



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

MSR Lutzville Prospecting Right Application

Final Revised

BASIC ASSESSMENT REPORT

And

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

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

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IMPORTANT NOTICE: Site Plan Consulting (SPC) has revised/updated only sections of the report as was specifically required by DMR and added some aspects that needed additional information. Consequently, as SPC has not made overall changes to the original BAR that was sent out for comment, SPC has not changed the structure of the Original BAR report but merely added sections that aim to address issues that DMR identified as lacking. Therefore, the table of content below highlights the sections of the report that are addressed by SPC in this report and were therefore the main issues tabled for comment in the Public Participation Process on November 2019 to 2020.

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1. IMPORTANT NOTICE

In terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002 as amended), the Minister must grant a prospecting or mining right if among others the mining “will not result in unacceptable pollution, ecological degradation or damage to the environment”.

Unless an Environmental Authorisation can be granted following the evaluation of an Environmental Impact Assessment and an Environmental Management Programme report in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA), it cannot be concluded that the said activities will not result in unacceptable pollution, ecological degradation or damage to the environment.

In terms of section 16(3)(b) of the EIA Regulations, 2014, any report submitted as part of an application must be prepared in a format that may be determined by the Competent Authority and in terms of section 17 (1) (c) the competent Authority must check whether the application has taken into account any minimum requirements applicable or instructions or guidance provided by the competent authority to the submission of applications.

It is therefore an instruction that the prescribed reports required in respect of applications for an environmental authorisation for listed activities triggered by an application for a right or a permit are submitted in the exact format of, and provide all the information required in terms of, this template. Furthermore please be advised that failure to submit the information required in the format provided in this template will be regarded as a failure to meet the requirements of the Regulation and will lead to the Environmental Authorisation being refused.

It is furthermore an instruction that the Environmental Assessment Practitioner must process and interpret his/her research and analysis and use the findings thereof to compile the information required herein. (Unprocessed supporting information may be attached as appendices). The EAP must ensure that the information required is placed correctly in the relevant sections of the Report, in the order, and under the provided headings as set out below, and ensure that the report is not cluttered with un-interpreted information and that it unambiguously represents the interpretation of the applicant.

2. Objective of the basic assessment process

The objective of the basic assessment process is to, through a consultative process—

- (a) determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;
- (b) identify the alternatives considered, including the activity, location, and technology alternatives;
- (c) describe the need and desirability of the proposed alternatives,
- (d) through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage , and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on the these aspects to determine:
 - (i) the nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and
 - (ii) the degree to which these impacts—
 - (aa) can be reversed;
 - (bb) may cause irreplaceable loss of resources; and
 - (cc) can be managed, avoided or mitigated;

- (e) through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to—
 - (i) identify and motivate a preferred site, activity and technology alternative;
 - (ii) identify suitable measures to manage, avoid or mitigate identified impacts; and
 - (iii) identify residual risks that need to be managed and monitored.

PART A

SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

PREFACE

1. THE BRIEF TO FINALISATION OF THE BAR REPORT

As such, this updated BAR deals with the provision of information to satisfy the following requests of DMR in its letter of 16/04/2019 (contained in Annexure A) by integrating responses to the following issues into the BAR update especially with regards to reflecting on the potential impacts of the prospecting activities on the estuarine ecosystem:

“

1. The prospecting activities are proposed to be undertaken close to the Olifants River Estuary. The applicant is required to appoint an independent estuarine specialist to conduct estuarine biodiversity impact assessment study, to recommend mitigation measures on prospecting close to estuary. The finding and recommendations of estuarine biodiversity impact assessment must be integrated into the Basic Assessment Report. Therefore the BAR must include the A3 size locality maps of the area and illustrates the exact location of the proposed boreholes. The maps must be of acceptable quality and as a minimum, have the following attributes:
 - Distance from the Olifants River estuary and its banks;
 - The buffer zones;
 - Vegetation types of the study area, sensitive areas and all the no-go areas;
 - Access tracks/roads to the prospecting areas;
 - GPS Co-ordinates;
2. The Basic Assessment Report (BAR) incorporating the finding and recommendations of estuarine biodiversity impact assessment study, which have been subjected to 30 days public participation period, including the above information must be submitted to this Department for reconsideration.
3. Public participation to be conducted must be in line with Chapter 6 of the 2014 EIA Regulations and please ensure that comments from all registered stakeholders are enclosed to the BAR to be submitted. The register and proof of correspondence with all registered stakeholders must be included in the BAR.

”

2. BACKGROUND

At the time of acceptance of this brief which was structured to the DMR's Regional Manager's requirements set out above, Site Plan Consulting (SPC) was aware of Environmental Management dilemmas raised against mining of the coastal sand of Geelwal ridge by Tormin and the negative press as well as ministerial visits to consider complaints.

Notwithstanding those facts, SPC perused the “brief” in terms of the DMR letter of 16/04/2019 which seeks only a Prospecting Right (no Mining) and focuses on Prospecting impacts within the

context of the Estuary sensitivity to be determined through provision of the findings of an Environmental Assessment of the prospecting on the Estuary and provision of additional information and plans as well as reporting on a participatory process to which the revised document would be subject to, following which a Final BAR would be submitted to DMR.

SPC had determined that while the RM's requirements included an Independent Estuarine Specialist study to recommend mitigation measures on prospecting close to the Estuary, SPC discovered a comprehensive Estuarine study entitled "Olifants Estuary Management Plan 2007/09 and draft 2017 Update", of the Estuary which had been compiled by Anchor Environmental Consultants CC (Update by Royal HaskoningDHV). SPC's perusal of such specialist study posted on the internet, found it to be very comprehensive and to contain all mapping and description of sensitive areas which could be expected of a fully professional estuarine study as contemplated by DMR's instruction. Accordingly, SPC determined that the study could be relied on by conduction SPC's own groundtruthing site visit for recordal of the threatened ecosystems, biodiversity areas and the fact that these areas are largely as found in the report. Accordingly, such study assessment of the estuary comprehensively mapped and described the ecologically sensitive systems and classified ecological areas typical of an estuary and that such mapping and description in the specialist report would adequately serve to describe the sensitivity areas of the estuary against which proposed prospecting could be assessed by SPC in determining impact and No-Go setback distances.

In the experience of SPC in other drilling programs in similar veld conditions in the Vredendal/Vanrhynsdorp area where similar drilling and site rehabilitation had shown impacts on the veld to be minimal/insignificant and in light of the fact that most drilling in this program could be conducted largely within existing roads and tracks minimising Environmental Impact, SPC accepted the brief.

This acceptance was made despite SPC's realisation that while the DMR's RM requirements of the brief did not include the following, much comment could be expected in the following matters during the I&AP process:

- i. The poor public perception of Tormin's environmental performance on the West coast to date in the press. In this regard we can fortunately report that this matter is now being addressed by the recently appointed new General Manager at Tormin who intends putting in time and effort to change the current negative perception of Tormin's Environmental Management through open engagement and regular consultation with the communities and other I&APs inclusive of authorities. This update Basic Assessment Report identifies appropriate Environmental Management to this prospecting program as a tool for implementation and use in such engagements.
- ii. The misconceived conclusion that all prospecting leads to mining and accordingly comments referring to the impacts of mining, when in fact such succession has in the order of only a 1% chance of success. The fact however remains that prospecting must be done to determine the mineral opportunities of the country at high cost risk to the prospecting company.
The further misconception by the I&APs is that they do not give recognition to the distinct difference between Prospecting and Mining.
- iii. The progressive and phased nature of prospecting. A prospecting program begins with non-invasive surface geological/geophysical mapping which, given any understanding gained of the geology and possible mineralisation would lead to broad spaced drilling as in the case of this application to establish the surface mapping expectations of a possible horizontal occurrence of the target mineral. If the desired broad spaced drilling in phase 1 is successful, it would indicate motivation for further drilling along mineral alignments

indicated by the positive broad spaced drilling. Such closer spaced drilling would determine possible reserve determination. Only at that stage if successful, the company would either apply for conducting bulk sampling permission or lodging a Mining Right application.

It will be shown in this report that while in the prospecting work program the full drilling program for this type of possible mineral deposit needs to cater financing of the drilling of up to 200 holes, only the Phase 1 broad spaced drilling program of 36 holes can be defined at this stage and accordingly the detail environmental assessment of such 36 hole sites included herein. Where any of the current hole clusters prove positive, the siting of Phase 2 closer spaced drilling can be defined, at such stage with inputs on botany, fauna, archaeology as informants to phase to close space drilling. The botanist will again be commissioned to conduct a botanical assessment of especially endemic species in the area as well as faunal consideration where such Phase 2 drilling with defined hole positions can be conducted. Likewise, any other relevant elements of possible archaeological significance, visual assessment and drainage (proximity to drainage lines from a silt impact perspective can be assessed and reported on to DMR Environmental division WC in the consideration of conducting such phase 2 drilling. Once again all possible impacts of phase two drilling on the estuary will be assessed and reported on to at least; DMR, Cape Nature as custodian of the estuary, DEA&DP Biodiversity and Coastal Management Directorate, Olifants Estuary Management Forum and Daniel van der Westhuizen chair of Olifants Vissers, UCT Department of Environment, Chair of the Ebenhaeser Communal Property Association and Papendorp community (Refer further to response to DEA&DP comment 1.3).

- iv. Being able to establish that the currently envisaged prospecting would not impact on the sustainability of the fishing community.
- v. Coastal Protection Zone (CPZ) i.t.o NEM: ICMA: The fact that certain of the envisaged drilling holes will be conducted within the national coastal standard of 1km from the water mark of the coastline and the estuary in terms of the Coastal Protection Zone (CPZ) under the Integrated Coastal Management Act (ICMA). Such act requires that where Environmental Authorisation such as this Prospecting Right application is made and activities occur within the CPZ, a list of 6 elements must be considered as noted in attached DEA&DP comment letter of 20 January 2020 para 2.9.1 to 2.9.6. The competent Authority in this case DMR must consider such matters.

Each of these matters is attended to in para 4e) “Non-estuarine impact of the drilling” which deals with the detail locality of the prospecting drill holes as seen in Figure 6 of para 4e).

- vi. Unfortunately at application stage of the Prospecting Right area, such area had been defined by cadastral boundaries for ease of legal reference especially the eastern boundary being chosen as the property boundary which was the west bank of the main river channel as shown in Figure 1 Locality Plan. Such definition of the Prospecting Right Area then easily leaves the reader under the misconception that Prospecting would be considered or is proposed to the west bank of the main river channel when in fact as per Figure 5 any consideration by Prospecting only begins at the toe of hillslope and furthermore is now only proposed beyond a 500m buffer from such toe of hillslope as contained in Figure 5.

3. TASKS UNDERTAKEN BY SPC IN MEETING THE BRIEF THROUGH UPDATE OF THE DRAFT BAR TO FINAL BAR

- i. The EAP and staff of SPC familiarised themselves with the:
 - Estuary’s local and regional location and the estuary’s ecological sensitivity through study of the Estuarine reports (refer Annexure L) and 2 day site visit during which the sensitive ecological classified areas were confirmed, photographed and GPS recorded for reference in reporting relative to prospecting activities. The estuary

visit also included visits to the fishing villages and boat launching river banks and jetties.

- Greater prospecting area in understanding the topography, drainage lines and locality of the drill hole clusters which included locating the drill hole positions by GPS and photographing such localities mainly in or adjacent to existing roads and assessing the vegetation status of drill hole sites where they occur in partially vegetated areas with further consideration to drainage lines proximity to drill clusters and their relative position to the cliff marine coast or in two cases the upper estuary west bank.
- ii. Familiarisation with the:
 - Geological background to the prospecting program, in selection of the 36hole drilling program, targeting the 50m and 90m amsl possible “strandlines”.
 - The drilling method, equipment employed and the nature of impacts and footprint of each drilling site.
- iii. Reflection on the method of drilling and Environmental Management and resultant environmental impact after rehabilitation achieved in similar drilling projects under SPC management in similar topographic and vegetation environments in Knersvlakte and Namaqualand, as a point of departure in the assessment of proposed drilling on drill hole’s immediate environments.
- iv. Conducted the estuarine impact assessment as per para 4 of the draft BAR with site visits to inform SPC on sensitive elements of the study and receiving activities (fishing communities of Ebenhaeser, Olifantsdrif and Papendorp) and relation to the fishing boat launching banks and sites. This involved visits by 4x4 giving access to the western and eastern banks of the estuary, the adjacent slopes, existing infrastructure, consideration of drainage channels, watersheds and the identification of no-go areas and buffers between proximate drilling and the ecological sensitive areas of the estuary through verification of such sensitivities as contained in the specialist Olifants River Management Plan report plans and discussion.
- v. SPC then prepared the Updated Draft Basic Assessment Report for distribution in our I&AP process.
- vi. SPC prepared and issued an erratum (to the draft report distributed in November 2019) with photos and a plan (now Figure 6) illustrating and describing the exact positions of the drill holes which erratum was distributed through all channels used to distribute the document for comment and included the erratum for presentation at the public meeting (accordingly, given lost time for comment the due date for comments was extended from 7 to 20 Jan 2020)
- vii. SPC prepared a photo and new plans illustrated PowerPoint presentation to serve the I&AP public meeting to be held on Tuesday 26 November 2019 (refer Annexure I for copy of the PowerPoint slides).
- viii. As the task description specified by the DMR letter of requirements emphasised that the updated Basic Assessment Report containing the findings of the Estuarine Assessment and Impact Report be subject to a 30 day public participation process, two participatory meetings as follows were initiated.
 - a) Special meeting with the fishing community- As the importance of the fishing community in the Ebenhaeser Papendorp communities was well known to SPC from earlier involvements with Transhex Group mining, the Greater Cederberg Biodiversity Corridor study and the prevalence of the negative comment which the fishing community and its representatives had given during the initial I&AP engagement by the Tormin Consultants during 2016, SPC focused its assessments on the fishing community facilities and proximity to the River and accordingly contacted fishing community members who had attended 2016 meetings to engage

with them in further understanding their requirements, fears and aspirations for consideration in the SPC Prospecting Impact assessment. A meeting was accordingly arranged through fisherman Charl Le Roux to be held at 17:00 in the Ebenhaeser community hall on dd 1 October 2019 with the contact person and 3 other members of the fishing community whom he would bring to the meeting. With nobody arriving by 16:45, Mr Charl Le Roux was called and he responded saying that they would not attend the meeting as they had been instructed by their fishing community head not to attend the meeting arranged by SPC and accordingly SPC drove back to Cape Town disappointed with the fishing community's stance.

b) In fulfilment of the key requirement of DMR being the subjecting of the update Draft Basic Assessment Report for public participation:

- The Draft report was then prepared and distributed electronically, in hard copy and for laying for comment at Public Library of Lutzville and Ebenhaeser (Olifantsdrif) and Ebenhaeser Municipal office for perusal by persons responding to the newspaper notice placed in Ons Kontrei as well as A2 and A3 posters placed in the field on fences and on notice boards at the libraries, municipal office and at house adjacent Papendorp hall. Refer Annexures D, E, and F for the full documentation of the participatory process and SPC's response to each matter raised in the letters of comments received.
- As part of the I&AP process, an I&AP meeting was scheduled for 17:30 on 26 November 2019 at the Ebenhaeser Community hall with exhaustive PowerPoint presentation with text notes, site photos and updated plans as required by the DMR brief. The commencement of the meeting was held in abeyance until 18:00 while numerous persons from the community were arriving. Then an attendance register was circulated amongst somewhat 35 persons in attendance and the PowerPoint presentation with allowance for brief intermittent questions began. However, soon the meeting became disrupted by continued interjections and remarks from and between the attendees many of them clearly between the fisher-folk leading the EAP to question whether a person giving criticism was in fact the person who had instructed that the meeting of 1 October 2019 should not take place and he turned out to be that person. While SPC had focused much of its assessment on determining that the prospecting method and locality would not negatively impact on the sustainability of the fishing community, the majority of attendees had clearly set their mind on disruption of the meeting and were not interested in the presentation moving on to the matter of fishing sensitivity. The audience further disrupted the meeting to a level where the EAP offered them the choice of leaving the meeting if they so wished. Some ±28 persons left the meeting and the presentation was completed to the few who remained with interesting discussion and answers to questions raised. Refer Annexure I for attendance register.

Outside of the fishing community concerns, many of the questions raised stemmed from a general community anti-mining lobbying with no focus on the circulated report's focus on neither drill site positioning, impact analyses nor findings of a cumulative low impact on the estuary and the community activities. Unfortunately, the disruption of the meeting was at

such a level that it did not permit even the taking of minutes. For the reader, copy of the PowerPoint Presentation is contained in Annexure I.

- ix. All comments received during the I&AP process between November 2019 and 20 Jan 2020, have been considered and where appropriate have been incorporated by informing this final BAR report. For responses on each comment raised by each respondent see table in para 3a) and table (iii)a.
- x. SPC prepared an overall conclusion on the level of impact which prospecting would have on the estuary as reported in paragraphs 4a) to 4f) with a concise response to the questions raised in the DMR letter of requirements to be met.
- xi. SPC prepared the final BAR for submission to DMR. Given that the SPC contribution is largely focused on items raised by the DMR and included in the Final BAR of 2016-2017 as updated paragraphs/sections, to satisfy the DMR, the sections update by SPC are retained in red while the content retained from the original BAR remains in black text.

PARA 1

This report addresses issues identified by DMR letter of 16/04/2019 noting the shortcomings in the submitted BAR report signed 07/04/2017 which needed to be addressed ¹for DMR's pending reconsideration of the application.

Accordingly, the applicant Mineral Sands Resources (Pty) Ltd (MSR) appointed Site Plan Consulting (SPC) to undertake the task of assessment and addressing of such issues and updating the BAR in accordance with the DMR request.

1.0 Background to the SPC brief and this update of this final BAR

As such, this updated BAR deals with the provision of information to satisfy the following requests of DMR in its letter of 16/04/2019 (contained in Annexure A) by integrating responses to the following issues into this BAR update especially with regards to reflecting on the potential impacts of the prospecting activities on the estuarine ecosystem:

- a) Integration of the findings and recommendations of an independent estuarine specialist assessment and recommended mitigation measures on prospecting close to the estuary.
- b) Upgrading of the mapping of the BAR to A3 size and illustrating:
 - i. "The exact location of proposed boreholes"
 - ii. "Distance from the Olifants River Estuary and banks"
 - iii. "The buffer zones"
 - iv. "Vegetation types of the study area, sensitive areas and all no-go areas"
 - v. "Access tracks/roads to the prospecting areas"
 - vi. "GPS coordinates"
- c) Redistribution of the updated BAR report (incorporating the findings and recommendations of the estuarine assessment study) for 30 day Public Participation Process and comment from all registered stake holders with reporting on the participatory process to be fully included in the Updated BAR.
- d) To submit such updated BAR with record of the participatory process for reconsideration by DMR.

It is emphasised that Site Plan Consulting given our estuarine experience in the Richards Bay: Bay and Beachfront Planning, the Orange River estuary interface with Alexkor and Kromme River St Francis Marina and numerous estuaries of the East London to Port Elizabeth Coast having referenced the CSIR estuarine reports over the years, recognises the significance and sensitivity of estuarine ecology as SPC's point of departure in this response on issues raised by DMR on the original BAR of 2016.

1.1 Clarification of the issues raised by DMR

1.1.1 The DMR in its letter called for "**an independent estuarine specialist** to conduct an estuarine biodiversity impact assessment study to recommend mitigation measures on Prospecting close the estuary".

SPC immediately, on literature research, established that a comprehensive estuarine study entitled: "Olifants Estuary Management Plan"(OEMP)^{*1} dd November 2007 and 2009 compiled by Anchor Environmental Consultants CC and its Update by others in 2017 exist and provide technical assessment of the estuary sensitivity on which SPC could consider the impact of the prospecting activities in the consideration of setbacks, buffer zones, no-go areas and sensitive interfaces between prospecting and the estuary. Such reports also served as a valuable basis in SPC's site visit of 1-2 October 2019 along both banks of the Estuary between Lutzville and the mouth for

¹ Olifants Estuary Management Plan November 2007 and February 2009, Anchor Environmental Consultants CC, www.anchorenvironmental.co.za

establishing the OEMP's adequacy for it to further inform SPC in SPC's consideration of the interface between the estuary and prospecting activities thereafter followed by further site visits.

1.1.2 It is unfortunate that the Prospecting Right Area's eastern boundary taken as the farm De Punt's boundary, coincided with the western bank of the estuary main channel. This creates a perceived threat that prospecting could occur up to the estuary bank, while this was simply a cadastral convenience in defining the survey (Regulation 42) diagram of the Prospecting Area. In the absence of the original BAR **identifying the extremely sensitive element of the estuary bank marshes and flood plains which fall within the Prospecting Right Area as definite No-Go areas**, the reader had rightfully retained his/her concern for this zone.

However, given estuarine sensitivity and the above fact of the prospecting right boundary, the identification by DMR of the issues pertaining to the lack of estuary reference is fully appreciated and accordingly the estuarine study's and SPC's site visit's identification and sensitivity consideration of the entire estuary and notably the tidal salt marsh areas, submerged macrophyte areas, floodplain salt marshes, etc are mapped in this update and considered as highly sensitive No-Go zones in the re-assessment of the prospecting activities impact.

This short-coming in the original BAR which never mapped ecological zones of the estuary is accordingly dealt with in this BAR revision by Figure 5 clearly identifying these zones of the west bank and in fact the west bank itself as a No-Go area with 500m buffer.

1.1.3 With respect to the DMR items i-vi above, this updated BAR provides informative mapping on items i-vi to appropriately reflect, in maps, such sensitive areas as further illustration of the relationship between the prospecting and the impact considerations on the De Punt Hill and the estuary within the context of the horizontal and vertical distance between such areas and the location of the proposed drilling program and served as the basis for buffer zone delineation.

The original BAR ref. Part A para 3 d) did not fully address the prospecting details nor the relevance of the estuary in sufficient detail for the reader/authority to take an informed decision and it is the purpose of this update to provide such lacking information/perspective on the matter. Accordingly, this BAR Revision contains clear scale maps with photos adequately illustrating all matters at hand.

1.1.4 As the update by SPC reflects on the horizontal and vertical distances between the prospecting drilling and sensitive zones of the estuary west bank and the broader considerations of the estuary including the fishing communities livelihood, the updated Draft BAR was subject to a full public participatory process for the reader to reconsider:

- the relationship between/impact of proposed prospecting on the estuary and other biodiversity of the broader prospecting area ; and
- the SPC reflection on the nature of drilling impact on drill site vegetation as described in para 3 and Photopage Example Drilling Program Pg 18 on the basis of similar prospecting drilling experience between Vredendal and Vanrhynsdorp.

1.1.5 On reading the original BAR and knowing what limited impact a well-directed initial wide spaced drilling program can have and aware of the resilience of the De Punt hill's vegetation to recover as determined in the earlier Transhex Group Track rehabilitation programs, SPC at the outset realised that:

- The achievable low level of the broad spaced drilling impact was not fully imparted to the reader of the original BAR; and

- In the absence of technical/ecological reference to (acknowledgement of) the estuary's ecological role and bank sensitivity,

the actual low impact of the broad spaced drilling program in the report (2016 BAR) left the reader without sufficient illustration of the fact that the drilling program will have a very low to insignificant impact on the drilling areas and on the estuary.

1.1.6 Furthermore para 4e) now reflects on the non-estuarine impact of the drilling program relating largely to the drill site and immediate surrounding impact on the environment of De Punt Hill.

Accordingly, this updated BAR strives to illustrate such detail of the prospecting on its immediate surrounding environment and on the estuarine ecology and biodiversity.

3. Contact Person and correspondence address

a) Details of

i) Details of the EAP

Name of The Practitioner: Adriaan du Toit
Tel No.: +61 8 9575 7697
Fax No. :
e-mail address: adriaan@aemco.com.au

For SPC:

Name of the Practitioner: Stephen van der Westhuizen assisted by Siphumelelo Mbali – Site Plan Consulting
Tel No: 021 854 4260
Fax No: 021 854 4321
E-mail address: siphumelelo@siteplan.co.za

ii) Expertise of the EAP.

(1) The qualifications of the EAP (with evidence).

(with evidence). See Appendix 1

Qualified Environmental Hydrogeologist originally registered under SACNASP and now also AUSIMM, he is a member of the South African International Association for Impact Assessment (IAIAsa).

24 Years as registered scientist with 18 years specialist experience in EIA's, EMP's and environmental assessments in South Africa and over the world. As per the attached CV Mr du Toit has done scoping, EIA's and EMP for more than 30 mining projects in RSA and numerous others in Australia, Africa, Kazakhstan, Indonesia and the Middle East including work for the DMR/DME and other government departments in RSA. He has also been used as an expert environmental practitioner for the International Atomic Energy Agency, UNESCO and international consultancies and mining companies. He was part of the DMR's team evaluating mining companies for the EMEM (Excellence in Mining and Environmental Management Award).

For SPC details of the EAP (Stephen van der Westhuizen) refer Annexure B.

(2) Summary of the EAP's past experience.

(In carrying out the Environmental Impact Assessment Procedure)

(In carrying out the Environmental Impact Assessment Procedure)

Please see attached CV. Mr du Toit owned and operated the biggest environmental consultancy in the Northern Cape during 1999-2008 (African Water Solutions) and is a well

knows environmental practitioner with the Department of Mines, Department of Water, Department of Agriculture and Department of Environmental Affairs. Over the past 8 years he has been doing environmental, mining and hydrogeological assessments for international clients with a special focus on Australian companies operating in Africa

For SPC details of the EAP (Stephen van der Westhuizen) refer Annexure B.

b) Location of the overall Activity.

Farm Name:	Remaining Extent of Farm The Point #267 and Lot 615 Olifants River Settlement.
Application area (Ha)	4495.4 ha
Magisterial district:	Vredendal
Distance and direction from nearest town	20km west of Lutzville, Western Cape
21 digit Surveyor General Code for each farm portion	<p>The Point #267: C07800000000026700000</p> <p>Lot #615: C078000700000061500000</p> <p>See also attached survey plan - Appendix 2 for coordinates of the Prospecting Right area</p>

c) Locality map

(show nearest town, scale not smaller than 1:250000). See Appendix 2.

See Locality Plan 1 overleaf

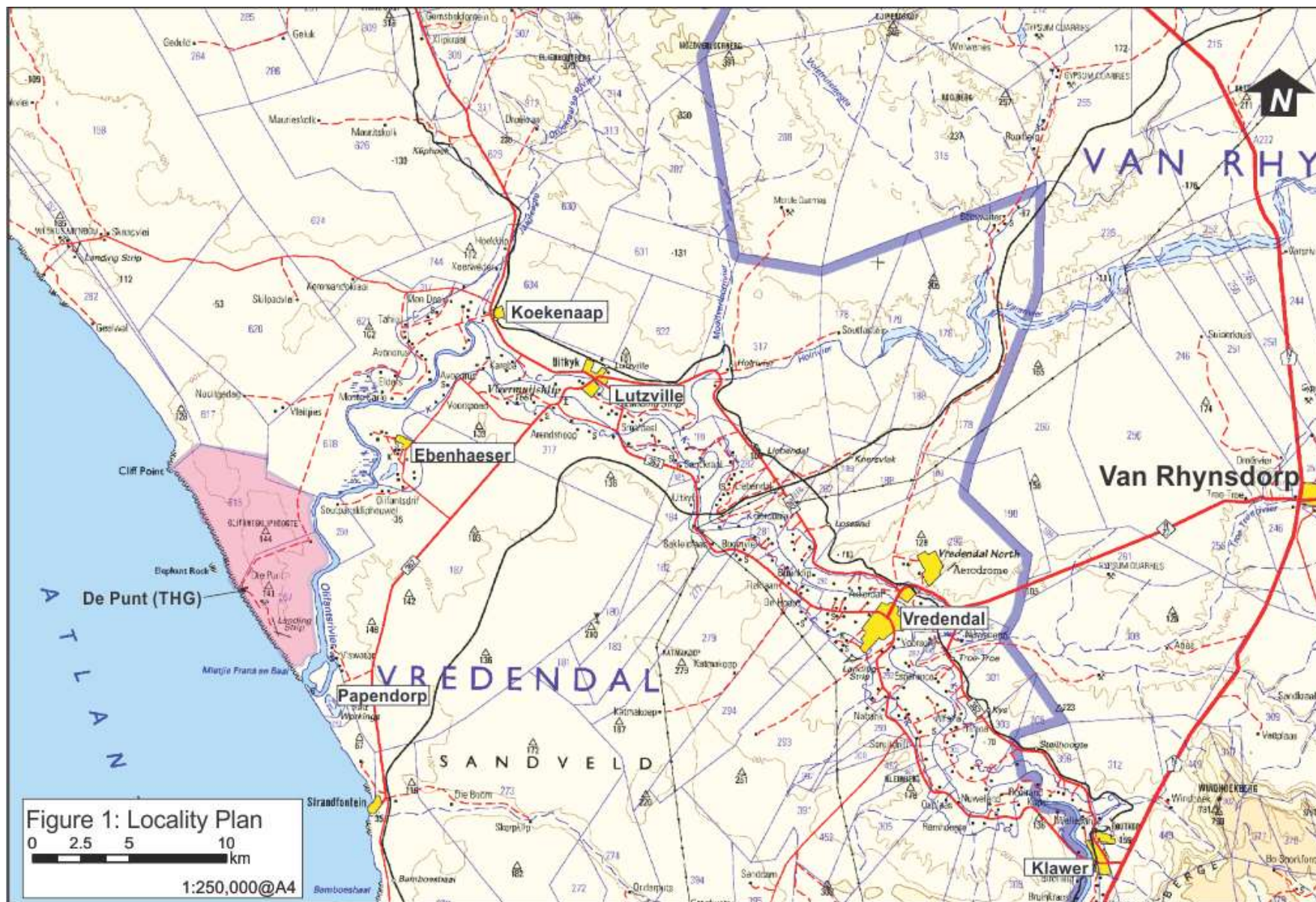


Figure 1 Locality Plan

d) Description of the scope of the proposed overall activity.

Provide a plan drawn to a scale acceptable to the competent authority but not less than 1: 10 000 that shows the location, and area (hectares) of all the aforesaid main and listed activities, and infrastructure to be placed on site

No infrastructure is to be established. As per the prospecting work programme most work will be non-invasive - mapping and geophysical surveys and modelling. Only during phase 3 is shallow drilling (~30m deep) planned that will be based on results from the first 2 phases of non-invasive prospecting. All activities will take place inland from the ocean and Olifants river and no impact to beaches, surf zone or riparian habitats will take place. A map indicating the potential drill locations (subject to phase 1 & 2 of prospecting results) and the existing roads that will be used is indicated in Appendix 2.

(i) Listed and specified activities

NAME OF ACTIVITY (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	Aerial extent of the Activity Ha or m²	LISTED ACTIVITY Mark with an X where applicable or affected.	APPLICABLE LISTING NOTICE (GNR 544, GNR 545 or GNR 546)
Prospecting Right	4495.4 ha	Number 20	GNR 983

(ii) Description of the activities to be undertaken

(Describe Methodology or technology to be employed, including the type of commodity to be prospected/mined and for a linear activity, a description of the route of the activity)

Geological exploration/Prospecting to find and define an economic resource of Heavy Minerals Sands, Phosphate and/or Diamonds. All these minerals are associated with old marine and strandline deposits that are now located inland.

This will be done in 6 phases as per the proposed prospecting work programme:

1. Desktop review, mapping and field grab sampling
2. Geophysical survey – electrical depth soundings or radiation survey
3. Drilling - maximum of 200 holes @ 30m depth = 6000m of drilling
4. Resource modelling
5. Financial and technical modelling
6. Scoping and feasibility study with additional sampling

PARA 2

Geological control of the Prospecting Program

For the reader to appreciate the drill hole distribution, SPC herein explains the distribution of the 1st Phase drilling of 36 holes in clusters of 3 to 6 holes per cluster in 10 clusters A to K, by reflecting on the geology of the De Punt Hill (Refer Figure 2 Geology) and the topography of De Punt as shown in the Contour Plan Figure 3.

The sought-after minerals are known to occur on the West Coast **in the alluvial deposits (Quaternary Calcareous and Gypsiferous deposits)** (ref Figure 2 Geology) of the west coast coastal plain inland of the current shoreline as elevated paleo terrace deposits at strandline levels 30, 50 and 90 mamsl along the coastline between De Punt and Brand se Baai (with strandlines shown diagrammatically in Figure4).

Consequently, the Phase 1 prospecting program aims at determining the distribution of any concentrations of the target heavy minerals at levels 50 and 90 mamsl Strandlines through wide-spaced drilling (3 to 6 holes per wide spaced hole clusters A to K as per Figure 4: Drill Holes Targeting the 50 and 90m Strandline traces hereafter).

Figure 4 shows both the inferred 50 and 90m strandline terraces and the position of the drill holes per cluster located to intersect the relevant inferred strandline terrace.

Given the terraced nature of the prospecting targets, the drill clusters generally have their line of holes orientated at right angles to the local contours and importantly are located along existing or old roads or tracks to minimise the disturbance of vegetation by drilling.

Furthermore, **the bedrock which underlies the alluvial formation is quartzitic sandstones of the Peninsula Formation (Op) of Table Mountain Group** as shown in Figure 2 which rock was eroded to a vastly undulating surface prior to the deposition of the thick alluvial deposit forming the De Punt Hill above such Sandstone erosion level. Accordingly, occurrence of alluvial deposit and the target terrace levels are precluded by the occurrence of the sandstone bedrock (See Photo 734) below such undulating surface. However, the undulating paleo weathering surface of such sandstones did provide the opportunity for varied basins of paleo alluvial deposition and accordingly prospecting is structured to identify such deposits within the context of the generally horizontal paleo strandline terrace levels.

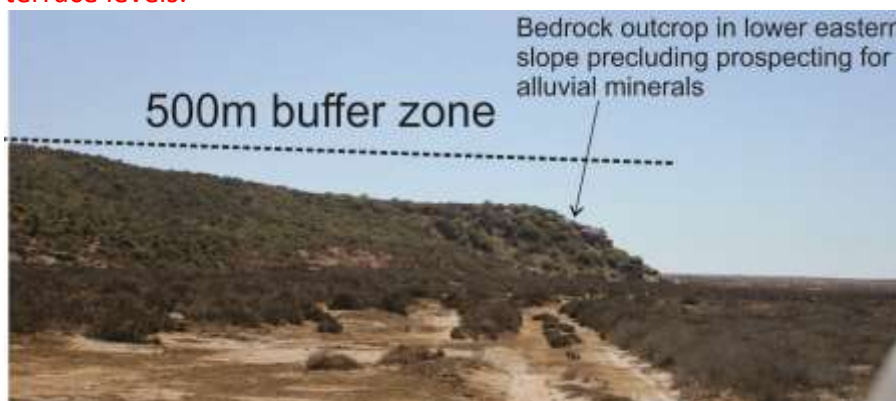


Photo 734 GPS 376: Looking north on floodplain Salt Marsh to bedrock defined headland typical of bedrock outcrops along the lower hillslope of the prospecting area and generally occurring within the 500m buffer zone



Figure 2: Geology



Figure 4: Drill Holes targeting the 50 and 90m strandline terraces

PARA 3

Given the directly comparable nature of the drilling, drill rig envisaged and SPC's experience illustrated hereafter, the reporting by SPC assumes a drilling footprint of maximum 5x10m in the consideration of temporary impact on vegetation.

Example of a similar drilling program between Vredendal and Van Rhynsdorp

As SPC found that the original BAR showed a photo of the anticipated rig, the text did sufficiently describe the drilling for interpretation by laymen, leaving the reader asking many questions about the nature and impact of drilling especially on vegetation, SPC hereby describes the nature and impact of drilling through referral to records of a similar drilling program with photo conducted between Vredendal and Vanrhynsdorp on the Atties B&B property in similar vegetation condition.

As stated in the BAR, prospecting drilling will be conducted in either existing or earlier roads or farm tracks or with immediate direct access from roads or tracks within the Prospecting area to minimise the impact of access to and of the drilling activity of the rows of holes as was generally done in the example case hereafter.

Example drilling program reflecting suitably low drilling impact in similar veld conducted between Vredendal and Vanrhynsdorp (refer Photopage: Example Drilling: Photos E-1 to E-8 below)

The nature of the drill rig is shown in Photos E-1 to E-3, reflecting on the rig established in a farm track ready to commence drilling in Photo E-1, with the rig moving off a drill site reflecting limited disturbance where drilling had occurred in the foreground in Photo E-2, and the localised dust impact which occurs given that 90% of the drilling dust is captured in the dust bagging system from which samples are drawn in photo E-3.

Photos E-4 to E-6 show the limited extent of soil disturbance (spilled drilling dust) and the recovery of the natural vegetation alongside and within road areas where drilling had occurred within roads or tracks. Photos E-4 to E-8 were taken 3 years after drilling in the very arid Vanrhynsdorp climate.

Photos E-7 and E-8 also taken 3 years after drilling of holes in the veld away from the access road, no longer reflecting the impact of the single pass of the drill rig and its support vehicle through the veld with the holes only recognisable by the occurrence of spilled grey dolomitic chips but with insignificant impact on the vegetation.

Of importance is to note that it had been determined in other prospecting programs in the Knersvlakte and the west coast plains, that a much higher level of disturbance and higher level of rehabilitation required, results from preparation of the drill site by topsoil and vegetation removal to a berm followed by its replacement after drilling, than that which occurs as seen in the photographs where no pre-drilling topsoil or vegetation removal takes place.

In the example, the drilling rig and its logistical vehicle simply follow the road or track to as close to the drill site as possible and then proceed to the site through the natural veld and over in situ topsoil. Upon completion of drilling, any heaped dust or chip is simply raked smoothed by hand and the drill rig leaves the site with the shortest route to the access road or track but avoiding tight turning under which the wheels would slew and cause vegetation damage and soil disturbance.

SPC believes that these illustrations would allay many fears which the reader may have had without the example.

This example drilling program has since the drilling been subject to post drilling environmental audit report and rehabilitation assessment for closure application reporting all to the satisfaction of DMR and other commenting departments as well as to the satisfaction of Stephen van der Westhuizen who served as EAP in the project.

Photopage: Example Drilling Program: Photos E-1 to E-8



Photo E-1: Drill rig on farm track ready to drill



Photo E-2: Rig moving off drill site in foreground



Photo E-3: Localised drilling dust and dust bagger



Photo E-4: Limited impact of drilled site on farm boundary road



Photo E-5: Revisited drilled site on farm track

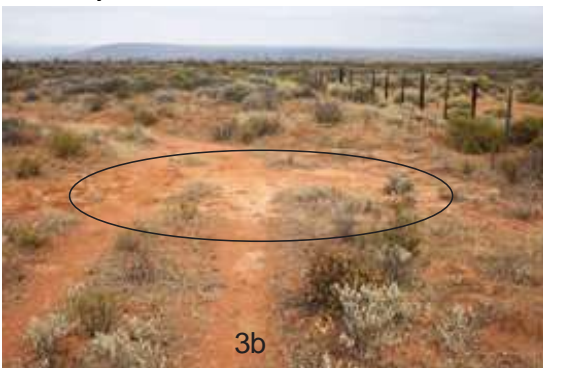


Photo E-6: Revisited drilled site on farm track



Photo E-7: Revisited drill site in veld off-road



Photo E-8: Revisited drill site in veld off-road

e) Policy and Legislative Context

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process)	REFERENCE WHERE APPLIED	HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT. (E.g. In terms of the National Water Act a Water Use License has/ has not been applied for)
National Environmental Management Act, Act 107 of 1998	Impact assessment	Application for EA has been made
Environmental Impact Assessment Regulations, 2014 - Notice 733 of 2014	EIA assessment guideline document	Use of the guideline document is followed
Mineral and Petroleum Resources Development Act 28 of 2002	Application for prospecting right	Application for a PR has been made
Land Use Planning Ordinance 15 of 1985	Development planning in line with local municipal zoning	Consultation with the municipality and land owners has

f) Need and desirability of the proposed activities.

(Motivate the need and desirability of the proposed development including the need and desirability of the activity in the context of the preferred location).

Need - The prospecting activity is located in the Matzikama Local Municipality with about 14 000 households. About 58% of the local population is of working age and has an unemployed rate of 29% (Municipal IDP 2012-2016). MSR has an active heavy mineral sand mining operation employing more than 300 people and contractors - Tormin Mine that is located next to the area under application. For the future continuation of this economic activity it needs to expand its resource base and in this regard the adjacent properties to its current operation is the most viable exploration target. As MSR has an established footprint and processing capacity it has the ability to develop and mine sub-economic deposits that are found in the area.

Desirability - part of the area under application - The Point, is currently being used for processing of mined marine diamond gravels and mining related infrastructure by Trans Hex. MSR has an existing business relationship with Trans Hex and already mine overlapping areas. Both properties under application has been subject to years of exploration activity and as such is not in a pristine or undisturbed state. Any additional HMS, phosphate or diamond resources that can be found close to the established infrastructure of Tormin mine will help extending the life of the mine. With an establish processing operation already in place at Tormin, this will further limit additional impacts on the environment.

The area under application has been allocated for mining development planning under the Western Cape Spatial Development Framework plan by the Government of the Western Cape- Appendix 3 and

the Matzikama municipality. It is fully in line with the municipal Ward 8 economic development planning which has identified mining as a key development aspect (Appendix 3).

g) Motivation for the overall preferred site, activities and technology alternative.

The area under application has been known to host HMS and diamonds through historical drilling by Trans Hex. The area under application has been zoned for mining development and is in line with the local Ward 8 municipal development plans (Appendix 3).

Prospecting by mapping, geophysics and drilling are the only professional method by which to evaluate the deposit. Drilling methods to be used includes slimline reverse circulation, air core or Sonic drilling is a technology alternative if the formation is too loose to allow good recovery of samples.

h) Full description of the process followed to reach the proposed preferred alternatives within the site.

NB!! – This section is about the determination of the specific site layout and the location of infrastructure and activities on site, having taken into consideration the issues raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout.

i) Details of the development footprint alternatives considered.

With reference to the site plan provided as Appendix 4 and the location of the individual activities on site, provide details of the alternatives considered with respect to:

- (a) the property on which or location where it is proposed to undertake the activity;
 - (b) the type of activity to be undertaken;
 - (c) the design or layout of the activity;
 - (d) the technology to be used in the activity;
 - (e) the operational aspects of the activity; and
 - (f) the option of not implementing the activity.
- (a) The two properties under application will not be subject to the establishment of any new infrastructure or access roads. All infrastructure needed is already established and use will be made of the office and administration infrastructure on Tormin Mine site that is located next to the area under application. The properties under application is one of the few area's where heavy mineral sands can be found close to the existing Tormin operation and is not subject to an existing HMS prospecting or mining right.
- (b) The proposed activity is following the minimum exploration standard to find and define a mineral resource. The use of AirCore/Sonic drilling as an alternative to DTH or RC drilling have been considered and this will be trialled during the exploration phase. The need of a bulk sample has not been considered at this stage as the material is probably at a depth that will required a large stripping ratio. The exploration work is subject to ASX and JORC requirements as the activity takes place under a listed entity.
- (c) The layout of the activity is not applicable as no infrastructure is to be established. The drilling of holes and their location will be based on surface mapping and geophysical surveys results to try and identify old strandlines. If geophysical surveys

or remote sensing is not successful, a number of closely spaced drill fence lines will be done - e.g. 25m spaced holes along existing tracks/roads. A budget of 200m holes drilled to a depth of about 30m/bedrock is planned. An estimated location of planned drill hole locations are indicated in Appendix 3 that are subject to exploration mapping and geophysical survey results.

- (d) Geophysics : Electrical depth soundings, Ground penetrating radar and radiation surveys.

Drilling will be either reverse circulation, air core, sonic drilling or even down the hole hammer.

Lab analyses of samples will be done in the Tormin mine laboratory that is already established next to the properties under application.

- (e) All operational aspects are simplified as to limit any impacts. In this regard all prospecting activity and testing of samples will be based from the Tormin mine site. No people or machinery will be housed or services on the prospecting site. Use will be made of approved infrastructure on Tormin mine site.

- (f) If the prospecting activity does not take place the future development and economic viability of the current mining operation at Tormin is placed in jeopardy as the mine needs to expand its resource base. The resource base of this area that has been zoned for mining development under the Matzikama district development plan will not be developed.

ii) Details of the Public Participation Process Followed

Describe the process undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings. (Information to be provided to affected parties must include sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land.

PARA 3a: Public participation followed for this Updated BAR

Un-prescribed meeting with the fishing community

As also discussed in Para 3 viii of the Preface, the detail of a special meeting to have been held with persons from the fishing community is described below. As SPC's attention was drawn to the grievances of the fishing community in the 2016-2017 public process, SPC gave special attention to considering the river facilities and nature of the fishing community activities and accordingly made telephonic contact with persons who had attended the 2016 I&AP meeting in order that SPC could discuss the fisherman's needs and concerns directly in a meeting dedicated to fishing.

Accordingly, SPC made telephonic contact fisherman Charl Le Roux and arranged with him and the municipal office at the community hall that a small group discussion could be held at 17:00 in the Ebenhaeser community hall on 1 October 2019 with the contact person and 3 other members of the fishing community whom he would bring to the meeting.

With nobody arriving by 16:45 on the date, Mr Charl Le Roux was called and he responded saying that they would not attend the meeting as they had been instructed by their fishing community head not to attend the meeting arranged by SPC and accordingly SPC drove back to Cape Town disappointed with the fishing community's stance.

The formal I&AP meeting in terms I&AP process regulations held on 26 November 2019

Such meeting was held to meet the 2nd and 3rd requirement of DMR's letter of 16/4/2019 in respect of the prescribed Public Participation process.

In this round of public participation for the updated BAR, the process of identifying I&AP's using the list included in the DMR template below as a guide, was mainly through the registered I&AP list as contained in the original BAR. Furthermore, other I&AP's were identified because of their position as State Departments, Local Authorities, NGO's or community representation.

Identified parties were initially contacted by telephone as an introduction, to ensure the correct contact details and preferred method of correspondence, whereupon all parties were sent a copy of the draft revised/update BAR with covering letter (see Annexure E). All copies of draft report were sent by email or hand delivery or made available at the Lutzville Public Library and the Ebenhaeser Municipal Office.

The broader community was alerted through "Ons Kontrei" newspaper advert published on 14 November 2019 and A2 notices placed at the entrance to the property and other smaller posters placed on public office notice boards – (Refer Annexure D for copies of these).

A public meeting with the broader community was scheduled for Tuesday 26 November 2019 at the Ebenhaeser Community hall at 17:30 (5:30pm).

Record of the formal I&AP meeting

As part of the I&AP process, an I&AP meeting was scheduled for 17:30 on 26 November 2019 at the Ebenhaeser Community hall with exhaustive PowerPoint presentation with text notes, site photos and updated plans as required by the DMR brief. The commencement of the meeting was held in abeyance until 18:00 while numerous persons from the community were arriving. Then an attendance register was circulated amongst somewhat 35 persons in attendance and the PowerPoint presentation with allowance for brief intermittent questions began.

However, soon the meeting became disrupted by continued interjections and remarks from and between the attendees many of them clearly between the fisher-folk leading the EAP to question whether a person giving criticism was in fact the person who had instructed that the meeting of 1 October 2019 should not take place and he turned out to be that person. While SPC had focused much of its assessment on determining that the prospecting method and locality would not negatively impact on the sustainability of the fishing community, the majority of attendees had clearly set their mind on disruption of the meeting and were not interested in the presentation moving on to the matter of fishing sensitivity and further disrupted the meeting to a level where the EAP offered them the choice of leaving the meeting if they so wished. Some 28 persons left the meeting and the presentation was completed to the few who remained with interesting discussion and answers to questions raised. Refer Annexure I for attendance register.

Outside of the fishing community concerns, many of the questions raised stemmed from a general community anti-mining lobbying with no focus on the circulated report's focus on neither drill site positioning, impact analyses nor findings of a cumulative low impact on the estuary and the community activities. Unfortunately, the disruption of the meeting was at such level, that did not permit even the taking

of minutes. For the reader, a copy of the PowerPoint Presentation is contained in Annexure I.

Table (iii)a): Summary of issues raised in the 2019/2020 I&AP process

	Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Para in this report where the issues / responses were incorporated
LANDOWNER / Legal OCCUPIER					
	The Point - Trans Hex Operations Pty Ltd- Pierre Kotze & Abegail Makgato Cell: 082 451 2873 (PK), 074 733 0007(AM) Email: PierreK@TRANSHEX.co.za AbegailM@TRANSHEX.co.za		No comments received	NA	Annexure E
	Lot 615 - JC Pienaar Environmental comments by G Nel (Guillaume Nel Environmental Consultants) 45 Fabriek Street, Paarl Cell: 072 1571 321 Tel: 021 870 1874 Email: guillaume@gnec.co.za		No comments received	NA	Annexure E
	JC Pienaar Boerdery - Lot 617 J.C. Pienaar Boerdery Posbus 426 Potchefstroom 2520 Cell: 082 801 5444 Tel: 018 291 1686 Email: nakkie@iafrica.com		No comments received	NA	Annexure E
State Departments					

	Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Para in this report where the issues / responses were incorporated
	<p>Department of Environment Affairs and Development Planning: Ms A la Meyer 1 Dorp Street Cape Town 8001 (Must be by hand) 1(plus 3 cds) Tel: 021 483 2887 Email: Adri.LaMeyer@westerncape.gov.za</p>	20/01/20	<p>The Department advises that the Revised Draft BAR does not meet DMR's requirements and that it may be necessary to make another Revised Draft BAR (inclusive of the required specialist study) available to all registered interested and affected parties ("I&APs") prior to submission of the Final BAR to the competent authority.</p> <p>1. Directorate: Development Management (Region 1) – Ms Melanese Schippers (Melanese.Schippers@westerncape.gov.za; Tel: (021) 483 8349):</p> <p>1.1 The correspondence issued by DMR dated 16 April 2019 required the applicant to appoint an independent estuarine specialist to conduct an estuarine biodiversity impact assessment to recommend mitigation measures for prospecting near the Olifants River Estuary. The DMR further requested that an A3 size locality map, clearly illustrating the exact location of proposed boreholes, sensitive areas, buffer zones and "no-go" areas be included in a Revised Draft BAR that must be circulated to all registered I&APs for a 30-day commenting period.</p>	<p>The existing specialist environmental study report providing comprehensive estuarine assessment and mapping combined with the EAPs (Stephen van der Westhuizen) himself a specialist in considering Prospecting and Mining Impacts and his experience in Estuarine environments and accordingly appreciation of the existing Estuarine Report adequately fulfils the sought after assessment required by the DMR without any further specialist assessment of the estuarine ecology or assessment of the prospecting activity on such estuarine activities as discussed in para 4 of the BAR.</p> <p>1.1 As above. SPC notes that A3 format maps of Figure5 and 4 showing detail of the following are included in Annexure C A3 plans:</p> <ul style="list-style-type: none"> • Sensitive estuarine plant communities of the estuary. • Fishing communities elements. • Other considerations such as watersheds. • The 500m buffer proposed along the Estuary. • Detail positions of the Boreholes each numbered with coordinates available in GIS on request. 	<p>Annexure E and F</p> <p>Figure 4 CPZ</p>

	Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Para in this report where the issues / responses were incorporated
			<p>1.2 The applicant appointed Site Plan Consulting cc as an independent EAP to address the DMR's requirements. The Revised Draft BAR dated November 2019 does not include an estuarine biodiversity impact assessment. The EAP indicated in the Revised Draft BAR that they have experience to assess the impacts that prospecting activities may have on the estuary and relied on the Olifants Estuary Management Plan ("OEMP") (dated November 2007 and 2009 compiled by Anchor Environmental Consultants) for information. This Directorate believes specialist input is still required to verify the findings of the EAP and the outdated OEMP. Please be advised that the Department has commissioned the Olifants River Estuarine Management Plan, which must be consulted by the EAP and verified by the independent estuarine specialist. The Draft Olifants River Estuarine Management Plan dated June 2017 is available online, or could be obtained from this Department upon request. (In this regard, please refer to paragraph 2.10 below.)</p>	<ul style="list-style-type: none"> Position of drill holes relative to episodic drainage channels. <p>In light of the above and the content of the draft BAR as circulated if fully read, will reflect that no further specialist input is required in light of the generally low impact of the anticipated drilling, position of holes and the identified classified ecological zones of the estuary.</p> <p>1.2 As above.</p> <p>The draft 2017 update was consulted from the internet and the following was found:</p> <ul style="list-style-type: none"> Despite the prospecting application having been followed through 2016, the 2017 draft Estuarine Management plan while noting other certain minerals makes no reference to then and now current prospecting Right application by MSR. The 2017 draft deal primarily with management of the estuary and does not 	Preface

	Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Para in this report where the issues / responses were incorporated
			<p>1.3 Further, the map included in the Revised Draft BAR only provide locations of approximately 36 holes, whereas the maximum holes to be drilled, is indicated throughout the Revised Draft BAR as 200 holes. Sensitive areas in terms of vegetation as well as any indication that the proposed prospecting area is located within a Critical Biodiversity Area ("CBA"), have not been indicated on the map. Considering paragraphs 1.1 to 1.3 above, the requirements of the DMR in their letter dated 16 April</p>	<p>bring about any change to or refinement of estuarine sensitivity (as the 2017 report document use chapter notes that "<i>original authors and input received from the University of Cape Town (UCT) research team and other stakeholders remains largely unchanged, although certain editorial changes and factual updates will be evident. Historical information and data remains relevant and critically important for estuarine management in the long term and must be updated when new information becomes available.</i>"). None of the 2017 considerations have a direct bearing on the matters in the DMR brief. No doubt in further refinement of the 2017 document, prospecting with potential mining should further be considered in the refinement of the Estuary Management Plan. The 2017 report does not weighting of impact.</p> <p>1.3 As explained in the preface, in its para 2.iii, prospecting is of a progressive nature with the results of each phase with a specific function only after completion of such phase informing the next phase and accordingly only the localities of the first 36 broad spaced holes attempting to establish the location of an inferred mineralised strandline at 50m and 90m amsl can be fixed at this stage. Until</p>	<p>Preface</p> <p>Annexure J</p> <p>Refer Preface</p>

	Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Para in this report where the issues / responses were incorporated
			<p>2019 have not been met.</p> <p>1.4 The proposed prospecting area is located within a CBA. However, the exact location of all the prospecting holes have not</p>	<p>their results are known, no further definition of the prospecting program can be given. Should results be positive from the Phase 1 36 hole drilling program, further non-invasive geophysics will be applied and then consideration would be given to drilling any further holes (mentioned in 2016 documentation as being 200 holes). Consequently, during the Tormin geology team preparation of a further prospecting phase, full consideration will be given to the sensitivity of areas contemplated for drilling focusing on matters including roadways with zero impact as priority, earlier disturbed areas, and then vegetation status of areas contemplated for drilling, which areas would be assessed by a botanist. Additionally proximity to drainage channels and other environmental considerations pertaining to the site would be considered and the final proposal would be encompassed in an environmental impact statement to be table as an environmental assessment to determine any further environmental authorisation.</p> <p><u>Like the progressive nature of the geological prospecting program, the environmental authorisation will also be incrementally applied as it cannot be predicted (refer also preface para 2 iii with respect to any possible Phase 2 drilling program).</u></p> <p>1.4 The draft BAR document mapping acknowledges the CBA but it is noted that the</p>	<p>Preface</p> <p>Para 4e)</p> <p>Figure 4, Photopages 1 and 2 Photos E1 to E8</p>

	Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Para in this report where the issues / responses were incorporated
			<p>been mapped.</p> <p>1.5 Page 68 of the Environmental Management Programme (“EMPr”) states that “All drilling is planned in the roads and where not will be surveyed by botanist to identify protected plant species” [sic]. Based on the mentioned statement, it is unlikely that all the holes will be located within existing roads; therefore, it is important that the exact locations of the 200 holes be indicated. A survey should have been undertaken by a suitably qualified botanist to identify the areas where protected plant species are likely to occur within the prospecting area. The location of the protected plant species/ species of conservation concern to be avoided, should be highlighted on a map.</p> <p>1.6 Since the proposed prospecting area is located within a CBA; the exact location of the all the holes have not been indicated; and it is unclear whether any protected plant species will be impacted upon because of prospecting activities, the significance rating of the impact on indigenous vegetation is questioned.</p> <p>1.7 Further to the above, this Directorate objects to prospecting</p>	<p>drilling has specifically targeted totally disturbed areas such as roads with a few holes in previously disturbed areas now partially revegetation and the implications of disturbance by drilling through a single pass of the drill rig and its support vehicle must be considered with the context of the draft reports description in para 4e) with further reference to photo pages 1 and 2 and the photos E1 to E8 in para 3 of the report reflecting on the extremely low level of impact on vegetation.</p> <p>1.5 See above for drilling further than 36 holes.</p> <p>1.6 See above comment.</p> <p>1.7 Refer Preface para 2 ii regarding the difference</p>	<p>See comment on issues 1.3 above</p> <p>See preface para 2 iii</p>

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			<p>activities and the establishment of any future mine within a CBA.</p> <p>1.8 This Directorate would like to provide the following comment, although this was not indicated in the correspondence of the DMR:</p> <p>1.8.1 The impacts associated with the proposed prospecting activities must be assessed and described in accordance with the requirements of regulation 3(1)(j) of Appendix 1 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended).</p> <p>1.8.2 The need and desirability for the proposed prospecting activities must be described in terms of the National Department of Environmental Affairs' Guideline on Need and Desirability (first version published in terms of section 24J of the NEMA in 2014, and second version in 2017)).</p> <p>1.8.3 Page 25 of the Revised Draft BAR states that comments from Heritage Western Cape ("HWC") is "not applicable". Please elaborate on this statement and please indicate whether HWC was notified of the availability of the Revised Draft BAR.</p> <p>1.9 The following general comment is offered:</p> <p>1.9.1 Please ensure that the appendices are correctly referenced in the BAR since Appendix 3 and 6 are incorrectly referenced.</p> <p>1.9.2 Reference to the Land Use Planning Ordinance, 1985</p>	<p>between prospecting and mining.</p> <p>1.8.1 As stated in the comment these matters were not raised by DMR in the brief and of an administrative nature which application in retrospect would not change this current assessment of the prospecting impact by 36 holes drilling on the natural systems of the site.</p> <p>1.8.2 See comment in 1.8.1 above.</p> <p>1.8.3. It is recorded that in the 2016-2017 BAR at the time that SAHRA and HWC was engaged and that no impact on heritage resources was expected and that prior to drilling commencing and updated field heritage survey would be done over the drill site and forwarded to HWC.</p> <p>1.9.1. Appendices refer to the 2016 BAR (in black) while the SPC update refers to Annexures (in red).</p> <p>1.9.2 We are fully aware of the change in the</p>	

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			<p>(Ordinance 15 of 1985) is outdated and must be replaced with the relevant land use planning requirements.</p> <p>1.9.3 Page 5 of the EA issued on 11 May 2018 and the Revised Draft BAR reference the property as Lot 651 Olifants River Settlement. The e-mail of the EAP dated 26 November 2019 however refers to Lot 165.</p> <p>1.9.4 Clarity is requested on the inclusion of JC Pienaar Boerderie (Lot 617) in the list of landowners as the application is only for Lot 651.</p> <p>1.9.5 Please include the Surveyor-General ("SG") Digit code for each farm portion in the BAR. Page 11 of the Revised Draft BAR refers the reader to the "attached survey plan - Appendix 2" for the SG Digit code. The SG Digit code could however not be observed in Appendix 2.</p> <p>1.9.6 The Draft BAR lists only Activity 20 of Listing Notice 1 of the EIA Regulations, 2014 (as amended). The EA issued by the DMR on 11 May 2018 also lists Activity 22 of Listing Notice 1 of the EIA</p>	<p>legislations name and refer to the LUPO as much of the planning at 2015-2016 was still being done in terms of the LUPO. While it probably will be best to avoid the title of the legislation in this ongoing program and refer to it as appropriate Planning Legislation and focus on the relevant plans applicable at the time many of which have become revised during the prospecting program period between 2015 and 2020 as reflected in the comment by Briaan Smit of Matzikama municipality.</p> <p>1.9.3. Apologies are made that the subject line of the email cover note to the erratum issued on 26 November 2019 had a typo error stating the northern property as Lot 165 instead of the correct being Lot 651 as shown in plans and in application.</p> <p>1.9.4 Is included as he is an adjacent owner.</p> <p>1.9.5 This are now included in this final BAR table of location of the overall activity PART A Para 3b) table.</p> <p>1.9.6. As the approval was given for activity 20 and 22 of Listing Notice 1 by DMR, such approval remains despite this update.</p>	<p>PART A para 3b table</p> <p>Para 2.9.1 to 2.9.6</p>

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			<p>Regulations, 2014 (as amended). Please clarify whether only Activity 20 of Listing Notice 1 is applicable to prospecting activities.</p> <p>2. Directorate: Biodiversity and Coastal Management – Ms Lynn Jacobs/ Ms Mercia Liddle (Lynn.Jacobs@westerncape.gov.za; Mercia.Liddle@westerncape.gov.za; Tel: (021) 483 0773/ 8341):</p> <p>2.1 The National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) (“NEM: ICMA”) provides the framework for integrated management of the coast with the aim of preserving, protecting, extending and enhancing the status of coastal public property and securing equitable access to the benefits and opportunities of the coast. As such, the NEM: ICMA provides for various zones and provides a framework for the management of these zones. Be advised that the entire coastline where the proposed prospecting activities are proposed to occur, forms part of the Coastal Protection Zone (“CPZ”) as defined in Section 16 of the NEM: ICMA and delineated by the Department in the West Coast Coastal Management (Setback) Delineation Line Project, 2014. The purpose of the CPZ is to avoid increasing the effect or severity of natural hazards in the coastal zone, and to protect people and properties from risks arising from the dynamic coastal processes, including the risk of sea level rise.</p>	<p>2.1 Refer Preface para 2 v. read together with your further comment in your para 2.9.1 to 2.9.6.</p> <p>Broadly, in terms of the purpose of the CPZ we note that the drilling targets the 50m and 90m amsl strandlines and accordingly all clusters of holes on the seaward side of the prospecting area are on a gently sloping or level plateau 50m above sea level on a cliffed coast with the drill clusters set well back from the cliff and separated from the cliff by the main coastal road. Consequently the drill sites are isolated from the sea and any possible potential impact arising from dynamic coastal processes while it is further noted in respect to another comment regarding any threat of salt water ingress resulting from prospecting that given 30m deep boreholes drilled from a 50m or 90m contour cannot result in salt water ingress.</p>	

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			<p>2.2 Furthermore, the proposed prospecting activities are located to some extent within the littoral active zone (as defined in NEM: ICMA) and is vegetated by indigenous vegetation which has covered the dune system and prevented sand migration over time. Subsequent mining will significantly degrade the coastal environment which will reduce the ecological functioning of the coastal dunes to mitigate the effects of sea surges during storm events.</p> <p>2.3 The proposed prospecting activities predominantly fall within a CBA. According to the Western Cape Biodiversity Spatial Plan, 2017 ("WCBSP"), the desired management objective for a CBA is to "Maintain in a natural or near natural state, with no further loss of habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land uses are appropriate."</p> <p>2.4 The main vegetation type found in the study area is Namaqualand Strandveld. Whilst the vegetation type is classified as least threatened, the area serves as an important ecological corridor, and fruitful prospecting ultimately leads to mining, which are not aligned with the management objectives outlined in the WCBSP, 2017.</p>	<p>2.2 No, none of the drilling is near nor at the level of the littoral zone and none of the drilling is in a dune zone.</p> <p>Furthermore mining is not under consideration, only the drilling of 36 holes which quite clearly is isolated from the effects of sea surges during storm events. The commenting person clearly draws no distinction between this prospecting application and beach mining which occurs elsewhere under totally separate authorisation.</p> <p>2.3. See responses to comments 1.3 and 1.4 above.</p> <p>2.4 The classified status of the vegetation is known and its relative sensitivity understood and served the proposed method of vegetation management of drill sites as described in para 3 and 4e) of this final BAR.</p> <p>We are not aware that CBAs and WCBSPs provide for mineral development where prospecting has not yet proved it.</p>	<p>Preface para 2 iii</p>

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			<p>2.5 It is important to note that in addition to the endemic vegetation found in the study area, various faunal species also occur in the area. Regardless of mitigation measures, prospecting and mining activities will displace these species, which may have adverse effects on the surrounding habitats. Habitat displacement of these species may increase the pressure on the surrounding habitats regarding food sources, and may lead to competition among other species, in addition to increased mortality rates.</p> <p>2.6 The proposed prospecting area is an important part of the natural ecosystem and should thus retain most of its natural character to perform a range of biodiversity and ecological infrastructure functions and services. The preservation of strategic landscapes is required to ensure minimal habitat species loss and maintain ecosystem functionality. The proposed prospecting activities will most likely compromise these functions of the natural environment, albeit of a temporary nature.</p> <p>2.7 The coastal dune system is important to maintain ecological functionality along the stretch of coastline, including protection from storm surges, and is worthy of conservation as intended when the coastal setback was set aside as a “no-go” area in the applicant’s existing mining right. This area must therefore not be disturbed in any way.</p> <p>2.8 Furthermore, the Provincial Coastal Access Audit (November 2019) identified the proposed stretch of coast as a conflict area where there is no public access due to the privately-owned land</p>	<p>2.5 The EAP has considered the extent of impact of the very temporarily drilling and largely its confinement to disturbed areas to have significantly low enough impact on fauna to not evoke a faunal impact assessment for the defined 36 holes. If the program leads to narrow spaced drilling or later to mining faunal species displacement may become relevant.</p> <p>2.6 See response above.</p> <p>What strategic landscape? How do 36 small diameter holes impact on a landscape as big as that of the prospecting area?</p> <p>2.7 As per response 2.1, none of this is relevant.</p> <p>2.8 To date diamond mining with necessary restricted access has precluded much public access. However, studies conducted for amongst others the</p>	<p>Ref Figure 4</p>

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			<p>and mixture of mining and agriculture. This Directorate is concerned that although there is no readily identifiable public access to the coast through these properties, the number of gravel tracks and roads that run parallel and perpendicular to the coastline attest to frequent usage of the coastal zone. The frequent use of heavy vehicles in the coastal zone results in unnecessary damage to the dune structure and ecology. Mining on this stretch of coast results in a huge portion of the coast being inaccessible to the public.</p> <p>2.9 This Directorate believes that the NEM: ICMA was not adequately considered in the Policy and Legislative Context of the Revised Draft BAR. In terms of section 63(1) of the NEM: ICMA, where an EA in terms of Chapter 5 of the NEMA is required for activities that have an impact on the coastal zone, the competent authority must take into consideration all matters listed in the section including, inter alia, the following:</p> <p>2.9.1 Whether coastal public property, the coastal protection zone or coastal access land will be affected and if so, the extent to which the proposed development is consistent with the purpose for establishing and protecting those areas;</p> <p>2.9.2 The likely impact of coastal environmental processes on the proposed prospecting activities;</p> <p>2.9.3 Whether the activity is likely to be significantly damaged or prejudiced by dynamic coastal processes;</p> <p>2.9.4 Whether the development would prejudice the</p>	<p>local authority has recorded that the roads to the coast and onto the beaches in the areas north of the prospecting area have been used extensively by:</p> <ul style="list-style-type: none"> • Kelp harvesters and driers • Recreational campers and divers “crayfish” and abalone. • 4x4 west coast tourists <p>2.9. The revised BAR did not have a brief to update policy and legislative context and the matter of NEM:ICMA is dealt with in comment 2.1.</p> <p>This is not the task of the applicant but the task of the lead authority DMR to consider items 2.9.1 to 2.9.6 and it is very relevant as in our response in 2.1 above the drill holes are generally 50m above amsl inland of a cliffed coast and set well back from the cliffed coast separated from the cliff by the coastal road. The drill hole clusters are generally at closest 300m from the cliffed shoreline. Refer Figure 4.</p>	<p>Preface 2 v)</p> <p>Figure 4</p>

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			<p>achievement of any coastal management objective;</p> <p>2.9.5 Whether the proposed activity is likely to cause irreversible or long-lasting adverse effects to any aspect of the coastal environment that cannot be satisfactorily be mitigated; and</p> <p>2.9.6 Whether the nature of the proposed activity requires it to be located within coastal public property, the coastal protection zone or coastal access land.</p> <p>2.10 In terms of section 38 of the NEM: ICMA, this Department is the provincial lead agency for coastal management in the Western Cape. The Department is implementing the Provincial Coastal Management Programme ("PCMP"), which is a five-year strategic document to provide all departments and organisations with an integrated, coordinated and uniform approach to coastal management in the Province. A key priority of the PCMP is the Estuary Management Programme, which is predominantly implemented through the Estuary Management Framework and Implementation Strategy ("EMFIS") project. The Draft Olifants River Estuarine Management Plan (June 2017) which has been commissioned by this Department as part of the EMFIS, was not considered in the Revised Draft BAR. Although this Plan has not yet been approved, the Plan as well as the accompanying Olifants Estuarine Management Plan: Revised Situation Assessment Report (June 2017) must be considered and the relevance of the mentioned documents the proposed prospecting activities must therefore be included in and reported on in the BAR.</p>	<p>2.10 See above responses in respect of NEM:ICMA. The report will be considered and DMR and DEA&DP should liaise to align prospecting programs and mineral development interest on the west coast with environmental management plans which resort under the NEM:ICMA.</p> <p>We note in the two Figures 5 and 6 contained in the June 2017 draft report clearly shows that Olifants mouth Community Conservation area and the estuarine boundary (SANBI) fall outside proposed prospecting activity areas though they share a common boundary with the Prospecting Right boundary along the estuary but in this regard refer para 1.1.2 and Figure 5 with subsequent proposed 500 buffer zone.</p>	<p>Ref Annexure H</p> <p>Annexure G</p>

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			<p>2.11 Please be advised that the proposed prospecting area fall within the area that has been earmarked by both the National Department of Environment, Forestry and Fisheries as well as this Department for declaration as part of the Protected Areas Expansion in this region. Any proposed mining activities within this area is therefore not supported.</p> <p>2.12 It must further be noted that authorisation of the proposed prospecting activities will set a precedent for any future proposals along the coast and create the opportunity for other mining companies to exploit the option to apply to scope in the area. Based on the above, this Directorate objects to this prospecting right application.</p> <p>3. Directorate: Waste Management – Mr Etienne Roux (Etienne.Roux@westerncape.gov.za; Tel: (021) 483 8378):</p> <p>3.1 The Draft BAR and EMPr are silent on possible waste that could be generated during invasive prospecting activities. Any solid waste should be appropriately stored until such time that it can be disposed of at a licensed facility, suitable of accepting such waste.</p> <p>3.2 Waste is not allowed to be burned or buried on the proposed prospecting area.</p>	<p>2.11 Is preclusion of a sector such as mining good planning? Should the national departments not seek interdepartmental cooperation and coordination of planning as contemplated under the PAJA.</p> <p>2.12. We believe that every application should be assessed on its merit within an holistic overriding strategic management systems and not on the basis of precedents.</p> <p>3.1 Waste management was not a component of the DMR brief but it can be accepted that solid waste management will take place within a waste management protocol as used by Site plan Consulting in all its mining EMP together with its hydrocarbon management protocol which (now contained in annexure H) as part of the conditions of approval.</p> <p>3.2 Refer above response at para 3.1 and refer also Annexure G draft Environmental Awareness</p>	Annexure H

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			<p>3.3 Any event resulting in spillage or leakage of hazardous substances onto land or into water resources must immediately be reported to the relevant authorities, including this Department's Pollution and Chemicals Management Directorate, in accordance with section 30 of NEMA, 1998. Information related to the incident must include the reporting, containment and clean-up procedures of such an incident/s, and the immediate remediation of the affected area. All necessary documentation must be completed and submitted to the relevant authorities within the prescribed timeframes.</p> <p>4. Directorate: Pollution and Chemicals Management – Mr Hassan Parker (Hassan.Parker@westerncape.gov.za; Tel: (021) 483 6877):</p> <p>4.1 It is recommended that the groundwater's electrical conductivity be frequently measured to monitor for possible saltwater intrusion due to drilling activities. It is further recommended that a contingency plan be developed and implemented in the event of saltwater intrusion, which includes the discontinuation of all drilling activities, and post-rehabilitation of saline intrusion to the aquifer, should drilling activities have been completed.</p> <p>4.2 Furthermore, the applicant must ensure that adequate backfilling of drill holes is undertaken.</p>	<p>Induction Training Manual. 3.3 Refer above response and Annexure H.</p> <p>4.1 Not relevant as the prospecting holes will be drilled at minimum 50m amsl and only drilled to 30m maximum depth.</p> <p>4.2. yes the drilling contractor will be instructed to do so and the holes will be inspected and marked by small concrete blocks as is standard practise in prospecting.</p>	

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			<p>5. Directorate: Air Quality Management – Mr Peter Harmse (Peter.Harmse@westerncape.gov.za; Tel: (021) 483 4383):</p> <p>5.1 The EMPr must be amended to include reference to the following:</p> <p>5.1.1 Noise generated during invasive prospecting activities must comply with the Western Cape Noise Control Regulations (Provincial Notice 200/2013) of 20 June 2013.</p> <p>5.1.2 Dust generated during invasive prospecting activities must comply with the National Dust Control Regulations promulgated in terms of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004).</p> <p>6. The applicant is reminded of its <i>“duty of care”</i> prescribed in section 28 of the NEMA, 1998 which states that <i>“Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment”</i>, read together with section 58 of the NEM: ICMA, 2008 which refers to one’s duty to avoid causing adverse effects on the coastal and estuarine</p>	<p>5.1.1 The EAP has determined from experience in drilling and noise level monitoring that the isolation of the drilling from any surrounding use is so distant that noise will not be a relevant environmental element in this program given the nature of equipment to be employed in the drilling.</p> <p>5.1.2 As in the case of noise, dust generated is determined to be insignificant and not relevant in this update. The dust in this prospecting is extracted as the sample.</p> <p>6. This will be conveyed through the environmental awareness training as in Annexure G.</p>	

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			environment.		
	Department of Water and Sanitation- Water Resource Management – Berg/ Olifants Rassie Nieuwoudt Clanwilliam Tel: 027 482 2233 Mobile: 060 5446 665 Email: NieuwoudtR@dws.gov.za	15/01/20	<p>2. The Department has reviewed the draft Basic Assessment Report and here are our comments:</p> <ul style="list-style-type: none"> a. Please note that all the requirements as stipulated in the National water Act (NWA), 1998 (Act No 36 of 1998) must be adhered to. b. Consideration of Prospecting interface (non-interface) with the estuary: It is stated that only two drill hole clusters are east of the watershed on the eastward slope towards the estuary and are clusters G and F with their closest point being located between 60m and 110m above estuarine water level and between 500 and 1100m from the defined toe of hilllope (western edge of estuary). The 500m horizontal distance buffer from the estuary should be marked on site prior to commencement of any prospecting activity and be a No-Go zone. c. No pollution of surface- or groundwater may occur during the activities related to this report. You are referred to Section 19 of the National Water Act relating to the prevention and remedying effects of pollution that must be adhered to. d. The report does not indicate if and how much water will be required for the proposed drilling of some 200 exploration boreholes. e. The applicant or it's subsidiaries in control of the prospecting must take reasonable measures to prevent water containing waste or any substance which causes or is likely to cause pollution of a water resource from entering any water resource, either by natural flow or by seepage. f. The Department of Water and Sanitation may require any person in control of a mine or activity to arrange for a technical investigation or inspection, which may include an independent review, to be conducted on any aspect aimed at preventing pollution of a water resource. 	<p>b. The buffer zone shall be marked by the placing of white beacons.</p> <p>c. Accepted.</p> <p>d. Only 36 holes are contemplated in Phase 1 drilling program and the water requirements are minimal as drilling water will be recirculated.</p> <p>e. Agree but it is noted that no pollutant additives will be used.</p> <p>f. Accepted.</p>	<p>Annexure E and F</p> <p>Figure 5</p>
	Department of Water and Sanitation: Olifants Doorn WMA - Thembisa Torch Tel: 021 941 6236 Email: torch@t@dws.gov.za		No comments received	NA	Annexure E
	Department of Public Works: Regional Office Western Cape: Ms Nomalanga Kani Private Bag X9027, Cape Town, 8000 Tel: 021 402 2087 Cell: 071 609 2788 Email:		No comments received	NA	Annexure E


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Nomalanga.kani@dpw.gov.za				
Department of Public Works: Ossie Lamb Cell: 082 8388821 Email: Ossie.lamb@dpw.gov.za		No comments received	NA	Annexure E
Department of Public Works: Brian Stander Tel: 027 402 2259 Email: Brian.stander@dpw.gov.za		No comments received	NA	Annexure E
Department of Agriculture, Forestry and Fisheries (Provincial): Land Use Management Cor van der Walt : Elsenberg Tel : 021 808 5099 Email: CorvdW@elsenburg.com	4/03/2020	No objection to proposed prospecting on condition that the prospecting should not lead to any permanent changes in the land capability.	NA	Annexure E and F
Department of Agriculture, Forestry and Fisheries Wade Theron - Assistant Director to the West Coast: Compliance Cell: 082 771 8910 Tel: 022 714 1710 Email: wadet@daff.gov.za		No comments received	NA	Annexure E
CapeNature: Elbie Cloete (Piketberg) Pierre de Villiers (Coastal Program)	13/12/19	<u>From Alanna Duffel-Canham: Conservation Intelligence</u> The Olifants River Estuary is adjacent to the proposed prospecting area. The Olifants River has been determined as an Aquatic Critical Biodiversity Area. Much of the area surrounding the	We agree with the sensitivity of the estuary in terms of aquatic life and its role in bird life and have considered the Olifants Estuary Management Plan	

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	<p>Manager) Alana Duffell-Canham (Stellenbosch) Wentzel Horniman (Cons Services Officer- NW) E Cloete: 082 455 5992 Pierre de Villiers: 083 236 2924 A Duffell-Canham: 021 866 8000 Wentzel Horniman: 027219 1480</p> <p>Email: ecloete@capenature.co.za estuaries@capenature.co.za aduffell-canham@capenature.co.za whornimann@capenature.co.za</p>		<p>estuary has been determined as terrestrial Critical Biodiversity Area and an ecological corridor needs to be maintained along the coast and from the estuary inland. The estuary is of high conservation importance and a process is underway to proclaim the estuary as a formal protected area. The estuary supports salt marsh vegetation which is already highly threatened by anthropogenic impacts and loss of this vegetation type affects other biota in the estuary. The Olifants Estuary has the largest supratidal and floodplain salt marshes in South Africa. The salt marshes at the Olifants River Estuary are in relatively good condition and are the only ones remaining that are truly representative of saltmarshes along the West Coast.</p> <p>The following bird species are listed in the TOPS list of NEMBA and have been recorded at the Olifants River mouth:</p> <p>a. Lesser flamingo; b. Greater Flamingo; c. Black harrier d. African black oystercatcher; e. Damara tern f. Caspian tern; g. Cape Cormorant; h. Great white pelican; i. Swift tern; j. Grey-headed gull; k. Hartlaub's gull; l. Kelp gull.</p> <p>Most of the above are also threatened species in terms of IUCN status either at a national or regional level. Other threatened species not covered by TOPS include Chestnut-banded Plover, African Marsh Harrier. The Olifants River Estuary has been identified as an Important Bird Area (IBA). Many of the above species roost and forage in the estuary mouth and some such as the African Black Oystercatcher breed on the surrounding coast. The estuary also plays an important nursery area for 8 estuarine</p>	<p>specialist environmental study at the highest level in the assessment of prospecting impact. Refer also to West Coast District Municipality Environmental section comment on corridors below.</p>	

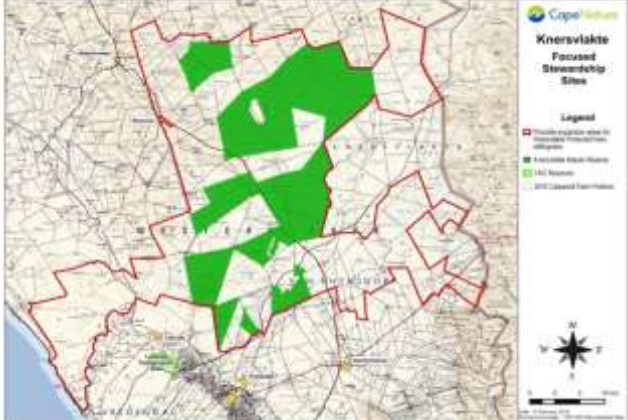
	Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Para in this report where the issues / responses were incorporated
			<p>dependent fish species as well as 4 estuarine opportunist fish species.</p> <p>Mining activities close to the estuary could have an impact on water quality of the estuary and noise and physical disturbance could disturb birds and other fauna. Changes in water quality could also affect the sensitive salt marsh vegetation.</p> <p>As stated previously the direct and indirect impacts of prospecting as well as potential future impacts as a result of mining expansion should be considered. As stated previously, CapeNature recognises that this a prospecting application and that impacts should be more limited than those of mining but we always consider prospecting as a precursor to mining and thus adequate information should be obtained which can be used to inform the likely impacts on biodiversity of both prospecting and potential mining activities.</p> <p>The revised report is a considerable improvement on the previous application. An updated comments and response report done by the new consultants stating how they have addressed the previous comments would have also been useful.</p> <p>The primary exploration holes appear to follow existing roads. Please confirm that no new roads will be created during any stage of prospecting. From the information provided (which unfortunately did not include a georeferenced shapefile for the</p>	<p>We accordingly have paid special attention of run-off into the estuary and note that no chemical additives which could pose any threat to estuarine water quality or the salt marshes are used in the drilling. The risk of hydrocarbon contamination is determined as insignificant and will be managed in terms of the hydrocarbon protocol in Annexure H.</p> <p>As per para 2 ii of the preface the considerations of mining are not relevant at this early stage of the prospecting application.</p> <p>No new roads are contemplated for prospecting during the 36 hole program. Should any road be required for further drilling their environmental impact will be considered together with that of</p>	<p>Para 2 ii</p> <p>Figure 5</p>


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			<p>boreholes) it is difficult to determine if all the proposed boreholes and in particular boreholes F1-3, G1-3 and K1-3 are further than 500m from the edge of the estuary (which incorporates the edges of saltmarsh and floodplain) which was the buffer area requested in our previous comments. Please confirm that these boreholes are not located within 500m of the estuary and provide a shapefile for all the boreholes.</p> <p>There are several known localities of Species of Conservation Concern (SCC) in the vicinity of the prospecting area and it is likely that more occur on the site. Despite several botanical studies being done in the general area, the level of biodiversity information for the site is considered low and if any invasive prospecting sites are required in the future which are not part of the current plan which indicates the sites are on or immediately adjacent to existing roads these must be groundtruthed by a botanical specialist familiar with the habitats of this region prior to any invasive prospecting (drilling) being permitted on site.</p>	<p>future holes. The drill holes do now have coordinates as contained in Annexure J and can be provided to authorities on request. The borehole positions shown in the A3 Figure 5 are plotted by GIS shapefile application.</p> <p>We confirm that the drill hole clusters F, G and K are outside the proposed 500m buffer from the estuarine edge as shown in the A3 Figure 5.</p> <p>Yes, as described in the report any drill holes contemplated after the initial 36 holes will be groundtruthed by botanical and other specialists as would any related disturbances such as temporary roads or tracks to consider local occurrences of species of conservation concern.</p>	<p>Figure 5</p> <p>Preface 2 iii</p>
	Provincial Heritage Resources - SAHRA and Heritage Western Cape: Mr Damon		See EAP response to DEA&DP comment 1.8.3 above reflecting on the engagement of SAHRA and HWC during the original application which concluded, requiring no further heritage assessment in the application.		
	SAHRA-Maritime and Underwater Cultural Heritage Unit				
Municipality					

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	<p>West Coast District Municipality Environmental Section – Charles Malherbe Tel: 022 433 8536 Cell: 082 7735 991 Email: cjmalherbe@wcdm.co.za</p>	20/01/20	<p>The West Coast District Municipality object to the Prospecting Application due to the following environmental reasons:</p> <ul style="list-style-type: none"> • The property identified for prospecting (and possible future mining) currently provides an ecological corridor and linkage to the Knersvlakte Nature Reserve and consist of areas of high conservation importance Critical Biodiversity Areas (CBA's). • The property further links the ocean and the estuary which again links up with the Knersvlakte Protected Area Expansion Strategy – Please see map below. Such linkages are crucial to cater for climate change and movement of species. If prospecting (and possible future mining) are allowed these identified corridors would not be able to function and serve its purpose and more biodiversity would be lost. • Prospecting and possible future mining will impact tourism negatively due to visual impacts during peak season as there are tourist facilities (guesthouse, campsites and hiking trails/Crayfish Trails that passes through the area which are operated by the local communities, including the Papendorp community. • This area falls within the Coastal Protection Zone which comprises of the land 1 KM inland from the high water mark (HWM) and includes a small section of state owned admiralty reserve which is Coastal Public Property in terms of ICMA. No prospecting should be allowed within 1 KM of the HWM within the Coastal Protection Zone measured from the coast as well as from the river/estuary's HWM. The Coastal Protection Zone of 1 km is not mentioned or referred to at all in this application, only reference to a limited buffer zone which is inadequate in terms of the Integrated Coastal Management Act - ICMA. 	<p>While SPC appreciates the need for corridors and had participated through Setplan in the Greater Cederberg Biodiversity Corridor, we note that the corridor now shown in red on the plan compiled by Cape Nature but attached to West Coast District Municipality comment shows that the corridor over the prospecting property is delineated by cadastral boundaries and not an environmental assessment of slope directions, watersheds, natural vegetation continuity or by monoculture irrigation agriculture transverses along tributaries of the Olifants River. Within the above context the very low impact of the envisaged prospecting is not considered to deter from such level of corridor consideration.</p> <p>This application concerns only prospecting and not future mining with the prospecting not affecting tourism.</p> <p>Refer para 2 v. of the preface and responses in para 2.9 of DEA&DP comment above.</p>	<p>Preface para 2 iii</p>

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			<ul style="list-style-type: none"> • It is important that the mouth and lower reaches of the estuary and its surroundings are maintained and protected in the Coastal Protection Zone to facilitate the processes that occur in estuaries. • The river and Olifants Estuary has been identified as CBA an Important Birding Area (IBA) with a number of threatened red data species of birds that uses and frequently visits the estuary. • Flora and fauna assessments needs to be done in more detail – not just desktop exercises. • The supratidal and floodplain salt marches in the Oliphant's Estuary are the largest in South Africa and the reason why it's currently in the process to be awarded formal conservation status being one of the last remaining pristine estuaries along the West Coast of South Africa. The protected area will include the northern bank of the Olifants Estuary currently identified for prospecting. • Visual impacts from Papendorp will be very high if prospecting and possible future mining gets approved which will impact on local eco-tourism opportunities and the formal protected area currently underway.  <p>Map from the Knersvlakte Protected Area Expansion Strategy – The map clearly indicates conflict between conservation and prospecting/mining on the same footprint (the northern bank of the Olifants Estuary which falls within 1 km of the HWM which is also part of the Coastal Protection Zone which must be excluded and set aside for Coastal Protection).</p>	<p>We agree and fully support protection of this estuary, and reiterated that the prospecting will not negatively affect the mouth or adjacent littoral zones of the coast.</p> <p>The SPC assessment has considered the extremely limited impact of the 36 hole drilling activity and as per the response to DEA&DP comment 2.5 further studies are not required at this stage of the prospecting program.</p> <p>We agree with and support the protection of the estuarine ecological zones and accordingly have provided a 500m buffer along the northern bank as per Figure 5.</p> <p>Visual impact was considered by SPC and reflected on in the report with inward and outward looking photographs from Olifantsdrift while Papendorp will not be affected visually at all.</p> <p>We cannot confuse “prospecting/mining” impact with the very low insignificant impact of the current prospecting by drilling of 36 holes.</p>	Para 2 ii
	Matzikama Municipality: Municipal Manager		No comments received	NA	Annexure E

	Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Para in this report where the issues / responses were incorporated
	Gerald Seas Tel: 027 201 3300 Email: cfo@matzikamamun.co.za				
	Matzikama Municipality: Community Development Thesmé van Zyl Tel: 027-201 3351/02 Email: thesme@matzikamamun.co.za	20/01/20	<p>Dear Mr Donald</p> <p>I am in full support of Mr Malherbe's comments attached and would like to add the following points:</p> <ul style="list-style-type: none"> • Mining versus Tourism Development and Environmental Conservation for the future generation of Matzikama is becoming a force to be reckoned with especially taking into account that most of the northern coastline of the Matzikama area is already consumed with mining operations. • The area allocated for prospecting is in contrast with the Matzikama Municipality's Environmental vision as stipulated in the Environmental Management division of the Municipalities Integrated Development Plan and Spatial Development Framework. • Of concern is that the proposed prospecting area crosses over into an area identified by Cape Nature as the extension of the Knersvlakte Bioregion Reserve identified for future protection as can be seen in the Figure below. This was also indicated in the Environmental Management division of the latest IDP of the Matzikama Municipality (4th Generation Integrated Development Plan – (01 July 2017 – 30 June 2022) as can be seen on the map attached to this commentary and in Mr Malherbe's comment. 	<p>- Surely the mining sector and preserving access to mineral resources should form part of municipal strategic spatial planning which includes consideration of its economic contribution.</p> <p>- As above, the SDF should now consider the mineral potential being investigated through prospecting.</p> <p>- As above, during consideration of nature reserve proclamations and especially extensions of "reserves" attention should be given to investigating mineral potential in such areas in order that the strategic plan for reserve can deal with accommodating mineral development.</p>	

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	<p>Matzikama Municipality: Town Planning Section Briaan Smit Tel: 027 201 3481 Email: bsmit@matzikamamun.co.za</p>	20/01/20	<p>Cognisance must be taken of the judgement handed down in the Constitutional Court of South Africa on 12 April 2012 on the issue of the Minister of Mineral Resources vs. Swartland Municipality and Others and Maccsand (Pty) Ltd vs. City of Cape Town (Chamber of Mines of South Africa and Agri South Africa as Amici Curiae (Case nos.: CCT 102/11 [2012] ZACC 8 & CCT 103/11 [2012] ZACC 7) where relevant companies are restrained from conducting mining and/ or prospecting activities until the properties are zoned in accordance with the relevant planning legislation.</p> <p>Please note that you still make reference to the “Land Use Planning Ordinance 15 of 1985” under “(e) Policy and Legislative Context” which was repealed with the promulgation of the Spatial Planning and Land Use Management Act, 2013 (No 16 of 2013) and Western Cape Land Use Planning Act 2014 (No 3 of 2014) and therefore it must be amended.</p>	<p>SPC is fully conversant with the case and has attended to the matter at hand in many applications for prospecting and mining and will do same for this Prospecting Application under the relevant planning legislation.</p> <p>Please refer EAP response to this matter as given in response to DEA&DP comment 1.9.2 above.</p>	

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			<p>Although the Spatial Development Framework for the Matzikama Municipality, 2014 supports mining activities within the coastal corridor it also provides for “critical biodiversity areas”, “tourism”, “conservation” and also the proposed Oifants River Estuary Conservation area in die amendment version (2019) of the Spatial Development Framework for the Matzikama Municipality (also see inset below).</p>  <p>The visual impact should also be viewed from the Atlantic Ocean inland.</p> <p>It seems that no provision has been made for public access to the coast.</p>	<p>The accomodation of mining within coastal corridor as provided for in the Matzikama SDF is valued and appreciated by the mining industry. Fortunately the conservation zones shown in Matzikama map do not conflict with the prospecting now applied for.</p> <p>Current public access will remain unchanged and is a matter to be dealt with outside of the current</p>	<p>Refer Figure 4 re OR Estuary conservation area</p>

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			<p>It also seems that the applicant did not take climate change and the effects of the continuing drought in to account and how the prospecting activities will influence it.</p> <p>It is also unclear what type of vehicle will be use to collect samples during the prospecting period, which route/roads will be used to transport the prospecting material and if that particular road is wide enough for vehicles used. Also please keep in mind that the application in terms of the Matzikama Municipality: Land Use Planning By-law, 2015 with regards to the mineral separation plant located on Farm No 262 has not been finalised.</p> <p>It seems that Minor Road 9737 will be impacted on and therefore comment/approval from the Western Cape Government: Road Network Management must be obtained.</p>	<p>prospecting as it also involves companies outside of the current applicant.</p> <p>Climate change is not relevant in this time and spatial frame.</p> <p>Samples will be collected by the logistical support truck to the rig and likely be of a 5-7 ton flatbed truck which will use existing roads/tracks.</p> <p>Should a wayleave be required for MR 9737 such application will be made to the road authority but note that the traffic generated by prospecting will be minimal.</p>	
	Municipal Councillor: Ward 2 Amelia Job Email: ameliaj@matzikamamun.co.za		No comments received	NA	Annexure E
	Municipal Councillor: Ward 8 Mario Cloete Email: marioc@matzikamamun.co.za		No comments received	NA	Annexure E
Non Governmental Organisations					
	Friends of the OEMF		No comments received	NA	Annexure E

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	Care of Thesme van Zyl (Secretary) – Will distribute to OEMF Tel: 027 201 3351 Email: thesme@matzikamamun.co.za				
	Strandfontein Rate Payers Association & Olifants Estuary Management Forum S du Plessis P.O. Box 191 Doringbaai 8151 Cell: 073 783 7080 Email: kwela@intekom.co.za or svduplessis18@gmail.com	20/01/20	<p><u>From email cover note:</u> In conclusion I object to any Prospecting Right granted on the Northern Boundary of the Olifants River and Estuary 17km upstream.</p> <p>In my opinion and with due respect SPC did not fulfil their Mandate of a complete Estuarine Biodiversity Impact Assessment in supplying updated maps and certain documentation as outlined in my comments.</p> <p>Departments of Government, Environmental Consultants and NGO's have worked very hard over the last 4 years to create a Protected Area and these negotiations cannot be ignore due to the future of our rivers and water crises.</p> <p>The sensitivity of this application needs to be assessed at a Ministerial / Parliamentary Level before this PR is granted with the interest of a MR being granted in the future.</p>	<p>Refer to para 2 Background of the Preface regarding the comprehensive Olifants Estuary Management Plan which eliminates the need an appointment as considered in the DMR requirements for an specialist Independent Estuarine Study to be conducted.</p> <p>This prospecting application does not impact on the protected area to any extent which has relevance claimed.</p> <p>SPC comments that given the extremely low impact of the envisaged prospecting drilling, no further referral needs to be contemplated.</p>	<p>Annexure E and F</p> <p>Figure 4</p>

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			<p><u>From comment letter</u></p> <p>It is noted that the PR activities proposed are limited to a small area and might not be as obtrusive as mining activities. However, in light of the expansions planned at Tormin Mine (Mineral Sand Resources (MSR) and a subsidiary of Mineral Resource Commodities MRC) it has become imperative that applications be they PR or MR cannot be assessed in isolation of each other.</p> <p>The original MR in 2011 was for 6.98km stretch of coastline along the beach from the HW to 10M from the foot of the cliff. The entire Mining Right was 1.348 HA. With Section 102 that coastal footprint has increased to approximately 40km of coastline, albeit that application is still under appeal.</p> <p>If we include this PR, which is an added 13km of coastline, the northern boundary of the mouth of the Olifants Estuary and 17km of undisturbed sensitive estuarine zone. Tormins footprint would cover more than 7000HA and 53 km stretch of coastline that shall trigger concerns under ICMA and NEMA. 53 km of coastline would be mined with limited access to the Public.</p> <p>When Mineral Sand Resources Mining license lapsed and as we know a Mining License is valid for 5 years and only applies in relation to commencement.</p> <p>MSR (Tormin) has expanded their scope of activities, i.e. MSR is now doing far more than originally applied for as is now described in the extent of their expansion. MSR needs an amended Environmental Authorization to match its scope of</p>	<p>At this stage as per Preface para 2 ii mining is not in the application.</p> <p>No relevant to this prospecting application.</p> <p>The conclusions of mining impacts and limit of public access cannot be reached in terms of this application and no conclusion is appropriate at this stage.</p> <p>Mining Licenses no longer exists and not relevant to this application.</p> <p>The current MSR activities elsewhere are not directly relevant to this current application and would only be considered by the competent</p>	<p>Preface para 2 ii</p> <p>Preface para 2 i</p>

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			<p>work. (This was confirmed in the HC judgment between MSR and the Magistrate for the District of Vredendal and others). Has that been done?</p> <p>With regard to the conditions laid out by National DEA Point 4.29 “that the applicant must get a specialist to conduct an Estuarine Biodiversity Impact Assessment. Furthermore it must be conducted in line with Section 63 of NEMA and ICMA.”</p> <ul style="list-style-type: none"> - SPC referred to a 2009 copy of the Olifants EMP by Anchor Environment in their updated and revised BAR. - The OLIFANTS EMP is a living document it was updated in 2012 and revised and amended in 2017 to be aligned into the National Estuary Management Protocol (NEMP) for the new legislation. - Ecological Reserve Determination - Olifants Estuary Gazetted in 2017. To note - pg. 12 to 18. nor the IBA from Birdlife issued October 2013 has been included. - ICMA – S16c, d(i) and S16f. and the User Guide of ICMA on S16. Points to consider that would trigger ICMA. <p>The water body of the Olifants River mouth, Estuary and its water course belong to the Republic of South Africa and this PR affects access to Coastal Public Property. There is one access point given, even though one of the drilling points is smack bang in the middle of the public road to Transhex maingate.</p>	<p>authority DMR.</p> <p>Refer Preface para 2 background regarding use of the Olifants Estuary Management Plan report not requiring a specialist appointment contemplated by DMR to do such estuarine assessment.</p> <p>Refer also response to DEA&DP comment 1.2 above.</p> <p>Yes there is only one access at present and the drilling of holes in the disturbed road area avoids disturbance of natural vegetation and to accommodate drilling in the edge of the road, traffic control for that day will only require danger sign posting and placement of a flagman along the road approach as would be contemplated for any road maintenance, side drain maintenance, mitre drain maintenance or road side vegetation mowing. The safety precautions would be referred to the roads authority for approval by obtaining a “wayleave”.</p>	<p>Ref footnote under para 1.1.1 and report cover and plan copy in Annexure K</p>

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			<p>Meeting 26 November 2019</p> <p>The CADASTRAL Lines need to be highlighted as the map presented at the PP meeting is misleading. No map was provided of:</p> <ul style="list-style-type: none"> - the Knersvlakte Expansion Strategy - the Greater Cederberg Biodiversity Corridor <p>- Map outlining Ecological Reserve Determination of the Olifants River and Estuary.</p> <p>- No information on the salt marshes, wetlands and updated research on the 4th largest Estuary in SA.</p> <p>SPC within its updated and revised BAR should list all of the above to stakeholders for the sake of transparency and for rural communities whom do not have access to internet.</p> <p>-pg 14 photographs are deceiving no view over river looking north from the floodplain was a unanimous response from the public.</p> <p>-pg 16 PR area northern Entrance to Olifants Estuary is a CBA Critical Biodiversity Area.</p> <p>Examples of GPS sites are taken in a landlocked area and not on a sensitive riverbank therefore it is misleading.</p> <p>Pg 16 GPS points 356 – 369 is in the mouth of the Estuary and</p>	<ul style="list-style-type: none"> - Regarding the first 3 items, given the very limited activities and temporary disturbances considered in the SPC assessment, their relevance within the context of Knersvlakte reserve and the Biodiversity Corridor did not justify showing the proposed drilling in the above context. - Regarding ecological reserve determination the study of DWS was consulted but is extraneous to the prospecting proposal as it will have no impact on the estuary itself nor its ecological reserve requirements. - Incorrect, all relevant ecological sensitive areas of the estuary as determined in the specialist study report were contained in the Figure 5 presented during the I&AP meeting and as contained in Figure 5 represent the ecological elements of the estuary which critically set the minimum required of the Ecological Reserve Determination by DWS by 2017. - Photos 699, 705 and 706 should also be perused together with Figure 5 Estuary interface plan. <p>The river interface is best illustrated in the above photographs and the river is largely not relevant as the relevance in interface is the toe of the hillslope delineated in Figure 5 and the supporting 500m</p>	

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			<p>surrounding coastline that triggers ICMA within 1km.</p> <p>GPS Points 374, 375, 376, 377, 378 is bordered on saltmarsh plains, wetlands and critical nurseries for fish within a sensitive area of the lower Olifants Estuary.</p> <p>Then on the Southern banks GPS site 395 and 396. Whose property is that? This land was handed over by President Rhamaphosa in 2019.</p> <p>The fishers and members walked out of the meeting on the 26 November 2019 due to not enough consultation with the Community Property Association and the Heritage Rights of Fishermen and Permit holders. Old contact details were given by Mr Westhuizen on behalf of SPC as reference for contacts this was challenged by the fishers.</p>	<p>buffer landward of such toe to protect the sensitive river bank and estuarine plant communities seen in Figure 5.</p> <p>Yes, these GPS positions were specifically visited and photographed for reflection of the sensitive plant community areas of the estuary enabling SPC to verify the mapping contained in the specialist estuarine report.</p> <p>GPS 395 and 369 photos 769 and 771 are on the southern bank of the river at finishing community launching site recently upgraded to serve the fishing community and termed the Papendorp jetty in the report. This southern bank now forms part of the recently awarded land claim in the proximity of Papendorp.</p> <p>Regarding consultation attempts with the fishing community please refer Preface para 3 viii a) regarding a boycotted meeting set for 1 Oct 2019 and the fact that the public meeting with its PowerPoint illustration by photos and plans was structured for discussion with the fishing community during the meeting, which discussion minutes would have served as the important I&AP input to the document revision following the meeting but unfortunately the fishing community whom in your comment claims has not been consulted disrupted the meeting and left before any matters of relevance within the PowerPoint framework could</p>	

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			<p>PP is not a box to tick when it comes to rural communities whose rights are threatened. One needs patience and to hear the concerns raised.</p> <p>Pg 19 example of a drill site inland is not an example of a drillsite near the Olifants Riverbanks.</p> <p>Pg 20/21 Is motivated with Transhex having mined overlapping areas.</p> <p>West Coast Resources a subsidiary of Transhex has gone into liquidation thereby the land in question needs to be investigated further along the coastline.</p> <p>Pg 22-29 Contacts of stakeholders are outdated and should have been followed up on and corrected. Eg Mr Lamb of Public Works has retired.</p> <p>To compare the Olifants Estuary to mining at the Orange River whom has had their RAMSAR removed is not a comparison to the only River and Estuary on the West coast still in a pristine condition. Vegetation clearance /Water for drilling.</p>	<p>be discussed (refer Preface para 3 viii b).</p> <p>The above reference in the preface reflects the priority and attempts by SPC to properly engage with the fishing community who paid no respect to SPC's attempts.</p> <p>Within the context of the immediate surroundings of the drill sites the photopage photos E1 to E8 are extremely relevant to the local surrounds of the envisaged drilling as no drilling is contemplated near the Olifants River banks (drill clusters A to K) as seen in the photographs 762 and 759 where such clusters are in excess of 500m from the riverbank.</p> <p>Not relevant in the impact assessment of this application.</p> <p>Where personal numbers change any enquiry can be made the general number of the organisation.</p> <p>We do not compare the elements of the Orange River Estuary to the Olifants River Estuary and merely refer to the Orange River given site plan consulting involvement in matters of the interface between mining and sensitive estuary salt marsh immediately adjacent to mined areas with the biggest lesson to be learned being that of reduced flood intensity of the Orange River due to dam</p>	

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			<p>If my calculation serves correctly the site establishment and vegetation clearance required for drilling would be 10msq vegetation clearance per site that is 10 000 msq vegetation for 100 holes. WATER is required for drilling and the report appears silent on that.</p> <p>Where will the water be obtained? How will the dirty water be contained or disposed of? The impacts of water extraction and disposal in an arid area are critical with our ongoing drought. No mention is made of the types of chemicals used as part of the drilling process? How will these impacts affect the water quality?</p> <p>The Matzikama Regions water crises has been compounded by drought and the sluices from the Clanwilliam dam have released water once in 20 months, which is having a serious impact on the lower regions of the Olifants Estuary. Ground water is for humans and agriculture not for mining.</p>	<p>building over the past 40 years and vast abstraction volumes for irrigation agriculture and reversed flow of the Vaal river limiting naturally required periodic flood flow through the estuary and periodic wetting of the salt marshes of the estuary.</p> <p>Unfortunately the calculation is incorrect as the drilling of 100 holes at 10 msq vegetation clearance per hole is not 10 000 msq but 1000 msq. In any event no site clearance is contemplated in this final report as discussed in para 3 example of similar drilling program.</p> <p>The minimal water required will be brought to drill site by water truck in 1000 litre containers and any excess drilling water released during circulation thereof will be allowed to seep into the ground as it will contain no contaminants.</p> <p>The water consumption will not impact on the total water availability from farm boreholes or existing road dust control water points or water sources currently used at the Transhex De Punt processing plant or the Tormin Processing plant from which this water could be obtained.</p>	

	Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Para in this report where the issues / responses were incorporated
			<p>Mr Gwede Mantashe meeting in Lutzville in February 2019 with MSR/ Tormin Mine.</p> <p>Points raised were to improve the economy e.g.storage facilities were going to be erected in Lutzville . To date Tormin wants to stockpile on farm land and is applying to have it rezoned. Where is the promise of storage facilities? Desalination plant? Rail transport to Saldhana Bay?</p> <p>I attach MRC annual 2018 Australian Presentation.</p> <p>In revised BAR there is no documents from any correspondence with Public Works nor the Matzikama Municipality which was not included in the original BAR submitted to DMR. Not by the documents I received via PAIA on this PR application. The Flora and Fauna of a River and Estuary is totally different to that of Coastal Areas and the EAP of the Original BAR has ignored experts advice to the point of the EAP remarks being condescending.</p> <p>I believe this PR application benefits so few, with a conscious lack of concern on the environmental degradation that runs contrary to Section 24 G of the Constitution of which the health of the Estuary will be threatened in the long-term if the PR is granted. The health and status of the Olifants River needs to be protected for future generations and seen in its totality and vision if Mining follows the Prospecting Right.</p> <p>One cannot divide the Olifants rivermouth whereby the southern banks is for a National Protected Status and the Northern banks to possible future mining on such a critically sensitive ecological system.</p>	<p>Not relevant to this current brief on prospecting impacts.</p> <p>Public works and Matzikama Municipality were engaged in this process and comments were received from the Matzikama Municipality (as above) but no comments were received from Public Works.</p> <p>The assessment by SPC has found that the impact of the current prospecting application will be so limited as to not threaten any elements of the estuary.</p> <p>???</p>	

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			<p>Therefore I object to any Prospecting on such a pristine part of our coastline and the banks of the Olifants River and Estuary.</p> <p>The rights of the Matzikama citizens comes before the rights of Prospecting in view to mine that will have a detrimental impact that can never be rehabilitated.</p>	The objection is noted within the above context.	
	<p>Olifantsrivier Vissers - fishing permit holders OEMF – <u>Daniel van der Westhuizen, Chair of Olifantsvissers</u></p> <p>represented by Mr Sylvester Don</p> <p>Charl le Roux 081 862 1036 Wilbur Cloete 071 807 8639 and supported by Ms F Hartley of UCT-Environmental Evaluation Unit 071 807 8639 021 650 2866</p> <p>Email: salvesterdon@gmail.com Email: fahdelah.hartley@uct.ac.za</p>	20/01/20	<p><u>From Daniel van der Westhuizen</u> Objections to the updated BAR for on the northern banks of the Olifants estuary Reference number: WC 30/5/1/1/2/10240 PR</p> <p>I am writing on behalf of the fisher community living next to the Olifants estuary. We have a number of objections to the Draft Updated BAR for the Mine Prospecting Application that was circulated for comment as well as the public participation process. As fishers of the Olifants River, and landowners on the southern bank of the estuary and rights holders of resources in the estuary, we regard ourselves as one of the most important stakeholders in this application process. We present our objections on the updated BAR and the prospecting right application below.</p> <p>1. Public Participation Process: We attended the public meeting held at the Ebenhaeser Community Hall on 26 November 2019. We heard from the chair of the meeting (the EAP) that he had tried to contact the fishers to have a meeting to discuss the application and the possible environmental impacts. However, it appears that the phone number used by the EAP to contact the</p>	<p>1. Refer Preface para 3 viii a) and b) note on the engagement with the fishing community by SPC in the process.</p> <p>SPC had contacted Mr Charl Le Roux on 081 862 1036 and he undertook to arrange the meeting of 1 October 2019 and to bring members of the fishing</p>	Para 3a)

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			<p>fishers was no longer in use and thus no meeting was arranged. As far as we know, no further effort was made to meet with us - a group of 45 permit holders (approximately 90 fishers) that harvest resources from the estuary for food and livelihoods and have a long relationship with this estuary. We hoped to be able to raise our concerns at this public meeting in November. However, we felt that the EAP came with a “finished story” and was not listening to our concerns instead he was trying to convince us that there would not be any impacts associated with the prospecting application. Every issue we raised was not considered valid and there was no real discussion about our concerns associated with this project. The fishers became frustrated at the lack of attention to their issues of concern and walked out of the meeting before it ended. A big concern to us is that we have no way of knowing whether the issues raised by ourselves and other stakeholders attending the meeting –have been incorporated into the final BAR – and thus do not know whether our concerns have been addressed or not.</p>	<p>community to such meeting in order that SPC could acquaint itself further with the nature and operation of the fishing community but refer Preface para 3 viii a) for last minute boycott of the meeting despite SPC driving to Olifantsdrif from CapeTown to hold the meeting. During the subsequent I&AP meeting of 26 November it was established through discussion between the EAP and Mr Silvester Don that it was under his instruction to Charl le Roux to call off the meeting of 1 October 15 minutes before it was due to be held.</p> <p>Firstly no Mr Daniel van der Westhuizen signed the attendance register of the meeting of 26 November 2019.</p> <p>Secondly, the meeting was to be structured with an extensive PowerPoint presentation with opportunity for discussion linked to slides related to the fishing community activities.</p> <p>However, well before the slide presentation in its structured form could proceed to near the fisher community involvement stage, the fishing community began to disrupt the meeting to a level which forced the EAP to request that if they were not interested in the presentation moving on to the matter of fishing sensibly they were given the choice of living the meeting if they so wished refer Preface para 3 viii b) second bullet.</p> <p>2. The text of the preface reflects in its paragraph</p>	

	Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Para in this report where the issues / responses were incorporated
			<p>2. The importance of the estuary to people of Ebenhaeser and Papendorp. This application to undertake prospecting is the first step towards applying for mining rights. The Olifants River and surrounding environment is a source of food and livelihoods for fisher people of Ebenhaeser and Papendorp. Fishing on the estuary is a way of life for us and has been for generations before us and will be for generations to come. We spend many hours on the river and often sleep on the banks of the river as we mostly fish at night. We are concerned that mining on farms along the northern bank of the river will result in restricted access riparian lands where we sometime overnight. We are concerned that prospecting (which is likely to lead to a mining application given the expansion of coastal mining in the area) will negatively affect the estuary – the fishing, water quality, the salt marshes, sense of place, and our way of life and culture. We were never directly consulted about this application despite the fact that our lives and livelihoods will be directly affected but this application. Although the EAP and officials tell us that this is a prospecting application and drilling these holes will have limited impact on the environment, this is just another application among many mining applications (some approved, some under review) along this coast. We are concerned about the expansion of mining</p>	<p>para 3 viii a) that given the negative comments regarding fishing community involvement in the 2016 meetings, SPC prioritised engagement with the fishing community in the 2019 program but unfortunately as reflected in the preface, the fishing community itself did not engage as what had been hoped with the SPC program.</p> <p>In a final comment on this matter of fishing community non engagement, SPC does not believe that it now constitute a fundamental flaw in the report, given that the remainder of the assessment of impact and the comprehensive site visit of SPC to fishing facilities have provided sufficient insight into the fishing activities to conclude that the prospecting program by drilling as documented in the final report will not impact negatively on the fishing community or its activities.</p> <p>3. Refer Matzikama Municipality Briiaan Smit comment and its attached plan we note that the Community Conservation Area is not impacted upon by any of the prospecting activities which are distant from this site.</p>	<p>Figure 4</p>

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			<p>along this sensitive coastal area and estuarine environment, which is being considered as a community conservation area. We are also concerned about the loss of access to the coast and estuary for local people.</p> <p>3. Declaration of a Community Conservation Area at the mouth of the Olifants estuary. The Olifants Estuary Management Plan refers to the declaration of a community conservation area at the mouth of the estuary. We have been involved in a long process to identify the boundaries of this conservation area with conservation officials, researchers and other estuary stakeholders and agree on our role as custodians of the estuary. Cape Nature, the provincial environmental authority, national DEA and various conservation NGOs, are all supportive of this plan and we are working with Cape Nature to have the area declared a conservation area. Mining activities on the northern bank of the estuary and the associated impacts of such mining would affect the value of this conservation area and the tourism opportunities and associated jobs that would be created through this protected area.</p> <p>4. The BAR promises jobs and projects that will benefit the local communities. From our knowledge of the Tormin mine, only one person from Ebenhaeser has been employed on the Tormin mine, even though Minister Susan Shabangu came to speak to the communities of Ebenhaeser and Papendorp before Tormin was developed promising 100s of jobs. Furthermore, as a community, we have not benefitted from any community projects associated with the development of the Tormin mine. We are suspicious that</p>	<p>Regarding reference to mining please refer preface para 2 ii not to confuse prospecting with mining.</p> <p>4. Regarding Tormin performance to date we refer the reader to Preface para 2i for considerations in redressing any claimed earlier shortfalls.</p>	<p>Preface 2 iii</p> <p>Preface para 2i</p>

	Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Para in this report where the issues / responses were incorporated
			<p>politicians and the applicant will say the project will bring jobs and projects but we will not benefit at all. We see the river and estuary as providing job opportunities through fishing, tourism, agriculture and conservation not mining. We strongly object to this mine prospecting application.</p> <p>Based on the above, we would urgently request that the application for this mine prospecting right and the BAR be rejected.</p>		
	<ul style="list-style-type: none"> Ebenhaeser Communal Property Association Papendorp community. <p>Local Chair: Ms Madelaine van Niekerk Cell: 073 228 6975 Email: ebenhaesercpa@general.com</p>		No comments received	NA	Annexure E
	<ul style="list-style-type: none"> Ebenhaeser Land Claim Community (ELCC) Ebenhaeser Communal Property Association Papendorp community. <p>Represented by Phuhlisani NPC (David Mayson) and Mr Sylvester Don Tel: 021 685 1118</p>		No comments received	NA	Annexure E

	Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Para in this report where the issues / responses were incorporated
	Email: david@phuhlisani.org.za PO Box 12915, Mowbray, 7705.				
	Lutzville and Koekenaap Community Group – Uitkyk. Mr W Fortuin, S Mannel, D Cloete, J van der Westhuizen, D Witbooi Email: davinewitbooi@gmail.com		No comments received	NA	Annexure E
	UCT- Department of Environment : M Sowman, F Hartley & T Melkonian Tel: 021 6502863 Email: merle.sowman@uct.ac.za	20/01/20	<p>The revised BAR addresses some of the concerns raised by IAPs in the previous BAR review process. However, there are still fundamental concerns regarding this prospecting application that require consideration before environmental authorization is granted. I focus on 2 main issues:</p> <ol style="list-style-type: none"> 1) Assessment of mining on land adjacent to the Olifants estuary requires a more holistic and strategic approach; 2) Mining in the vicinity of the Olifants estuary is in direct conflict with the objectives of the Olifants Estuary Management Plan and plans to establish a community conservation area at the mouth of the estuary. <p>1. The first issue concerns the ad hoc and site level approach to assessing prospecting and mining applications along this stretch of coast. This prospecting application is one of six applications submitted by MSR and/or Tormin in the past 4-5 years along this stretch of coast for prospecting and mining rights (see Appendix 1). These applications are in various stages of assessment, review and authorisation. A major concern is that each of these</p>	The Prospecting Right Area is defined by cadastral boundary with the Estuary's main channel west bank as per Deeds Office convention, but the Prospecting Activities are set well back from such common boundary reserving both the estuarine sensitive areas as far as the "toe of hillslope" and then the buffer width of 500m west of the toe line as seen in Figure 5.	Ref Figure 5 and para 1.1.2 and Figure 4 for community conservation area outside the Prospecting Right area

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			<p>applications is being assessed separately, at a project level, without considering the cumulative impacts that may result should mining be approved along this entire coastal and estuarine area – approximately 50km along the coast and 15-20km inland. This expansion of coastal mining activities is exactly the vision and intention of MSR (see Appendix 1) who have turned their attention to the west coast of South Africa after battling for several years to get mining approval in Xolobeni due to strong objections from local communities.</p> <p>These ad hoc BARs also fail to provide the strategic view of the overall regional issues and impacts (eg water requirements, impacts of trucks on roads, impacts on fisheries resources, loss of biodiversity, loss of public access etc) that could result if all these applications are approved. This estuary has been identified as the third most important estuary in South Africa from a conservation point of view. It is also a source of food and livelihood to local fishers living in a number of settlements on the southern banks of the estuary. These communities have also recently had their rights to land restored through a long and complex land claims process. They are in the early stages of examining land use options and tourism, conservation and agriculture have been identified as important economic development opportunities in and around the estuary. Approval of this prospecting application when the intention of the applicants is clearly to consolidate this entire stretch of coast for mining of mineral sands, is short-sighted and contrary to the principles in both the National Environmental Management Act (NEMA) of 1998 and the NEM: Integrated Coastal Management Act (ICMA) of 2009.</p>		

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			<p>The west coast from the Olifants estuary northwards remains one of the last unspoilt stretches of coast along the west coast of South Africa. The northern Cape coast has been devastated by mining activities and the costs of rehabilitation have been found to be exorbitant and not feasible. In view of the above, and South Africa's commitments to the Aichi targets and Sustainable Development Goals, it would be unwise to allow this application to be approved without considering the wider impacts and implications. Thus in view of the above, I strongly believe that it is incumbent on the Minister of DEFF to require a Strategic Environmental Assessment to be undertaken for this entire coastal region to ascertain the scope and scale of all mining activities and proposals and determine what level of mining would be environmentally sustainable and yield social benefits to communities living along this coastal environment.</p> <p>2. The Olifants estuary has been identified as one of the most important estuaries in South Africa from a conservation and cultural perspective. The process of developing the Olifants Estuary Management Plan (OEMP) involved extensive engagement with estuary stakeholders, the fishing community, researchers and officials from various conservation departments. One outcome of this process was an agreement to establish a community protected area at the mouth of the estuary. These recommendations were integrated into the OEMP and a process of consultation between Cape Nature and the fishers began in order to determine the boundaries of the conservation area. The process of declaring a community conservation area has been slow due to the finalisation of the Ebenhaeser land claims process</p>	<p>Unfortunately, future mining cannot be defined by strategic assessment in the absence of prospecting and consequently these prospecting exercises must be followed to achieve a suitable level of description of the resource/reserve on which such strategic mining plan could be based. Hence this first level of broad spaced drilling as contemplated in this application must be undertaken to begin to inform strategic future mining possibilities.</p>	

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			<p>and the need to ensure that all processes were aligned and plans were supported by the broader community. The conservation authorities were also slow in agreeing on an appropriate legal entity to declare the conservation area.</p> <p>Over the past two years, Cape Nature and the Western Cape Department of Environmental Affairs and Development Planning and more recently, the Department of Public Works (who own a parcel of land on the southern bank of the estuary) and Oceans and Coasts, DEFF, have been exploring mechanisms for declaring the area a community conservation area (see Figure 1 below). These plans which include developing tourism linked to the community conservation area and involving local people in conservation management are in direct contrast to the mining activities envisaged on land on the northern bank of the estuary. If the prospecting application is approved, it indicates to the applicant that government is broadly supportive of mining in this area and in our experience if a mining right is then applied for, it is likely to be successful. The potential impacts on the community and the environment associated with the mining option will be immense. Thus, before any decisions are taken, it is imperative to consider the historical context of this community and the journey that they have walked to get to this point. Approval of the prospecting application would be in direct conflict with the plans to declare a community conservation area at the mouth of the estuary.</p>	<p>Please refer to the misconceived conclusion that all prospecting leads to mining as per Preface para 2ii.</p> <p>No it will not, approval will only allow the drilling of prospecting holes which only if then proved positive would give consideration to further prospecting and when the full prospecting results are known only then would consideration be given to areas for mining which on the vast prospecting area, following an Environmental Impact assessment of</p>	

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				Mining which would consider these extraneous factors, and exclusion of conflict areas would any mining be defined through a full community engagement process under a Mining Right application and NEMA.	
	J Sunde - Researcher – working with the Olifantsriver fisher community for decade UCT: Dep of Environmental Science (EEU) Cell: 072 262 7444 Email: jsunde@telkomsa.net		No comments received	NA	Annexure E
	Lynette Munro - The Green Connection PO Box 24308, Lansdowne, 7779 Tel: 021 696 8266 Email: info@thegreenconnection.org.za		No comments received	NA	Annexure E
	Birdlife South Africa - acting together with Olifants Estuary Management Forum - Dale Wright Private Bag X5000, Parklands, Johannesburg, 2121 Tel: 011 789 1122 Email: Info@birdlife.org.za		No comments received	NA	Annexure E
	Suzanne Powell - Centre for Environmental Rights 1 Scott Road, Observatory, 7925		No comments received	NA	Annexure E

	Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Para in this report where the issues / responses were incorporated .
	Email: spowell@cer.org.za and chorsfield@cer.org.za				
	Agricultural Community Development Elma Visage (PA to Johan van der Hoven) Tel: 027 213 1087 Email: lgokantoor@gmail.com		No comments received	NA	Annexure E
Individual respondents					
	C M Kriel - Resident Vredendal No reference to contact details		No comments received	NA	Annexure E
	M Calitz - Minrite Operation Manager Tell: 027 217 2034 Cell: 082 657 6115 Email: martin@minrite.com		No comments received	NA	Annexure E
	Jan Briers : PO Box 878 Bettys Bay 7141 Cell: 079 857 4457 Email: janbecol@gmail.com or janenlindabriers@gmail.com		No comments received	NA	Annexure E
	L & T Fouche - Strandfontein Resident (Tour Guide) Cell: 072 154 3887 Cell: 078 743 0549 Email: noordkykers@mylan.co.za		No comments received	NA	Annexure E

	Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Para in this report where the issues / responses were incorporated .
	Alan Dittmer - Farm Zoutpansklipheuwel Tel: 027 217 1450 Email: alandittmer@gmail.com		No comments received	NA	Annexure E
	Naseegh Jaffer Director: Masifundise Development Trust 1 Station Road Mowbray "We have a vision of empowered fishing communities with sustainable livelihoods, where all live in a democratic and socially just environment". Tel: 021 6854549 Email: info@masifundise.org.za		No comments received	NA	Annexure E

The activity has been advertised by site notices on access gates on the main road to both properties as well as in the local newspaper "Ons Kontrei" - Appendix 5. The current land owners, municipality and relevant state departments have been contacted for their input and comments. Interested or affected parties that have registered have been communicated with and this report supplied to them for their input and comments over a period of 30 days during May and June 2016. Significant number of replies and comments were received together with a request for meetings with some of the IAP's to discuss their concerns and potential misunderstandings as Afrikaans was some of the IAPs only language. A meeting with all the registered IAPs was organised and took place on 17 August 2016. The minutes of the meeting with issues and concerns raised and replies is contained in Appendix 5. No new environmental issues or concerns were raised during this meeting that was not previously raised during the IAP process. An electronic copy of the recorded meeting has also been provided to the DMR. Full details in this regard is attached in Appendix 5 and the Table below:

Table (iii)b) Summary of issues raised by I&APS during the initial 2015-2016 I&AP process

(Complete the table summarising comments and issues raised, and reaction to those responses)

Interested and Affected Parties		Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated.
List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.					
<u>AFFECTED PARTIES</u>					
Landowner/s	X				
The Point - Trans Hex Operations Pty Ltd	X	No comments received	None		
Lot 615 - JC Pienaar Environmental comments by G Nel	X	07/06/2016 14/06/2016	Owner does not object to the application subject to the following: 1. Drilling is done alongside existing roads 2. Turning of any vehicles/trucks will be done using existing roads 3. Drilling outside of existing roads will be done in a straight line 4. No more than 200 holes to be drilled 5. Access control will be implemented Comments by G Nel - enviro consultant:	1. Agreed 2. Agreed 3. Agreed 4. Agreed 5. Agreed 6. Owner has been contacted and consent not needed to lodge the application - Reg 39 (2) (b) 7. Statement without base- area has been mined for 60 years. 8. Unsubstantiated statement and without base. 9. The area under application has no formal protection status and is zoned for mining	Appendix 5; Part A section 3 (p) and Section B

		<p>6. Land owner should be notified and consent obtained</p> <p>7. Mining will destroy rural sense of the area</p> <p>8. The project will have detrimental impact on the environment</p> <p>9. Area is in critical biodiversity area</p> <p>10. There are numerous watercourses which traverse the site</p> <p>11. The proposal is contrary to all relevant laws</p> <p>12. The Basic Assessment report is not a scoping report and legislation does not allow for such an approach</p> <p>13. The following needs to be addressed - botanical impacts, how impacts will be minimize, impact to heritage, waste must be avoided, consequences of depleting resources, development must not jeopardise the ecosystem, risk averse and cautious approach, negative impacts must be prevented, enviro management must be integrated.</p> <p>14. Provision of employment should be the main motivation for the application as the current mines use only small amount of labour.</p> <p>15. Prospecting have limited employment opportunity.</p> <p>16. Impact assessment should be done.</p> <p>17. Planned prospecting pose a significant risk of ground and surface water pollution and impact on vegetation.</p> <p>18. Alternative to prospecting should be provided.</p>	<p>development under the Matzikama Spacial Development Plan. CBA classification is a land planning conservation tool and is subject to Matzikama Spacial Development Planning.</p> <p>10. No watercourse within area under application but a number of non-perennial drainage lines. No impact to any drainage lines will take place.</p> <p>11. Absurd statement - no comment</p> <p>12. This is the statutory required approach</p> <p>13. This is a basic assessment as per the gazetted regulations not a full EIA.</p> <p>14. This is a prospecting application.</p> <p>15. Correct</p> <p>16. Basic assesment being done</p> <p>17. No risk to ground or surface water and impact to vegetation from drilling is limited and within the bounds of prospecting as authorised by a basic assessment.</p> <p>18. No alternative to prospecting except bulk sampling or mining.</p> <p>19. Correct</p> <p>20. Sand material where drilling rigs drive is unlikely to compact. If such an issue is noted area will be ripped to loosen the sand.</p> <p>21. Rehab cost are included in financial calculation</p> <p>22. Protected plant specie removal require a permit and can be done when mining is contemplated.</p> <p>23. Prospecting will make use of existing roads</p>	
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			19. All residents and government departments must be notified. 20. Impact of compaction must be addressed. 21. Restoration must be included in the financial provision. 22. Search and rescue of bulb species must be allowed 23. Existing roads will not sufficient		
Lawful occupier/s of the land					
	X				
Landowners or lawful occupiers on adjacent properties	X				
JC Pienaar Boerdery - Lot 617	X		See comments under landowner		
Municipal councillor	X	17 May 2016	1. No prospecting or mining activities will be allowed until the property is zoned according to the local land use by-law.	1. The area under application is classified as a mining development zone as described under the West Coast Spatial Development Framework and Spatial Development Plan for Matzikama. Application is in line with current planning and Ward 8 development requirements.	Appendix 3
Municipality	X	No comments received		Not applicable	
Organs of state (Responsible for infrastructure that may be affected Roads Department,					

Eskom, Telkom, DWA e					
Department of Water and Sanitation- Rassie Nieuwoudt	X	18/05/2015	No comments received		
Department of Public Works	X	05/05/2016	No comments received		
Department of Agriculture, Forestry and Fisheries	X	05/05/2016	No comments received		
Cape Nature - Elbie Cloete & Pierre de Villiers & Alana Duffell-Canham	X	10/05/2016 01/06/2016 13/06/2016	<ol style="list-style-type: none"> 1. Olifants River must not be impacted on. 2. The Namaqualand Strandveld over which prospecting will be done is not a threatened habitat and has no formal protection status. 3. There are plant species of conservation concern and drilling sites should be groundtruthed by a botanist before drilling. 4. No detailed reference to terrestrial or aquatic critical biodiversity areas in the area under prospecting has been made. 5. Although this is only a prospecting application CapeNature consider prospecting in the light of a mining application. 6. CapeNature does not support the application. 	<ol style="list-style-type: none"> 1. No impact on the Olifants River or estuary will take place. For the record please note that the Olifants River and estuary has no official protection status. 2. Correct 3. Substantial studies in the area has been used as a desktop assessment as required under a basic assessment level of investigation and NEMA 4. Reference to the biodiversity in the area/region has been noted. Area under application has no formal protection status and is subject to the Matzikama development plans as promoted by SANBI. Biodiversity of an area under SANBI does not create protection status - only used as input under spacial development plans and zoning as a decision making tool. 5. Incorrect, illegal, biased approach that does not follow regulatory requirements 6. CapeNature's role and mandate not to support prospecting or mining is noted 	Part A. 3(h) (viii), 3 (j), (k), (p); Part B EMP and Appendix 4
Communities					
Ebenhaeser Land Claim Community (ELCC) and Ebenhaeser Communal	X		<ol style="list-style-type: none"> 1. The ELCC will in future obtain the land on the opposite side of the Olifants River. 	<ol style="list-style-type: none"> 1. This is good to know and will form part of any future development planning 	Appendix 5, Part B EMP

Property Association and Papendorp community. Located across the Olifants River and ~5km from the area under application. Represented by Phuhlisani NPC (David Mayson) and Mr Sylvester Don			<p>2. A number of issues were raised against the proposed mining on the bank opposite Ebenhaeser and Papendorp as well as in the estuary.</p> <p>3. Period for public response needs to be extended so meetings can be held with Ebenhaeser CPA and Papendorp.</p>	<p>especially after the transfer to this land has taken place.</p> <p>2. Note again that this is prospecting application and that it is not a mining application. Further the estuary, the banks and riparian habitats are excluded from any prospecting activity. The estuary mouth and banks were in fact excluded from the area under application. The nearest hole to be drilled as per the drill location map is 1.1km from the estuary and more than 700m from the banks of the Olifants River. No impact will take place on the Olifants River or estuary.</p> <p>3. A request of extension of the I&AP timeframe was submitted to the DMR.</p>	
Lutzville and Koekenaap Community Group - Uitkyk. Mr W Fortuin, S Mannel, D Cloete, J van der Westhuizen, D Witbooi		03/06/2016 07/06/2016 08/06/2016	<p>This group of people appear to live in Lutzville.</p> <p>They object against the mine or any prospecting/mining application - no reason provided.</p> <p>1. The want a community meeting with the EAP</p>	1. Meeting with IAP took place	Appendix 5
Olifantsrivier Vissers - fishing permit holders OEMF - represented by Mr Sylvester Don and supported by Ms F Hartley of UCT-Environmental Evaluation Unit		7 June 2016	<p>1. Public meetings must be held with the OEMF</p> <p>2. All communication and documents must be in Afrikaans, not in English</p> <p>3. Expansion of infrastructure at Tormin mine must be addressed.</p> <p>4. How will access be obtained to drill holes.</p> <p>5. What infrastructure will be established.</p> <p>6. What minerals will be explored for and how.</p>	<p>1. Meeting held 17/08/2016</p> <p>2. English is preferred medium for all parties and government. Public meeting also held in Afrikaans.</p> <p>3. Not applicable to this application</p> <p>4. By existing roads</p> <p>5. None</p> <p>6. Heavy mineral sands, garnets, diamonds and phosphate</p>	Appendix 5; Part A 3 (h); 3h(viii); 3 (p) and Part B EMP

			<p>7. An application for mining on the land should be done before mining is done in the Olifantsriver estuary.</p> <p>8. The Basic Assessment report should mention the communities of Ebenhaeser and Papendorp and that the people are dependent on the estuary for survival.</p> <p>9. Tormin mine has not provided and job opportunities to the OEMF and they are worried about the current mine workers rights.</p> <p>10. Worried about water pollution.</p> <p>11. The EAP for the Basic Assessment is or was an employee of MSR and is therefore not independant.</p>	<p>7. This is only prospecting and no activity in or near the estuary is planned or have been applied for.</p> <p>8. This point noted and is very important</p> <p>9. Tormin mine current labour aspects is outside the framework of this BA.</p> <p>10. No water will be used, chemicals be introduced or groundwater is expected to be intersected during prospecting. No activity is planned near the Olifants River.</p> <p>11. Incorrect and without base</p>	
Dept. Land Affairs		05/05/2016	No comments received		
Traditional Leaders					
Dept. Environmental Affairs		06/05/2016	Only comments received are from Cape Nature-see that section		
Other Competent Authorities affected					
Provincial Heritage Resources - SAHRA and Heritage Western Cape, Mr Damon	X	05/05/2016 & 27/07/2016 ; 23 March 2017	No impact on heritage resources expected - see NID letter response in Appendix 5	Any and all heritage resource material found will be reported to Heritage Western Cape. An updated field heritage survey will be done over the target drill site and the report forwarded to SAHRA and HWC.	Part B EMP and Appendix 6.
SAHRA-Maritime and Underwater Cultural Heritage Unit	X	4 April 2017	Mr Brieg Williams replied that no comment from their department is		

			required - see email response in Appendix 5		
<u>OTHER AFFECTED PARTIES</u>					
Strandfontein Rate Payers Association & Olifants Estuary Management Forum - S du Plessis and Papendorp community members	25/04/2016 05/05/2016 02/06/2016	1. Public meeting with OEMF requested 2. Stating that there is "no intended prospecting activity on the banks of the river or riparian zone" is insufficient. 3. EIA for mine is now 53km 4. EIA should be done 10-15km upstream and include the estuary a marine protected area 5. Specialist studies on coastal bays, cliffs, marshes and wetlands need to be done as the mine will get its water from them. 6. Water is necessary to human rights of Ebenhaezer and Papendorp communities. 7. A number of comments on mining and the current mine process routes of Tormin mine.	1. Public meeting held 2. Statement is correct 3. This is a basic assessment for prospecting not mining 4. This is a BA and the Olifantsriver has no official protection status and is not located in a declared MPA 5. This is prospecting application that will not impact on these features and no water is to be used during prospecting. 6. Correct. No water is to be used during prospecting. 7. This is a BA for a prospecting application independent from the current mining activity at Tormin.	Appendix 5; Part A 3 (h); (j), (k); 3h(viii); 3 (p) and Part B EMP	
<u>INTERESTED PARTIES</u>					
C MKriel - Resident Vredendal	5/05/2016 25/04/2016 05/05/2016 20/05/2015	1. Prospecting takes recreational facilities away from the community 2. Transport during prospecting deteriote roads.	1. Prospecting is on private land 2. Use will be made of existing roads 3. If a mining application is lodged this will be done during the EIA	Appendix 4, 6; Part B Emp	

		<p>3. Cumulative impact of future mining activities need to be conducted.</p> <p>4. Impact on the estuary must be investigated by the applicant and the DMR</p> <p>5. General objection on the environmental process and the prospecting right</p>	<p>4. No impact on the estuary will take place and the DMR does not do BA's or EIA's</p> <p>5. Objection noted</p>	
M Calitz - Minrite Operation Manager	27/04/2016 16/05/2016	* Area under prospecting is utilised by locals for recreational purposes	* Prospecting is on private land	Appendix 2
Jan Briers -	25/04/2016 and 24/05/2016	<p>1. Admiralty Reserve and the estuary is public land and therefore also "belong" to Mr Briers</p> <p>2. Mr Briers object to the application in general</p> <p>3. Want annual performance assessment report to be included</p> <p>4. EIA failed to consider alternatives</p> <p>5. 4ha of land will be cleared</p> <p>6. Statement that no infrastructure is to be established is incorrect and misleading</p> <p>7. A lot of historical prospecting has been done by TH, Mr Kotze, NDC, Namakwa Sands and others that are more intensive than that proposed by the applicant. They showed the area not worthwhile for prospecting and even bulk sampling by TH indicated this. Strandlines are 2km from the sea. The No Go option should be considered.</p> <p>8. Report by CSIR find that no diamond mining should be allowed south of the Olifantsriver mouth.</p> <p>9. Drill holes is considered infrastructure.</p>	<p>1. The application does not overlap with the admiralty reserve or the estuary</p> <p>2. Any person has the right to object to an application</p> <p>3. Not a statutory requirement</p> <p>4. This is a BA not an EIA</p> <p>5. No clearing of vegetation is planned</p> <p>6. No infrastructure is to be established</p> <p>7. Please provide the exploration results in this regard as MSR do not have these results.</p> <p>8. Application is for area north of Olifantsriver mouth.</p> <p>9. Drill holes are not infrastructure but some planned holes locations are indicated in attached map.</p> <p>10. This statement is irrelevant to the application and on its own a highly disturbed ranting with anarchistic undertones.</p> <p>11. Please provide a map indicating this statement as it does not correlate with our title deeds.</p>	Part A 3 (h); 3h(viii), 3(j), 3 (k), 3 (p) and Part B EMP; Appendix 2, 4, 5 & 6;

		<p>10. The mines current location and infrastructure is morally and principally wrong and should be located in or close to a town to contribute to the local economy.</p> <p>11. The area under application border 30km of public land.</p> <p>12. Comments relating to Mr Briers is generic</p> <p>13. Description of the environment and impact risk matrix are incomprehensible.</p> <p>14. Main environmental risk is new tracks and roads</p> <p>15. The area is a CBA and the prospecting lines of De Beers after more than 50 years is still visible.</p> <p>16. Application to Heritage Western Cape is required.</p> <p>17. Fauna and flora assessment and review are at an inappropriate scale.</p> <p>18. Final site map does not show possible location of prospecting</p> <p>19. Rehabilitation calculation ignores impact of new access tracks</p>	<p>12. Unsure what all the discussion is about but please refer to replies to Mr Briers in this table.</p> <p>13. Please read these sections again - they follow standard protocol</p> <p>14. No new tracks or roads to be established</p> <p>15. The area under application has no official protection status and as stated prospecting and mining has been ongoing for more than 50 years and the area under application, as stated by Mr Briers, is not in an undisturbed state.</p> <p>16. Heritage Western Cape has been send all documents. Area under application require a desktop study as was done. Red sensitive area (see desktop review report) has been excluded from drilling activity as per prospecting exploration hole map.</p> <p>17. Scale of review exceeds requirements for a basic assessment.</p> <p>18. Possible location of prospecting holes are now indicated.</p> <p>19. No new access tracks are to be established.</p>	
L & T Fouche - Strandfontein Resident	25/04/2016	<p>1. Would like the estuary, coastal terraces, plains and endemic plants to be preserved from unwanted mining activity</p> <p>2. Any activity other than conservation or recreation will negatively impact on the estuary and natural river environment</p> <p>3. Mining operations have an effect on property values in coastal towns</p>	<p>1. This is a prospecting application only subject to NEMA</p> <p>2. No activity is planned within the estuary or natural river environment</p> <p>3. This is only a prospecting application and will be unlikely to have an effect on property values.</p>	Part A 3 (p) and part B EMP

J Sunde - Researcher - UCT: Dep of Environmental Science	24/05/2016 01/06/2016 03/06/2016	<ol style="list-style-type: none"> 1. The Olifantsriver fishing community and the Ebenhaeser land claimant were not included in consultation. 2. The public comment period must be extended by 30 days to allow direct meetings with the Ebenhaeser community. 3. The consultation process relies on apartheid, pre-democracy descriptions of the social relations of the region. 4. The area has significant biodiversity and the Olifants estuary management plan of the planned protected area has not been referenced. 5. Archaeological history of the area has been documented but not the cultural heritage of the site. It is unlikely that mitigation of no drilling within 50m of middens is adequate. 6. Access to drill site are unknown. 7. No establishment of infrastructure and by making use of existing facilities at Tormin mine will lead to further environmental degradation. 8. Water usage is unclear. 9. Applicant is the subject of complaints regarding environmental aspects. 	<ol style="list-style-type: none"> 1. Please see attached communication with representatives of the community. 2. An application to allow longer public interaction and meetings was requested by the DMR. See attached letter. No feedback was received. 3. As per the attached letter the Department of Land Restitution was contacted at the start of the I&AP process. 4. The Olifants River and Estuary currently has no official protection status in South Africa. 5. The buffer zone of 50m is doubled to 100m to address this concern. 6. Access will be by existing tracks and roads as stated and as per agreement with surface owner. 7. This statement is absurd and without any scientific base. 8. No water is to be used during prospecting. 9. No complaints raised against MSR has yet resulted in any evidence to support a complaint or fine. 	Part A 3 (h); 3h(viii), 3(j), 3 (k), 3 (p) and Part B EMP; Appendix 2, 4, 5 & 6;;
Lynette Munro - The Green Connection	03/05/2016 25/05/2016 03/06/2016	<ol style="list-style-type: none"> 1. Numbering and headings of report are confusing. 2. The two location maps does not provide enough detail and are of low resolution. 	<ol style="list-style-type: none"> 1. The EAP agree- the template as designed and provided by the DMR has limitations. 2. Location Map 1 put the economic location of the mine into perspective and is an unchanged map from the Western Cape Spatial development plan. The second map and detailed coordinates should provide 	Part A 3 (h); 3h(viii), 3(j), 3 (k), 3 (p) and Part B EMP; Appendix 2, 4, 5 & 6;

			prospecting is unknown and not relevant to this application.	
Birdlife South Africa - acting together with Olifants Estuary Management Forum - Dale Wright	02/06/2016	<ol style="list-style-type: none"> 1. Birdlife request to be involved in the future deliberations regarding the proposed mining activities. 2. The Olifantsriver and estuary is a CBA and IBA and support threatened species of birds. More detailed avifaunal report with field based studies are required. 3. A public meeting is requested. 4. The water use licencing and water use must be laid out in detail. 5. The road infrastructure for this project must be provided. 	<ol style="list-style-type: none"> 1. This is a prospecting application 2. The Olifantsriver and estuary has no official protection status and no impact on the river or its habitats will take place. 3. Public meetings done 4. No water will be used 5. No roads will be constructed 	Part A 3 (h); 3h(viii), 3(j), 3 (k), 3 (p) and Part B EMP; Appendix 2, 3, 4, 5 & 6;
UCT- Department of Environment : M Sowman, F Hartley & T Melkonian	04/05/2016 16/05/2016 17/05/2016 21/05/2016 23/05/2016 04/06/2016	<ol style="list-style-type: none"> 1. The Public notice was not adequate 2. BAR should be in Afrikaans 3. Public meeting is requested and IAP process extended 4. BAR has very little input from IAP's 5. EAP was employed by MRC 6. Format of report not well structured 7. The use of current infrastructure at Tormin site is of concern 8. Indication of where exploration holes are to be 9. Unknown minerals and prospecting activity 10. Worried about the fact that activities will take place inland from the ocean and the rivers and beaches as this may mean the applicant will in future apply for sea, beach and river mining. 	<ol style="list-style-type: none"> 1. Requirements under NEMA was met 2. English is the required medium but meetings with community was in Afrikaans 3. Will be done and extension was requested 4. As per this table more than sufficient input has been received. 5. Incorrect 6. Format is as provided by DMR template 7. Use of existing infrastructure lowers and limits any impacts 8. See attached map as provided and discussed during the IAP public meeting. 9. Please read description of activities in the BA again - minerals and methods are described 10. Statement is illogical 	Part A 3 (h); 3h(viii), 3(j), 3 (k), 3 (p) and Part B EMP; Appendix 2, 3, 4, 5 & 6

		<p>3. The impact on the mouth and estuary of the Olifants River should be discussed in more detail.</p> <p>4. The use of English to notify the Afrikaans community in an Afrikaans newspaper is unreasonable.</p> <p>5. There is a need for an archaeological or paleontological expert to survey the area to be prospected.</p> <p>6. The flora assessment needs to be done in more detail.</p> <p>7. Fauna desktop review needs a conclusion.</p> <p>8. Final layout sensitivity plan is based on unknown information. EIA summary is superficial as the next phase will be mining.</p>	<p>sufficient details but does lose some resolution in PDF format.</p> <p>3. No impact on the Olifants River, Estuary of riparian habitat will take place from the proposed drilling of holes as they are located far from this zone and will not introduce any chemicals, dust or noise into the Olifants River environment.</p> <p>4. I&AP guidelines and regulations have been complied with.</p> <p>5. The small area in red in the SAHRA sensitivity map will not be impacted on as per the proposed drill layout map. The rest of the area as per SAHRA - "no palaeontological studies are required". Also all drilling will be in disturbed areas on or next to established roads. Desktop review of 10 studies in this area has resulted in the proposed management and mitigation measures.</p> <p>6. The level of assessment is in line with a Basic Assessment as required. A full EIA is not applicable. Endemic, red data and rare plants are listed. No clearance of vegetation will take place or new roads established.</p> <p>7. Fauna desktop review information has been used in the establishment of management criteria in the Basic Assessment Report.</p> <p>8. Final sensitivity map is based on all data presented and as reflected under the desktop reviews.</p> <p>EIA summary is based on EIA risk matrix as per international standard. Next phase of</p>	
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		<p>11. The mouth of the river is to be declared community protected area and mining will impact on this.</p> <p>12. The people of Ebenhaeser is not mentioned and has not benefitted by jobs from Tormin mine.</p> <p>13. What benefit will the people of Ebenhaeser get from this mine application.</p> <p>14. What is water requirements from the planned mining operation.</p>	<p>11. No impact to the river, estuary or riparian habitat will take place.</p> <p>12. Please see all the communication with the community in this table.</p> <p>13. This is a prospecting application.</p> <p>14. This is a prospecting application not mining and no water use will take place.</p>	
Alan Dittmer - Farm Zoutpansklipheuwel	01/06/2016	<p>1. Some comments about land claims he will lodge against the government</p> <p>2. Do not want dust pollution from the mine</p> <p>3. Tormin mine must build a tar road between Elands Bay and Doringbay</p>	<p>1. Comment noted</p> <p>2. This is a prospecting application but no dust will be generated outside of the immediate prospecting sites during drilling. Zone of nuisance dust less than 20m around drill rig.</p> <p>3. Comment noted</p>	Part B EMP
Suzanne Powell - Centre for Environmental Rights	02/06/2016	No issues raised or brought to the attention of the EAP during the IAP interaction process with this group but a separate document was sent to the Minister of Mineral Resources on 29/06/2016 accusing the EAP of not being independent.	This is a typical approach from activist who has no environmental reason to object to a legitimate application activity. This approach undermines the purpose of environment assessment and protection and make a mockery of the due process. It is classified as eco terrorism by Donal R Liddick in his 2006 publication "Eco-Terrorism". It should be treated with the contempt and disgust it deserves.	
Naseegh Jaffer	03/06/2016	No comments received		

Interested and Affected Parties		Date	Issues raised	EAPs response to issues as mandated by the	Section and
List the names of persons consulted in this column, and		Comments		applicant	paragraph
Mark with an X where those who must be consulted were in fact consulted.		Received			reference in this report where the issues and or response were incorporated.
<u>AFFECTED PARTIES</u>					
Landowner/s	X				

- iii) **The Environmental attributes associated with the alternatives.**(The environmental attributed described must include socio-economic, social, heritage, cultural, geographical, physical and biological aspects)

(1) **Baseline Environment**

PARA 4

ESTUARINE IMPACT ASSESSMENT

a) Estuarine sensitivity characteristics

SPC perusal of the estuarine study “Olifants Estuary Management Plan” (OEMP) was found amongst others to comprehensively and sufficiently identify and classify the sensitive zones of the west bank (interface with the property/Prospecting Right application boundary) to a level which did not require any additional specialist assessment as contemplated by DMR comment. The classification and sensitivity rating was confirmed by SPC 4X4 visit along the west bank and accordingly the further reporting on this matter relies both on the Management Plan (OEMP) and the verification by SPC site visit of 1st and 2nd October 2019.

Figure 5 reflects the Estuarine Plant Communities identified in the OEMP and confirmed by our site visit to consist of the extremely sensitive estuarine elements of:

- Channel edge,
- Dynamic mudbanks
- Zostera banks
- Intertidal and Floodplain Salt Marshes; and
- Supratidal Salt Marshes,

which as seen in Figure 5 often straddle the property boundary as seen in Photos 726/7 (therefore also the Prospecting Right area boundary). As a point of departure in this assessment, these zones being extremely sensitive components of the estuarine biodiversity/ecosystem can accordingly not be threatened by any new adjacent activity.

Accordingly as SPC’s first response Figure 5 now shows the **toe of hillslope in red dashed line** as the functional western boundary of the estuary and it is from such dashed red line in Figure 5 and not the western bank of the main channel, that the imposition of estuary buffer zones are considered.

As a point of departure, vehicle movement or any other activities within the estuary biodiversity areas between the toe of hillslope (red dashed line) and the western edge of the main channel should be totally discouraged other than at locally defined points such as the original quayside as seen in (Photo 693 near the estuary mouth) and visitor facilities in photo 699 which are in any event outside of the prospecting area and accessed from farm 267 Ptn 2 and serve the fishing community.

Fishing boat launching from the western bank generally also only occurs on the river in Ebenhaeser and Olifantsdrift area far north of the prospecting area. While it is noted that the south western bank quayside and camp site seen in photos 693 and 699 are outside the prospecting area.

While the OEMP report also deals with water chemistry, micro algae, invertebrates, fish and birds, these have been perused but we have found that despite their rightful place in estuarine management, we do not identify any significant potential impact of the contemplated prospecting on those elements.

In respect of birds, the avifauna of the estuary is largely related to the healthy preservation of the vegetated banks, floodplains and salt marshes. While the significant presence of migratory birds is noted, the level of prospecting activities and their very short duration and dispersed locality is likely to have an insignificant effect on such bird migration during the prospecting period especially as no overhead powerlines are contemplated and no activity on or near the sensitive west bank of the estuary is contemplated.

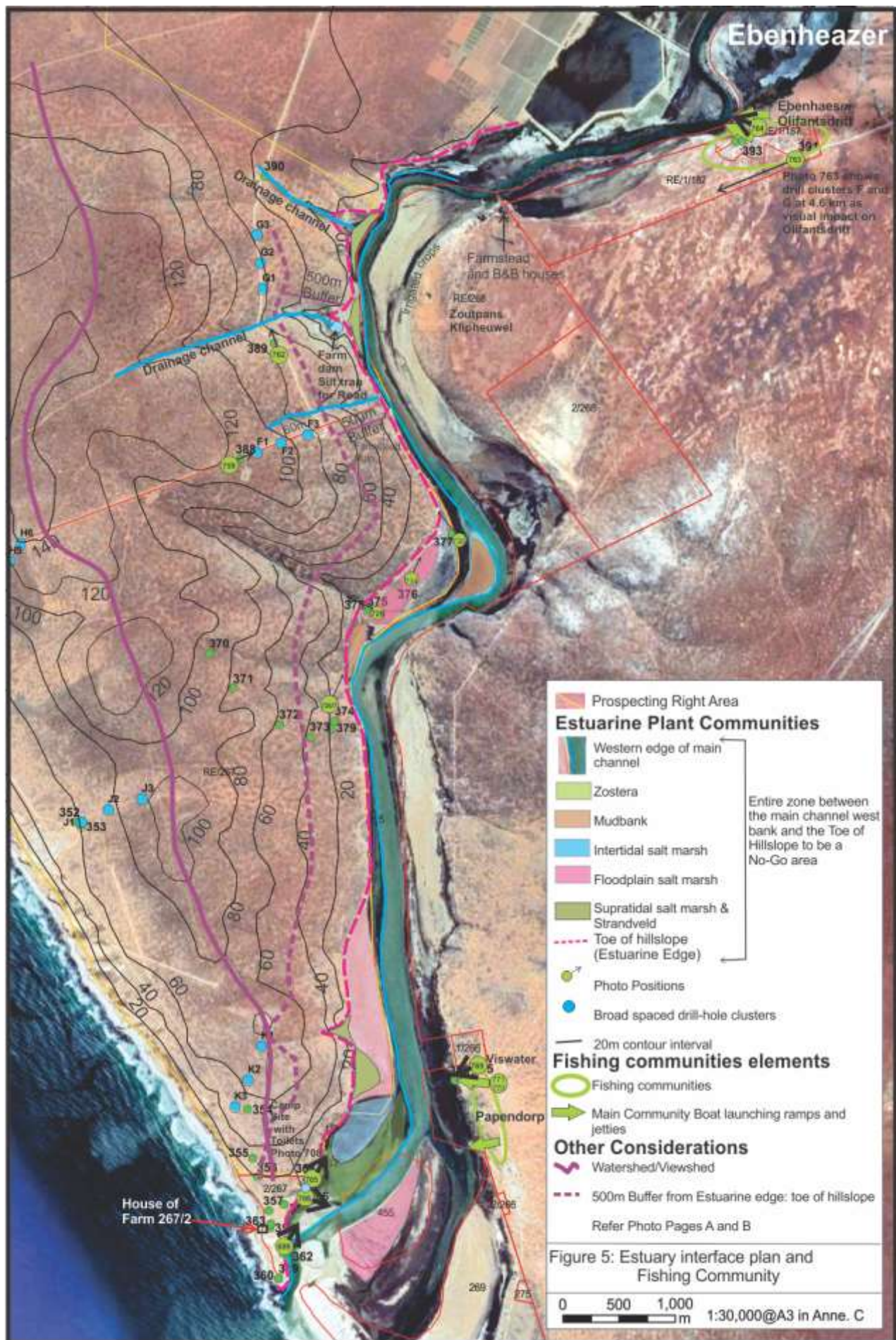


Figure 5: Estuary interface plan and fishing community (For A3 Map see Annexure C)

Photopage A: Fishing communities and Estuary Interface; South to North



Photo 693 GPS 351: Old Quayside for marine boats which entered estuary



Photo 764 GPS 392: Community boat launching on both banks of the estuary at Ebenheaser/Olifantsdrift



Photo 769 GPS 395: Papendorp jetty



Photo 771 GPS 396: Papendorp jetty with boats



Photo 770 GPS 396: Estuarine sensitivity/informative posters by authorities at Papendorp jetty



Photo 699, GPS 361: From De Punt look-out outside the prospecting area looking north at the west bank

Estuary West Bank Interface from South to North



Photo 706 GPS 368: View from west bank with flamingos at shoreline looking across to Papendorp on east bank



Photo 705 GPS 368: West bank opposite Papendorp/Viswater

Photopage B:



Photo 726/27 GPS 374: Mud bank and floodplain salt marsh in west bank



Photo 729 GPS 375: Looking up undisturbed drainage channel from Floodplain Salt Marsh



Photo 734 GPS 376: Looking north on floodplain Salt Marsh to bedrock defined headland typical of bedrock outcrops along the lower hillslope of the prospecting area and generally occurring within the 500m buffer zone



Photo 736 GPS 377: Looking up northern end of Prospecting west bank passed farmstead ruin to 500m buffer zone below drill cluster F

Visual impact



Photo 763 GPS 391: Locality of drill hole clusters F & G in the main access road to De Punt as seen from photo position 763 below



Photo 759 GPS 388: Showing Ebenhaeser/Olifantsdrift town at 4.5km as seen from the drill cluster F

The maintenance of good water chemistry and algae levels are by far a factor of upstream maintenance of river flow and fertigation in agricultural practises and will not be affected by the broad spaced drilling program.

The estuarine characteristics of the water body and the vegetated banks, floodplains and marshes will also vary following the raising of the Clanwilliam Dam with reduced flood flow and resultant increased salinity due to the increasing dominance of intertidal sea water exchange.

b) Consideration of Prospecting interface (non-interface) with the estuary

As discussed in para 2 and shown in Figure 4 the distribution of the broad spaced drill holes is determined by the locality of areas where shallow drilling to max 30m could confirm the presence of mineralisation on either the 50m or 90m elevated strandlines. Fortunately, 8 of the 10 target areas are located west of the very dominant De Punt watershed as seen in Figure 4 and Figure 5, physically and visually totally isolating 8 of the 10 drill hole clusters from the estuary.

The only two drill hole clusters east of the watershed on the eastward slope towards the estuary are clusters G and F though at their closest point being located between 60m and 110m above estuarine water level and between 600 and 1100m from the defined toe of hillslope (western edge of estuary). Such locality therefore offers the opportunity to formally demarcate an adequate 500m buffer zone as seen in Figure 5. Furthermore, drill hole clusters G and F are located within the main access road serving De Punt and the Transhex group village and diamond recovery facility.

Furthermore, choice of drilling in the disturbed road area does locate hole F2 and F3 at a distance of 60m plus from a run-off channel contour indentation while drill hole G1 is 250m from a similar contour defined channel. As these channels during run-off would carry any silt generated by the drilling operations, in addition to that currently generated by the main gravel road to the supratidal salt marsh which fortunately receives the run-off channel in an existing gravel walled dam which acts as silt retention pond for the main gravel road silt as seen in Figure 5.

c) Impact of the two drilling clusters F and G on the estuary

The above has shown that the only drill clusters which could have any possible impact on the estuary are those of clusters G and F each with three drill holes and at their closest 600m from the estuary edge, such impact risk would be limited to:

- i. **Silt impact** from the drill clusters drilling adding to the silt runoff of the main gravel road which discharges down two drainage channels.

This silt risk from drill clusters G and F to the estuary is minimised by:

- The fact that the drill rig will be bagging dust as the sought-after sample with extremely limited dust spillage from drilling being discharged onto the road surface (Refer paragraph 3 entitled: Example of drill program photos E-3 and E-4).
- That any such dust generation on the gravel road is still some 600-800m from the estuary edge.
- The dust from both the drilling and the existing road which enters the drainage channel from cluster G terminates in a farm dam shown in

Figure 5 with formal ground wall where such dust/silt is trapped, with the dam largely having served as a silt trap for many years.

ii. **Visual impact** (refer Figure 5 and photo 763 and 759 in Photopage B above):

Given the elevated north-south central watershed/view-shed shown in Figure 5, only the activities of clusters F and G are exposed to views from the west bank of the estuary with low/distant impact on:

- Ebenhaeser Olifantsdrift village. Photo 763 taken from the high ground above Ebenhaeser Olifantsdrift village at 4.5km from drill clusters F and G shows the position of the 6 drill holes between contour 60 and 110m exposing the drill rig when active, to direct such distant view from Ebenhaeser/Olifantsdrift. The outward view from drill hole F1 towards Olifants drift shows that over the 4.5km distance visual impact of a drill rig operating for maximum 2 weeks at the 6 holes of clusters F and G will be a temporary visual impact of low significance as the village visual exposure to the drill site, though direct is minimal.
- The Zoutpans Klipheuwel farm as shown in Figure 5. The Zoutpans Klipheuwel farm is the closest east bank property to the drilling of clusters F and G, with the closest distance from the house/B&B complex to Cluster G at 2 km and cluster F at between 2.5 and 2.9km and the house/B&B houses being located only slightly above estuarine level, therefore observing the drilling at a steep incline does not expose the drilling to an equitable visual impact given reduced distance as compared to the high level photo position of photo 763.

These inclined views to the west and southwest are therefore views which will reduce exposure of the rig which at 2 to 2.9km will be very low and temporary. Furthermore, the homestead and other accommodation units of Zoutpans Klipheuwel all have their focus of views to the river to their immediate north with the drilling not impacting on such northerly river views.



The Google Image left reflects the northward focus of the farmstead and adjacent accommodation buildings towards the proximate river and not focusing on the west view towards the proposed temporary prospecting drilling of Clusters F and G

d) **Consideration of buffer zones**

The original BAR was criticised for not dealing with buffer zones between prospecting and the estuary possibly for good reason as the impact of the drilling was established by the author to be low. In this SPC assessment of the interface between the prospecting and the estuary we considered the OEMP report of February 2009's Figure 4 showing a proposed "New development setback" (buffer zone) but found its delineation unmotivated and not determined by meaningful criteria and would not have served the original BAR in any event.

Instead, we have considered the 600m closest distance between any drilling and the hillslope toe delineating the estuary and accordingly have found that 500m buffer

required in the National Water Act would be appropriate in the consideration of prospecting (though far more than adequate in dealing with the proposed broad spaced drill holes). Accordingly, Figure 5 shows such 500m buffer applied between the estuary boundary (toe of hillslope and the drill hole clusters of F and G).

Such 500m No-Go zone between the Prospecting drilling and the western estuarine boundary should therefore form part of the conditions of approval.

e) Non estuarine impact of the drilling

In the comments received and DMR comment, the matter of drilling on vegetation and a lack of illustration that drilling will be conducted in existing roads or directly access from existing roads were raised. This additional paragraph with table of impacts, photos showing the drilling hole in relation to existing roads and Figure 6 reflect the answers on this matter. As a point of departure, we note that the Prospecting area falls totally within the Namaqualand Strandveld vegetation type which extends to beyond the Buffels River and which has protection in the West Coast National Park in terms of CBA 1 Terrestrial Classification. Within this vegetation context, this paragraph deals with the impact of the broad spaced drilling as a restricted area as; “low” to maximum “low moderate” impact by:

- i. Figure 6 and photopages 1 and 2 of proposed hole positions confirming that the drilling will occur either totally within existing roads or earlier roads partially revegetating.
- ii. Brief reporting on an example of a drilling program reflecting similar low drilling impact on drill sites and drill site vegetation conducted in similar veld between Vredendal and Vanrhynsdorp in para 3.

As having been determined in numerous similar drilling programs, a lower impact on vegetation of this nature occurs by allowing the limited movement of the drill truck and its logistical support vehicle to drive over the in-situ vegetation which recovers within the first season by comparison to the earlier prospecting drilling EMPs with traditional specification calling for removal of topsoil and vegetation from the drill site and then reseeding and managing dust (which recovery took years).

Table 1: Non estuarine impact of drilling on drill site vegetation

Drill Cluster	GPS Point	Photo No	Impact of drilling on drill site	Impact level
A	381	748	Partly revegetated old road intersection and remnant old road. Temporary vegetation impact	Low/moderate
B	383	749	Existing boundary roads. No impact within roads	Low
C	384	750	Existing boundary roads. No impact within roads	Low
D	385	753	Partly revegetated old road intersection and remnant old road. Temporary vegetation impact	Low/moderate
E	386	756	Existing road and part road verge temporary vegetation impact	Low/moderate
F	388	759	Existing boundary roads. No impact within roads	Low
G	389	762	Existing boundary roads. No impact within roads	Low
H	Hole H6	682	Existing boundary roads. No impact within roads	Low
J	352	684	In partly revegetated road temporary vegetation impact	Low/moderate
K	354	686	In partly revegetated road temporary vegetation impact	Low/moderate

Figure 6: Prospecting drill holes (clusters) in relation to existing roads and tracks and photo positions.

All vegetation in the area shown is Namaqualand Strandveld up to the boundary with the estuarine vegetation (the SPC red dashed line demarcating the toe of the slope in seen in Figure 5) and coastal cliff tops.

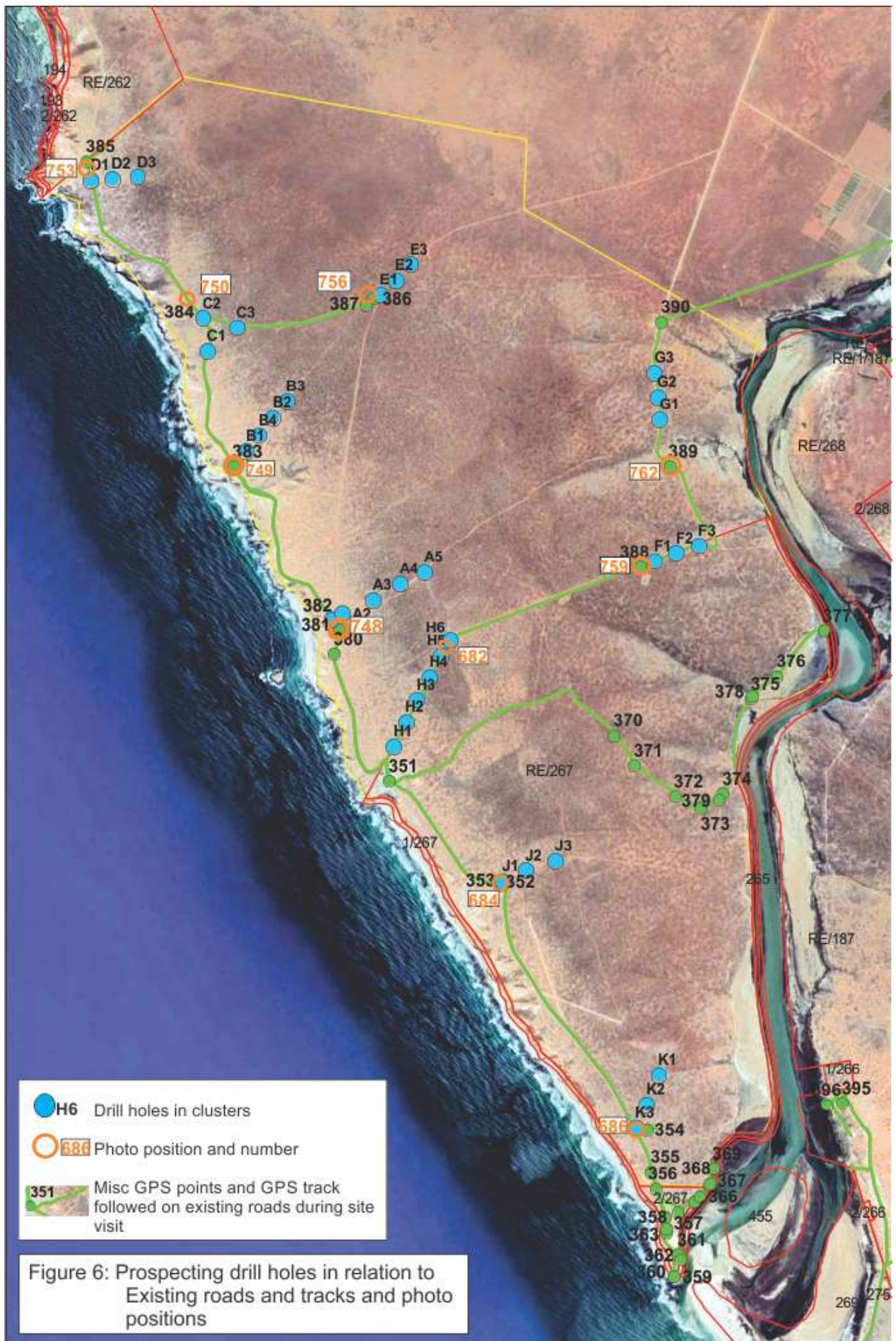


Figure 6: Prospecting drill holes in relation to existing roads and tracks and photo positions

Photopages 1 & 2: Detail location of drill holes in existing and old roads, some partly revegetating Refer Figure 6



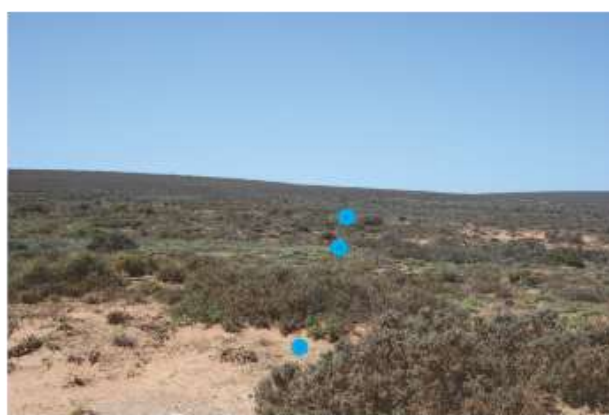
Drill Cluster A: Photo 748



Drill Cluster B: Photo 749



Drill Cluster C: Photo 750



Drill cluster D: Photo 753



Drill cluster E: Photo 756



Drill cluster F: Photo 759



Drill cluster G: Photo 762



Drill Cluster H: Photo 682



Drill Cluster J: Photo 684



Drill cluster K: Photo 686

f) Overall conclusion of the impact on the estuary by proposed drill hole clusters and recommendations for implementation through this updated BAR-EMP

Having perused the suitable technical/ecological assessment by the OEMP of the sensitive west bank ecological units and having visited the estuary to consider the report's identification and delineation of the estuary, SPC was fortunate and satisfied to use those findings as the basis for the determination of the prospecting drilling impact on the estuary's biodiversity/ecology. In our assessment of the prospecting against biophysical characteristics of the De Punt prospecting area, we have found that only two clusters of drilling could impact on the estuary given locality on the slope but such unlikely impact is averted by the following factors:

- Drilling by air percussion drill with the dust generated serving as the sample, collected in bags (as seen in Photo 3 and 4 of the example drilling program) with extremely low dust spillage at the rig largely eliminating the consideration of drilling dust impact on the estuary given furthermore the 600m between the drilling areas and the estuary bank and their location in the main De Punt gravel access road as seen in Photos 759 and 762 in Photos page 1 and 2.
- Drilling clusters F and G within the road verge further assists in achieving maximum clean-up with minimal dust release from the site.
- The horizontal distance in excess of 600m between the closest drilling and the estuary boundary being suitably far to negate any "surrounding activity" impact on the estuary.
- Respect for the 500m buffer zone against the extremely sensitive estuarine vegetation/ecologies of mudbanks and salt marshes and observation of the 32m setback from any drainage channel (i.t.o NEMA).
- Total preclusion of any prospecting movement between the toe of hillslope and the estuary channel.

- Through Environmental Induction Training, management shall ensure that all employees are fully informed on the high sensitivity of the estuarine system in order that they respect and observe the above restrictions.

(a) Type of environment affected by the proposed activity.

(its current geographical, physical, biological, socio- economic, and cultural character).

Geographical: The prospecting area is located in the West Coast District Municipality and the Matzikama Local Municipality. The area under application represents a coastal region located between the Atlantic Ocean and the Olifants River and its mouth. The area is a flat to gently rolling terrain located 40-145m above sea level.

Biological: The natural vegetation is predominantly Namaqualand Strandveld and Namaqualand Sand Fynbos. See desktop fauna and flora assessment in Appendix 6. Most of the site has been transformed and impacted on by sheep grazing and historical and current mining processing activity by Trans Hex. The area has been described as a critical biodiversity type ii and ecological support area (see Appendix 3) by the South Africa Biodiversity Institute. This classification does not give it any official protection status and none of the area has any national protection status (see SANBI maps in Appendix 3). The purpose of the SANBI classification is to be used as a planning tool by municipalities when approving zoning or developments. In this regard the Matzikama municipality have zoned this area (see Appendix 3) under the district spacial development framework as "remnant biodiversity corridors" zoned or allocated for mining purposes.

Socio-economic: The prospecting area is within a stock farming area with very low carrying capacity with HMS and diamond mining taking place in and along the adjacent coastline. The main economic activity outside farming is mining activity by Tronox, Trans Hex and MSR. Without mining activity this region may develop huge socio-economic issues. On the farm The Point Trans Hex has substantial processing infrastructure and buildings to accommodate their workers and contractors. No prospecting activity will take on or close to any of the established building or processing infrastructure. Across the Olifants River the communities of Ebenhaeser and Papendorp is found together with land obtained under a land claim settlement. In this regard please review their concerns and issues raised in the above Table and Appendix 5.

Cultural: The local culture is a mix of farming and mining activity with a long history of co-operation between local diamond and HMS miners and the local farmers as well as the municipality. The local and economic active part of the community is in strong support of mining development as is evident from the long history of prospecting and mining activity in this region. In this regard MSR is a well known developer and contribute to local business, schools and development projects. Its tract record in providing above market employment conditions makes it a favourite employer with the local community.

(b) Description of the current land uses.

Mineral processing by Trans Hex on The Point and sheep grazing on Lot 615. Historical prospecting activity has been done on both properties.

(c) Description of specific environmental features and infrastructure on the site.

Lot 615:

Environmental features: Offshore, outside the area under application is the Robeiland with its breeding colony of seals. The farm itself do not have any specific environmental features - it consist of gently rolling dunes, hills and cliffs on the seaward side. There are no surface water features or perennial drainage lines on the farm itself but it does border on the northern bank of the Olifants River.

Infrastructure: There are existing farm roads and some stock fences. No permanent houses that are occupied are found on Lot 615.

R/E The Point #267:

Environmental Features: The main environmental feature is the mouth and estuary of the Olifants River on the southern boundary of the property. The mouth and adjacent farm portion - portion 2 of 267 is excluded from the application.

Infrastructure: There are numerous access roads, workshops, houses, air field and a processing

(d) Environmental and current land use map.

(Show all environmental, and current land use features)

See attached - Appendix 3 the current land use map and the West Coast Spatial Development Framework map that has earmarked this area for mining development.

iv) Impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts

(Provide a list of the potential impacts identified of the activities described in the initial site layout that will be undertaken, as informed by both the typical known impacts of such activities, and as informed by the consultations with affected parties together with the significance, probability, and duration of the impacts. Please indicate the extent to which they can be reversed, the extent to which they may cause irreplaceable loss of resources, and can be avoided, managed or mitigated).

Please see Appendix.6 for the EIA risk matrix and assessment details in this regard.

v) Methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks;

(Describe how the significance, probability, and duration of the aforesaid identified impacts that were identified through the consultation process was determined in order to decide the extent to which the initial site layout needs revision).

Please see Appendix 7 for full details. Impacts were based on extensive background environmental information, information provided by the IAP's, site visits by the EAP together with decades of historical experience in the prospecting and mining industry including prospecting for HMS and diamonds in this area. Site layout cannot be changed because no infrastructure is to be established. A weighted risk matrix can also be applied to less well known aspects.

vi) The positive and negative impacts that the proposed activity (in terms of the initial site layout) and alternatives will have on the environment and the community that may be affected.

(Provide a discussion in terms of advantages and disadvantages of the initial site layout compared to alternative layout options to accommodate concerns raised by affected parties)

Positive: Locals will be employed to help with prospecting work and local drilling contractors will be asked to tender. This will have positive impact on the local economy.

Negative: The only invasive activity will be drilling and the final footprint of a 6inch holes is limited. Invasive disturbance of a 6inch (165mm) holes times 200 is 5.45m². Most if not all holes is planned to be drilled within the footprint of existing roads and tracks on the farm.

Existing roads and tracks will be used and no activity will take place on coastal cliffs or the riparian zone of the Olifants River or within 100m of the Olifants River or its banks

No alternative site layout is planned as no infrastructure is to be established.

vii) The possible mitigation measures that could be applied and the level of risk.

(With regard to the issues and concerns raised by affected parties provide a list of the issues raised and an assessment/ discussion of the mitigations or site layout alternatives available to accommodate or address their concerns, together with an assessment of the impacts or risks associated with the mitigation or alternatives considered).

All holes drilled will be immediately backfilled or capped. No new access tracks or roads will be constructed. All prospecting activity will take place outside the riparian zone of the Olifants River and outside the coastal dune or cliff zone. For details concerns raised and the applicants response please see the IAP table above and Appendix 5.

viii) Motivation where no alternative sites were considered.

The occurrence of minerals are dictated by geology and as such this area has been identified from its geological prospective nature. No alternative activity outside prospecting or mining is therefore applied for. The only alternative is a no-go option.

No infrastructure during prospecting is to be established. Only mapping, geophysics and drilling is to be undertaken. All equipment will be housed and serviced off the site on Tormin Mine site. There are no alternative exploration options that can be considered as industry standard is followed.

ix) Statement motivating the alternative development location within the overall site. (Provide a statement motivating the final site layout that is proposed)

Not applicable - only alternative is no-go option as a mineral resource is targeted.

- i) Full description of the process undertaken to identify, assess and rank the impacts and risks the activity will impose on the preferred site (In respect of the final site layout plan) through the life of the activity.

Including (i) a description of all environmental issues and risks that were identified during the environmental impact assessment process and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures.)

A field survey of the farms and prospecting area were done by the EAP to familiarize him with the area during 2015 and 2016. The EAP is also familiar with the numerous EIA's done on the area and surrounding land by Trans Hex, MSR, Newshelf 1201 and Eskom. The EAP also have access to historical exploration work and exploration results by Trans Hex and Newshelf 1201.

Detailed assessment of specialist surveys done in the area and over the farms by archaeologist and botanist were compiled into detailed desktop studies to identify potential areas of concerns.

Any environmental aspect identified by the EAP or IAP's were assessed by a weighted risk matrix. The higher the risk rating the higher the significance of impact is.

Before drilling will take place the area will be surveyed by a botanist and archaeologist to confirm that no sensitive sites or plants are in that location. These surveys will be provided to the DMR as part of their environmental performance assessment and rehabilitation report.

In areas where drilling is to take place photo's that are GPS referenced will be taken to indicate site conditions before prospecting and will be taken again after prospecting has been completed.

Any alternative aspects proposed by IAP's or government departments will be listed and rated according to a weighted risk matrix.

j) Assessment of each identified potentially significant impact and risk

(This section of the report must consider all the known typical impacts of each of the activities (including those that could or should have been identified by knowledgeable persons) and not only those that were raised by registered interested and affected parties).

NAME OF ACTIVITY (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. For mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	POTENTIAL IMPACT (Including the potential impacts for cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc....etc...)	ASPECTS AFFECTED	PHASE In which impact is anticipated (e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)	SIGNIFICANCE if not mitigated	MITIGATION TYPE (modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc) E.g. Modify through alternative method. Control through noise control Control through management and monitoring through rehabilitation..	SIGNIFICANCE if mitigated
Mapping	None		Phase 1	No effect		
Geophysics	None		Phase 2	No Effect		
Drilling	Dust and Noise	Air and road access	Phase 3	Low	Drilling only during day time.	
	Heritage	Shell middens		Very High	No drilling within 50m of any shell middens	
	Vegetation	Not expected as no vegetation is to be cleared		Very Low to no effect	Botanical survey of sites before drilling starts	
	Water	Groundwater		Very low	No chemicals to be used during drilling and area is	

		pollution			not know to have	
Reporting and modelling	None		Phase 4&5	No effect		

The supporting impact assessment conducted by the EAP must be attached as an appendix, marked **Appendix**

k) Summary of specialist reports.

(This summary must be completed if any specialist reports informed the impact assessment and final site layout process and must be in the following tabular form):-

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
The EAP has access to numerous specialist environmental reports and investigations done for the EIA for Trans Hex over The Point property, the EIA done on the surrounding land by MSR and Newshelf 1201 on their project Elephant as well as all the surveys and studies done by Eskom on the nearby properties for the Windfarm project - Appendix 6. This constitute a huge volume of background information on the local and site specific environmental aspects. Personal site visits were also done by the EAP during 2015 and 2016	<p>Archaeological:</p> <ul style="list-style-type: none"> * Any shell middens should be reported to SAHRA and not be disturbed. They are normally found within 300m of the sea high water mark near exposed rocky headlands or near estuaries and river mouths. * Any open habitation or cave sites with stone tools from the early to middle stone age should be reported to SAHRA and not be disturbed. <p>Any red data or endangered species of fauna or flora will be protected and SANBI or WESSA or DEA will be contacted if encountered.</p> <p>Before drilling start all drill site location identified will be assessed by specialist heritage and botanical specialist.</p> <p>Any nesting sites of birds will be left undisturbed and a 100m buffer zone around them will be enforced.</p>		

Attach copies of Specialist Reports as appendices

l) Environmental impact statement

(i) Summary of the key findings of the environmental impact assessment;

The prospecting activity is not expected to induce any significant impacts with most impacts having a duration less than 6 month. Disturbance of vegetation at the drill site is the only impact identified with a duration longer than 6 months. Drill site will therefore be limited to drilling on or next to existing roads and tracks.

(ii) Final Site Map

Provide a map at an appropriate scale which superimposes the proposed overall activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers .Attach as **Appendix**

Appendix 8

(iii) Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;

Positive: Increased employment and economic activity during the prospecting phase.

Negative: Surface disturbance where exploration holes are to be drilled. All holes will be immediately backfilled or capped and disturbed area rehabilitated. Disturbed impact area of 200 small exploration holes is 5.45m² and the footprint area of a small rig together with base plates is about 5m² per hole.

Risks: The only risk is an economic risk to the applicant that the area will not have any economic resource deposit.

The only alternative option to prospecting is bulk sampling or mining or the no-go alternative.

m) Proposed impact management objectives and the impact management outcomes for inclusion in the EMPr;

Based on the assessment and where applicable the recommendations from specialist reports, the recording of proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr as well as for inclusion as conditions of authorisation.

The management objective is that prospecting will not result in any permanent changes to the land use capability.

The impact management outcome is that the area resemble the state it was in before prospecting started and that no impact on the public or Olifants river will take place.

n) Aspects for inclusion as conditions of Authorisation.

Any aspects which must be made conditions of the Environmental Authorisation

PARA 5.1 n) Aspects for inclusion as conditions of Authorisation

- i. Prior to any prospecting commencing, application must be made to the road authority for a wayleave permitting the use of the public road to the Transhex gate for drilling and the placing of safety signage for the period of the drilling activities of Clusters F, G and H.
- ii. Prior to any prospecting commencing, authorisation in terms of temporary change of Land Use to Permit Prospecting must be obtained from the local authority in terms of planning legislation.
- iii. The extreme environmental sensitivity of the estuary must be brought to the attention of all employees.
- iv. The Environmental Induction Training Manual must be conducted regularly as contemplated in Annexure G
- v. All prescriptions contained in the BAR are to be followed.
- vi. All buffer zones to be clearly demarcated by white beacons as defined in Figure 5 and respected.
- vii. No-Go areas as defined in Figure 5 are to be respected.
- viii. Speed limit signage to be placed along intended routes and enforced in the interest of both safety and dust generation.
- ix. The drilling rig and logistical vehicles to follow demarcated roads and tracks to drill sites.
- x. Immediately following drilling, excess dust is to be removed from the drill site in bags and the drill site lightly raked.
- xi. The drill operators and vehicle drivers must be shown photographs E-1 to E-8 in PARA 3 example of similar drilling program to guide them in their activities on site.
- xii. When drill vehicle and logistical vehicles enter partly vegetated areas, they must avoid tight turning, preferably reversing to avoid wheel slewing of topsoil and vegetation.
- xiii. Waste and hydrocarbons (Fuel and Lubricants) is to be managed in terms of Annexure H Waste and Hydrocarbon Management Protocol prescriptions.
- xiv. Following on positive results in Phase 1 drilling of 36 holes, further planning of close spaced drilling by MSR geological department must be subject to consideration of the findings of Environmental Specialist inputs as envisaged in Preface para 2 iii) for integration thereof into further drill site identification and such environmental assessment and geological motivation for closed spaced drilling is to be submitted to DMR and referred to other interested and affected parties for their comment prior to DMR approval to any drill holes in a Phase 2 program.

The above prescriptions by the SPC review will now apply to this EMP with further considerations listed below in black which were prescribed in the original 2016-2017 BAR where applicable. While the prescription of 100m setback from the river in the 2016 BAR report is now replaced by the 500m No Go Buffer.

- * No servicing of vehicles or drilling equipment can take place on the area under application.
- * No drilling or impact must take place within the riparian zone of the Olifants River or within 100m of the banks of the river.
- * No nesting sites of birds must be disturbed.

- * Any sites of archaeological significance - e.g. shell middens must be reported to SAHRA and not be disturbed.
- * Any protected or rare plant species must not be impacted on

Only existing roads and tracks will be used.

Drill site locations must be surveyed by botanist and archaeologist before drilling starts.

Drill sites will be rehabilitated.

All exploration holes must be backfilled or capped within 24h of drilling as they are a death trap for small lizards, rodents and other animals.

o) Description of any assumptions, uncertainties and gaps in knowledge.

(Which relate to the assessment and mitigation measures proposed)

There is currently no listed heritage sites or national estates on the area under application. The region is known to host heritage sensitive sites like shell middens and it is therefore possible that such sites might be encountered during exploration. Such sites will immediately be reported to SAHRA and a heritage and botanical survey will be conducted over all planned drill sites when they have been identified.

p) Reasoned opinion as to whether the proposed activity should or should not be authorised

ii) Reasons why the activity should be authorized or not.

The proposed prospecting activity should be authorized as the area under application has been subject to exploration activity and adjacent mining activity over the past few decades (from 1950's) and therefore this application does not introduce a new impact. The expansion of a mineable resource will contribute to the local and regional economy and is in line with the WCSDF spatial development plan and land use for this area which is zoned mining.

iii) Conditions that must be included in the authorisation

PARA 5.2 Conditions that must be included in the authorisation

See PARA 5.1n above for conditions to be prescribed in the authorisation.

- * No servicing of vehicles or drilling equipment can take place on the area under application.
- * No drilling or impact must take place within the riparian zone of the Olifants River or within 100m of the banks of the river.
- * No nesting sites of birds must be disturbed.
- * Any sites of archaeological significance - e.g. shell middens must be reported to SAHRA and not be disturbed.
- * Any protected or rare plant species must not be impacted on.

q) Period for which the Environmental Authorisation is required.

5 years

r) Undertaking

Confirm that the undertaking required to meet the requirements of this section is provided at the end of the EMPr and is applicable to both the Basic assessment report and the Environmental Management Programme report.

Confirmed

s) Financial Provision

State the amount that is required to both manage and rehabilitate the environment in respect of rehabilitation.

iv) Explain how the aforesaid amount was derived.

R315 958.13 for the potential maximum disturbance associated with drilling of 200 exploration holes by using the DMR calculation of environmental liability spreadsheet - component 10 – General surface rehabilitation of 2ha.- Appendix 9. Please note that this calculation is using a extreme estimate of 100m² per hole although the expected disturbance is less than 5m² per holes and invasive disturbance is even less.

v) Confirm that this amount can be provided for from operating expenditure. (Confirm that the amount, is anticipated to be an operating cost and is provided for as such in the Mining work programme, Financial and Technical Competence Report or Prospecting Work Programme as the case may be).

Confirmed - the cost has been budgeted for under the PWP.

t) Specific Information required by the competent Authority

vi) Compliance with the provisions of sections 24(4)(a) and (b) read with section 24 (3) (a) and (7) of the National Environmental Management Act (Act 107 of 1998). the EIA report must include the:-

(1) Impact on the socio-economic conditions of any directly affected person. (Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim, attach the investigation report as an **Appendix** .

The activity will only impact on 0.04% of the land area under application and have a temporary impact of inconvenience on the land holder only and not on their socio-economic condition. All impacts will be localised within the boundary of the properties under application.

(2) Impact on any national estate referred to in section 3(2) of the National Heritage Resources Act. (Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) with the exception of the national estate contemplated in section 3(2)(i)(vi) and (vii) of that Act, attach the investigation report as **Appendix 2.19.2** and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6.and 2.12.herein).

Only exploration drilling will be done and there are no listed heritage sites or national estates on the area under application. No impact is therefore expected in this regard. If any sites are encountered SAHRA will be informed immediately.

u) Other matters required in terms of sections 24(4)(a) and (b) of the Act.

(the EAP managing the application must provide the competent authority with detailed, written proof of an investigation as required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in sub-regulation 22(2)(h), exist. The EAP must attach such motivation as **Appendix 4**).

As per the attached information, appendices, maps and consultation with the land and lease owners written proof of a basic impact assessment investigation is provided.

PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

4. Draft environmental management programme.

- a) Details of the EAP, (Confirm that the requirement for the provision of the details and expertise of the EAP are already included in PART A, section 1(a) herein as required).

Confirmed - provided in Part A

- b) Description of the Aspects of the Activity

(Confirm that the requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A, section (1)(h) herein as required).

Confirmed - provided in Part A

- c) **Composite Map**

(Provide a map (**Attached as an Appendix**) at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers)

When environmental sensitive areas like heritage, surface water features, wetlands, cliff zones, farm house or public areas are superimpose the resultant map indicates that the area is sensitive to the possibility of encountering shell middens or fossils at depth. These sites if encountered will not be impacted on and drilling will take place at least 50m from any such site. In addition no drilling will take place within 100m of existing buildings. See Appendix 8.

- d) **Description of Impact management objectives including management statements**

- (1) **Determination of closure objectives.** (ensure that the closure objectives are informed by the type of environment described)

The closure objective is to return any area impacted by prospecting activity to the same state and with the same land use capability as before prospecting started by the current applicant.

- (2) **Volumes and rate of water use required for the operation.**

None, dry air drilling will be done.

- (3) **Has a water use licence has been applied for?**

(4) Impacts to be mitigated in their respective phases

Measures to rehabilitate the environment affected by the undertaking of any listed activity

ACTIVITIES	PHASE	SIZE AND SCALE of disturbance	MITIGATION MEASURES	COMPLIANCE WITH STANDARDS	TIME PERIOD FOR IMPLEMENTATION.
<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc</p> <p>E.g. For mining:- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)</p>	<p>(of operation in which activity will take place.</p> <p>State; Planning and design, Pre-Construction, Construction, Operational, Rehabilitation, Closure, Post closure).</p>	<p>(volumes, tonnages and hectares or m²)</p>	<p>(describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)</p>	<p>(A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)</p>	<p>Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required.</p> <p>With regard to Rehabilitation specifically this must take place at the earliest opportunity. .With regard to Rehabilitation, therefore state either:-..</p> <p>Upon cessation of the individual activity or.</p> <p>Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.</p>
Prospecting – Activity 20	All phases	A total of about 2ha of surface area could be disturbed during drilling of 200 holes.	<p>All prospecting holes will be backfilled or capped within 24h of drilling.</p> <p>Drip trays will be used with any drilling rig.</p> <p>Drilling only during day time.</p> <p>This will ensure immediate mitigation of impacts and limit creation of new ones.</p> <p>No servicing of equipment on the site.</p> <p>No drilling within 50m of any archaeological site.</p> <p>No drilling within 100m of any building.</p> <p>Use will be made of existing tracks and roads.</p> <p>No drilling within the riparian zone of the Olifants River.</p> <p>No disturbance of nesting birds sites.</p>	Compliance with continuous rehabilitation and prevention of pollution.	Measures must be implemented when invasive prospecting start and continue to be enforced during the whole of the prospecting period.

e) Impact Management Outcomes

(A description of impact management outcomes, identifying the standard of impact management required for the aspects contemplated in paragraph ());

ACTIVITY (whether listed or not listed). (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc....etc....etc.).	POTENTIAL IMPACT (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc....etc....)	ASPECTS AFFECTED	PHASE In which impact is anticipated (e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)	MITIGATION TYPE (modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc) E.g. • Modify through alternative method. • Control through noise control • Control through management and monitoring • Remedy through rehabilitation..	STANDARD TO BE ACHIEVED (Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
Drilling	Dust and noise	Air	Prospecting phase 3	Only drill during day time No drilling within 100m of a building	Less than 82 dBA at farm boundary and no visible dust.
Drilling	Surface disturbance	Soil	Prospecting phase 3	Backfill or plug all drill holes. No drilling within riparian zone of Olifants River	No open drill holes to be left. No impact on Olifants River
Drilling	Disturbance of bird nesting sites or archaeological sites	Fauna and Heritage	Prospecting phase 3	No drilling within 50m of bird nesting sites or archaeological sites All drill sites to be located in roads and where not will be surveyed by an archaeologist.	No impact
Drilling	Vegetation disturbance	Flora	Prospecting phase 3	All drilling is planned in the roads and where not will be surveyed by botanist to identify protected plant species	No impact

ACTIVITY (whether listed or not listed).	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE In which impact is anticipated	MITIGATION TYPE	STANDARD TO BE ACHIEVED
(E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.).	(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc....etc...)		(e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)	(modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc) E.g. <ul style="list-style-type: none"> • Modify through alternative method. • Control through noise control • Control through management and monitoring • Remedy through rehabilitation.. 	(Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.

f) Impact Management Actions

(A description of impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated in paragraphs (c) and (d) will be achieved).

ACTIVITY whether listed or not listed. (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc....etc....etc.).	POTENTIAL IMPACT (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc....etc....)	MITIGATION TYPE (modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc) E.g. • Modify through alternative method. • Control through noise control • Control through management and monitoring Remedy through rehabilitation..	TIME PERIOD FOR IMPLEMENTATION Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. .With regard to Rehabilitation, therefore state either:-.. Upon cessation of the individual activity or. Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.	COMPLIANCE WITH STANDARDS (A description of how each of the recommendations in 2.11.6 read with 2.12 and 2.15.2 herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)
Drilling	Dust and noise	Control by limiting operating hourse and distance to the public.	During drilling	No impact on occupational health and safety of people or public
Drilling	Surface disturbance	Backfill or plugging of exploration holes. No drilling within riparian zone of Olifants River	Immediately after drilling.	In compliance with continuous rehabilitation policy and the protection of wildlife and sensitive environments.
Drilling	Disturbance of shell middens or bird nesting sites	No drilling or traffic within 50m of a shell midden or bird nesting sites	During prospecting and before drilling starts	No impact on potential heritage sites

Drilling	Disturbance of vegetation	Drill inside roads reserves and have area surveyed by botanist	During prospecting and before drilling starts	No impact to protected or rare plant species
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ACTIVITY whether listed or not listed.	POTENTIAL IMPACT	MITIGATION TYPE	TIME PERIOD FOR IMPLEMENTATION	COMPLIANCE WITH STANDARDS
(E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.).	(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc....etc...)	<p>(modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)</p> <p>E.g.</p> <ul style="list-style-type: none"> • Modify through alternative method. • Control through noise control • Control through management and monitoring <p>Remedy through rehabilitation..</p>	<p>Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required.</p> <p>With regard to Rehabilitation specifically this must take place at the earliest opportunity. .With regard to Rehabilitation, therefore state either:-..</p> <p>Upon cessation of the individual activity or.</p> <p>Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.</p>	(A description of how each of the recommendations in 2.11.6 read with 2.12 and 2.15.2 herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)

g) Financial Provision

Determination of the amount of Financial Provision.

- (a) Describe the closure objectives and the extent to which they have been aligned to the baseline environment described under the Regulation.**

The closure objective is to leave the environment in the same state that it was found before prospecting started. Not having any impact of significance that will result in the baseline environment being changed over the long term. The land capability and land use will remain the same after closure as before prospecting by the applicant started.

- (b) Confirm specifically that the environmental objectives in relation to closure have been consulted with landowner and interested and affected parties.**

Confirmed

- (c) Provide a rehabilitation plan that describes and shows the scale and aerial extent of the main mining activities, including the anticipated mining area at the time of closure.**

Not applicable - no mining activity.

- (d) Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objectives.**

The rehabilitation plan and criteria will result in the close objective being reached and is compliant with the end use closure objective.

- (e) Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guideline.**

The only invasive activity is drilling of about 200 holes. The rehabilitation liability of the quantum required is R315,958-00.

- (f) Confirm that the financial provision will be provided as determined.**

Confirmed

Mechanisms for monitoring compliance with and performance assessment against the environmental management programme and reporting thereon, including

- h) Monitoring of Impact Management Actions
- i) Monitoring and reporting frequency
- j) Responsible persons
- k) Time period for implementing impact management actions
- l) Mechanism for monitoring compliance

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
Drilling	Noise levels Fugitive dust levels Backfill of holes Review of drill sites before drilling for any signs of shell middens or stone tools or protected plant species.	Registration of any noise or dust complaints by the public or land owner. Measuring noise and dust levels downwind from a drill site on the boundary of the farm when drilling within 100m of farm boundary. Botanical and heritage survey of drill site locations when confirmed after phase 1 & 2. All holes must be backfilled or plugged within 24h of drilling. Reporting any heritage sites to SAHRA	Environmental officer – Tormin Mine	Monitoring at the start of any drilling prospecting activity. Report monthly to MSR management and the surface owner, and annually to DMR. Management actions are in force when prospecting starts and are therefore immediately implemented. With any official noise or dust complaint the issue will be investigated immediately and the outcome reported to the DMR within one month.

h) Indicate the frequency of the submission of the performance assessment/ environmental audit report.

Annually

i) Environmental Awareness Plan

(1) Manner in which the applicant intends to inform his or her employees of any environmental risk which may result from their work.

PARA 6: Environmental Awareness Plan

See Annexure G: Draft Environmental Awareness Induction Training Manual to be read with Figure 4 showing existing roads to be followed and Figure 5 showing the sensitive zones of Estuarine west-bank, the No-Go area on the west-bank and the 500m buffer zones.

Before any activity start an induction workshop is held by an OHSA- and environmental officer of MSR. Any activity which resulted in an environmental incident or risk is documented and reported during weekly toolbox meeting that is held with all employees and contractors.

(2) Manner in which risks will be dealt with in order to avoid pollution or the degradation of the environment.

Any environmental risk identified by a contractor, project manager or environmental officer is raised and reported during weekly toolbox meetings. These risks or incidents are raised as an opportunity to learn and/or prevent and mistakes from occurring that might impact on the environment or create liabilities for MSR.

These aspects or risks are then integrated into the induction training as a minimum requirement for new employees or contractors.

j) Specific information required by the Competent Authority

(Among others, confirm that the financial provision will be reviewed annually).

MSR hereby confirm that the financial provision will be reviewed annually and reported on during the performance assessment report.

2) UNDERTAKING

The EAP herewith confirms

- a) the correctness of the information provided in the reports ☐X
- b) the inclusion of comments and inputs from stakeholders and I&APs ; X☐
- c) the inclusion of inputs and recommendations from the specialist reports where relevant; X☐
and
- d) that the information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties are correctly reflected herein. X☐



Signature of the environmental assessment practitioner: Stephen van der Westhuizen

Site Plan Consulting

Name of company:

9 March 2020.

Date:

-END-