4.5
ERF 1068, STANFORD, OVERSTRAND MUNICIPAL AREA: PROPOSED CONSENT USE: MESSRS SETPLAN CONSULTING ON BEHALF OF THE RICHARD METCALF FAMILY TRUST

1068 SSS (3375)
P Roux (028) 313 8900 Hermanus Administration
15 January 2018

1. EXECUTIVE SUMMARY

An application has been received on 18 July 2016 from Messrs Setplan Consulting on behalf of the owners of Erf 1068, Stanford on behalf of the Richard Metcalf Family Trust, for a consent use in terms of Sections 16(2)(o) in order to permit mining activities on Erf 1068, Stanford.

The Locality Plan of the property concerned is attached as Annexure A, the Motivation Report from the applicant in support of the application is attached as Annexure B and the Site Development Plan is attached as Annexure C.

2. DECISION AUTHORITY

Municipal Planning Tribunal

3. BACKGROUND / SITE HISTORY

Erf 1068 is situated outside of Stanford next to the R43 between Stanford and Hermanus. The property is zoned for agricultural use and is currently being used for hard rock mining and farming activities. The mining activities have been in operation for the past two (2) decades without prior approval from the Municipality for the land use. The applicant seeks to obtain permission in order to continue with the hard rock mining activities, thus the reason for the application.

4. SUMMARY OF APPLICANT'S MOTIVATION

Due to the comprehensiveness of the Motivation Report, only the main points of motivation are conveyed as follows (the detailed report is attached as Annexure B):

- ❖ Land use application is made for a consent use within the Agricultural Zone 1: Agriculture of the Overstrand Municipality Zoning Scheme to permit hard rock mining as is currently being undertaken at the Stanford Quarry on Erf 1068, Stanford.
- ❖ Site description:
    - Stanford Quarry is located on Erf 1068 and within a 24,8 ha mining right area.
    - Erf 1068 measures 410,7342 ha.
    - Erf 1068 is used for agricultural use (i.e livestock grazing and vegetable cultivation) and with a portion demarcated for the mining right area.
    - The mining right area includes the rehabilitated scree mined area, the existing logistical facility area, weighbridge and existing processing plant, with current excavation area.

- The mining activity includes drilling and blasting of the western face of the eastern mountain spur, crushing the shot rock and temporary storage of the crushed rock before transportation.

❖ The mining activities have been in operation since licencing in 1996 (i.e. for the past 20 years).

❖ Environmental approval includes:
- licensing to mine scree slope in 1996;
- in 2002 an Environmental Management Programme Report (EMPR) was compiled for rehabilitation of the scree mining area and for the proposed mining of the hard rock;
- in 2011 a Conversion of the Mining Right was applied for and approved in 2012. In the same year the EMPR was updated which was used between 2012 to 2016.

❖ The Stanford Quarry supported the construction industry in the Overstrand Area for the past 20 years – alternative material being Villiersdorp and Grabouw.

❖ Little to no objections in the time of operation.

❖ Currently the Stanford Quarry has been developed to approximately 98% of its permissible excavation footprint.

❖ No request for land use authorisation of the quarry for the local authorities (local or district) despite their participation during the quarry establishment, nor any record of the 24 ha mining land use in the Municipal Spatial Development Framework (SDF) or as a "non-conforming" land use in the Zoning Scheme or land use records over the past 20 years.

❖ The applicant states that the above demonstrates a long-standing, regionally recognised and compliant land use.

❖ The consent use application is not for a new "green-fields" mining use but of the legal regularisation of an "existing quarry".

❖ The applicant specifies mine rehabilitation plans, decommission and post-mining land use.

❖ The applicant motivates that the application is desirable in terms of the following criteria:
- consistency with the Overstrand Municipality Policy (SDF and Integrated Development Framework [IDF]);
- Zoning Scheme Regulations;
- constitutes a desirable temporary use within Agricultural Zone 1 due to the limited footprint and life of the mine;
- economic, social impact;
- traffic impact;
- continued use of municipal, national and private services.

5. ADMINISTRATIVE COMPLIANCE

Methods of advertising		Date published	Closing date for comments
Notices	Yes	30/08/2016	07/10/2016
Ward councillor	Yes	30/08/2016	07/10/2016
Advertised	Yes	30/08/2016	07/10/2016
Total letters of support	**None**		

Was public participation undertaken in accordance with Section 45 – 49 of the Proposed Draft By-Law on Municipal Land Use Planning?	**Yes**
Was the application processed correctly (if no, elaborate below):	**Yes**
Is the proposal consistent with the principles referred to in Chapter 2 of SPLUMA and Chapter VI of LUPA? (can be elaborated further below)	**Yes**

6. SUMMARY OF COMMENTS FROM ORGANS OF STATE AND/OR MUNICIPAL DEPARTMENTS

Name	Date received	Summary of comments	Recommendation
Overstrand Environmental Section	05/08/2016 08/02/2017 16/08/2017	Annexure D.	**Negative**
Telkom	12/09/2016	Annexure E.	**Positive**
National Department of Public Works	15/09/2016 15/03/2017	Annexure F.	**Positive**
District Health	15/09/2016	Annexure G.	**Positive**
Department of Transport and Public Works	19/09/2016	Annexure H.	**Positive**
Eskom	22/09/2016	Annexure I.	**Positive**
Department of Environmental Affairs and Development Planning: Component Planning	07/10/2016	Annexure J.	**Positive**
Fire Department	07/10/2016	Annexure K.	**Positive**
Operational Services	07/10/2016	No objection.	**Positive**
Building Department	18/10/2016	No objection	**Positive**
CapeNature	31/10/2016 27/02/2017	Annexure L.	**Positive**
Breede-Gouritz Catchment Management Area	01/11/2016	Annexure M.	**Negative**
Services Report	07/11/2016	Annexure N.	**Positive**
Agriculture	15/11/2016	Annexure O.	**Positive**

7. SUMMARY OF COMMENTS RECEIVED DURING PUBLIC PARTICIPATION

Three (3) objections were received against the application. The objections were submitted by Overstrand Environmental Section, National Department of Public Works and Cape Nature.

Objection from National Department of Public Works (NDPW)

Objection received from the National Department of Public Works (NDPW), dated 15 September 2016 relates to the application submitted for the Environmental Authorisation (EA) to expand the mining right area, the following is stated:

- the objection is against the issuing of the environmental authorisation due to the severe/irreplaceable harm that such an extension would cause to the biodiversity of that area and of the stream that feeds the Klein River Estuary. Further, the mine is situated within the Stanford Heritage Area;
- no compliance is given regarding the Municipality's request to cease the mining activities and to provide proof that the correct land use rights have been obtained.

Applicant's comment

NDPW objection is not relevant as it does not relate to the application at hand. The application is for a consent use in order to regularize the existing mining activity. The email's subject directly relates to the application which was submitted for Environmental Authorisation (EA) in order to expand the mine in the future. Therefore the objection received from NDPW is in response to a call for comment on the draft Environmental Impact Assessment (EIA) / Environmental Management Plan (EMP).

The Municipality requested to Afrimat Aggregates (Pty) Ltd to regularize the historic mining activity as no record could be produced to indicate that land use authorisation was in place. The regularising has been initiated through the consent use application. The background of the mining activity is given in the motivation as submitted on 10 August 2016.

Request was made by the applicant that the NDPW review its comment on the consent use application were after the applicant would provide additional comment. On 15 March 2017 the NDPW submitted a reviewed comment which stated that the issues regarding the consent use were discussed with the applicant and subsequently resolved.

Town Planner's comment

Although the comment submitted by NDPW was submitted towards a different application and cannot be considered as part of this application, the issues regarding the harm to the biodiversity of that area and of the stream that feeds the Klein River estuary is considered relevant. Further, CapeNature and Overstrand Environmental Section's comments had the same input regarding the current mining activities and the adverse and harmful effect it has on the river.

Objection from Cape Nature

In similar regard to the objection received from NDPW, the objection from CapeNature dated 1 November 2016 also relates to the application submitted for the Environmental Authorisation to expand the mining right area and not towards the consent use to regularise the existing mining activities. On 27 February 2017 revised comments were received from CapeNature which relates to the consent use application. The points raised in the comments received on 27 February 2017 are as follows:

- clarity is needed between the difference of the current land use application and the proposed extension of the mining activities;
- the mining activity has already been taking place and the impact of the mining activity on the biodiversity and the boarder environment have already occurred. Should consent use be considered then stringent conditions must be set. The consent use must only be for the current mining area and not the proposed extension area;
- rehabilitation on site has been highly inadequate. Widespread degradation has occurred on both the mining footprint and extending beyond down the slope into the watercourse. There is not much evidence of rehabilitation in terms of the Mineral and Petroleum Resources Development Act (MPRDA) / National Environmental Management Act (NEMA) application, the land use application and the full range of Google Earth historical imagery;
- the consent must be subject to a detailed rehabilitation plan for the site which must be approved by the Municipality and be provided to CapeNature for comment. The MPRDA / NEMA application included high level principles however this is not considered adequate in order to ensure the successful rehabilitation of the site; and
- no objection is made to the application subject to well defined boundaries as described above and the approval of a detailed rehabilitation plan.

Applicant's comment

The reason for the amended comment is noted.

The motivation report Section 2(i) clearly states "*the consent use application is not for a "green fields" or "new quarry" but rather for the regularisation of an existing quarry."*
The stringent conditions are noted.

- consent use application as depicted in Figure 16 is for the existing 2011 mine right area (i.e. figure 2) and does not include the MPRDA / NEMA application area; and
- requirement for a detailed rehabilitation plan is noted and is further addressed below.

No objection towards the consent use application noted.

The boundary of the area where consent use is applied for is the approved Department of Mineral Resources Mining Right Area and the 2011 updated Excavation Plan including the "limit of excavation", with revised mine right boundary and limit of excavation as determined by the Department of Energy (DME) in 2011 are the cadastral defined mining right area.

Town Planner's comment

The comments provided by CapeNature are noted especially the statement of that the rehabilitation on site has been highly inadequate. Should the application be approved then the applicant/operator of the mine will have to provide continues proof that the rehabilitation plan is implemented and that on site amendments are made.

Objection from Overstrand Environmental Section (detailed comment is attached as Annexure D)

(i) the application has been evaluated against the Mining Policy Statements and Guidelines as put forward in the Overstrand Municipality's Spatial Development Framework, 2006 (SDF), with the mining at the Stanford Quarry being in conflict with such policy;
(ii) impact of un-rehabilitated quarries on tourism;
(iii) visual impact cannot be rated as moderate;
(iv) clarity must be provided regarding the current water use on the existing mine and if a water use licence is/was required or issued;
(v) applicant to indicate what measures are put in place to prevent siltation of the stream/river due to mining. It is recommended that a freshwater study be conducted to determine current impacts on the stream/river;
(vi) no timeframes are put forward for the proposed rehabilitation of the current mining site; and
(vii) application to clarify/include the following:
- current water use on site and its monitoring in terms of a water use licence.
- indicate impacts on stream by conducting a freshwater study; and
- provide a rehabilitation plan, including costs and timeframes for planned rehabilitation measures.

Applicant's comment

(i) Consistency of mining on Erf 1068, Stanford with Overstrand Policy is limited by the following:
- the commencement of mining activities (1996) and compilation of the EMP (2002) inclusive of the Mine Plan, pre-dating current relevant policies (2006-2014), together with the fact that the current mining has reached ±98% of its development footprint restricts the retrospective application of such policies to this application;
- the policies, while putting forward a Mining Policy and spatially depicted land use categories not suitable for mining, do not reserve areas for exploitation of construction materials, with such areas only being confirmed through prospecting and site selection;
- minerals being place/resource-bound, a critical location consideration for strategic minerals (e.g. construction materials), together with distance from the consumer market (i.e. delivery cost and transport impact on regional/district road infrastructure and user safety) also being a strong location consideration;
- however, consistency is being and can still be achieved with Overstrand Policy in respect of mining on Erf 1068, Stanford through the following:
  - ❖ the current mining operations as per the EMP include mitigation measures to address impacts;

- the limited operational period of mining does not preclude the re-instatement of pre-mining land capability given the EMP Rehabilitation Plan;
- the EMP being inclusive of stringent rehabilitation measures, monitoring and auditing;
- the Stanford Quarry achieving a balance between the benefits of mining a strategic resource and the long-term environmental costs.

(ii) rehabilitation of the Stanford Quarry is a legal requirement in terms of the mining right issued, inclusive of re-vegetation and terrain shaping to reduce visual impact;

(iii) noted - moderate rating as per assessment detailed in Section 4.2.1(ii) of the Motivation Report;

(iv) water obtained from the property owner for plant area and road wetting, with such supply as per Notarial Mineral Lease;

- Water Licence Application (WULA): application date: 30 November 2015. WULA issuing: Expected shortly;

(v) note - requirement for a freshwater study. A Freshwater Ecosystem Impact Assessment for the Stanford Quarry was commissioned by Afrimat (mining company) in 2016 in order to address impacts, including siltation.

- current EMP stormwater management comprises drainage via shallow stormwater/silt cut-off channels to retention ponds (two (2) dams). Photo 5 in the Motivation Report illustrates a berm bordering the stockpile platform to prevent sand/silt run-off and movement into the stream. A Stormwater Management Plan for Stanford Quarry was commissioned by Afrimat (mining company) in 2016, with such plan specifically addressing silt run-off.

(vi) timeframe requirement in a rehabilitation plan;

(vii) water use by quarry restricted to dust suppression water spraying at plant and stockpile area, and water wetting of haul road and quarry access road, especially in the vicinity of the R43 intersection

- note - requirement for a freshwater study; and
- note - requirement for a rehabilitation plan, including cost estimates and timeframes.

The applicant further proposes a way forward in consideration to the comments received from the Overstrand Environmental Section, National Department of Public Works and Cape Nature.

First an Annual Rehabilitation Plan (ARP) will be complied for Stanford Quarry. The ARP compilation will be an on-going annual process for the life-of-mine. Compilation of the Stanford Quarry ARP will be informed by the following:

- final Rehabilitation Decommissioning and Mine Closure Plan Objectives;
- post-mining Land Use Plan;
- new and previously unattended impacts requiring mitigation; and
- financial provision for mitigation in the financial year.

The ARP will draw from the following information to update the existing EMP management requirements:

- Stormwater Management Plan for the Stanford Quarry;
- Freshwater Ecosystem Impact Assessment for the Stanford Quarry; and

- Water Use Licence.

The applicant further states that, considering the abovementioned, the duplication of the Rehabilitation Plan as requested by the comments/objections cannot be prepared. However, the ARP will be made available to the Overstrand Municipality. The ARP will comprise of a structured process for co-ordinating and scheduling the operational rehabilitation of mining disturbances at the Stanford Quarry.

The applicant provided the following documentation and information, on account of the comments and objections (attached as Annexure P):

- the EMPR which was approved in 2011 and the Rehabilitation Plan;
- the estimated life of the existing mine is approximately three (3) years from May 2017;
- freshwater Ecosystem Impact Report; and
- Stormwater Management Report.

Current status of mitigation measures has also been provided. It further indicates that the following mitigation measures have been done as in May 2017 to address the impact on the river and the monitoring thereof:

(i) culverts have been installed at the river crossing to facilitate flow and address previous damming and overflow which resulted in material and silt being washed into the river. Road sides have been stabilised/packed with channelling to diverts water run-off to the retention pond;
(ii) shaping the platform to direct drainage towards the retention pond;
(iii) shaping of the road way to reduce ponding and direct drainage to the retention pond;
(iv) improvement of channels and berms where required;
(v) emptying of slit from the retention pond;
(vi) appointment of a ECO for required bio monitoring and regular inspection of the storm water system, with register recording and identification of follow-up remedial actions required;
(vii) an application for Water Use License (WULA) was submitted to the Department of Water Affairs in November 2015, the application is still in progress with the following being concluded to date:
    - preparation and submission of the Freshwater Ecosystem Impact Report and Stormwater Management Report;
    - meeting with the Breede-Gouritz Catchment Management Agency (BGCMA) regarding the application;
    - site inspection by BGCMA and DWS officials; and
    - awaiting issue of a General Authorisation.

The documentation and the information were sent to the Overstrand Environmental Section.

The Overstrand Environmental Section submitted additional comment on 16 August 2017 regarding the Freshwater Ecosystem Impact Report Study which indicates that the mining activities have a definite impact on the river which is in close proximity to the mine. Recommendations were also made by the Environmental Section should the application be approved. The additional comments are as follows:

Environmental Management Programme, 2011
The rehabilitation plan is not linked to specific timeframes which makes it impossible to determine when rehabilitation will commence. The visual impact is severally underrated in the Visual Envelope Assessment. The scar from the quarry site is visible from as far as Hermanus.

Stormwater Management Report
The report addresses the existing stormwater control measures, namely the berm and stormwater dams on site. However, the report compiled by the Freshwater Consulting Group in 2017, pertaining to this specific site, clearly indicates that measures are not effective and that siltation is still taking place due to the activities on this quarry site.

Ecological status of the river
Based on the determination of the ecological status of different reaches within the Klein River tributary the following is highlighted from the study:

Reach B: moderately modified
- loss of riparian habitat and thus loss of ecological function to accommodate excavation;
- loss of buffer between disturbance and the channel with increased erosion;
- excessive sedimentation of the channel due to unstable eroding banks and runoff of the fine sediments from the excavation site;
- loss of in-stream habitat due to fly rock and sediment.

Reach C: largely modified
- complete change in bed and channel characteristics through removal of the alluvium during mining;
- invasion by alien trees and thus a loss of habitat integrity;
- sedimentation of the channel and runoff of silt laden stormwater from the road and crushing site.

Existing water-use
The report states that the current water-use of Stanford Quarry is not registered. It is unclear if the existing license, which is issued in the name of Walshacres, is also applicable to the quarry.

Current impact assessment
The report highlights the following activities and its impacts on the watercourse and its characteristics, without mitigation:

Therefore the recommendation is as follows:

- *the applicant must provide proof of the appointment of an Environmental Control Officer (ECO) and subsequent reports as indicated in the EMP of 2011;*
- *the rehabilitation plan should be linked to a timeframe;*
- *a re-assessment of the visual impact of the current quarry site should be conducted;*
- *the applicant should familiarize themselves with the contents of the report conducted by the Freshwater Consulting Group. The mitigation measures proposed to alleviate the impacts on the freshwater ecosystem are strongly supported. A recommendation is made to the Town Planning Department that the implementation of these measures is set as conditions to the applicant; and*

- *the formal monitoring as proposed in the Freshwater Study must be implemented on site and must be assessed by an independent environmental control officer.*

Town Planner's comment

The comments and recommendations provided by the Overstrand Environmental Section is noted and will be considered when evaluating the consistency of the proposed continued use of the mine in relation to the Spatial Planning Land Use Management Act (SPLUMA) and Land Use Planning Act (LUPA) planning principles, the Overstrand Municipal Spatial Development Framework (OMSDF) and Integrated Development Framework (IDF).

6. SUMMARY OF APPLICANT'S REPLY TO COMMENTS

See previous heading.

8. MUNICIPAL ASSESSMENT OF COMMENTS

See previous heading.

9. MUNICIPAL PLANNING EVALUATION (REFER TO RELEVANT CONSIDERATIONS GUIDELINE)

9.1 (In)consistency with the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013)

It is noted that the applicant did not address or motivate the application in terms of the planning principles as contained in SPLUMA and LUPA. The (in)consistency of the application can be considered as follows:

Spatial Justice

Afrimat (the operator of the mine) is committed to integrating genuine transformation that permeates the organisation, and understands this to be critical for the sustainability of its business in South Africa. Each subsidiary has a dedicated BEE Committee which actions the plans and recommendations of the Social, Ethics and Sustainability Committee in this regard, and further proactively drives improvements in all B-BBEE categories.

Spatial sustainability

The existing mine is situated in a CBA 1 and CBA 2 location in terms of the Cape Farm Mapper and the Municipality's Integrated Development Framework. CBA 1 and 2 is defined as *areas in a natural condition that is required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.*

The objective for the farm in terms of a CBA is to *maintain a natural or near-natural state, with no further loss of natural habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land uses are appropriate.*

The mine is also located north of the R43, which is the main (tourism) route between Hermanus and Stanford. The locality of the mine on Erf 1068 allows it to be visible from Hermanus Old Harbour (Hermanus CBD) and sections of the R43, which are classified as a scenic route. This must be noted as the local economy of the Overstrand is largely underpinned by tourism derived from its scenic and heritage qualities.

The current mining activity is not consistent with this specific principle or in line with the objective of the CBA, as the impact of the mine visually erodes the tourism and landscape character of the area. This is due to the highly inadequate rehabilitation on site, coupled with the widespread degradation which has occurred on both the mining footprint and down the slope into the watercourse.

However, it should be noted that the mining activity is already at 98% and the impact of the mining activity on the biodiversity and the broarder environment have already occurred. The only remedy to combat the current environmental and visual degradation is stringent conditions for rehabilitation of the mining area and the river.

Spatial Efficiency
98% of the mine is already developed. The applicant proposes to only utilise the remaining 2% of the mining right area. Further, the existing infrastructure (developed roads and mining structures) are to be utilised.

Spatial resilience
The application will enable the applicant to optimise his assets, should it be necessary due to economic and/or financial reasons. Further, job security will be afforded with the continuation of the mine which can help to strengthen the ability of the employees to deal with economic shocks.

Good administration
The application followed the required planning procedures to ensure that land use activity is in line with Municipal By-Laws and the public process has been followed.

9.2 (In)consistency with the principles referred to in Chapter VI of the Land Use Planning Act, 2014 (Act 3 of 2014)

Same as above.

9.3 (In)consistency with the IDP/Various levels of SDF's/Applicable policies

Erf 1068 is situated within the Overstrand Municipal area and therefore directed and managed by the Overstrand Municipal Wide Spatial Development Framework, 2006 and the Municipality's Integrated Development Framework, 2014.

The Macsands case state that a mining right issued in terms of Section 23(1) of the Mineral and Petroleum Resources Development Act 28, 2002 (hereafter MPRDA) and a mining permit issued in terms of Section 27 of the MPRDA by the Minister does not trump the need to comply with other legislation relating to land use. This includes the Zoning Scheme Regulations and the SDF. The

Zoning Scheme and the SDF stems from statutory requirements, the need for overall strategic planning and site specific planning to manage growth and conservation, land use and development. Further, the operator needs to comply with the relevant environmental legislation which in turn is also relatively new/updated legislation. The policies stated in the OMSDF have regard with conservation and environmental issues therefore should the application comply with the relevant environmental legislation, then it must also be able to comply with the current SDF.

As stated in the comment provided by the Overstrand Environmental Section, the OMSDF sets out specific policy statements regarding mining. The OMSDF's policy statements and guide lines on mining are as follows:

"Mining areas should take into account the worth of the material to be extracted against the long term costs of the visual quality of the area, the potential loss in agricultural production, as well as the impacts on existing rights of neighbouring property owners.

The extractive industrial activities should be in harmony with the ecological systems, respecting the processes that control the functioning of these elements.

The spatial location of mining activities needs to be carefully considered relative to the location of other comparable resources, infrastructure availability and environmental sensitivity.

Rehabilitation of mined areas should be a requirement undertaken simultaneously with mining operations. Rehabilitation should be monitored by an appoint ECO. Mining companies should be held accountable for the rehabilitation of mined areas.

Avoid mining activities in/near and implement mitigation measures if permitted for:

- *environmentally sensitive areas i.e. irreplaceable and vulnerable areas according to the bioregional planning model;*
- *visually prominent locations;*
- *ecologically vulnerable areas;*
- *areas in view of identified scenic routes; and*
- *sensitive hydrological systems"*

The applicant states in his response that the mining activities can still be made compliant with the policies should specific actions be done, these are:

❖ the current mining operations as per the EMP include mitigation measures to address impacts;
❖ the limited operational period of mining does not preclude the re-instatement of pre-mining land capability given the EMP Rehabilitation Plan;
❖ the EMP being inclusive of stringent rehabilitation measures, monitoring and auditing; and
❖ the Stanford Quarry achieving a balance between the benefits of mining a strategic resource and the long-term environmental costs.

Additional to the actions as proposed by the applicant the following must be done additionally to show that the mining operation is consistent with the SDF:

- the applicant must provide proof of the appointment of an ECO and subsequent ECO reports as indicated in the EMP of 2011;
- the rehabilitation plan should be linked to a timeframe;
- a re-assessment of the visual impact of the current quarry site should be conducted and rehabilitation must be done on the ridgelines of the mining area in order to ensure that the visual impact is mitigated;
- the applicant should familiarize themselves with the contents of the report conducted by the Freshwater Consulting Group. The mitigation measures proposed to alleviate the impacts on the freshwater ecosystem are strongly supported. A recommendation is made to the Town Planning Department that the implementation of these measures is set as conditions to the applicant; and
- the formal monitoring as proposed in the Freshwater Study must be implemented on site and must be assessed by an independent environmental control officer.

9.4 (In)consistency with guidelines prepared by the Provincial Minister

Not applicable.

9.5 Impact on municipal engineering services

No municipal services are provided to the property. The issue regarding the use of water on the property is not resolved. Should the application be approved then the applicant must indicate that the water use on the property is done in line with the relevant legislation and that a water permit is obtained.

9.6 Outcomes of investigations/applications i.t.o other legislation

The applicant has indicated that the operator of the mine has obtained a mining right to mine a section of Erf 1068, Stanford - Mining Right was issued in 2012. Further, in 2011 an updated EMPR (Environmental Management Programme Report) was done to manage the mining activities.

9.7 Existing and proposed zoning comparisons and considerations

As stated under the background heading Erf 1068 is situated outside of Stanford next to the R43 between Stanford and Hermanus. The property is zoned for agricultural use and is currently being used for hard rock mining and farming activities. The mining activities have been in operation for the past two (2) decades without prior approval from the Municipality for the land use. The applicant seeks to obtain permission in order to continue with the hard rock mining activities. Mining is an additional right under the Agricultural Zone 1. The additional right can only be acted upon once approval has been gained for a consent use application.

9.8 The desirability of the proposal

As stated earlier the applicant seeks to gain approval to continue the operation of the existing mining activities for the remaining life of the mine. When assessing the desirability of the proposal in terms of the Overstrand Municipality's By-Law on Municipal Land Use Planning one must have regard for the following:

- the comments in response to the notice of the application and the comments received from organs of state and internal departments;
- the response by the applicant to the comments;
- investigations carried out in terms of other laws;
- consistency with planning principals;
- Spatial Development Frameworks;
- the impact the proposed use will have on the environment and infrastructure; and
- the compatibility (visual impact, impact on safety and location) of the proposed use with surrounding land uses.

Various internal and external departments and organisations' comments were received on the application. Two (2) negative comments were received against the application submitted to the Town Planning Department. The two (2) comments were provided by Overstrand Environmental Section and Cape Nature. The comments were addressed by the applicant. However, both the Overstrand Environmental Section and Cape Nature stated that should the application be considered favourable then more stringent management of the activity must be done and several additional conditions must be complied with. One of the main points of concern is the current state of the river next to the mining site; this river will need to be rehabilitated immediately.

As stated earlier the property currently has a mining right which demarcates a section of the farm for mining. Further in 2011 an updated Environmental Management Programme Report (EMPR) was done to manage the mining activities.

The current state of the mine is not consistent with the Mining Policy as depicted in the OMSDF, nor is it consistent with the LUPA and SPLUMA planning principle of spatial sustainability. The major concerns which needs to be addressed is the visual impact created by the mining scare against the mountain which is visible from the Hermanus CBD and the impact of the mining activity on the river which feeds into the estuary and the environment surrounding the mining site. Further, should the following actions be done then the mine will be made more consistent with the OMSDF and the LUPA and SPLUMA planning principle of spatial sustainability, these actions are:

- ❖ the current mining operations as per the EMP include mitigation measures to address impacts;
- ❖ the limited operational period of mining does not preclude the re-instatement of pre-mining land capability given the EMP Rehabilitation Plan;
- ❖ the EMP being inclusive of stringent rehabilitation measures, monitoring and auditing; and
- ❖ the Stanford Quarry achieving a balance between the benefits of mining a strategic resource and the long-term environmental costs.

Additional to the actions as proposed by the applicant the following must be done to show that the mining operation is consistent with the SDF:

- the applicant must provide proof of the appointment of an ECO and subsequent ECO reports as indicated in the EMP of 2011;
- the rehabilitation plan should be linked to a timeframe;
- re-assessment of the visual impact of the current quarry site should be conducted and rehabilitation must be done on the ridgelines of the mining area in order to ensure that the visual impact is mitigated;
- the applicant should familiarize themselves with the contents of the report conducted by the Freshwater Consulting Group. The mitigation measures proposed to alleviate the impacts on the freshwater ecosystem are strongly supported. A recommendation is made to the Town Planning Department that the implementation of these measures is set as conditions to the applicant; and
- the formal monitoring as proposed in the Freshwater Study must be implemented on site and must be assessed by an independent environmental control officer

Should the aforementioned actions be done, then the existing mine will also be more consistent with objective of the CBA in which the mining activity is situated.

The applicant proposes to utilise the existing infrastructure and road ways which have been developed during the life of the mine. Should the application be considered favourable, then a condition will be stipulated which states that a detailed Site Development Plan and building plans be submitted to the satisfaction of the Senior Manager: Town and Spatial Planning and Manager: Building Control. No services are rendered to the farm by the Municipality as per the Services Report.

The location of the mine in relation to the area which it serves must be considered when assessing the compatibility of a mine. Hermanus and the Overstrand Municipality are seeing tremendous growth in the building industry and the products produced by the mine is used extensively by the building industry. Further, the location of resources must be weighed against the impact of the mining activity on visual and environmental concerns along with the economics of scale and travelling distance. Simply closing a mine which currently supplies the immediate building industry and which is productively stable and has reached 98% of its production capacity is not the viable option. Further, as previously stated, should certain actions be done then the current mining activity can become compliant with the OMSDF and IDF mining policies, the objectives of the CBA and all of the planning principles.

Given the abovementioned, the history of the mine (as motivated by the applicant) and the outset that the current mine can only be operated for approximately three (3) years; the proposed continuation of the mine is considered desirable subject to stringent conditions. Should the conditions not be adhered to then the mining activity will be forced to cease until such a time as to when the conditions can be complied with.

9.9 ADDITIONAL PLANNING EVALUATION FOR REMOVAL OF RESTRICTIONS

The financial or other value of the rights

N/A

The personal benefits which will accrue to the holder of rights and/or to the person seeking the removal

N/A

The social benefit of the restrictive condition remaining in place, and/or being removed/amended

N/A

Will the removal, suspension or amendment completely remove all rights enjoyed by the beneficiary or only some of those rights

N/A

10. RECOMMENDATION

1. that in terms of Section 16(2)(o) of the Overstrand Municipality By-Law on Municipal Land Use Planning, 2015 (By-Law) for a consent use in order to permit mining activities on Erf 1068, Stanford, **be approved** in terms of the provisions of Section 61 of the By-Law;

2. that the following conditions for the approval in paragraph 1. above must be complied with within sixty (60) days:

   (a) that the Annual Rehabilitation Plan (ARP) be submitted to the Overstrand Town Planning Department and Environmental Services;

   (b) that an updated 2018 Site Development Plan for the mining area be submitted for approval to the satisfaction of the Senior Manager: Town and Spatial Planning;

   (c) that building plans be submitted for structures which are not approved by the Building Department on Erf 1068, Stanford and that the comment from the Building- and Fire departments be complied with at that stage;

   (d) that the appointment of an independent Environmental Control Officer (ECO) be submitted to the Overstrand Town Planning Department and Environmental Services;

   (e) that the subsequent ECO reports as indicated in the EMP of 2011 be submitted to the Overstrand Town and Spatial Planning Department and Environmental Services;

   (f) that timeframes be submitted which indicate when specific actions in the rehabilitation plan will be completed;

(g) that rehabilitation be commenced on the un-mined ridgelines of the mining area in order to ensure that the visual impact is mitigated;

(h) that rehabilitation be started in the river with a report and photographic evidence of the before and after result submitted to the Overstrand Town and Spatial Planning Department and Environmental Services, and

(i) that Section 3.4.1 of the Freshwater Ecosystems Impact Assessment Report be noted and that implementation of the recommendation be commenced with a report and photographic evidence of the before and after result being submitted to the Overstrand Town and Spatial Planning Department and Environmental Services and Cape Nature;

3. that the additional conditions for the approval of paragraph 1. above must be complied with:

(a) that approval is only for the continued use of the mine to a maximum of three (3) years or life of the mine, the most restrictive will be applicable;

(b) that the mining area and the excavation area on Erf 1068 be limited to the 2011 Updated Mine Layout Plan: Mine Site Development Plan and as submitted with the application;

(c) that all the conditions compiled by the Department of Transport and Public Works (attached as Annexure H), Eskom (attached as Annexure I), Telkom (attached as Annexure E), District Health (attached as Annexure G), Fire Department (attached as Annexure K), Breede-Gouritz Catchment Management Agency (attached as Annexure M) and Western Cape Department of Agriculture (attached as Annexure O), be complied with;

(d) that all the conditions compiled in the Services Report (attached as Annexure N), be complied with;

(e) that all the conditions compiled by the Overstrand Environmental Services dated 16 August 2017 (attached as Annexure D) and Cape Nature dated 24 February 2017 (attached as Annexure L), be complied with, and

(f) that this approval does not absolve the applicant/operator of the proposed activity from complying with other legislation.

4. that should the conditions in paragraphs 2. and 3. not be adhered to then the mining activity must cease until such time as when the conditions can be complied with;

5. that the applicant be notified of its right of appeal in terms of Section 78 of the Overstrand Municipality By-Law on Land Use Planning, 2016 with regard to the above conditions of approval.

11. REASONS FOR RECOMMENDATION

- the application complies with four (4) of the principles as set out in SPLUMA and LUPA and should proposed actions be done, then all of the planning principles will be complied with;
- no objection was received against the application from the adjacent property owners;
- the objections received from the Overstrand Environmental Services and Cape Nature can be mitigated and is stated as conditions of approval;
- the agricultural land use on the property will not be affected;
- the mining activity will be restricted to three (3) years or life of the mine, whichever is most restrictive;
- the resource mined is used in the building industry in and around the Overstrand; and
- 98% of the existing mine has been mined.

12. Annexures

Annexure A:	Locality Plan
Annexure B:	Motivation Report
Annexure C:	Site Plan
Annexure D:	Overstrand Environmental Section
Annexure E:	Telkom
Annexure F:	National Department of Public Works
Annexure G:	District Health
Annexure H:	Department of Transport and Public Works
Annexure I:	Eskom
Annexure J:	Department of Environmental Affairs and Development Planning: Component Planning
Annexure K:	Fire Department
Annexure L:	Cape Nature
Annexure M:	Breede-Gouritz Catchment Management Area
Annexure N:	Services Report
Annexure O:	Department of Agriculture
Annexure P:	Applicant’s comment and additional comment on objections

SIGNATURES

<u>AUTHOR:</u>

Name: **PETRUS ROUX**

Signature: ____________________

Date: ____________________

REGISTERED PLANNER

Name :	**S VAN DER MERWE**
Signature :	____________________
SACPLAN registration number:	**A/1850/2014**
Date:	____________________

ANNEXURE A 1/1

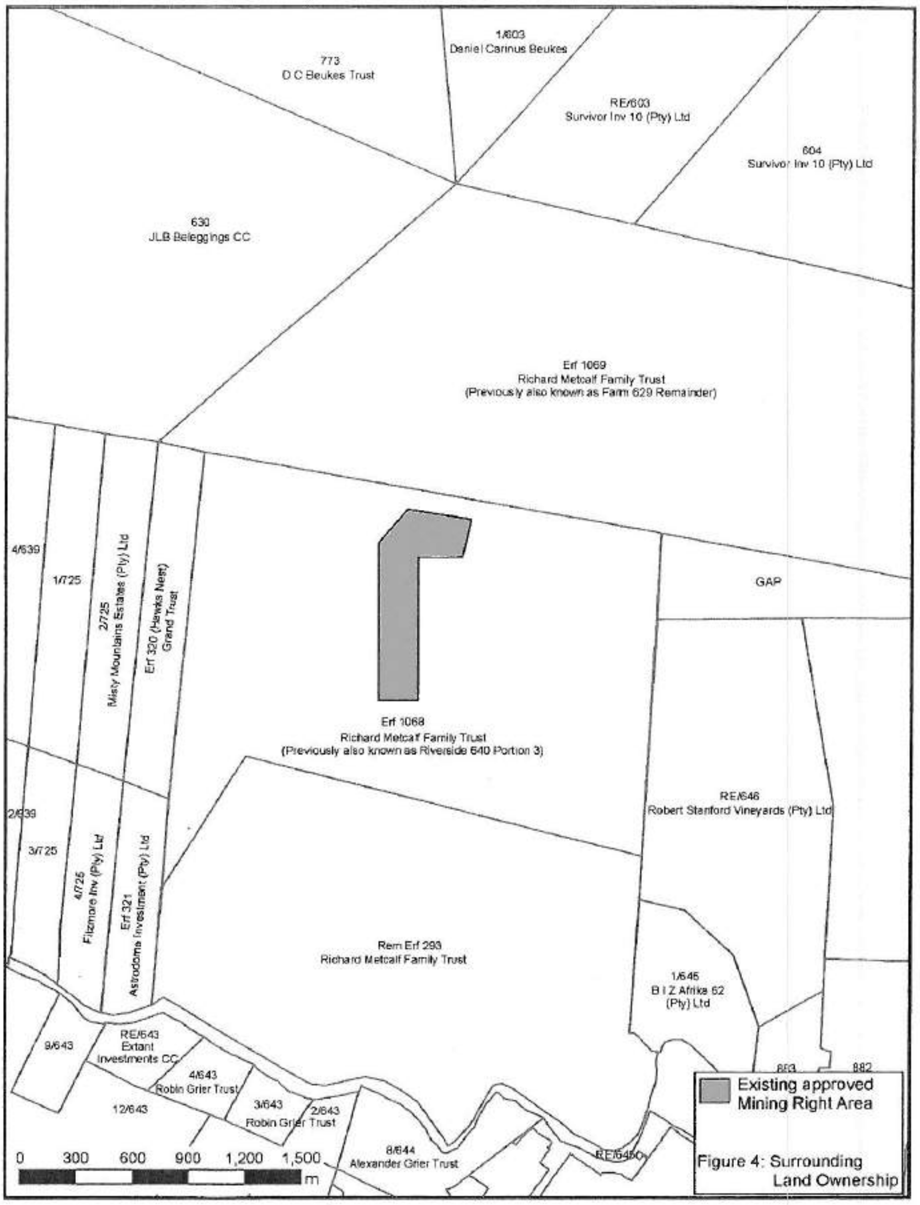


Figure 4: Surrounding Land Ownership

1. INTRODUCTION

1.1. Background

This application is lodged by Settlement Planning Services (Western Cape) cc trading as Setplan on behalf of the mining company Afrimat Aggregates (Operations) (Pty) Ltd (previously Prima-Klipbrekers (Pty) Ltd) and the property owner of Erf 1068, Stanford, Overstrand Municipal Area. Refer Resolution by the Richard Metcalf Family Trust and Power of Attorney issued by Russell Metcalf, as well as Resolution and Power of Attorney from Afrimat Aggregates (Operations) (Pty) Ltd, attached to the application.

1.2. Nature of the Application

Land Use Application is made for a Consent Use within the Agricultural Zone 1: Agriculture (AGRI) of the Overstrand Municipality Zoning Scheme (2013) (Development Management Scheme) in terms of sections 16(2)(o) and 21(3) of the Overstrand By-Law on Municipal Land Use Planning, 2015 to permit hard rock mining as is currently being undertaken at the Stanford Quarry on Erf 1068, Stanford, Overstrand Municipal Area.

1.3. Purpose and Content of this Report

This report has been prepared in motivation of the abovementioned application. It augments information required in the "Town Planning Application Form (2016/2017)" of Overstrand Municipality. The completed and signed Application Form is attached to the application.

While this application has as its primary purpose meeting the requirements of the Overstrand Municipality Zoning Scheme and conditions imposed by previous planning legislation (i.e. LUPO), it will draw heavily on the following:

(i) Data contained in the Stanford Quarry Environmental Management Programme (EMP) – October 2011 Update, which incorporated the original EMP dated September 2002, and served as a review and update of mining compliance with the 2002 EMP, as well compliance with requirements (i.e. Conversion of the Mining Right) in terms of the Mineral and Petroleum Resources Development Act, 2002 (MPRDA).

(ii) Findings and recommendations of the Environmental Performance Assessment of Stanford Quarry Mining Operations dated October 2011, with such Assessment assessing and ensuring compliance with the 2002 EMP and that the 2011 EMP Update address any issues identified.

(iii) Environmental authorisation having been part of the EMP's EIA process as confirmed by the "Government's One Environmental System" which commenced on 9 December 2014, and states that "All environmental management plans or programmes approved in terms of the Mineral and Petroleum Resources Department Act, 2002 (Act no 28 of 2002), immediately before 8 December 2014, shall be deemed to be approved in terms of the NEMA" (refer Annexure A).

The balance of this motivation report is structured as follows:

- Section 2 puts forward the approach to inform the authorisation of the current land use and motivate the consent use.

- Section 3 presents the mine plan (Site Development Plan) and rehabilitation plan currently in place in terms of the EMP as well as the current status of the mine and way forward.
- Section 4 puts forward the desirability to permit the on-going mining on Erf 1068 Stanford through an assessment the performance of the Stanford Quarry and mining operations, with specific reference to the following:
  - Consistency with Overstrand Municipality policy
  - Impact on the biophysical environment
  - Impact on heritage
  - Economic impact
  - Social impact
  - Impact on safety, health and well-being of the surrounding community
  - Impact on existing services
  - Traffic impacts and related considerations
  - Impact on existing use rights
  - Capital investment
  - Compatibility with surrounding uses
- Section 5 draws conclusions and makes a recommendation on the application.

Supporting documentation is contained in Annexures to the motivation report.

1.4. Locality

Figure 1 illustrates the existing Stanford Quarry ±20km east of Hermanus and 3,4 km north-west of Stanford, located in Ward 11 of the Overstrand Municipality.

The quarry is located at the foot of the Klein Rivier Mountain 1,5 km north of the R43 (Hermanus-Stanford) and 3 km north of the Klein Rivier which feeds the Klein Rivier Vlei, also known as the Hermanus Lagoon, 6 km to the west.

1.5. Cadastral Description, Extent and Ownership

(i) Site Description

Stanford Quarry is located within a 24,8ha Mining Right Area located on Erf 1068, Stanford in the Overstrand Municipal Area (refer Figure 2). As per S.G. No 1045-94 (refer Annexure B) it is noted that Erf 1070 comprises Erf 1068, Erf 1069 and Rem Erf 293. The consolidated Erf 1070 is registered at the Surveyor General's Office but not registered at the Deed's Office. Accordingly in this consent use application reference is made to the properties which have title deeds (i.e. Erf 1068, Erf 1069 and Erf 293), with Erf 1068 being the subject of this consent use application. Erf 1068 is held in terms of Title Deed T13601/1991 registered on 6/3/1991, with such property previously described as The Remainder of Portion 3 (a portion of portion 1) of the Farm Riverside No 640 situate in the Division of Caledon (refer Annexure C).

(ii) Extent

Erf 1068 measures 410,7342ha in extent

ANNEXURE B 3/38

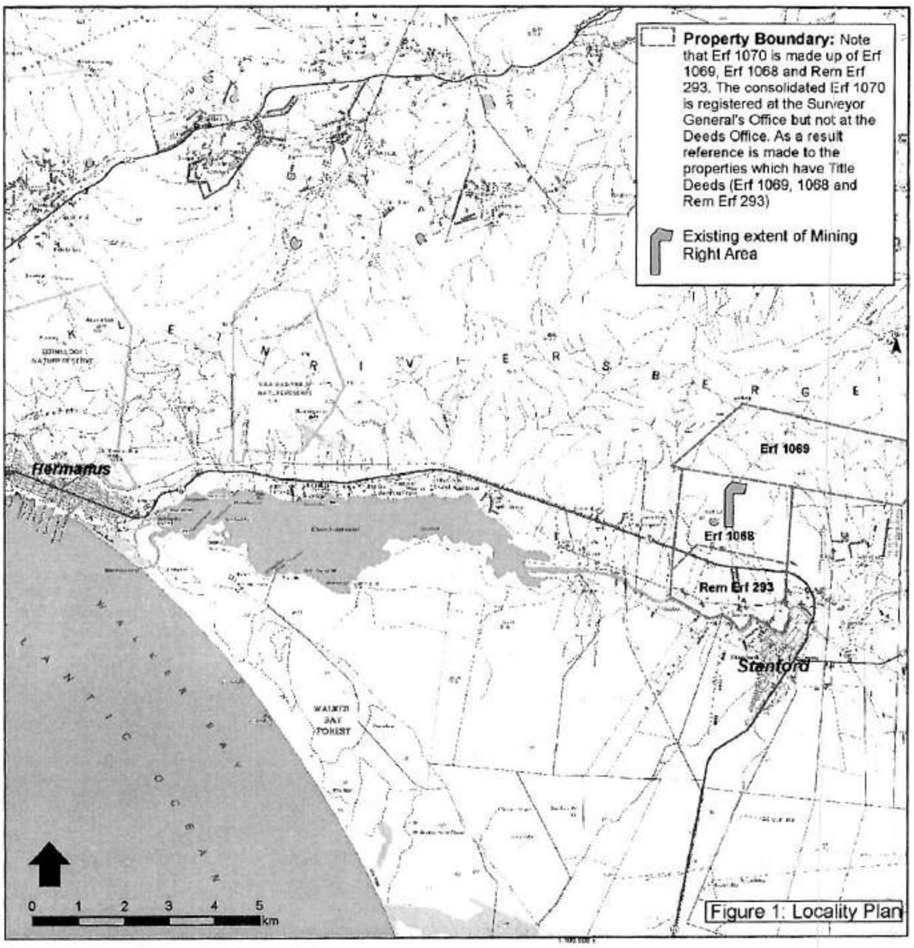
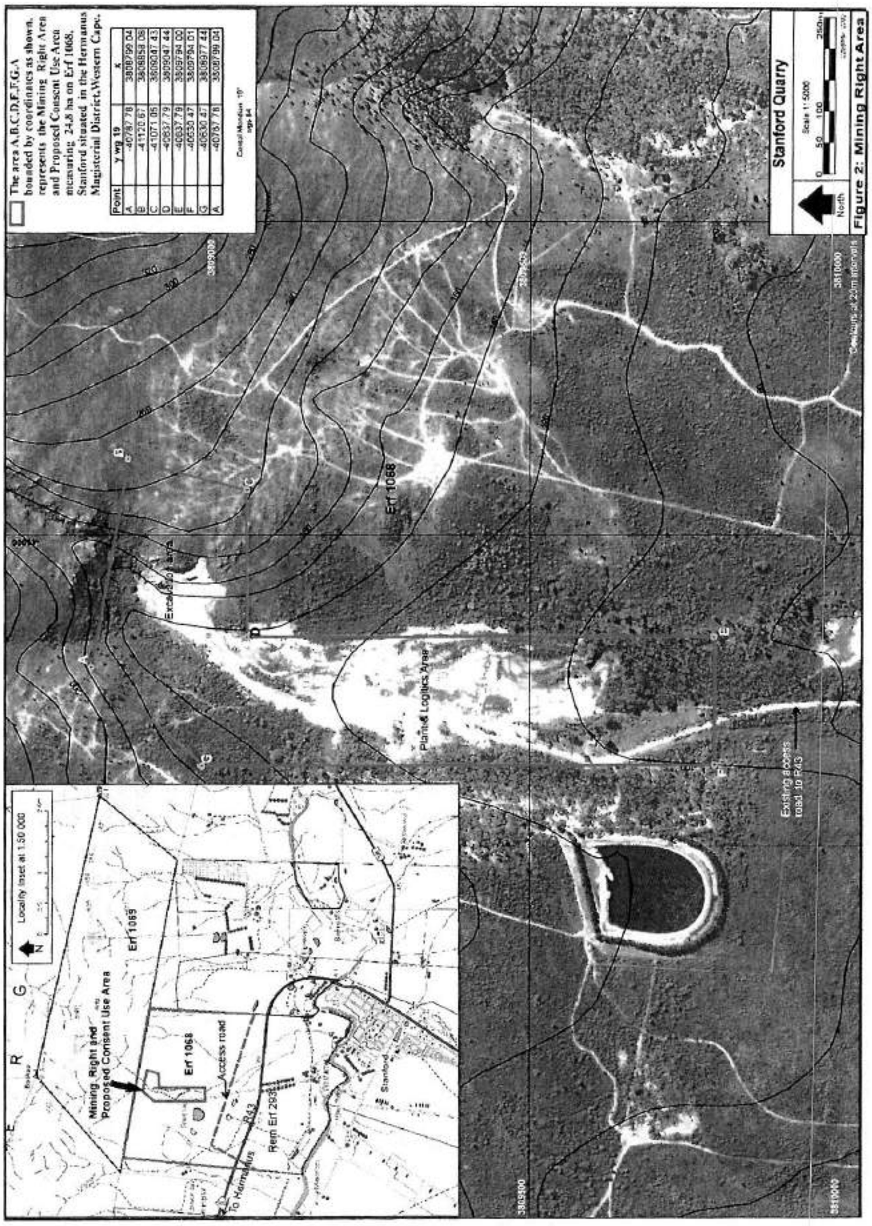


Figure 1: Locality Plan

ANNEXURE B 4/38



(iii) Ownership
Erf 1068 is in ownership of the Richard Metcalf Family Trust (Registration Number 100/86)
(iv) Servitudes and Building Lines
Erf 1068 is subject to a 30,0m street and common building line restriction, given its location in Agricultural Zone 1.
(v) Conveyancer's Certificate
No Conveyancer's Certificate is required given no impact of the quarry on any registered servitudes. It is noted that the lease agreement for the Mining Right Area, including access thereto, is per Notarial Mineral Lease.
(vi) Bondholder's Consent
No mortgage bond is registered against the property.
(vii) Land Claims
No land claims are registered against the property.

1.6. Existing Land Use

Existing Land Use on Erf 1068 is predominantly extensive agriculture (i.e. livestock grazing), with limited intensive agriculture (i.e. vegetable cultivation) practised in the south-west portion of the Mining Right Area (refer Figure 3). Land Use within the remainder of the Mining Right area includes the rehabilitated scree mined area, the existing logistical facility area, weighbridge and existing processing plant, with the current excavation area in the north-east. Access to the Mining Right area is via a gravel road traversing Erf 1068 and Rem Erf 293 to TR2082/ R43 +-850m south of the Mining Right Area (refer Photo 6). Surrounding land use is a combination of extensive agricultural (i.e. livestock grazing) and intensive agriculture, including vineyards and orchards, as well as wilderness on the mountain slopes.

1.7. Surrounding Land Ownership

The land ownership abutting Erf 1068 (i.e. Stanford Quarry) includes the following as depicted in Figure 4, noting that properties both to the north (i.e. Erf 1069) and the south (i.e. Rem Erf 293) are also owned by The Richard Metcalf Family Trust, owner of Erf 1068.

Property	Owner
Erf 1068 (Stanford Quarry)	**Richard Metcalf Family Trust**
Erf 1069	Richard Metcalf Family Trust
Rem Erf 293	Richard Metcalf Family Trust
RE/646	Robert Stanford Vineyards (Pty) Ltd
Erf 320	Grand Trust
Erf 321	Astrodome Investment (Pty) Ltd

2. CONSENT USE MOTIVATION APPROACH

The approach taken to motivate this consent use application is informed by the following:

(i) Historical Development of Stanford Quarry
Prima Klipbrekers (Pty) Ltd, now Afrimat Aggregates (Operations) (Pty) Ltd have operated the Stanford Quarry over the past 20 years since its licensing in 1996 as a alluvial scree slope

excavation, together with the necessary crushing and sand washing plant, workshops and offices, loading area and weighbridge.

With depletion of the scree deposit (+-2001) the option to crush shot rock from the adjacent rock outcrop through drilling and blasting of the western face of the eastern mountain spur was pursued, with full use of the existing plant and logistical facilities being made and enabling the rehabilitation of the depleted scree material excavation. This led to the 2002 Environmental Management Programme Report (EMPR) being compiled as the management tool for such mining and rehabilitation as illustrated in Figure 5, with approval on 5 December 2002. Between 2002 and 2010, through partial mine closure, rehabilitation of the alluvial scree mining area took place, together with mining of hard rock from the western face of the eastern spur and the closure/ rehabilitation actions as detailed in Figure 6. In 2011 a "Conversion of Mining Right" requirement of the Mineral and Petroleum Resources Development Act (2002) and amendments to the hard rock excavation area as required subsequent to an Environmental Performance Assessment conducted in October 2011 (i.e. retaining a pillar within a no-go area, re-packing the stream channel bank and amending the extent of excavation to reduce breaking the ridge line and limiting visual exposure) (refer Figure 7). The EMPR – October 2011 Update (of the September 2002 EMPR), approved as per the issuing of the Converted Mining Right on 20 January 2012, has been the management tool for the Stanford Quarry from 2012 to 2016, with such EMPR to provide ongoing management for life of mine, its decommissioning and rehabilitation.

(ii) Participation Process
The compilation of the 2002 EMPR included a broad range of Interested and Affected Parties (I&APs) in order to achieve support for its activities, inclusive of National and Provincial Departments, the Overberg District Council and the then Stanford Municipality, as well as a public participation process including the Stanford Conservation Trust, Bluemoon Community, Alien Control Services, Kleinriviersberg Conservancy, Walker Bay Conservation Forum and the Hermanus Lagoon Property Owner's and Association.

(iii) The Stanford Quarry's support of the construction industry in the Overstrand area is demonstrated by its supply of concrete aggregate over the past 20 years, especially considering the nearest alternative sources of such material being Villiersdorp and Grabouw.

(iv) Uninterrupted operation of the Stanford Quarry since 1996 to present, with little to no recorded objection to such operation in the area.

(v) Current development status of Stanford Quarry reflecting +-98% of its permissible excavation footprint as illustrated in Figures 2 and 3.

(vi) No request/ demand for land use authorisation of the quarry from the local authorities (local and district) despite their participation during the quarry establishment, nor any record of the 24,8ha mining land use in the Municipal SDF or as a "non-conforming" land use in the Municipality's Zoning Scheme or land use records over the past 20 year-period.

The above clearly demonstrates a long-standing, regionally recognised and compliant land use. Accordingly, given the request for land use authorisation, this application is informed by the following:

(i) The consent use application is not for a "green-fields" or "new quarry", but rather for the legal regularisation of an "existing quarry".

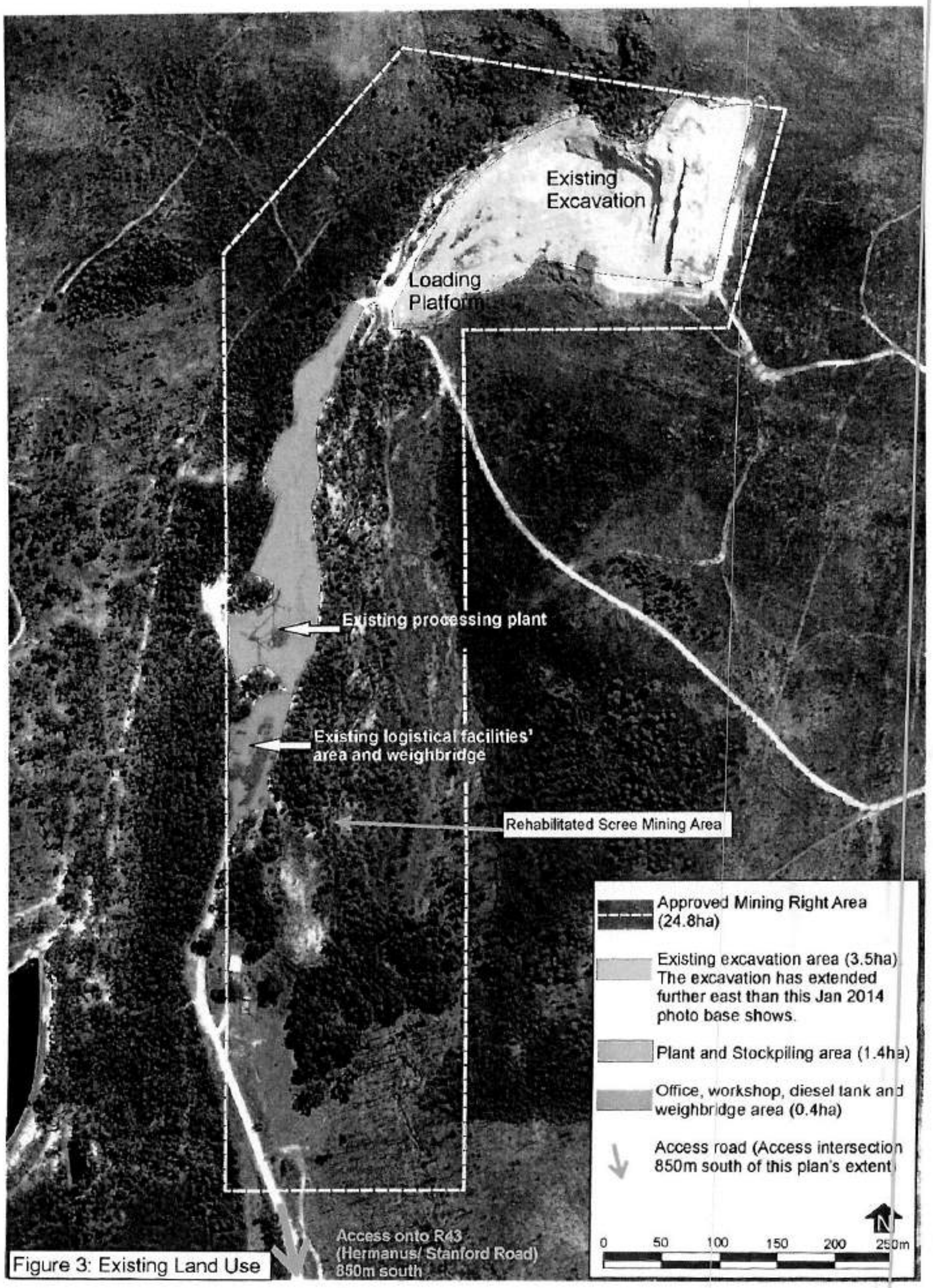


Figure 3: Existing Land Use

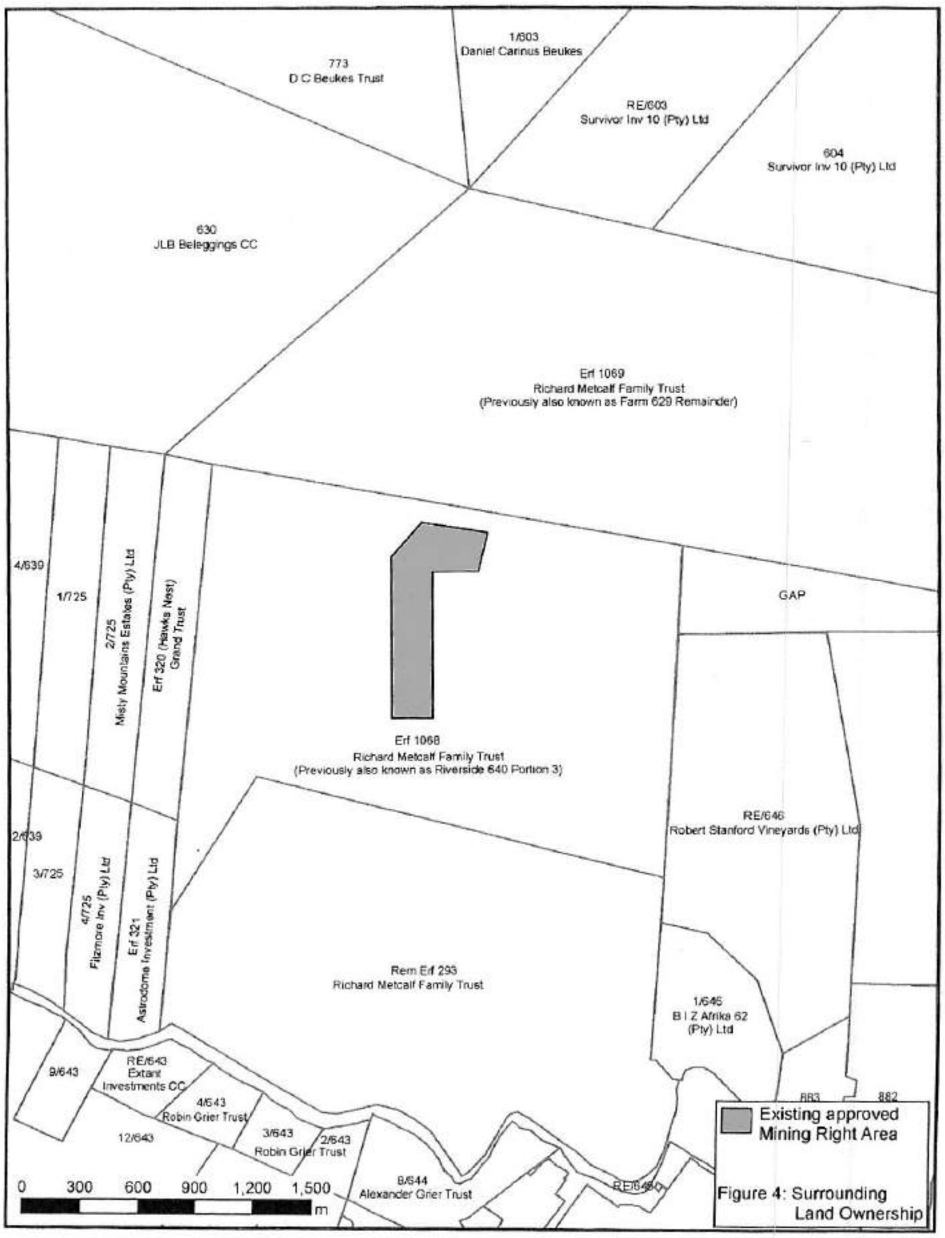


Figure 4: Surrounding Land Ownership

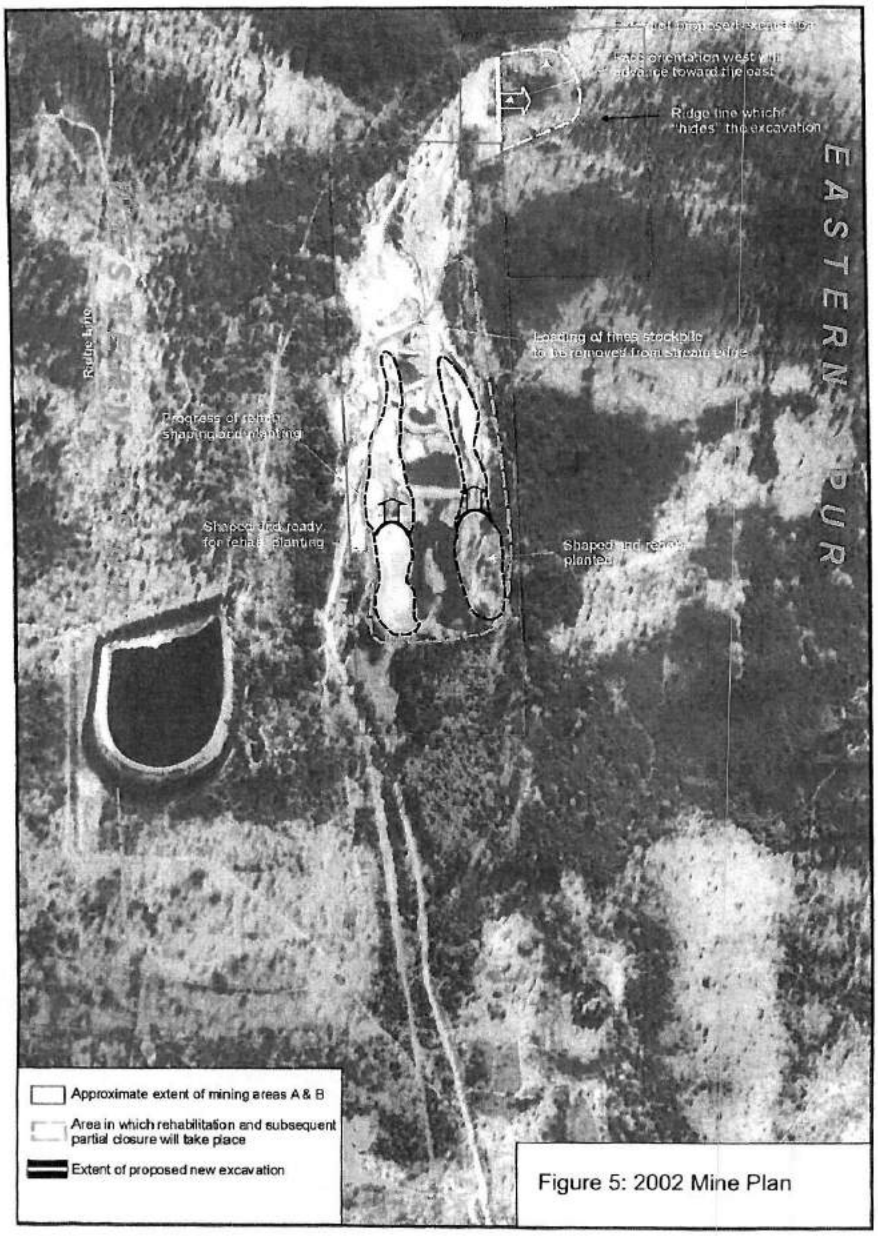


Figure 5: 2002 Mine Plan

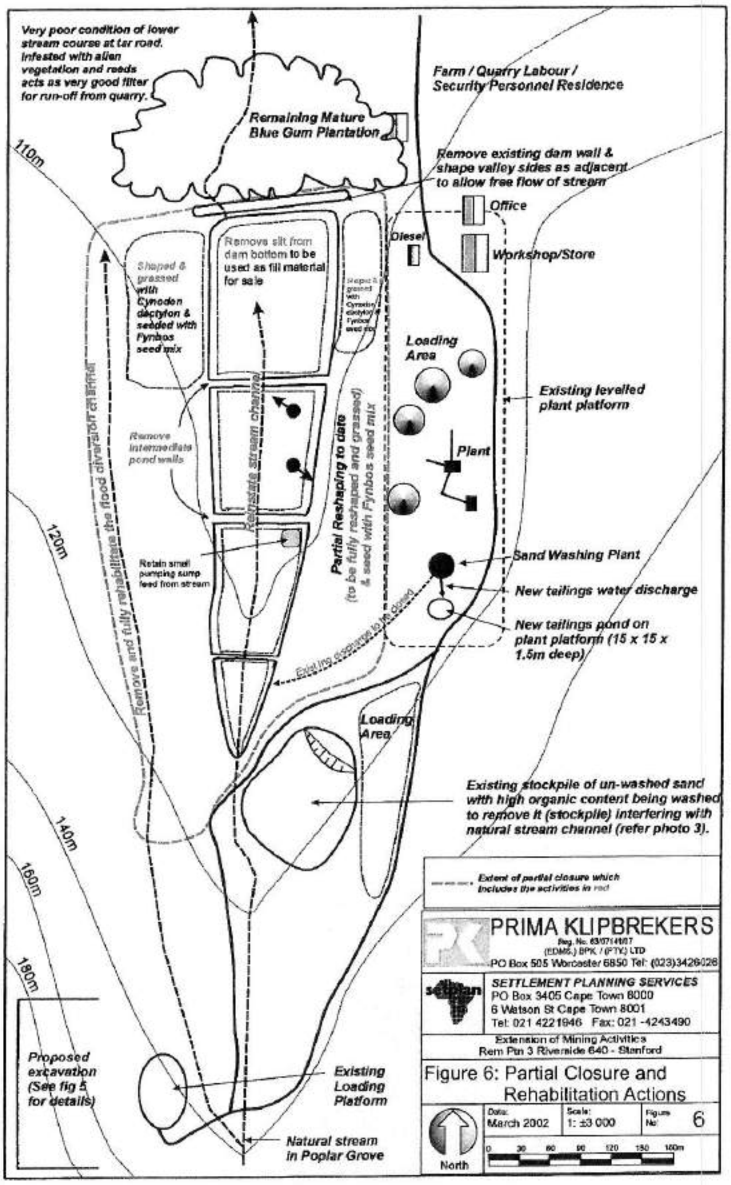


Figure 6: Partial Closure and Rehabilitation Actions

(ii) The motivation approach will focus on the past and current performance of the quarry within the environmental, social and economic resources as opposed to the assessing the ability of such resources to accommodate a "new quarry" and the current policy/ regulatory requirements for quarry location which cannot be applied retrospectively to historic quarry establishment.

3. MINE AND REHABILIATION PLANS

The Stanford Quarry is located within a 24,8ha Mining Right Area as per the issuing of such right in 2002 and the issuing of the Converted Mining Right on 20 January 2012. Figure 2 illustrates the location and extent of the Mining Right Area as approved by the Department of Mineral Resources (DMR).

3.1. Mine Site Development Plan

The historical development of the Stanford Quarry as detailed in Section 2 (i) presently manifests in the 2011 Updated Mine Layout Plan illustrated in Figure 7, which represents the Mine Site Development Plan and depicts the main components comprising such plan, including:

(i) The excavation development as detailed in Figure 8: Updated Excavation Plan (2011), with the following being noted:
   - The excavation/ mining does not extend to the edge of the Mining Right Area but is set by a Limit of Excavation Line, that as a mining restriction as instructed by the DMR Inspectorate, with activity outside such line solely used for topsoil stockpile berms (refer Annexure D).
   - The excavation comprising "benches" in order to facilitate safe mining practice, avoid the visual impact of a high "cliffed" face and to facilitate revegetation on the benches and limited height faces.

(ii) The north-west "pillar" reservation, with such area being fenced off as a "no-go" area to provide a broader buffer to the Montane Forest of the waterfall area to the north-west (refer Photo 4).

(iii) Topsoil management in excavation advance including topsoil and vegetation overlaying the upper face and topsoil removal to perimeter topsoil berm stockpiles, together with the extent of both the "excavation limit" and Mining Right Area boundary being clearly beaconed.

(iv) Logistics, plant and stockpile area, that is adjacent to the rehabilitated previous depleted scree mining area, with such logistics including the crusher plant, stockpiles of mined material (i.e. various grades/ sizes), a workshop/ store, washbay, office, bunded diesel tank and weighbridge (refer Photos 1, 2 and 3).

(v) Stormwater management comprising drainage via shallow stormwater/ silt cut-off channels to retention ponds/ silt traps prior to controlled/ piped discharge to the stream.

Production at the Stanford Quarry presently averages 3264 tons/ month (i.e. January-May 2016). Despite the Table Mountain Sandstone resource deposit within the hard-rock excavation area (i.e. 565290m^3 as per 2011 reserve estimate), the life of mine is restricted by the following:

- Continuous mining resulting in the excavation footprint having reached +-98% of the maximum excavation surface area (i.e. as per the "limit of excavation line").
- Increasing the depth of the excavation will result in loss of benches, with an exposed "high cliff" excavation face increasing visual impact, restricting revegetation of the excavation area in the absence of benches and reducing the safety and use of the excavation area post-mining (i.e. for humans, livestock and fauna).

Accordingly the "life-on-mine" is restricted, with the only realistic option being the expansion of the excavation area eastwards subsequent to completion of the current mining phase.

3.2. Decommissioning and Rehabilitation Plan

Decommissioning and rehabilitation of the quarry included(es) the following two programmes:

(i) The partial mine closure to restore the depleted scree mining area, with rehabilitation actions between 2002-2012 as per Figure 6, together with retaining the logistical, plant and stockpile areas to support the hard rock (excavation) mining. Such rehabilitation focussed upon reinstating the stream channel subsequent to removal of dams, removal and fully rehabilitating the flood diversion channel and fully re-shaping and grassing the area.

(ii) The decommissioning and rehabilitation of the hard rock excavation as detailed in Figure 9: 2011 Updated Decommissioning and Rehabilitation Plan for the Hard Rock Excavation to include the following:
  - Trimming the perimeter edge to soften visual impact.
  - Ripping the hardened working/ loading platform, covering with previously removed/ stockpiled topsoil and seeding with a specified mix.
  - Re-topsoiling the final excavation floor subsequent to applying grit/ fines and the revegetation as specified.
  - Loading topsoil over benches of the final excavation and revegetation as specified.
  - Retaining the haul road as a farm access road.
  - Removal of all plant and structures (logistical area), scarifying the level platform and rehabilitation to a pasture.

3.3. Post-Mining Land Use

The post mining use, subsequent or sequential to rehabilitation includes the following as depicted in Figure 10: Post Mining Land Use:

(i) Rehabilitation areas to pasture use, including:
  - Excavation floor
  - Loading platform
  - Logistics and stockpile area

(ii) Reintegrating revegetated excavation berms and faces into the surrounding wilderness area.

(iii) Reintegrating the general Mining Right Area into the surrounding wilderness area.

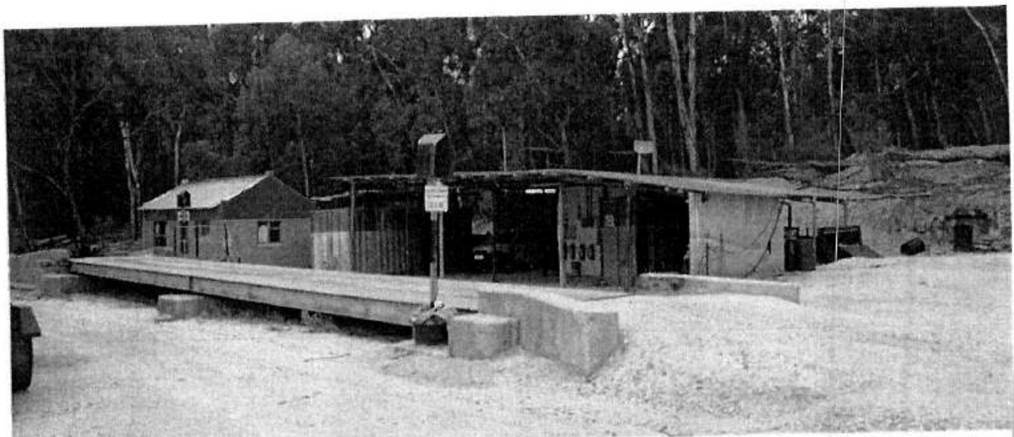


Photo 1: Existing logistical facilities including office, small workshop and stores. Weighbridge in the foreground.

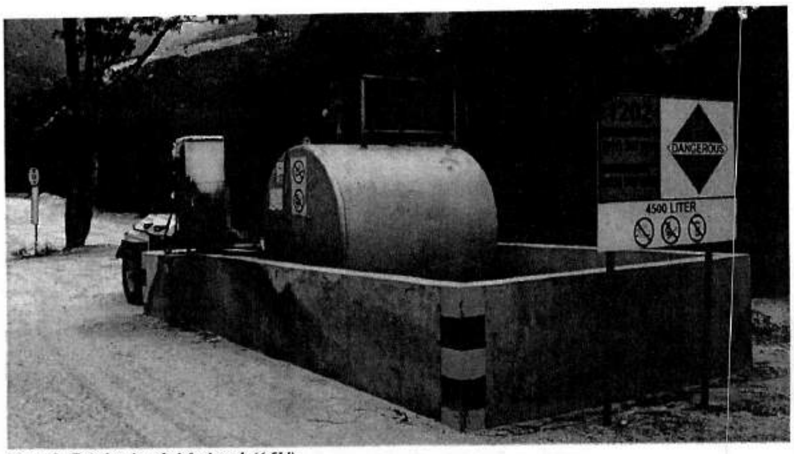


Photo 2: Existing bunded fuel tank (4.5kl)

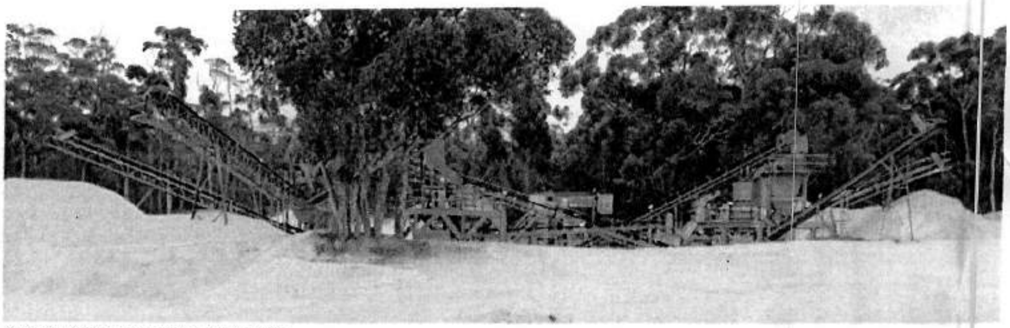
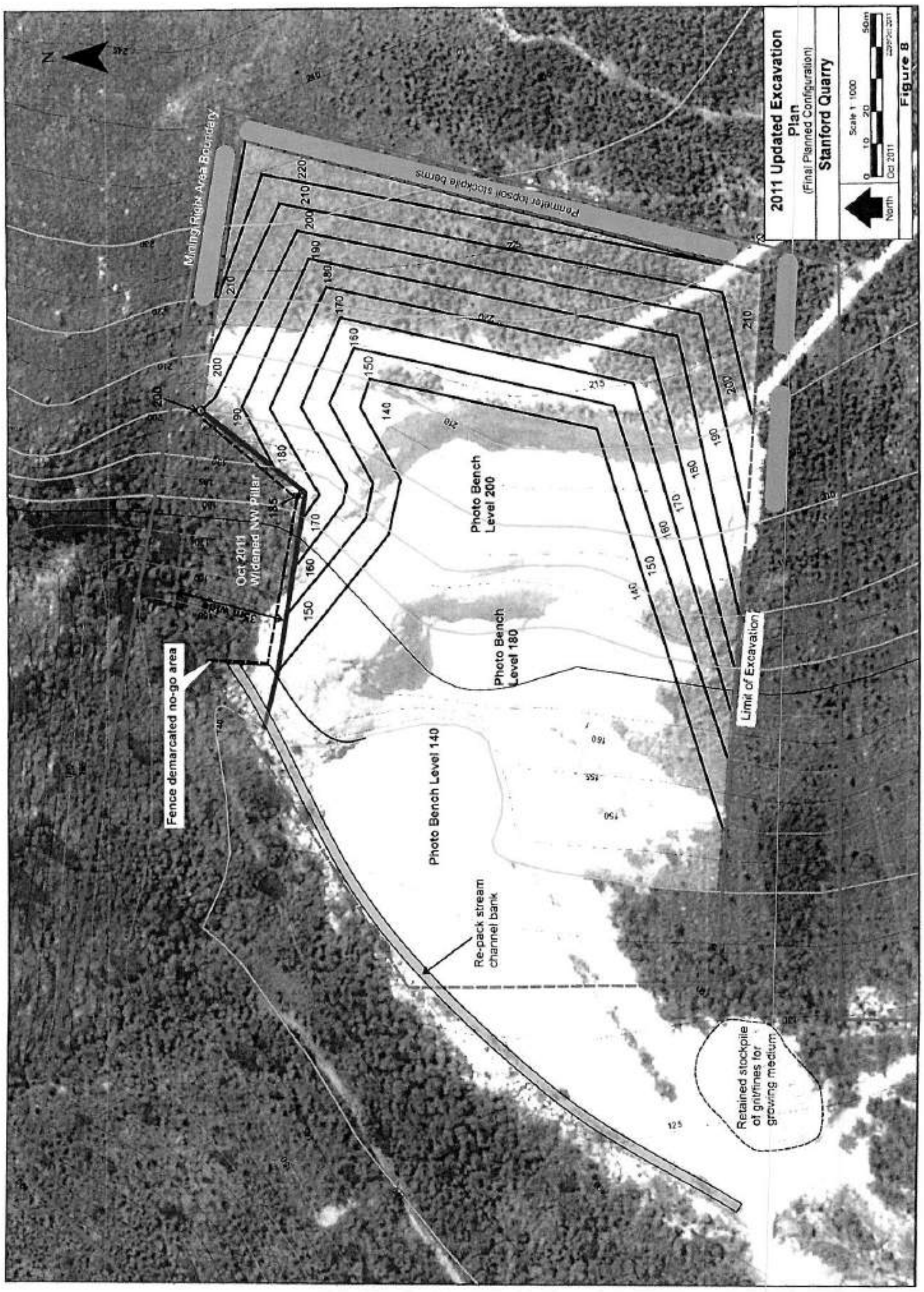


Photo 3: Existing processing plant on site

ANNEXURE B 14/38



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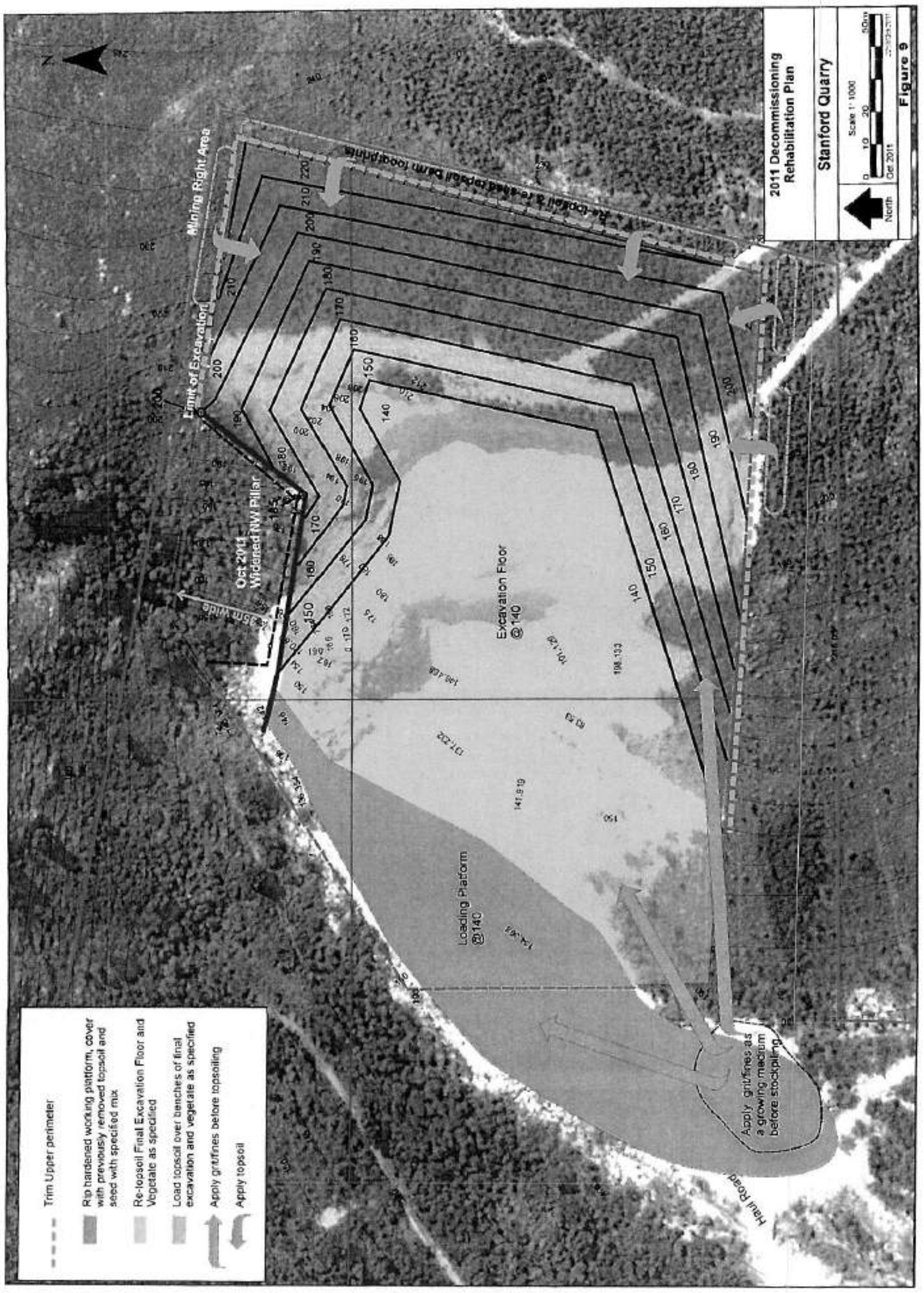

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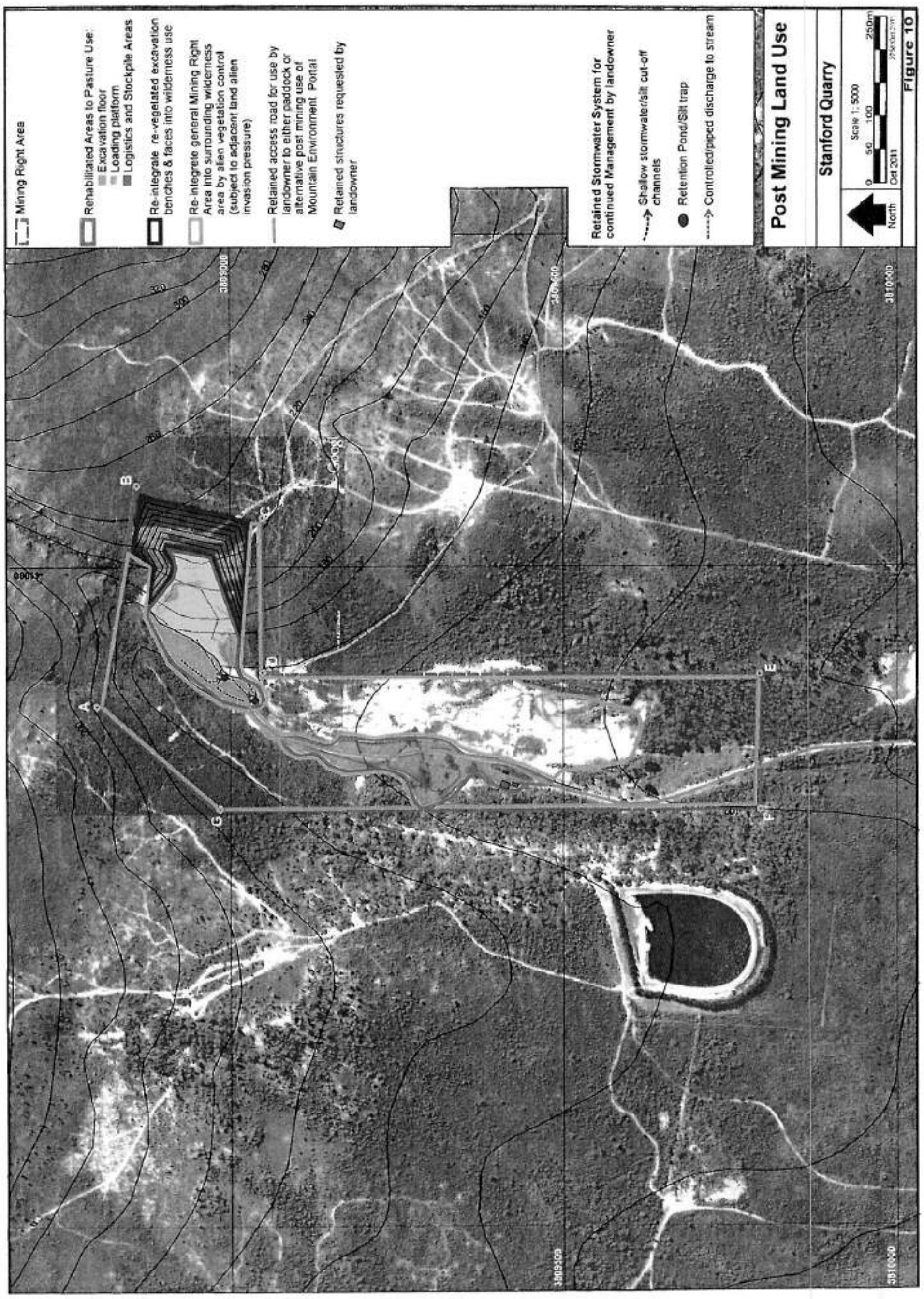


(iv) Retaining access road for use by landowner to either access paddocks or alternative post-mining use of mountain environment portal.
(v) Retaining any structures requested by the landowner
(vi) Retaining the stormwater system for continued stormwater management by the landowner, including the shallow cut-off channels, retention pond/ silt traps and controlled/ piped discharge to the stream.

4. DESIRABILITY

The following puts forward the desirability to consider this consent use application and to permit continued mining on Erf 1068, Stanford, for the remaining "life-of-mine". Such desirability is informed by the consistency of the proposed land use put forward in this application with Overstrand Municipality's spatial policies and criteria for deciding on applications (i.t.o. section 68 of the Overstrand By-Law on Municipal Land Use Planning (2015)).

4.1. Consistency with Overstrand Municipality Policy

(i) Consistency with the Overstrand Municipality Spatial Development Framework (SDF, 2006), the Overstrand Integrated Development Framework (2014) (IDF, 2014) and the Draft Overstrand Environmental Management Framework (2013)(EMF, 2013).

The Mining Policy as put forward in the Overstrand SDF (2006) recognises that given the existence of "sand mines" often being situated in visually prominent or environmentally sensitive areas, a need exists to find a balance between economic and environmental considerations given the importance of mineral exploitation to the construction industry, as well as other industrial applications. The policy further emphasises the following guidelines for the location of mines:

- Avoid mining activities in/ near and implement mitigation measures if permitted for;
  - environmentally sensitive areas i.e. irreplaceable and vulnerable areas according to the bioregional planning model, especially in Conservation I and Conservation II areas;
  - visually prominent locations;
  - areas with prime and unique agricultural land;
  - ecologically vulnerable areas;
  - areas in view of identified scenic routes; and
  - sensitive hydrological systems.

  Such policy is reflected as follows in the SDF (2006) and subsequent policies.
- The Overstrand SDF (2006) and Overstrand IDF(2014) in their respective policies and objectives (i.e. SDF Policy P15.1 and IDF EO2 Objective "protect biodiversity and agricultural resources") put forward the following consideration for mining: "The desirability of designating mining areas should take 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 agricultural production, as well as the impacts on existing rights of neighbouring property owners".

- The Overstrand IDF (2014) (E02 Objective) emphasises the following: "Prevent unsustainable change in land use of biodiversity rich rural areas, existing agricultural activity and soil with agricultural potential to other uses".
- Spatial Planning Categories (SPCs) as put forward in the Overstrand SDF (2006) and Critical Biodiversity Areas (CBAs) as put forward in the Overstrand IDF (2014) place the following restrictions on mining as illustrated in Figures 11 and 12 respectively, noting the following:
  - Overstrand SDF (2006); major portion of Mining Area is located in "Conservation-Agriculture Buffer" which has as its purpose maintaining ecological and evolutionary process, safe-guarding valuable ecosystem services, protecting landscapes of visual value, providing a buffer between the "conservation" and "agriculture core areas" and accommodating ecological corridors. Accordingly the SDF puts forward requirements for where mining rights exist and mining would result in the transformation of threatened ecosystems, including; off-sets being provided, transformed areas being subject to stringent rehabilitation measures, monitoring and auditing, all informed by specialist botanical input and input of the Municipality in compilation of the EMPR, with the objective of the rehabilitation being restoring the natural veld within the transformed areas.
  - Draft Overstrand IDF (2014); The draft IDF, a component of the Overstrand IDF: Towards 2050 in putting forward the land use categories that should not be supported, lists mining and mineral extraction as follows within the following land classification:

Core 1	Core 2	Buffer/ Other Natural	No Natural Remaining
• Mining and mineral extraction	• Mining and mineral extraction	• Loss of >1ha through transformation of any natural or near natural habits comprising critically endangered or endangered vegetation types or within ecological corridors. • Mining and mineral extraction	• Loss of >5ha through transformation of natural or near natural habitats in rural areas, subject to mitigatory measures informed by specialist assessments (e.g. groundwater)

Consistency of mining on Erf 1068 Stanford with Overstrand policy is limited by the following:

- The commencement of mining activities (1996) and compilation of the EMP (2002) inclusive of the Mine Plan, pre-dating current relevant policies (2006-2014), together with the fact that the current mining has reached +-98% of its development footprint restricts the retrospective application of such policies to this application.

- The policies, while putting forward a Mining Policy and spatially depicted land use categories not suitable for mining, do not reserve areas for exploitation of construction materials, with such areas only being confirmed through prospecting and site selection.
- Minerals being place/ resource-bound, a critical location consideration for strategic minerals (e.g. construction materials), together with distance from the consumer market (i.e. delivery cost and transport impact on regional/ district road infrastructure and user safety) also being a strong location consideration.

However consistency is being and can still be achieved with Overstrand policy in respect of mining on Erf 1068 Stanford through the following:

- The current mining operations as per the EMP include mitigation measures to address impacts on biodiversity, water resources, visual impact, noise, etc., through management of identified buffers, "no-go" areas, restricted excavation area, top-soil management, hydrocarbon management, dust and noise management, etc. (refer sections 3.1, 3.2, 3.3 and 4.2).
- The limited operational period of mining does not preclude the re-instatement of pre-mining land capability given the Rehabilitation Plan (refer Figure 9) as per the EMP, with land to be restored to either its agricultural or wilderness use land capability (albeit with an altered habitat type). The completed rehabilitation of the depleted scree mining area demonstrates such restoration.
- The EMP being inclusive of stringent rehabilitation measures, monitoring and auditing, including provision for an Environmental Monitoring Committee (DMR, Municipality, land owner participation) to ensure appropriate topographical and land use/ capability reinstatement post-mining.
- The Stanford Quarry achieving a balance between the benefits of mining a strategic resource and the long-term environmental costs thereof given the mitigatory and rehabilitation measures in place.

(ii) Consistency with the Overstrand Municipality Zoning Scheme (2013).

Erf 1068 and the surrounding properties are zoned Agricultural Zone 1: Agriculture (AGRI) in terms of the Overstrand Municipality Zoning Scheme. The proposed land use (i.e. mining) is consistent with the Agricultural Zone 1 (AGRI) as it is a consent use to such primary use. Mining, apart from being place/ resource bound, is generally considered favourably as a consent use within the agricultural zone given no dedicated "mining zone" and given agriculture's un-built surface, space extensiveness and remoteness from urban or highly populated areas. Furthermore, mining is often restricted by other resource limitations (e.g. topography and sensitive environment) and a land use-period ("life-of-mine") informed by both its acceptable level of impact and the mineral reserve.

Accordingly, a consent use to permit mining for a defined period (i.e. "life-of-mine") within Agricultural Zone 1 (AGRI), as provided for in terms of sections 16(2)(o) and 21(3) of the Overstrand By-Law on Municipal Land Use Planning (2015) will achieve consistency within the Overstrand Municipality Zoning Scheme regulations.

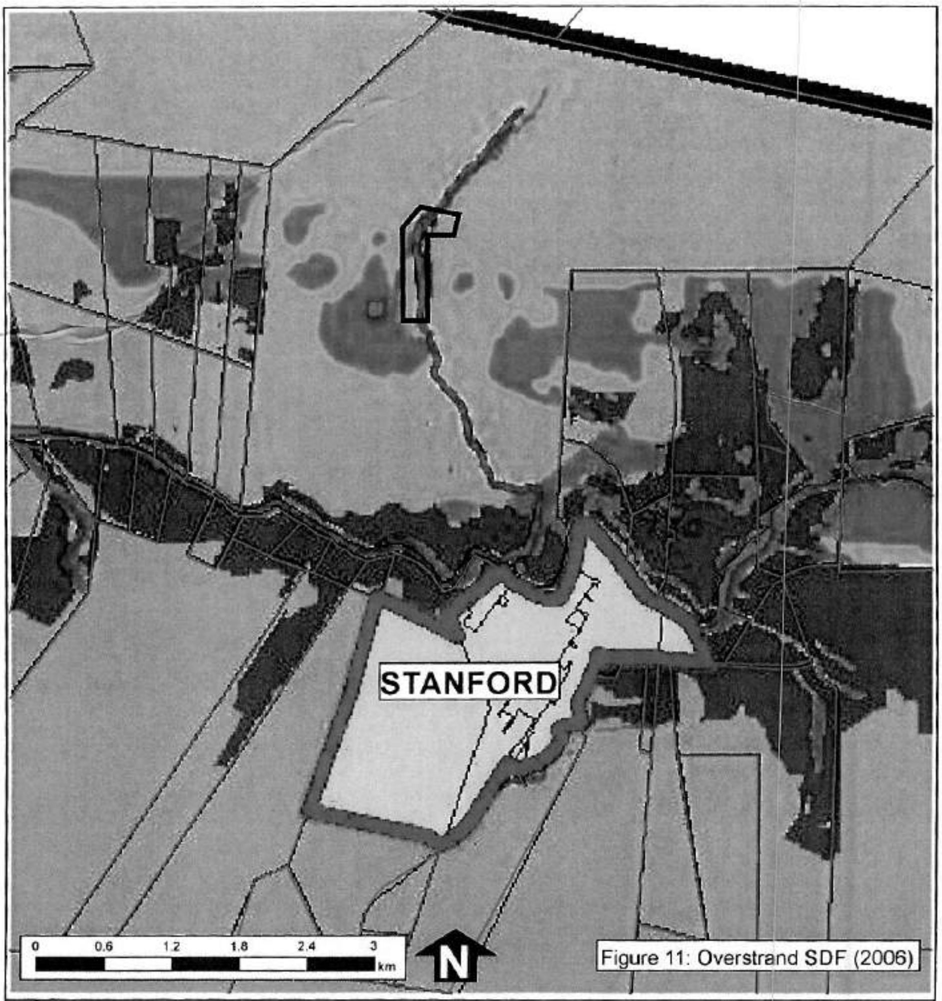


Figure 11: Overstrand SDF (2006)

Existing Mining Right area

Definitions of Spatial Planning Categories copied directly from SDF

Conservation 2: Represents area of highest conservation status. Includes unique areas, relatively large areas, clustered and / or discrete area which are irreplaceable in terms of achieving national biodiversity conservation objectives, and/or areas which provide valuable ecosystem services in terms of particularly maintaining water production and /or quality, protecting soils, regulating floods. Land is in private ownership.

Conservation - Agriculture Buffer: Rural, modified landscapes of relatively high value in terms of achieving national objectives for biodiversity conservation, particularly in terms of maintaining ecological and evolutionary processes outside of conservation spatial planning categories, and safe-guarding valuable ecosystem services such as production of harvestable goods, water production and / or protection of water quality, protecting soils, regulating floods, buffering coastal areas (etc). In addition it contributes to protection of cultural assets (specifically landscapes of visual or heritage value). These areas provide and buffer between the conservation and agriculture "core" area and represent ecological corridors, vegetation transition area and /or important areas for delivery of ecosystem goods or services.

Core Agriculture: Rural landscapes of largely transformed areas which may contain remnants of critically endangered or endangered natural vegetation which may have value in terms of food production, maintaining ecosystem services and protecting heritage assets. Land is in private ownership

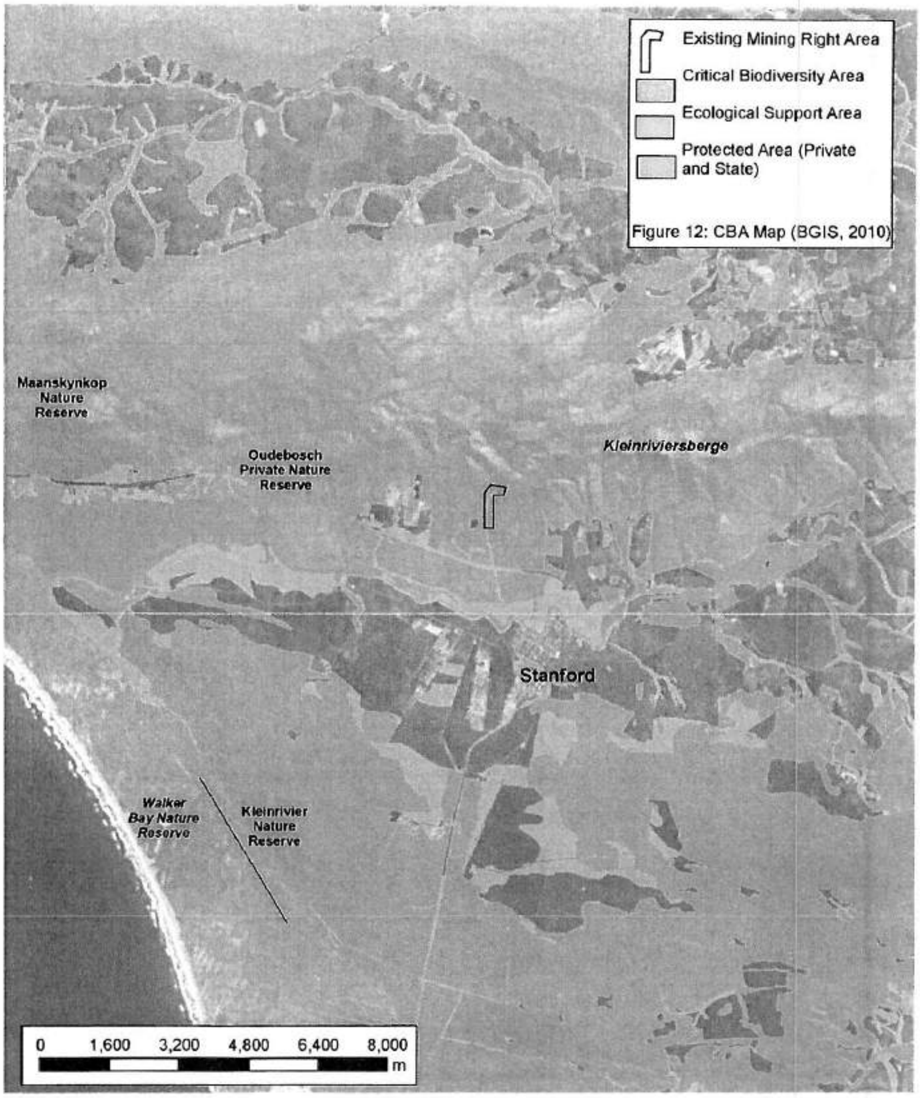


Figure 12: CBA Map (BGIS, 2010)

4.2. Considerations Criteria

There is compelling evidence as to the existing and on-going proposed mining on Erf 1068 having met and continuing to address the following necessary criteria in consideration of this consent use application, as presented below and detailed in previous sections of the report. Accordingly, this section provides a review of the attributes of Erf 1068 and its surrounds which initially informed the quarry consideration (2002) and its development and mining to date, as well as the identification of impacts and mitigatory measures put forward to address such impacts to date and for the remainder of "life-of-mine".

4.2.1. Impact on Biophysical Environment

(i) Mineral Resource Occurrence

The demand for construction aggregate in the fast developing greater Hermanus area originally prompted the need for a hard rock quarry. Several potential sites were prospected, including the Afdaksrivier Farm (deep overburden), the dis-used Mount Horeb quarry (located in a conservation area), Gansbaai area (exposed slope with severe visual impact consequences), Shaw's Pass area (long gravel haul road), Hemel-en-Aarde Valley (moist ground conditions) and Erf 1068 Stanford (suitable and accessible deposit). On Erf 1068 sandstones are faulted along the scarp, located against the granite which underlies the scree slope between the foot of the mountain and the R43.

The geology underlying the Stanford Quarry has proven suitable for mining over the past 20-year period, with the proximity to its market (i.e. Hermanus and surrounds) further ensuring its success given the direct impact of transport distance on the delivered material cost borne by the customer. The 2011 reserve estimate was 565 290m^3 tight or 1300 000 tons, with the current 2016 reserve estimated at 122 727m^3 tight or 270 000 tons, affording an additional mine lifespan of +-5 years (i.e. 2016 to 2020-21).

(ii) Topography and Visual Amenity

- **Topography:** The existing excavation is located on the southern lower slopes of the Kleinrivier Mountain, geologically made up of Table Mountain Sandstones. The existing excavation is located on the steeply sloping west-facing slope of a tributary to the Kleinrivier. The current excavation has its base at level 120m amsl and rises to its upper level at contour level 235m. There are several ridgelines which serve to reduce / eliminate visual impact from the south and south-west (refer Figure 13 and Photo 4).
- **Visual Impact:** The existing visual impact is ascribed a rating of **moderate** given the following factors:
- The Visual Catchment Area is contained by natural ridgelines and despite the high lying status of the excavation, the Catchment area is restricted to short portions of the R43 before and after Stanford. The upper face of the existing quarry is visible from at least 1 residence to the south-west (possibly to 2 more) at a minimum distance of 2.7km. In recent discussion with the landowner of Erf 321 to the south-west, the landowner expressed a high level of dissatisfaction with the visual impact afforded by the current mine excavation (refer Figure 15). Photos 7 and 8 show the view of the quarry faces from the R43 at a distance of 6.4km and 2.1km respectively, with Photo 8 being from the vicinity of Erf 321.

View catchments are typically divided into 3 Zones of Visual Influence (viz Foreground, Middle Distance and Background). Foreground measures about 800m. The Middle

Distance measures up to 6 500m where colours textures and patterns are still visible. The background zone extends beyond 6500m and only landforms are visible at this distance. In this case the current visual impact from the R43 as well as surrounding residences are located in the Middle Distance.

- The Visual Absorption Capacity[1] is rated as follows. Note the higher the visual absorption capacity, the less visual impact will occur;
    a. very High for topography given the presence of the ridges which hide sections of the proposed excavation for views from the south;
    b. very Low for vegetation given the presence of natural veld around entire area; and
    c. Medium for settlement pattern, given the extensive agricultural land use practices which occur north of the R43 near to Stanford.

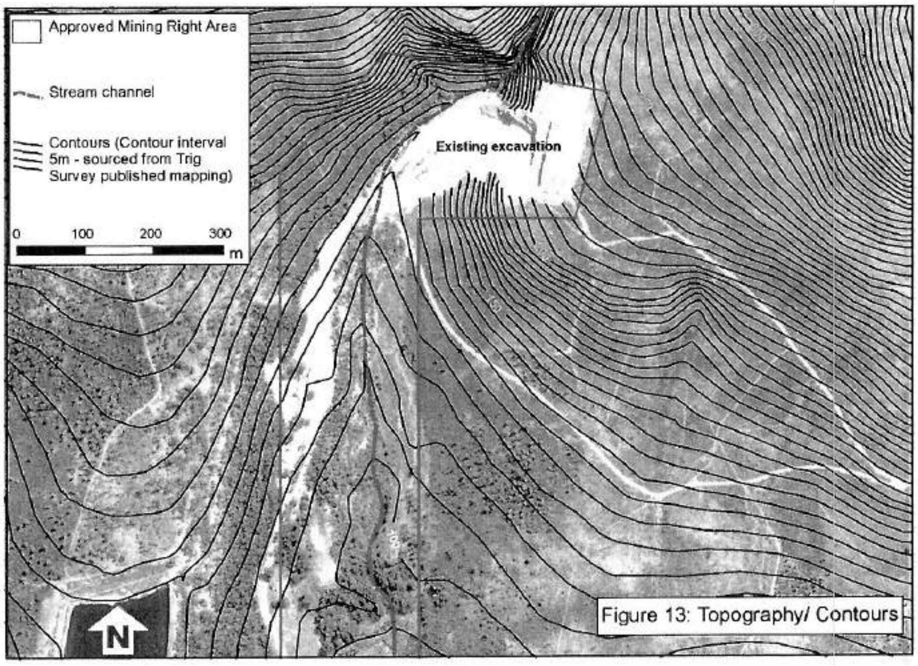


Figure 13: Topography/ Contours

[1] The extent to which other elements in the landscape may camouflage the development or absorb the impact (such as topography, vegetation or settlement patterns)

The following photos show the existing views of the current excavation / southern berm from R43 (TR2802):

Photo 7: View of the R43 (between Stanford and Gansbaai) looking north. Note the presence of natural veld which does serve to increase the visual impact because of its low capacity to "absorb" any impact. This photo has been taken at distance from the disturbance and thus falls into the medium zone of influence. (55mm standard lens).

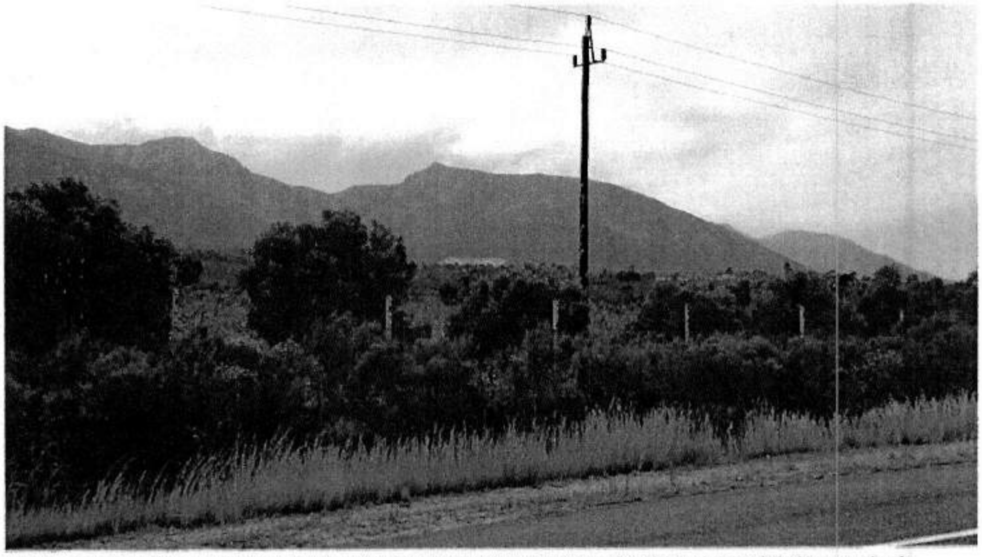


Photo 8: View from R27 from approximately 2.1km. Note the influence of existing ridges which for the most part hide this excavation for any views. (55mm standard lens).

Photo 9 is from the same location as Photo 8 using 300mm zoom lens.

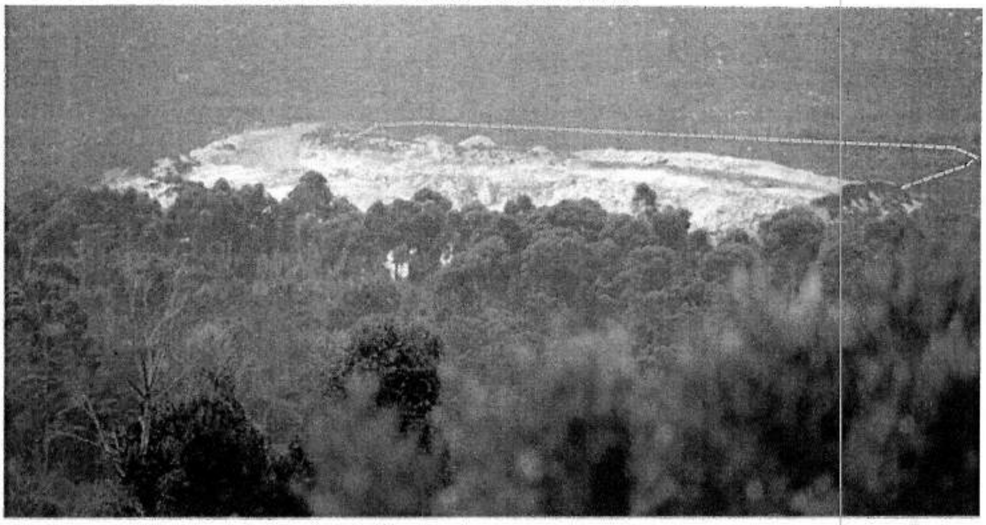


Photo 9: Zoomed in view of excavation (April 2016) (300mm lense)

Photo 9 shows a limited existing visual impact, but note the presence of current bluegum tree-line obscuring much of the faces. The risk of increased visual impact does exist should these trees be felled or burn, but note that the actual visual impact to the human eye, is closer to Photo 8 than Photo 9's zoomed in view.

Photo 4: Excavation viewed from stockpile platform indicating the retention of the north-west pillar/ ridgeline and the south-western ridge line to restrict visual impact

Photo 5: Berm to restrict sand/ silt movement from road/ stockpile platform into stream valley

Photo 6: Existing quarry access off the R43

- **Mitigation:**

  During the past and current mining, the following mitigation measures have and are being put in place to reduce topographical and visual impact of the quarry and its operation.

  - Scree deposit and plant area:

    While the level platform created in the bluegum plantation, the excavation of the stream-bed scree deposit and the development of a series of dams had a negative impact on the topography, neither were visible from outside the farm boundary. Completed operational rehabilitation (2002-2012) of the sides of the excavation (shaping topsoiling and seeding), removal of the dam walls and sand washing outlet, reinstatement of the stream, closure/ rehabilitation of the stream diversion channel and reducing the number of road crossings of the stream from two to one has resulted in a well-shaped stream valley, with such area being reintroduced into the surrounding farm/ wilderness area through alien vegetation control. The plant site will be rehabilitated subsequent to mine closure (i.e. the excavation) as a level pasture above the valley. Accordingly the impact is **permanent but low.**

  - Hard rock excavation.

    To reduce the permanent impact of the cliffed excavation in the western end of the mountain spur the following mitigation measures have been put in place, some of which will be ongoing until mine closure:

- Set-back of the south-western boundary of both the Mining Right Area and "limit of excavation" as per DME Inspectorate restriction and agreement (refer Annexure D). Such retention of the south-western rocky ridge-line has been successful in reducing the visual impact of the excavation (refer Photo 4).
- Excavation method (buttress blasting) whereby as benches approach final perimeter positions, faces will be split to 10m high faces on 8,5m wide benches thereby providing a reduced visual impact compared to a single vertical high face.
- Softening of the cliffed face by topsoiling of benches and planting of Fynbos species on such benches, as well as reliance on acid staining by seepage and lichen growth on the generally moist south-facing bench faces.
- Retention of the north-west pillar (refer Figure 7 and Photo 4) and its fencing off as a "no-go" area to provide a broader buffer (pillar) to the Montane Forest and waterfall, thereby not reducing visual amenity in such area.
- Restricting height and slope of topsoil berms during "life-of-mine", together with seeding to achieve a "green" appearance.
- Removal of currently visible southern topsoil stockpiles and berms during topsoiling of the excavation benches post-mining (refer Photos 4 and 9).
- Reintegration of the excavation area to the wilderness function of the mountain despite it being locally impacted upon. Visual impact of the hard rock excavation is **locally permanent and high.**

(iii) Soil

- Lost topsoil in the scree mining area was replaced through the spreading of existing material and by the scarifying of portion of the plant area during rehabilitation of the scree area.
- Topsoil in the hard rock excavation area is dozed to topsoil stockpile berms on the eastern, northern and southern "excavation limit line", with such berms being limited in height to 2,0m (north-south berm) and 1,5m (southern and northern perimeter berms), with topsoil berms sloped at between 1:2 and 1:3 to reduce visual impact (refer Figure 7). Such berms are topsoiled with fresh topsoil containing seedbank (upper 150mm horizon) and supplementary seeded to ensure their revegetation. Furthermore, given the full life-of-mine duration of topsoil stockpiling, such topsoil is rejuvenated by addition of mulch with supplementary seeding and specific species transplant from adjacent areas.

(iv) Vegetation

The status of, impact on and management of natural vegetation was informed by a botanical assessment conducted by Dough Jeffrey Environmental Consultants in April 2001 (refer Annexure E), with the following impacts identified:

- The Scree Mining Area

  Judging from the remnants of vegetation which surrounded the existing site as consisting of Bluegum, Port Jackson and Rooikrantz thickets and severe Poplar invasion of the stream, mining activities in the scree area had no impact on indigenous vegetation, concluding the mining impact was **nil** on indigenous vegetation.

- The proposed Hard Rock Excavation (i.e. 2002 and onwards)
  Given that 60% of the 2,0ha to be destroyed by the excavation consisted of burned silky and spiky hakea, with the fynbos having been burned a by extremely hot fire in the area, the loss of fynbos by this excavation was difficult to assess. Vegetation assessment prior to the fire revealed the rocky area vegetation to consist mainly of Rhus bush species with Malvas (*Pelargonia sp*), but severely impacted by Silky Hakea.

The open Fynbos (lower mountain Fynbos) comprised mainly of short Restios, Ericas and small bulb flowers (Gladioli, etc.), but this was severely invaded by Spiky Hakea to the south and Pines further up the slope.

The specialist botanist assessment classified the hard rock site conservation value as **locally high and moderate** in regional and national terms.

In light of invasive species and the restricted area of the impact, impact was considered **moderate but permanent.**

Accordingly, Mr. Nic Helme who conducted the survey of the site in April 2001 concluded the following:

"Although the site has a high diversity of indigenous plant species, none of the species appears to be a local endemic, and none is RDB listed. The habitat is widespread in the mountains from Betty's Bay to Gansbaai, and it is thus concluded that the proposed development will have a ***low regional impact*** *on the flora."*

The following mitigation measures were suggested:

- *"All disturbance should be limited to an area at least 30m from any Afromontane Forest patches (in the gorges).*
- *Disturbance to the stream should be minimised.*
- *All alien plants (as listed) within 100m of the excavation should be manually removed by handpulling when young, or cutting down when older. This should be done both at the commencement of quarrying, and at the end of the quarrying period. "*

Accordingly, the following Vegetation Management Programme was put in pace within the 2011 EMP Update, with such programme having been implemented within the Mining Right Area to date:

(i) <u>Avoidance of Unnecessary Impact on Fynbos</u>

In order to avoid unnecessary impact on natural vegetation the following prescriptions are now included in addition to those mitigation measures suggested above by the specialist botanist:

- No equipment movement shall take place outside of designated disturbance areas nor off roadways.
- The farm road used as access road to the upper eastern excavation shall be maintained with side drains and mitre drains to avoid concentrated stormwater discharge, erosion or siltation of adjacent fynbos.

- The October 2011 north-west mining pillar limitation as per Figure 7 must be respected as the fynbos on this steep slope is extremely vulnerable to disturbance and will not allow rehabilitation if disturbed.
- No material may be tipped over any slope edge other than in a designated tipping area within the working area.
- Topsoil removal and stockpiling in accordance with the topsoil management specifications of as per section 4.2.1 (iii) and Figure 7 is fundamental to revegetation during rehabilitation to re-establish fynbos.

(ii) October 2011 Alien Vegetation Control Programme

- Level of invasion. The October 2011 EPA reflected the high level of alien vegetation invasion notably in the following areas:
  - Re-growth in the 2002 rehabilitated scree excavation area.
  - Significantly increased density of Pine, Australian Myrtle and Spiky Hakea on the mountain slope adjacent to the mining area.

- Alien vegetation control and management.

  The difficulty of controlling alien vegetation in the mining area stems directly from the continuous invasion from the highly impacted areas immediately surrounding the mining area and the general high level of alien species in the Stanford area. Notwithstanding this continuous threat, the EMP does require that the mine controls alien infestation and must ensure that alien control is evident at time of mine closure application. Furthermore, the soils are all rich in alien seed which germinates every year and requires sapling uprooting every year after germination.

  Hence, the following control and programme is specified:

  Conduct a first-year overall clearing programme followed each subsequent year for a full 3-years;

  - to prevent new re-grown bushes reaching seeding maturity and annually introducing new seed; and
  - to progressively reduce the seedbank through uprooting of annual germinated saplings 6-months after germination
    - Species to target:
      - Species to target in the stream channel and 2002 rehabilitated scree mining area include:
        - Port Jackson
        - Rooikrantz
        - Australian Myrtle
        - Spiky Hakea
        - Bluegums
        - Black Wattle
      - Species to target on the mountain slope within 50m of the Mining Right Area to act as a buffer:
        - Spiky Hakea
        - Pines
    - Method of control per species group:
      - Pine, Hakea and Rooikrantz: Slash saplings and cut mature plants and remove from site to burn elsewhere (under burning permit)
      - Port Jackson, Australian Myrtle and Blue Gum all of which re-sprout after cutting and therefore require poisoning:

  - Cut and remove wood
  - Treat cut stump with 2% Garlon mixed with diesel
- All saplings of identified species are to be uprooted and removed from site to avoid re-rooting

In the subsequent years (for three consecutive years) conduct the following annually:

- Uproot all saplings and remove from site.
- Slash all plants which have grown to seeding potential before they seed and treat those species which require herbicide after slashing.

(iii) Re-establishment of ground cover

As the presence of good ground cover or re-established fynbos provides resistance to alien invasion, the following ground cover re-establishment should be undertaken:

- On the mountain slope: Conduct fynbos seed collection under guidance of a landscape contractor during February to March, appropriately treat the seed and spread the seed during April.
- In the shaped 2002 scree gravel area after alien vegetation clearing:
  - Seed with kweek grass (*Cynadon Dactylon*) during warm weather preferably October – November by hand broadcasting and lightly raking the seed into the soil
  - Transplant runners of "Wild Fig" (*Carpobratus*)
  - Plant with Bitou seedlings (*Crysanthemoides monilifera*)

While the 2001 botanical assessment has informed mining (i.e. 98% of the excavation footprint), natural vegetation management and rehabilitation to date, the following extracts from a 2016 botanical assessment conducted by Sean Privett of Fynbos Ecoscapes of the area immediately abutting the eastern edge of the hard rock excavation serves to provide the following updated botanical data. Such data reinforces the need for stringent rehabilitation measures for the hard rock excavation area in order to present further loss/ impact on the surrounding Overberg sandstone fynbos.

- The Mining Right Area falls within the following major original distribution of natural vegetation types (BGIS, Database) (refer Figure 14):
  - Elim ferricrete fynbos (**critically endangered**) i.e. previous scree mining area, now rehabilitated.
  - Overberg sandstone fynbos (**critically endangered**) i.e. hard rock excavation area, currently being mined and having reached +-98% of the excavation footprint or 3,5ha in extent.
- Overberg sandstone fynbos being categorized at a national level as **critically endangered** and the natural vegetation surrounding the hard-rock excavation having a **high local** (Stanford-Kleinriviersberge) and **regional** (Overberg) conservation value owing to its **critically endangered** status and **high diversity** and **endenism.**
- Alien vegetation posing a major threat to the Overberg sandstone fynbos vegetation type.
- The Mining Right Area as illustrated in Figure 12 is situated within a Critical Biodiversity Area and an Ecological Support Area (stream-bed) (SANBI – Holness and

Bradshaw, 2010), with such area and aquatic feature to be safeguarded in their natural state if biodiversity is to persist and ecosystems are to continue functioning.

(v) Fauna

- <u>Scree Slope Area</u>
  Given the highly altered environment of Blue Gum thicket prior to mining of the scree slope, the highest impact is likely to have been on riverine micro-organisms, invertebrates and the stream ecological continuity between mountain and estuary. As no assessment was made in 2002, the impact cannot be properly assessed but on vertebrate fauna is expected to have been **low and temporary**, with stream continuity reinstated as part of the 2002 scree mining area rehabilitation (refer Figure 6).
- <u>Hard Rock Excavation</u>
  While no fauna survey was conducted, the excavation only impacts on 3,5ha and it is expected that any species having been in the area will have migrated to the endless surrounding natural habitat. No specific species were noted during site visits or during mining to date. Impact is considered **low and temporary** ("life-of-mine") as many species will return after mining albeit to a slightly altered habitat after rehabilitation, with the benched excavation offering a habitat for rodents and bird-life, especially raptors.

(vi) Surface Water

- <u>Scree Slope Area</u>:
  The mining of the scree slopes, altered water course and sand washing had a **significant** but **temporary** impact on stream flow characteristics, but the rehabilitation of the scree excavation, removal of the dams and diversion channel and construction of a single stream crossing has reinstated the natural stream flow (refer Figure 6).

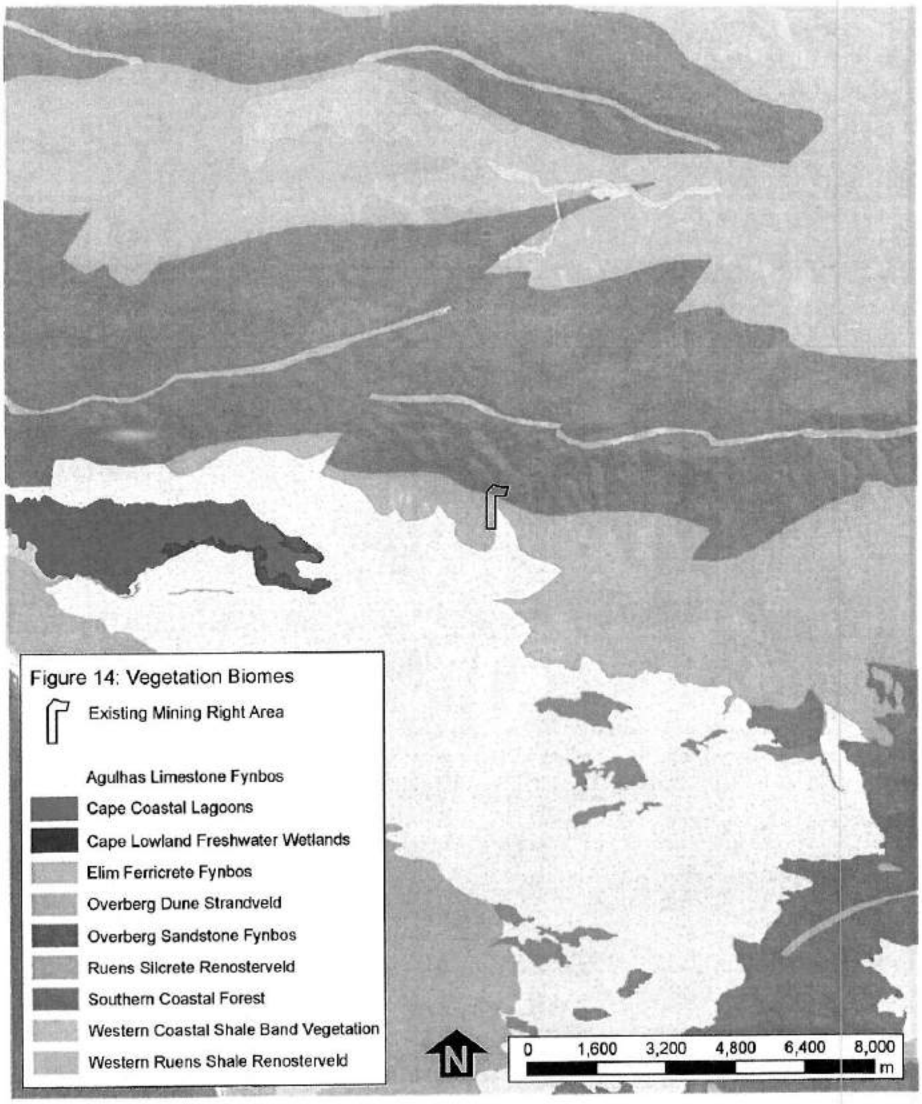


Figure 14: Vegetation Biomes
Existing Mining Right Area
Agulhas Limestone Fynbos
Cape Coastal Lagoons
Cape Lowland Freshwater Wetlands
Elim Ferricrete Fynbos
Overberg Dune Strandveld
Overberg Sandstone Fynbos
Ruens Silcrete Renosterveld
Southern Coastal Forest
Western Coastal Shale Band Vegetation
Western Ruens Shale Renosterveld
N
0 1,600 3,200 4,800 6,400 8,000
m

- Hard Rock Excavation:

  As the operation is being conducted in the hill slope above the existing loading platform and no increase in the size of the platform being allowed towards the stream, the current mining has an insignificant impact on the stream given proper construction of a single stream crossing and re-packing of the stream channel bank (refer Figure 8) adjacent to the loading platform. Accordingly, impact will be **low** and for "life-of-mine" only.
- Operational and Post Mining Management of Stormwater

  Stormwater management as depicted in Figure 7 includes the following to reduce run-off impact (e.g. silt, hydro-carbons, etc.) into the stream.
  - Shallow stormwater/ silt cut-off channels
  - Retention ponds/ silt traps
  - Controlled/ piped discharge to stream

  Photo 5 illustrates a berm bordering the stockpile platform to prevent sand/ silt run-off and movement into the stream.

  As illustrated in Figure 9, the stormwater system is to be retained for continued stormwater management by the landowner.

(vii) Groundwater

Neither the rehabilitated scree area or the current hard rock quarry will impact on groundwater, with impact considered **insignificant,** furthermore it is noted in the September 2011 EPA site visit that no significant seepage after the winter was evident, but no doubt slow seepage (moisture) will suffice to encourage revegetation on the benches and faces in post-mining rehabilitation given the aquifer recharge rock volume above bench height. Furthermore the EMP's Hydrocarbon Management Programme includes measures to limit the risk of groundwater or soil contamination by fuels or lubricants.

(viii) Noise

Existing Plant and Logistical Area:

Noise generated by the crushing plant, excavators and front-end loaders has not caused any disturbance of neighbours to date, accordingly, impact is **insignificant.**

Hard Rock Excavation:

While the drilling on the hill may be audible at the R43 road under favourable atmospheric night conditions, it does not pose any impact. Blasting which occurs once per month is audible in Stanford under favourable weather conditions but never poses an impact given the distance of 3 to 4 kilometres to the town. Impact is therefore **low** and restricted to "life-of-mine".

(ix) Air Quality

Hard Rock Excavation and Plant/ Stockpile Area:

While drilling and blasting do generate dust, the dust levels are too low to impact on either the surrounding vegetation or the distant neighbours. Despite being drier than the earlier mined scree area, dust emanating from the plant is not a problem, with wetting of the plant/ stockpile area, haul road and quarry access road as mitigation. Impact is **low.**

(x) Vibration and Fly Rock

Hard Rock Excavation:

Given the distance to neighbouring properties, public roadways and the 500m distance to the single labourer's dwelling on the farm located in the south of the Mining Right Area, vibration and fly rock has no serious impact. Possible fly rock damage to an irrigation pipe of the farm owner which runs down the west bank of the stream must however be considered. The quarry operators accept full liability for protection and immediate repair should damage occur to this pipeline. Impact is **low** for "life-of-mine".

(xi) Archaeology and Sensitive Landscape

Hard Rock Excavation

Given that no artefacts have been found during the earlier scree slope mining and the current hard rock excavation (98% of footprint to date), the impact on archaeology is considered **insignificant.** With respect to the landscape setting, the mountain slope is classified as sensitive and measures are in place not to break the south-western ridge, thereby further decreasing visual impact from surrounding properties and public roads, including the R43 being a "scenic route". (Refer Section 4.2.1 (ii)). Impact is **low** but the risk is **moderate** to **significant and permanent**.

4.2.2. Economic Impact

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

- Continued employment of 2 permanent staff and a team of 10 staff who conduct the necessary blasting, crushing, loading and stockpiling on a rotational basis between three of the operator's quarries.
- Continued delivery of concrete aggregate to the wider Hermanus construction industry (a significant district sector) at a competitive price given the proximity of Stanford Quarry to customers. The recent closure of the Caledon Quarry further increases the dependence of the local construction industry on the Stanford Quarry for construction aggregate.
- Support of local communities through the DMR's required Social and Labour Plan through which the quarry operators contribute financially to municipal IDP identified community projects. Currently Stanford Quarry supports the establishment of a community-based driving school in Stanford.

4.2.3. Social Impact

To date, Stanford Quarry has not been the cause of any negative social impact through labour unrest, complaints against the quarry operation (e.g. noise, dust, etc.) or local farm labour displacement. Furthermore, given that all employees reside off-site little or no social interaction occurs with local surrounding farm dwellers, therefore reducing the risk for social conflict. Positive social impact vests in long-standing employment and social benefits derived from the quarry's Social and Labour Plan.

4.2.4. Impact on safety, health and well-being of the surrounding community.

The relative isolation and distance from surrounding homesteads (minimum of 1,5km), as well as the quarry operation being restricted to weekdays 07h00-17h30 daily, negates impacts emanating from quarry operations (e.g. dust, noise, fly-rock, etc.), with mitigatory measures in pace should impact occur, including:

- Road and plant area wetting to reduce the impact of dust from truck movement.
- Truck washing on departure to reduce dust/ soil deposition on the 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.

Furthermore the on-going quarry operations and presence of personnel on Erf 1068 will continue to contribute to the security of the area.

4.2.5. Impact on Services

The on-going operation of the quarry will not impact on services given that such services have been in place for the past 16 or more years, including:

- Water obtained from the property owner, including for road and plant area wetting, with such supply as per Notarial Mineral Lease.
- Electrical power; ESKOM.
- Sewage treatment; municipal collection from on-site holding tank.
- Waste (domestic); removal to municipal disposal facility.
- Waste (industrial e.g. oil spill); removed by specialist contractor.
- Furthermore as detailed in section 3.1 and Figure 7, stormwater management is in place to reduce run-off of silt and hydrocarbons, as well as uncontrolled discharges into the stream.

4.2.6. Traffic Impacts and Related Considerations

The quarry access over Erven 1068 and Rem 293 is in terms of Notarial Mineral Lease, including conditions of use (e.g. maintenance and dust management). The current average product sales on 3265 tons/ month result in 10-11 truck movements from the quarry per work-day (i.e. +-1/hour), notably a negligible traffic increase on the TR43. However, mitigatory measures are in place to reduce the impact of delivery trucks, including:

- Road wetting in the vicinity of the TR43 intersection (refer Photo 6).
- Speed and road safety management (e.g. signage) and driver education/ awareness.
- Vehicle compliance (e.g. silencer noise) and removal of sand/ debris prior to trucks leaving the quarry.

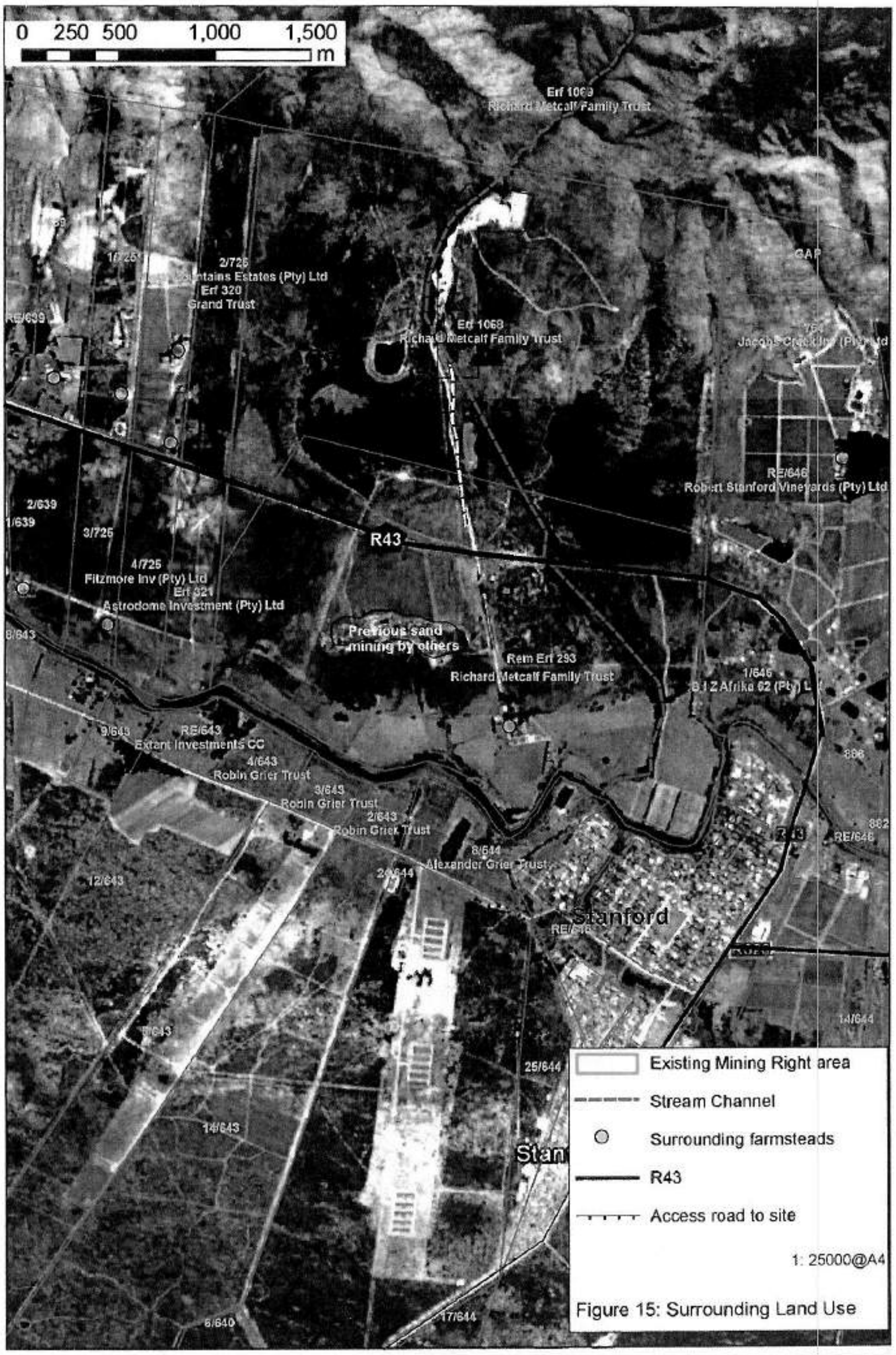


Figure 15: Surrounding Land Use

4.2.7. Impact on Existing Use Rights

The consent use, if approved, will not impact on existing surrounding land use rights given that such approval in terms of section 69 of the Overstrand By-Law on Municipal Land Use Planning (2015) will be subject to specific conditions ensuring appropriate operation of the quarry as well as its closure and rehabilitation. 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. quarry operator). Additionally, the land owner and quarry operator are mutually protected by a lease agreement in the form of a Notarial Mineral Lease in respect of the right to mine, lease period and ancillary rights and responsibilities.

4.2.8. Capital Investment

Apart from the initial capital investment to establish the quarry, its on-going operation results in on-going replacement investment in machinery and maintenance to undertake such operation, including land rental to the landowner.

4.2.9. Compatibility with Surrounding Land Uses

As illustrated in Figure 15, the impact on surrounding land uses is limited given the following:

- The limited footprint of the activity and its isolation within the 410,73 ha farm (Erf 1068), with Rem Erf 293 (387,79ha) and Erf 1069 (729,72ha) owned by the same landowner as Erf 1068 further increasing such isolation of the quarry from adjacent land uses. It is noted that while the Mining Right Area comprises 28,4ha, actual disturbance areas only comprise 3,5ha (excavation), plant and stockpile area (1,4ha) and logistical area (0,4ha).
- The surrounding land uses being mainly extensive (e.g. wilderness and livestock grazing).
- No complaints from land owners practising intensive land uses (e.g. vineyards, orchards) or operating hospitality establishments (e.g. guesthouses).
- Homesteads being at minimum 1500m distance from the quarry.
- Mitigatory measures being in place to reduce any impact on surrounding properties (e.g. hydrocarbon management, dust and noise abatement, restricting/ reducing visual impact, etc.).

4.2.10. Compliance with the Pre-Application Consultation

A Pre-Application Consultation in terms of section 38(1) of the Overstrand By-Law on Municipal Land Use Planning (2015) was not required.

5. CONCLUSION AND RECOMMENDATON

5.1. Conclusion

As per sections 16(2)(o) and 21(3) of the Overstrand By-Law on Municipal Land Use Planning (2015) and in terms of the criteria for deciding on an application (section 68 of that By-Law), this application is motivated on the following grounds:

(i) Complies with the requirements of the Overstrand By-Law on Municipal Land Use Planning (2015).

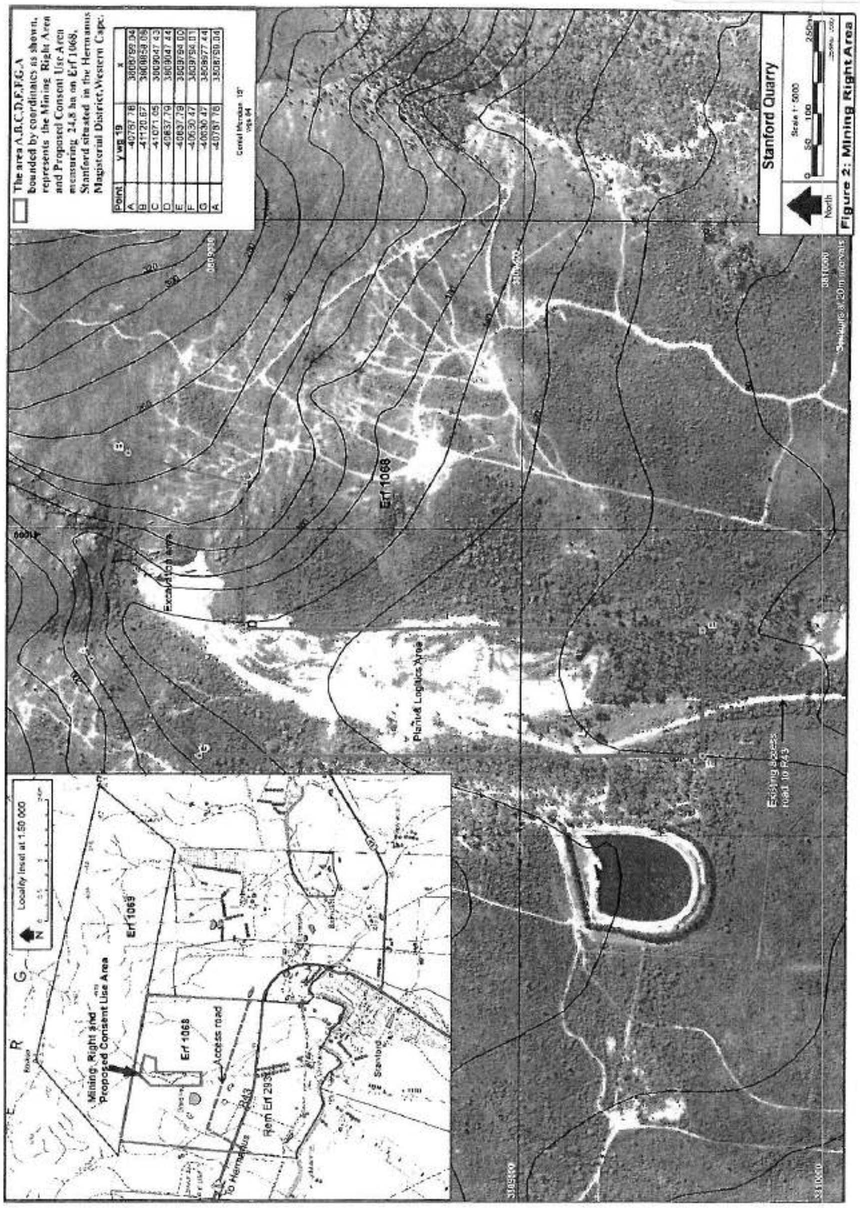
(ii) Comprises a reasonable and permissible deviation from the Overberg SDF (2006), Overberg IDF(2014) and the Overberg draft EMF (2013), acknowledging the planning parameters which informed the historic establishment of the Stanford Quarry, but also recognising that the mining and rehabilitation mitigatory measures in place address the current requirements of Overstrand policy.

(iii) Constitutes a desirable temporary use within Agricultural Zone 1: Agriculture (AGRI) as per the Overstrand Municipality Zoning Scheme (2013) and within Erf 1068 Stanford and environs.

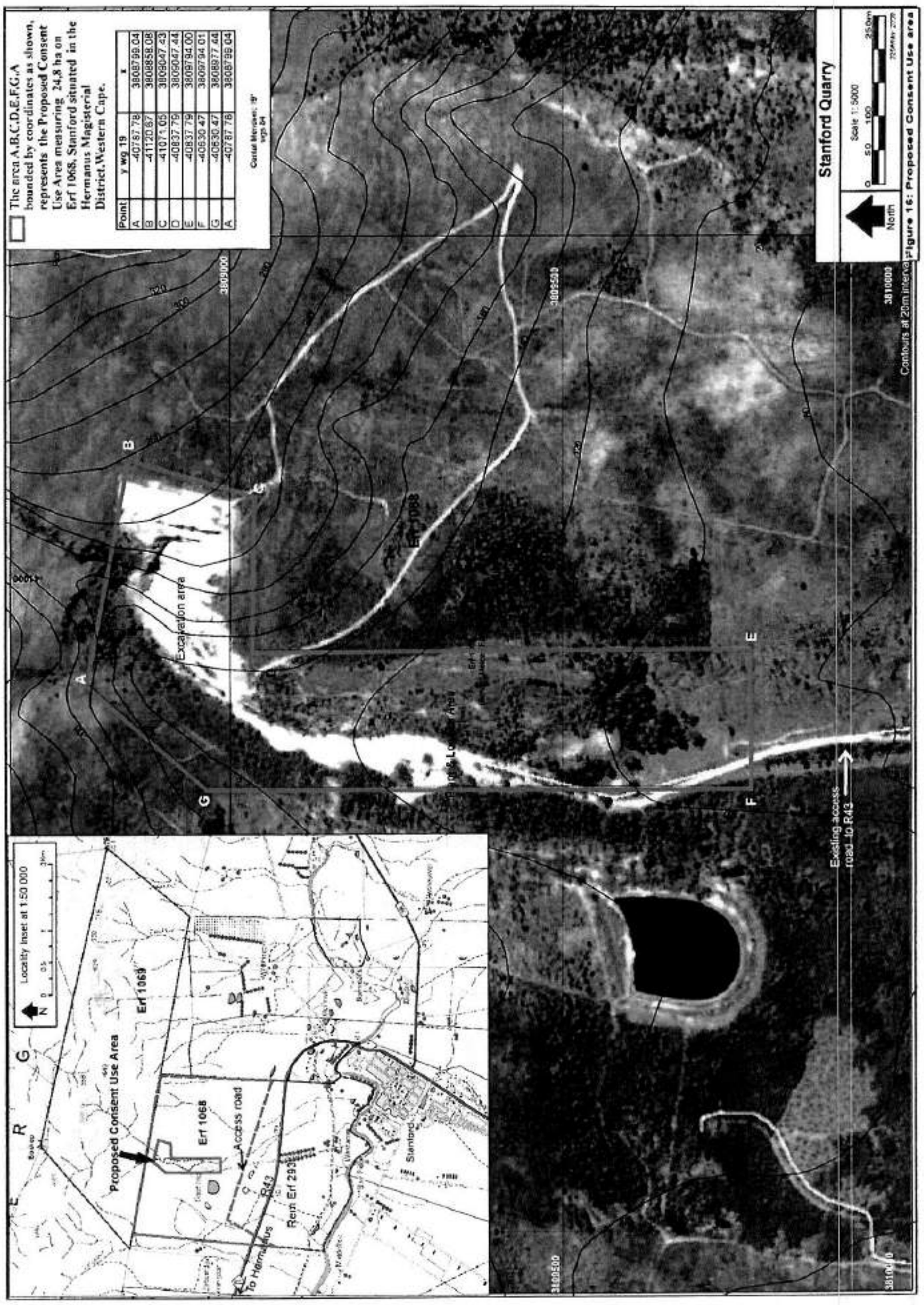
5.2. Recommendation

As motivated in this report the approval of a consent use in the Agricultural Zone 1: Agriculture (AGRI) of the Overstrand Municipality Zoning Scheme in terms of the Overstrand By-Law on Municipal Land Use Planning (2015) to permit mining on Erf 1068 Stanford for the "life-of-mine" of the Stanford Quarry, with the proposed consent area as depicted per diagram A, B, C, D, E, F, G in Figure 16: Proposed Consent Use Area.

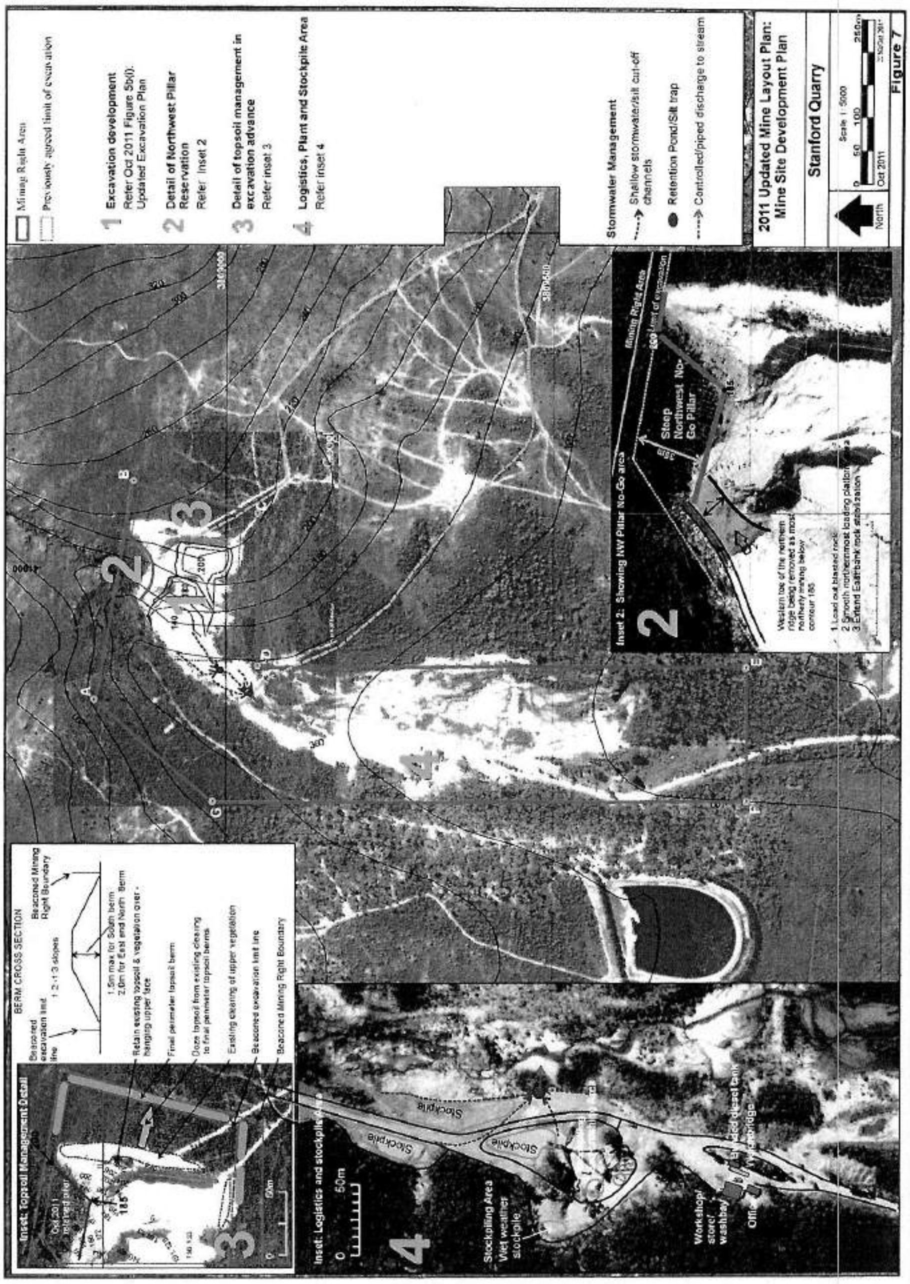
ANNEXURE C 1/3



ANNEXURE C 2/3



ANNEXURE C 3/3



ANNEXURE D 1/22

Office of the Director:
Infrastructure & Planning
Environmental Management

OVERSTRAND
ENVIRONMENTAL SECTION

Kantoor van die Direkteur:
Infrastruktuur & Beplanning
Omgewingsbestuur
OVERSTRAND

Navrae:
Enquiries: Penelope Aplon

Datum:
Date: 05 August 2016

Craig Donald
Site Plan Consulting
PO Box 28
Strand
7139

/via e-mail/

Dear Sir,

DRAFT SCOPING REPORT: STANFORD QUARRY

The Environmental Management Section (EMS) of Overstrand Municipality thanks you for the opportunity to provide comment on above mentioned application. The EMS has concerns regarding the following issues;

a) Spatial Development Framework (SDF):

As indicated in the report, the municipality has a specific section relating to a mining policy. The application has been evaluated against the policy statements and guidelines given in the SDF of Overstrand municipality.

Policy statement 1: The desirability of designating mining areas should take into account the worth of the material to extracted against long term costs of the visual quality of the area, the potential loss in agricultural production, as well as the impacts on existing rights of neighbouring property owners.

The current site is situated along the slopes of the Klein River Mountains, and creates a scar on the mountain which is visible from Hermanus, Stanford and adjacent properties along the Klein River. The report claims that *" if rehabilitation measures are implemented as proposed there will be will be no additional permanent visual impact"* (page 24). However the current site is already causing concerns in the area, an example of this are various complaints from local tourism businesses on many occasions.

Policy statement 2: *Extractive industrial activities should be in harmony with the ecological systems, respecting the processes that control the functioning of these elements.*

The current site is located on a stream which is one of the main feeders or the Klein River estuary. Currently no obvious measures to prevent siltation are visible on site. Further expansion could increase the sediment load and run off into the estuary.

Policy statement 3: *The mining of minerals, rock and sand should be undertaken in a legal and efficient manner.*

According to the Town Planning Department of Overstrand municipality, the current mining site has not gone through the administrative processes in terms of Land-use Spatial Planning regulations to operate a mining facility from this agricultural property.

Policy statement 5: *The spatial location of mining activities needs to be carefully considered relative to the location of other comparable resources, infrastructure availability and environmental sensitivity.*

The current site is located on a feeder stream to the Klein River estuary. This is the 9th most important estuary in the country in terms of National biodiversity priorities. The impacts of mining activities on this tributary can only be determined by a freshwater study.

Guidelines on rehabilitation:

Rehabilitation of mined areas should be a requirement undertaken simultaneously with mining operations. Rehabilitation should be monitored by an appointed ECO. Mining companies should be held accountable for the rehabilitation of mined areas.

Currently no obvious signs of rehabilitation can be seen on site. If rehabilitation was conducted proof of this must be submitted by the ECO who monitored the process.

Guidelines on spatial location:

Avoid mining activities in/near and implement mitigation measures if permitted for:

- Environmentally sensitive areas i.e. irreplaceable and vulnerable areas according to the bioregional planning model

- visually prominent locations;

- Ecologically vulnerable areas;

- Areas in view of identified scenic routes;

- *Sensitive hydrological systems.*

These guidelines on spatial location are in direct contradiction to the current mining site and proposed extension. The botanical survey states that the area falls within a critical biodiversity area and the vegetation type is critically endangered Sandstone fynbos. The line of site studies, which are discussed elsewhere in this document proves that the site is located within a very prominent visual location. The heritage overlay zones, which are discussed elsewhere in this document makes specific reference to sections of the R43, which are considered scenic routes of great significance.

b) Tourism (comments from the Tourism manager, Overstrand Municipality):

Overstrand tourism establishments are increasingly focussed on responsible practices and building their brands around the green economy. It is difficult to do so in an environment where the natural vegetation is disturbed and destroyed with no efforts of improving older quarry sites. The exposed quarry pits are visible from many angles. Environmental impact needs to be minimised and progressive rehabilitation efforts tabled.

c) Visual Impacts:

The applicant will have to conduct a visual impact statement to proof that the extension will have no further visual impact. Stating that the "*current visual impact of the excavation is limited by existing ridges and other topographical controls for most impactees.* " This section cannot support this statement; the current scar is visible from Hermanus, as can be proven by photos taken from two points in Hermanus.

Photo 1: Zoomed in view from Gearings Point, wall at Gearings Point in foreground.

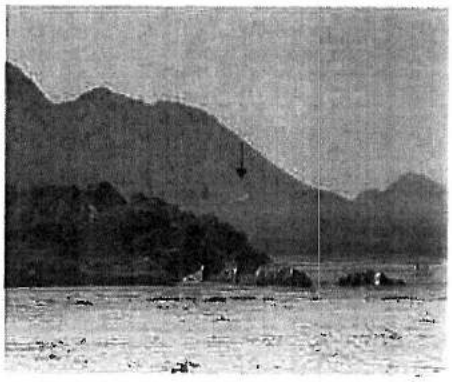


Photo 2: View from Grotto beach east.

A preliminary "line of site" study was done on ArcView, Geographical Information System (GIS), to determine the visual impact of further expansion. The results are indicated in the graphs and map attached in annexure A. (GIS work done by T. Dry) the graphs should be interpreted as follow:

Y axis – height above sea level	red line – site is not visible	black circle – observation point
X axis – distance in metres, between points	green line – site is visible	green circle – site is visible

The results of the line of site modelling indicate that the extension to the existing site will be visible from the following sites; De Kelders, Grotto beach east, Gearings Point, Stanford (intersection on R43) and the Hermanus New Harbour. (Line of site graphs attached)

d) Overstrand Municipal Overlay Zones:

In a joint project between the EMS and the Town Planning Department, Overstrand Municipality is busy drafting Overlay zones for the municipal area. Overlay zones provides a mechanism for land use management whereby Council may give effect to specific guidelines contained in a spatial development framework or policy plan. These guidelines could (within specified areas) promote development, require a limitation of land uses, define additional, stipulate more or less restrictive development rules, or identify specific development rules. It provides a mechanism for elevating specific policy guidelines, as approved by Council, to land use regulations. An overlay zone will apply in addition to the base zone of a property. Three overlay zones have been compiled for the Overstrand municipal region namely a Heritage Protection overlay zone, Stanford overlay zone and an Environmental Management overlay zone. These overlay zones will be included in the current zoning scheme of Overstrand Municipailty.

By-laws will be drawn up in order to provide a mechanism to ensure compliance to the management purpose of each overlay in terms of the zoning scheme.

The current mining site and proposed expansions falls within the following two Heritage Protection Overlay Zones:

Scenic Heritage Drive Heritage Protection Overlay Zone

The purpose of this specific overlay is:

- To maintain and enhance the scenic drive network in the Overstrand which is a heritage resource of considerable environmental, historic and aesthetic significance and which contributes substantially to the economic base of the region;
- To promote the tourism and recreational potential of the Overstrand scenic route network by enhancing the user's experience;
- To ensure that the actual route is embedded within the landscape rather than imposed upon it.

Landscapes of High Natural, Scenic and Heritage Significance

The purpose of this specific overlay is:

- To protect and enhance landscapes identified as having high natural, scenic and heritage significance and which contribute to the character and sense of place in the Overstrand and its economic base.
- To promote the cultural tourism and recreational potential of significant Overstrand landscapes.

The proposed expansion of the quarry is in direct contravention with the purposes of the draft Heritage Protection Overlay Zones. The aesthetic significance of the scenic drive will decrease with the growth in size of the current mining scar.

e) Air Quality (Dust & Noise):

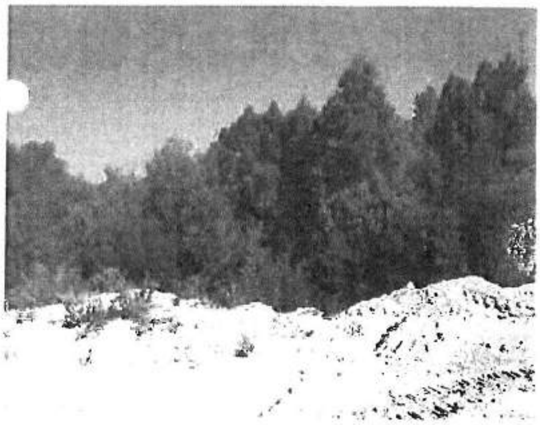
The report addresses dust fall but it is unclear if the specific mining activities falls within Band 3, as referred to in the Dust fall standards of SANS. Fauna and flora must also be considered when reviewing the impacts of dust and noise.

f) Groundwater:

Figure 12 in the draft scoping report indicates a map of the surface water regime, the new extension falls within the local drainage basin. On page 41 of the report it is stated that;"*Note that groundwater will in no way be affected or impacted by the proposed activity.*" The applicant must please submit a hydrological study to substantiate this statement.

g) Surface water:

The existing mining right is located on top of a tributary of the Klein River, feeder to the Klein River estuary (ranked 9th most important estuary in South Africa, in terms of biodiversity). Mining activities are taking place directly adjacent to the existing streams on site. However no obvious measures can be observed to prevent siltation of this stream or river. The applicant must indicate what measures will be put in place to rectify the current situation on site and what measures will be put in place to prevent that the new expansion will not cause siltation of any streams on site.



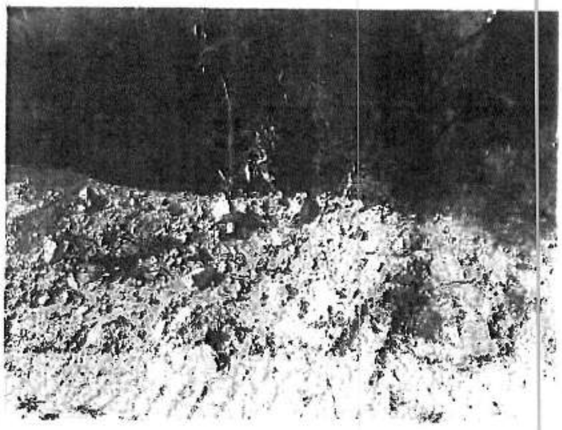


Photo 3 & 4: Material directly adjacent to stream/river

It is important to note that prevention of siltation in this stream and river must be a key aspect of the storm water management plan which will be submitted with the WULA. It is further recommended that a freshwater study be conducted to determine the current impacts on the stream, river and the outflow into the estuary.

h) Need & Desirability:

Even though this is not an application in terms of the NEMA: EIA regulations, the NEMA EIA guideline on need and desirability (Oct 2011) should be considered for this application. In terms of this guide "*need refers to the time and desirability to place- i.e is this the right time and is it the right place for locating the type of land-use/activity being proposed? Need and desirability can be equated to wise use of land- i.e the question of what is the most sustainable use of land.*"

When considering the desirability of the proposed extension, the following NEMA principles states that environmental management must:

- "place people and their needs at the forefront of its concern" and equitably serve their interests;
- "be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option;
- pursue environmental justice "so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person"; and
- ensure that decisions take "into account the interests, needs and values of all interested and affected parties";
- with the environment to be "held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage

The scoping report does address the issue of need (timing) in the report, however the desirability (placing) of the proposed extension is not addressed sufficiently. Continued reference is made to that it is "*proposed eventual land use is to return the land as wilderness area (albeit with altered habitat type).*" Further specialist studies is requested to demonstrate the sucess of hard rock quarry rehabilitation.

i) Rehabilitation:

According to the mining guideline in the SDF, "*rehabilitation should be undertaken simultaneously with the mining operation. Rehabilitation should be monitored by ECO. Mining companies should be held accountable for the rehabilitation of mined areas.*" Currently no visible signs of rehabilitation on the current mining site can be observed. If rehabilitation has been conducted, it is requested that proof thereof be submitted.

A detailed rehabilitation plan with timeframes and budget, has not been included as part of this Scoping Report. The EMS specifically requests that such a report be submitted as part of the study. The success of hard rock quarry rehabilitation should also be addressed in this plan.

ANNEXURE D 8/22

j) Conclusion:

Further extension of this mining site in not supported based on the following factors:

- The need and desirability for further expansion of the current site is not clearly specified in the report.
- Rehabilitation of current area is not implemented. Further detail must be provided for future rehabilitation of the site.
- The visual impacts of extension are not accurately reflected in this report and a detailed visual impact assessment is requested.
- The impacts of the current mining area on the stream and river are not indicated and must be assessed by a freshwater specialist.

This office reserves the right to revise these comments as additional information is made available.

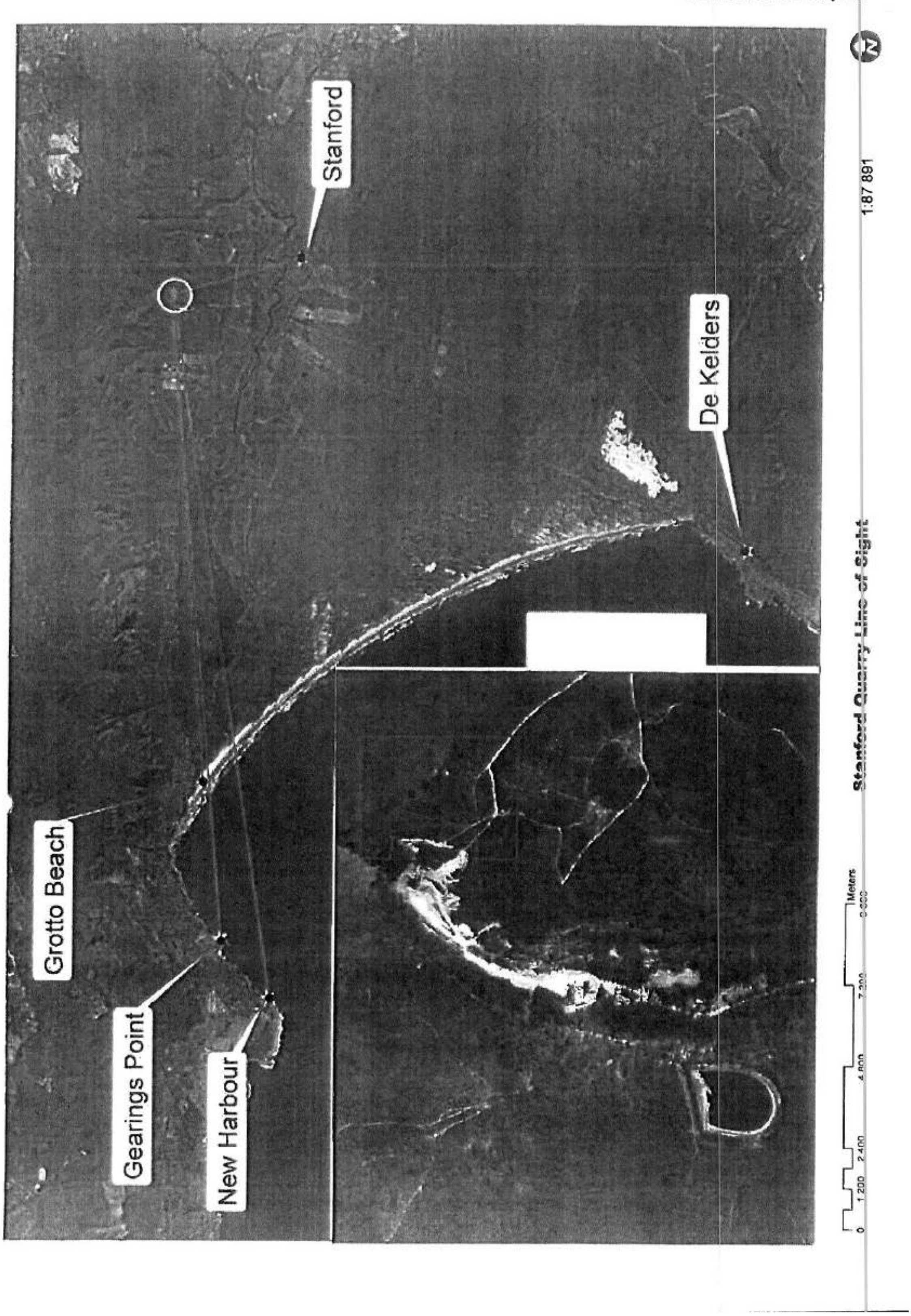
Kind regards,

Mr.S.MULLER: DIRECTOR: INFRASTRUCTURE & PLANNING

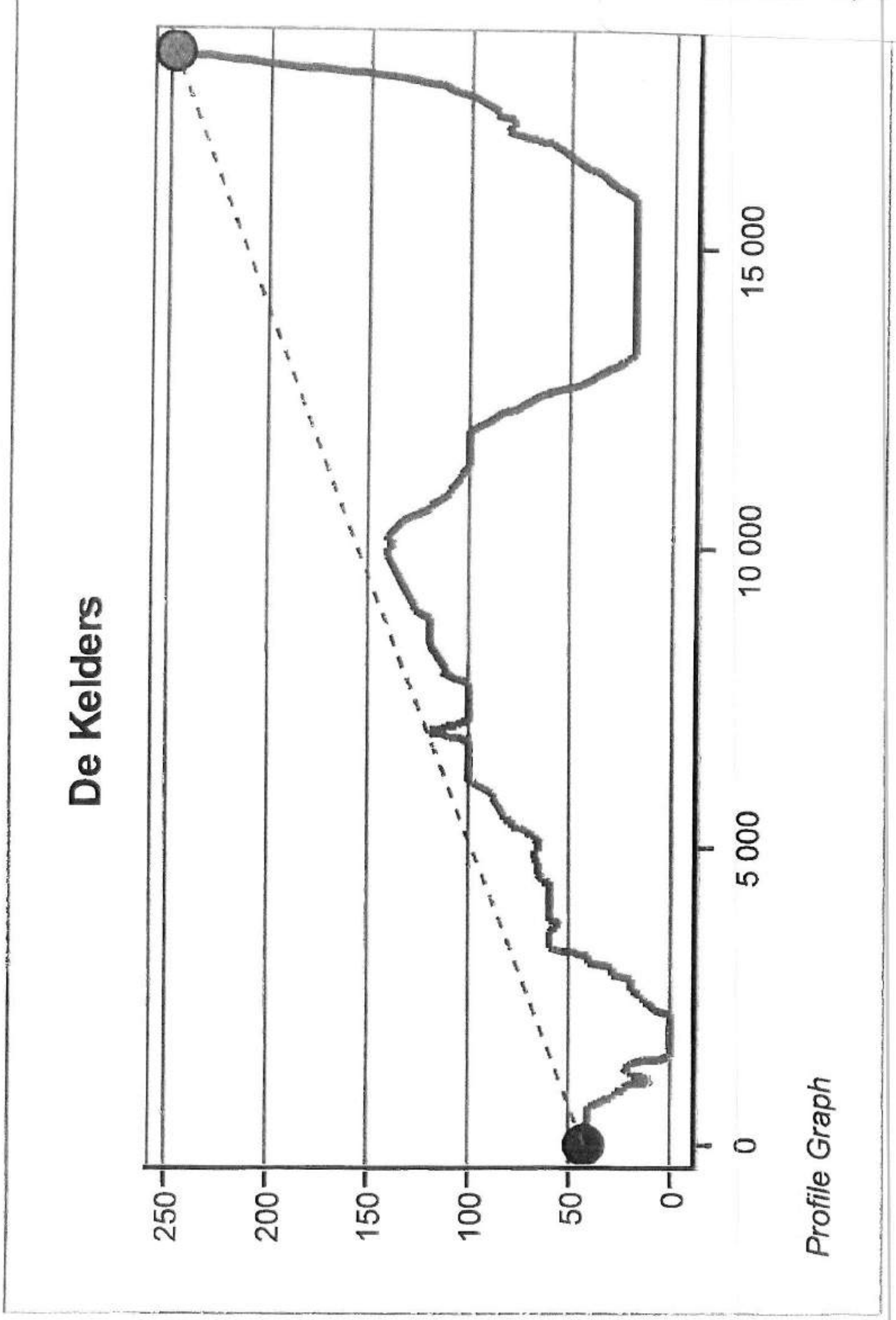
Cc: Mrs. L. de Villiers (Senior Manager: Environmental Management)

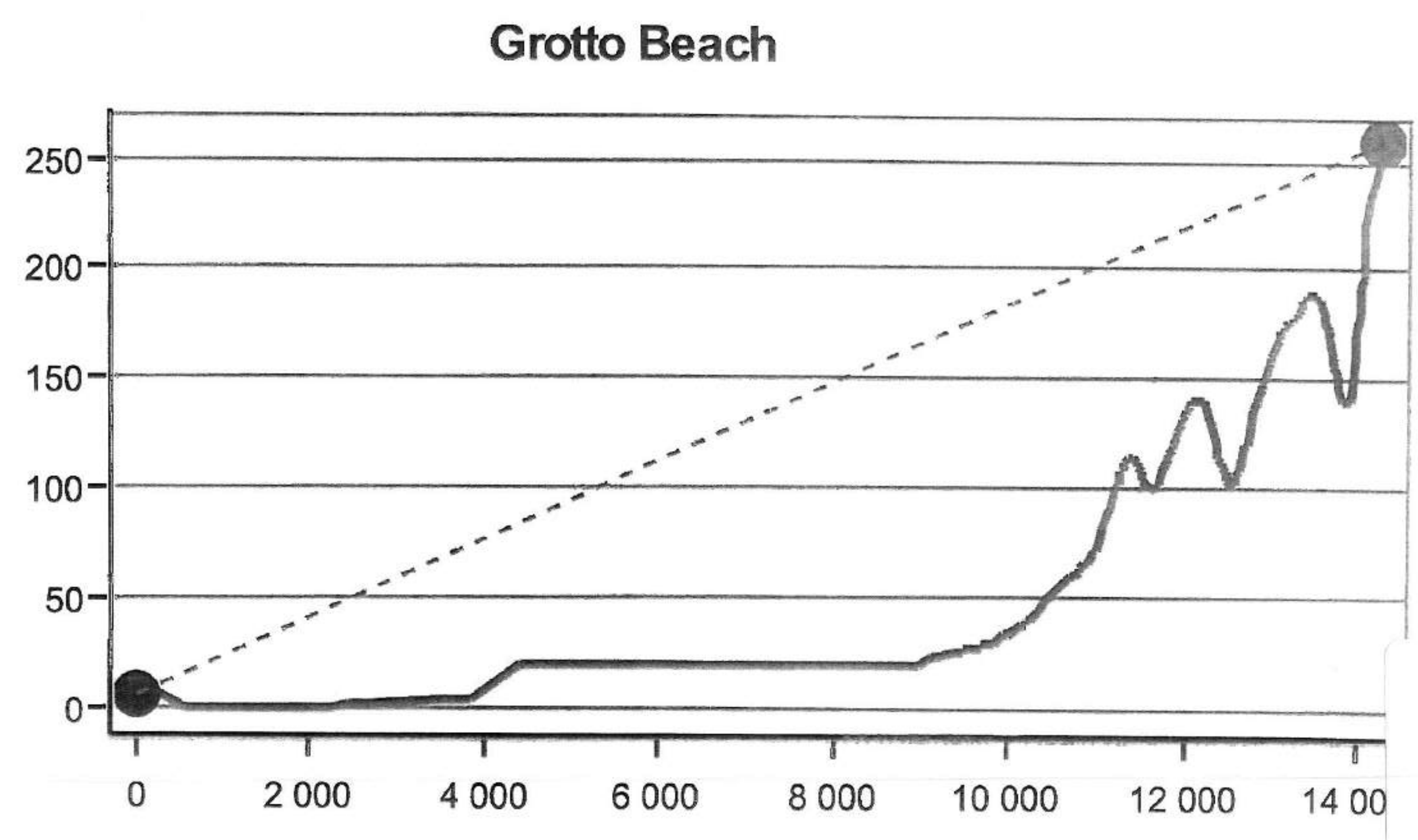
ANNEXURE D 9/22

ANNEXURE H



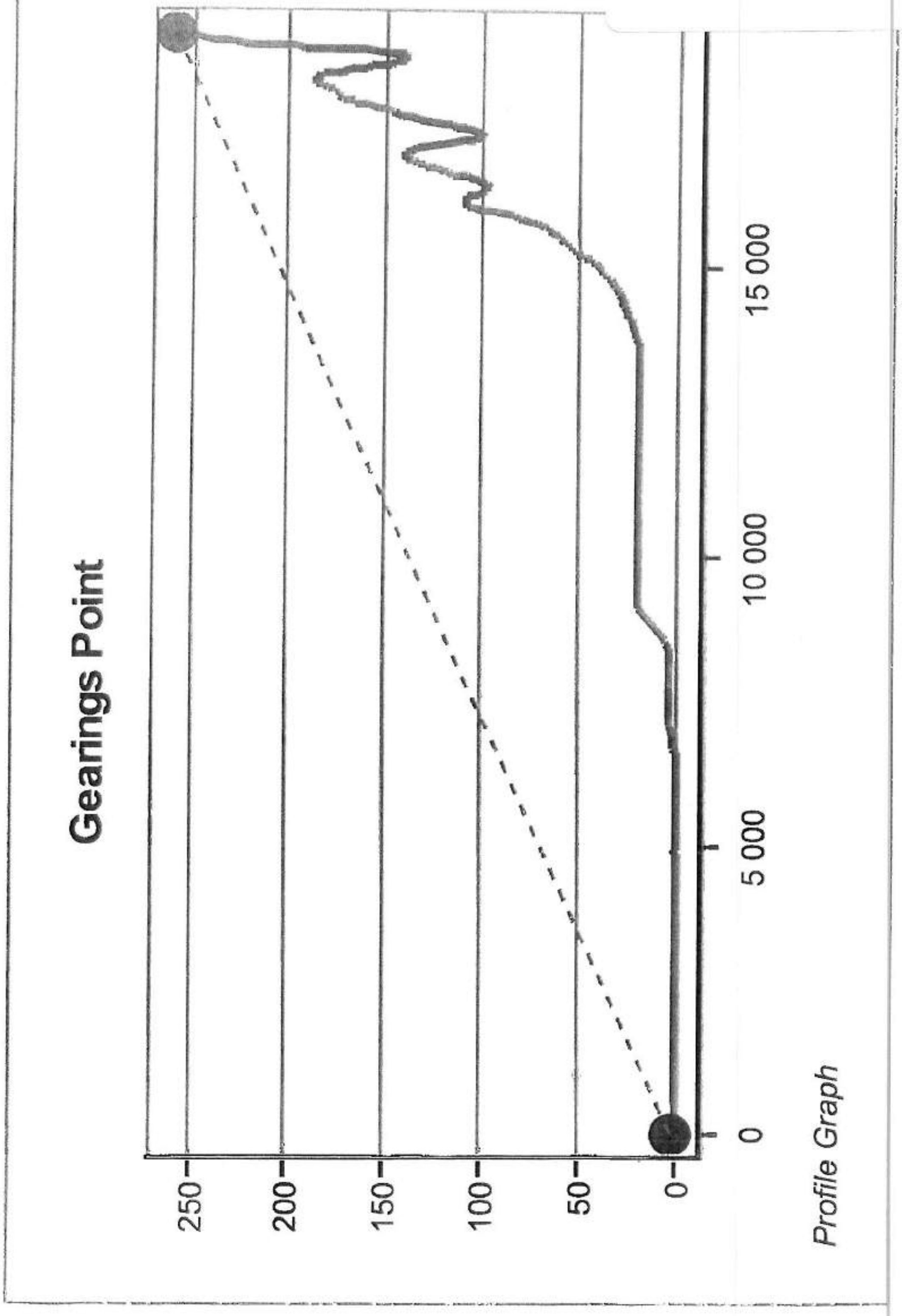
ANNEXURE D 10/22



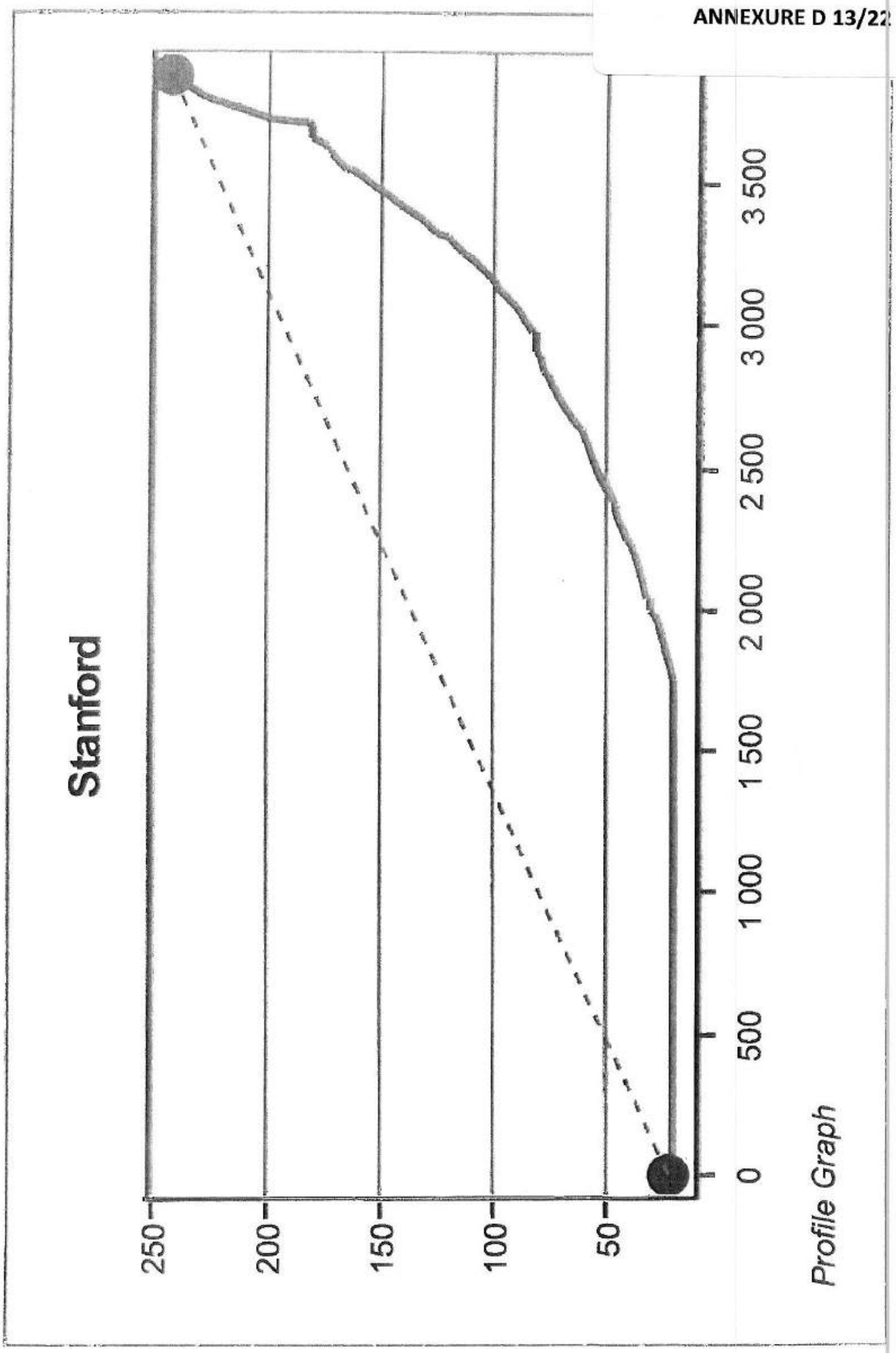


Profile Graph

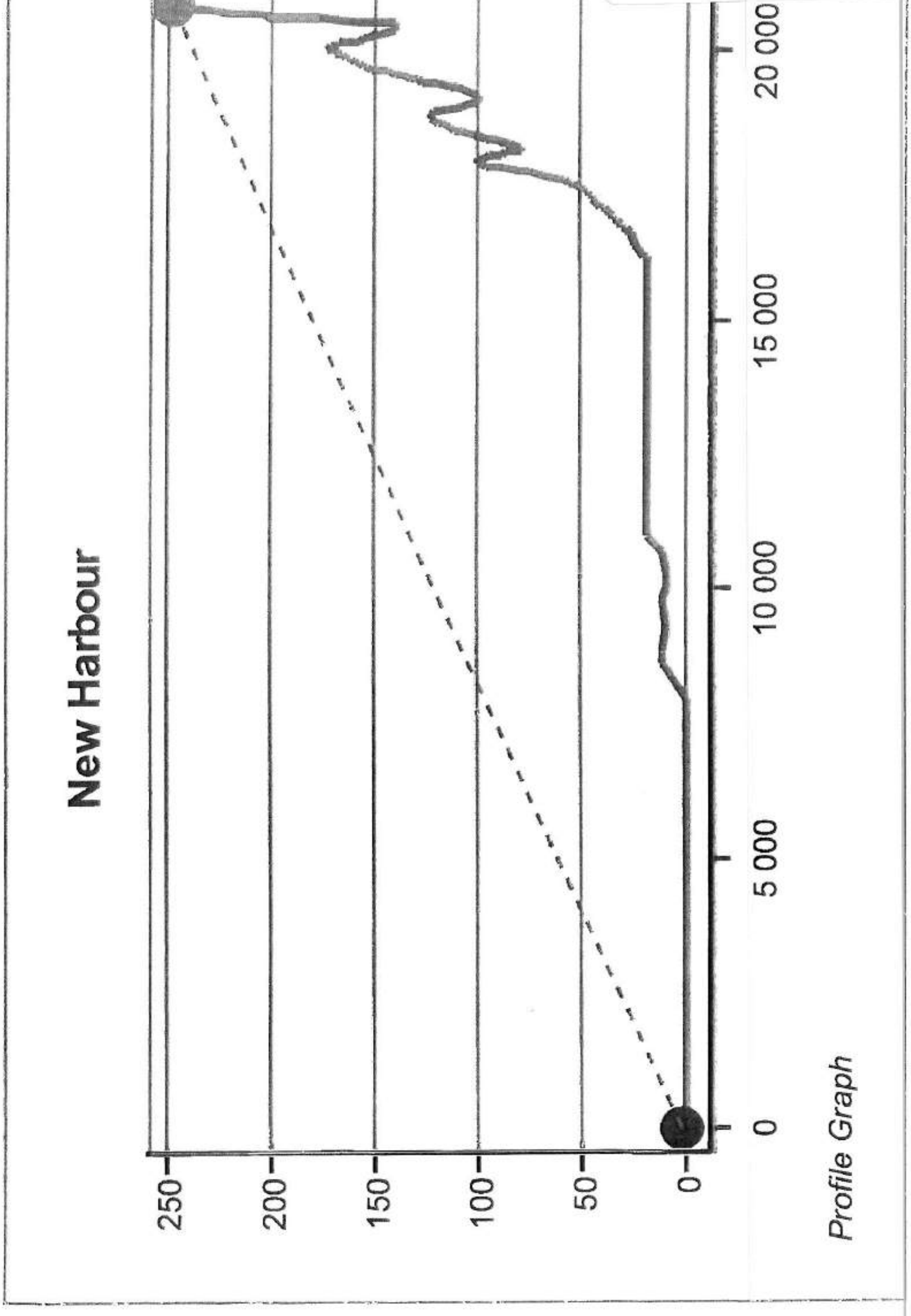
ANNEXURE D 12/22



ANNEXURE D 13/22



ANNEXURE D 14/22



ANNEXURE D 15/22

Office of the Director
Infrastructure & Planning
Environmental Management

OVERSTRAND
ENVIRONMENTAL SECTION

Kantoor van die Direkteur:
Infrastruktuur & Beplanning
Omgewingsbestuur

OVERSTRAND

Navrae:
Enquiries: Penelope Aplon

Datum:
Date: 08 February 2017

Mr. Petrus Roux
TOWN PLANNING

/via e-mail/

Dear Sir,

PROPOSED CONSENT USE APPLICATION: ERF 1068, STANFORD

The Environmental Management Section (EMS) of Overstrand Municipality thanks you for the opportunity to provide comment on above mentioned application.

a) Spatial Development Framework (SDF):

In terms of the Spatial Development Framework (SDF) the municipality has a specific section relating to a mining policy. The application has been evaluated against the policy statements and guidelines given in the SDF of Overstrand municipality.

Policy statement 1: The desirability of designating mining areas should take into account the worth of the material to extracted against long term costs of the visual quality of the area, the potential loss in agricultural production, as well as the impacts on existing rights of neighbouring property owners.

The current site is situated along the slopes of the Klein River Mountains, and creates a scar on the mountain which is visible from Hermanus, Stanford and adjacent properties along the Klein

River. However the current site is already causing concerns in the area, an example of this are various complaints from local tourism businesses on many occasions.

Policy statement 2: Extractive industrial activities should be in harmony with the ecological systems, respecting the processes that control the functioning of these elements.

The current site is located on a stream which is a main feeder or the Klein River estuary. Currently no obvious measures to prevent siltation are visible on site.

Policy statement 5: The spatial location of mining activities needs to be carefully considered relative to the location of other comparable resources, infrastructure availability and environmental sensitivity.

The current site is located on a feeder stream to the Klein River estuary. This is the 9th most important estuary in the country in terms of biodiversity. The impacts of mining activities on this tributary can only be determined by a freshwater study.

Guidelines on rehabilitation:

Rehabilitation of mined areas should be a requirement undertaken simultaneously with mining operations. Rehabilitation should be monitored by an appointed ECO. Mining companies should be held accountable for the rehabilitation of mined areas.

Currently no obvious signs of rehabilitation can be seen on site. If rehabilitation was conducted in terms of the 2002, Environmental Management Programme, proof of this must be submitted by the ECO who monitored the process.

Guidelines on spatial location:

Avoid mining activities in/near and implement mitigation measures if permitted for:

- Environmentally sensitive areas i.e. irreplaceable and vulnerable areas according to the bioregional planning model

- Visually prominent locations;

- Ecologically vulnerable areas;

- Areas in view of identified scenic routes;

- Sensitive hydrological systems.

These guidelines on spatial location are in direct contradiction to the current mining site. The botanical survey states that the area falls within a critical biodiversity area and the vegetation type is critically endangered Sandstone fynbos.

b) Tourism:

"Overstrand tourism establishments are increasingly focussed on responsible practices and building their brands around the green economy. It is difficult to do so in an environment where the natural vegetation is disturbed and destroyed with no efforts of improving older quarry sites. The exposed quarry pits are visible from many angles. Environmental impact needs to be minimised and progressive rehabilitation efforts tabled. "(Comments from Frieda Lloyd, Tourism manager, Overstrand Municipality)

c) Visual Impact:

This office does not agree with the statement that the existing visual impact can be rated as moderate.

d) Groundwater:

The Water use Allocation and Registration Management System (WARMS) data, which contains information on current licences/ registrations being processed by the Breede Gouritz Catchment Management Agency (BGCMA) states that Walshacres has a current water use of 1600m^3/a Clarity must be provided regarding the current water use on the existing mine and if a water use licence was required or issued.

e) Surface water:

The existing mining right is located on top of a tributary of the Klein River, feeder to the Klein River estuary (ranked 9th most important estuary in South Africa, in terms of biodiversity). Mining activities are taking place directly adjacent to the existing streams on site. However no obvious measures can be observed to prevent siltation of this stream or river. The applicant must indicate what measures will be put in place to rectify the current situation on site.

It is recommended that a freshwater study be conducted to determine the current impacts on the stream and river.

f) Rehabilitation:

The report does not indicate any timeframes for the proposed rehabilitation of the current mining site.

ANNEXURE D 18/22

g) Conclusion:

The following have to be clarified regarding this application:

- The current water use on site and how it is monitored in terms of water use licence.
- Indicate what the current impacts on the stream, is, which feeds into the Klein River estuary. This can be done by conducting a freshwater study.
- Provide a rehabilitation plan, including costing of what the planned rehabilitation measures will be for the existing mining site.

This office reserves the right to revise these comments as additional information is made available.

Kind regards,

Penelope Aplon
Environmental Officer

Cc: L. de Villiers (Senior Manager: Environmental Management)

ANNEXURE D 19/22

Office of the Director:
Infrastructure & Planning
Environmental Management

MEMORANDUM

Kantoor van die Direkteur:
Infrastruktuur & Beplanning
Omgewingsbestuur

Date :	16 August 2017
To:	Petrus Roux (Town Planning)
From:	Penelope Aplon (Environmental Management)
RE:	Farm 1086, Stanford Quarry: 2011 Environmental Management Programme

The Environmental Management Section has the following comments regarding the Environmental Management Programme and Storm Water Management Report submitted to the Town Planning Department.

Environmental Management Programme, 2011:

The rehabilitation plan is not linked to specific timeframes which makes it impossible to determine when rehabilitation will commence. The visual impact is severally underrated in the Visual Envelope Assessment. The scar from the quarry site is visible from as far as Hermanus.

Storm Water Management Report:

The report addresses the existing storm water control measures, namely the berm and storm water dams on site. However the report compiled by the Freshwater Consulting Group in 2017, pertaining to this specific site, clearly indicates that measures are not effective and that siltation is still taking place due to the activities on this quarry site.

Ecological status of the river

Based on the determination of the ecological status of different reaches within the Klein River tributary the following is highlighted from the study:

Reach B: moderately modified

- Loss of riparian habitat and thus loss of ecological function to accommodate excavation
- Loss of buffer between disturbance and the channel with increased erosion
- Excessive sedimentation of the channel due to unstable eroding banks and runoff of the fine sediments from the excavation site
- Loss of instream habitat due to fly rock and sediment

Reach C: largely modified

- Complete change in bed and channel characteristics through removal of the alluvium during mining
- Invasion by alien trees and thus a loss of habitat integrity
- Sedimentation of the channel and runoff of silt laden stormwater from the road and crushing site.

Existing water-use:

The report states that the current water-use of Stanford Quarry is not registered. It is unclear if the existing license which is issued in the name of Walshacres is also applicable to the quarry.

Current impact assessment:

The report highlights the following activities and its impacts on the watercourse and its characteristics, without mitigation:

Activity: Encroachment of excavation and loading platforms on riparian fringe

Description of impact	Significance
Loss of riparian habitat	Medium - High
Channel bank erosion due to increased runoff from the disturbed area and the lack of a buffer	Medium
Loss of instream habitat and faunal diversity due to increased silt input.	Medium - High

Activity: Blasting of hard rock resulting in fly rock into the instream and riparian habitat

Description of impact	Significance
Destruction of instream habitat through the introduction of large boulders and rock from the hill slope.	High
Alteration in the local hydraulics of the system, particularly during high flow conditions due to alteration in the bed character.	Medium

Activity: Noise generated by blasting, drilling and vehicular activity in close proximity to the river channel

Description of impact	Significance
Disturbance to aquatic and semi-aquatic fauna.	High

Activity: Road crossing the river channel

Description of impact	Significance
Changes in the hydraulic functioning of the river system.	High
Erosion and sedimentation	High

Activity: Encroachment of the stockpiling and crushing plant platform into the riparian fringe

Description of impact	Significance
Loss of riparian habitat and associated buffer.	Medium
Bank erosion and sedimentation of the instream habitat.	Medium
Water quality deterioration.	Medium

This study confirms that the current mining activity does have a very negative impact on the tributary of the Klein River estuary.

ANNEXURE D 22/22

Recommendations:

1) The applicant must provide proof of the appointment of an ECO and subsequent ECO reports as indicated in the EMP of 2011.

2) The rehabilitation plan should be linked to a timeframe.

3) A re-assessment of the visual impact of the current quarry site should be conducted.

4) The applicant should familiarize themselves with the contents of the report conducted by the Freshwater Consulting Group. The mitigation measures proposed to alleviate the impacts on the freshwater ecosystem are strongly supported. **A recommendation is made to the Town Planning department that the implementation of these measures is set as conditions to the applicant.**

5) The formal monitoring as proposed in the Freshwater study must be implemented on site and must be assessed by an independent Environmental Control Officer

This office reserves the right to review these comments as further information is made available.

Penelope Aplon
Environmental Officer

ANNEXURE E 1/4

Telkom

OVERSTRAND MUNISIPALITEIT
12 SEP 2016
OVERSTRAND MUNICIPALITY

TP- ATheart
C P Roux

Access Network Engineering

Telkom SA SOC Limited

10 Jan Smuts Drive
Pinelands
7404

Tel : 021 414 5614
Fax : 088 021 414 5614
Email : Petersi2@telkom.co.za

Enquiries : Ihlaam Peters
Our Ref. : WSFD3507_16
Your ref. : 1068 SSS (3375)

09 September 2016

FILE NO: Emen
EL 1068 Stanford
SCAN NO: 1069 Stanford
77
COLLABORATOR NO: 936502

Attention: M. Harmse

OVERSTRAND Municipality
P.O. Box 20
Hermanus
7200

Dear Madam/Sir

APPLICATION FOR TELKOM WAYLEAVES: PROPOSED CONSENT USE: SETPLAN (OBO RICHARD METCALF FAMILY TRUST) – ERF 1068, STANFORD

With reference to your letter and dated 30 August 2016.

I hereby inform you that Telkom approves the proposed work indicated on your drawing in principle. This approval is valid for 12 months only, after which reapplication must be made if the work has not been completed.

Any changes or deviations from the original planning during or prior to construction must immediately be communicated to this office.

Approval is granted, subject to the following conditions.

As per the drawing supplied, Telkom SA LTD infrastructure will be affected, consequently the conditions below and on the attached legend will apply.

Telecommunication services position is shown as accurately as possible but should be regarded as approximate only.

Should alterations or relocation of existing infrastructure be required, such work will be done at the request and cost of the applicant.

Please notify this office within 21 working days from this letter of acceptance and if any alternative proposal is available or if a recoverable work should commence.

ANNEXURE E 2/4

Telkom

As important <u>OPTIC FIBRE</u> cables are affected, please contact our representative <u>FREDERIK SWART</u> at telephone number <u>081 363 7815</u> at least <u>48 hours</u> prior to commencement on construction work.

It would be appreciated if this office can be notified within 30 days of completion of the construction work. Confirmation is required on completion of construction as per agreed requirements.

Should Telkom SA infrastructure be damaged while work is undertaken, kindly contact our representative immediately.

Yours faithfully

(pp)

Selwyn Bowers
Operations Manager
Wayleave Management: Western Region

ANNEXURE E 3/4

open serve

Wayleave

Telkom S.A Ltd

open serve

This wayleave, Ref WWIP_WSFD3507_16 is valid for 12 months from date hereof and is subject to the following conditions.

1. No mechanical plant or vibrator type compactors may be used within three meters of any Telkom plant (i.e. any Telecommunications equipment above or below ground level)

2. The position of our plant affected by the proposal is indicated as approximate and our *FREDERIK SWART* TEL: (028) 514 1199 must be contacted at least 48 hours prior to commencement of the work, upon which the actual location of Telkom Plant will be indicated on-site.

3. A written request must be submitted to Telkom for consideration should the applicant require our plant to be relocated. The cost of such relocation will be recoverable from the applicant

4. It is the responsibility of the applicant to verify the existance of the indicated plant and to notify Telkom immediately should the applicant locate any Telkom plant which is not indicated on the plans.

5. Should the applicant expose any Telkom plant, the safeguard thereof will be the applicants full responsibility.

6. Failing to comply with the above conditions or any special conditions addendum hereto will be regarded as gross negligence and the applicant will be held responsible for and damage or loss as a result thereof.

Date: 9/9/2016

For Regional General Manager
Western Cape

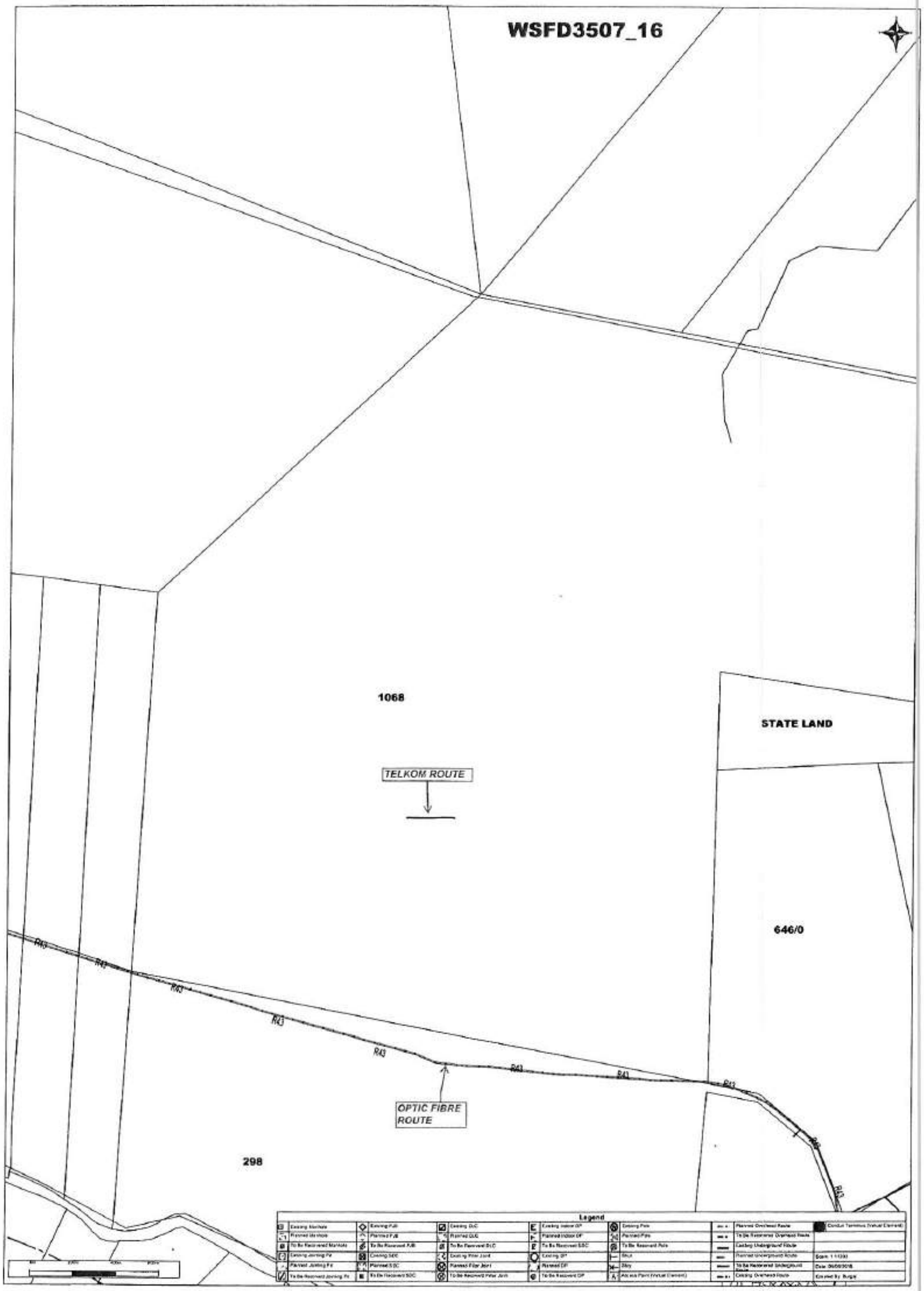
Telkom Symbol Legend

1. Underground Pipe Route	
2. Underground Buried cable	
3. Pipe Junction Boxes	MH JP
4. Street Distribution Cabinet (SDC)	
5. Jointing Pillar (PJ) Above Ground	
6. Pole	W
7. Robot Control	R
8. Aerial Route	
9. Stay	
10. Strut	
11. Call Office	
12. OPTIC FIBRE Equipment	

The pipelines indicated contain OPTIC FIBRE cables.

Frederik Swart 081 363 7815 to be contacted 48 Hrs before work commences.

ANNEXURE E 4/4



ANNEXURE F 1/2

Petrus Roux - MINING RIGHT EXTENSION APLICATION BY AFRIMAT AGGREGATES (OPERATIONS) (PTY) ON PORTION OF ERVEN 1068 AND 1069 (STANFORD): CALL FOR COMMENT ON DRAFT EIA/EMP

From:	Basson Geldenhuys <Basson.Geldenhuys@dpw.gov.za>
To:	"craig@siteplan.co.za" <craig@siteplan.co.za>
Date:	2016/09/15 10:49 AM
Subject:	MINING RIGHT EXTENSION APLICATION BY AFRIMAT AGGREGATES (OPERATIONS) (PTY) ON PORTION OF ERVEN 1068 AND 1069 (STANFORD): CALL FOR COMMENT ON DRAFT EIA/EMP
Cc:	Frederick Johnson <Frederick.Johnson@dpw.gov.za>, Vuyo Ngonyama <Vuyo.Ng...

Dear Craig

The abovementioned matter has bearing. The National Department of Public Works (NDPW) would like to place the following comments and objections on record:

- NDPW is objecting against the issuing of the environmental authorisation due to the severe/irreplaceable harm that such an extension would cause to the biodiversity of that area and to the stream that feeds the Klein River estuary. Further to the aforementioned that the existing mine is also situated within the Stanford heritage area.
- NDPW would furthermore like to ***request proof that the existing mining activities has been ceased/suspended*** due to the fact that the existing mine is not complying in terms of the land use policy of the Overstrand Municipality (Letter reference 1068 & 1069 SSS of Overstrand Municipality dated 6 June 2016) and or proof that the correct land use has been obtained. Please take note of the following Case law regarding the applying of an incorrectly land use (*Maccsand v the City of Cape Town and others Case CCT 103/11 [2012] ZACC 7*).

Therefore NDPW is not supporting the extension of the mining application.

Kind regards

Basson Geldenhuys Pr.Pln | chief town planner | professional services | national department of public works, cape town regional office | room 1419, customs house | lower heerengracht street | cape town | e-mail: basson.geldenhuys@dpw.gov.za | telephone number: +27 21 402 2174 | Fax number: 086 272 8660 | cell phone number: 071 648 8656

ANNEXURE F 2/2

OVERSTRAND MUNISIPALITEIT
15 MAR 2017
OVERSTRAND MUNICIPALITY

public works
Department:
Public Works
REPUBLIC OF SOUTH AFRICA

TP-A Theart
(P Roux)

Private Bag X9027, Cape Town, 8000. International Code: +27 21 Tel: 402-2174: Cell: 071 648 8656
E-mail: basson.geldenhuys@dpw.gov.za, website: www.publicworks.gov.za

The Director
Infrastructure and Planning
Overstrand Municipality
PO Box 20
Hermanus

15 March 2017

For Attention: P Roux (Town Planner) and Alida Conradie alida@overstrand.gov.za

Dear Sir

CONSENT USE APPLICATION: STANFORD QUARRY, ERF 1068, STANFORD, OVERSTRAND MUNICIPAL AREA RESPONSE TO REVISED COMMENT/ OBJECTIONS AND PROPOSED WAY FORWARD

The above-mentioned matter has bearing.

The National Department of Public Works (NDPW) do not want to provide any additional comments with regards to the above-mentioned matter.

The issues regarding the Consent Use were discussed with the consultant and subsequently resolved.

Yours faithfully

Basson Geldenhuys
Chief Town Planner
Professional Service: Cape Town Regional Office
Date: 15/03/17

FILE NO: EL 1068 + 106
Stanford
SCAN NO:
COLLABORATOR NO: 1003925

15 MAR 2017

15. Sep. 2016 11:59 Hermanus health No. 0014 P. 8

ANNEXURE G 1/1

Munisipaliteit • U-Masipala • Mu
OVERSTRA

File reference:	3375
Date:	30/08/2016

INTERNAL MEMORANDUM

From	:	Town Planning Department
Town Planner	:	PETRUS ROUX

TO:

Area Manager	*Building Department*	*District Health*	*Electrical Department*
Environmental Officer	*Fire Department*	*Infrastructure and Planning (Onrus)*	*Local Heritage Committee*
Operational Services	*Traffic Department*	*Ward Councillor (D Botha)*	*Waste Management*

Applicant	SETPLAN obo RICHARD METCALD FAMILY TRUST
Property Details	ERF 1068 STANFORD
Application Description	PROPOSED CONSENT USE

ATTACHMENTS :

1. Notice 2. Locality Plan 3. Site & Ground Floor Plans 4. Motivation	Should the information be insufficient for you to make an informative comment, please list any additional documentation that you would require to make informed comments.

YOUR DEPARTMENT'S COMMENTS:

Adhere to impact on Safety health and well-being of the surrounding Community as stipulated in the Application.

Signature: Date: 15/09/2016.

Please provide your comments (with specific reference to any conditions of approval that should be imposed) in the space provided above or in a separate Memo **by not later than the date stipulated below.** **If you require an extension of time for submission of comments, kindly request this in writing.** Should no comments be received, it will be assumed that you have no objection to the proposal and where appropriate, the Mayoral Committee will be informed accordingly.

- *Building Control Department to confirm that all structures on the property/ies are in accordance with the approved building plans.*

COMMENTS REQUIRED BY: 7 OCTOBER 2016

OVERSTRAND
Munisipaliteit • U-Masipala • Municipality

ANNEXURE H 1/1

Western Cape Government
Transport and Public Works

OVERSTRAND MUNISIPALITEIT
19 SEP 2016
Orig
OVERSTRAND MUNICIPALITY

ROAD NETWORK MANAGEMENT
Email: Grace.Swanepoel@westerncape.gov.za
tel: +27 21 483 4669
Rm 335, 9 Dorp Street, Cape Town, 8001
PO Box 2603, Cape Town, 8000

P Roux

REFERENCE: 16/9/6/1-21/86 (Job 23923)
ENQUIRIES: GD Swanepoel
DATE: 7 September 2016

FILE NO: Erven 1068 & 1069 Stanford
SCAN NO:
COLLABORATOR NO: 9357148

The Municipal Manager
Overstrand Municipality
PO Box 20
HERMANUS
7200

Attention: Mr P Roux

Dear Sir

ERVEN 1068 AND 1069: CONSENT USE APPLICATION FOR A QUARRY

1. Your letter 1068 SSS (3375) dated 30 August refers.

2. The subject erven are located 3 km north of Stanford and take access at ±km 20.36 off Trunk Road 28/2.

3. This application is for Consent Use in order to permit continued mining activities (quarry) on the property.

4. This Branch offers no objection to the Consent Use application in terms of the Land Use Planning Act, No 3 of 2014 subject to the hard-surfacing of the access at ±km 20.36 off Trunk Road 28/2.

Yours faithfully

ML WATTERS
For CHIEF DIRECTOR: ROAD NETWORK MANAGEMENT

ANNEXURE I 1/4

Eskom

OVERSTRAND MUNISIPALITEIT
22 SEP 2016
OVERSTRAND MUNICIPALITY

TP - A Theart
(P Roux)

The Municipal Manager
OVERSTRAND MUNICIPALITY
P O Box 20
HERMANUS
7200

Attention: P Roux

Date:
8 April 2016

Enquiries:
Shaun Swanepoel
Tel 021 980-3913
Fax 086 660 0941

Dear Sir / Madame

ERF 1068, STANFORD, OVERSTRAND MUNICIPAL AREA: PROPOSED CONSENT USE: SETPLAN (OBO RICHARD METCALF FAMILY TRUST)

OUR REF: 02425/16
YOUR REF: 1068 SSS (3375)

This application affects the following Eskom power lines

- **STANFORD F2 OVERHEAD POWERLINE**
- **STANFORD F3 OVERHEAD POWERLINE**

Eskom has no objection to the abovementioned application, provided the following conditions are adhered to:

a) The following building and tree restriction on **either side of centre line** of overhead power line must be observed:

Voltage	Building restriction either side of centre line
11kV	9.0 m

b) No construction work may be executed closer than **6 (SIX) metres** from any Eskom structure or structure-supporting mechanism.

c) No work or no machinery nearer than the following **distances from the conductors**:

Voltage	Not closer than:
11kV	3.0 m

d) Natural ground level must be maintained within Eskom reserve areas and servitudes.

e) That a **minimum ground clearance** of the overhead power line must be maintained to the following clearances:

Voltage	Safety clearance above road:
11kV	6.3 m

FILE NO: erven 1068 - ST
SCAN NO: 19
COLLABORATOR NO: 939066

ANNEXURE I 2/4

f) That existing Eskom power lines and infrastructure are acknowledged as established infrastructure on the properties and any rerouting or relocation would be for the cost of the applicant/developer.

g) That Eskom rights or servitudes, including agreements with any of the landowners, obtained for the operation and maintenance of these existing power lines and infrastructure be acknowledged and honoured throughout its lifecycle which include, but are not limited to:

  i. Having 24 hour access to its infrastructure according to the rights mentioned in (a) above,

  ii. To perform maintenance (structural as well as servitude – vegetation management) on its infrastructure according to its maintenance programmes and schedules,

  iii. To upgrade or refurbish its existing power lines and infrastructure as determined by Eskom,

  iv. To perform any other activity not listed above to ensure the safe operation and maintenance of the Eskom power lines or infrastructure.

h) Eskom must have at least a 10m obstruction free zone around all pylons (not just a 10m radius from the centre).

i) Eskom shall not be liable for the death or injury of any person, or for loss of or damage to any property, whether as a result of the encroachment or use of the area where Eskom has its services, by the applicant, his/her agent, contractors, employees, successors in title and assignee.

j) The applicant indemnifies Eskom against loss, claims or damages, including claims pertaining to interference with Eskom services, apparatus or otherwise.

k) Eskom shall at all times have unobstructed access to and egress from its services.

l) Any development which necessitates the relocation of Eskom's services will be to the account of the developer.

m) **Dirk Swart, Caledon CNC** must be contacted on **028 212 1665** before working in close proximity to the overhead power lines.

Kindly contact **Shaun Swanepoel** at Tel: 021 980 3913, should you require any further information.

Yours sincerely

Shaun Swanepoel
LAND DEVELOPMENT (BRACKENFELL)

ESKOM (WESTERN REGION)

OCCUPATIONAL HEALTH AND SAFETY ACT (Act No 85 of 1993) WITH REGULATIONS

D16 (7) Excavations

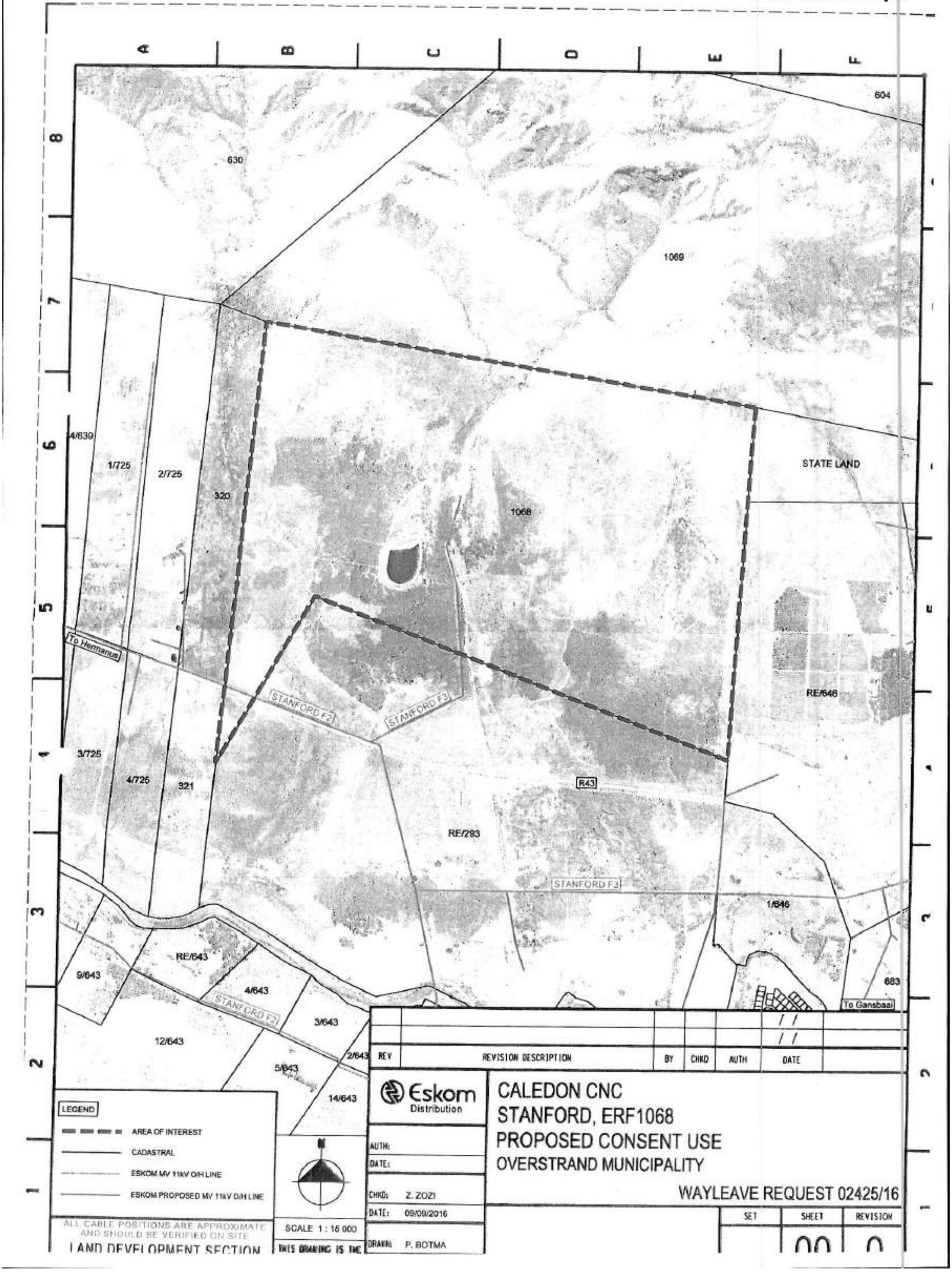
"The builder or excavator shall ascertain as far as possible the location and nature of underground services likely to be affected by the excavation and take such steps as may be necessary to prevent danger to persons".

THE ELECTRICITY ACT (Act No 41 of 1987)

Section 27 (3) : Offences and Penalties

"Any person who without legal right (the proof of which shall be upon him) cuts or damages or interferes with any apparatus for generating, transmitting or distributing electricity, shall be guilty of an offence and liable on conviction to a fine not exceeding R2 000,00 or to imprisonment for a period not exceeding twelve months".

ANNEXURE I 4/4



ANNEXURE J 1/1

Western Cape Government
Environmental Affairs and Development Planning

DEVELOPMENT MANAGEMENT: REGION 2
Angelina. Mabie@westerncape.gov.za
tel: +27 21 483 8354: +27 21 483 3633
1 Dorp Street, Cape Town, 8000
www.westerncape.gov.za

REFERENCE: 15/3/2/12/BO3/Erf 1068, Stanford, Hermanus
ENQUIRIES: A. Mabie-Goeieman

TP A Thaak (P Roux)

OVERSTRAND MUNISIPALITEIT
07 OCT 2016
OVERSTRAND MUNICIPALITY

The Municipal Manager
Overstrand Municipality
P O Box 20
Hermanus
7200

(Attention: P Roux)

OVERSTRAND MUNICIPALITY: CONSENT USE ON ERF 1068, STANFORD, HERMANUS

1. Your request for comment has reference.

2. The existing quarry is located in an existing Mining Right area and the surrounding land uses are a combination of extensive agriculture, intensive agriculture vineyards orchards, wilderness on the mountains slopes.

3. In terms of the Overstrand Municipality Zoning Scheme the zoning of the property is Agricultural Zone I, the proposed land use is consistent with the Agriculture Zone I.

4. The said property is consistent with the forward planning documents, the Overstrand Spatial Development Framework and Overstrand By-Law on Municipal Land Use Planning (2015).

5. The above comment submitted is not binding on this Town and Regional Planning Sub-Directorate: Region 2, the Director: Development Management – Region 2, the Chief Director: Environmental and Development Management, the Head of the Department: Environmental Affairs and Development Planning or the Minister responsible for Environmental Affairs and Development Planning.

Mabentsela

CHIEF TOWN AND REGIONAL PLANNER: REGION 2

DATE: 29.09.2016

FILE NO: Erven 1068 & 1069 Stanford
SCAN NO:
COLLABORATOR NO: 944561

14 OCT 2016

ANNEXURE K 1/1

Munisipaliteit • U-Masipala • Municipality
OVERSTRAND

File reference:	3375
Date:	30/08/2016

INTERNAL MEMORANDUM

From	:	Town Planning Department
Town Planner	:	PETRUS ROUX

TO:

Area Manager	*Building Department*	*District Health*	*Electrical Department*
Environmental Officer	*Fire Department*	*Infrastructure and Planning (Onrus)*	*Local Heritage Committee*
Operational Services	*Traffic Department*	*Ward Councillor (D Botha)*	*Waste Management*

Applicant	**SETPLAN obo RICHARD METCALFE FAMILY TRUST**
Property Details	**ERF 1068 STANFORD**
Application Description	**PROPOSED CONSENT USE**

ATTACHMENTS :

1. Notice 2. Locality Plan 3. Site & Ground Floor Plans 4. Motivation	Should the information be insufficient for you to make an informative comment, please list any additional documentation that you would require to make informed comments.

MUNISIPALITEIT OVERSTRAND MUNICIPALITY
FIRE BRIGADE / BRANDWEER
APPROVED / GOEDGEKEUR
07 OCT 2016

YOUR DEPARTMENT'S COMMENTS:

① All structures must be in compliance with requirements of National Fire Protection Regulations - SANS 10400 T: 2011.

② Above ground storage tanks for flammable liquids must be in compliance with SANS 10131.

Signature:		Date:	

Please provide your comments (with specific reference to any conditions of approval that should be imposed) in the space provided above or in a separate Memo by not later than the date stipulated below. If you require an extension of time for submission of comments, kindly request this in writing. Should no comments be received, it will be assumed that you have no objection to the proposal and where appropriate, the Mayoral Committee will be informed accordingly.

- *Building Control Department to confirm that all structures on the property/ies are in accordance with the approved building plans.*

COMMENTS REQUIRED BY: 7 OCTOBER 2016

ANNEXURE L 1/5

CapeNature

OVERSTRAND MUNISIPALITEIT
31 OCT 2016
OVERSTRAND MUNICIPALITY

SCIENTIFIC SERVICES

postal	Private Bag X5014 Stellenbosch 7599
physical	Assegaaibosch Nature Reserve Jonkershoek
website	www.capenature.co.za
enquiries	Rhett Smart
telephone	+27 21 866 8017 **fax** +27 21 866 1523
email	rsmart@capenature.co.za
reference	SSD14/2/6/1/7/2/1068&1069_mining_Stanford
date	**26 September 2016**

Site Plan Consulting
P.O. Box 28
Strand
7139

TP A Theart
(Suid Mema)

FILE NO: Erven 1068 & 1069
SCAN NO: Stanford
28
COLLABORATOR NO: 965830

Attention: Craig Donald
By email: craig@siteplan.co.za

Dear Craig

Draft Environmental Impact Assessment Report and Environmental Management Programme Report for the Mining Right Extension Application by Afrimat Aggregates (Pty) Ltd on Portions of Erf 1068 and Erf 1069, Stanford
(DMR ref. no. WC30/5/1/2/2/349MR)

CapeNature would like to thank you for the opportunity to comment on the proposed mining activities and would like to make the following comments. Please note that our comments only pertain to the biodiversity related impacts and not to the overall desirability of the application.

Public/Authority Consultation

It must be noted up front that CapeNature was not notified of this application, despite the inclusion within the public participation section of an email addressed to CapeNature dated 28 April 2016 notifying of registration of interested and affected parties and the availability of the Scoping Report. This email was never received – it may have been addressed to the incorrect email address.

The first notification that CapeNature received of this application was on 3 June 2016 via a query from the Klein River Estuary Forum. CapeNature then contacted Site Plan Consulting and requested to be registered as an interested and affected party. We did not get a response from Site Plan however we did receive the Draft Environmental Impact Assessment (EIA) Report and Environmental Management Programme (EMPr) Report to which this comment pertains.

Therefore it must be noted that CapeNature was not notified during the Scoping Phase and were not afforded the opportunity to comment. Related to this, our initial concerns that would have been raised during the Scoping Phase would only be expressed now, and therefore are likely to result in a delay in the process in order to be addressed.

Biodiversity Background

The subject property is classified as Critical Biodiversity Area (CBA) according to the Overberg Conservation Plan. CapeNature is in the process of producing the province-wide provincial spatial biodiversity plan with updated CBA maps. On the draft internal version, the

2 3 OCT 2016

site is classified as CBA, with the footprint of the existing mine CBA: Degraded. The natural vegetation occurring within the existing footprint and the proposed expansion is Overberg Sandstone Fynbos, listed as Critically Endangered.

There is a watercourse located on the western boundary of the existing quarry, although the disturbance footprint of the mining activities occurs within the riparian zone of the watercourse for some distance downstream. The watercourse is a tributary of the Klein River and it joins the upper end of the Klein River Estuary a short distance downstream. The riparian area referred to is classified as a floodplain wetland and is a National Freshwater Ecosystem Priority Area (NFEPA) wetland.

Specialist Studies

A botanical specialist study was undertaken. The study confirmed that there is intact Overberg Sandstone Fynbos present within the proposed expansion area, with a total of four Species of Conservation Concern encountered. The northern half of the proposed expansion area consists of good condition fynbos while the southern half was previously infested with pine trees which have since been cleared (it would appear that there have been fires in this area around 2012/2013 based on Google Earth imagery). The area of good condition fynbos is described as high conservation value and CapeNature objects to any mining in this area.

As stated above, the existing mining footprint is located adjacent to a watercourse with the disturbance footprint within the riparian area and floodplain wetland. Despite this, there has not been a freshwater specialist study undertaken. While the existing mining activities would be the primary source of the impact on the watercourse and wetland, the expansion of the mine will exacerbate the existing impacts. The existing impacts also need to be addressed and remediated.

If CapeNature had been provided the opportunity to comment during the Scoping Phase, we would have recommended that a freshwater specialist study should be undertaken in order to assess the additional impact and to provide recommendations to address the existing impacts. The freshwater specialist study should also assess the potential impact on the estuary, which is an estuary of national importance in terms of biodiversity, as well as the economy in terms of acting as a fish nursery and for tourism.

As stated above, CapeNature focuses on the mandate of biodiversity, however we wish to state that it must be ensured that other potential impacts are adequately assessed and reviewed by the relevant parties e.g. visual impact and tourism. In this case, addressing the biodiversity impacts can also address these impacts, particularly in relation to rehabilitation.

Rehabilitation

An important aspect to consider is the rehabilitation of the mining activity, in particular taking into consideration the precedent of the existing mine to date. It is stated that the existing approved EMPr for the site is now obsolete, and was undertaken prior to existing legislation and is unlikely to have been acceptable by current standards.

General rehabilitation principles have been included, with the aspects related to vegetation rehabilitation incorporated from the botanical specialist report. These proposed measures are supported.

However, the proposed end use of the mining activity has not been described. Some of the examples forwarded for rehabilitation of hard rock quarries are Blue Rock Quarry and Tygervalley Waterfront Quarry, however these would be highly inappropriate in this case as those are located within urban environments, not high up on a mountain slope surrounded by high conservation value fynbos (the Klein River Mountains are recognized as a hotspot for species diversity and endemism). Other photographs of rehabilitated hard rock quarries have been provided, however the proposal for this site has not been stated or detailed.

Although not described in any detail, there is evidence that the rehabilitation activities for the existing quarry to date have not been sufficient and that there have been impacts as a result of the activities including within the floodplain downstream of the quarry.

Although there is pristine fynbos higher up the slopes, there is evidently a significant alien invasive infestation on the site, which appears to have been exacerbated by the mining activities. It is evident that there have been alien clearing activities within the mining area, however there is still a significant infestation and the applicant must be responsible for ensuring that alien invasive species are removed from the designated mining area. It is noted that there is also a significant alien infestation beyond the mining area and the landowner should be alerted that they are required to remove alien invasive species in terms of the NEM:BA Alien and Invasive Species Regulations and CARA.

Alternatives

It is noted that alternatives have been mentioned and have been described as not feasible either due to logistical difficulties or unacceptably high impacts. This is noted however, more detail would be required before these could be dismissed. Although CapeNature are not the experts in mineral resources, rock aggregate cannot be considered a rare or strategic mineral, therefore the resource at the current location cannot be argued as not having alternative sources of the same mineral. Reference is made to the maps provided by the Council of Geoscience indicating that Stone Aggregate: Table Mountain Group is one of the most widely distributed mineral resources in the Western Cape.[1]

Conclusion

In conclusion, CapeNature **objects** to the application as currently proposed. While it is noted that many of the impacts are from the existing quarry and that the extensions would only be in addition to existing impacts, we cannot condone the continuation and expansion of an existing undesirable activity. Should this application be considered any further, a freshwater specialist study will be required and a more detailed rehabilitation plan must be compiled with a single well defined end use that is acceptable from a biodiversity perspective.

CapeNature reserves the right to revise initial comments and request further information based on any additional information that may be received.

Yours sincerely

Rhett Smart
For: Manager (Scientific Services)

cc. Elize Steenkamp, Department of Mineral Resources
Bernadette Osborne, Department of Environmental Affairs and Development Planning

[1] Cole, D.I., Ngcofe L. and K. Halenyane (2014): *Mineral Commodities in the Western Cape Province, South Africa*, Council for Geoscience

ANNEXURE L 4/5

CapeNature

SCIENTIFIC SERVICES

postal	Private Bag X5014 Stellenbosch 7599
physical	Assegaaibosch Nature Reserve Jonkershoek
website	www.capenature.co.za
enquiries	Rhett Smart
telephone	+27 21 866 8017 **fax** +27 21 866 1523
email	rsmart@capenature.co.za
reference	SSD14/2/6/1/7/2/1068&1069_mining_Stanford
date	**24 February 2017**

Site Plan Consulting
P.O. Box 28
Strand
7139

Attention: Neville van der Westhuizen
By email: neville@siteplan.co.za

Dear Neville

Application for Consent Use for the Existing Afrimat Aggregates (Pty) Ltd Hard Rock Quarry on Portions of Erf 1068 and Erf 1069, Stanford
(Overstrand Municipality ref. no. 1068 SSS (3375))

CapeNature would like to thank you for the opportunity to comment on the application and would like to make the following comments. Please note that our comments only pertain to the biodiversity related impacts and not to the overall desirability of the application.

CapeNature responded to the consent use application, in which we referred to our formal comments on the Draft Environmental Impact Assessment Report and Environmental Management Programme Report for the joint MPRDA/NEMA process for the expansion of the existing mine. In summary, we objected to the application.

A response has been provided from the applicant's consultants clarifying that the application is only for the mining that has taken place to date and therefore our comments on the MPRDA/NEMA mine expansion process are not relevant. CapeNature accepts this and acknowledges the responses provided. It would have however been useful if a distinction between the two processes and the scope of activity was provided in the consent application, particularly as they are proceeding concurrently.

As the mining activity has already taken place in terms of this application, the impacts on biodiversity and the broader environment have also already occurred. Should consent use be considered further, this must be subject to stringent conditions. It must be ensured that the consent use only refers to area which has already been mined and already been approved. The extension area contemplated in the MPRDA/NEMA application (DMR ref. no. WC30/5/1/2/2/349MR), must not be included in the consent use.

The main concern regarding the current operations is the rehabilitation of the site. Based on the evidence available, rehabilitation on the site has been highly inadequate. There is evidence of widespread degradation both on the mining footprint and extending beyond down the slope and down the watercourse. There is not much evidence of rehabilitation (never mind restoration) of the disturbance footprint of the mine, based on the information provided within the MPRDA/NEMA application, the planning application and the full range of available Google Earth historical imagery.

CapeNature therefore recommends that the consent use must be subject to a detailed rehabilitation plan for the site. The MPRDA/NEMA application did include general high level rehabilitation principles, however this was not considered adequate in order to ensure the successful rehabilitation of the site.

A detailed rehabilitation plan must be compiled which must be subject to approval from the Overstrand Municipality and should also be provided to CapeNature for comment. A suitable end use for the site must be identified and the applicant must ensure that resources are provided to ensure the site is rehabilitated to an acceptable standard, as determined by the municipality and CapeNature. The rehabilitation plan should also include clear timelines and objectives that can be enforced.

In conclusion, CapeNature does not object to the consent use application, subject to well defined boundaries as described above and the approval of a detailed rehabilitation plan.

CapeNature reserves the right to revise initial comments and request further information based on any additional information that may be received.

Yours sincerely

Rhett Smart
For: Manager (Scientific Services)

cc. Petrus Roux, Overstrand Municipality

ANNEXURE M 1/2

TP - A Theart
(Suid Merwe)

OVERSTRAND MUNISIPALITEIT
01 NOV 2016
OVERSTRAND MUNICIPALITY

BREEDE-GOURITZ

Catchment Management Agency
Opvanggebied Bestuursagentskap
I-Arhente yoLawulo lomMandla nokungqongileyo
51 Baring Street Worcester 6850, Private Bag X3055 Worcester 6850

E-mail:	zmbunquka@breedegouritzcma.co.za	Navrae: / Enquiries/ Imibuzo:	Z Mbunquka
Cell:	076 814 2784	☎	023 346 8000
		Verwysing: / Reference/iiReferenci:	4/10/1/G40L/ERF1068
		Datum: / Date:	31 October 2016

The Municipal Manager
Overstrand Municipality
P O Box 20
Hermanus
7200

Dear Sir/Madam

COMMENT ON THE PROPOSED SPECIAL CONSENT AND DEPARTURE ON ERF 1068, STANFORD.

With reference to the application received by Breede Gouritz CMA on 01 September 2016; the following:

<u>The Breede-Gouritz Catchment Management Agency (BGCMA) in principle, has no objection to the proposed consent use subject to the following conditions:</u>

- All relevant sections and regulations of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to.
- No pollution of surface water or ground water resources may occur due to any activity on the property.
- No storm water runoff from any premises containing waste, or water containing waste emanating from industrial activities and premises may be discharged into a water resource. Polluted storm water must be contained.
- All relevant sections and regulations of the National Environmental Management: Waste Act, 2008 (Act 59 of 2008) regarding the disposal of solid waste must be adhered to. Solid waste may only be disposed off onto an authorized solid waste facility in terms of abovementioned legislation.
- The minimizing of waste must be promoted and alternative methods for waste management must be investigated.

FILE NO: EL 1068 - Stanford
SCAN NO: 06
COLLABORATOR NO: 966639

TP 1 NOV 2016

ANNEXURE M 2/2

- No permanent structures maybe constructed within the 100-year flood line of any watercourse (seasonal or permanent river, stream, etc).

- No additional use of surface water and/or storage of water is permitted, unless the applicant has formally obtained a license in terms of Section 41 of the National Water Act (Act 36 of 1998) and/or formal authorization in terms of General Authorizations issued under Section 39 (Government Notice 399 dated 26 March 2004), and/or if it is authorized under Schedule 1 of the National Water Act, 1998 (Act 36 of 1998).

- It is the duty of the applicant(s) to ensure that all servitudes of aqueduct, access and storage to give effect to the apportionment of water uses has been agreed upon prior amongst the property owners and formally registered with the Deeds office to give affect thereto upon approval of the application.

- No activities may take place within a buffer area as determined by the freshwater ecologist upstream and downstream of a watercourse and/or any wetland system that is delineated without formal authorization thereto obtained from BGCMA.

Water for domestic use.

- The water provided for domestic use must comply with the SANS 241: 2011 guidelines for drinking water. Regular monitoring must be done to ensure compliance. If the quality of the water is of such a nature that it is a threat to human health, then the Breede-Gouritz Catchment Management Agency and the Provincial Department of Health must be informed of the procedures to rectify the problem.

Disposal of sewage

- The disposal of sewage must at all times comply with the requirements of Sections 22 and 40 of the National Water Act of 1998, (Act 36 of 1998.

The BGCMA will gladly comment on any additional information provided for review. The BGCMA reserves the right to revise initial comments and request further information based on any additional information that might be received.

Please do not hesitate to contact this office if you have any further queries.

Please ensure to quote the above reference in doing so.

Yours faithfully,

PHAKAMANI BUTHELEZI
CHIEF EXECUTIVE OFFICER

ANNEXURE N 1/1

COMMENTS FROM THE ENGINEERING SERVICES DEPARTMENT FOR: APPLICATION FOR CONSENT USE: ERF 1068, STANFORD (3375)

Electricity	:	Eskom area
Stormwater	:	No services available
Water	:	No services available
Sewer	:	No services available
Roads and traffic	:	No services available

Conditions:

1. that the developer arrange with ESCOM for the provision of electricity and that he complies with all conditions as may be set by ESCOM;

2. that no water service from Overstrand Municipality is available and the developer will be responsible to obtain the necessary approval, licence and permit from the applicable authorities (water affairs, health, etc.) for the use of any water and the extraction thereof;

3. that the quality of potable water comply with SANS0241 standards and that relevant proof be submitted to the Senior Manager : Engineering Services, Overstrand Municipality;

4. that waste water disposal be done in a safe and healthy manner and that plans thereof be submitted to the Municipality and DWA for approval;

5. that the developer complies to all the conditions set by Department Of Water Affairs;

6. that as no municipal refuse services are rendered in the area, the owner is responsible for removal of all refuse generated on the property, and the disposal thereof at a registered municipal waste transfer station or waste disposal facility.

Hendriks

DENNIS HENDRIKS
SENIOR MANAGER:
ENIGINEERING SERVICES

7/11/2016
DATE

ANNEXURE O 1/2

Western Cape Government
Agriculture

Cor Van Der Walt
LandUse Management
Email: LandUse.Elsenburg@elsenburg.com
tel: +27 21 808 5099 fax: +27 21 808 5092

TP A Theart
(C P Roux)

FILE NO: Erven 1068 & 1069
SCAN NO: Stanford
23
COLLABORATOR NO: 970597

OUR REFERENCE : **20/9/2/4/2/789**
YOUR REFERENCE : **1068 SSS (3375)**
ENQUIRIES : **Cor van der Walt**

Overstrand Municipality
PO Box 20
HERMANUS
7200

Att: P Roux

PROPOSED CONSENT USE: DIVISION CALEDON

ERF NO 1068, STANFORD

Your application of 30 August 2016 has reference.

The Western Cape Department of Agriculture has no objection to the proposed application with the following conditions:

- Put all measures in place to ensure proper post-mining rehabilitation of affected areas to as close to the original condition as possible;
- Limit the visual impacts associated with mining;
- Be careful not to damage agricultural infrastructure
- Allow day to day farming activities to continue unrestricted.

Please note:

- Kindly quote the above-mentioned reference number in any future correspondence in respect of the application.

ANNEXURE O 2/2

- The Department reserves the right to revise initial comments and request further information based on the information received.

Yours sincerely

AS ROUX Pr Eng
DIRECTOR: SUSTAINABLE RESOURCE MANAGEMENT
2016-10-27

Copies:
Department of Environmental Affairs & Development Planning
1 Dorp Street
CAPE TOWN
8001

Department of Minerals Resources
Private Bag X9
Rogge Bay
8012

L de Villiers

ANNEXURE P 1/53

S v/d Merwe

setplan SETTLEMENT PLANNING SERVICES

PLANNING AND MANAGEMENT CONSULTANTS

OVERSTRAND MUNISIPALITEIT 05 DEC 2016 OVERSTRAND MUNICIPALITY

FILE NO: EL 1068 Stanford 17/17/B

SCAN NO: 04

COLLABORATOR NO: 976778

Chief Town Planner
Professional Services
National Department of Public Works
Cape Town Regional Office
Lower Heerengracht Street
Cape Town
8000

5 December 2016
Our ref: 1619

Attention: Basson Geldenhuys cc: Alida Calitz (Overstrand Municipality)

RESPONSE TO OBJECTION BY THE NATIONAL DEPARTMENT OF PUBLIC WORKS ON REPORT IN MOTIVATION OF AN APPLICATION FOR CONSENT USE IN TERMS OF SECTIONS 16(2)(o) AND 21(3) OF THE OVERSTRAND BY-LAW ON MUNICIPAL LAND USE PLANNING (2015) TO PERMIT MINING IN THE AGRICULTURAL ZONE 1 (AGRI), AND TO ACHIEVE LAND USE AUTHORISATION AND CONTINUED OPERATION OF THE EXISTING STANFORD QUARRY (HARD ROCK QUARRY) ON ERF 1068, STANFORD, OVERSTRAND MUNICIPAL AREA

Setplan, on behalf of Afrimat Aggregates (Operations) (Pty) Ltd, puts forward the following response to the objection submitted by the National Department of Public Works (NDPW) (email dated 15/09/2016) on the abovementioned application which was forwarded to NDPW by the Overstrand Municipality in terms of the Overstrand By-Law on Municipal Land Use Planning, 2015.

The objection is not relevant as it does not relate to the application at hand, with such irrelevance reflected by the following:

(i) *NDPW's e-mail has as it's subject; "**Mining right extension** application by Afrimat Aggregates (Operations) (Pty) on Portion of erven 1068 and 1069..",* as its objection; *"NDPW is objecting against the issuing of the **environmental authorisation** due to the severe/ irreplaceable harm **such an extension** would cause....";* and as its conclusion, *"therefore NDPW is not supporting the **extension** of the mining application".*
   - The application at hand is not for the **extension** of the Standford Quarry. The **consent use application** categorically states "The consent use application is not for "an extension", "green-fields" or "new quarry", but specifically for the **legal regularisation/ authorisation of an existing land use** as manifested at the existing Stanford Quarry over the past 20 years since its licencing in 1996."
   - The objective of the application at hand is **not an environmental authorisation but a land use consent approval** for the existing Stanford Quarry.

(ii) NDPW's objection is in response to a *"call for comment on draft **EIA/ EMP**".*

- The response required should have been with regard to the **land use consent application** as circulated to NDPW by Overstrand Municipal, with such consent application focussing on the **existing quarry** as opposed to a **quarry extension** as put forward in the draft EIA/EMP.

(iii) NDPW's request for *"proof that the **existing mining activities have been ceased/ suspended or the correct land use has been obtained**"*.

- In accordance with the findings of the Macsand v/s the City of Cape Town judgment, Afrimat Aggregates (Pty) Ltd were requested by the Overstrand Municipality on 6 June 2016 to regularise the historic mining land use at the Stanford Quarry given no record of land use authorisation being in place. Such regularisation has been initiated through the submission of a land use consent application to permit mining in the Agricultural Zone 1 and to achieve land use authorisation and continued operation of the existing Stanford Quarry. The Overstrand Municipality confirmed lodgement of such application on 10 August 2016.
- Section 2(1); Historical Development of Stanford Quarry contained in the application Motivation Report 1619/R1 dated July 2016 highlights the following insofar land use regularisation and compliance:
  - No request/ demand prior to 6 June 2016 for land use authorisation of the quarry from the local authority (Local and District) despite their participation during quarry establishment, nor any record of the 24,8ha mining land use in the Municipal SDF or as a "non-conforming" land use in the Municipality's Development Management Scheme (Zoning Scheme) or municipal land use records over the past 20-year period.
  - Mining as a land use over the past 20 years since its licensing in 1996 and compilation of the 2002 EMPR which included I&APs to achieve support for its activities, including the then Stanford Municipality, the Overberg District Council, National and Provincial Departments, as well as a public participation process including several then community-based conservation organisations including the Stanford Conservation Trust, Bluemoon Community, Kleinriviersberg Conservancy, Walker Bay Conservation Forum and the Hermanus Property Owner's Association.
  - The Stanford Quarry representing a long-standing, regionally recognised and compliant land use (i.e. no written complaints submitted).

It is concluded that the objection submitted by NDPW is not relevant to the consent use application at hand given the following:

(i) Such objection is directed at a quarry "extension" on land outside of the existing quarry and its Mining Area (i.e. not the subject of the consent application). Accordingly NDPW's objection has no bearing on the consent use application.

(ii) An application for land use regularisation/ authorisation is in place insofar the existing Stanford Quarry, including its on-going operation and rehabilitation as per the current EMP.

Accordingly, a review of the objection is suggested, with the NDPW focussing its response on the **consent use application as tabled**, especially given the need for the existing quarry to remain operational and thereby realise the required rehabilitation, with the consent use approval and conditions thereto playing a pivotal land use management role in such rehabilitation.

ANNEXURE P 3/53

As a result of the aforementioned and specifically to avoid addressing objections that do not pertain to the application for land use authorisation we have not responded fully and comprehensively to the objections contained in the letter dated 15 September 2016. We hereby reserve our client's rights to do so once we receive the amended / reviewed objections from the National Department of Public Works. Should the National Department of Public Works decide not to amend its objections we reserve our client's rights to respond fully to the current objections.

Yours faithfully

Neville van der Westhuizen

FILE NO: EL 1068-Stanford
17/17/B
SCAN NO: 02
COLLABORATOR NO: 97675

L de Villiers
ANNEXURE P.4/53
S v/d Merwe

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PLANNING AND MANAGEMENT CONSULTANTS

OVERSTRAND MUNISIPALITEIT
05 DEC 2016
OVERSTRAND MUNICIPALITY

Senior Manager: Environmental Management
Environmental Section
Infrastructure and Planning
Overstrand Municipality
16 Paterson Street
Hermanus
7200

5 December 2016
Our ref: 1619

Attention: Penelope Aplon
Mrs L de Villiers

cc: Alida Calitz (Overstrand Municipality)

RESPONSE TO OBJECTION BY THE OVERSTRAND ENVIRONMENTAL MANAGEMENT SECTION (EMS) ON REPORT IN MOTIVATION OF AN APPLICATION FOR CONSENT USE IN TERMS OF SECTIONS 16(2)(o) AND 21(3) OF THE OVERSTRAND BY-LAW ON MUNICIPAL LAND USE PLANNING (2015) TO PERMIT MINING IN THE AGRICULTURAL ZONE 1 (AGRI), AND TO ACHIEVE LAND USE AUTHORISATION AND CONTINUED OPERATION OF THE EXISTING STANFORD QUARRY (HARD ROCK QUARRY) ON ERF 1068, STANFORD, OVERSTRAND MUNICIPAL AREA

Setplan, on behalf of Afrimat Aggregates (Operations) (Pty) Ltd, puts forward the following response to the objection submitted by the Environmental Management Section (EMS) of the Overstrand Municipality (email dated 05/08/2016) on the abovementioned application which was forwarded to the EMS by the Overstrand Municipality in terms of the Overstrand By-Law on Municipal Land Use Planning, 2015.

The objection is not relevant as it does not relate to the application at hand, with such irrelevance reflected by the following:

(i) EMS's objection is entitled "**Draft Scoping Report: Stanford Quarry**".
  - Such objection dated 5 August 2016 is in response to a draft **Scoping Report** submitted to Overstrand Municipality for the **extension** of Stanford Quarry.
  - The application at hand does not include a **"Scoping Report"** for the **extension** of the Stanford Quarry, but a land use consent application which categorically states **"The consent use application is not for "an extension", "green-fields" or "new quarry", but specifically for the legal regularisation/ authorisation of an existing land use as manifested at the existing Stanford Quarry over the past 20 years since its licencing in 1996."**

(ii) The EMS objection, if purporting to also be applicable objection on the **land use consent application**, either by purpose or by default, is **inappropriate** as illustrated by the following:
  - All text/ statement references in such objection have no reference framework to the consent use application.

5 DEC 16

ANNEXURE P 5/53

- Policy references (e.g. Overstrand Municipality Mining Policy) put forward as informants to the draft Scoping Report are in fact employed in the consent use application to assess consistency of the existing Stanford Quarry with Municipal Policy, inclusive of the Overstrand Municipality Spatial Development Framework (SDF), the Overstrand Integrated Development Framework (2014), the Draft Overstrand Environmental Management Framework (2013) and Overstrand Municipality Zoning Scheme (2013).
- The EMS objection pertains to a "new/ extension" quarry as put forward in the Draft Scoping Report, and Environmental Impact Assessment (EIA) and Environmental Management Programme (EMPR) which assess the ability of resources (e.g. biodiversity) to accommodate a "new extension". However the motivation approach put forward in the land use consent application (i.e. the application at hand), given that the current mining footprint of the quarry has reached 98% of the maximum excavation surface area as per the prescribed "limit of excavation line", focusses on the past and current performance of the existing quarry within the environmental, social and economic resources in order to inform rehabilitation, which will comprise one of the major activities during the remaining life-span of the quarry.

It is concluded that the objection submitted by the EMS is not relevant to the consent use application at hand given the following:

(i) Such objection is directed at a quarry "extension" on land outside of the existing quarry and its Mining Area (i.e. not the subject of the consent use application).

(ii) Such objection has its focus on the ability of environmental resources (and others) to accommodate a new "quarry/ extension" and on current policy/ regulatory requirements for quarry location (e.g. overlays) which cannot be applied retrospectively to historic quarry establishment (i.e. the existing Stanford Quarry).

Accordingly, a review of the objection is suggested, with the EMS focussing its response on the consent use application as tabled, especially given the need for the existing quarry to remain operational and thereby realise the required rehabilitation, with the consent use approval and conditions thereto playing a pivotal land use management role in such rehabilitation.

As a result of the aforementioned and specifically to avoid addressing objections that do not pertain to the application for land use authorisation we have not responded fully and comprehensively to the objections contained in the letter dated 5 August 2016. We hereby reserve our client's rights to do so once we receive the amended / reviewed objections from the Overstrand Environmental Management Sesction. Should the Overstrand Environmental Management Section decide not to amend its objections we reserve our client's rights to respond fully to the current objections.

Yours faithfully

Neville van der Westhuizen

L de Villiers
ANNEXURE P 6/53
Suid Marine

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PLANNING AND MANAGEMENT CONSULTANTS

OVERSTRAND MUNISIPALITEIT
05 DEC 2016
OVERSTRAND MUNICIPALITY

FILE NO: EL 1068 Stanford 17/6/7/8
SCAN NO: 03
COLLABORATOR NO: 976773

Scientist: Land Use Application
Scientific Services
CapeNature
Private Bag X5014
Stellenbosch
7599

5 December 2016
Our ref: 1619
Your ref: ~~SSD 14/2/6/1/7/2/1068&1069-mining-Stanford~~

Attention: Rhett Smart cc: Alida Calitz (Overstrand Municipality)

RESPONSE TO OBJECTION BY CAPE NATURE ON REPORT IN MOTIVATION OF AN APPLICATION FOR CONSENT USE IN TERMS OF SECTIONS 16(2)(o) AND 21(3) OF THE OVERSTRAND BY-LAW ON MUNICIPAL LAND USE PLANNING (2015) TO PERMIT MINING IN THE AGRICULTURAL ZONE 1 (AGRI), AND TO ACHIEVE LAND USE AUTHORISATION AND CONTINUED OPERATION OF THE EXISTING STANFORD QUARRY (HARD ROCK QUARRY) ON ERF 1068, STANFORD, OVERSTRAND MUNICIPAL AREA

Setplan, on behalf of Afrimat Aggregates (Operations) (Pty) Ltd, puts forward the following response to the objection submitted by CapeNature (email dated 28/10/2016) on the abovementioned application which was forwarded to CapeNature by the Overstrand Municipality in terms of the Overstrand By-Law on Municipal Land Use Planning, 2015.

The objection is not relevant as it does not relate to the application at hand, with such irrelevance reflected by the following:

(i) CapeNature's covering e-mail states *"with regard to **the proposed consent use for the expansion** of the Afrimat Quarry on Erf 1068..."*
   - The application at hand is not for the expansion of the Standford Quarry. The consent application categorically states "The consent use application is not for "an extension", "green-fields" or "new quarry", but specifically for the **legal regularisation/ authorisation of an existing land use** as manifested at the existing Stanford Quarry over the past 20 years since its licencing in 1996."

(ii) CapeNature's covering e-mail states *"....we provided comment on the **Draft BAR/ EMPR** in terms of the joint NEMA/MPRDA application.... these comments are **relevant to the consent use application** and are attached."*

- The CapeNature objection pertains to a "new/ extension" quarry as put forward in the Draft Environmental Impact Assessment (EIA) and Environmental Management Programme (EMPR) which assess the ability of resources (e.g. biodiversity) to accommodate a "new quarry". However the motivation approach put forward in the consent use application (i.e. the application at hand), given that the current mining footprint of the quarry has reached 98% of the maximum excavation surface area as per the prescribed "limit of excavation line", focusses on the past and current performance of the existing quarry within the environmental, social and economic resources in order to inform rehabilitation, which will comprise one of the major activities during the remaining life-span of the quarry.

It is concluded that the objection submitted by CapeNature is not relevant to the consent use application at hand given the following:

(i) Such objection is directed at a quarry "extension" on land outside of the existing quarry and its Mining Area (i.e. not the subject of the consent application).

(ii) Such objection has its focus on the ability of environmental resources (and others) to accommodate a new "quarry/ extension" and on current policy/ regulatory requirements for quarry location which cannot be applied retrospectively to historic quarry establishment (i.e. the existing Stanford Quarry).

Accordingly, a review of the objection is suggested, with CapeNature focussing its response on the **consent use application as tabled**, especially given the need for the existing quarry to remain operational and thereby realise the required rehabilitation, with the consent use approval and conditions thereto playing a pivotal land use management role in such rehabilitation.

As a result of the aforementioned and specifically to avoid addressing objections that do not pertain to the application for land use authorisation we have not responded fully and comprehensively to the objections contained in the letter dated 28 October 2016. We hereby reserve our client's rights to do so once we receive the amended / reviewed objections from CapeNature. Should CapeNature decide not to amend its objections we reserve our client's rights to respond fully to the current objections.

Yours faithfully

WESTHUIZEN.

Neville van der Westhuizen

ANNEXURE P 8/53

setplan
SETTLEMENT PLANNING SERVICES
PLANNING AND MANAGEMENT CONSULTANTS

The Director
Infrastructure and Planning
Overstrand Municipality
PO Box 20
Hermanus
7200

Your ref: 1068 DDD (3375)
6 March 2017
Our ref: 1619

Attention: P Roux (Town Planner) and Alida Conradie alida@overstrand.gov.za

CONSENT USE APPLICATION: STANFORD QUARRY, ERF 1068, STANFORD, OVERSTRAND MUNICIPAL AREA

RESPONSE TO REVISED COMMENT/ OBJECTIONS AND PROPOSED WAY FORWARD

This memorandum serves to:

(i) Provide response to the revised comment/ objections submitted by Overstrand Municipality; Environmental Section, CapeNature; Scientific Services and the National Department of Public Works (NDPW).

(ii) Propose a way forward to supplement the Consent Use Application and thereby facilitate its consideration and conclusion by Council.

1. Background

The comment/ objections initially received from CapeNature, Overstrand Environmental Section and NDPW were, in the opinion of the applicant, inappropriate as such comment/ objections did not refer to the application at hand. Accordingly, with the consent of Overstrand Town Planning, the three Departments/ Sections were requested to provide revised comment/ objections to the Consent Use Application as submitted. Such comment/ objections have duly been received and inform the following applicant's response thereto and proposed way forward.

2. Response to Revised Comment/ Objections

Revised Comment/ Objections	Applicant Response
2.1. National Department of Public Works: Basson Geldenhuys (Town Planner) email response dated 20 February 2017 (refer Annexure A)	
(i) Issues dealt with during discussion with applicant and therefore NDPW has no further comments.	(i) Final comment noted.
(ii) Issues raised by NDPW during telephonic discussion on 4 December 2016 included:	(ii) Requirement for mitigation and rehabilitation noted.

– Original consent use directed at an extension of mining activities at Stanford Quarry and not the existing quarry. – Consent use approval should ensure that appropriate mitigation and rehabilitation is in place both during remainder of life-of-mine and on closure of the quarry (i.e. the existing quarry) given the sensitive natural environment in which it is located.	
2.2. CapeNature; Scientific Services: Rhett Smart (Scientist: Land Use Application) letter dated 24 February 2017 (refer Annexure B)	
(i) Initial comments directed at MPRDA/ NEMA application for expansion of the quarry. (ii) Revised comment is on Consent Use Application for the existing quarry. Consent Use Application made no distinction between the two concurrent processes. (iii) Consent Use, if considered, must be subject to stringent conditions, including: – Consent use must only refer to the area which has been mined and already approved for mining (i.e. not extension area which is contemplated in the MPRDA/ NEMA application). – Consent Use must be subject to a detailed rehabilitation plan for the site given evidence that rehabilitation of the site to date has been inadequate. Such detailed rehabilitation plan be subject to Overstrand Municipality approval and comment/ review by CapeNature. Furthermore, such plan to include a suitable end-use, clear timelines and objectives that can be enforced. Applicant to ensure resources are available to achieve an acceptable standard of rehabilitation as determined by the Overstrand Municipality and CapeNature.	(i) Reason for the request for revised comment/ objections acknowledged. (ii) Revised comment noted. The Consent Use Motivation Report 1619/R1 section 2(i) clearly states "the consent use application is not for a "green-fields" or "new quarry", but rather for the regularisation of an "existing quarry" (iii) Stringent conditions requirement noted. – Consent Use Application as depicted in Figure 16 is for the existing 2011 Mine Right Area (i.e. Figure 2) and does not include the MPRDA/ NEMA mine extension application area. – Requirement for a detailed rehabilitation plan noted. Refer MPRDA/ NEMA Regulations in such regard (see 3 below)
(iv) Cape Nature does not object to the Consent Use Application, subject to well defined boundaries as described and the approval of a detailed rehabilitation plan.	(iv) No objection to Consent Use Application noted. – Boundary of Consent Use (i.e. Figure 16) is as per approved DMR Mining Right Area (i.e. Figures 2 and 3) and the 2011 Updated Excavation Plan (i.e. Figure 6) including a "limit of excavation", with the Revised Mine Right Boundary and Limit of Excavation as determined by the DME in 2011 (refer Annexure D). All such areas

	are cadastrally defined as per the Mining Right. – Consent Use Application requirement for a detailed rehabilitation plan noted. Refer MPRDA/ NEMA Regulations in such regard (see 3 below)
2.3. <u>Overstrand Municipality; Overstrand Environmental Section; Penelope Aplon (Environmental Officer) letter dated 8 February 2017 (refer Annexure C)</u>	
(i) The application has been evaluated against the mining policy statements and guidelines as put forward in the Overstrand Municipality's SDF (2006), with the mining at the Stanford Quarry being in conflict with such policy.	(i) The Consent Use application, as reflected in section 4.1 of the Consent Use Motivation Report 1619/R1 (July 2016) takes cognisance of Overstrand Municipality Policy (i.e. mining, environmental). However such Motivation Report states the following: "Consistency of mining on Erf 1068 Stanford with Overstrand policy is limited by the following: – The commencement of mining activities (1996) and compilation of the EMP (2002) inclusive of the Mine Plan, pre-dating current relevant policies (2006-2014), together with the fact that the current mining has reached +-98% of its development footprint restricts the retrospective application of such policies to this application. – The policies, while putting forward a Mining Policy and spatially depicted land use categories not suitable for mining, do not reserve areas for exploitation of construction materials, with such areas only being confirmed through prospecting and site selection. – Minerals being place/ resource-bound, a critical location consideration for strategic minerals (e.g. construction materials), together with distance from the consumer market (i.e. delivery cost and transport impact on regional/ district road infrastructure and user safety) also being a strong location consideration. However consistency is being and can still be achieved with Overstrand policy in respect of mining on Erf 1068 Stanford through the following: – The current mining operations as per the EMP include mitigation measures to address impacts.

	– The limited operational period of mining does not preclude the re-instatement of pre-mining land capability given the EMP Rehabilitation Plan. – The EMP being inclusive of stringent rehabilitation measures, monitoring and auditing. – The Stanford Quarry achieving a balance between the benefits of mining a strategic resource and the long-term environmental costs."
(ii) Impact of unrehabilitated quarries on tourism	(ii) Rehabilitation of the Stanford Quarry is a legal requirement i.t.o. the Mining Right issued, inclusive of revegetation and terrain shaping to reduce visual impact.
(iii) Visual impact cannot be rated as moderate.	(iii) Noted. Moderate rating as per assessment detailed in section 4.2.1(ii) of the Motivation Report.
(iv) Clarity be provided regarding the current water use on the existing mine and if a water use licence is/ was required or issued.	(iv) - Water obtained from the property owner for plant area and road wetting, with such supply as per Notarial Mineral Lease. - Water Licence Application (WULA): application date: 30 November 2015. WULA issuing: Expected shortly.
(v) Applicant to indicate what measures are put in place to prevent siltation of the stream/ river due to mining. It is recommended that a freshwater study be conducted to determine current impacts on the stream/ river.	(v) - Note requirement for a freshwater study. **A Freshwater Ecosystem Impact Assessment for the Stanford Quarry** was commissioned by Afrimat (mining company) in 2016 in order to address impacts, including siltation. - Current EMP stormwater management comprises drainage via shallow stormwater/ silt cut-off channels to retention ponds (2 dams). Photo 5 in the Motivation Report illustrates a berm bordering the stockpile platform to prevent sand/ silt run-off and movement into the stream. **A Stormwater Management Plan for Stanford Quarry** was commissioned by Afrimat (mining company) in 2016, with such plan specifically addressing silt run-off.
(vi) No timeframes are put forward for the proposed rehabilitation of the current mining site.	(vi) Timeframe requirement in a rehabilitation plan.
(vii) Application to clarify/ include the following: – Current water use on site and its monitoring i.t.o. a water use licence.	(vii) – Water use by quarry restricted to dust suppression water spraying at plant and stockpile area, and water wetting of haul

– Indicate impacts on stream by conducting a freshwater study. – Provide a rehabilitation plan, including costs and timeframes for planned rehabilitation measures.	road and quarry access road, especially in the vicinity of the R43 intersection – Note requirement for a freshwater study. – Note requirement for a rehabilitation plan, including cost estimates and timeframes.

3. Rehabilitation Plan" MPRDA/ NEMA regulations

The requirement for a rehabilitation plan raised in the comments/ objections needs to be viewed within the context of legislation regarding mine closure applicable to all mines (i.e. holders of Mining Rights). This does not imply that all mines are imminently closing but stems from the following legislation prescribing that a mining company compile and submit details of its Mine Closure Plans and initiate a process of annual update of such "closure planning" during the remaining life-of-mine:

(i) The **Mineral and Petroleum Resources Development Act** (MPRDA) requires that in terms of the first principle for mine closure in Regulation 56, a closure of a mining operation is "**a process which must start at the commencement of mining and continue throughout the life of operation**"; and

(ii) The **National Environmental Management Act (NEMA) Regulations of 20 November 2015 appendix 3** specifies the detail structure and financial provisioning for "**Annual Rehabilitation Plans**" (ARPs) to be prepared and submitted by the holder of a Mining Right together with the details in its **Appendix 4** for the "**Final Rehabilitation, Decommissioning, and Mine Closure Plan**" together with a **Post Mining Land Use Plan** and **Financial Provision**.

The current legislation under the above Acts, as from March 2017, requires of all mines (i.e. holders of Mining Rights) to prepare and lodge ARPs (Annual Rehabilitation Plans) inclusive of budgeting for implementation of such plans which must be submitted to the DMR.

It is noted that the DMR is the lead agent of the MPRDA and of the NEMA in respect of mines, especially in respect of annual rehabilitation plans.

4. Way Forward

The first such ARP is being compiled for Stanford Quarry (2017-2018 financial year), with completion in the next 8 weeks. Such ARP compilation will be an on-going annual process for the life-of-mine. Compilation of the Stanford Quarry ARP will be informed by the following:

- Final Rehabilitation Decommissioning and Mine Closure Plan objectives
- Post-mining Land Use Plan
- The approved 2011 EMP Rehabilitation Plan
- New and previously unattended impacts requiring mitigation in the financial year
- Financial Provision for mitigation in the financial year

The ARP will draw on the following to update existing EMP management requirements:

(i) Specialist studies, with such studies appended to the ARP:
  - Stormwater Management Plan for Stanford Quarry (2016)

- Freshwater Ecosystem Impact Assessment for the Stanford Quarry (2016)

(ii) Water Use Licence (WUL), if issued timeously.

Consequently, a duplicate Rehabilitation Plan as requested in the comment/ objections cannot be prepared in terms of the Overstrand By-Law on Municipal Land Use Planning (2015). However, at the time of acceptance of the Stanford Quarry ARP by the DMR, the ARP would be made available to the Overstrand Municipality. Such ARP which comprises a structured process for co-ordinating and scheduling the operational rehabilitation of mining disturbances at the Stanford Quarry would address comment/ objections tabled by the NDPW, CapeNature and Overstrand Environmental Section, as well as provide the consent use, if approved, with the necessary management conditions and facilitate its consideration and conclusion by Council.

Please contact our office in the event of any further information being required.

Yours faithfully

NWESTHUIZEN

Neville van der Westhuizen

ANNEXURE P 14/53

setplan

SETTLEMENT PLANNING SERVICES

PLANNING AND MANAGEMENT CONSULTANTS

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Tel 021-854 4260 Fax 021-854 4321

The Town Planner
Town and Spatial Planning Department
Overstrand Municipality
PO Box 20
Hermanus
7200

Our ref. 1619
Your ref:
18 May 2017

Attention: Petrus Roux

ERF 1086 STANFORD: CONSENT USE APPLICATION TO ACHIEVE LAND USE AUTHORISATION AND CONTINUED OPERATION OF THE EXISTING STANFORD QUARRY

Your e-mail of 15 May 2017 refers.
As requested, the following information and/ or reference thereto in Report 1619/R1 dated July 2016 submitted in motivation of the Consent Use Application.

1. <u>The Current Environmental Authorisation for the Existing Mine Area</u>
   (i) The current EIA is as per the EMP's EIA process as part of the original EMP dated 2002 and the EMP update dated 2011, manifesting in the 2002 Mining Licence and the 2012 Converted Mining Right respectively.
   (ii) Confirmation of the status of such EA is confirmed by the "Government's One Environmental System" which came into effect on 9 December 2014 and states that "All environmental management plans or programmes approved in terms of the Mineral and Petroleum Resources Department Act, 2002 (Act no 28 of 2002), immediately before 8 December 2014, shall be deemed to be approved in terms of the NEMA".
   (iii) Refer Consent Use Motivation Report 1619/R1 page 1 section 1.3 (iii) and Annexure A to such report. Annexure A is also attached to this letter for your convenience.

2. <u>The EMP which was updated 2011 and the Rehabilitation Plan</u>
   (i) 2011 EMP Update – refer attached electronic copy of Report 2258/R6 October 2011, inclusive of the Mine Plan and Rehabilitation Plan.
   (ii) Refer Consent Use Motivation Report 1619/R1 Section 3 (pages 11-18) which summarises the Mine Site Development Plan, the Decommissioning and Rehabilitation Plan and the proposed Post-Mining Land Use, including the following figures:
      - 2011 Updated Mine Layout Plan: Mine Site Development Plan (Figure 7).
      - 2011 Updated Excavation Plan (Figure 8)
      - 2011 Decommissioning Rehabilitation Plan (Figure 9)
      - Post Mining Land Use Plan (Figure 10)

14/06/17

Also note the 2002 Mine Plan (Figure 5) and the Partial Closure and Rehabilitation Actions (Figure 6) as described in section 2(i) "Historical Development of Stanford Quarry" detailing the previous mining and rehabilitation of the lower Scree Mining Area.

3. Estimated Lifespan of the Existing Mine
   (i) Refer Consent Use Motivation Report 1619/R1 section 3.1 which states that the life-of-mine is restricted for several reasons, one of which being that the excavation footprint has reached +-98% of the maximum excavation surface area as per the "limit of excavation line" set by the DMR during the 2011 EMP update (refer Figure 8). Furthermore, despite a significant resource deposit, excavation berms need to be retained for safety and rehabilitation purposes. Accordingly the mining company/ owner Afrimat Aggregates (Operation) (Pty) Ltd puts forward a life-of-mine as at May 2017 of +-three (3) years.

4. The Fresh Water Study indicates that the Mining Activities have a definite impact on the river, please indicate how this will be addressed.
   Mitigation to alleviate mining impacts on the river and its associated freshwater ecosystems include the following as put forward in the 2011 EMP, the Freshwater Ecosystems Impact Assessment Report (Freshwater Consulting cc) and the Stormwater Management Report (WATSAN Africa-2016) (see attached). Where infrastructure, work methodology and monitoring are in pace to mitigate such impacts, such initiatives accordingly noted.

   4.1. 2011 EMP Operational Phase
   - Tidying up of the fill platform edge together with the sloping and rehabilitation of the western slope of the stream valley.
   - Construction of a tailings pond on the plant platform to which tailings from the sand washing plant will discharge and closure of the existing drainage line to the upper dam in the stream channel. Tailings from the tailings pond must be removed by front-end loader and used as sand cover in the rehabilitation of old gravel pits on the south slope of the hill facing the tar road.
   - Rehabilitation of the stream channel includes; the re-establishment of indigenous shrub and trees on the west bank by tree/shrub planting by a horticulturalist; tidying the lower portion of the stream channel above the bridge and its revegetation; reconstructing the bridge; and infill shaping/reshaping and final stabilisation of the east bank above the bridge using coarse rock pack.
   - With regards to hard rock excavation, the following must be undertaken; restricting all loading operations to the extent of the existing platform below the excavation with no expansion of the platform towards the stream; removal of any fly-rock from the stream; taking precautionary measures not to damage the exposed water pipe by fly-rock; and finally, the topsoiled areas to be seeded with Fynbos seed to local seed supplier specification.

   4.2. 2011 EMP Rehabilitation Phase and Post-Mining
   - Retention of the stormwater system for continued functioning, including the shallow stormwater cut-off channels, retention ponds/ silt traps and controlled/ piped discharge to the river, with management thereof by the landowner.

4.3. 2016 Freshwater Ecosystems Impact Report

- Removal of a section of the loading platform and rehabilitation of this area through re-shaping and planting with indigenous vegetation to create a natural buffer of at least 30 m between the excavation area and the river channel.
- Re-shaping of the channel margin and removal of large rock material that prevents the growth of natural riparian vegetation typical of the channel under natural conditions.
- Rehabilitation of the channel margin through the introduction of topsoil and revegetation of the channel banks and riparian fringe.
- Removal of alien vegetation and revegetation of the channel margins where infestation limits the riparian functionality along the length of mine operations.
- Stabilisation of the channel where active erosion is evident using soft engineering options such as geofabric meshes rather than gabions or armourflexing if possible.
- Management of runoff from the site through development of an effective stormwater management plan to intercept flows from the excavation and loading platform, as well as the stockpiling and crushing platform. Although there are currently detention facilities to intercept silt laden stormwater runoff, this system is not effective and needs to be addressed to ensure that overbank flow, erosion and sedimentation of the channel are minimised.
- Crushed stone should be removed from the river channel by hand.
- Upgrading of the road crossing to accommodate high flows and thus prevent the 'damming' effect that is created by the current road crossing. This would involve the input of an engineer and consideration of culverts instead of pipes across the river. The road crossing also requires erosion prevention measures to prevent sedimentation of the channel. Re-instating the natural flow dynamics of the system will also assist with flushing fine sediments accumulated in the in-stream habitat and thus improve the currently impacted state of this ecosystem.

4.4. 2016 Stormwater Management Report

- Upgrading of existing stormwater infrastructure to cope with volume of stormwater (i.e. road-side and platform berms, and two stormwater dams). Consideration be given to the following additional infrastructure:
  - Two stormwater dams of similar dimension to the existing dams with adequate capacity to contain stormwater run-off from the relevant areas of the operation.
  - Two outlets through the berm to reduce velocity of stormwater and subsequently reduce its erosion potential.
- Depressions in road to be filled in, shaped and compacted in order to prevent ponding and ensure an even flow of stormwater along the road from the culvert to the lower stormwater dam. Downstream of the culvert the road needs to be slightly and transversely sloped (north-west to south-west) to facilitate stormwater drainage from the road towards and against the berm into the stormwater dam, as opposed to in the stream.
- In order to prevent stormwater from leaving the road and ending up in the stream the berm must be 500mm in height, well compacted and shaped with 1:3 sides.
- The slope of the "landing area"/ platform needs to be engineered to direct stormwater run-off towards the upper stormwater dam as opposed to its current slope towards the river. Such "landing/ platform area" must also be provided with a proper berm to ensure stormwater overflow does not run down the slope into the stream.

- Regular fixed-schedule maintenance inspections of roads, berms and stormwater dams, increased to once weekly during winter, with eroded or damaged areas promptly repaired.
- Regular silt removal from the stormwater dams in order that silt does not compromise the hydraulic capacity of such dams, resulting in overflow. Removed silt to be disposed of safely away from the river.
- A monitoring programme including the following be in place:
  - Independent and officially qualified ECO be appointed to inspect stormwater infrastructure twice yearly.
  - River biomonitoring at two (2) sampling points (upstream and downstream of the quarrying operation) to monitor the required parameters, with evaluation against accepted criteria. Notably turbidity should be measured in the stream downstream of the quarry and crusher.

Current Status

As at May 2017 the following mitigation measures to address mining impact on the river together with monitoring thereof are in place at Stanford Quarry, in terms of the requirements of the 2011 EMP and in response to the Fresh Water Impact Assessment and the Stormwater Management Report.

(i) Culverts have been installed at the river crossing to facilitate flow and address previous "damming" and overflow which resulted in material/ silt being washed into the river. Additionally the roadsides of the river crossing (i.e. fill) have been stabilised/ packed, with run-off diverted to the retention pond, thereby chanelling such run-off away from the river course. Monitoring is in place, during wet weather, with prompt repair.

(ii) Shaping of the "platform" to direct drainage towards the retention pond.

(iii) Shaping of the roadway to reduce ponding and direct drainage to the retention pond.

(iv) Improvement of channels (i.e. depth) and berms (i.e. height) where required, together with regular inspection.

(v) Regular emptying of silt from retention ponds, with removal to appropriate fill and monitoring of the dams during rainy season to inform if and when additional ponds are required.

(vi) Appointment of an ECO for required biomonitoring and regular inspection of the stormwater system, with register recordal and identification of follow-up remedial actions required.

(vii) An application for Water Use Licence (WULA) was submitted to the Department of Water and Sanitation on 30 November 2015. Such application is in progress with the following having been concluded to-date:

- Preparation and submission of the Freshwater Ecosystem Impact Assessment and the Stormwater Management Plan.
- Meeting with the Berg-Gouritz Catchment Management Agency re the application.
- Site inspection by GBGM/ DWS officials.
- Awaiting issue of a General Authorisation.

We trust that the above meets the requirements or your email dated 15 May 2017.

ANNEXURE P 18/53

Yours faithfully

Neville van der Westhuizen
Setplan

Attachments:
(i) Stormwater Management Plan.
(ii) 2011 EMP (Report 2258/R6- October 2011.
(iii) Annexure A
(iv) Freshwater Study

ANNEXURE P 19/53

AFRIMAT®

FRESH WATER REPORT FOR THE PROPOSED SAND MINE ON THE FARM WOODLANDS 874, MALMESBURY

A requirement in terms of Section 21 of the National Water Act 36 of 1998

September 2015

greenmined environmental

Tel 021 850 8875
Fax 086 546 0579

201 Hibernian Towers
c/o Beach Rd & Sarel Cilliers Strand, 7140
Suite 62, Private Bag x15
Somerset West, 7129

WATSAN Africa

Index

Executive Summary

Afrimat has applied for a mining license on the Farm Woodlands to mine sand for the building and construction industry. The farm has been extensively exploited in the past for sand mining. The Department of Water and Sanitation expressed concern for a seep or drainage line downhill from the proposed mine and asked for a "Fresh Water Report".

According to the report the water course in question is demarcated by a stand of *Elegia*, a recognised wetland indicator plant. Although patches of this plant are common in the district, the sub-catchment near the mine is denuded from these plants. Therefore it might be worthwhile to save them from further destruction. At the same time the wetland could serve as indicator of how well the mine is going to be operated.

The Fresh Water Report does not contain any evidence that prohibits the development of the envisaged sand mine. It is suggested that the mining should go ahead.

1. Introduction

Afrimat Aggregates Operations (Pty) Ltd applied for official authorisation to mine sand on 92 hectares of Portion of the farm Woodlands 874. The farm is located 18 km south of Malmesbury.

Department of Water and Sanitation officials identified a drainage line and possibly a wetland (named the Woodlands Wetland for the purpose of this report) that is situated within 500 meters of the envisaged mining operations. This drainage line is adjacent to the southern boundary of the area that is earmarked for the envisaged mining operation.

According to the Department's policies a "Fresh Water Report" is called for that should accompany the mining application. Greenmined Environmental appointed Watsan Africa on behalf of Afrimat to produce such a fresh water report.

Over time a certain structure has developed for these reports and this 'recipe' was duly followed.

2. Regional Setting

The mine is located 18 km south of Malmesbury (Figure 1) and to the west of the Paardenberg Mountain along the R302 trunk road.

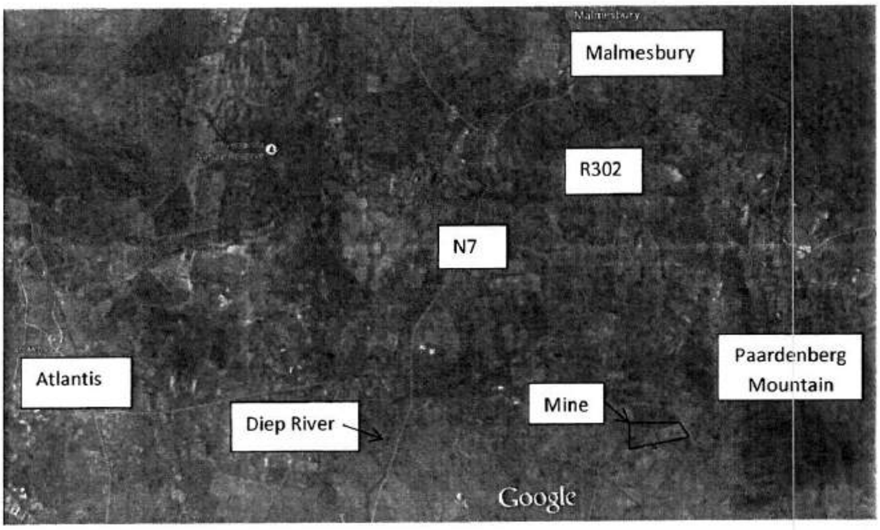

Figure 1. Location of the envisaged sand mine.

The envisaged sand mine is located on a rather flat, undulating landscape (Figure 2).

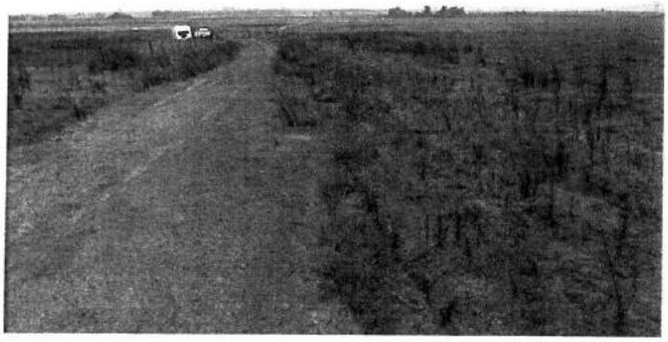

Figure 2. The Farm Woodlands Landscape

Most of the landscape has been ploughed over for wheat farming. In the past extensive sand mining has been taking place on the farm as well, particularly towards the east up the slopes of the Paardenberg.

To the east is the Paardenberg. The slope increases closer to the mountain. The coastal flat stretches towards the east and is a flat landscape with hills and drainage lines. The Diep River transects the area.

The study area is underlain by granite (Ann., 2015), which is covered with a layer of sand, up to 2 meters thick.

Groundwater deliverance is only from 0.1 to 0.5 litres per second. The conductivity ranges from 70 to 300 mS/m. (Ann., 2015). Ground water recharge is from precipitation.

The area is located in the botanical Fynbos Biome and that it is marked by the Swartland Granite Renosterveldt which is critically endangered. http://bgis.sanbi.org/municipalities/summaries.asp?muni=WC015.

It is important to note that adjacent and to the north of the proposed mining site is a patch of relatively undisturbed Renosterveldt. Since so little of this veldt type is left conservation authorities attach a high value to such places and it is doubtful if mining will ever be allowed here.

This sets the tone for the fresh water report and the importance of the seep to the south of the proposed mining site.

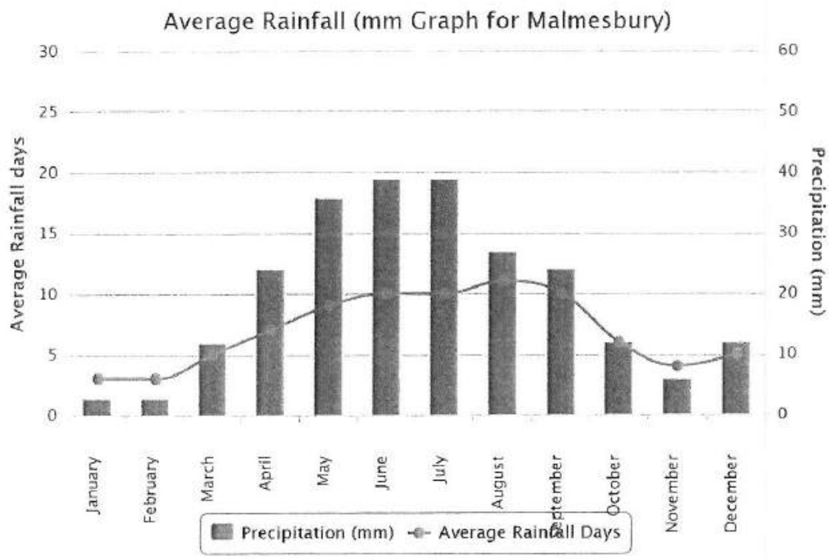

Figure 3. Malmesbury Rainfall (http://www.worldweatheronline.com/)

The rain falls mostly during winter (Figure 3). During summer little rain falls. The above chart is for the nearby Malmesbury, where rainfall is listed as 403 mm per year. The farmer said that up to 770mm of rain during very wet years have been recorded on the property.

3. Erosion Potential

The contours on the surrounding wheat fields drain excess storm water away and some of these depressions end up into earthen dams (Figure 4). Despite of the low rainfall, evidently the erosion potential is high, with loose sand washed away.

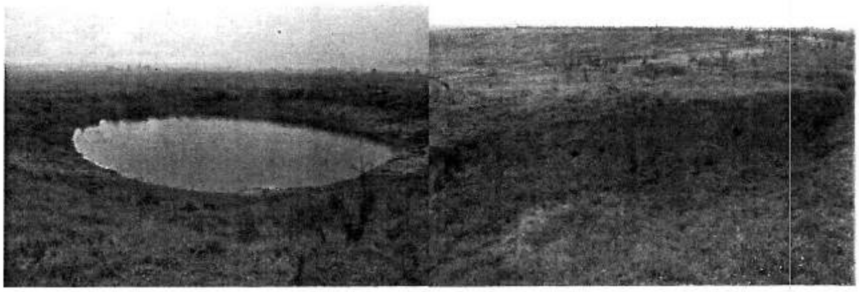

Figure 4. Earthen Dam & Erosion

4. **Possible Effect of Sand Mining on the Wetland**

The layer of sand in the largest area that is set to be mined is approximately 2.5 meters deep and is to be mined to a depth of 2 meters. This means that there will be 2 meters depth less of substrate that is available to absorb rain (Lanz, 2015).

Seeps like the Woodlands Wetland are often replenished by the vertical movement of ground water from higher ground. It is possible for ground water to migrate from the sandstones of the Paardenberg to eventually decant in the Woodlands Wetland. With 2 meters less substrate this mechanism would be impaired as well.

It is not known how much of the wetland's water is as a result of decanting groundwater as opposed to precipitation.

Nevertheless, with less available buffer substrate it is possible that the wetland would be more subject to stronger surface flows, more flash floods and a higher erosion potential.

The mining operation could result in sediment ending up in the wetland. This is a serious threat that would call for careful execution of the operation, regular monitoring of the wetland and timely mitigation measures.

5. **Relative Importance of the Drainage Line**

The question rises how important the drainage line is relative to other such lines and in terms of the area that it drains. Figure 5 shows a drainage line that starts against the western slope of the Paardenberg and then stretches towards the south west, makes a broad turn to the west and the towards the north west were it joins with an unnamed tributary of the Diep River. The tributary stretches over a distance of 8.2 km, as the crow flies. This drainage line has significance in the sense that it has a dam close to where it rises. The tributary joins the Diep River adjacent and south of the hamlet of Kalbaskraal.

Approximately halfway up from its southern turn to the start of the unnamed tributary, the drainage line of interest to this particular study joins. It is the middle one of the three lines in Figure 5. It is approximately 2.2 km long, from where it starts to where it joins next to the R302 trunk road. It can easily be recognised on the somewhat vague Google Earth Image by looking for the area that is going to be mined.

The drainage line frizzles out towards the west and is no more discernible. The ground here is disturbed, but less so than the mining area and the surrounding wheat fields. From here up to the slope of the Paardenberg the area is less disturbed and may contribute to the drainage area. There are no wetland indicator plants in these areas.

To the north of the drainage line another one drains towards the west to join the unnamed tributary.

Of the drainage lines in the area the one of interest seems rather insignificant and small, with a relative small drainage area.

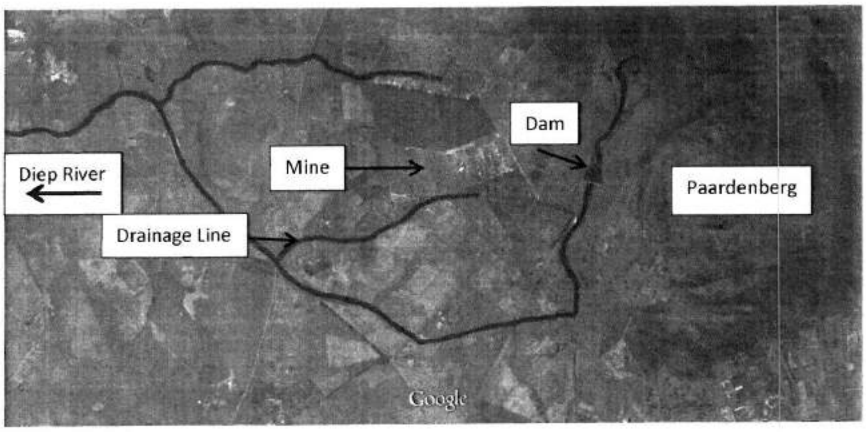

Figure 5. Relative importance of the sand mine drainage line

6. Indicators

Various indicators are used to delineate wetlands (Ann., 2005).

6.1 Terrain Indicator

The wetland is in a shallow valley on a gentle slope on an undulating landscape.

To the east the slope becomes much steeper towards the Paardenberg. Towards the west the landscape is rather flat, with shallow drainage lines. The seeps become streams that eventually end up in the Diep River.

6.2 Wetness indicator

During the site visit there was no running water in the wetland, despite the rain that was falling.

The depressions in the wetland at road crossing were filled with water (Figure 6). This water was all gone by 1 September when a second site visit was conducted.

The wetland is intersected by a channel of varying depth, in places up to 50 cm deep. It was dry during the site visits, but shows signs of erosion.

Figure 6. Road over the wetland with storm water pipe

6.3 Vegetation Indicator

The drainage line was most likely first identified as a wetland, or at least having some wetland characteristics, by the presence of *Elegia filacea*. This is one of the Restionaceae or restio family of sedge-like plants (Figure 7 & 8).

There are some 50 species of the genus *Elegia* and their taxonomy has probably not been entirely sorted. Some of them are closely related and look-alike. One has to be an expert on the genus for a reliable identification and then experts would differ among themselves. For the purpose of this work the identification is taken as close enough.

Sieben *et al* (2014) identify several *Elegia* species as wetland indicators. It only grows in sandy, wet areas of the Western Cape.

A dense stance of *E. filacea* is apparent along certain stretches of the drainage line. The darker areas on the map (Figure 9) indicate where the plant grows. The indicator plant does not cover the entire drainage line and is denser in some areas than others.

Figure 7. Drainage Line on a rainy day with *Elegia* species.

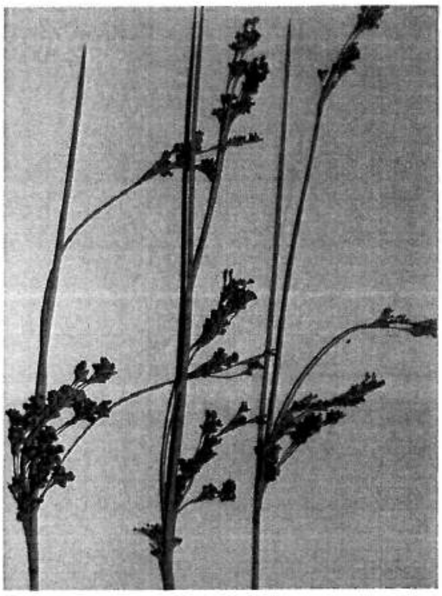

Figure 8. *Elegia filacea*

Further down and past the farm's homestead and adjacent to the R302 trunk road, during the site visit of 1 September, a trickle of water was running down the drainage line. It had a dense covering of *Cyperus* sedges and a couple of arum lilies *Zantedescia aethiopica*.

6.4 Soil Profile Indicator

Temporary wetlands are often characterised by blotchy and streaky soils in the upper 80 cm (Kotze *et al*, 2009). This is one of the main diagnostic properties of temporary wetlands. A soil scientist is required to dig a testing pit to profile the soil, to find the hydromorphic soils and to validate the classification as a temporary wetland. Lanz (2015) has done much work in the mining area and it would have been helpful if he could have has a look at the wetland soils as well.

7. Wetland Classification

Geomorphologically the Woodlands Wetland is a hillside seepage that is linked to a channel. The substrate is colluvial (materials transported by gravity). The water inputs are mainly from sub-surface flows and little of it is from rainfall precipitation. The outflow is from a well-defined channel that connects the seep to a stream (Kotze *et al*, 2009).

The wetland is situated on a nutrient poor substrate derived from Table Mountain sandstone. The vegetation consists of restios and grasses that are adapted to grow under these harsh conditions. The vegetation of these wetlands is branded as sclerophyllous, according to Sieben *et al* (2014).

The Mediterranean climate of the Western Cape is marked by wet winters but with very dry summers with hot and desiccating winds. Wetlands under these conditions can dry out in summer and the vegetation is specialised to withstand these conditions. These then are" temporary" wetlands and the one below the Woodlands mining area falls in this category.

The wetland is classified as a temporary hillside seep with a channel and with sclerophyllous vegetation

8. Wetland Delineation

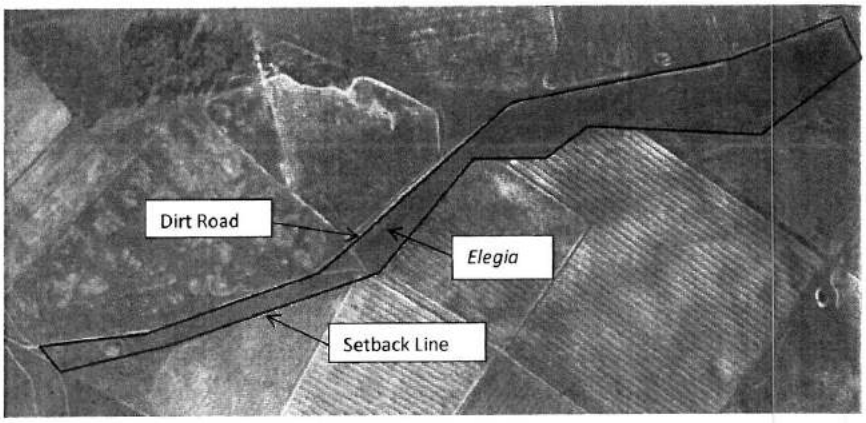

Figure 9. Drainage Line and Setback Line

It is recommended that as much as possible of the drainage line is protected. A setback line is indicated in Figure 9 beyond which disturbance should be prevented. The area out of the setback line is already heavily disturbed. Hence it makes little sense to try and preserve any of that. The setback line therefore follows the dirt road and the boundaries of the wheat fields.

The setback line stretched beyond the mining area towards the west. This section of the drainage line is still in a reasonable condition and further deterioration should be prevented.

9. The Drainage Line Extension

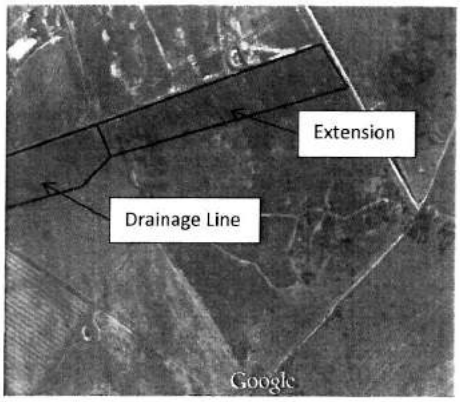

Figure 10. Drainage Line Setback Extension towards the East of the Mining Area

The drainage line channel is no longer discernible towards the east up the hill.

The area is marked by the wetland indicator *Elegia* as well.

This area is bordering right onto the mining area.

For the sake of explanation, let this area be called the Drainage Line Extension.

If this area is going to be disturbed because of the mining, the drainage line proper will predictably lose all of its conservation significance. Sediment will wash down the hill to cover the wetland.

Therefore the setback area is extended to include a narrow stretch of land, as is indicated in Figure 10.

This would also leave some of the connectivity between the part of the watershed on and around the Paardeberg.

Mr SP van Blerk, the owner of the land, indicated that there are two springs higher up the slope adjacent to the extension. These are wet all year round but not enough water is coming out of the springs to have any effect on the wetness of the seep lower down. The springs are concealed by a dense stand of Port Jackson trees.

Figure 11. The Drainage Setback Line Extension

This area is marked by sonkwasriet *Wildenowia incurvata* (Figure 11). A couple of renosterbos *Elytropappus renocerotis* are still left. Higher up the hill the two springs are concealed by a dense stand of Port Jackson willow *Acacia saligna*, which is an aggressive invader. These should be removed. The extension should be kept as natural as possible and kept free of invasive species.

It is as important as the actual drainage line because if disturbance is allowed here it would obviously impact on the drainage line.

10. Wetland Integrity

Table 1. Wetland Habitat Integrity (After Kleynhans, 1999)

Attribute	Score
Hydrology	
Flow modification	4
Inundation	4
Water Quality	
Water quality modification	1
Sediment load modification	4
Hydrology / Geomorphology	
Canalization	0.5
Topographic Alteration	0.5
Biology	
Terrestrial encroachment	4
Removal of vegetation	4
Alien fauna	4
Over-utilisation of biological resources	4
Mean	3.0
Category	Moderately Impacted

0-1.0	Pristine
0.1-2	Near-pristine
2.1-3	Moderately impacted
3.1-4	Modified
4.1-5	Critically modified

The hydrology has been impacted upon because of the widespread sand mining in the area. It can be expected that there is more runoff during high rainfall events and less release of ground water over a longer period of time following rainfall events because there now is less substrate to hold and release ground water. This will get worse when mining is continued.

It is unknown how much the water quality has been impacted upon by the mining, but apart from the increase in the sediment load, not much deviation from what it was before is expected.

The topography of the wetland itself probably has not changed all that much, even though the surrounding land has been lowered as the sand was mined out. Apart from two dirt roads over the wetland with pipes underneath (Figure 10) to let through storm water nothing else has changed the topography of the wetland.

Plants from the surrounding wheat field have encroached on the wetland, with much of the original vegetation probably removed. The area is being grazed by livestock.

Despite of the major impacts on the surrounding landscape, the wetland still have elements of its original status that is worth to preserve and even improve.

The area wetland extension adjacent and above the wetland (Figure 10) has not been included in this evaluation. It is considered to be above the seep higher up in the catchment.

11. Resource Economics

Table 2. Wetland Goods and Services

Goods & Services	Score
Flood attenuation	5
Stream flow regulation	5
Sediment trapping	5
Phosphate trapping	5
Nitrate removal	5
Toxicant removal	4
Erosion control	5
Carbon storage	5
Biodiversity maintenance	4
Water supply for human use	0
Natural resources	1
Cultivated food	0.5
Cultural significance	0
Tourism and recreation	0
Education and research	1

0	Low
5	High

The goods and services delivered by the environment, in this case the Woodlands Wetland, is a Resource Economics concept as adapted by Kotze *et al* (2009).

The worth of the Woodlands Wetland is particularly held by its ability to trap nutrients and sediments from the surrounding wheat fields, sand mining operations and grazing pastures. Stands of *Elegia* is seeps and drainage lines are plentiful in the district, but in the direct vicinity of the proposed mine wetland vegetation is view and far between. If there were more they could have played a significant role in the control of erosion.

Most of the wetland vegetation has been removed out of the area and it is against the historic trend that the Woodlands Wetland still has some left, hence the high score for biodiversity maintenance.

The grazing for livestock has a limited value because of the small wetland size, hence to low score for cultivated food.

Perhaps some researcher will find it in his heart to study the wetland because its vulnerability to mining.

The goods and services delivered by the environment, in this case the Woodlands Wetland, is a Resource Economics concept as adapted by Kotze *et al* (2005).

The value for tourism stands out because it is located in the most picturesque area of Stellenbosch with its mountains and vineyards. The lupines serve as fodder for livestock, hence the higher score. Stellenbosch has much cultural value, but the erfs on the verge of Idas Valley probably does not share the same attribute.

The diagram (Figure 12) is an accepted manner to visually illustrate the resource economic footprint the wetland.

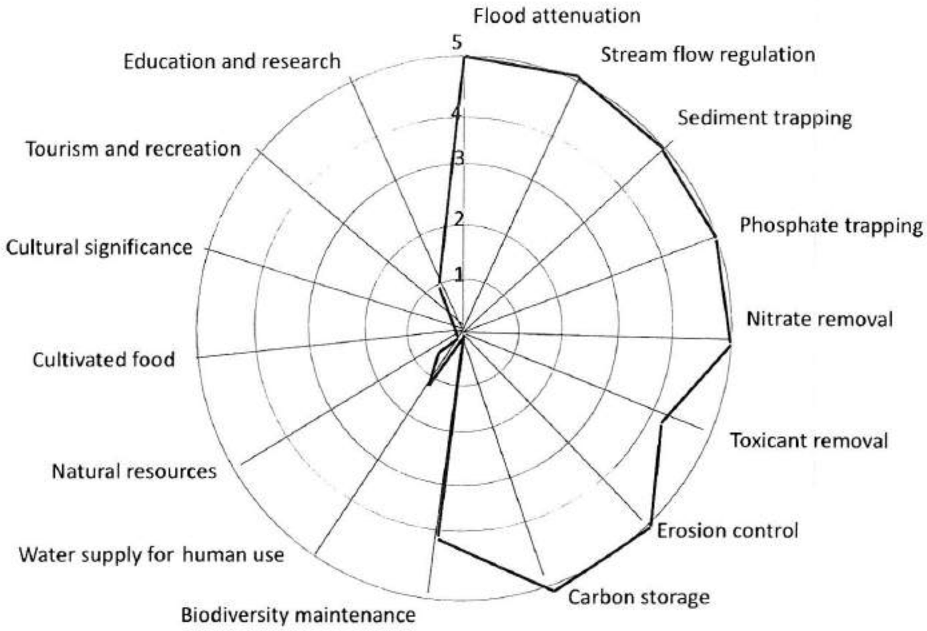

Figure 12. Resource Economics Footprint of the Sandfontein Wetland

12. Recommendations

Very little of the original Renosterveldt is left in the area and conservation authorities attach a high value to any patches of land that still possess some of its original vegetation. The seep adjacent to the proposed mining area is not any different. This is particularly true because most of the other seeps in the sub-watershed had been denuded of most of its natural vegetation.

However, the wetland is not adequately important to prohibit any further development of sand mining on the property. It is small, not unique or special and can be saved despite of the mining. It is suggested that the decision-making authorities allow the envisaged sand mine.

The seep could be used to measure the level to which the mine will be operated. If any sedimentation or disturbance occurs there, the reason for this should be determined and the mining operation improved to prevent any further damage. Regular monitoring is important.

The drainage setback line extension is as important for conservation as the actual seep.

Alien vegetation should be removed, especially from up the hill above the extension.

If livestock is kept out of the area demarcated by the setback line, it would greatly serve conservation purposes.

13. Literature

Anonymous. 2015. *Geohydrological assessment of a proposed sand mine, Portion 2 of the Woodlands farm 874*, Malmesbury. GEOSS. Stellenbosch.

Anonymous. 2005. *A practical field procedure for identification and delineation of wetlands and riparian areas.* Department of Water & Sanitation. Pretoria.

Kleynhans, C.J. 1999. *Assessment of Ecological Importance and Sensitivity.* Department of Water Affairs and Forestry. Pretoria.

Kotze, G., G. Marneweck, A. Batchelor, D. Lindley & Nacelle Collins. 2009. *A technique for rapidly assessing ecosystem services supplied by wetlands.* Water Research Commission, Pretoria.

Lanz, J. 2015 *Assessment of the impact of sand mining on agricultural potential on the Farm Woodlands no. 874* .Soil Scientist. Stellenbosch.

Sieben EJJ.,H. Mtshali and M. Janks. 2014. *National Wetland Vegetation Database: Classification and Analysis of Wetland Vegetation Types for Conservation Planning and Monitoring.* Water Research Commission. Pretoria.

14. Declaration of Independence

I, Dirk van Driel, as the appointed independent specialist hereby declare that I:

- Act/ed as the independent specialist in this application
- Regard the information contained in this report as it relates to my specialist input/study to be true and correct and;
- Do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management act;
- Have and will not have vested interest in the proposed activity;
- Have disclosed to the applicant, EAP and competent authority any material information have or may have to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the environmental Impact Assessment Regulations, 2010 and any specific environmental management act.
- Am fully aware and meet the responsibilities in terms of the NEMA, the Environmental Impacts Assessment Regulations, 2010 (specifically in terms of regulation 17 of GN No. R543) and any specific environmental management act and that failure to comply with these requirements may constitute and result in disqualification;
- Have ensured that information containing all relevant facts on respect of the specialist input / study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties facilitated in such a manner that all interested and affected parties were provided with reasonable opportunity to participate and to provide comments on the specialist input / study;
- Have ensured that all the comments of all the interested and affected parties on the specialist input were considered, recorded and submitted to the competent authority in respect of the application;
- Have ensured that the names of all the interested and affected parties that participated in terms of the specialist input / study were recorded in the register of interested and affected parties who participated in the public participation process;
- Have provided the competent authority with access to all information at my disposal regarding the application, weather such information is favourable or not and;
- Am aware that a false declaration is an offence in terms of regulation 71 of GN No. R543.

Signature of the specialist: D van Driel

Name of the company: Watsan Africa Date: 30 August 2014

15. Resumé (much shortened)

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Water Scientist

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Experience

USAID/RTI, ICMA & Chemonics. Iraq & Afghanistan — **2007 -2011**
Program manager.

City of Cape Town — **1999-2007**
Acting Head: Scientific Services, Manager: Hydrobiology.

Department of Water & Sanitation, South Africa — **1989 – 1999**
Senior Scientist

Tshwane University of Technology, Pretoria — **1979 – 1998**
Head of Department

University of Western Cape and Stellenbosch University 1994- 1998 part-time
- Lectured post graduate courses in Water Management and environmental management to under-graduate civil engineering students
- Served as external dissertation and thesis examiner

Service Positions
- Project Leader, initiator, member and participator: Water Research Commission (WRC), Pretoria.
- Director: UNESCO West Coast Biosphere, South Africa
- Director (Deputy Chairperson): Grotto Bay Home Owner's Association
- Member Dassen Island Protected Area Association (PAAC)

Membership of Professional Societies
- South African Council for Scientific Professions. Registered Scientist No. 400041/96
- Water Institute of South Africa. Member

Education

- PhD (Life Sciences) Nelson Mandela Metropolitan University
- MSc (Life Sciences) North West University
- MBA Pretoria University
- NHDipl (Education) Tshwane University of Technology

WATSAN Africa **Relevant Reports 2014 - 2015**

- Fresh Water and Estuary Report Erf 77 Elands Bay
- Fresh Water Report Delaire Graff Estate, Stellenbosch
- Fresh Water Report Quantum Foods (Pty) Ltd. Moredou Poultry Farm, Tulbagh
- Fresh Water Report Revision, De Hoop Development, Malmesbury
- Fresh Water Report, Idas Valley Development Erf 10866, Stellenbosch
- Fresh Water Report, La Motte Development, Franschhoek

ANNEXURE P 41/53

AFRIMAT®

STORM WATER MANAGEMENT REPORT

for the

STANFORD QUARRY

on Portion 3 of the Farm Riverside 640, Caledon

A requirement of the

BREEDE-GOURITS CATCHMENT MANAGEMENT AGENCY

in terms of Section 40 if the National Water Act (36 of 1998)

greenmined environmental

Tel: 021 851 2673
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WATSAN Africa

March 2016

APPENDIX 10:

Stormwater Management Plan

Index

1 Background

The firm Setplan produced in 2002 an Environmental Management Plan (EMP) for the then Prima Klipbrekers (Pty) Ltd, which subsequently was acquired by Afrimat (Pty) Ltd. In the same year the EMP was duly approved by the national Department of Minerals and Energy. This EMP comprehensively describes how the quarry and its on-site crusher are operated. These aspects are not repeated and this report should be read along with the EMP.

Relevant climatological and topographical information is also given in the EMP.

Previously only the loose scree in the stream bed was mined. The scree has subsequently been mined out and in order to extend the life of the quarry (Figure 1) and the associated crusher and loading facilities (Figure 2), the owner opted to apply for a mining license to mine hard rock from the mountain side.

Figure 1 Stanford Quarry

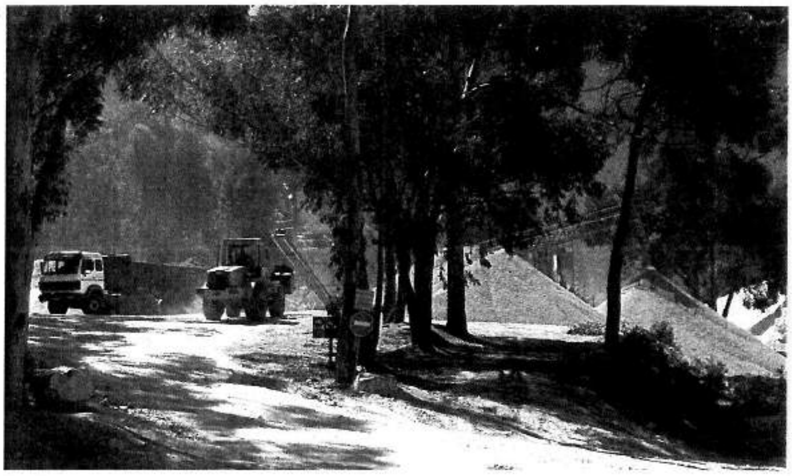

Figure 2 Crusher and Loading Area

Currently the mining and crushing operation is ongoing. Despite of this the licensing process is still ongoing.

The national Department of Water and Sanitation, as an input to the mining license application, though their agent the Breede-Gouritz Catchment Management Agency. insisted in February 2016 on several documents, among other a "Storm Water Management Report". This report must describe in adequate detail how the runoff from the mining operation, road, stockpiles, crusher and loading facility should be dealt with.

The current owners of the quarry, Afrimat (Pty) Ltd have appointed Greenmined Environmental to handle the licensing procedures. Greenmined, in turn, appointed WATSAN Africa to draft the required Storm Water Management Report.

A site visit was conducted on 1 February 2016.

2 Purpose

A stream rises in the mountains adjacent to the quarry, flows past the site and ends up in the Klein River. The Klein River Estuary (Figure 3) is a prominent feature of the landscape.

Siltation is a perceived problem, not only of the Klein River and its tributaries, but also of the estuary. Hence it is important that the silt that is being produced in the blasting, crushing and sand washing operations at the quarry is prevented from entering the stream as much as is practically possible.

The purpose of this report is to describe the infrastructure and its operation that is required to keep silt-laden runoff out of the stream.

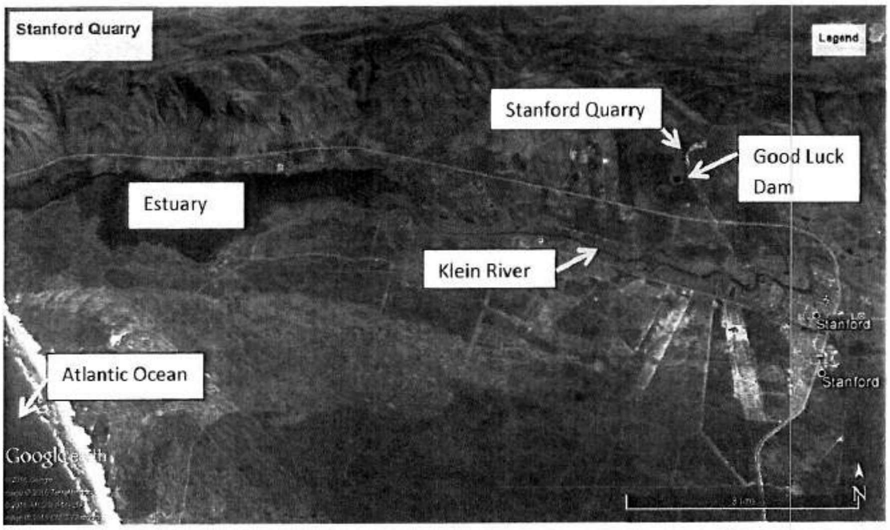

Figure 3 Area Map

3 Water Infrastructure

The stream rises in the mountains from which the rock is mined. Water is taken at a weir in the valley just upstream from the quarry. The water is piped to a dam (Good Luck Dam (Figure 3) on the adjacent coastal flats from where water is taken for the quarrying operation. This water is used for washing the crushed rock and the building sand that comes out of the crushing operation. It is also used for dust suppression.

4 Rainfall

During the site visit the site was very dry with no runoff whatsoever. However, according to the rainfall figures given in the EMP (Setplan 2002, p8) the maximum daily rainfall can be from 28mm up to 88 mm. Rainfall this much can produce a significant volume of silt-laden runoff from the work face, haulage road and loading area, which has to be contained on site and not allowed to enter the stream.

The infrastructure will have to be upgraded to effectively cope with the volume of storm water.

5 Site Description

The site lay-out is depicted in Figure 4.

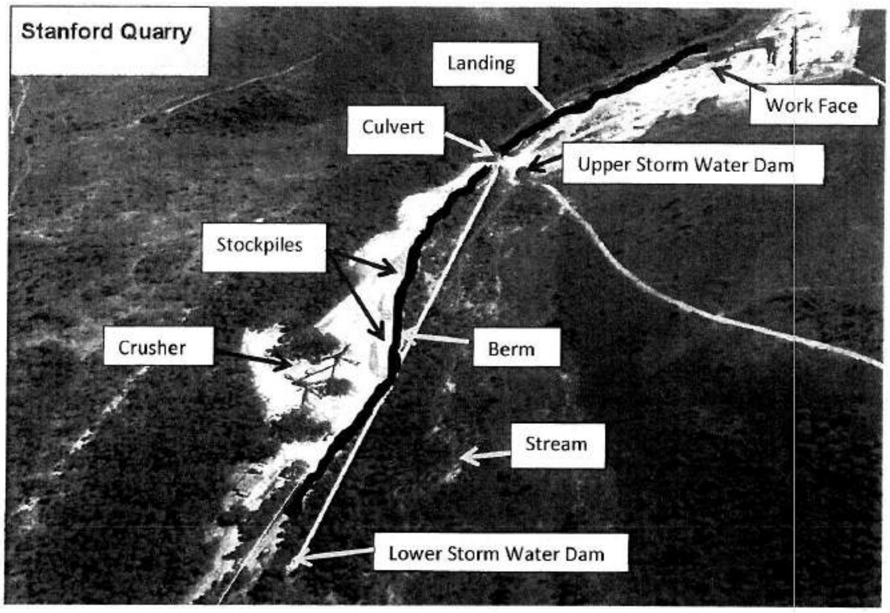

Figure 4 Stanford Quarry Site Lay-Out

The above figure is a Google Earth image with some free hand drawn lines to visually illustrate the lay out of the proposed storm water drainage system.

The blue line depicts the stream which is now in need of protection from the mining activities.

6 Existing Storm Water Infrastructure

Already existing storm water control infrastructure on the property includes some berms on the side of the road (Figure 5) and landing as well as two storm water dams (Figure 6).

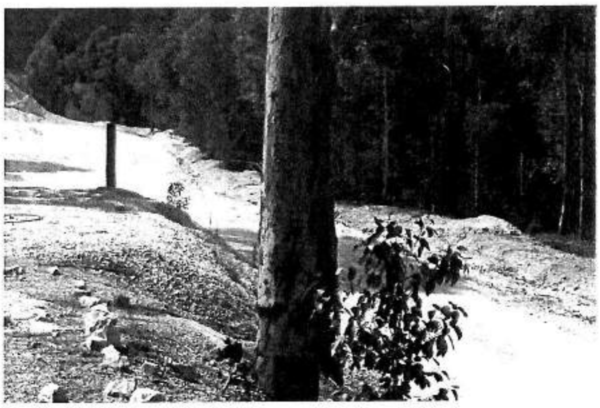

Figure 5 Haulage Road with Berm

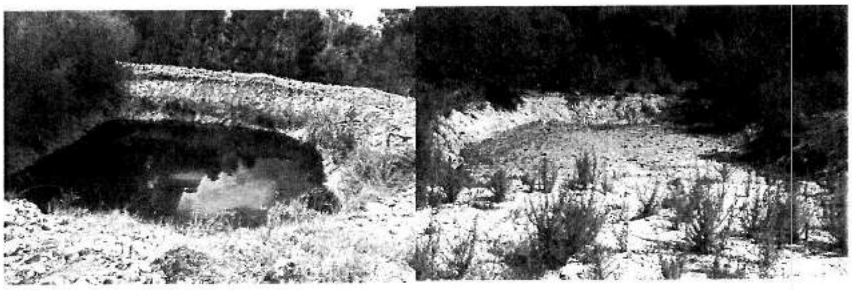

Figure 6 Lower and Upper Storm Water Dams

7 The Haulage Road

The straight white line in Figure 4 depicts the distance from the culvert to the lower storm water dam. The distance is 451m. The elevation over this distance drops from 134m to 113m, or 21m. This renders an overall slope of 0.05 (5m vertical in 100m horizontal).

This is not a steep slope, despite of the mountainous terrain. It can therefore be expected that there will be some ponding on the road when it rains. To prevent ponding and to ensure an even flow of storm water along the road from the culvert right down to the lower storm water dam, the depressions in the road will have to be filled in, shaped and compacted.

8 The Berm

Downstream of the culvert the black line (Figure 4) more or less follows the western curb of the road downs. It illustrates the earthen berm which is required to prevent the storm water from leaving the road and ending up in the stream. This berm will have to be 500mm high, well compacted and shaped with 1:3 sloped sides. The berm is to follow the road from the culvert all the way to the lower storm water dam. Here it ends in a shallow ditch in order to convey the storm water into the lower storm water dam.

Downstream of the culvert the road will have to be slightly and transversely (across from northwest to southeast) sloped so that storm water drains from the road and flows towards and against the berm into the storm water dam.

9 The Landing

From the culvert towards the toe of the mine is a landing area (Figure 7) and work space for trucks to manoeuvre. This area has now developed in a road as hard rock mining into the mountain slope has progressed. The natural fall of this area is towards the stream, while the upper storm water dam is located in the opposite direction towards the southeast. Hence the slope of the area will have to be engineered in such a way that flow of the water is towards the dam and not into the stream.

This area will also have to be provided with a proper berm to ensure that storm water does not run down the slope and into the stream.

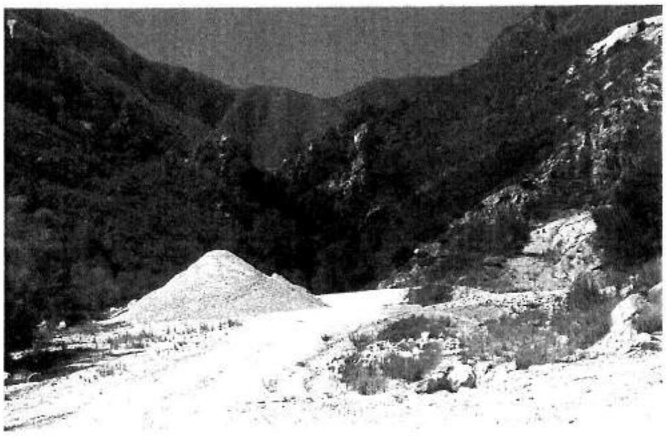

Figure 7 The Landing.
Note the valley from which the stream arises.
Note the storage area on the landing

10 Maintenance

The roads, culvert, berms and storm water dams should be regularly inspected according to a fixed schedule. During winter the inspection frequency may be increased to once a week. Eroded areas should be promptly repaired.

Truck drivers should be made aware of the vulnerability of the berms and should take care not to destroy any infrastructure. If damage occurs, it should be reported and duly recorded.

11 Dam Clearing

The storm water dams are expected to fill up with silt from the quarry, roads, crusher and stockpiles and this silt is to be removed from time to time. Silt should not be allowed to compromise the hydraulic capacity of the dams to such an extent that they stand a chance to overflow.

Removed silt should not be allowed to find its way into the stream and should be disposed safely away from the stream.

12 Inspections

Inspection results and repairs should be recorded in writing in an official record book. The recorder should note the date of recording and sign the book entry.

13 Additional Infrastructure

This includes all of the above, including the maintenance of the berms and of the exiting two storm water dams. Two more properly constructed storm water dams of similar dimensions than the existing ones should be added along the haulage road with adequate capacity to contain storm water runoff from the relevant drainage areas of the operation. Two more outlets through the berm would reduce the velocity of running storm water and subsequently reduce its erosion potential.

Importantly, the turbidity should be measured in the stream downstream of thequarrying operation and the crusher.

If these 4 dams together fail to materially reduce the turbidity, the construction of more additional infrastructure should be considered.

14 Environmental Control Officer (ECO)

An independent and officially qualified ECO should be appointed to inspect the storm water infrastructure and the record book twice a year. This should take place just prior to the rainy season and be repeated towards the end of the rainy season.

15 Environmental Risk

The one most important risk in the district is possibly the silting up of the Klein River Estuary. Sedimentation of South African estuaries because of human intervention is a long-standing and general problem (Beck & Basson, 2008) and the Klein River is no exception. Sediments are both of marine and fluvial (river) origin. It stands to reason the production of sediments from the Klein River catchment should be limited as much as possible, which seems to be extremely difficult, as only 7.3% of the catchment is under some form of protection (Klein River Estuary Management Plan, 2008)

Nevertheless, the current quarrying operation does not pose an immediate environmental threat of such a magnitude that operations will have to be ceased. For most of the year the stream is dry. According to the Stanford Quarry EMP there are reed beds in the lower catchment that will probably prevent sediments from entering the Klein Estuary. On the other hand, the environmental risk is large to call for immediate ameliorating action. Quarrying without effective environmental protection should not be allowed to carry on indefinitely. It is doubtful if measures can be in place prior to the 2016 rainy season. The quarrying should carry on, provided that effective silt control is implemented before the 2017 rainy season.

16 Monitoring Programme

The purpose of storm water management is to maintain the ecological integrity of the stream that flows past the quarrying and crushing operation. The silt emanating from the operation that can wash into the stream is the cause for most of the concern. It is measured as turbidity.

The biennial monitoring is designed to measure the success of the storm water management and is to indicate how much of the silt is kept out of the stream. Should the turbidity remain high, the measures should be re-assessed and upgraded in order to effectively meet the criteria.

The following parameters should be measured:

Parameter
pH Temperature Oxygen Concentration Salinity Total Suspended Solids (TDS) Turbidity SASS5 Biomonitoring

Two sampling points are required, one upstream and one downstream of the quarrying operation.

Ideally these procedures should be followed twice per year using properly calibrated field instruments. More samples should be taken in event of a silt spill into the stream.

The stream is said to flow only during and after rains and it is dry during the rest of the time. For biomonitoring the stream is required to run for a month or more. Hence it may be possible to carry out this procedure only once towards the end of the rainy season.

The results should be evaluated against accepted criteria such as the South African Water Quality Guidelines.

The results should be made available to government agencies and affected parties.

17 Literature

Anonymous. 2007. *Klein River estuary Management Plan.* CSIR. Stellenbosch.

Anonymous. *2002 Stanford Quarry Environmental Management Plan*, Setplan, Cape Town.

Beck J.S. & G.R. Basson. 2008. *Klein River Estuary (South Africa): 2D numerical modelling of estuary breaching.* Water SA 34(1): 33—38.