

**BASIC ASSESSMENT PROCESS FOR THE PROPOSED
PROSPECTING IN SEA CONCESSION AREA 14A BY TRANS
ATLANTIC DIAMONDS (PTY) LTD**

Trans Atlantic Diamonds (Pty) Ltd
Office 1603 Portside
4 Bree Street
Cape Town, Western Cape, 8001



TRANS ATLANTIC
DIAMONDS

**Appendix 16:
BID**

Anchor Environmental Consultants
8 Steenberg House, Silverwood Close, Tokai, South Africa
www.anchorenvironmental.co.za



AANSOEKER: Trans Atlantic Diamonds (Edms) Bpk

AANSOEK OM PROSPEKTEERREGTE EN OMGEWINGSMAGTIGING OM TE PROSPEKTEER IN DIE KUSLANGSE SEEKONSESSIEGEBIED 14A, TUSSEN GROOTHOEKEN EN DORINGBAAI LANGS DIE WESKUS

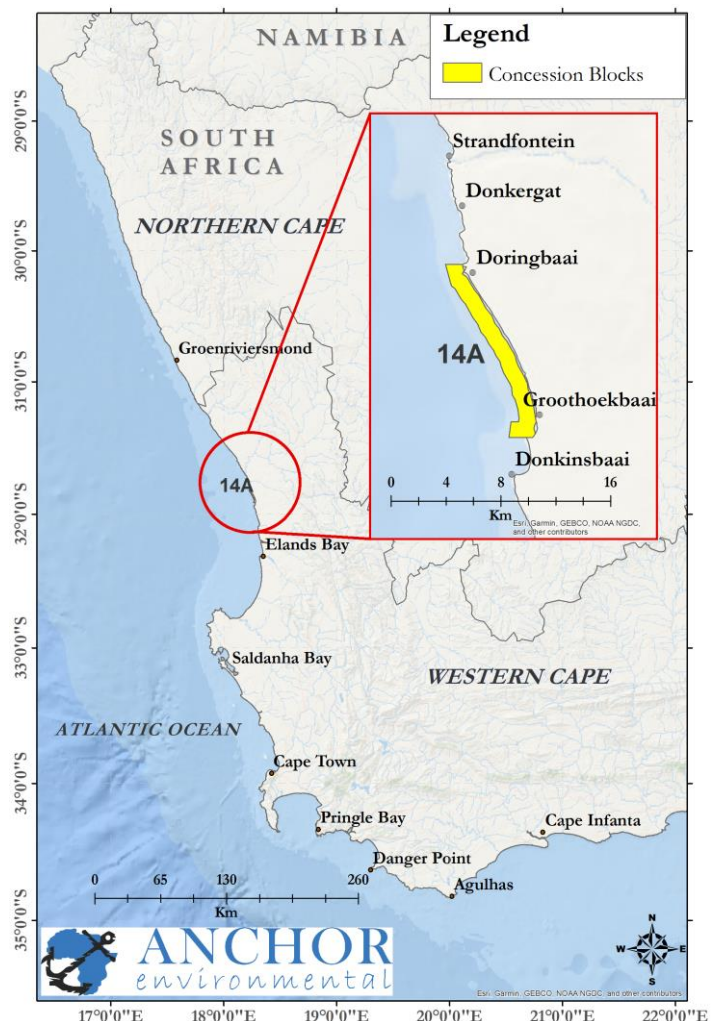
Oktober 2021

PROJEK AGTERGROND

Trans Atlantic Diamonds (Edms) Bpk (TAD) het aansoek gedoen vir die reg om diamante, edelgesteentes, swaar- en industriële minerale en yster-, basis en kosbare metale wat in Konsessiegebied 14A voorkom, te prospekter. Aansoeke is ingedien ingevolge die Wet op Ontwikkeling van Minerale en Petroleumhulpbronne ((28 van 2002), soos gewysig)). Aangesien prospektering 'n genoteerde aktiwiteit is in term van die Omgewingsimpak-assesseringsregulasies, 2014 (gewysig en afgekondig ingevolge die Wet op Nasionale Omgewingsbestuur (107 van 1998), moet TAD ook aansoek doen om Omgewingsmagtiging (OM) by die bevoegde owerheid, d.w.s. die Departement van Minerale Hulpbronne en Energie (DMHE). Om aansoek te doen vir OM, moet 'n Basiese Assesseringsproses van die voorgestelde aktiwiteit asook die potensiele impak daarvan uitgevoer word, tesame met 'n Openbare Deelnameproses en die bevindinge as 'n verslag aan die DMHE voorgelê word. Die Aansoeker het Anchor Environmental Consultants (Edms) Bpk aangestel as die Onafhanklike Omgewingsassesseringspraktisyn (EAP) om te help met die aansoek om prospekterregte en omgewingsmagtiging.

PROJEK LIGGING

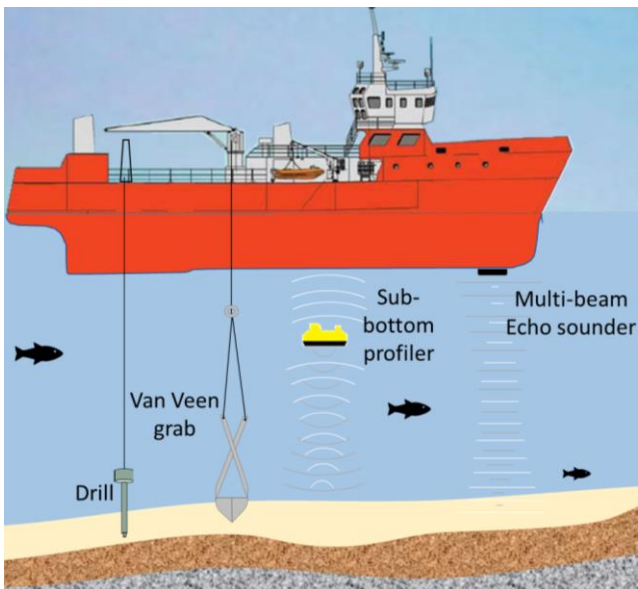
Seekonsessiegebied 14A is in die see langs die Weskus geleë en 1 240 ha groot. Hierdie konsessiegebied strek vanaf net suid van Groothoekbaai to net noord van Doringbaai, en is ongeveer 7 km suid van Strandfontein geleë (Figuur 1). Die area strek van die brandersone tot 1 km.



Figuur 1: Seekonsessiegebied 14A langs die Weskus

PROSPEKTERINGSMETODE

Geofisiese Opname: 'n Hoëfrekwensie "Multibeam Echo Sounder" en middelfrekwensie "sub-bottom profiler" sal gebruik word om 'n model van die seabodem en grondlae te skep en spesifieke rotstipes van belang (geologiese eenhede) te identifiseer. Hierdie toerusting werk deur middel van klankgolwe wat na die seabodem gestuur word en dan terugboks vanaf die seabodem, deur die water na die ontvanger. Die seine wat ontvang word, word gebruik om 'n beeld van die seabodem te skep. Resultate van hierdie opname sal gebruik word om die toepaslike boormetode, boorterreine en die ontwerp van die mynbouvaartuig in te lig (Figuur 2 en 3).



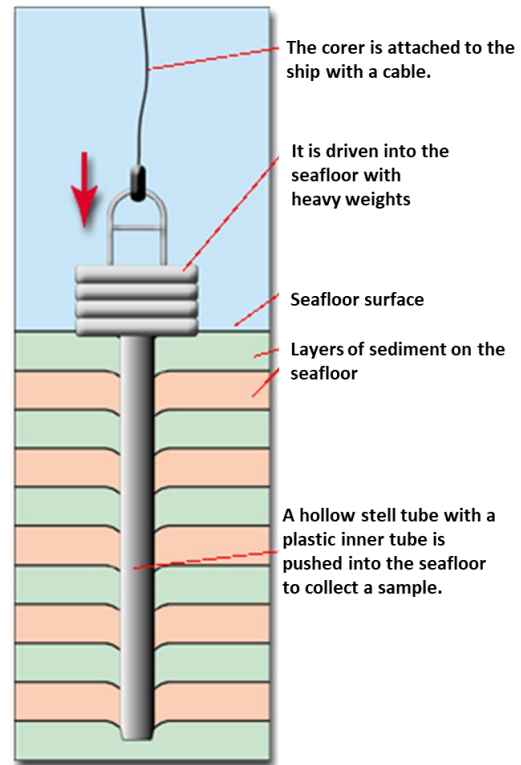
Figuur 1: Verskeie metodes wat gebruik sal word om grondmonsters te neem.



Figure 3. 'n Voorbeeld van 'n "sub-bottom profiler". Bron: Seatronics.

Kernmonsters: Seavloermonsters sal versamel word met behulp van 'n Vibracore, Gravity Core of Sonic Core (Figuur 4). 'n "Core" dring die

seevloer binne en versamel grondmonsters. Dit sal inligting oor die struktuur van die seevloer, grondlae en geologiese eenhede verskaf. Resultate van hierdie opname sal help met die ontwerp van die boorwerktuig (sien hieronder) en mynbouvaartuig.



Figuur 4. 'n Voorbeeld van 'n corer. Bron: British Ocean Sediment Core Research Facility.

Boor: Voornemende teikenareas moet ondersoek word deur 'n spesiaal-ontwerpte boorwerktuig wat grond uit die seabodem kan graaf. Grondmateriaal sal op die vaartuig deur 'n DMS-verwerkingsaanleg, verwerk word. Uitskot sal oorboord gegooi word. Resultate van hierdie opname sal help met die ontwerp van die mynvaartuig.

Van Veen Grab (grypmonsters): Die instrument versamel oppervlakige grondmonsters wat ontleed word om makrofauna (klein seediertjies soos wurms, mossels en krappies) wat op en in die seevloer woon, te identifiseer en om geologiese eenhede van die seevloer te bepaal. Resultate sal gebruik word om die makrofauna

gemeenskappe in die gebied tydens en na prospektering en mynbou te beskryf en te monitor.



Figure 5. 'n Van Veen grab werk soos 'n klou om grond en makrofauna te "gryp" en op te skep.

POTENSIËLE IMPAKTE

(Belangrikheid van die impak word in hakies aangedui)

Sosio-ekonomies:

- Sosio-ekonomiese impakte op kusvisvang (Baie Laag)
- Sosio-ekonomiese impak op kleinskaalse visserye (Baie Laag)
- Sosio-ekonomiese impak op rotskreef (Baie Laag)
- Sosio-ekonomiese impak op ringnet vissery (Baie Laag)
- Streeks voordele (Laag positief)
- Plaaslike voordeel (Onbeduidend positief)

Mariene Ekologie en visserye:

- Seismiese versteuring op ongewerweldes, en vis (Baie Laag)
- Seismiese versteuring op seeskilpaaie (Onbeduidend)

- Seismiese versteuring op mariene soogdiere en seevoëls (Medium)
- Seismiese versteuring op seevoëls (Laag)
- Mariene megafauna botsings met opname vaartuie (Baie Laag)
- Seevloermonsters en grondafval (Laag)
- Fyn sediment stofwolke (Baie Laag)
- Fisiese versteuring as gevolg van ankers en kettings (Onbeduidend)
- Vrystelling van afval tydens skipbedrywighede (Baie Laag)
- Impak op visserye (Baie Laag)

Erfenis:

- Impak van boor- en grypmonsterneming op onderwater prehistoriese hulpbronne (Baie laag)
- Impak van boor- en grypmonsterneming op onderwater paleontologiese hulpbronne (Baie laag)
- Impak van boor- en grypsmonsterneming op Argeologiese Hulpbronne soos skeepwrakke (Geen)

"No-go" Opsie, d.w.s om nie met prospektering voort te gaan nie:

Positiewe impak van hierdie opsie

- Geen effekte op die bio- en geofisiese omgewing nie (Laag)

Negatiewe impak van hierdie opsie

- Verlies aan geleentheid om vas te stel of 'n diamanthulpbron in die konsessiegebied voorkom of nie (Laag)
- Verlore ekonomiese geleentheid (Laag)

AANSOEKPROSES EN TYDLYN

Fase 1: Indiening van aansoek

'n Prospekterreg- en omgewingsmagtigings-aansoek is by die DMHE ingedien en op 7 September 2021 aanvaar.

Fase 2: Aanvanklike kommentaar tydperk

Belanghebbende en Geaffekteerde Partye (B&GPe) word uitgenooi om te registreer en aanvanklike kommentaar op die aktiwiteit te lewer.

Fase 3: Sirkuleer Konsep BAR & Amptelike kommentaartydperk

'n Konsep Basiese-assesseringsverslag (BAR) sal vir 30-dae op ons webtuiste en by die Doringbaai e-sentrum, Doringbaai Biblioteek, Strandfontein Weskus Inligting-sentrum en Ebenhaeser Biblioteek vir die publiek beskikbaar wees. Dit sal 'n beskrywing van die voorgestelde projek, potensiële impakte en spesialisbevindinge insluit.

Fase 4: Openbare Deelname Vergadering

'n Openbare vergadering is in Doringbaai. Hiertydens sal lede van Anchor (die EAP) en Trans Atlantic Diamonds (die aansoeker) meer besonderhede oor die voorgestelde prospekteraktiwiteit verskaf en B&GPe raadpleeg. B&GPe sal dan ook die geleentheid hê om vrae te vra en kommentaar oor die aktiwiteit te lewer.

Fase 5: Dien finale BAR by die DMHE in

Belanghebbendes se kommentaar sal aangespreek en in die belanghebbendekonsultasieverslag, wat deel vorm van die finale BAR,

opgeteken word. Die finale BAR sal dan by die DMHE ingehandig word vir hersiening.

Fase 6: Besluit deur die DMHE

Die DMHE het 107 dae om al die dokumente na te sien en te besluit of Omgewings-magtiging vir prospektering in konsessie-gebied 14A toegestaan moet word of nie.

HOE OM DEEL TE NEEM

B&GPe word uitgenooi om te registreer en kommentaar te lewer op die aansoek om prospekterregte en omgewingsmagtiging (waarvan besonderhede in die BAR is) gedurende die Openbare Deelnameproses:

Vanaf: Woensdag 3 November 2021

Tot: Vrydag 3 Desember 2021 teen 17:00.

Metodes om te registreer en deel te neem:

1) Voltooi die vraelys of stel u kommentaar op 'n gewone dokument saam en stuur dit aan die kontakpersoon hieronder per pos, e-pos, telefonies, of handig dit by die Openbare Deelname Vergadering in.

2) Lewer u kommentaar tydens die Openbare Deelname Vergadering.

Verseker dat u naam, kontakbesonderhede, belangstelling in hierdie aktiwiteit (bv. inwoner, visserman) en metode waarop u gekontak wil word (foon/ WhatsApp/ e-pos/ pos), verskaf is.

Uitgenooi na die Openbare Vergadering:

Datum: Donderdag, 11 November 2021

**Lokaal: Miriam Owies Gemeenskapsaal,
Haweweg 1, Doringbaai**

Tyd: 18:00 – 20:00

Cheruscha Swart

Ekoloog in Omgewingskonsultant

Anchor Environmental Consultants (Pty) Ltd

Skakel: +27 21 701 3420

Posadres: Suite 8 Steenberg Huis, Steenberg Kantoor park,
Silverwood Close, Tokai, 7945

E-pos: cheruscha@anchorencvironmental.co.za

Webwerf: anchorencvironmental.co.za

APPLICANT: Trans Atlantic Diamonds (Pty) Ltd

APPLICATION FOR PROSPECTING RIGHTS AND ENVIRONMENTAL AUTHORISATION TO PROSPECT IN THE INSHORE SEA CONCESSION AREA 14A, BETWEEN GROOTHOEKBAAI AND DORINGBAAI ON THE WEST COAST

OCTOBER 2021

PROJECT BACKGROUND

Trans Atlantic Diamonds (Pty) Ltd (TAD) has applied for a right to prospect for diamondiferous and gemstone deposits in addition to other heavy minerals, industrial minerals, precious metals and ferrous and base metals that may exist within the application area, in terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002), as amended, within Sea Concession Area 14A. As prospecting is a Listed Activity under the Environmental Impact Assessment Regulations, 2014 (amended and promulgated in terms of the National Environmental Management Act (Act No. 107 of 1998)), TAD is also required to apply for Environmental Authorisation (EA) from the competent authority, i.e., the Department of Mineral Resources and Energy (DMRE). To apply for EA, a Basic Assessment of the proposed activity and its potential impacts, along with a Public Participation Process, must be conducted and the findings submitted as a report to the DMRE. The Applicant has appointed Anchor Environmental Consultants (Pty) Ltd (Anchor) as the independent Environmental Assessment Practitioner to assist with applying for prospecting rights and Environmental Authorisation.

PROJECT LOCATION

Sea Concession area 14A is located inshore on the West Coast and is 1 240 ha in extent. This is an inshore concession area that extends from just south of Groothoekbaai to just north of Doringbaai and is approximately 7 km south of Strandfontein (Figure 1). The concession area extends from the surfzone to 1 km offshore.

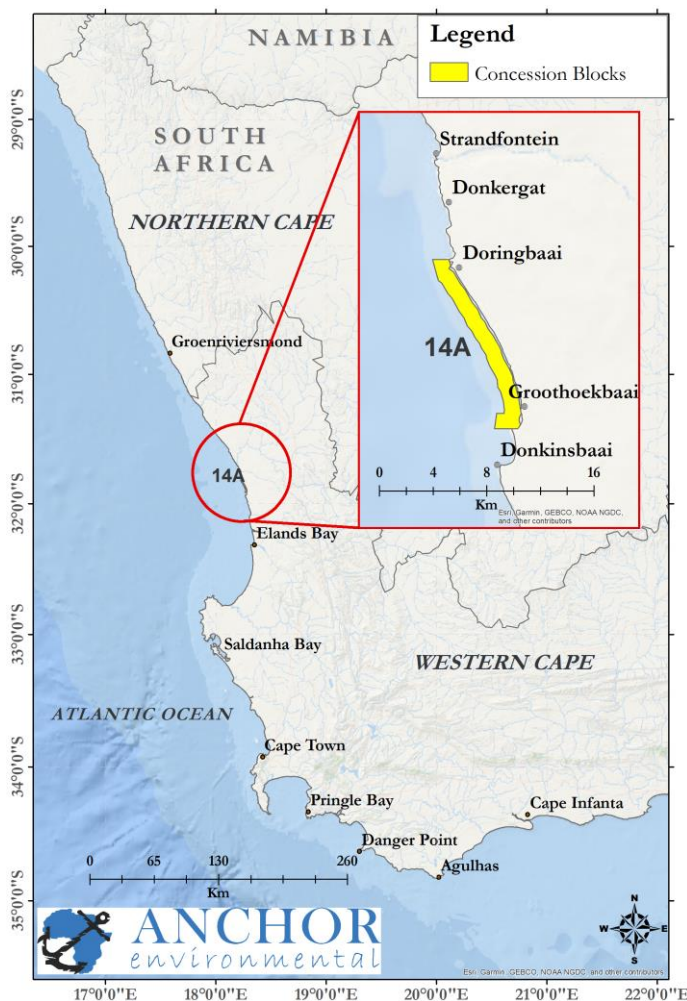


Figure 1: Sea concession 14A off the Western Cape Coast.

PROSPECTING METHOD

Geophysical Survey: A high frequency Multibeam Echo Sounder and mid-frequency sub-bottom profiler will be used to create a model of the seafloor and layers of sediment and identify specific rock types (geological units) of interest. This equipment works by sending out sound towards the seabed. The sound energy is reflected from the seabed and travels back through the water to the receiver. The received signals are processed and used to create an image of the seafloor. Results from this survey will be used to inform the appropriate drilling method, drill sites and the design of the mining vessel (Figure 2 and 3).

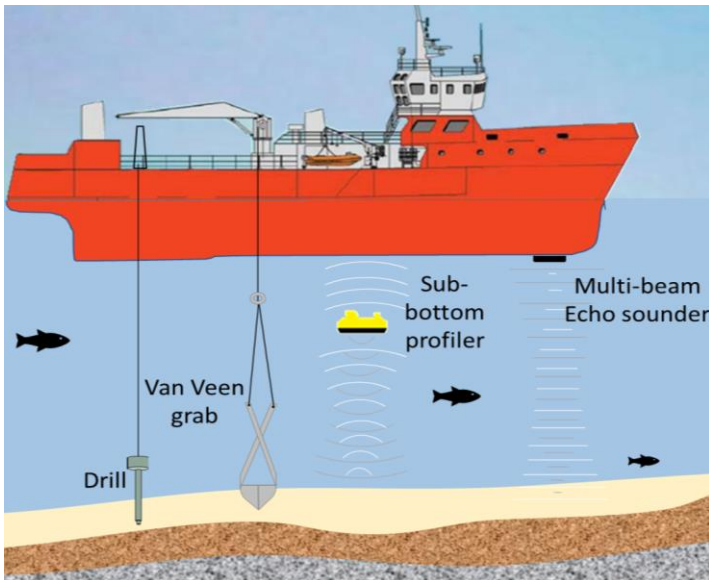


Figure 2: The various sampling methods that will be used.



Figure 3. An example of a sub-bottom profiler. Source: Seatronics.

Coring: Seabed samples will be collected using a Vibracore, Gravity Core or Sonic Core. A core penetrates the seafloor and collects sediment samples (Figure 4). It will provide information on the structure of the seafloor, sediment layers

and geological units. Results from this survey will be used to inform the engineering of the drilling tool (see below) and mining vessel.

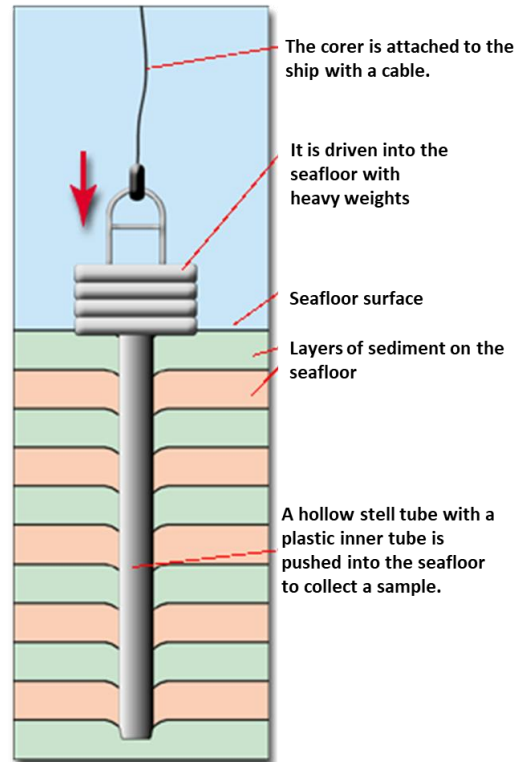


Figure 4. Example of a corer. Source: British Ocean Sediment Core Research Facility.

Drilling: Prospective targets need to be analysed by a uniquely designed drill tool that will dredge gravel from the seabed. Material will be processed onboard by a DMS processing plant and tailings discarded overboard. Results from this survey will be used to inform the engineering of the mining vessel.

Van Veen Grab sampling: The grab collects surficial sediment samples that are analysed to identify benthic macrofauna (small animals such as worms, mussels, and crustaceans) to determine geological units of the seafloor (Figure 5). Results from this survey will be used to describe and monitor the baseline macrofaunal communities in the area during and after prospecting and mining.



Figure 5. A Van Veen grab works like a claw to grab sediment containing macrofauna from the seafloor.

- Physical disturbance due to anchors and chains (Insignificant)
- Waste discharges during vessel operations (Very Low)
- Impact on fisheries (Very Low)

Heritage:

- Impacts of core and grab sampling on submerged prehistoric resources (Very Low)
- Impacts of core and grab sampling on submerged palaeontological resources (Very Low)
- Impacts of core and grab sampling on Maritime Archaeological Resources (None)

POTENTIAL IMPACTS

Socio-economic:

- Socio-economic impacts on inshore net fishers (Very Low)
- Socio-economic impacts on small scale fisheries (Very Low)
- Socio-economic impacts on rock lobster (Very Low)
- Socio-economic impacts on purse seine (Very Low)
- Regional benefits (Low positive)
- Local benefits (Insignificant positive)

Marine Ecology and fisheries:

(Significance of impacts are indicated in parentheses)

- Seismic disturbance to invertebrates and fish (Very Low)
- Seismic disturbance to turtles (Insignificant)
- Seismic disturbance to marine mammals (Medium)
- Seismic disturbance to and seabirds (Low)
- Marine megafauna collisions with survey vessels (Very Low)
- Seabed sampling and tailings disposal (Low)
- Fine sediment plumes (Very Low)

No-go Option, i.e., to not commence with the activity:

Positive impacts of this option

- No effects to the bio- and geophysical environment (Low)

Negative impact of this option

- Loss of opportunity to establish whether or not viable offshore resources exists in the concession area (Low)
- Lost economic opportunities (Low)

APPLICATION PROCESS AND TIMELINE

Phase 1: Lodge Application

A prospecting rights and environmental authorisation application has been lodged with the DMRE and was accepted on 7 September 2021.

Phase 2: Initial commenting period

Interested and Affected Parties (I&APs) were invited to register and provide initial comment on the activity.

Phase 3: Circulate Draft BAR & Official Public Participation Period

A Draft Basic Assessment Report (BAR) will be available on our website and at the Doringbaai e-centre, Dorinbaai Library, Strandfontein West Coast Information Centre and Ebenhaeser Library, for 30 days. It will include a detailed description of the proposed project, potential impacts and specialist findings.

Phase 4: Public Participation Meeting

A Public meeting is scheduled in Doringbaai during which members of Anchor (the EAP) and Trans Atlantic Diamonds (the applicant) will provide more detail on the proposed prospecting activity and consult with I&APs whom will then have the opportunity to ask questions and provide comment on the activity.

Phase 5: Submit Final BAR to the DMRE

Stakeholder comments will be addressed and included in the stakeholder consultation report which forms part of the final BAR. The final BAR will then be submitted to the DMRE for review.

Phase 6: Decision by the DMRE

The DMRE has 107 days to review all the documents and decide whether to grant Environmental Authorisation for prospecting in Concession area 14A.

HOW TO PARTICIPATE

I&APs are invited to register and provide comments on the application for prospecting rights and environmental authorisation (details of which are in the BAR) during the Public Participation Period:

From: Wednesday 3 November 2021

To: Friday 3 December 2021 at 17:00.

Methods to register and participate:

- 1)** Complete the questionnaire or compile your comment on a document of your choice and submit it to the contact person below via email, post, telephonically or submit it during the Public Participation Meeting.
- 2)** Attend and provide comment during the Public Participation Meeting.

Ensure that your name, contact details, interest in this activity (e.g. fisherman, resident, etc.) and way you wish to be contacted (e.g. email) are provided.

Invitation to attend the public meeting:

Date: Thursday, 11 November 2021

Venue: Miriam Owies Community Hall, 1 Haweweg, Doringbaai

Time: 18:00 – 20:00

Cheruscha Swart

Ecologist and Environmental Consultant

Anchor Environmental Consultants (Pty) Ltd

Tel: +27 21 701 3420

Postal Address: Suite 8 Steenberg House, Steenberg Office
Park, Silverwood Close, Tokai, 7945

Email: cheruscha@anchorenvironmental.co.za

Website: anchorenvironmental.co.za
