

**PROSPECTING RIGHT APPLICATION FOR HEAVY MINERALS  
FROM DREDGED SAND OFFSHORE OF DURBAN**

**DRAFT BASIC ASSESSMENT REPORT**

**KZN 30/5/1/1/2/10778PR**

**10 DECEMBER 2018**



**Prepared by Alan Smith Consulting for Marine Sands (Pty) Ltd**



**mineral resources**

Department:  
Mineral Resources  
**REPUBLIC OF SOUTH AFRICA**

**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)

**NAME OF APPLICANT:** Marine Sands (Pty) Ltd

**TEL NO:** 0112681644

**FAX NO:** 086 552 8093

**POSTAL ADDRESS:** P.O BOX 52673, SAXONWOLD, JOHANNESBURG, 2132

**PHYSICAL ADDRESS:** 50 KEYES AVENUE, ROSEBANK, JOHANNESBURG, 2196

**FILE REFERENCE NUMBER SAMRAD:** KZN 30/5/1/1/2/10778PR

## 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**

**3. Contact Person and correspondence address**

**a) Details of**

**i) Details of the EAP**

Name of The Practitioner: Alan Smith Consulting cc

Tel No.: 031 2086896

Fax No. : N/A

e-mail address: asconsulting@telkomsa.net

**ii) Expertise of the EAP**

**(1) The qualifications of the EAP**

(with evidence as **Appendix 1**)

Dr Alan Smith: PhD (Geology), Pr. Sci. Nat.

Ms Lisa Guastella: MSc (Oceanography), Pr. Sci. Nat.

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

(In carrying out the Environmental Impact Assessment Procedure)

The consultants' qualifications and experience are outlined in Appendix 1, together with evidence of qualifications.

Dr Alan Smith has a PhD in geology; Ms Lisa Guastella has a MSc in Oceanography.

Both consultants have practised as environmental consultants and have 30 years of work experience each.

Past relevant EIA experience includes:

- Upgrade of stormwater outfall, Beach Road, Amanzimtoti on behalf of eThekweni Municipality.
- Durban Beachfront Promenade Extension and Node Development – Basic Assessment and Specialist Report input, for SDP on behalf of eThekweni Municipality.
- Isipingo nodal development: Lifesaving Club demolition and relocation of facilities to Reunion Park - Basic Assessment together with SDP on behalf of eThekweni Municipality.
- Demolition and Reconstruction of Sunkist Stormwater Outfall, Durban, eThekweni Municipality.
- Objective analysis of EIA and public opinion pertaining to the proposed Plettenberg Bay Marina development on behalf of Environmental Evaluation Unit (EEU), UCT, to advise the Cape Provincial Administration for decision-making.
- EIA for Umfolozi Casino Conference & Hotel Resort, Richards Bay
- EIA: Demolition and Reconstruction of Sunkist Stormwater Outfall, Durban for Durban Municipality.
- Applications for small-craft launch site licences for Ethekeeni Municipality & EMPs
- Basic Assessment: Richards Bay cemetery expansion for uMhlathuze Municipality
- Basic Assessment: Community bridge over Tugela River at Sahlumbe, for KZN Department of Transport.
- Basic Assessment: Construction of gauging weirs on the Londonspruit, Coedmore Quarry, for AFRISAM
- Environmental Management Plan: Café Fish, Durban Harbour
- Environmental Impact Assessment: Elysium Desalination Plant
- Proposed upgrade of Tinley Manor Beach facilities: Specialist Report: Physical Marine & Coastal Impacts, input to BAR.
- Richmond Waste Water Treatment Works Upgrade, Amendment Report: Geomorphological & Wetland Specialist Report, input to BAR.

**b) Location of the overall Activity**

<b>Farm Name:</b>	N/A
<b>Application area (Ha)</b>	207.0372 Ha
<b>Magisterial district:</b>	Durban
<b>Distance and direction from nearest town</b>	Offshore east of the Durban harbour, City of Durban, within 3 kilometres thereof
<b>21 digit Surveyor General Code for each farm portion</b>	N/A - See map and co-ordinates – Appendix 2

**c) Locality map**

Attach a locality map at a scale not smaller than 1:250000 showing the nearest town and attach as **Appendix 2**

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

Attach 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.

The location is as per the locality map contained in **Appendix 2**.

This application is made in relation to a prospecting rights application wherein prospecting is to determine if certain heavy minerals are present in potentially economic concentrations in the dredged beach and sea floor sand which may contain inter alia; ilmenite, rutile, zircon, garnet and magnetite. This sand has historically and is currently being dredged by Durban port authorities (Transnet) from the ocean floor around to the east of the Durban Harbour. The sand is thereafter deposited to the hopper at the "A" berth in the Durban port and subsequently pumped by the eThekweni Municipality northward along the Durban beaches. Alternative sand replenishment measures involve depositing sand on the "mound" offshore of Durban, or more recently, in emergency measures, pumped dredged sand directly from the dredger ship via a pipeline to the beaches. These activities are conducted in order to augment the sand supply to the beaches and to clear the harbour entrance.

The prospecting of these sea floor sands and the heavy minerals contained within the sands, shall occur within the translocation process of the dredged sand to the sand hopper site and/or from the dredger itself. The sampling of these sands at either of these sites (the sand hopper and dredger) will not materially impact the surrounding environment nor detrimentally affect the composition and volume of sand available for the augmentation of the beaches.

The purpose of the prospecting right applied for is to confirm and test the economic viability (quality and quantity) of such heavy minerals as currently being dredged within the sea floor sands and processed and will continue in the future.



Area 2 relates to the area up to 3 km offshore north-east to east of Durban harbour (refer Appendix 2). This includes the area dredged by Transnet to prevent sand build-up and the blocking of the Durban Harbour entrance channel.

Prospecting will comprise a sand sampling survey of the Transnet dredged sand by a competent person and, with the consent of the relevant authority, will consist of removal of hand collected small sand samples (approximately 1 kg) from, either:

- a. Within and/or around the hopper system located at the A berth in the Durban port (refer Fig. 1, Appendix 3); and/or
- b. On the dredger ship, which is responsible for the dredging of the sand within the prospecting areas applied for (refer Fig. 2, Appendix 3).

Sampling will take place when the dredger is operating within the area specified. The sampling will be non-invasive. It is submitted that no prospecting will occur (in situ) on the ocean floor prior to the dredging of the sand within the prospecting areas applied for. The proposal relates only to sampling of the sand that has already been dredged by Transnet to determine if economic concentrations of heavy minerals are present in the dredged sand.

No infrastructure will be developed, and no processing of materials will take place on site; all sample preparation and analyses will take place in registered and established off-site laboratories and facilities. The sand will be analysed in an offsite commercial laboratory to determine the concentrations of heavy minerals. No environmental disturbances are envisaged during the prospecting process; the sampling is a physical process with no chemical or other substances added in situ and thus will not detrimentally impact the surrounding environment, nor materially affect the composition and volume of sand available for the augmentation of the beaches. The main focus of the programme will be initiated by a Proof of Concept study for a year which will review of existing data, undertake limited sampling of dredged sand material and a high-level review of various technical, contractual commercial and logistical aspects of the proposed project. It is envisaged that the initial sampling process and analysis of the samples will take an estimated 3-5 months.

Should the Proof of Concept study provide positive results, a Scoping Study and subsequently a Feasibility Study will be undertaken in which similar work would be undertaken to increasingly more detailed levels. Each of these subsequent programmes will take approximately 12 months and will involve the same sampling of already dredged material either on the dredger or at the hopper. In each of the three 12-month phases, sampling should ideally be undertaken over a prolonged enough period to ensure that the effect of variations in sea and weather conditions on the sand samples are monitored and determined

**e) Policy and Legislative Context**

<p><b>APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT</b></p> <p>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</p>	<p><b>REFERENCE WHERE APPLIED</b></p>	<p><b>HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT.</b></p> <p>E.g. In terms of the National Water Act a Water Use License has/ has not been applied for</p>
<p>Mineral and Petroleum Resources Development Act (Act 28 of 2002), Section 16 as amended</p>	<p>Prospecting activities: KZN 30/5/1/1/2/10778PR</p>	<p>Conditions and requirements attached to the granting of a prospecting right will apply to the prospecting activities</p>
<p>National Environmental Management Act, No 107 of 1998 (as amended) Listing Notice 20 of Listing Notice 1</p>	<p>Prospecting activities: KZN 30/5/1/1/2/10778PR</p>	<p>The appropriate environmental authorisation must be obtained before proceeding with any prospecting activities. Duty of care, public participation, consideration of alternatives and environmental impacts.</p>



National Heritage Resources Act, 25 of 1999 ("NHRA")	Commenting authority	Archaeological awareness
Constitution of the Republic of South Africa: everyone has a right: a. to an environment that is not harmful to their health or wellbeing; and b. to have the environment protected for the benefit of present and future generations, through reasonable legislative and other measures that: i. prevent pollution and ecological degradation; ii. promote conservation; and iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.	Rights of South African citizens	The prospecting activities shall be conducted in such a manner that there are no anticipated significant environmental impacts

**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).

The aim of the prospecting activities is to evaluate the heavy mineral content of the marine sand already dredged by Transnet immediately, south-east to north-east of the Durban Harbour entrance and determine the economic value of the heavy minerals and determine the viability of establishing an operation for extracting any mineral resource that may be identified in the prospecting. The proposal presents an opportunity to maximise the return from a process where the sand has to be dredged as a matter of course and this project would merely entail opportunistically removing the heavy mineral content. Should the proposed prospecting programme prove the economic viability of the project and logistically possible, the financial gains would offset some of the costs of the dredging by Transnet and the eThekweni Municipality Durban's beach nourishment project. Furthermore, should extraction of heavy minerals prove economic and proceed, it would enhance the eThekweni regional economy and that of Kwazulu Natal and the national mineral industry, including exports and job creation

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

The site is governed by the area offshore of Durban Harbour (refer **Appendix 2**) that Transnet dredges for maintenance purposes and then eThekweni Municipality utilises (the material) for beach nourishment. There is no site alternative, as this is the area that requires maintenance dredging.

The sampling would be done at selected points within the sand collection and distribution system, preferably at the sand hopper or alternatively on the dredger (refer **Appendix 3**). Permission for sampling would be required to be obtained from the operators of the sand hopper system and/or the dredger. Samples will be collected by hand, with approximately 1 kg of material in each sample. The sampling protocol would ensure that the samples are representative of the sand being dredged. There is no alternative technology for this critical aspect to determine the grade of heavy minerals in the dredged sand.

The approximately 1 kg sample would be bagged and stored before drying and dispatch to the laboratory of Scientific Services Ltd who are ISO accredited. Initially the dried samples will be visibly examined for presence of dark minerals which will be a proxy estimate for the heavy mineral component. Thereafter the grain size variation and proportion of slimes material will be determined. This will be followed by dense media separation, or cyclones to estimate the total heavy mineral count. Selected samples will be analysed by XRF for significant HMS chemical components of titanium, Zirconium and iron. Further QEMSEM analysis of selected samples will estimate the proportion of ilmenite, rutile zircon and iron and other heavy mineral constituents. The distribution of the heavy minerals will then be plotted, which will allow for the determination of the global grade of heavy minerals in any one of the dredged areas

**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 as provided above 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 area (Area 2) is determined by plotting the area that Transnet dredges, thus no alternative area is considered. The other prospecting rights applications submitted in tandem with this application (Area 1: KZN 30/5/1/1/2/10780PR, known as the “sand trap”; and Area 3: KZN 30/5/1/1/2/10779PR, corresponding to the sand winning dredge site proposed for raw materials required for Durban Harbour infrastructure construction) have the same attributes in that they are, or are proposed to be, sites for Transnet dredging.
  - (b) The type of activity involves sampling as outlined in section g) above. The prospecting activities are also provided in the Prospecting Works Programme, submitted to DMR.
  - (c) The design of the activity is such that sand samples will be taken either from the sand hopper or directly from the dredger, as outlined in g) above. The sand samples will correspond to where the dredger operates in Area 2, as per the layout in Appendix 2.
  - (d) The technology is as outlined in g) above. Sampling will be non-invasive and will take sea floor sand that has already been disturbed and removed from the sea floor by the dredger. In addition to the dredged sand samples that will be collected in all three phases for assay and grade purposes, during the Phase 2 Scoping Study and Phase 3 Feasibility Study, larger (1 m<sup>3</sup>) dredged sand samples may be collected for bench-scale metallurgical test work in a laboratory to determine the applicability of various extraction techniques on the sand samples. It is likely that this test-work will involve studying the size distribution of the sand components, removal of slimes, gravity concentration of minerals of higher density and the electromagnetic separation of the various potentially economic sand particles.
  - (e) The operational aspects are as outlined in g) above. *Proof of Concept*: Initially, between 20 and 50 samples will be collected over a 3-month period to provide an early indication of the concentrations of the heavy minerals and whether they are likely to be present in economically viable concentrations. The sampling would only commence after a 3-month literature survey. The sampling process and analysis of the samples will take an estimated 5 months, as time delays are essential between sampling surveys. It will be necessary, once prospecting rights are granted, to liaise with the relevant Third Parties, in particular those parties collecting the dredged sand (i.e. Transnet), and those parties that operate the sand hopper and the sand beach pumping system (i.e. eThekweni Municipality). It is likely that agreements will have to be negotiated and concluded with these Relevant Third Parties, thus it is anticipated that the entire first phase of sampling and assessment will take approximately 12 months.  
Should the results of the initial Proof of Concept study outlined above be positive, a *Scoping Study* will proceed in Year 2 of the operation. Should, in the opinion of Marine Sands Pty Ltd, the conceptual study not have positive results, the project and work programme would be terminated, and no further work would be undertaken. The Scoping Study will mostly include periodic sampling of the hopper or the sand distribution, conducted over a 12-month period to determine any time-dependent variations in grade of the heavy mineral content of the pumped sand. The Scoping Study would undertake similar categories of work to those set out in the Proof of Concept Study, but in all cases the work would be done in more detail. Preliminary environmental test-work will be undertaken during this phase. An infrastructure and logistics study would review, in more detail, the potential sites of the operation along with the availability of site access, and services of water electricity etc. A marketing and transport study would refine the identification of potential markets and determine prices that would render the project economically viable, information of which would feed into a financial and operational model. Should this indicate the project to be viable then a feasibility study would be recommended, if not, the project will be curtailed.  
The *Feasibility Study* would include all aspects normally undertaken in such a study, including environmental impact, logistics and infrastructure requirements, initial capital expenditure and

operating and financial modelling. If the results of the Feasibility study are positive, financing for project development and production would be arranged in this phase.

- (f) Prospecting activities are essential to investigate and confirm the presence and quality of heavy mineral deposits. Should the activity not be implemented, opportunity will be lost to determine the viability of heavy mineral extraction using an already available resource, i.e. dredged sand. The proposed study represents an opportunity to optimize the value of an existing resource that is anyway transported from the seafloor to the beach. Should the prospecting right be refused, a potential economically viable heavy mineral resource will effectively be sterilised.

## 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.

The following public participation has been conducted for the proposed project to date:

- Identification of stakeholders and compilation of comprehensive Interested and Affected Party database (I&AP Register). Stakeholders, as part of the Public Participation Process, include Transnet and eThekweni municipality as occupiers of the property, i.e. area dredged; sand hopper owners and dredger owners/operators; municipal officials and ward councillors; relevant State Departments; relevant sporting clubs and associations; relevant NGO's and commenting authorities. The database was reviewed and updated with the latest contact details of the relevant stakeholders (refer Appendix 4.3).
- Fixing site notices at the following locations (refer Appendix 4.1)
  - (i) Entrance gate to the National Sea Rescue Institute, sand hopper and Berth "A" at Durban Harbour
  - (ii) Notice board at the Point Watersports Club, Point, Durban
  - (iii) Landward end of uShaka Pier, opposite Moyo's restaurant
- Placing an advertisement in the English medium "The Mercury" newspaper, Friday 12 October 2018 (refer Appendix 4.2)
- Circulation to all identified I&APs of a Background Information Document (BID)
- Meetings of Marine Sands (Pty) Ltd with representatives from Transnet and the Stormwater & Catchment Management Unit (responsible for beach nourishment scheme) of eThekweni Municipality.
- Compilation and circulation of draft Draft Basic Assessment Report (BAR) (this report) to all I&APs, Key Stakeholders and Organs of State (refer Appendix 4.3) to facilitate preliminary comments on the proposed prospecting right, allowing the EAP to address the issues during the EIA process for a 30-day period.
- The Draft Basic Assessment was circulated to all I&AP's via email and a hard copy was made available at the Durban Central library. The Draft Basic Assessment is available for comment and review for a period of 30 days.
- All comments received thus far during the public participation process, as well as responses provided, have been captured and are recorded in item (iii) below. Completed I&AP registration forms and relevant email communications are provided in Appendix 4.4.
- Once DMR has made a decision, all registered I&APs will be notified of the outcome of the application.

iii) Summary of issues raised by I & Aps  
 (Complete the table summarising comments and issues raised, and reaction to those responses)

<b>INTERESTED AND AFFECTED PARTIES</b>  List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted	<b>DATE COMMENTS RECEIVED</b>	<b>ISSUES RAISED</b>	<b>EAPs response to issues as mandated by the applicant</b>	<b>Section and paragraph reference in this report where the issues and or response were incorporated.</b>
<b><u>AFFECTED PARTIES</u></b>				
<b>Landowner/s</b>				
	<input type="checkbox"/>			
	<input type="checkbox"/>			
<b>Lawful occupier/s of the land</b>		N/A		
	<input type="checkbox"/>			
	<input type="checkbox"/>			
<b>Landowners or lawful occupiers on adjacent properties</b>		N/A		
	<input type="checkbox"/>			
	<input type="checkbox"/>			
	<input type="checkbox"/>			
	<input type="checkbox"/>			
<b>Municipal councillor (if more than one, attach list as an</b>				

<b>Annexure)</b>					
Conrad Dlamini Bongimusa Ward councillor (ward 26 Point)	X	-	None yet, BID sent 17 Oct 2018		
JP Prinsloo Ward councillor (ward 66 Bluff)	X	-	None yet, BID sent 18 Oct 2018		
<b>Municipality (if more than one, attach list as an Annexure)</b>					
eThekwini Municipality – Natural history museum (David Allan)	X	18 Oct 2018	BID sent 16 Oct 2018, no issues		Avifauna (iv) (1) (a)
eThekwini Municipality - EPCPD		-	None yet, BID sent 16 Oct 2018		Environment
eThekwini Municipality - CSM		-	None yet, BID sent 16 Oct 2018		Sand pumping, beach nourishment, sand hopper Part A (b) (iv) (1) (a) & (b)
eThekwini Municipality – Dev. Planning: LUM		-	None yet, BID sent 16 Oct 2018		Environment
<b>Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA e</b>					
Transnet - Environmental	X	-	None yet, BID sent 16 Oct 2018		
Transnet – Engineering services	X	-	None yet, BID sent 16 Oct 2018		
Transnet – Business Unit	X	-	None yet, BID sent 16 Oct 2018		
Transnet – Group Capital	X	-	None yet, BID sent 19 Oct 2018		
DWS	X		None yet, BID sent 18 Oct 2018		
<b>Communities</b>					

<b>Dept. Land Affairs</b>					
	X	-	None yet, BID sent 19 Oct 2018, follow-up sent to colleague 22 Oct 2018		
<b>Traditional Leaders</b>					
<b>Dept. Environmental Affairs</b>					
National	X	-	None yet, BID sent 16 & 18 Oct 2018		
Provincial	X	-	None yet, BID sent 16 Oct 2018		
<b>Other Competent Authorities affected</b>					
SAHRA	X	-	None yet, BID sent 16 Oct 2018		Heritage (iv) (1) (a)
EKZMW	X	-	None yet, BID sent 16 Oct 2018		Marine Ecology (iv) (1) (a)
DAFF	X		None yet, BID sent 16 Oct 2018		Marine Ecology (iv) (1) (a)
<b><u>OTHER AFFECTED PARTIES</u></b>					
<b><u>INTERESTED PARTIES</u></b>					
Johnny Vassilaros		18 Oct 2018	<ol style="list-style-type: none"> <li>1. I would like to know how the sand will be collected.</li> <li>2. Will they use the dredger system as Transnet is currently using?</li> <li>3. If so, would a dredger be available permanently?</li> <li>4. Where will they store the sand once the hopper is full?</li> <li>5. Will they just dump it on Vetch's Beach as they are still incapable of reaching the other</li> </ol>	<ol style="list-style-type: none"> <li>1. No new sand will be dredged; utilising the same sand that is being dredged by Transnet</li> <li>2. Yes</li> <li>3. There is no indication from Transnet that a dredger would be available permanently but part of the current investigation would be to determine the economic viability of the proposed extraction process based on the current dredging schedules and the current quantum of sand dredged and placed on the</li> </ol>	Extraction process and logistics

		<p>beaches?</p> <p>6. Will the mineral content be extracted on board before the clean sand is deposited to the hopper?</p> <p>7. Would any unwanted sediment be dumped out at sea?</p> <p>8. If permission is granted, would this be an on-going affair or will it be limited to a certain period?</p> <p>9.</p>	<p>beach, with any optimisation which can be affected (and as is required)</p> <p>4. Dredge and pump scheduling and bulk flow of sand to be determined in the proposed programme but no temporary storage envisaged at this stage.</p> <p>5. No change in existing scenario, no new sand dredged; utilising the same sand that is being dredged by Transnet. The entire process envisaged requires that hopper and pumping operation would be optimised and current problem areas rectified so that pumping of sand would be on a scientifically based and managed distribution to the entire beach.</p> <p>6. Extraction either on-board or at the hopper – this would form part of the proposed investigation.</p> <p>7. No, the proposals envisage an intervention in the current planned process in that instead of pumping 100% of the sand to the beach, the heavy minerals (possibly about 5%) would be extracted and the balance of “light” sands (some 95%) would still be supplied to the beach. It is not envisaged that there will be any unwanted or waste material.</p> <p>8. Ongoing, utilising the same sand that is being dredged by Transnet.</p> <p>9. We are following the public participation process for a Basic Assessment Report (BAR) as part of the prospecting right application and no public meeting is required (or has been requested by DMR) at this stage.</p> <p>Should there be any further questions you would like to discuss with Marine Sands, these can either be conveyed by email or please indicate if you would like for them to phone you;</p>	
Jeremy Williams	24 Oct 2018	<p>1. Are any mining rights being applied for outside of the Transnet areas?</p> <p>2. If mining were to go ahead, would processing of the sand lead to fine sediments into the marine environment.</p>	<p>Response by applicant:</p> <p>1. Marine Sands (Pty) Ltd has applied for only 3 prospecting areas. Area 3 corresponds to the new area that was part of the application by Transnet for sand for the extended harbour</p>	Mining rights & fines in the water column

		My concern with the fines was not the change in percentage, but where they end up. In bulk pumping as done for Durban beach rehab they probably remain mostly trapped in-between large grains. A concentration system similar to that used by RBM would result in significant proportion of fines in the tails which would be dumped at sea close to the surface (I assume.)	works, for which authorisation was recently granted. 2. The mining process would be different to RBM, which has a higher proportion of fine sediments. Any mining operations would operate within the dredger or hopper system operations, save that the heavy minerals would be removed from the sand. The balance of sand supplied to the beaches would effectively be no different from that currently supplied to the beaches.	
Malcolm Keeping	19 Oct 2018	1. If they do eventually get permission to go ahead with extraction of minerals, what will happen to the sand thereafter - will it be returned somehow to the beaches and will it be safe to do so? 2. Maybe this is an opportunity to insist that if this project goes ahead, then the booster pumps along the beachfront must be re-commissioned so the processed sand can be sent up to the northern beaches?	1. The sand will be returned to the beaches via the sand pumping scheme as normal 2. Noted	Sand hopper and beach nourishment
Jeremy Saville	11 Nov 2018	Response to notice at Moyo (UShaka) – “what do you think about that long sandbank that just hasn't gone away off the end of south pier. I understood that when the second dredger was brought on board, the trap would be back to it's old depth, but that sandbank is looking more and more like a permanent feature?”	The ILembe (dredger) is in Richards Bay after undergoing a facelift in the Durban harbour. Transnet know about the build-up according o the master of the Italeni (smaller dredger used mainly for channel maintenance dredging)	Dredging
Fiona MacKay	17 Oct 2018	Questioned whether the applicant is actually Mineral Sands Resources (Pty) Ltd (Mineral Commodities Ltd)? That is, the rights holder and mining company working at Tormin on the West Coast?	Applicant response "I confirm that we are not related or affiliated with either of the below mentioned companies" was communicated to the I&AP	
Paddy Norman	18 Oct 2018	Personally I thoroughly approve of making the best use of mined material. And extracting the more valuable minerals from an active sand winning operation appears to me to have more benefits than negative impacts. However, this could be more significant than it appears. If it proves economically viable it will open the door for	The project involves only extracting the heavies from existing dredged sand by Transnet; i.e. piggy-backing on their sand; no new sand will be dredged specifically for the heavy mineral extraction. Noted,	Extraction process and logistics, cumulative impacts of sand mining?



		<p>more “greenfields” offshore mining applications along our coastline. And at Durban it may put pressure to unnecessarily increase the pumping....</p> <p>Has anyone actually evaluated the extent to which this offshore mining has contributed to Durban’s coastline retreat? All mining would be small scale relative to big storm events, but destabilising the local sand migration system could have unexpected (cumulative?) impacts..</p>		
Des d’Sa, SDSEA	5 Nov 2018		Response by applicant to a telephonic discussion contained in Appendix 4.	
Bobby Peek, Groundwork	18 Oct 2018	Follow-up email by applicant further to telephonic discussion.	This application relates only to sand that is and will be dredged by Transnet, and specifically only to any of the heavy minerals within those dredged sands, that may prove economic to extract. Historically this sand has been used for beach nourishment on the Durban beaches.	Procedures

Copies of relevant emails are included in Appendix 4.4

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

**(1) Baseline Environment**

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

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

Sand is already dredged (removed) by Transnet from the offshore marine environment. The biophysical environment is thus what is contained within the dredger and sand hopper - *there will be no additional affect on the external environment*. Externally, the marine environment that is dredged east to north-east offshore of Durban is described below for context to provide a description of the baseline environment from which the dredger operates.

**GEOGRAPHICAL CONTEXT:** The main reason for the existence of Durban is the Durban Harbour, reportedly Africa's busiest port. The port is on the southern side of the City of Durban and to the south of this is an area known as The Bluff, characterised by ancient sand dunes (Berea Red Sands) rising to an elevation of 100 m. Between the immediate hinterland and the Bluff, lies an area termed the South Durban Basin, a flat area of low elevation, historically mostly swampland, which was infilled and where much of Durban's industry is based. The Durban area has a climate classification of *Cfa*, according to the Köppen-Geiger Climate Classification (Conradie, 2012), meaning a warm temperate climate, fully humid with a hot summer. Rainfall is mostly in summer, averaging 1 006 mm per annum.

**OCEANOGRAPHIC SETTING:** The KZN coastline is bathed by the warm waters of the Indian Ocean, with the strong Agulhas Current flowing in a south-westward direction, transporting warm water polewards. Ocean temperatures off the KZN coast are warm (typically 20–26°C), which is a contributing factor to the warm climate and high humidity levels, particularly in summer. Durban is at the southern end of what is termed the KZN Bight, which refers to the concave curvature of the coastline between Cape St Lucia and Durban (Roberts, et al., 2016), where the coastline recedes from the shelf edge and the continental shelf widens to almost 50 km at its widest point off the Thukela River (Guastella & Roberts, 2016). The continental shelf narrows south of Durban (8 km wide with a gradient ranging from 2-8°) characterised by a wave- and current-dominated oceanographic regime (Cawthra et al., 2012). There is often the presence of a semi-permanent, mesoscale, cyclonic ocean circulation inshore of the main Agulhas Current between approximately Durban and Park Rynie, referred to as the Durban Eddy (Guastella & Roberts, 2016); this feature is responsible for frequent nearshore current reversals, i.e. north-eastward currents, opposite to the "expected" south-westward flowing Agulhas Current.

**WAVE ENVIRONMENT, LONGSHORE DRIFT & MARINE SEDIMENTS:** The KZN coastline is dynamic, and is subject to large swell events, associated with cut-off low (COL) pressure systems, cold fronts and dissipating tropical storms (Guastella & Smith, 2018). Based on a combined CSIR/Transnet waverider buoy dataset for Richards Bay and Durban for the 18-year period from 1992 to 2009, the average significant wave height (Hs) for Durban is 1.65 m, with an average swell direction of 130° (Corbella & Stretch, 2012). Swells from the south-south-east (SSE) dominate the spectrum (Appendix 5, Fig. 1), particularly in autumn, winter and spring, associated mainly with cold fronts. Longshore drift is predominantly from south to north, although reversals are possible during NE to E swells, which are more prevalent during summer. The nett south to north longshore drift, together with the blocking effect of the Durban Harbour south pier, which prevents the natural northward migration of marine sand, is responsible for the accumulation of sand in an area colloquially known as the "sand trap". This is the subject of Area 1 (KZN 30/5/1/1/2/10780PR) applied for. The sand from this area is dredged by Transnet to replenish Durban's beaches northward of the harbour. The

swells and local currents around the harbour piers also facilitate the accumulation of sand in the harbour entrance channel and surrounds, which corresponds to this application: Area 2 (KZN 30/5/1/1/2/10778PR), whereby maintenance dredging is required by Transnet to prevent sand build-up and the blocking of the Durban Harbour entrance channel. Area 3 (KZN 30/5/1/1/2/10779PR) corresponds to the depositional area further offshore (refer Fig. 2 in Appendix 2), where sand winning dredge sites have been approved by the authorities for raw materials required for Durban Harbour infrastructure construction. The proposed removal of heavy minerals is from existing sandwinning sites located within what Flemming (1981) has termed the “wave dominated nearshore sediment wedge”. The sand wedge is dynamic and constantly redistributed by currents and bottom surge associated with high swells and marine storm events (Cawthra, et al., 2012). The shelf sands represent the transgressive Holocene- to modern sediment wedge forming a seaward thinning unit stacked against the Pleistocene aeolianite/beachrock substrate (Cawthra, et al., 2012).

**MARINE FAUNA:** The marine fauna consists of fauna typically found on the KZN coast.

*Marine Mammals:* Cetaceans encountered include mainly the resident Humpback whale (June to November), and Bottlenose dolphins, however the following species may also be present: Minke whale, Southern Right whale, Sperm whale, Sei whale, Bryde's whale, Blue whale.

*Turtle* species likely to be encountered include Loggerhead, Leatherback, Green and to a lesser extent Hawksbill and Olive Ridley turtles.

*Ichthyofauna:* Fish species off the Durban coast are dominated by the Indo-Pacific ichthyofauna, with many endemic reef species, as well as migratory gamefish species. Whalesharks are possible during summer and a number of shark species are found offshore, including Zambezi, Great White, Tiger and Dusky sharks, as well as rays. Cuttlefish and squid are also known to occur. The area offshore of Durban is popular amongst ski-boat, kayak and paddleski fishermen, whilst the beaches are also popular amongst shore anglers. The annual sardine run occasionally brings a bounty of the small fish to the Durban area, coinciding with marine mammal and fish migrations.

*Benthic fauna:* Benthic invertebrate diversity is greatest along the east coast of South Africa, compared to the south or west coast (Sink et al., 2011). A total of 198 invertebrate macrofauna species have been recorded in the nearshore sandy substrate. Distinctive molluscs inhabit the sandy areas offshore of Durban that are dredged, amongst these various bivalves (e.g. mussels, scallops) and gastropods (e.g. frog shells). Various Meiofauna (organisms <1 mm in size) also inhabit the sandy substrates. Meiobenthos includes small species such as copepods, ostracods, gastrotriches, nematode worms and flat worms. Some of the meiofauna are adept at burrowing while others live in the interstitial spaces between the sand grains (Pilfrich, 2018).

**AVIFAUNA:** Durban Harbour is the subject of a consistent monitoring programme run by Dr David Allan, under the auspices of the Natural History Museum, where water birds within the harbour are monitored on a monthly basis. Species commonly sighted include various species of plover, terns, herons, egrets, cormorants, kingfishers, wagtails and ibis, as well as the occasional stork, flamingo, pelican, spoonbill (Allan, 2012). The offshore environment is relatively species poor, with mainly Grey Headed gulls, Kelp gulls and a variety of tern species and white-chin petrels. Gannets are occasional visitors along with the sardine run in winter. There is a resident pair of fish eagles in the vicinity of the Bluff Nature Reserve.

**HERITAGE:**

Previous studies (Maitland, 2016) have indicated a high number of shipwrecks in the area offshore of Durban. In a specialist study corresponding to Area 3, Maitland (2016) indicated a high number of Maritime Underwater Cultural Heritage (MUCH) sites from the shipwreck database, with the two most prominent wreck trap areas (due to topography, historical shipping limitations and prevailing weather conditions) being the Back Beach and the Bar – today these areas correspond to just offshore, north of the harbour; and the Harbour mouth.

However, the nature of the environment, poor historical reporting and the length of time since the wrecks occurred means these MUCH sites are hard to locate with any accuracy (Maitland, 2016). According to the database there are at least 35 vessels that may be found in the area that corresponds to PR Site 3, most of these in the more southern section of this area, corresponding to Alternative 2 in the study.

*As the prospecting environment will be on the dredger and/or at the sand hopper site from sand already dredged by Transnet, there will be no additional affect on the external environment.* There is no waste or discard material involved in this process or necessary disturbance of the surface. The EMP for Transnet contains the correct protocol in dealing with any MUCH sites encountered during dredging operations and any sites uncovered during dredging work are dealt with on an ad hoc basis.

## SOCIO-ECONOMIC ENVIRONMENT

Durban harbour is Africa's busiest port and the economic hub of the City of Durban. The dredger operates offshore and, when not in operation, moors alongside the Harbour "A" Berth near where the Sand Hopper is located on the quayside (refer map in Appendix 4.1). Owing to the project area being an offshore environment, there are no land occupants and no land-based communities are directly affected by any of the dredger operations. Surrounding communities to where the dredger operates include the Durban Point area (refer Appendices 2 and 4.1) and Bluff. The offshore area is utilised by ski-boat anglers, paddleskiers and kayak fishermen.

The project will not affect other person's socio-economic conditions. Prospecting is to occur from a dredger ship in the offshore sea zone or from the Sand Hopper in which the sand is deposited from the dredger, at "A" Berth, Port of Durban. The adjacent area to where the ship dredgers operate would be the eThekweni Municipality, but surrounding communities will be unaffected, as the activities take place offshore or at the sand hopper site within the Port of Durban.

### **(b) Description of the current land uses.**

The offshore environment corresponding to the prospecting rights applications is utilised by shipping traffic in and out of Durban Harbour, ski-boat anglers, paddleskiers and kayak fishermen.

The "A" berth is used for mooring of ships, more specifically the three Transnet dredgers, these being the Ilembe, Isandlwana and Italeni; the latter is used for maintenance dredging within the port of Durban and material dumped at an offshore dumpsite. The Ilembe and Isandlwana are used for dredging where sand is required to be moved off Durban, Richards Bay and Port Elizabeth. The Sand Hopper, in which the marine sands are deposited from the dredgers for Durban's beach nourishment scheme, is located at "A" berth near where the dredgers are moored, with a pipe extending from the quayside to the hopper (refer **Appendix 3**) to facilitate the transfer of sand.

The prospecting environment will be inside the dredger and/or sand hopper; there will be no additional affect on the external environment.

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

Sand samples would be collected offshore directly from on board the dredger at sea, as the sand is dredged or from within the sand hopper, once delivered from the dredger. The prospecting environment will be on the dredger and/or the sand hopper, thus the infrastructure will consist of the dredger itself and the sand hopper. There will be no further disturbance of the earth surface, sea or seafloor caused by the prospecting methods beyond that caused by existing dredging operations,

### **(d) Environmental and current land use map.**

(Show all environmental, and current land use features).

A map showing the offshore areas applied for in relation to Durban is depicted in **Appendix 2, Figure 2.**

**v) 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).

The sampling will not involve any mechanical sampling equipment and will thus have no impact on mechanical operations or additional environmental impacts. The sampling would be done by hand and all sampling would be done without any noise pollution or disruption to third party activities. The sampling would be done at selected points within the sand collection and distribution system, at the sand hopper or alternatively on the dredger. Each prospecting phase is dependent on the results of the preceding phase.

Potential impacts of the prospecting application are minimal, as this is an application for a prospecting right where sand samples will be taken from an existing process; there will be no additional processes required to obtain samples for analysis.

The only risks envisaged would be injuries to staff if standard safety protocols are not adhered to on site, i.e. safety at sea (if sampling directly from the dredger) or safety at the hopper site. Standard safety could include the wearing of PPE and if operating from the dredger at sea, it may be a Transnet requirement that the sampling personnel have minimum safety at sea qualifications, e.g. STCW.

**vi) 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).

Owing to the fact that sampling is being done on an existing dredging process, no additional environmental impacts are anticipated.

**vii) 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).

The prospecting activities are non-invasive and hence will have no physical environmental or social impact.

From a socio-economic perspective, a positive impact will be short-term, limited employment opportunities for prospecting in terms of sampling, analysis and reporting. This will be up to 36 months or the course of the prospecting programme, depending on its success,

**viii) 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).

The only mitigation measures envisaged are the following of safety protocols for sampling, i.e. standard safety could include the wearing of PPE and if operating from the dredger at sea, it may be a Transnet requirement that the sampling personnel have minimum safety at sea qualifications, e.g. STCW. The risk of not complying with these conditions are that staff could potentially get injured. If operating from the dredger, motion sickness preventative action may need to be employed, i.e. ingestion of motion sickness tablets.

**ix) Motivation where no alternative sites were considered.**

The limitations of the area are determined by the sites Transnet dredge and any alternatives are limited to Area 1 and 3, where prospecting rights have also been applied for. Alternative sites might be Area 1 and Area 3, for which separate prospecting rights applications have been submitted. No other alternative sites were considered, as the project is governed by the existing dredging programme.

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

Sampling is to be taken from two alternative locations, viz from the dredger or the sand hopper. There are no other suitable sampling sites. The advantage of sampling directly from the dredger is that you could know the exact location of the sand sampled at that time, whereas the sampling from the sand hopper would only be from the general area that the dredger was operating in during that dredge, as it would be the accumulated dredge sand that is deposited into the hopper.

**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.)**

There are only two sampling sites that could be considered, namely the dredger and the hopper sites. These are the only two sites where one can sample the dredged sands. The selection of the site that would be used for sampling will be determined in discussions with eThekweni Municipality and Transnet. Sampling at both of these sites would not involve any environmental disturbance, so there is no environmental impact at either site and therefore no opportunity to assess the process of selecting either site.

**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).

<b>NAME OF ACTIVITY</b>	<b>POTENTIAL IMPACT</b>	<b>ASPECTS AFFECTED</b>	<b>PHASE</b>	<b>SIGNIFICANCE</b>	<b>MITIGATION TYPE</b>	<b>SIGNIFICANCE</b>
<p><b>E.g. For prospecting</b> - drill site, site camp, ablation facility, accommodation, equipment storage, sample storage, site office, access route etc.</p> <p><b>E.g. For mining</b>, - excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablation, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc.)</p>	<p>Including the potential impacts for cumulative impacts</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc.)</p>		<p>In which impact is anticipated</p> <p>(E.g. Construction, commissioning, operational Decommissioning, closure, post-closure)</p>	If not mitigated	<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.</p> <p>(E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation).</p>	If mitigated
Collection of sand samples from dredger or sand hopper	PHYSICAL ENVIRONMENT	No identified additional environmental impact to normal dredging operations	Prospecting	Insignificant	No mitigation required	Insignificant
	SOCIO-ECONOMIC	Limited job creation	Prospecting	Moderate	No mitigation required	Low
	PERSONAL SAFETY	Safety on site when extracting sand samples	Prospecting	Moderate	PPE to be worn and site-specific health & safety requirements to be adhered	Low

					to; STCW qualification required if prerequisite for work onboard Transnet dredger, compliance with instruction of Transnet dredger staff or Sand hopper staff (as required)	
Analysis of sand samples	SOCIO-ECONOMIC  PERSONAL SAFETY	Limited job creation  Safety in laboratory when analysing sand samples	Analysis	Moderate	No mitigation required  PPE to be worn and laboratory health & safety requirements to be adhered to	Low

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.
No specialist reports required or been undertaken at this stage	N/A	<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	
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Attach copies of Specialist Reports as **Appendices**

**l) Environmental impact statement**

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

The prospecting activities are non-invasive and involve extracting samples from sand that has already been removed from the sea floor by third parties, hence no environmental or social impacts have been determined.

**(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**

Refer Appendix 2, Figure 2.

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

Positive impact with respect to limited job creation associated with sampling and analysis of samples.

Possible negative impact with respect to adherence of sampling personnel to health & safety requirements, mitigated fully by conforming to requirements.

Risk of sampling staff injury on site; mitigated fully by staff conforming to health & safety requirements and adhering to instruction by dredger and/or hopper relevant personnel.

**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.**

Nil

**n) Aspects for inclusion as conditions of Authorisation.**

(Any aspects which must be made conditions of the Environmental Authorisation)

Nil

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

(Which relate to the assessment and mitigation measures proposed)

Nil

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

**i) Reasons why the activity should be authorized or not.**

The activity should be authorised as there are no anticipated environmental impacts of the proposed activity. There are limited safety issues that can be fully mitigated against. If the project is successful there could be significant economic benefit.

**ii) Conditions that must be included in the authorisation**

Nil

**q) Period for which the Environmental Authorisation is required.**

Three 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.**

No rehabilitation is required, as there is no negative impact on the environment during the prospecting stage, therefore no provision needs to be made for funding any rehabilitation for the prospecting stage.

i) **Explain how the aforesaid amount was derived.**

See above

ii) **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).

See above

t) **Specific Information required by the competent Authority**

i) **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** .

As this prospecting right application is based on sampling sand that already has been removed legitimately by dredging by third parties, this does not apply at this stage

(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).

As this prospecting right application is based on sampling sand that already has been removed legitimately by dredging by third parties, this does not apply at this stage

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 an **Appendix**).

As this prospecting right application is based on sampling sand that already has been removed legitimately by dredging by third parties, this does not apply at this stage

**PART B**  
**ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT**

**1) 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).

The EAP has been addressed 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).

This has been addressed 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 should be avoided, including buffers.

Attached as **Appendix 2.**

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

- i) **Determination of closure objectives.** (ensure that the closure objectives are informed by the type of environment described)  
No environmental damage is anticipated and therefore no closure plan is required
- ii) **Volumes and rate of water use required for the operation.**  
There will be no water consumption beyond that of human consumption of a small prospecting team (3 people)
- iii) **Has a water use licence has been applied for?**  
Not required or requested

iv) 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><b>E.g. For prospecting, -</b> drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc.</p> <p><b>E.g. For mining,-</b> 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.</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 m<sup>2</sup>)</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 Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.</p>
<p>Sampling dredged sand</p>	<p>Phase 1, 2 and 3</p>	<p>Nil, on ship or at hopper</p>	<p>Not required</p>	<p>No damage so compliant</p>	<p>N/A</p>

**e) Impact Management Outcomes**

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

<b>ACTIVITY</b> (whether listed or not listed)	<b>POTENTIAL IMPACT</b>	<b>ASPECTS AFFECTED</b>	<b>PHASE</b> In which impact is anticipated	<b>MITIGATION TYPE</b>	<b>STANDARD TO BE ACHIEVED</b>
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.	(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution 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.)  E.g. <ul style="list-style-type: none"> <li>• Modify through alternative method.</li> <li>• Control through noise control</li> <li>• Control through management and monitoring</li> <li>• Remedy through rehabilitation.</li> </ul>	(Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives etc.)
Sampling already dredged material	nil	nil	nil	N/A	N/A

**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).

<b>ACTIVITY</b> Whether listed or not listed.	<b>POTENTIAL IMPACT</b>	<b>MITIGATION TYPE</b>	<b>TIME PERIOD FOR IMPLEMENTATION</b>	<b>COMPLIANCE WITH STANDARDS</b>
(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.)	(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc.)	(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.)  E.g. <ul style="list-style-type: none"> <li>• Modify through alternative method,</li> <li>• Control through noise control,</li> <li>• Control through management and monitoring,</li> <li>• Remedy through rehabilitation.</li> </ul>	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.	(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)
Sampling dredged sand on dredge ship or at hopper	No impact	No impact, thus no mitigation required	No impact, thus no mitigation required	No impact, thus no mitigation required

**g) Financial Provision**

**(1) 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.**

No environmental impact of sampling dredged material, so no closure possible or required

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

No environmental impact of sampling dredged material ,so no closure possible or required

**(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.**

No environmental impact of sampling dredged material, so no closure plan possible or required. No mining anticipated under prospecting rights

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

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

No environmental impact, so no rehabilitation or financial provision required.

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

No environmental impact, so no rehabilitation or financial provision required.





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

As no environmental damage will be caused in the course of sampling dredged sand, we would be guided by the requirements of the department as to how frequently they will require a submission of performance assessment/ audit report

**n) 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.**

Employees would be informed in their letters of appointment, and in a code of standard basic operating conditions, which would address possible risk areas, and in addition at regular meetings and on company billboards or social media communication, as would be applicable

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

Employees and contractors would be informed of all requirements to ensure no degradation of the environment or pollution, although there is limited probability as there is limited opportunity for these occurrences in the sampling of the already dredged sand.

**o) Specific information required by the Competent Authority (Among others, confirm that the financial provision will be reviewed annually).**

Should there be a financial provision required this will be reviewed regularly, but there is no requirement at present, as there is no environmental damage possible in extracting samples of sand already dredged on a dredger or at the hopper

**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&As; **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**.

*L. Guastella*

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Signature of the environmental assessment practitioner:

Alan Smith Consulting

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Name of company:

10 December 2018

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Date:

## APPENDIX 1: DETAILS OF THE CONSULTANTS & PROOF OF QUALIFICATIONS

### ALAN SMITH CONSULTING

**Consultant name:** Dr Alan Smith (Pr.Sci. Nat.)

**Qualifications:** BSc Geology, BSc (Hons) Geology, MSc Geology, PhD Geology (all University of Natal Durban, now University of KwaZulu-Natal)

**Contact details:** *Landline:* 0312086896

*Mobile:* 0824336697

*Email:* [asconsulting@telkomsa.net](mailto:asconsulting@telkomsa.net)

Dr Alan Smith is an independent environmental consultant, with specialist skills including fluvial floodplain analysis, palaeoflood hydrology, palaeontology, coastal morphodynamics, estuarine morphodynamics and marine processes. Alan attained a PhD in Earth Science from the University of KwaZulu-Natal (1989) and has practised as an environmental consultant since he left the Council for Geosciences in 1993. He has provided Specialist Reports for both marine- and land- based projects. Alan's offshore work has included seabed mapping, heavy mineral prospecting and seabed ground truthing.

Alan has been researching fluvial systems since 1988. He has also conducted various river flood and coastal erosion investigations for various municipalities, organizations and individuals, both in KZN, Mozambique and Kenya. More recently Alan has compiled Palaeontological reports for renewable energy solar photo-voltaic parks in the Free State and N Cape. Examples of major projects which he has been involved with include the assessment of coastal erosion along the Dolphin, Umdoni and Ugu Coasts following the catastrophic storm surf erosion of March 2007. Alan was also involved in the offshore survey for sighting of the marine telecom fibre optic cable which landed at Mtunzini, the offshore component of the Richards Bay coal wharf development and Richards Bay Minerals offshore prospecting.

Alan is a Research Associate of the University of KwaZulu-Natal and is actively involved in scientific research on the topics on which he consults. This allows him to understand these processes better, keep scientifically current and be able to supply a contemporary science service. Alan has authored or co-authored 45 refereed papers (published both nationally and internationally) and regularly attended international conferences as a speaker delegate. Alan has lectured part-time in the School of Agriculture, Earth & Environmental Sciences (SAEES) at UKZN and was a co-supervisor on a PhD (2010-15) concerning river floods and Climatic Change.

**Consultant name:** Lisa Guastella (Pr.Sci. Nat.)

**Qualifications:** BSc Geography, BSc (Hons) Atmospheric Science, MSc Oceanography (all University of Cape Town)

**Contact details:** *Landline:* 0312086896

*Mobile:* 0828604043

*Email:* [lisagus@telkomsa.net](mailto:lisagus@telkomsa.net); [lisa.guastella@alumni.uct.ac.za](mailto:lisa.guastella@alumni.uct.ac.za)

Lisa is an environmental consultant and meteorologist/air quality specialist and oceanographer, qualified with a BSc (Geography), BSc (Hons) Atmospheric Science (1985) and MSc Oceanography (1988). Lisa has practised as an environmental consultant and specialist meteorologist and air quality consultant for approximately 20 years, during which time she has maintained air quality and meteorological instrumentation, performed data quality control and reported on meteorological conditions and air quality for South Durban, Richards Bay and Coega. She has been involved in the siting and installation of meteorological and air monitoring equipment and has a good understanding of local weather and climate conditions.

Lisa has been studying part-time towards a PhD in Physical Oceanography on oceanography of the KZN Bight and is a Research Associate of the Bayworld Centre for Research and Education (BCRE) and is actively involved in scientific research on oceanography, coastal processes and meteorology, subject matter in which she consults. Lisa has authored or co-authored 14 peer-reviewed scientific papers (published both nationally and internationally) and has regularly attended national and international conferences as a speaker delegate; she has presented 36 conference papers on subjects including air quality, meteorology, oceanography, coastal erosion, fisheries and climate change. She has co-authored a small-craft launch site policy for KZN and book chapters on coastal erosion and oceanography.

# Univerſitas Natalienſis



hoc ſcripto nos, Univerſitatis Natalienſis  
Vice-Cancellarius, Registrarius, teſtamur

ALAN MITCHELL SMITH

## Gradum Philoſophiae Doctoris in Facultate Scientiae

attigisse

*P. van Booyen*

Vice-Cancellarius

*[Signature]*

Registrarius

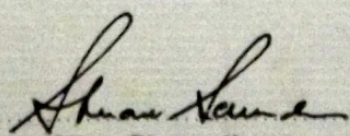
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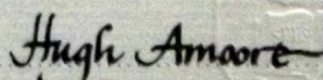


**UNIVERSITY OF CAPE TOWN**  
*with which is incorporated the South African College*

**Degree of Master of Science**

*We hereby certify that* LISA ANNE-MARIE GUASTELLA  
*was admitted to the Degree of Master of Science in*  
PHYSICAL OCEANOGRAPHY ON 24 JUNE 1988

  
Vice-Chancellor

  
Registrar

**APPENDIX 2: LOCALITY MAPS**

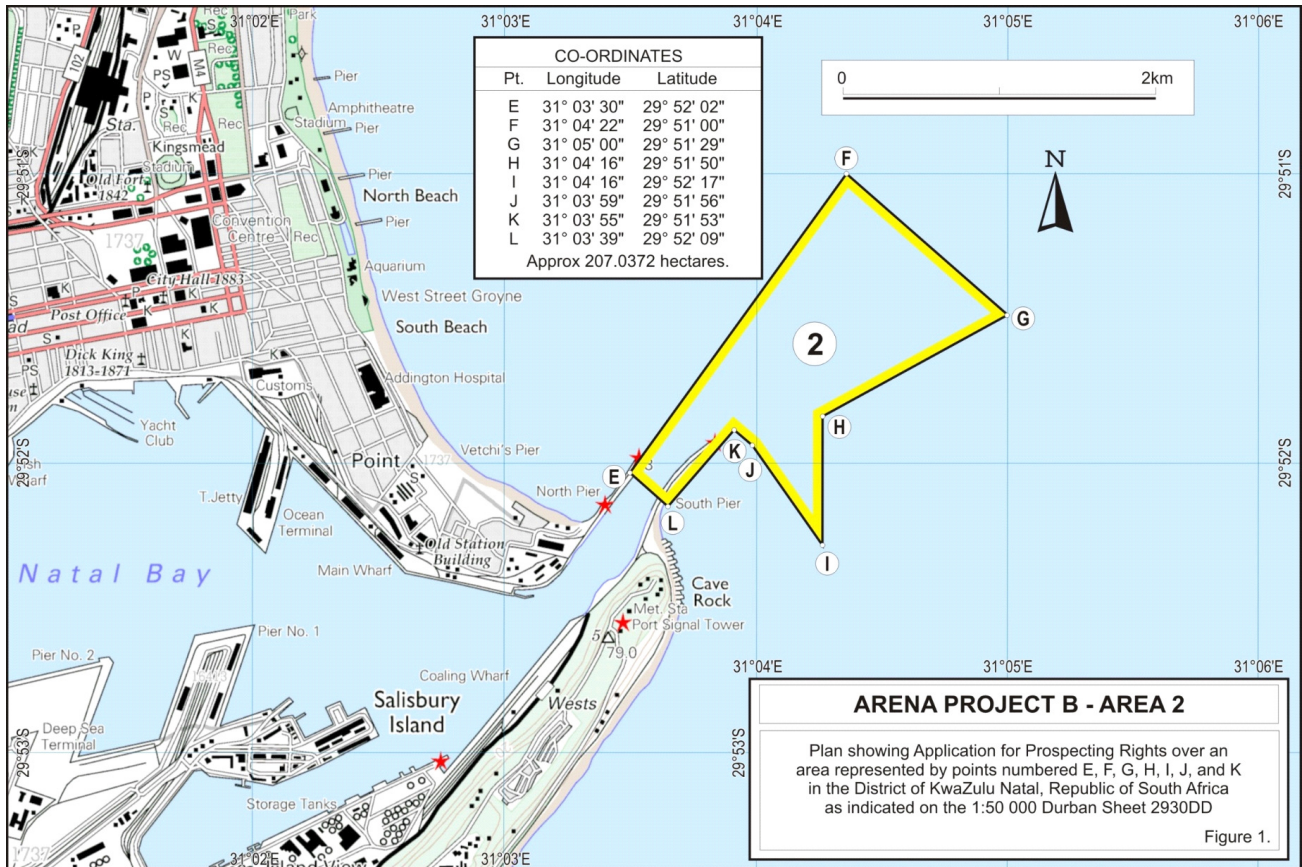


Figure 1: Prospecting area applied for

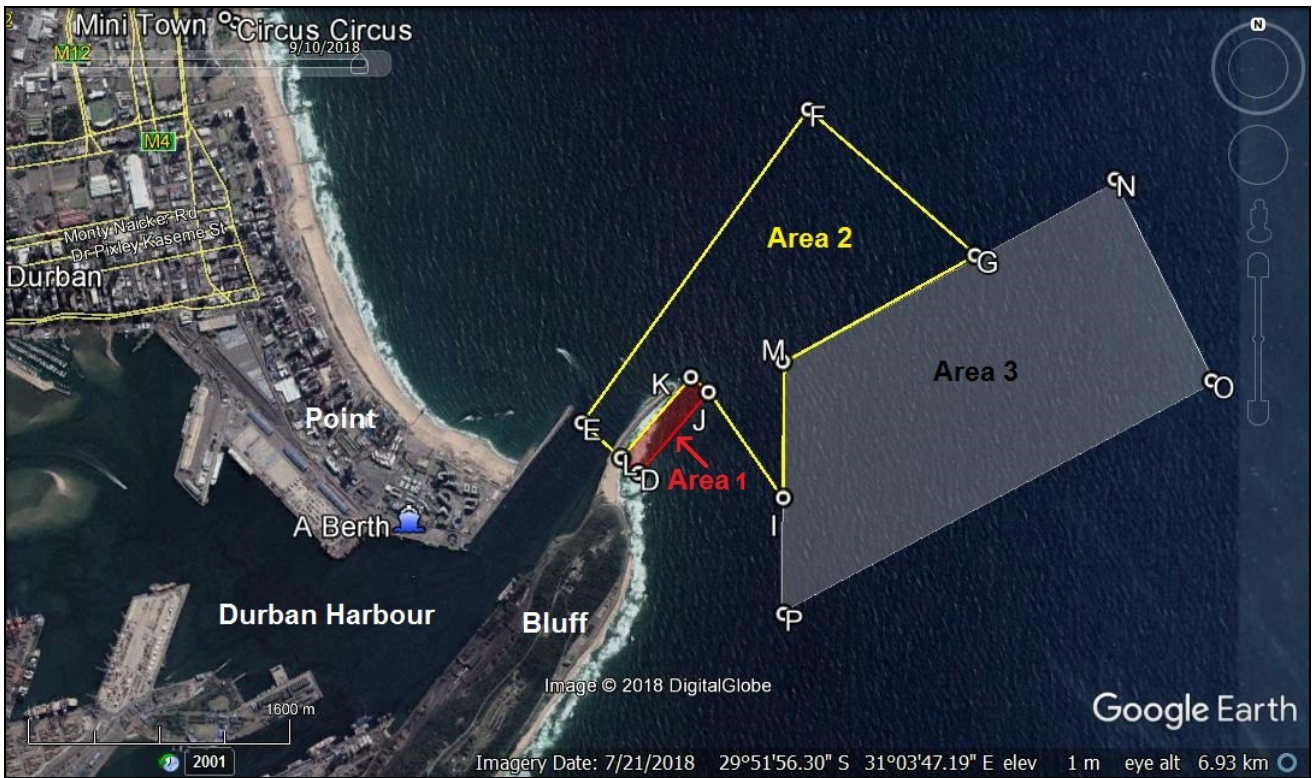


Figure 2: Map indicating prospecting areas applied for (this application is for Area 2) in relation to Durban. Surrounding land use at the Point and Durban CBD is residential and commercial, the Durban harbour perimeter quaysides serve port operations, whilst the northern end of the Bluff is a South African naval base.

**APPENDIX 3: SITE PHOTOGRAPHS**

Figure 1: Sand hopper located at Durban Harbour "A" berth



Figure 2: Transnet dredgers (pics: MarineTraffic.com)  
(a) Isandlwana



(b) Ilembe





# APPENDIX 4: PUBLIC PARTICIPATION

## 4.1 SITE NOTICES

The map below indicates the location of site notices, which were placed at:

- (i) Entrance gate to the National Sea Rescue Institute, sand hopper and Berth "A" at Durban Harbour,
- (ii) The landward end of uShaka Pier, (b)
- (iii) Notice board at the Point Watersports Club, Point, Durban

For reference, the location of the Sand hopper and Vetch's Beach is also indicated.



Photographs of site notices

(i) entrance gate to NSRI and Berth A	(ii) landward end of uShaka Pier	(iii) Notice board at the Point Watersports Club

**NOTICE OF APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF GOVERNMENT NOTICE REGULATION 983 (LISTING NOTICE 1) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT NO. 107 OF 1998)**

**DMR REF NO: KZN 30/5/1/2/10778PR and KZN 30/5/1/2/10779PR**  
**PROSPECTING ACTIVITIES FOR HEAVY MINERALS FROM DREDGED SAND OFFSHORE OF DURBAN, ETHEKWINI MUNICIPALITY, KWAZULU-NATAL**

Notice is hereby given in terms of Regulations published in Government Notice R. 982 of 04 December 2014, under sections 24(5) and 44 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, that Marine Sands (Pty) Ltd has applied for Prospecting Rights to conduct prospecting activities to determine if viable deposits of heavy minerals occur within the sand currently being dredged by Transnet offshore of Durban, which is then utilised, *inter alia*, by the eThekweni Municipality for beach nourishment purposes. The sampling will occur within the sand hopper situated at the A berth of the Durban harbour and/or on the dredging ships/s.

In order to obtain Environmental Authorisation from the Department of Mineral Resources (DMR), a Basic Assessment (BA) Process needs to be followed. Alan Smith Consulting has been appointed as independent environmental practitioners to carry out the BA Process. The proposed activities will take place offshore of Durban and are relevant to two sites, viz.:

- KZN 30/5/1/2/10778PR - Area 2: 207.0372 ha, up to 3 km offshore north-east to east of Durban harbour.
- KZN 30/5/1/2/10779PR - Area 3: 360.3509 ha, up to 3 km offshore ENE to east of Durban harbour.

A third contiguous site (Area 1, corresponding to an area known as the "sand trap" east of the Durban harbour South Pier) has also been applied for and is awaiting acceptance by DMR. Should this third application be accepted, it would have the same aim and processes as envisaged in the initial two sites.

**NOTICE OF PUBLIC PARTICIPATION PROCESS**  
 As part of the BA Process, the Applicant is required to notify Stakeholders of the application and make draft reports available in the public domain. Interested & affected parties (I&AP's) who wish to participate by providing comments, or who would like to obtain more information should please contact Ms Lisa Guastella or Dr Alan Smith at  
 Tel : 031 208 6896, E-mail : lisa.guastella@alumni.uct.ac.za / asconsulting@telkomsa.net, Address : 29 Browns Grove, Shearwood, 4091.



**R.S. SINGH & ASSOCIATES**  
 ATTORNEYS / NOTARIES / CONVEYANCERS

**LEANNE NAIDOO LLB (UKZN)**  
 ATTORNEY & CONVEYANCER

Suite A1, 1st Floor, Rocket Towers P O Box 56 1000, Chatsworth, 4030  
 230 Leany Naidoo Drive, Bayview Doonak 365, Durban  
*Specialist conveyancing, probate and deceased estate practitioners*  
 Tel : 031 400 8632/83 • Fax : 031 400 8308  
 Email: leanne@rs.singh.co.za • drshree@rs.singh.co.za



**ANNEXURE D NOTICE TO DISPLAY INTENTION TO APPLY FOR LIQUOR LICENCE IN TERMS OF SECTION (42)(1)(b)(iii) OF ACT KwaZulu-Natal Liquor Licensing Act, 2010 (Act No. 6 of 2010)**

**KZNLA 3**  
**Name and surname of the applicant: J K M RESTAURANT ENTERPRISES**

**Category of licence applied for: (on/off-consumption/micro-manufacturer/special event): (ON CONSUMPTION)**

**Type of premises for which licence is applied for: COMMERCIAL**

**Trading name of the premises: VICTORY LOUNGE**

**Address of the premises: SHOP 88 CHATSWORTH CENTRE 17 JOYHURST STREET CHATSWORTH 4092**

**Date of Display: 12 OCTOBER 2018**

**Expiry date of display 09 NOVEMBER 2018**

**NB: Objections should be lodged with the local committee in the district from where the application emanates within 21 days from the date of the display.**

**Address : KZN Liquor Authority : 1st Floor, The Marine, 22 Dorothy Nyembe Street, Durban 4001.**

716 Town Planning

716 Town Planning

**711 Public Notices**

**NOTICE OF SURRENDER OF ESTATE OF A DEBTOR'S ESTATE SECTION 4(1)**

Notice of Surrender of a debtor's estate in terms of Section 4(1) of the Insolvency Act No. 24 of 1936 as amended.

Notice is hereby given that application will be made in the High Court of South Africa, KWAZULU NATAL DIVISION, PIETERMARITZBURG on 8 NOVEMBER 2018 of the acceptance of the surrender of the estate of:

**NAME: CRAIG STEVEN POTGIETER**  
**OCCUPATION: SENIOR ADMINISTRATION CLERK**  
**ADDRESS: 18 EMILY ROAD, 13 PRESIDENT GARDENS, SCOTTSDALE EXT, PIETERMARITZBURG**

**DIVORCED** and that the Statement of Debtor's Affairs will lay for inspection at the office of the Master of the High Court at Pietermaritzburg for a period of fourteen (14) days from 12 OCTOBER 2018.

**SIGNED AT PRETORIA ON THE 2ND DAY OF OCTOBER 2018.**

REF: P631/18

**IN THE HIGH COURT OF SOUTH AFRICA KWAZULU-NATAL LOCAL DIVISION, DURBAN**  
 (CASE NO. 7946/18)

### 4.3 I&AP LIST

(a) The following is a list of interested & affected parties notified from the EAP's database; the last column indicates the date those I&AP's responded, whether officially registered or querying aspects of the proposal.

Name	Affiliation	email	Date notified	Registered
Sean Fennessy	ORI	<a href="mailto:seanf@ori.org.za">seanf@ori.org.za</a>	16-Oct	
Larry Oellerman	ORI	<a href="mailto:gcampkin@saambr.org.za">gcampkin@saambr.org.za</a>	16-Oct	
Fiona MacKay	ORI	<a href="mailto:fmackay@ori.org.za">fmackay@ori.org.za</a>	16-Oct	17-Oct
Brent Newman	CSIR	<a href="mailto:bnewman@csir.co.za">bnewman@csir.co.za</a>	16-Oct	
Mohammed Essop	KZN Subsistence Fishermen Forum	<a href="mailto:messop@telkomsa.net">messop@telkomsa.net</a>	16-Oct	
Shanice	SDCEA	<a href="mailto:shanice@sdceango.co.za">shanice@sdceango.co.za</a>	16-Oct	12-Oct
Des D'Sa	SDCEA	<a href="mailto:desmond@sdceango.co.za">desmond@sdceango.co.za</a>	16-Oct	
Bobby Peek	Groundwork	<a href="mailto:bobby@groundwork.org.za">bobby@groundwork.org.za</a>	16-Oct	
Alice Thompson	Earthlife Africa	<a href="mailto:alicetho@ispace.co.za">alicetho@ispace.co.za</a>	16-Oct	
Caro Schwegmann	Coastwatch	<a href="mailto:afromatz@telkomsa.net">afromatz@telkomsa.net</a>	16-Oct	
Di Jones	Coastwatch	<a href="mailto:Coastwatch@telkomsa.net">Coastwatch@telkomsa.net</a>	16-Oct	
Andre Fletcher	NSRI	<a href="mailto:station5@searescue.org.za">station5@searescue.org.za</a>	18-Oct	
Dave (DUC)	PWC	<a href="mailto:paul@duc.co.za">paul@duc.co.za</a>	16-Oct	
Paul Smit	General Manager: Point Water sports Club	<a href="mailto:gm@pwsc.co.za">gm@pwsc.co.za</a>	16-Oct	18-Oct
	Durban Ski-boat club	<a href="mailto:accounts@durbanskiboatclub.co.za">accounts@durbanskiboatclub.co.za</a>	16-Oct	
Paddy Norman	WESSA	<a href="mailto:paddyn@telkomsa.net">paddyn@telkomsa.net</a>	16-Oct	18-Oct
Aslam Peer	Cold Harvest (Bayhead)	<a href="mailto:aslam@saft.co.za">aslam@saft.co.za</a>	16-Oct	
Richard Holmes	Durban Boatowners Association	<a href="mailto:dboa@sphere.co.za">dboa@sphere.co.za</a>	14-Nov	
Leo Kroone	Durban Marina	<a href="mailto:admin@durbanmarina.co.za">admin@durbanmarina.co.za</a>	16-Oct	
Graham Rose	RNYC	<a href="mailto:commodore@rnyc.org.za">commodore@rnyc.org.za</a>	16-Oct	17-Oct
Jon Marshall	PYC	<a href="mailto:jon@enviroconsult.co.za">jon@enviroconsult.co.za</a>	16-Oct	
Malcolm Keeping	DUC	<a href="mailto:malcolm.keeping@sugar.org.za">malcolm.keeping@sugar.org.za</a>	16-Oct	18-Oct
Johnny Vassilaros	Paddleski Club	<a href="mailto:atlantistrade@telkomsa.net">atlantistrade@telkomsa.net</a>	16-Oct	22-Oct
Jeremy Cliff	KZN Sharks Board	<a href="mailto:cliff@shark.co.za">cliff@shark.co.za</a>	16-Oct	
Donavan Henning	Nemai consulting	<a href="mailto:donavanh@nemai.co.za">donavanh@nemai.co.za</a>	17-Oct	18-Oct
Jeremy Williams	SAUFF	<a href="mailto:jeremy@divefactory.co.za">jeremy@divefactory.co.za</a>	Response to notice	24-Oct
Rory O'Connor	Concerned citizen	<a href="mailto:roc@tiscali.co.za">roc@tiscali.co.za</a>	cc'd in by Johnny	
Eddie Litchfield	Paddleski Club	<a href="mailto:jayed@mweb.co.za">jayed@mweb.co.za</a>	cc'd in by Johnny	
Jeremy Saville	Concerned citizen (swell.co.za website)	<a href="mailto:jemsav@swell.co.za">jemsav@swell.co.za</a>	Response to notice	11-Nov

(b) The following is a list of authorities notified; the last column indicates the date those authorities responded, whether officially registered or querying aspects of the proposal.

Name	Affiliation	email	date notified	Registered as I&AP
Conrad Dlamini Bongimusa	Ward councillor (ward 26 Point)	<a href="mailto:Conrad.dlamini@durban.gov.za">Conrad.dlamini@durban.gov.za</a>	17-Oct	
JP Prinsloo	Ward councillor (ward 66 Bluff)	<a href="mailto:ward66@ethekwini.org">ward66@ethekwini.org</a>	18-Oct	
Greg Mullins	EPCPD	<a href="mailto:Greg.Mullins@durban.gov.za">Greg.Mullins@durban.gov.za</a>	16-Oct	
Chumisa Thengwa	EPCPD	<a href="mailto:Chumisa.Thengwa@durban.gov.za">Chumisa.Thengwa@durban.gov.za</a>	16-Oct	
David Allan	Natural History Museum	<a href="mailto:David.Allan@telkomsa.net">David.Allan@telkomsa.net</a>	16-Oct	18-Oct
Godfrey Vella	SCM	<a href="mailto:godfrey.vella@durban.gov.za">godfrey.vella@durban.gov.za</a>	16-Oct	
Claire Norton	Development Planning: Land Use Management branch	<a href="mailto:Claire.Norton@durban.gov.za">Claire.Norton@durban.gov.za</a>	16-Oct	
Dianne van Rensburg	eThekwini Municipality	<a href="mailto:diane.vanrensburg@durban.gov.za">diane.vanrensburg@durban.gov.za</a>	16-Oct	
Siraj Paruk	Transnet	<a href="mailto:Siraj.Paruk@transnet.net">Siraj.Paruk@transnet.net</a>	16-Oct	26-Oct
Nelson Mbatha	Transnet	<a href="mailto:Nelson.Mbatha@transnet.net">Nelson.Mbatha@transnet.net</a>	16-Oct	26-Oct
Simphiwe Mazibuko	Transnet	<a href="mailto:simphiwe.mazibuko2@transnet.net">simphiwe.mazibuko2@transnet.net</a>		26-Oct
Vishern Beakam	Transnet	<a href="mailto:vishern.beakam@transnet.net">vishern.beakam@transnet.net</a>		26-Oct
Clive Greyling	Transnet	<a href="mailto:Clive.Greyling@transnet.net">Clive.Greyling@transnet.net</a>	16-Oct	
Dorian Bilse	Transnet	<a href="mailto:Dorian.Bilse@transnet.net">Dorian.Bilse@transnet.net</a>	16-Oct	
Shamina Krishnaswamy	Transnet	<a href="mailto:Shamina.Krishnaswamy@transnet.net">Shamina.Krishnaswamy@transnet.net</a>	16-Oct	
Dineo Mazibuko	Transnet	<a href="mailto:Dineo.Mazibuko@transnet.net">Dineo.Mazibuko@transnet.net</a>	16-Oct	
Makhosazane Zondi	Transnet pipelines	<a href="mailto:khosi.zondi@transnet.net">khosi.zondi@transnet.net</a>	16-Oct	
Norman Ward	DWS	<a href="mailto:WardN@dws.gov.za">WardN@dws.gov.za</a>	18-Oct	
Jennifer Olbers	EKZNW	<a href="mailto:Jennifer.Olbers@kznwildlife.com">Jennifer.Olbers@kznwildlife.com</a>	16-Oct	
Santosh Bachoo	EKZNW	<a href="mailto:Santosh.Bachoo@kznwildlife.com">Santosh.Bachoo@kznwildlife.com</a>	16-Oct	
Dominic Wieners	EKZNW	<a href="mailto:Dominic.Wieners@kznwildlife.com">Dominic.Wieners@kznwildlife.com</a>	16-Oct	
Irene Hatton	EKZNW	<a href="mailto:irene.hatton@kznwildlife.com">irene.hatton@kznwildlife.com</a>	16-Oct	
J Zikhali	DAFF KZN	<a href="mailto:jeffreyzikhali@hotmail.com">jeffreyzikhali@hotmail.com</a>	18-Oct	
Dennis Fredericks	DAFF Marine Resource management	<a href="mailto:DennisF@daff.gov.za">DennisF@daff.gov.za</a>	18-Oct	
Desmond Stevens	DAFF Acting DDG Fisheries	<a href="mailto:DDGFisheries@daff.gov.za">DDGFisheries@daff.gov.za</a>	18-Oct	
JA Matshili	DAFF Research & Development	<a href="mailto:JusticeMA@daff.gov.za">JusticeMA@daff.gov.za</a>	18-Oct	
Omar Parak	DEDTEA	<a href="mailto:omar.parak@kznedtea.gov.za">omar.parak@kznedtea.gov.za</a>	16-Oct	18-Oct
Bonisiwe Sithole	DEDTEA	<a href="mailto:bonisiwe.sithole@kznedtea.gov.za">bonisiwe.sithole@kznedtea.gov.za</a>	16-Oct	
Madibe Ntombi	DWS	<a href="mailto:mngoma-madibe@dws.gov.za">mngoma-madibe@dws.gov.za</a>	16-Oct	
Neo Leburun	DWS	<a href="mailto:leburun@dws.gov.za">leburun@dws.gov.za</a>	16-Oct	
Lesa la Grange	SAHRA	<a href="mailto:llagrange@sahra.org.za">llagrange@sahra.org.za</a>	16-Oct	08-Nov
Alan Boyd	DEA Oceans & Coasts	<a href="mailto:Ajboyd@environment.gov.za">Ajboyd@environment.gov.za</a>	16-Oct	18-Oct
Feroza Albertus	DEA Oceans & Coasts	<a href="mailto:falbertus@environment.gov.za">falbertus@environment.gov.za</a>	18-Oct	
Nontsasa Tonjeni	DEA Oceans & Coasts	<a href="mailto:ntonjeni@environment.gov.za">ntonjeni@environment.gov.za</a>	18-Oct	
Karoon Moodley	KZN DMR	<a href="mailto:karoon.moodley@dmr.gov.za">karoon.moodley@dmr.gov.za</a>	18-Oct	
Port Captain	Transnet			TBA
Jo McMahon	Transnet: Group Capital (environment & sustainability)	<a href="mailto:Joseph.mcmahon@transnet.net">Joseph.mcmahon@transnet.net</a>	19-Oct	19-Oct
Sifiso Ndlovu	Land Claims Commission	<a href="mailto:Sifiso.ndlovu@drdlr.gov.za">Sifiso.ndlovu@drdlr.gov.za</a>	19-Oct	22-Oct
Sithembile Nxumalo	Dept of Land Affairs	<a href="mailto:Sithembile.nxumalo@drdlr.gov.za">Sithembile.nxumalo@drdlr.gov.za</a>	19-Oct	22-Oct
Thandeka Mbambo	DEA Oceans & Coasts	<a href="mailto:TMbambo@environment.gov.za">TMbambo@environment.gov.za</a>	01-Nov	01-Nov
Funanani Ditinti	DEA Oceans & Coasts	<a href="mailto:fditinti@environment.gov.za">fditinti@environment.gov.za</a>	01-Nov	01-Nov

#### 4.4 RELEVANT COMMUNICATIONS

##### (1) David Allan, eThekweni Municipality Natural History Museum

From: "David Allan <David.Allan@durban.gov.za>  
Thu 10/18, 9:53 AM  
To: Lisa Guastella

Hi Lisa  
Thanks for sending this through.  
Can't see any direct problems from a bird perspective I must admit!  
Thanks again.  
Regards - David

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**From:** Lisa Guastella [<mailto:lisa.guastella@alumni.uct.ac.za>]

**Sent:** 16 October 2018 09:22 PM

**To:** David Allan

**Subject:** Fw: Prospecting rights applications: Marine Sands

Hi David

Hope this email finds you, as my previous attempt turned out wrong.  
Please see message below FYI - not sure if a concern for you or not at this stage.  
Kind regards  
Lisa

**From:** Lisa Guastella

**Sent:** Tuesday, 16 October 2018 6:40 PM

**To:** Godfrey Vella; David.Allen@durban.gov.za; Claire.Norton@durban.gov.za; diane.vanrensburg@durban.gov.za;

Greg Mullins; Chumisa.Thengwa@durban.gov.za

**Subject:** Prospecting rights applications: Marine Sands

Good day

Please be advised that prospecting rights applications have been lodged with DMR to determine if viable deposits of heavy minerals exist in the sand dredged offshore of Durban by Transnet.

The advertisement, which appeared in the Mercury, 12 October 2018, and Background Information Document is attached FYI.

The applicant met with Godfrey Vella last week to discuss the proposal.

Please do not hesitate to contact me should you have any queries.

Kind regards

Lisa

*Lisa Guastella, M.Sc. (Pr.Sci.Nat.)*

*Environmental Consultant, Oceanographic and Air Quality specialist*

*Alan Smith Consulting*

*29 Browns Grove, Sherwood, Durban, 4091, South Africa*

*Tel: +27312086896*

*Cell: +27828604043*

[lisa.guastella@alumni.uct.ac.za](mailto:lisa.guastella@alumni.uct.ac.za)

[lisagus@telkomsa.net](mailto:lisagus@telkomsa.net)

## (2) Johnny Vasilaros, Durban Paddleski Club

From: Lisa Guastella

Wed 11/14, 12:54 AM

To: JOHNNY VASSILAROS <atlantistrade@telkomsa.net>

Hi Johnny

Apologies for the delay. Thanks for registering for the BAR process and for submitting your concerns.

Attached is an official response to your concerns raised (answers in green font).

Marine Sands have also expanded on the initial response I provided you to queries you sent via email, which are copied below - again their responses are in green font; my original response is in red font.

I would like to know how the sand will be collected. **No new sand dredged; utilising the same sand that is being dredged by Transnet.**

Will they use the dredger system as Transnet is currently using? **Yes**

If so, would a dredger be available permanently? **No new sand dredged; utilising the same sand that is being dredged by Transnet - would entail removing the heavy minerals from sand already dredged as part of ongoing process** There is no indication from Transnet that a dredger would be available permanently but part of the current investigation would be to determine the economic viability of the proposed extraction process based on the current dredging schedules and the current quantum of sand dredged and placed on the beach, with any optimisation which can be affected (and as is required)

If so, where will they store the sand once the hopper is full? **No new sand dredged; utilising the same sand that is being dredged by Transnet.** Again, dredge and pump scheduling and bulk flow of sand to be determined in the proposed programme but no temporary storage envisaged at this stage

Will they just dump it on Vetch's Beach as they are still incapable of reaching the other beaches? **No change in existing scenario, no new sand dredged; utilising the same sand that is being dredged by Transnet.** No – the entire process envisaged requires that hopper and pumping operation would be optimised and current problem areas rectified so that pumping of sand would be on a scientifically based and managed distribution to the entire beach.

Will the mineral content be extracted on board before the clean sand is deposited to the hopper? **To be advised - extraction either on-board or at the hopper** – this would form part of the proposed investigation

Would any unwanted sediment be dumped out at sea? **No new sand dredged; utilising the same sand that is being dredged by Transnet.** No, the proposals envisage an intervention in the current planned process in that instead of pumping 100% of the sand to the beach, the heavy minerals (possibly about 5%) would be extracted and the balance of "light" sands (some 95%) would still be supplied to the beach. It is not envisaged that there will be any unwanted or waste material

If permission is granted, would this be an on-going affair or will it be limited to a certain period? **Ongoing, utilising the same sand that is being dredged by Transnet.**

Please note, we are following the public participation process for a Basic Assessment Report (BAR) as part of the prospecting right application and no public meeting is required (or has been requested by DMR) at this stage. However, should there be any further questions you would like to discuss with Marine Sands, these can either be conveyed by email or please indicate if you would like for them to phone you; alternatively, they are coming down to Durban this Thursday and could possibly meet up with you if they can find a slot inbetween meetings with the various authorities; I await their final schedule.

Should you have any further queries, please do not hesitate to contact me.

Kind regards

Lisa

*Lisa Guastella, M.Sc. (Pr.Sci.Nat.)*

*Environmental Consultant, Oceanographic and Air Quality specialist*

Tel: +27312086896

Cell: +27828604043

[lisa.guastella@alumni.uct.ac.za](mailto:lisa.guastella@alumni.uct.ac.za)

[lisagus@telkomsa.net](mailto:lisagus@telkomsa.net)

## Concerns regarding the mineral extraction application

My main concern is the possibility of an increase in turbidity off the Durban coastline. We have already seen the detrimental affect the current sand pumping operation has had on our marine life. Any further increase in turbidity must be avoided at all costs. I therefore request further information as listed below.

### 1. Location of the extraction activity.

Will it be on board or in the hopper?

If on board the dredger, how could it ever be economically viable, when the dredger is being shared by several ports and only available in Durban for a few weeks a year? Or would Marine Sands provide its own dredger in order to operate throughout the year? To me that seems to be a more feasible option, as I cannot comprehend how any company, that is expected to make a substantial financial investment, be prepared to function only when the dredger is in town. Surely it will need to function continually throughout the year?

If Marine Sands does obtain its own dredger, where will it dump the clean sand, if the sand hopper is full and is unable to pump the sand on the Durban beachfront, as it is currently doing? I therefore foresee an increase in dumping sand offshore thus increasing the turbidity level off the city's coastline.

If the activity is to take place in the hopper, would there be sufficient space available to set up a plant, considering the lack of space due to the Point development currently underway? Where would the extracted material be stored before transported away?

### **Answer**

The intention is to work with Transnet and use their dredge only, based on the existing dredge/sand delivery arrangement of between 250,000 cu m and 500,000 cu m of sand being pumped per annum on to the beach as part of the sand nourishment scheme.

Further, current plans are to retro fit the heavy mineral separation plant on to the existing hopper system and in the long term only use the sand that is dredged for distribution through the hopper to the beach. There is a further opportunity that will be investigated that the sand to be dredged for use in construction as part of the port expansion programme would also be similarly processed to remove heavy minerals. This may necessitate a truck mounted separation plant or two separate plants.

Initial estimates are that there is sufficient area at the hopper to locate the separation plant.

The heavy minerals extracted from the sand would be trucked away as it accumulates.

Marine Sands does not intend to do any dredging other than through the Transnet dredges. No additional dredging is envisaged

### 2. Methodology of extraction process

Will it be a chemical process? If so what, if any, will find itself into the sea?

There will be no chemical part of the process. Initial mineral separation is envisaged as a wet cyclone gravitational system using the wet dredged sand. Further electromagnetic separation would be required to reach a marketable product (again no chemicals) and this latter process could be done at a remote inland site.

### 3. The EIA process

Is this application being made in its totality, or will it be done in piecemeal fashion?

It may appear that this application is only seeking approval to function under the current conditions, but we all know how easily Record of Decisions can be amended without any input from the registered I&APs.

I am concerned that Marine sands may at a later stage amend the RoD to be allowed to function using its own dredger and extracting the sand on board and dump the cleaned sand thus causing further turbidity to our coastline.

### **Answer**

This is the initial EIA process that only applies to the prospecting phase. Should the results of the prospecting phase prove successful, then a mining right for heavy minerals would be applied for, which would necessitate a second and more detailed and definitive EIA process along with the normal aspects of public participation.

This prospecting phase covers 3 subphases (1) a conceptual study in which no physical onsite work will take place and if it has positive results, will be followed by (2) a scoping study, which if successful would be followed by (3) a feasibility study. If the feasibility study had positive results, a mining right would be applied for.

### General Comments

The terms “prospecting” and “mining rights” obviously have intimidating connotations in and close to an environment of the Durban harbour and recreational areas. However, in law there is no alternative way to obtain rights to the process that is proposed by Marine Sands. That process should rather be considered as follows;

1. Sands have been, are and will continue to be, dredged in order to augment sand that is impeded from reaching the Durban beaches due to the harbour entrance construction, as part of the beach nourishment scheme.
2. The dredged sands contain certain heavy minerals (including dark mineral components) that may have a commercial value higher than that applied to beach nourishment.
3. These heavy minerals are unlikely to constitute more than 5-7% of the dredged sands and thus will not materially reduce the amount of sand that is pumped on to the beach.
4. Should it prove economic to extract those heavy minerals, additional income may be realised to offset current costs and the amount of dark minerals on Durban beaches should be reduced.
5. The proposed prospecting programme is geared to be non invasive.
6. The prospecting programme will have to consider and measure numerous factors before economic viability is confirmed, including the scale of the operation (limited by the rate at which sand is dredged (and ultimately supplied to the beach), the grade and composition of the heavy minerals in the dredged sand, the efficient operation of the hopper and beach pumping system and many other technical, logistical, commercial and contractual issues.

The Marine Sands proposals, if successfully implemented, should be viewed as a modification of existing processes and not as a mining venture.

From: JOHNNY VASSILAROS <atlantistrade@telkomsa.net>

Wed 10/24, 6:17 AM

To: 'Keith - Comline Inc.' <keith@comlinelaw.co.za>;

Good morning Keith,

Thanks for the offer to discuss the issues raised. I would prefer if these issues are discussed at a public participation meeting, which I assume needs to take place as per EIA regulations. I am sure many other I&APs will raise similar and other various issues.

Please notify us all when the first public participation meeting will take place.

Regards

Johnny Vassilaros

**From:** Keith - Comline Inc. [<mailto:keith@comlinelaw.co.za>]

**Sent:** Tuesday, 23 October 2018 2:50 PM

**To:** atlantistrade@telkomsa.net

**Cc:** 'Lisa Guastella'

**Subject:** RE: Prospecting rights applications: Marine Sands

Dear Johnny

I confirm that I represent, as a director, Marine Sands (Pty) Ltd and am involved in the prospecting rights application as well as any future operations of the project.

With reference to your email below, we believe it would be best to discuss your concerns telephonically (or Skype) in order to suitably address them.

Kindly let me know when you are free to discuss your concerns. I am available at most times during Wednesday to Friday this week, save for Friday morning between 09h30 and 11h00.

Regards



---

Keith Comline  
Director

*Tel:* +27 (0) 10 035 3797  
*Mobile:* +27 (0) 82 497 6859  
*Fax:* +27 (0) 86 552 8093  
*Website:* [www.comlinelaw.co.za](http://www.comlinelaw.co.za)  
Grosvenor Corner, 195 Jan Smuts, Rosebank  
Johannesburg, Gauteng, South Africa, 2196

### (3) Fiona MacKay, Oceanographic Research Institute

Wed 2018/10/17 11:30 AM

To: Fiona Mackay <[fmackay@ori.org.za](mailto:fmackay@ori.org.za)>; seanf@ori.org.za; bnewman@csir.co.za;  
'Judy Mann' <[jmann@saambr.org.za](mailto:jmann@saambr.org.za)>; cliff@shark.co.za; gcampkin@saambr.org.za

Dear Fiona

I have checked with the applicant, who has responded "I confirm that we are not related or affiliated with either of the below mentioned companies"

Thanks & regards

Lisa

*Lisa Guastella, M.Sc. (Pr.Sci.Nat.)*  
*Environmental Consultant, Oceanographic and Air Quality specialist*  
*Alan Smith Consulting cc*  
*29 Browns Grove, Sherwood, Durban, 4091, South Africa*  
*Tel: +27312086896*  
*Cell: +27828604043*  
[lisa.guastella@alumni.uct.ac.za](mailto:lisa.guastella@alumni.uct.ac.za)

From: Fiona Mackay <[fmackay@ori.org.za](mailto:fmackay@ori.org.za)>

CC: seanf@ori.org.za; bnewman@csir.co.za; 'Judy Mann' <[jmann@saambr.org.za](mailto:jmann@saambr.org.za)>; cliff@shark.co.za;  
gcampkin@saambr.org.za

Wed 10/17, 9:07 AM

Dear Lisa

Please can you confirm if the applicant is actually Mineral Sands Resources (Pty) Ltd (Mineral Commodities Ltd)? That is, the rights holder and mining company working at Tormin on the West Coast?

Thanks

Fiona

**Fiona MacKay**

**Senior Scientist**

**Oceanographic Research Institute**

**South African Association for Marine Biological Research**

Tel: +27 (31) 328 8172 Fax: +27 (31) 328 8188

Cell: +27 (82) 927 7890 E-mail: [fmackay@ori.org.za](mailto:fmackay@ori.org.za)

1 King Shaka Avenue, Point, Durban 4001 KwaZulu-Natal South Africa

PO Box 10712 Marine Parade 4056 KwaZulu-Natal South Africa

#### (4) Malcolm Keeping

"Malcolm Keeping <Malcolm.Keeping@sugar.org.za>

Fri 10/19, 9:22 AM

Lisa Guastella;

JOHNNY VASSILAROS <atlantistrade@telkomsa.net>; +2 more

Hi Lisa,

Maybe this is an opportunity to insist that if this project goes ahead, then the booster pumps along the beachfront must be re-commissioned so the processed sand can be sent up to the northern beaches?

Regards

Malcolm

**From:** Lisa Guastella [<mailto:lisa.guastella@alumni.uct.ac.za>]

**Sent:** Thursday, 18 October 2018 12:12 PM

**To:** Malcolm Keeping; JOHNNY VASSILAROS

**Subject:** Re: Prospecting rights applications: Marine Sands

Hi Malcolm

The sand will be returned to the beaches via the sand pumping scheme as normal, only difference is the sand may be "golder" because the heavies will have been extracted out; so Durban's "golden mile" may be just that!

For area 3 (sand designated for port construction), it will also simply be a process of removing the heavy mineral component - whether this will make the sand quality better for construction purposes I don't know, I will need to check this up with an engineer.

There are no chemicals involved in any extraction process (to my knowledge!).

Kind regards

Lisa

*Lisa Guastella, M.Sc. (Pr.Sci.Nat.)*

*Environmental Consultant, Oceanographic and Air Quality specialist*

*Tel: +27312086896*

*Cell: +27828604043*

[lisa.guastella@alumni.uct.ac.za](mailto:lisa.guastella@alumni.uct.ac.za)

[lisagus@telkomsa.net](mailto:lisagus@telkomsa.net)

**From:** Malcolm Keeping <[Malcolm.Keeping@sugar.org.za](mailto:Malcolm.Keeping@sugar.org.za)>

**Sent:** Thursday, 18 October 2018 11:59:59 AM

**To:** Lisa Guastella; JOHNNY VASSILAROS

**Subject:** RE: Prospecting rights applications: Marine Sands

Hi Lisa,

I guess the big question is, if they do eventually get permission to go ahead with extraction of minerals, what will happen to the sand thereafter - will it be returned somehow to the beaches and will it be safe to do so?

Regards

Malcolm

**(5) Paddy Norman, WESSA, Coastwatch**

Prospecting rights applications: Marine Sands

From: Lisa Guastella Thu 2018/10/18 11:54 PM

To: Paddy Norman <paddyn@telkomsa.net>; Dijones <dijones@iafrica.com>;  
jon@enviroconsult.co.za

Hi Paddy

Thanks for your email.

Some interesting questions and points raised.

I will get Alan to respond in more detail in due course.

The project involves only extracting the heavies from existing dredged sand by Transnet; i.e. piggy-backing on their sand; no new sand will be dredged specifically for the heavy mineral extraction.

Kind regards

Lisa

*Lisa Guastella, M.Sc. (Pr.Sci.Nat.)*

*Environmental Consultant, Oceanographic and Air Quality specialist*

*Alan Smith Consulting cc*

*29 Browns Grove, Sherwood, Durban, 4091, South Africa*

*Tel: +27312086896*

*Cell: +27828604043*

[lisa.guastella@alumni.uct.ac.za](mailto:lisa.guastella@alumni.uct.ac.za)

Sent: Thu 2018/10/18 11:17 AM

To: Lisa Guastella

From: Paddy Norman

CC: Dijones <dijones@iafrica.com>; jon@enviroconsult.co.za;

Hi Di, Lisa, and Jon

Personally I thoroughly approve of making the best use of mined material. And extracting the more valuable minerals from an active sand winning operation appears to me to have more benefits than negative impacts. However, this could be more significant than it appears. If it proves economically viable it will open the door for more "greenfields" offshore mining applications along our coastline. And at Durban it may put pressure to unnecessarily increase the pumping.

I would assume that someone has assessed the knock-on impacts on Durban's beaches from artificially moving sand around offshore? I raise this point because some of our South Coast beaches are still showing effects from the storm ten years ago, which caused a migration of sand into deeper water and lots of damage to coastal property. Is it even possible to do a meaningful sand budget for our highly dynamic (four-dimensional?) offshore environment? And I doubt if there are even adequate baseline studies for areas outside Ethekeweni.

Has anyone actually evaluated the extent to which this offshore mining has contributed to Durban's coastline retreat? All mining would be small scale relative to big storm events, but destabilising the local sand migration system could have unexpected (cumulative?) impacts.

The lower South Coast appears very vulnerable both in terms of its environment and in terms of its human resources.

Regards

Paddy

**(6) Jeremy Saville**

Mon 11/12, 2:35 PM

To: Jeremy Saville <jemsav@swell.co.za>

Hi Jem

Ha, ha, you are right, that sandbank does seem to be a permanent feature these days....

Yes, indeed, we are doing a basic environmental assessment for a proposed heavy mineral extraction project, using the already dredged sand - have attached the background info FYI & bedtime reading! At this stage it is just a prospecting application to explore the viability of doing it.

At the moment the I Lembe (dredger) is in Richards Bay after undergoing a facelift in the Durban harbour, haven't checked on the Isandlwana movements lately - you can check these out on [marinetraffic.com](http://marinetraffic.com). There is also a smaller dredger, the Italeni, which is used mainly for clearing port channels, think it should also be used for the entrance channel - they know about the build-up.

Ciao 4 now

Lisa

*Lisa Guastella, M.Sc. (Pr.Sci.Nat.)*

*Environmental Consultant, Oceanographic and Air Quality specialist*

*Tel: +27312086896*

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[lisagus@telkomsa.net](mailto:lisagus@telkomsa.net)

**From:** Jeremy Saville <jemsav@swell.co.za>

**Sent:** Sunday, 11 November 2018 1:07:53 PM

**To:** Lisa Guastella

**Subject:** sand trap

Howzit Lisa

i was at moyo last weekend and i saw the notice about mining and the sand trap, with you and alan listed as contacts.

I don't know much about the heavy minerals, but what do you think about that long sandbank that just hasn't gone away off the end of south pier. I understood that when the second dredger was brought on board, the trap would be back to it's old depth, but that sandbank is looking more and more like a permanent feature?

Jem

**(7) Jeremy Williams, SAUFF**

Jeremy Williams <jeremy@divefactory.co.za>

Wed 11/14, 11:11 AM

Hi Lisa,

Thanks for getting me a response. It answered my question.

Regards,

Jeremy

**From:** Lisa Guastella [<mailto:lisa.guastella@alumni.uct.ac.za>]

**Sent:** 13 November 2018 11:51 PM

**To:** Jeremy Williams

**Subject:** Re:

Hi Jeremy

Hope this email finds you well.

Please find attached the official response from Marine Sands.

Should you have any further queries, please do not hesitate to contact me.

Kind regards

Lisa

*Lisa Guastella, M.Sc. (Pr.Sci.Nat.)*  
*Environmental Consultant, Oceanographic and Air Quality specialist*  
Tel: +27312086896  
Cell: +27828604043  
[lisa.guastella@alumni.uct.ac.za](mailto:lisa.guastella@alumni.uct.ac.za)  
[lisagus@telkomsa.net](mailto:lisagus@telkomsa.net)

"Jeremy Williams <jeremy@divefactory.co.za>

Wed 10/24, 12:28 PM

Lisa Guastella

You forwarded this message on 2018/10/24 12:38 PM

Hi Lisa,

Yes, I got the document from Rory O'Connor. He passed it on to me as I represented SAUFF on the KZN MPA process run by Ezemvelo.

My concern with the fines was not the change in percentage, but where they end up. In bulk pumping as done for Durban beach rehab they probably remain mostly trapped in-between large grains. A concentration system similar to that used by RBM would result in significant proportion of fines in the tails which would be dumped at sea close to the surface (I assume.)

Regards,

Jeremy

**From:** Lisa Guastella [<mailto:lisa.guastella@alumni.uct.ac.za>]  
**Sent:** 24 October 2018 11:48 AM  
**To:** Robyn@Rob Allen  
**Cc:** 'Jeremy Williams'  
**Subject:** Re:

Thanks, Robyn

I am presuming Jeremy was forwarded the background info document from someone else?

Jeremy, thanks for registering; brief answers to your questions:

1) the prospecting rights are only relevant to existing areas dredged by Transnet - area 3 corresponds to the new area that was part of the application for sand for extended harbour works (EIA process done by Nema consulting) for which authorisation was recently granted.

2) As I understand it, processing would merely involve extraction of the heavy minerals out of the existing sand that is dredged by Transnet, thus there would be no change to the rest of the sand (i.e. proportion of fines), if anything Durban's beaches may be more "golden" as a result!

Please do not hesitate to contact me should you have any further queries/comments.

Otherwise, hope you are keeping well,

Kind regards

Lisa

*Lisa Guastella, M.Sc. (Pr.Sci.Nat.)*  
*Environmental Consultant, Oceanographic and Air Quality specialist*  
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[lisagus@telkomsa.net](mailto:lisagus@telkomsa.net)

MARINE SANDS (PTY) LTD

SAUFF

ATT: Jeremy Williams

jeremy@divefactory.co.za

PER Email via Lisa Guastella (Appointed EAP)

09 November 2018

Dear Mr Williams

**RE: RESPONSE TO QUERIES IN RELATION TO PROSPECTING RIGHTS APPLICATIONS WITH DMR REF NUMBERS KZN 30/5/1/1/2/10778PR and KZN 30/5/1/1/2/10779PR**

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We refer to the queries raised within the application of Mr Jeremy Williams to register himself, on behalf of SAUFF, as an interested and affected party in relation to the prospecting rights applications made by Marine Sands (Pty) Ltd under the aforementioned DMR reference numbers.

In particular, the queries raised were as follows:

1. Are there any mining/prospecting rights being applied for marine sand mining outside of the Transnet areas by Marine Sands (Pty) Ltd?
2. If mining was to go ahead would processing of the sand release fine sediments into the marine environment?

Our responses to the above queries are as follows:

**Response to Query 1:**

Marine Sands (Pty) Ltd has applied for only 3 prospecting areas which relate to the areas indicated in Annexure A.

It will be noted that Area 3 corresponds to the new area that was part of the application for mining rights by Transnet for sand, in relation to the extended harbour works (EIA process done by NEMA consulting) for which authorisation was recently granted.

**Response to Query 2:**

All of the process details and the products of the proposed process including any fine sediments would be determined by the prospecting program and the results received therefrom.

Subject to the outcome of the proposed prospecting investigations, the envisaged mining process (if such rights were to be applied for and granted) is distinct and not directly comparable to the Richards Bay process where dune sand is being mined, which generally includes sands of variable grain size and which tend to have higher proportion of fine sediments than are found in sea floor sediments which are the sands dredged by Transnet.

Furthermore, any mining operations that would be contemplated, subject to successful results in the proposed prospecting programme, would operate within the existing Transnet dredging and hopper system operations; save that that heavy minerals would be removed from the dredged sand. Accordingly, the balance of the sand

delivered to the beaches would be no different from the sand currently supplied to the beaches or for such other alternative uses as may be required by Transnet; in accordance with their current activities and operations.

We trust that the above addresses your queries and remain available should you have any further queries or concerns.

Yours faithfully  
**MARINE SANDS (PTY) LTD**



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Keith Comline  
Director

## **(8) Des D'Sa, SDCEA**

From: "Stuart Comline <comline@icon.co.za>

Mon 11/05, 4:13 PM

To: desmond@sdceango.co.za;

CC Lisa Guastella; +1 more

Good day Desmond

I refer to our telephone call this afternoon, which purpose was to introduce Marine Sands (Pty) Ltd to you.

As discussed, I attach the Background Information Document (BID) as part of our application for a prospecting right to the Department of Mineral Resources. The BID was published in the press on 16 October, a time which I believe you were overseas and when I first tried to call you to introduce our company.

The project is based on the concept that the sand dredged by Transnet may contain Heavy Mineral Sands, that could be extracted prior to the sands being supplied to the beach as part of the sand nourishment scheme. In terms of the law, we are obliged to apply for such a right in order to test the concept and obviously we are in discussions with Transnet at present.

Furthermore, as any sampling of the sand would be done on dredged material, either on the dredge or at the hopper, the proposed study has limited environmental impact

Should you wish to discuss any aspect, please feel free to contact me or our consultant, Lisa Guastella (copied here) of Alan Smith Consulting.

With best regards

On behalf of Marine Sands (Pty) Ltd

Stuart Comline

0836545449

## **(9) Bobby Peek, Groundwork**

From: "Bobby Peek <bobby@groundwork.org.za>

Thu 10/18, 3:52 PM

To: Stuart Comline <comline@icon.co.za>; Lisa Guastella; +1 more

Thanks Stuart.

To: "Bobby Peek <bobby@groundwork.org.za>

On 18 Oct 2018, at 15:44, Stuart Comline <[comline@icon.co.za](mailto:comline@icon.co.za)> wrote:

Good day Bobby

Following on from our call this afternoon, please find attached a copy of the Background Information Document ("BID") relating to Marine Sands' application for a prospecting rights offshore of Durban harbour. This application relates only to sand that is and will be dredged by Transnet, and specifically only to any of the heavy minerals within those dredged sands, that may prove economic to extract. Historically this sand has been used for beach nourishment on the Durban beaches.

I believe that Lisa Guastella of Alan Smith Consultants, our consultants on this project, originally sent this BID to you on 16 October, but from our conversation, in the event that you did not receive Lisa's email, I am sending you this copy.

The purpose of my call today was solely to introduce Marine Sands to you, however should you have further aspects that you wish to discuss please contact Lisa or myself.

Regards

Stuart Comline

0836545449



**APPENDIX 5: ADDITIONAL DIAGRAMS**

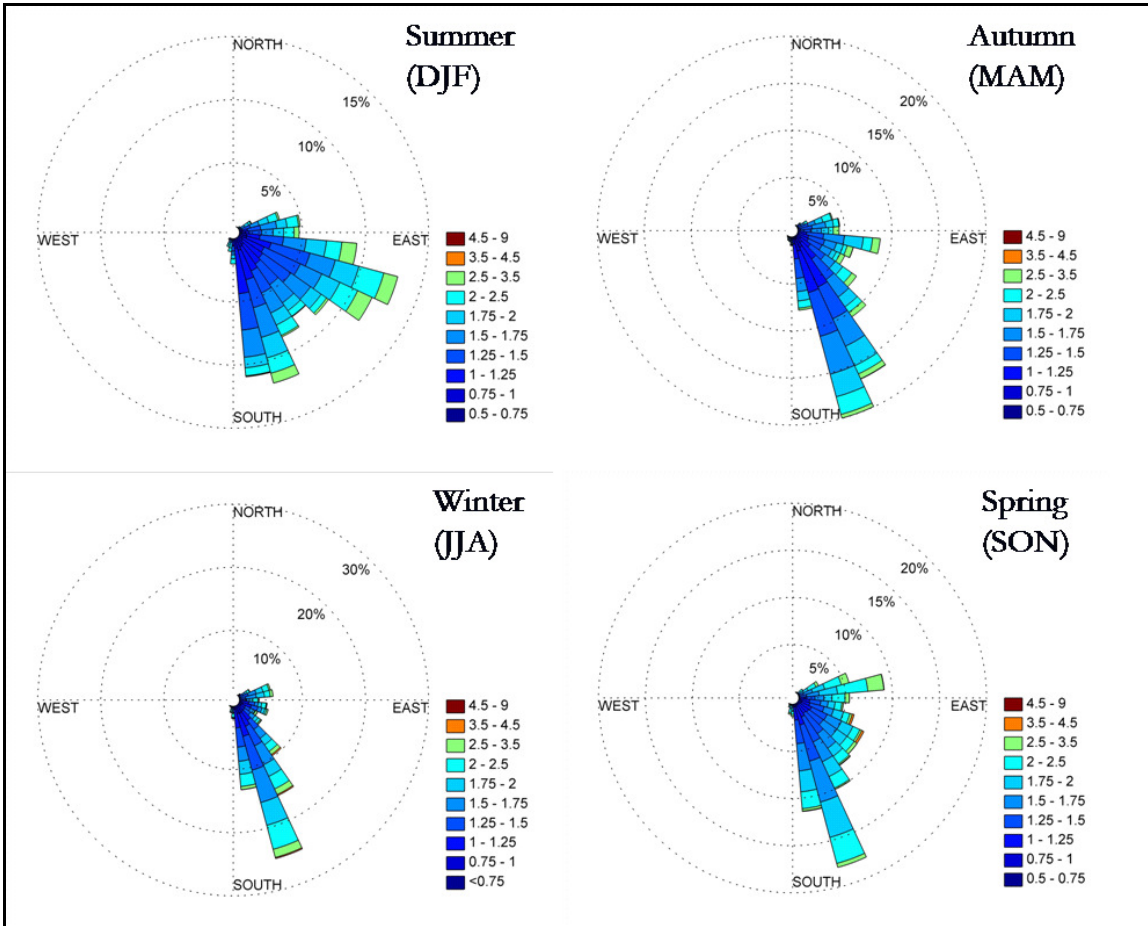


Figure 1: Seasonal swell distribution off Durban, based on 2007-2009 CSIR/ Transnet waverider data (S. Corbella, CCS construction).

## APPENDIX 6: REFERENCES

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