

ABAGOLD™



**APPLICATION FOR AMENDMENT OF THE
ENVIRONMENTAL AUTHORISATION
E12/2/3/1-E2/15-0311/107
ISSUED TO THE ABAGOLD DEVELOPMENT TRUST
Operational Environmental Management Programme**



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Operational Environmental Management Programme

September 2016



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Cover Photo: Abagold Ltd.

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GLOSSARY

Term	Description
Abalone	Abalone is a common name for any of a group of small to very large sea snails, marine gastropod molluscs in the family Haliotidae. Here it refers to the species <i>Haliotis midae</i>
Biosecurity	A set of preventive measures designed to reduce the risk of transmission of infectious diseases, quarantined pests, invasive alien species, and living modified organisms
Environmental Management Programme	A programme for managing potential impacts identified during the approval process.
Interested and Affected Parties	All stakeholders that have an interest in and/or are affected by the proposed development.
Solid waste	means all solid waste, including construction debris, chemical waste, excess cement/concrete, wrapping materials, timber, tins and cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers)
Stakeholder Consultation Report	Summarises the public participation process by detailing the methods and time frames used to engage all interested and affected parties (I&APs) and contains comments received by I&APs and responses to those comments.
Stormwater	Rain and wash water that washes off driveways, parking lots, roads, yards, rooftops, and other hard surfaces and is carried away through a system of pipes that is separate from the sewerage system. Stormwater is not treated and is often highly polluted.
Total Ammonia Nitrogen	Exists in two forms in the water: NH_3 (this is called unionized ammonia) NH_4^+ (this is called ionized ammonia). Together, these two forms of ammonia are called TAN which means total ammonia nitrogen. NH_3 is the principal form of toxic ammonia.
Total Suspended Solids	Is the dry-weight of particles trapped by a filter. It is a water quality parameter.

LIST OF ABBREVIATIONS

CWDP	Coastal Waters Discharge Permit
DEA	Department of Environmental Affairs
DEADP	Department of Environmental Affairs and Development Planning
EA	Environmental Authorisation
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
I&AP	Interested and Affected Party
ICMA	National Environmental Management: Integrated Coastal Management Act (Act 24 of 2008)
NEMA	National Environmental Management Act (Act 107 of 1998)
TAN	Total Ammonia Nitrogen
TSS	Total Suspended Solids

1 INTRODUCTION

1.1 Background

The Abagold Development Trust (hereinafter referred to as the Trust) applied for, and was granted, Environmental Authorisation (EA) for the development of a combined abalone and seaweed farm on Erf 11000 and a storage dam on Lot 36 of Erf 248, Hermanus on 1 April 2009 (Reference E12/2/3/1-E2/15-0311/07). The proposed development was initially conceptualised as a seaweed culture facility that would make use of effluent derived from neighbouring abalone farms. Activity alternatives included seaweed tanks interspersed with grazing organisms (e.g. urchins) that could be grown as feed for existing crayfish holding tanks build on a flat or sloped substrate. During the Environmental Impact Assessment (EIA) process, the Trust was asked to include a combined abalone and seaweed culture facility as an additional activity alternative. This activity alternative was ultimately selected as the preferred alternative in the final Basic Assessment report for which approval was granted by the Department of Environmental Affairs and Development Planning (DEADP) (Document ref. E12/2/3/1-E2/15-0311/07). However, the project description in the final BA Report was never updated properly from the original to reflect the infrastructure and operational requirements of a combined abalone and seaweed facility (the description in the EA still referred to a seaweed farm). Additional changes were also made to the project design during implementation in an effort to mitigate biosecurity risks posed by the project that were not fully appreciated in the original design.

The proposed development was originally owned by the Trust while support for the development was to be provided by Abagold Ltd. (hereinafter referred to as Abagold), the Overstrand Municipality and other benefactors to be identified. Due to a number of complications the Trust was not able to raise the requisite funding and Abagold agreed to continue with the project but under a different ownership structure. Under the new model, the Trust became a shareholder in Abagold, Abagold financed the entire project and purchased the land for the development from the municipality in 2010. The net result of this is that although the footprint of the development (Sulamanzi farm) has not changed from the original, the development as it stands at the moment does not correspond exactly with the project description in the EA.

In an effort to rectify this discrepancy, Abagold commissioned Anchor Environmental Consultants (Pty) Ltd to:

1. Assess the nature and the extent of the Sulamanzi development in relation to the EA that was issued for this development (E12/2/3/1-E2/15=0311/07) and identify any deviations from the EA that exist;
2. Assess all risks and potential impacts associated with any deviations from the EA and prepare a report on the same;
3. Advise Abagold on the approach to be followed in regularising any deviations from the EA; and (added subsequent to the original appointment);
4. Assist Abagold in completing an Application for Amendment of the EA in terms of Regulation 28 of the Environmental Impact Assessment Regulations, 2014 for the above project. Subsequently, this included a public participation process to provide Interested & Affected Parties (I&APs) with the opportunity to comment on the proposed amendments. Note that the Risk Assessment was revised to address stakeholder comments, requests and questions.

The application for amendment to the original EA (specific fee reference number is B-Amend-EIA-C3) was submitted to the DEADP on 1 March 2016. The DEADP reviewed the application submitted by Abagold and requested that Abagold complete a public participation process to inform stakeholders of the proposed changes to the existing EA and to provide interested parties the opportunity to comment. During the public participation process, stakeholders requested that the operational component of the Environmental Management Programme (EMPr) be updated to reflect the current project description and associated environmental management issues. Accordingly, this document represents the Operational EMPr and should be read in conjunction with the Supporting documentation (Massie and Clark 2016a), the Stakeholder Consultation Report (Massie and Clark 2016b).

1.2 Purpose, scope and implementation of the revised operational EMPr

The original EMPr for the Sulamanzi Development was compiled by EnviroAfrica as part of the original EIA process (See Appendix 2) and includes a standard Construction EMPr that is suitable for the revised project description and should remain valid for the remainder of the construction work to be done on the Sulamanzi farm in terms of the amended EA. However, the Operational EMPr is very brief and only refers to the (1) maintenance of tanks and connecting pipelines (2) maintenance of the security systems and wall structures; and (3) appropriate signage to demarcate no-go areas for the public. During the public participation process, I&APs requested that the Operational EMPr be updated to include relevant management issues including water quality monitoring, maintenance of the effluent outfall (i.e. solid waste removal) and biosecurity monitoring etc.

Together with the Construction EMPr as appended (See Appendix 1), this Operational EMPr forms part of the conditions that are recommended for inclusion in the revised EA (specific fee reference number is B-Amend-EIA-C3). This EMPr (construction and operational components) binds Abagold and all contractors, sub-contractors and other persons working on the Sulamanzi farm site to the terms and conditions of the EMPr throughout the construction and operation of the Sulamanzi abalone farm.

2 ENVIRONMENTAL IMPACT ASSESSMENT AND REVISED PROJECT DESCRIPTION

Massie and Clark (2016a) assessed whether various environmental impacts (terrestrial vegetation, marine environment, visual, social and cumulative impacts) had been exacerbated or lessened as a result of the structural and operational changes implemented since EA was granted for the Sulamanzi development. Findings from this assessment indicate that the key deviations from the EA include

1. A transfer in ownership from the Abagold Development Trust supporting 10 entrepreneurs to Abagold Ltd.
2. The use of fresh as opposed to recirculated seawater on the farm;
3. A change in the number and size of holding tanks used on the farm; and
4. A change from a combined abalone and seaweed facility to a conventional abalone culture farm (current situation).

In all instances, we are satisfied that these deviations are all non-substantive in nature and do not result in a measurable increase in any negative environmental impacts. On the contrary, the changes that were made have in many instances reduced potential negative impacts associated with the project and in some case (e.g. risk of spreading diseases to wild abalone populations) have even mitigated impacts that were not properly identified in the original assessment. Furthermore, the revised design, which is aimed at predominantly producing abalone, is more labour intensive and has resulted in the employment of many more people from the local community than initially planned. Finally, it has been shown that existing abalone farms release very small amounts of nutrients and TSS compared to the overall coastal ecosystem requirements, the cumulative impacts on deterioration of receiving water quality as a result of the conversion of Sulamanzi from a combined abalone and seaweed farm to a conventional abalone farm are considered to remain insignificant. However, Abagold (as all other abalone farms in the area) relies on clean seawater to successfully and cost effectively grow abalone (i.e. minimise treatment of influent water). Consequently, Abagold has a vested interest in minimising cumulative impacts on the receiving water quality and is therefore planning to build an effluent treatment plant. Ongoing, regular monitoring of the effluent water discharged from the farm is recommended though.

This risk assessment showed that the activity description in the existing EA needs to be updated to reflect the current situation of the Sulamanzi abalone farm. The following project description is recommended for inclusion in the EA:

"The Sulamanzi abalone farm predominantly farms abalone in quantities not exceeding 360 t per annum in a flow through system. The abalone tanks are constantly supplied with fresh seawater and no recycling of effluent water takes place due to the risk of compromising biosecurity. Fresh seawater is abstracted through existing intake infrastructure and is discharged via an existing stormwater pipeline across Erf 243 owned by the Overstrand Municipality. The abalone grow-out tank system has 12 units, each consisting of 160 small tanks with a holding capacity of 5000 Litres per tank. Abalone production tanks are positioned on a gentle slope of approximately 1:80, making use of gravity to reduce the energy requirement. Furthermore, each tank has a standpipe, which when removed allows nutrient rich solids to be drained from the bottom of the tanks and can be diverted for treatment. Abagold is planning to install a wastewater treatment plant on the Sulamanzi farm to extract nutrient rich solids from the effluent originating on Sulamanzi, Amanzi, Bergsig and Seaview farms. Abagold will seek to obtain a separate EA for this activity. Overflow water in comparison is very clean and can be used in a limited number of tanks further downstream. Abalone are exclusively fed using artificial feed.

A small amount of seaweed (and in future also sea urchins or other grazers) are grown in concrete ponds with plastic liners (so-called Paddle ponds), which are separate to the abalone flow-through system. Natural plant feeds are used for growing seaweed."

3 OPERATIONAL ENVIRONMENTAL MANAGEMENT PROGRAMME

Several aspects of responsible environmental management contained in the construction EMPr are applicable to the operational phase and should be read as such. This includes (refer to relevant sections in the Construction Phase EMPr as appended):

- Section 12: Environmental awareness training
- Section 14: Changes to EMPr
- Section 16: Environmental Management Specifications
 - Section 17.8 Water, Storm water, Erosion & Sedimentation Control
 - Section 17.9 Fuel, Tar, Compounds and Oil (take special note of guidelines to storing fuel)
 - Section 17.13 Fires and Smoking
 - Section 17.14 Emergency Procedures
 - Section 17.16 Solid Waste Management
 - Section 17. 21 Treating (flushing/testing) of Pipelines
 - Section 17.26 Socio-Cultural Issues

The following sections replace the requirements of the existing operational EMPr (Section 18).

3.1 Maintenance of infrastructure and safety

Tanks and connecting pipelines should be maintained in good working order to ensure that they remain free from blockages at all times. Abagold must compile a document that details these maintenance procedures. This document must include instructions on how to prevent PVC pipes from entering the effluent stream. Additionally, Abagold should continue to assist the Overstrand Municipality in collecting solid waste (including PVC pipes) originating from the Sulamanzi farm at the outfall point. This should be done whenever the abalone tanks are being cleaned and the effluent flow is switched off.

Care should be taken that security systems and signage are maintained to ensure that no unauthorised persons, especially small children, can gain access to the abalone farm.

3.2 Effluent water quality monitoring

Effluent from the Sulamanzi farm is discharged into the existing stormwater pipeline owned by the Overstrand Municipality, which crosses Erf 243 and enters the Indian Ocean at 34.437396°S, 19.216364° E. Abagold is not the owner of the pipeline and is therefore not required to apply for a Coastal Waters Discharge Permit (CWDP) in terms of the National Environmental Management Integrated Coastal Management Act (Act 24 of 2008) (ICMA). However, effluent quality must be compliant with the requirements as stipulated by the CWDP issued to the Overstrand Municipality (or as stipulated in the agreement between the Overstrand Municipality and Abagold). Effluent quality monitoring prior to discharge into the stormwater pipeline must therefore be conducted regularly to demonstrate that applicable conditions are met.

At the time of writing, the Overstrand Municipality has not yet obtained a CWDP and no formal agreement between the Overstrand Municipality and Abagold exists. The Draft National Standards for Land-Based Abalone Aquaculture (Government Gazette 39971 of 6 May 2016, Notice No. 504) (hereinafter referred to as National Abalone Standards) are currently being finalised for adoption by the Minister of Environmental Affairs in terms of section 24(2)(d), read with section 24(10)(a) of the National Environmental Management Act (Act No. 107 of 1998). Appendix 1 of the Draft National Abalone Standards specifies Effluent Monitoring Requirements for abalone farms that fall within the scope of these standards. This effluent monitoring protocol is in agreement with the methods that have been used by the Department of Agriculture, Forestry and Fisheries (DAFF) to regularly monitor existing abalone farms on the south and west coasts of South Africa (Probyn *et al.* 2014).

Although Sulamanzi will be authorised to operate in terms of the amended EA and not in terms of the National Abalone Standards, the monitoring protocol of the Draft National Abalone Standards should be implemented until a formal agreement between the Overstrand Municipality and Abagold is in place. The Effluent Monitoring Requirements in the Final National Abalone Standards may differ from those presented below (Section 3.2.1) and in time, the EMPr should be amended to reflect (1) the Final National Abalone Standards; and/or (2) the water quality monitoring protocol as per agreement with the Overstrand Municipality.

3.2.1 Interim effluent monitoring requirements

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APPENDIX 1 EFFLUENT MONITORING REQUIREMENTS

1. Table 1 Effluent monitoring requirements – Abalone

The specifications in this Appendix will apply in the absence of a coastal waters discharge permit, or where a coastal waters discharge permit does not include those specifications addressed in this Appendix.

Effluent constituent	Effluent limit value	Sampling frequency of annual median concentration measured during working and non-working hours:
Total Suspended Solids (TDS)	5 mg/l	Monthly
Total Ammonia Nitrogen (TAN)	0.6 mg/l	Monthly

2. Sampling positions

- 2.1. Samples should be taken from the following-
 - a. effluent streams;
 - b. inflow into the grow-out tanks (if there is no filtration system on the farm); or
 - c. intake to the farm.
- 2.2. Sampling should focus on effluents from grow-out units; hatcheries may be excluded where possible.
- 2.3. Ambient conditions are represented by intake to the farm prior to any treatment and are used as an indicator of background ambient concentrations.
- 2.4. Farms with no filtration or other treatment of intake water may utilise samples from header tanks for ambient concentrations.

3. Sampling times

Effluent samples should be collected during both working hours and non-working hours, preferably before work starts in the morning. This is to account for diel variation in concentrations as a result of variable outputs due to operational activities. Influent need only be sampled once daily to represent ambient conditions.

4. Calculation of values

- 4.1. Effluent and influent concentrations levels during working hours are applied to an 8 hour working day. After hours concentrations are assumed to apply to the remaining 16 hours.
- 4.2. The annual median should be weighted for working and non-working hours over the course of a year.

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4.3. In the calculation of activity-based concentrations, measured concentrations are initially weighted for an 8/16 hour working/non-working periods to provide an average daily value for a working day. A non-working day corresponds to 24 hour of the measured after hours signal. These are then weighted annually using 250 as the typical number of working days and 115 as non-working days in a year. Final values should reflect the difference between the intake and effluent concentrations.

4.4. The formula for calculation of activity-based concentrations over the course of a year (C_{ann}) is:

$$C_{ann} = ((C_w * 8/24) + (C_{nw} * 16/24)) * 250/365 + (C_{nw} * 115/365) \quad (\text{Eq. 1})$$

where,

C_w = the measured concentration of a particular parameter during working hours; and

C_{nw} = the concentration during non-working hours in a year.

5. Flow rates and Standing stock

5.1. Effluent flow rates should be measured in the effluent channel during the sampling period or can be estimated from pump capacity.

5.2. Data from multiple effluent streams should be presented individually as well as a combined single outflow concentration weighted by flow rate for each channel.

5.3. Individual channel concentrations are weighted according to volume flow on the day of sampling (in addition to the activity-based weighting presented above).

5.4. Calculation of a combined effluent concentration ($C_{combined}$) is as follows:

$$C_{combined} = C_1 * (F_1 / (F_1 + F_n)) + C_n * (F_n / (F_1 + F_n)) \quad (\text{Eq. 2})$$

where

C = the effluent concentration, and

F = the flow rate, for effluent channels 1 ton.

These values, combined with total effluent discharge rates, can be used to provide annual loadings for each water quality parameter (e.g. metric tonnes/year).

5.5. Standing stock data on the day of sampling should be recorded as whole wet weight for calculation of biomass-specific discharge rates.

6. Sampling frequency

6.1. Monthly samples should be taken of both total suspended solids and total ammonia nitrogen.

6.2. A running median is to be calculated from the most recent 12 monthly values and updated as new data become available. If the calculated annual median exceeds the effluent limit

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for any outflow, steps should be taken to identify the cause and instigate appropriate remedial actions.

6.3. Sampling frequency should increase to every two weeks until 3 consecutive values fall within the limit value.

3.3 Biosecurity

Recognising that Sulamanzi abalone farm contributes significantly to the total abalone production in the Hermanus Area, Abagold must work with neighbouring farms to ensure transparency and optimal animal health in an effort to mitigate against an increased disease risk. For this purpose a Biosecurity Memorandum of Understanding (MoU) between Abagold and adjacent farms (HIK Abalone Farm (Pty) Ltd. and Aquinion (Pty) Ltd.) was drafted and signed by all parties. This MoU and Biosecurity Plan must be implemented during the operational phase of the Sulamanzi development. All provisions in this MoU (See Appendix 1) must be strictly adhered to by all parties.

3.4 Noise control

The main source of the noise originates from the processing plant. Noise levels have been reduced as far as is practical by installing reverberation material. Noise levels must comply with municipal regulations at all times.

3.5 Odour

Odours emitted from the Sulamanzi farm must be monitored and kept to a minimum to ensure that they do not pose a nuisance to neighbouring properties. If concerns are raised by neighbours these should be thoroughly investigated by an independent third party and steps taken to mitigate any problems identified.

4 REFERENCES

- Massie V and Clark B. 2016a. Application for amendment of the environmental authorisation E12/2/3/1-e2/15-0311/107 issued to the Abagold Development Trust: Assessment of potential impacts arising from deviations from the environmental authorisation. Report prepared for Abagold Ltd. by Anchor Environmental Consultants (Pty) Ltd. for submission to the Western Cape Department of Environmental Affairs and Development Planning. Anchor Environmental Consulting Report No, 1690/1, September 2009.
- Massie V and Clark B. 2016b. Application for amendment of the environmental authorisation E12/2/3/1-e2/15-0311/107 issued to the Abagold Development Trust: Stakeholder Consultation Report. Report prepared for Abagold Ltd. by Anchor Environmental Consultants (Pty) Ltd. for submission to the Western Cape Department of Environmental Affairs and Development Planning. Anchor Environmental Consulting Report No, 1690/2, September 2009.
- Probyn TA, Pretorius M, and Bernatzeder A. 2014. Effluent Water Quality Characteristics of Land-Based Abalone Farms in the Western Cape, South Africa. Technical Report -14.001. Report prepared by the Department of Agriculture, Forestry and Fisheries, Directorate: Aquaculture Research. 33 pp.
- World Wildlife Fund (WWF) (2010). Abalone Aquaculture Dialogue Standard. 34p.

APPENDIX 1

**MEMORANDUM OF UNDERSTANDING:
THE IMPLEMENTATION, MANAGEMENT AND
CONTINUOUS IMPROVEMENT OF BIOSECURITY
MEASURES TO PREVENT THE OCCURRENCE AND
SPREAD OF ABALONE DISEASES**

Entered into by:

ABAGOLD LIMITED

Reg No.1995/070041/07

(hereinafter referred to as "Abagold")

and

AQUNION (PTY) LTD

Reg No. 1995/01834/07

(hereinafter referred to as "Aqunion")

and

HIK ABALONE FARM (PTY) LTD

Reg No. 1998/23580/07

(hereinafter referred to as "HIK")

collectively hereinafter referred to as "the Parties"

1 Background & purpose

- 1.1 Disease poses the single biggest threat to any abalone farming business and as such all avenues for the introduction and spread of disease should be managed with extreme due diligence. Unfortunately, the intensive nature of land-based abalone farming coupled with the close proximity of farming and processing sites significantly increases the risk of a disease occurring and spreading. The Walker Bay nodes of Hermanus and Gansbaai are especially vulnerable with a land-based farmed biomass load soon to be in excess of 2,000 tons. These risks are further amplified by an adjacent naturally occurring population of wild abalone which will likely accelerate the spread of disease from one site to another.
- 1.2 The abalone industry is the biggest aquaculture sector in South Africa, providing jobs to thousands of people. A disease on even one farm will be catastrophic.
- 1.3 The production of healthy abalone and the considered management of disease risk should be one of the biggest priorities on any farm. It is a well known fact that stressed organisms have compromised immune systems and are as such more susceptible to being affected by pathogens. Excellent on-farm husbandry, supported by a well-structured and considered Biosecurity Plan can significantly mitigate the risk and impact of a possible disease on a farming site.
- 1.4 The biggest uncontrollable avenue for disease entry is via the site's seawater supply system. This could be in the form of a contagious disease outbreak occurring in the adjacent wild population, or via the transmission of a seawater borne pathogen which originated on a neighbouring farming or processing site. It is for this reason that operating an abalone farming business in isolation is in itself a risk. Close cooperation between all stakeholders in the abalone harvesting, production and processing value chain is crucial in order to ensure the long term sustainability of the abalone aquaculture subsector.
- 1.5 The purpose then of this memorandum is to formalise the relationship between the Parties in order to better address the matter of disease risk.
- 1.6 It is envisioned that this document and its annexures will evolve over time as the list of Parties that subscribe to this memorandum expand.

2 Definitions

2.1 Biosecurity Coordinator

- 2.1.1 A suitably authorised and qualified person designated by each of the Parties to coordinate the implementation, maintenance and improvement of the Biosecurity Plan on each of the Parties' farming and processing sites.
- 2.1.2 If farming and processing is conducted on the same site, one Biosecurity Coordinator may represent both activities. For the avoidance of doubt, if farming and processing is conducted on different sites, the relevant Party must designate two such persons, one to represent each activity.

2.2 Biosecurity Committee

A committee consisting of every Biosecurity Coordinator.

2.3 Biosecurity Plan

A written plan that identifies significant potential pathways for the introduction and spread of disease, and describes the measures which are being, or will be, applied by the Parties to mitigate the risks. The plan also describes how the measures are audited to ensure that the risks are regularly reassessed and adjusted accordingly if necessary.

3 The Parties hereby wish to record their agreement in writing:

- 3.1 The Parties acknowledge that the biggest controllable risk to abalone health on farms and in wild populations is inadequate biosecurity principles and measures employed by neighbouring abalone harvesting, farming and processing entities.
- 3.2 The intention of this memorandum is to address immediate risk factors related to proximity and to promote co-operation between the Parties with regards to the implementation of a collective Biosecurity Plan.
- 3.3 The Parties therefore agree to adopt the "prevention is better than cure" approach, and as such agree to adhere to the requirements specified in this memorandum, and also take all necessary steps to ensure compliance.
- 3.4 The Parties agree to engage in good faith at all times. The purpose of this memorandum is to ensure positive solutions-based interactions between role players, and to promote a sense of good social citizenship where protection of self and neighbour is a core principle.

- 3.5 The Parties hereby agree to the following:
- 3.5.1 Each Party shall take all steps reasonable necessary to ensure that the Biosecurity Plan (annexure A) is adopted at top management level, and that the Biosecurity Plan is implemented, monitored and enforced on all of that Party's abalone farming and processing sites.
 - 3.5.2 Each Party shall designate a suitably qualified and experienced Biosecurity Coordinator for each abalone farming and processing site, subject to clause 2.1.2. The Biosecurity Coordinator shall report directly to the relevant Party's site manager.
 - 3.5.3 The Biosecurity Committee shall be constituted and shall serve to drive the implementation of the Biosecurity Plan, review progress made, discuss audit results, share animal health results, assist in areas of concern, drive continuous improvement and ensure transparency between all Parties. The Biosecurity Committee will meet bi-annually (every six months), and a chair will be nominated who will schedule and arrange these meetings.
 - 3.5.4 The Biosecurity Committee shall conduct quarterly audits of each of the Parties' farming and processing sites in order to ensure compliance with the Biosecurity Plan and accountability. Results and corrective actions of these reviews will be discussed at biannual Biosecurity Committee meetings.
 - 3.5.5 The Parties agree to allow the Biosecurity Committee reasonable access, during office hours and on reasonable notice, to all relevant farming and processing areas so that audits can be conducted effectively in order to demonstrate compliance or non-compliance. The Biosecurity Committee must be notified of any areas on a site which are considered too commercially sensitive for access by the Biosecurity Committee for audit purposes. By agreement with the Biosecurity Committee, such areas must be audited by an independent biosecurity expert with experience in the abalone farming industry.
 - 3.5.6 The Parties shall endeavour to correct any unfavourable audit findings as a matter of urgency.
 - 3.5.7 The policy of the Parties shall be that all employees shall observe the necessary protocols as defined in the Biosecurity Plan at all times. The Parties agree to take appropriate action against employees who fail to comply with the procedures listed in the Biosecurity Plan.
 - 3.5.8 Training will be given to all employees at least annually regarding the measures contained in the Biosecurity Plan and their significance. Additional training will be given to all employees on how to identify abnormal abalone behaviour and appearance.

- 3.5.9 An independent biosecurity expert with experience in the abalone farming industry shall be contracted annually to perform external audits on each of the Parties' farming and processing sites in order to determine level of compliance to the Biosecurity Plan.
- 3.5.10 The Biosecurity Plan shall be reviewed annually by the Biosecurity Committee, and at least once every 2 years by an independent biosecurity expert with experience in the abalone farming industry.
- 3.5.11 Each Party hereby authorises its attendant veterinarian to routinely circulate to that Party's Biosecurity Coordinators the following information pertaining to the health of the abalone on that Party's sites(s): covering letter of routine stock inspections highlighting significant findings (in the form of Annexure B), covering letter of histological examinations highlighting significant findings (in the form of Annexure C) and table summarising histology results (in the form of Annexure D).
- 3.5.12 The Parties hereby authorise the attendant veterinarian to immediately notify each of the other Parties if a possible disease is suspected on one of the Parties' sites.
- 3.5.13 The Parties agree to individually carry all costs associated with their respective compliance with the Biosecurity Plan.
- 3.5.14 All costs, including without limitation legal and consultant costs, arising in connection with the drafting, revision or amendment of this memorandum and the Biosecurity Plan from time to time, shall only be incurred with the prior unanimous consent of the Biosecurity Committee, and shall be shared equally between the Parties.

APPENDIX 2