APPENDIX E7

Stakeholder Consultation

Background Information Document

DENC Application Reference Number
NC/BA/15/NAM/NAM/KLE1/2018

OVERVIEW OF PROJECT OUTPUTS
BASIC ASSESSMENT REPORT AND APPENDICES

Basic Assessment Report (BAR)	Pre-Application BAR, Draft BAR, **Final BAR**
Appendix A	Site Maps
Appendix B	Site Photos and Descriptions
Appendix C	Facility Illustrations
Appendix D	1. Marine Specialist Study 2. Heritage Impact Assessment – Archaeology 3. Heritage Impact Assessment – Palaeontology 4. Heritage Impact Assessment - Maritime Archaeology
Appendix E	E1-E6: Stakeholder Consultation Report 1. Proof of the placement of the relevant advertisements and notices. 2. Proof that the key stakeholders (other than organs of state identified in terms of Regulation 41(2)(b) of GN 733 received written notification of the proposed activities. 3. Comments and response report. 4. Proof that the Authorities and Organs of State received written notification of the proposed activities. 5. A list of registered Interested and Affected Parties. 6. Copies of any correspondence and minutes of any meetings held. **E7: Background Information Document**
Appendix F	Impact Assessment
Appendix G	Environmental Management Programme (EMPr)
Appendix H	Details of EAP and Expertise
Appendix I	Specialist Declaration of Interest
Appendix J	Additional Information 1. Nama Khoi Municipal Services Confirmation Letter 2. De Beers Waste Disposal Consent 3. De Beers Mining Rehabilitation Letter 4. Environmental Authorisation dated 25 January 2016 5. Department of Public Works permission to conduct Environmental Impact Assessment 6. Operation Phakisa inclusion letter 7. Coastal Waters Discharge Permit Application

BACKGROUND INFORMATION DOCUMENT

EXPANSION OF DIAMOND COAST AQUACULTURE DEVELOPMENT, NORTHERN CAPE

September 2018

Introduction

Diamond Coast Aquaculture (hereinafter referred to as DCA) owns and operates an aquaculture farm on Farm 654 Portion 1 near Kleinzee in the Northern Cape (Figure 1), which is situated on land previously owned and mined by the DeBeers Group. DCA now owns this land and currently holds the environmental authorisation and aquaculture right for this facility, which has an annual production capacity of 150 t of abalone and 200 t of seaweed. DCA intends to expand their annual production capacity to 1000 t of abalone, 2000 t of finfish, 5000 t of seaweed, 300 t of oysters, sea urchins and/or sea cucumbers. DCA is registered as an Operation Phakisa: Oceans Economy (Aquaculture) project[1].

DCA also intends to erect a small wind energy facility with the capacity to produce less than 10 MW amounting to a maximum of 14 turbines, each with the capacity to produce 660 kW, which will be used to run the aquaculture facility.

The expansion of the DCA farm triggers a number of Listed Activities in the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended by Government Notice No. 40772 of 7 April 2017), promulgated in terms of the National Environmental Management Act (Act No. 107 of 1998) (NEMA). DCA is therefore required to apply for Environmental Authorisation to the Northern Cape Department of Environment and Nature Conservation. DCA appointed Anchor Environmental Consultants (Pty) Ltd (Anchor) to undertake the Basic Assessment (BA) process. The application for Environmental Authorisation was submitted in August 2018 and has the application reference number: NC/BA/15/NAM/NAM/KLE1/2018.

Aim of this Background Information Document

This BID aims to provide you, as an interested and/or affected party (I&AP), with:

- An overview of the proposed development;
- An overview of the Environmental Impact Assessment process and studies being undertaken to assess the potential impacts, both positive and negative, associated with the proposed project; and
- Details of how to become involved in the process, receive information, or raise issues, which may be of concern and/or interest.

[1] Aquaculture is one of the sectors which form part of Operation Phakisa under the Ocean's Economy in South Africa. Operation Phakisa is an initiative of the South African government which aims to implement priority economic and social programmes better, faster and more effectively. Operation Phakisa was launched by the President of the Republic in October 2014. The sector offers significant potential for rural development, especially for marginalised coastal communities. Kleinsee is a derelict mining town and unemployment is high in this area. The proposed development will provide employment opportunities for the local and regional communities.

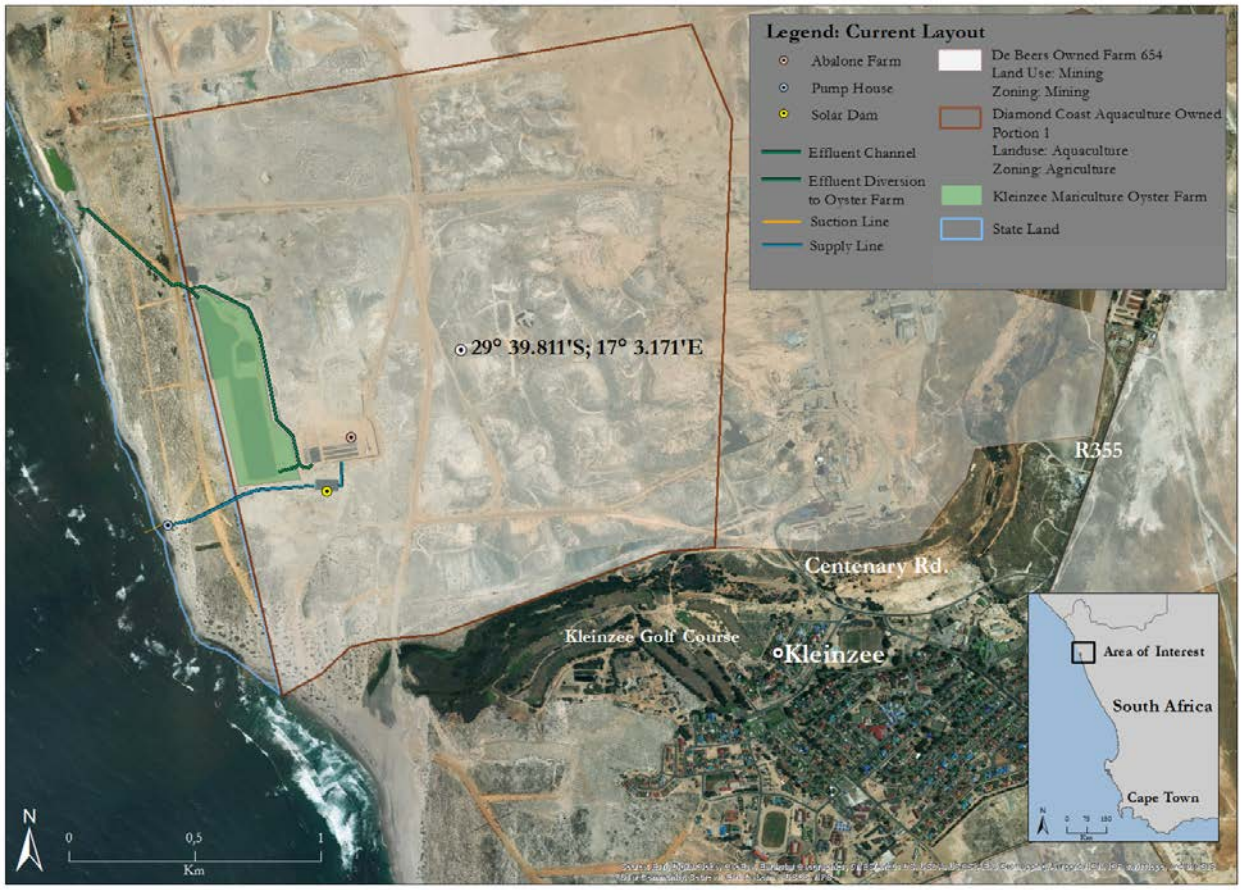

Figure 1: Current layout of the Diamond Coast Aquaculture Farm in Kleinzee, Northern Cape

Project description

Diamond Coast Aquaculture (previously Really Useful Investments No 72 (Pty) Ltd or RUI) was initially established as a joint venture with De Beers. This company was formed as part of the exit policy and social responsibility project for the local community in an area where De Beers has engaged in mining operations since 1922 under approval of the Department of Minerals and Energy.

DCA currently produces approximately 100 t of abalone and seaweed per annum in an environmentally smart integrated multi-trophic production system. This means that seaweed grown in abalone effluent is used as feed for the growing abalone. The planned upgrades to the existing facilities will diversify production and significantly increase production volumes, which could have potential environmental impacts on the marine environment resulting from an increase in the volume of effluent water discharged. The integrated multi-trophic production facility approach is, however, designed to mitigate these impacts as far as possible. The new design will combine fed aquaculture (i.e. finfish and abalone) with inorganic extractive (seaweed) and organic extractive (oysters, sea cucumbers and sea urchins) aquaculture to create balanced systems for environmental remediation (biomitigation), economic stability (improved output, lower cost, product diversification and risk reduction) and social acceptability (better management practices). The upgraded DCA farm will have an annual production capacity of 1000 t of abalone, 2000 t of finfish, 5000 t of seaweed, and 300 t of oysters, sea urchins and/or sea cucumbers. Oysters will exclusively be farmed in the solar dams and the finfish clusters, which will include a

tank that contains seaweed, sea urchins, cucumbers, flatfish and/or oysters to clean the finfish effluent water for partial recirculation.

Aquaculture organisms to be farmed include several indigenous species, namely the abalone (*Haliotis midae*), and seaweeds *Gracilaria gracilaris*, *Porphyra capensis* as well as *Ulva spp*., and two exotic species, the Pacific oyster *Crassostrea gigas and* rainbow trout *Oncorhynchus mykiss,* both of which are classified as exempt alien species in terms of the Alien and Invasive Species (AIS) Regulations promulgated under the National Environmental Management: Biodiversity Act (Act No. 10 of 2004) (NEMBA). No permit is therefore required for these species in terms of this Act. DCA are not certain which sea cucumber and sea urchin species will be farmed. If exotic species are selected, a risk assessment and permit will be required in terms of NEMBA (national competence).

Although exempt in terms of NEMBA, rainbow trout is considered an invasive species in terms of the Northern Cape Nature Conservation Act (Act No 9 of 2009) Schedule 6. The culture of this species is therefore prohibited in terms of Section 55 of this Act. Furthermore, Section 44 of the same Act, in contrast, states that "No person may, without a permit – (b) sell or buy any live

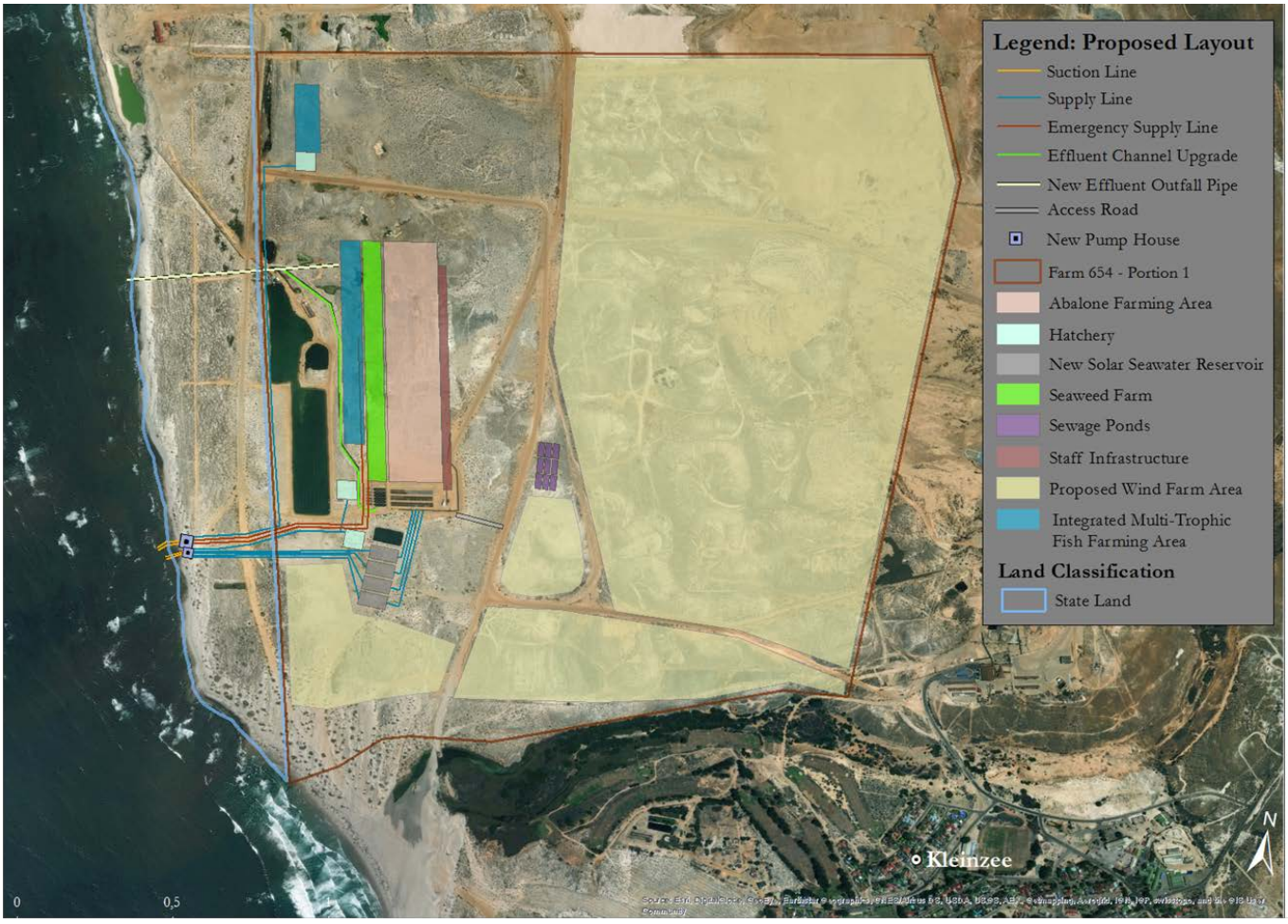

Figure 2: Proposed site layout of the Diamond Coast Aquaculture Farm in Kleinzee, Northern Cape

carp […], *trout*, […] or any exotic invertebrate freshwater fauna". It is therefore currently unclear whether DCA will require an exemption or a permit in terms of the Provincial Ordinance.

The expansion of the facility involves construction of new production infrastructure and buildings to accommodate staff facilities. Production infrastructure includes three new hatcheries, finfish production ponds, as well as the expansion of the existing abalone growing tanks. A second pump house will be built adjacent to the existing one, while the latter will be upgraded and fitted with five additional supply pipe lines (600 mm diameter) leading to four new solar dams and one new hatchery. The new pump house will be fitted with three supply pipe lines leading to the main farming area and the hatchery situated in the most northern part of the site.

A new effluent pipeline will be constructed to ensure that effluent is released below the low tide mark on the shore. The currently pending application for a Coastal Waters Discharge Permit (CWDP) to the National Department of Environmental Affairs will be revised and re-submitted concurrent to the BA process.

The current abalone farm footprint includes one septic tank and trickling filter system unit with the capacity to process 6000 litres/ 6 cubic metres of sewage per day and which services staff currently working on the farm (approximately 50 people). With the expansion of the farm, the total number of people will increase to 300 and DCA therefore intends to build two additional septic tank and trickling filter system units with the capacity to process 12 000 litres (12 cubic metres) per day. The All three treatment units combined have the capacity to treat 18 cubic metres of sewage per day, which lies well below the threshold as per EIA Regulations (2000 cubic metres). The additional units will be situated to the east of the main farming area more than 1 km from the high-water mark (the measured distance from the high water mark on Google Earth is 1040 m) (Figure 3). Occasionally, the septic tanks will need to be partially emptied of solids that accumulate on the bottom by means of a vacuum truck (approximately every six months). The solids will be disposed of at the Kleinzee Sewage Works.

Finally, DCA intends erecting a number of wind turbines on the site with a capacity to produce 660 kW per turbine. All wind turbines combined will produce less than 10 MW and this activity does therefore not trigger the EIA Regulations. A security fence will be built around the immediate production area and on the eastern boundary of the property to separate the aquaculture farm from the adjacent mining area.

Alternatives

It is a requirement of NEMA that feasible and reasonable alternatives (i.e. site, activity, layout, technology, operational aspects) are considered, including the 'No Go' option. Given that DCA already has an abalone farm on this site and that there is scope to upgrade this farm, it does not make economic sense to consider any alternative sites. Thus, no alternatives sites have been considered.

Three alternative technologies were considered during the planning phase. The preferred alternative constitutes a partial re-circulation system. The technology used in a partial recirculation system allows for recirculation of 50-70% of water in the production system. This system is also referred to as a semi-open system where water is supplemented or replaced from time to time. The water entering the semi-open system allows for the replenishment of oxygen

and the removal of production wastes. This alternative saves water and electricity arising from pumping costs.

Alternative technologies include the flow-through (or open) and the fully-recirculated (or closed) systems. However, these alternatives were not considered for the following reasons. Firstly, the technology of a fully-recirculated system is associated with high installation and running costs as oxygen must be added using expensive technology and production wastes have to be removed completely. Furthermore, biosecurity risks are high, which could jeopardise the operation. A fully-recirculated system does therefore not constitute a feasible alternative for an aquaculture facility involving abalone. The technology of a flow-through system (or open system) requires continuous replacement of seawater in the production system. Consequently this technology is associated with extremely high electricity requirements when compared to a partially re-circulated system. This system is no more environmentally beneficial in terms of waste production when compared to the partial re-circulation system as the effluent contaminant load is the same for both systems. The flow-through system was therefore not considered as a feasible alternative.

Two alternative production systems were also considered during the planning phase of this project. The preferred alternative is an integrated multi-trophic aquaculture system that uses the by-products, including waste, from one aquatic species as inputs (fertilizers, food) for another. Diamond Coast Aquaculture intend combining fed aquaculture (i.e. finfish and abalone) with inorganic extractive (seaweed) and organic extractive (oysters, sea cucumbers and sea urchins) aquaculture to create balanced systems for environmental remediation (biomitigation), economic stability (improved output, lower cost, product diversification and risk reduction) and social acceptability (better management practices). Single-trophic aquaculture on the other hand is limited to fed-aquaculture. This production system precludes bioremediation by means of extractive organisms such as seaweed, oysters, sea cucumbers and sea urchins. The current farm design integrates abalone and seaweed culture and it makes environmental and economic sense to expand the multi-trophic farm production system rather than adopting a single-trophic production system. The single-trophic production system was therefore not considered as a viable alternative.

The Environmental Impact Assessment (EIA) Process

Sections 24 and 44 of NEMA make provision for the promulgation of regulations that identify activities which may not commence without an Environmental Authorisation issued by the competent authority, in this case, the Northern Cape Department of Environment and Nature Conservation (DENC). The 2014 EIA Regulations promulgated in terms of NEMA (as amended by Government Notice R326), govern the process, methodologies, and requirements for the undertaking of EIAs in support of EA applications. The EIA Regulations are accompanied by Listing Notices (LN) 1-3 (R327, R325 and R324) that list activities requiring an EA.

The EIA Regulations provide for two alternative authorisation processes depending on the type of activity that is proposed. A Basic Assessment (BA) process is required for projects associated with limited environmental impacts as defined in in LN 1 and 3. In contrast, a Scoping and Environmental Impact Reporting process (S&EIR, also referred to as an EIA) is required to obtain EA for project with large scale, greater environmental impacts (defined in LN 2).

Box 1

The proposed development triggers the following listed activities, as listed in **Listing Notice 1 (GN R.327 of 2017)** for which a **Basic Assessment** process is stipulated:

6. The development and related operation of facilities for aquaculture of –

(i) finfish, crustaceans, reptiles or amphibians, where such facility, infrastructure or structures will have a production output exceeding 20 000 kg per annum (wet weight)

(ii) molluscs and echinoderms, where such facility, infrastructure or structures will have a production output exceeding 30 000 kg per annum (wet weight); […]

Note that other listed activities are also triggered by the proposed development. Please refer to Listing Notice 1 and 3 for the full description of all activities triggered.

Listing Notice 1 Activities 6, 8, 9, 10, 15, 17, 19A, 34, 35, 41, 45, 46, 52, and 53;

Listing Notice 3 Activities 2, 4, and 16.

Anchor Environmental has determined that the proposed project triggers a number of activities listed in LN1 and LN3 of the 2014 EIA Regulations (as amended) and that an application for EA should follow the Basic Assessment process. The key listed activities are presented in Box 1 below. Please refer to Listing Notice 1 and 3 for the full description of all activities triggered, including Listing Notice 1 Activities 3, 6, 8, 9, 10, 15, 17, 19A, 34, 35, 41, 45, 46, 52, and 53; and Listing Notice 3 Activities 2, 4, and 16.

Before commencing with the project, the proponent (DCA) is required to appoint an independent Environmental Assessment Practitioner (EAP) to undertake a Basic Assessment process and to obtain EA in terms of NEMA from the DENC. Regulations 19 and 20 of the EIA Regulations contain the detailed approach to the BA process. The BA process aims to identify and assess all potential environmental impacts (negative and positive). The Basic Assessment Report (BAR) should recommend how potential negative impacts should be effectively mitigated and how benefits can be enhanced. A marine impact specialist study will be undertaken to inform the BAR.

Stakeholder consultation, as part of the BA process, is intended to provide all stakeholders with the opportunity to raise issues and concerns that should be addressed in the BA process. Minimum requirements for the stakeholder consultation process are specified in Chapter 6 of the 2014 EIA Regulations.

As part of these environmental studies, I&APs will be actively involved through the public involvement process also being undertaken by Anchor Environmental (see Opportunity to participate below).

Potential environmental impacts associated with the project

Anchor Environmental have identified the following potential impacts associated with this project:

- Impacts on the marine and coastal environment including specific species and processes;
- Impacts on the terrestrial environment;
- Potential impacts on heritage resources;
- Impacts on the visual, scenic, aesthetic and amenity values represented by the natural and the built environment at the site of the project; and
- Impacts on the social environment (e.g. employment and job creation, and revenue generation).
- Impacts on air quality during the construction phase.

Impacts on the marine and coastal environment as well as on heritage resources were assessed by means of detailed specialist studies. All other impacts were, however, assessed as part of the Basic Assessment Report.

Opportunity to participate

Interested and affected parties (I&APs) are invited to register and provide comments on this project during the public participation process. I&APs must provide their comments together with their name, contact details (preferred method of notification, e.g. e-mail address, fax number or verbal communication) and an indication of any direct business, financial, personal or other interest which they have in the application to the contact person indicated below.

For more information contact

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