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# Sea-Based Aquaculture Development Zone in Saldanha Bay

Saldanha, Western Cape

**Annual Environmental Authorisation and Annual  
Environmental Management Programme External Audit**  
March 2023

**EA Ref. No.:** 14/12/16/3/3/1/1728/AM2

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**PREPARED FOR:**

Anchor Research and Monitoring (ARM)

**DATED:**

March 2023

**PREPARED BY:**

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## DECLARATION OF INDEPENDENCE

I, Nick Gates, as duly authorised representative of NCC Environmental Services (Pty) Ltd (**NCC**), hereby confirm my independence (as well as that of NCC) as an auditor and declare that neither I nor NCC have any interest, be it business, financial, personal or other, in any proposed activity, application or appeal in respect of which ARM Consultants has appointed as External Auditor, other than fair remuneration for worked performed. I further declare that I am confident in the results of the report undertaken and the findings as a result of it – as is described in my attached report.

Signed:

A handwritten signature in black ink, appearing to read 'Nick Gates', written in a cursive style.

**Nick Gates**

Senior Environmental Consultant: SHERQ Consulting  
NCC Environmental Services (Pty) Ltd

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## 1 INTRODUCTION

NCC Environmental Services (Pty) Ltd (hereafter referred to as the “NCC”) were appointed by Anchor Research and Monitoring (hereafter referred to as ARM”), as an independent party to conduct an annual external audit on their compliance with specific conditions stipulated in the Environmental Management Programme (EMPr) and Environmental Authorisation (EA) for the Sea-based Aquaculture Development Zone in Saldanha Bay (ADZ), situated in Saldanha, Western Cape.

This report serves to document the external audit proceedings, and is a record of all observations, and recommendations made during the engagement.

### 1.1 Audit Scope and Purpose

In accordance with Regulation 34 of the NEMA: EIA Regulations, 2017, as amended the holder of an authorisation must, for the period during which the environmental authorisation and EMPr, and where applicable the closure plan, remain valid—

- a) Ensure that the compliance with the conditions of the environmental authorisation and the EMPr, and where applicable the closure plan, is audited; and*
- b) Submit an environmental audit report to the relevant competent authority.*

As such, the scope of the environmental audit report will be based on assessing the conditions of the environmental authorisation, and the EMPr, and where applicable, the closure plan.

The purpose of the environmental audit is to address the legal requirements to report on the level of compliance with above mentioned conditions, report on the objectives and outcomes of EMPr and the extent to which it was achieved. In addition, any new impacts or risks will be assessed, the effectiveness of the EMPr will be evaluated, and shortcomings or any changes in the EMPr identified.

## 2 BACKGROUND

### 2.1 Project Background

This report serves as the **fourth** annual audit report.

The audit was conducted against the mitigation measures/requirements as prescribed for the Design, Construction, Operational, Decommissioning and Environmental Phases of the ADZ in both the EA and the EMPr.

Sequence of events:

- i. Environmental Authorisation granted in 2018.
- ii. One external compliance audit was conducted during the 2019 reporting period, February 2019-January 2020.
- iii. One external compliance audit was conducted during the 2020 reporting period, February 2020 – January 2021.
- iv. One External compliance audit was conducted in 2021 reporting period, February 2021-January 2022.
- v. One External compliance audit was conducted in the 2022 reporting period, February 2022-January 2023. Current audit period for this report.

### 2.2 Auditor Background

Nicholas Gates has been working in the Environmental Management Sector for 14 years during which auditing has been one of his core functions. He has undergone various training courses such as *Lead Auditing* and *SHEQ IMS Auditors* through institutions such as DQS and ISTECS Safety.

Over the years he has gained extensive experience across the various sectors from Mining, Construction, Energy, etc. either being part of an auditing team and as lead auditor on a number of projects. Clients include Municipalities, Private Companies, individuals, SOE's, etc. and range between the auditing of Landfills, Refineries, Renewable Energy Projects, Food Manufacturers, etc. against Environmental Authorisations, Environmental Management Plans and Water Use Licences.

### 3 METHODOLOGY

This section provides a high-level breakdown of the methods employed by NCC in providing observations, recommendations and conclusions derived from audit procedures conducted.

#### 3.1 Audit Process

The site visit, data reviews and report drafting were conducted by NCC's environmental compliance audit team. The site audit included the following procedures:

- 1. Site Inspection (held on 9 February 2023), which included:**
  - a. Briefing with the ADZ ECO
  - b. Site visit on Spreeuwalle Beach, Langebaan
  - c. On-site inspections of marine aquaculture farms
- 2. Review of Site Specification Reports and Documents**
  - a. Review and identification of previous audit findings.
  - b. AMC Meetings Record of Proceedings
  - c. AMC Action Items
  - d. ADZ ECO Monthly Reports
- 3. Compilation of Audit Report which includes key findings and recommendations.**
  - a. A comprehensive report is compiled after site inspection and review of all data, relevant reports, and interviews.

The audit report, if required, will provide recommendations on non-compliance identified during the compliance audit.

#### 3.2 Observation and Recommendation Determination

All recommendations were made according to what was observed through evidence provided whether documentation or photographic within a reasonable time period.

Observations were based on, and limited to, the following information sources:

- i. Available documentation and records received prior, subsequent, or during the audit.
- ii. Observations and photographic evidence submitted from physical site inspections.
- iii. Information received through both direct and cross-referenced interviews conducted with staff.



### 3.3 Findings

Key observations as conveyed in Section 6 of this report highlight areas of non-compliance as well as aspects that require prioritised attention. Each point under this section identifies the observation which it is pertinent to.

The purpose of these summarised commentaries is to allow ARM and the DFFE to identify common management challenges that are affecting compliance with the conditions of the permit audited.

Where observations and recommendations pertaining to the site are deemed significant through compliance status or performance, they are documented as specific issues in the report.

All site-specific observations and recommendations are correspondingly recorded in an audit table (See Annexures B & C).

As per Section 34(4) of the EIA Regulations:

*'Where the findings of the environmental audit report indicate:*

- (a) Insufficient mitigation of environmental impacts associated with the undertaking of the activity; or*
- (b) Insufficient levels of compliance with the environmental authorisation or EMPr and, where applicable the closure plan.*

*the holder must, when submitting the environmental audit report to the competent authority include recommendations for consideration to amend the EMPr or closure plan in order to rectify the shortcomings identified in the environmental audit report.*

Any recommendations to amend must be subjected to a public participation process prior to submitting to the competent authority. The requirements are set out in Section 5 of this report.

Within 7 days of the date of submission of an environmental audit report to the competent authority, the holder of an environmental authorisation must notify all potential and registered interested and affected parties of the submission of that report, and make such report immediately available—

- (a) To anyone on request; and
- (b) On a publicly accessible website, where the holder has such a website.

### 3.4 Audit Tables and Compliance Ratings

The audit tables in Annexure B & C captures all observations and recommendations made in relation to all conditions stipulated in the EA & OEMPr. They provide the reader with more detailed information in terms of what the stipulated requirements are in relation to the organisation's assessed current compliance status, according to the observations recorded by the auditor during the site visit.

Ratings are calculated based on a scoring system whereby each auditable condition is provided with a score as highlight in the table below.

**Table 1:** Compliance Scoring

Description	Status Indicator	Compliance Rating	Scoring	Action
Compliant	C	2	85%-100%	Minor Improvements Required
Partially Compliant	PC	1	65%-84%	Improvement Required
Non-Compliant	NC	0	0-64%	Major Improvements Required
Not Applicable/Audited	NA	-	-	No Improvements Required or not relevant at time of audit

Each condition has been ascribed a priority indicator of Compliant (Green), Partially Compliant (Yellow), Non-Compliant (Red), and Not Auditable (Grey) to assist the reader in determining areas that require attention to ensure compliance is achieved.

Areas that have been shaded indicate that they are sub-condition requirements, they are necessary in order for the condition to be compliant, non-compliant or not applicable. They have been broken down to indicate which areas of the condition need to be rectified.

An overall rating is calculated to provide the reader with the overview of the facilities compliance to the licence however each condition should be view and dealt with on their own merits as the rating does not provide for, or calculate, the severity or impact which might be presented.

For example, a site may have an overall rating of 97% which is perceived as good however the 3% worth of non-compliant condition/s may pose a significant impact or risk.

## 4 ASSUMPTIONS AND LIMITATIONS

The compliance audit and report are based upon the assumptions that:

- i. Documentation provided to the auditor by ARM was factual and true.
- ii. Evidence provided through interviews was factual and true.
- iii. The audit is based purely on the conditions as stipulated in the EA and EMPR issued for DFFE.
- iv. No independent physical or chemical testing, or verification of any description was conducted by the auditor or NCC as part of the compliance review.
- v. Reports were randomly sampled in order to accommodate time constraints.
- vi. Where visual observations of equipment were not possible either due to the location or complexity to access the auditor has used other means to determine compliance, either through written evidence from service providers which utilize the instruments or through interviews with Mulilo Prieska employees who work with the equipment.
- vii. Specialist studies may run on a different cycle to that of the external audits therefore aligning with audit findings, however these can be address in following audits.

## 5 CONSULTATION PROCESS

Consultation is an integral part of the auditing process, and the processes are highlighted as such in the EIA Regulations.

### 5.1 Regulation 34(5)

Regulation 34(5) refers to the public participation process involved with an Environmental Audit and indicates:

*‘When submitting recommendations in terms of subregulation (4), such recommendations must have been subjected to a public participation process, which process has been agreed to by the competent authority and was appropriate to bring the proposed amendment of the EMPr and, where applicable the closure plan, to the attention of potential and registered interested and affected parties, including organs of state which have jurisdiction in respect of any aspect of the relevant activity and the competent authority, for approval by the competent authority.’*

### 5.2 Regulation 34(6)

Regulation 34 (6) goes on further to highlight:

*‘Within 7 days of the date of submission of an environmental audit report to the competent authority, the holder of an environmental authorisation must notify all potential and registered interested and affected parties of the submission of that report, and make such report immediately available—*

*(a) To anyone on request; and*

*(b) On a publicly accessible website, where the holder has such a website.’*

## 6 FINDINGS

Based on the audit conducted, it was established that the ability of the EA and EMPr was achieved in terms of:

- i. The ability of the EMPr to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an ongoing basis was achieved; and*
- ii. The level of compliance with the provisions of Environmental Authorisation and EMPr for this project was largely achieved and represented a high level of compliance.*

A breakdown of the compliance levels for both the EA and EMPr are further highlighted below.

### 6.1 Environmental Authorisation

There was a total of one hundred and six (106) conditions stipulated in the EA issued to DFFE.

Of the one hundred and six conditions there were nine-eight (98) Compliant, zero (0) non-Compliant, zero (0) Partially Compliant and eight (8) Not Audited/Not Applicable.

These conditions were audited, and the final percentage rating was measured against these conditions, which excluded not applicable conditions.

The section below will highlight any the short comings of any conditions which were not deemed fully compliant.

### 6.1.1 Non-Compliance

a) None

## 6.1.2 Partial Compliance

b) None

## 6.2 Environmental Management Programme

There was a total of two hundred and fifty (250) conditions stipulated in the EMPr issued to DFFE. This includes all phases in the EMPr.

This is broken down as follows:

**Design Phase:** Thirty-five (35) conditions stipulated in the EMPr.

**Construction Phase:** Forty-one (41) conditions stipulated in the EMPr.

**Operation Phase:** One hundred and thirty-nine (139) conditions stipulated in the EMPr.

**Decommissioning:** Twelve (12) conditions stipulated in the EMPr.

**Environmental Monitoring:** Twenty-three (23) conditions stipulated in the EMPr.

Of the two hundred and fifty (250) there were eighty-three (83) **Compliant**, zero (0) **non-Compliant**, three (3) **Partially Compliant** and one hundred and sixty-four (164) **Not Audited**<sup>1</sup>.

These conditions were audited, and the final percentage rating was measured against these conditions, which excluded not applicable conditions.

The section below will highlight any the short comings of any conditions which were not deemed fully compliant.

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<sup>1</sup> The conditions which were noted as Not-Audited were either not auditable or were not relevant at the time the audit was conducted therefore were excluded from the overall rating calculations.



### 6.2.1 Non-Compliance

- No Non-Compliant conditions relating to the EMPr were identified.

## 6.2.2 Partial Compliance-Operation & Monitoring Phase

No	Aspect	Impact	Mitigation Measure:	Performance Indicator	Findings	Recommendations	Timeframe
5.1. Condition 2	Demarcation of ADZ precincts	Safety Hazard due to lines and infrastructure not accurately marked.	<b>Ensure that the outside boundaries of all active aquaculture areas are accurately marked day and night using markers compliant with South African Marine Safety Authority (SAMSA) regulations.</b>	All active aquaculture farms to be accurately marked.	DFFE Branch Fisheries Management have been in consultation with the South African Maritime Safety Authority (SAMSA) to develop an Aids to Navigation (AtoN) plan for the ADZ.	No recommendations as an Aids to Navigation (AtoN) has been drafted. Final AtoN plan is developed and it was identified that a Navigational Risk Assessment is now required before the AtoN can be implemented.	Stakeholder Engagement for the AtoN: June 2023
5.1. Condition 6	Supervision of farming activities	Risk of wildlife entanglement.	<b>Enforce maintenance and operational guidelines and standards in relation to potential entanglement risks at farms, including loose ropes, lines, buoys or floats.</b>	Maintenance plans to be compiled as and when needed by individual farms.	Saldanha Bay Oyster Company (SBOC) and Blue Ocean Mussels (BOM) provided maintenance plans in July 2022 due to previous non-compliance.	Three farms that are not compliant have provided a maintenance plan and are making progress towards compliance, as recorded in ECO reports.	Monthly by ECO checks.

5.1. Condition 115	Entanglement	Safety and Entanglement Risk.	<b>Ensure all mooring lines and rafts are highly visible (use thick lines and bright antifouling coatings).</b>	Sunken lines to be removed.	Sunken infrastructure was present one farm which posed an entanglement risk to marine life as stated in ECO Reports and Pers.Comms with ECO.	Farms with sunken infrastructure are in the process of developing a maintenance plan to return the farm to being highly visible.	Monthly by ECO checks.
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## 7 SUMMARY

Currently ARM and DFFE are compliant with majority of the conditions prescribed in the approved EA and EMPr at the for the ADZ.

There was a total of three conditions not realizing full compliance. Three (3) conditions were noted as partial compliance. The partially compliance conditions relate to, maintenance, entanglement and marking of precincts.

No non-compliance was noted.

### **No amendments are necessary for the EMPr.**

The ADZ must be commended for continuing to maintain a high standard in terms of compliance with conditions set out in the EA and EMPr.

Every effort has been made to ensure the site is run effectively and efficiently with minimal impact to the environment and surrounding communities.

In closing the ADZ is encouraged to continue to with monitoring exercises in order to continue with an already impressive compliance rating.

## 7.1 SUMMARY TABLES

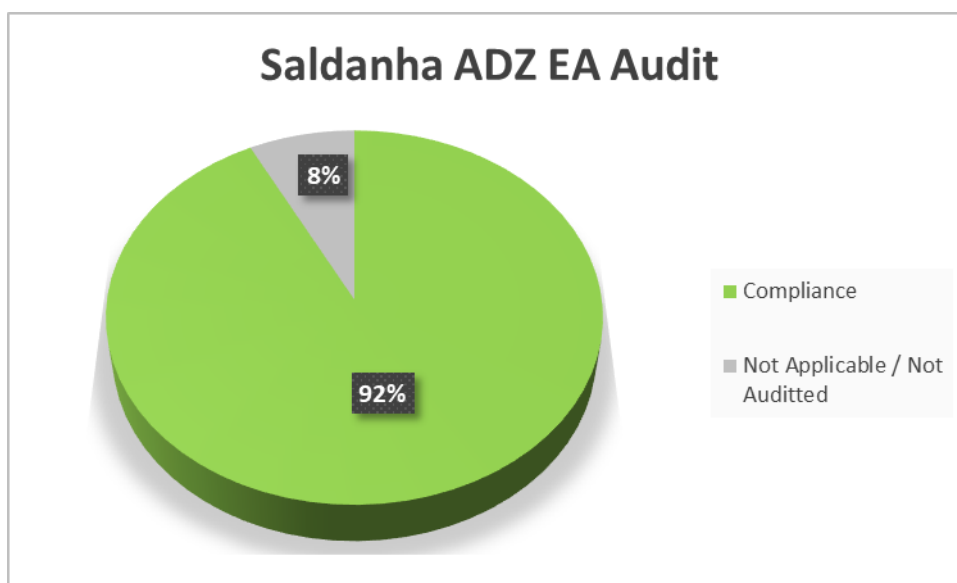
	Compliant	Partially Compliant	Non-compliant	Not Applicable / Not Audited	Total
<b>Total Conditions</b>	98	0	0	8	106
<b>Breakdown (%)</b>	92,45%	0,00%	0,00%	7,55%	100%
<b>Scoring Conditions</b>	98	0	0	NA	98
<b>Scoring</b>	2	1	0	NA	
<b>Total Scores</b>	196	0	0	Max Score	196
<b>Compliance Rating (%)</b>	100%	0%	0%		
<b>Overall Compliance Rating</b>	100%				

**Table 3:** Overall EA Rating.

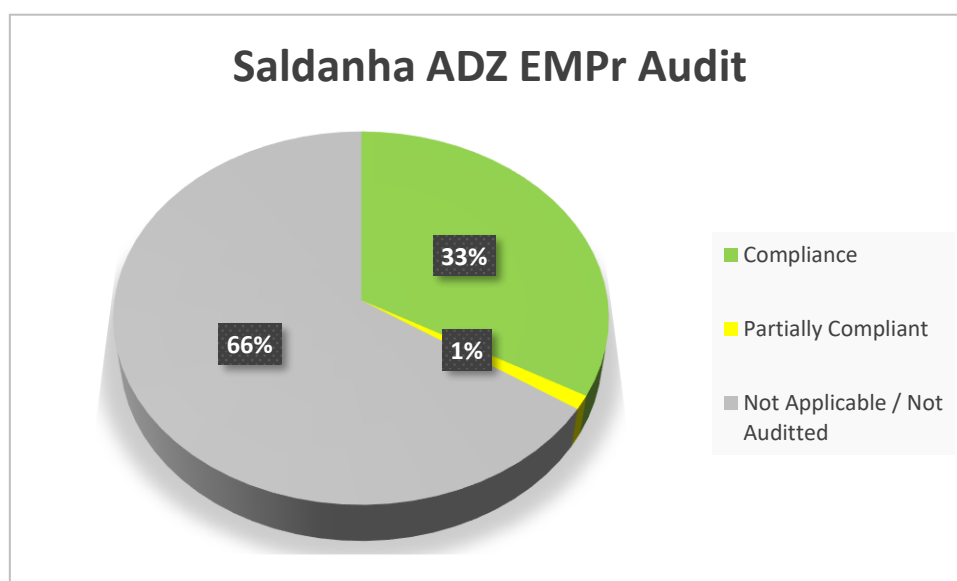
	Compliant	Partially Compliant	Non-compliant	Not Applicable / Not Audited	Total
<b>Total Conditions</b>	83	3	0	164	250
<b>Breakdown (%)</b>	33,20%	1,20%	0%	65,60%	100%
<b>Scoring Conditions</b>	83	3	0	NA	86
<b>Scoring</b>	2	1	0	NA	
<b>Total Scores</b>	166	3	0	Max Score	172
<b>Compliance Rating (%)</b>	90,59%	4,71%	0%		
<b>Overall Compliance Rating</b>	98,26%				

**Table 4:** Overall EMPr (All Phases) Rating.

## 7.2 SUMMARY GRAPHS



**Graph 1:** Breakdown of EA conditions



**Graph 2:** Breakdown of EMPr conditions.

## 8 REPORT DISTRIBUTION LIST

Recipient	Attention	Issued	Format
ADZ ECO: ARM Consultants	Jen Keightley		Electronic
Project Manager - DFFE: Sustainable Aquaculture Management	Michelle Pretorius		Electronic
DFFE: Sustainable Aquaculture Management	Maxhoba Jezile		Electronic
DFFE: Sustainable Aquaculture Management	Fatima Daya		Electronic
ADZ ECO supervisor: Anchor Research and Monitoring	Amy Wright		Electronic

### PREPARED BY:



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## ANNEXURE A – PHOTOGRAPHS





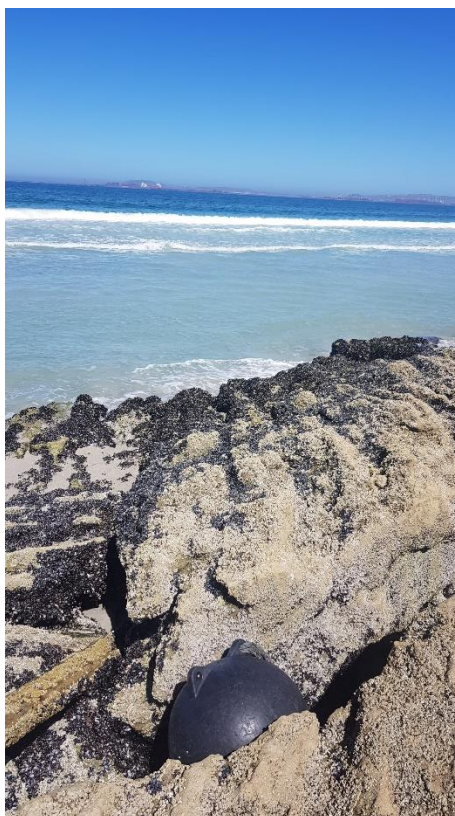
**Figure 1:** On site farm inspection.



**Figure 2:** On site farm inspection.



**Figure 3:** On site farm inspection: topline and buoys.



**Figure 4:** Buoy washed ashore on Spreevaulle Beach.

## **ANNEXURE B – ENVIRONMENTAL AUTHORISATION CONDITIONS**

Condition	Description	Compliant	Partially Compliant	Non-Compliant	Not Audited	Findings & Recommendations
<b>Scope of authorisation</b>						
1	The post mitigation scenario for the construction of the sea-based aquaculture development zone in saldanha bay within west coast district municipality in the western cape province is approved as per the geographic coordinated cited above	2				
2	Authorisation of the activity is subject to the conditions contained in this environmental authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation	2				
3	The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this environmental authorisation. This includes any person acting on the holder's behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.	2				
4	The activities authorised may only be carried out at the property as described above	2				
5	Any changes to, or deviations from, the project description set out in this environmental authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further environmental authorisation in terms of the regulations	2				
6	The holder of an environmental authorisation must apply for an amendment of the environmental authorisation with the competent authority for any alienation, transfer or change of ownership rights on the property on which the activity is to take place	2				
7	This activity must commence within a period of five (5) years from the date of issue of this environmental authorisation. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for the environmental authorisation must be made in order for the activity to be undertaken	2				
8	Commencement with one activity listed in terms of this environmental authorisation constitutes commencement of all authorised activities	2				
<b>Notification of the authorisation and right to appeal</b>						
9	The holder of the authorisation must notify every registered interested and affected party, in writing and within fourteen (14) calendar days of this environmental authorisation, of the decision to authorise the activity.	2				
10	The notification referred to must:	2				
	specify the date on which the authorisation was issued	2				
	inform the interested and affected party of the appeal procedure provided for in the National Appeal Regulations, 2014;	2				
	advise the interested and affected party that a copy of the authorisation will be furnished on request; and	2				
	give the reasons of the competent authority for the decision	2				
<b>Commencement of activity</b>						

11	The authorised activity shall not commence until the period for the submission of appeals has lapsed as per the National Appeal Regulations, 2014 and no appeal has been lodged against the decision. In terms of section 43(7), an appeal under section 43 of the National Environmental Management Act, 1998 will suspend the environmental authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged you may not commence with the activity until such time that the appeal has been finished.	2				Individual EMPs compiled for each farm.
<b>Management of the activity</b>						
12	The Environmental Management Programme (EMPr) submitted as apart of the application for EA is hereby approved. This EMPr must be implemented and strictly adhered to. Individual operators must compile individual site specific EMPs for the individual farms that are to be leased in the ADZ. The individual EMPs must be in line with the recommendations of this overarching approved EMPr and the conditions of this EA. The individual EMPs must be submitted to the ADZ Monitoring Committee (AMC) (see condition 12 below) for endorsement and to the Department for record keeping purposes, before commencement of the operations by the individual operator.	2				
<b>ADZ Management</b>						
13	To ensure appropriate ADZ management, two management bodies must be established by the holder of the authorisation prior to commencement of the activity.	2				AMC & CF Established.
	An ADZ Management Committee (AMC), comprising of, but not limited to, the Department of Agriculture, Forestry and Fisheries (DAFF), the Department of Environmental Affairs (DEA) (Oceans and Coasts/Biodiversity Branches), DEA (Integrated Environmental Authorisations), DEA Compliance and Monitoring, the Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) and the Transnet National Ports Authority (TNPA), to fulfil a coordinating and supervising role and ensure compliance with the EMPr throughout all phases of aquaculture farming in the ADZ; and	2				
	A consultative Forum that includes other relevant government departments, authorities and relevant local/public interest organisations, to review environmental monitoring data, advise on ADZ management and make recommendations to the AMC. The Consultative Forum will therefore feed into the AMC through the outputs (recommendations and advice) that it provides to the AMC for consideration.	2				
14	Upon establishment of the Consultative Forum, a notice must be published in a local newspaper announcing the inception of the Consultative Forum, providing contact details for the Consultative Forum Secretariat and inviting interested stakeholders to register on a stakeholder database to receive relevant notification about the ADZ.				NA	
<b>ADZ Management Committee</b>						
15	The function of the AMC is to oversee, facilitate, manage and monitor aquaculture operations in the ADZ. DAFF, as the applicant, is primarily responsible for the day-to-day management of the ADZ and ensuring the implementation of and adherence to the overarching approved EMPr, with appropriate support and guidance provided by the other AMC members	2				
16	The AMC must be consulted before the appointment of the project ECO, to ensure that they are suitably qualified and have the relevant expertise to monitor and ensure compliance with the conditions of the EA and EMPr	2				
17	The AMC must meet before the commencement of construction activities to appoint a Chairperson and to discuss the Terms of Reference (the member constitution, purpose, outcomes, roles and functions of the AMC, including but not limited those specified in the authorisation) From then on, the AMC must sit once every two months and special meetings can be convened on special or emergency situations.	2				
18	The chairperson must be an independent person, with experience in the environmental management and marine aquaculture field and/or industry.	2				
19	Key functions of the AMC are to:	2				



		Monitor aquaculture operators' compliance with the EMPr and ADZ EA conditions	2			
		Oversee environmental monitoring related to ADZ aquaculture activities in Saldanha Bay	2			
		Monitor production volumes in the ADZ	2			
		Make decisions based on the outcomes of environmental monitoring , which could lead to the amendment of the operations within the authorised ADZ	2			
		Make recommendations for improvements and amendments to the DAFFs overarching approved EMPr when required	2			
		Settle disputes regarding the interpretation of requirements in the EMPr and EA	2			
		Consider the advice, recommendations and inputs of the Consultative Forum with regards to environmental monitoring within Saldanha Bay and the management of the ADZ	2			
		Receive and manage stakeholder comments	2			
		Record and, if necessary, coordinate a response to environmental incidents related to aquaculture operations	2			
		Review and comment on new/expanded aquaculture farm proposals within the approved ADZ; and	2			
		Provide updated information to the Consultative Forum for distribution to the public (e.g. farm coordinates, water quality information, and notification of new aquaculture operations)	2			
<b>20</b>		The AMC organisational structure must make provision for various functions, including:	2			
		Chairperson: Calls and chairs meetings of the AMC	2			
		Secretariat: Fulfills secretariat functions, including:	2			
	<b>20.2.1</b>	Maintenance of member details and arrangement of meetings	2			
	<b>20.2.2</b>	Compiling and distribution of meeting notes	2			
	<b>20.2.3</b>	Distribution of communication to AMC members, Consultative Forum and aquaculture farmers in the ADZ	2			
	<b>20.2.4</b>	Maintenance of a database of registered (public) stakeholders	2			
	<b>20.2.5</b>	Drafting and distribution of regular (at least quarterly) AMZ Reports to all Consultative Forum members and registered stakeholders on activities in the ADZ:	2			
	<b>20.2.6</b>	Administration of and responding to stakeholder comments on aquaculture activities in the ADZ: and	2			
	<b>20.2.7</b>	Reporting on stakeholder aspects at AMC meetings	2			
		Environmental Representative: Fulfills environmental control functions, including :	2			
	<b>20.3.1</b>	Liasing with the suitably qualified service provider(s) appointed to attend to environmental sampling, monitoring and auditing aspects in the ADZ to ensure that monitoring is implemented as per the requirements:	2			
	<b>20.3.2</b>	Receiving and reviewing monthly Farm Monitoring Reports	2			
	<b>20.3.3</b>	Receiving and reviewing environmental sampling, monitoring and audit results	2			
	<b>20.3.4</b>	Notifying the Chairperson in the event any aspects require immediate attention of the AMC	2			
	<b>20.3.5</b>	Notifying the Secretariat in the event any aspects require immediate attention of other aquaculture farmers in the ADZ: and	2			

	20.3.6	Reporting on environmental aspects at AMC meetings	2				
<b>Consultative Forum</b>							
21		The holder of the authorisation must invite representatives of other relevant government departments, authorities, relevant local/public interest organisations and ADZ operators to become members of the Consultative Forum, including the following institutions/organisations:	2				
		Government and authorities: South African National Parks (SANParks): Western Cape Department of Agriculture (DoA); Cape Nature; and Saldanha Bay Municipality;	2				
		Aquaculture industry	2				
		Local industry association representing operations in the ADZ	2				
		Farmers operating in the ADZ	2				
		Other organisations: South African National Defence Force (SANDF)/ South African Navy (SAN); Saldanha Bay Water Quality Forum Trust (SBWQFT); and Representatives of the local fishing industry	2				
22		Forum members will join on a voluntary basis and at no costs to DAFF	2				
23		Key Functions of the Consultative Forum are to:	2				
		Review environmental monitoring data related to aquaculture in Saldanha Bay	2				
		Make recommendations to the AMC based on the outcomes of environmental monitoring; and	2				
		Provide a platform for discussion of environmental management in the ADZ and advise the AMC and ADZ Management.	2				
<b>Frequency and process of updating the EMPr</b>							
24		The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 29 below, indicate insufficient mitigation of environmental impacts associated with the undertaking the activity, or insufficient levels of compliance with the environmental authorisation or EMPr	2				
25		The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.	2				EMPr update in June 2022
26		The updated EMPr must be submitted to the Department for approval together with the environmental audit report, as per Regulation 34 of GN R. 982. The updated EMPr must have been subjected to a public participation process, which process has been agreed to by the Department, prior to submission of the updated EMPr to the Department for approval.	2				
27		In assessing whether to grant approval of an EMPr which has been updated as a result of an audit, the Department will consider the process prescribed in Regulation 35 of GN R.982. Prior to approving an amended EMPr, the Department may request such amendments to the EMPr as it deems appropriate to ensure that the EMPr sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity.				NA	
28		The holder of the authorisation may apply for an amendment				NA	
<b>Monitoring</b>							

29	The holder of the authorisation must appoint a suitably qualified and experienced independent Environmental Control officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this authorisation are implemented and to ensure compliance with the provisions of the EMPr.	2				
	The ECO must be appointed before commencement of any authorised activities	2				
	Once appointed, the name and contact details of the ECO must be submitted to the Director: Compliance Monitoring of the Department	2				
	The ECO must keep record of all activities on site, problems identified, transgressions noted and a schedule of tasks undertaken by the ECO	2				
	All monitoring studies conducted/commissioned by the Department of Agriculture, Forestry and Fisheries within Saldanha Bay must be reviewed by an independent specialist to verify findings before the report is submitted to the AMC	2				
	Findings of the daily monitoring by the ECO must be summarised into a monthly report which must be presented by the ECO to the AMC at the bi-monthly meetings	2				
	The ECO must also submit a detailed monitoring report to the Directorate: Compliance Monitoring on a monthly basis. A summarised version of this report must also be made available to all AMC members on a monthly basis	2				
<b>Recording and reporting to the department</b>						
30	All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this environmental authorisation, must be submitted to the Director: Compliance Monitoring of the Department at Directorcompliance @environment.gov.za.	2				
31	The holder of the environmental authorisation must, for the period during which the environmental authorisation and the EMPr remain valid, ensure that project compliance with the conditions of the environmental authorisation and the EMPr are audited, and that the audit reports are submitted to the Director: Compliance Monitoring of the Department at Directorcompliance@environment.gov.za	2				
32	The frequency of auditing and of submission of the environmental audit reports must be as per the frequency indicated in the EMPr, taking into account the processes for such auditing as prescribed in Regulation 34 of GN R.982	2				
33	The holder of the authorisation must, in addition, submit an environmental audit report to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and a final environmental audit report within 30 days of completion of rehabilitation activities.	2				
34	The environmental audit reports must be compiled in accordance with Appendix 7 of the EIA Regulations, 2014 and must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions as well as the requirements of the approved EMPr	2				
35	Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development	2				

**Notification to authorities**



36	A written notification of commencement must be given to the Department no later that fourteen (14) days prior to the commencement of the activity. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, as well as a reference number.				NA	Activities have commenced.
<b>Operation of the activity</b>						
37	A written notification of operation must be given to the Department no later than fourteen (14) days prior to the commencement of the activity operational phase				NA	Activities have commenced.
<b>Site closure and decomissioning</b>						
38	Should the activity ever cease or become redundant, the holder of the authorisation must undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.	2				
<b>Specific conditions</b>						
39	An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste must be disposed of at a landfill licensed in terms of section 20 (b) of the National Environmental Mangement Waste Act, 2008 (Act No.59 of 2008)	2				
40	No new mooring blocks must be placed withing a 200m of the Merestein site (33.087355°S, 17.955044°E - WGS 84, Decimal Degrees)	2				
41	A detailed anchor distribution plan must be provided to the Maritime and Underwater Cultural Heritage Unit at SAHRA once this has been finalised. This plan can be used to reassess potential shipwreck impacts to assist developers in determining whether to amend placement plans to avoid incurring further heritage intervention costs	2				
42	Diver surveys must be completed during the activities required for setting anchor arrays. Commercial divers working on the project must be provided with brief orientation training. If wreck material is identified, archaeologists must be contracted to make an assessment.	2				
43	The location and nature of any identified maritime and underwater cultural heritage resource must be provided to a maritime archaeologist and to the South African Heritage Resources Agency for inclusion on their Shipwreck Database	2				
44	Should evidence of archaeological material be identified, the Maritime and Underwater Cultural Heritage Unit at SAHRA must be notified and an archaeologist must assess the findings	2				
45	Should any wreck site, or part therof, or object or artefacts from a wreck site be disturbed during operations, a permit from SAHRA must be acquired prior to continuing with activities	2				
46	Benthic Mapping/survey of the area under individual farms must be undertakenby prospective operators before the commencement of the operational phase in order to establish baseline conditions for monitoring purposes	2				
47	Monitoring points must be established before the commencement of farming activities on each site in order to measure pre-farming baseline conditions with observed conditions during the operational phase. The number and placement of these monitoring points, and the parameters measured, must be appropriate to the mariculture activity type (and its by-products) at that site, the benthic habitat at that site, as well as the prevailing environmental conditions (such as the dominant current directions). The information gathered from monitoring reports must be used to guide the phased development of each site.	2				

48	Predictive dispersion models must be developed within 2 years of new aquaculture activities commencing and these must be used together with monitoring and other information to inform the continuous management of the Saldanha Aquaculture Development Zone	2				
<b>ADZ phasing-in of aquaculture expansion</b>						
49	The holder of the authorisation must limit annual ungraded shellfish production to 10000 tpa for the first two years, increasing thereafter annually by up to 5000 tpa, only if monitoring results indicate that environment health has been maintained and impacts remain manageable, to a maximum of 27600 tpa ungraded production.	2				
50	The holder of the authorisation must implement a phased approach for the development of finfish cage culture in the ADZ by:				NA	No finfish production.
	Limiting annual increases in finfish production to no more 1000 tpa to a maximum of 5000 tpa achieved over a 5 year period, only if monitoring results indicate that environment health has been maintained and impacts remain manageable				NA	No finfish production.
	Splitting the recommended annual increase in production between Big Bay and Outer Bay				NA	No finfish production.
51	Finfish production beyond 5000 tpa, to a maximum of 10000 tpa, must only be pursued if:				NA	No finfish production.
	Ecological monitoring indicated that production of 5000 tpa has no adverse ecological effects, and there is adequate information to permit further expansion in fish production;				NA	No finfish production.
	Intensified monitoring is applied (a detailed monitoring plan to be implemented) and that expanded production can only occur by following a more precautionary ramp up approach (where the expanded production is phased in over at least a five-year period, provided ongoing monitoring has indicated that resource quality objectives are maintained); and	2				
	In the ramp up period, and for any production beyond five years, a further period of strict monitoring and environmental quality standards in introduced. Should standards or precautionary limits be approached or exceeded, sampling and monitoring plans must include a response procedure that leads to appropriate downward adjustments of fish production				NA	
52	These detailed monitoring plans, for intensified monitoring in the expanded finfish production scenario (i.e. finfish production beyond 5000 tpa, to a maximum of 10000 tpa) must be submitted to the Department for approval, prior to this expansion in finfish production commencing				NA	No finfish production.
53	The holder of the authorisation must ensure that the findings of the dispersion modelling inform the site specific EMPs (to be compiled individual operators), Sampling Plan, ADZ layout and expansion	2				
54	Environmental monitoring must be implemented to inform management and expansion of operations as part of the phased approach	2				
<b>General</b>						
55	A copy of this environmental authorisation, the audit and compliance monitoring reports, and the approved EMP, must be made available for inspection and copying	2				
	at the site of authorised activity	2				
	to anyone on request, and	2				

		where the holder of the environmental authorisation has a website, on such publicly accessible website	2				
56		National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the holder of the authorisation or his/her successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the holder of the authorisation with the conditions of authorisation as set out in this document or nay other subsequent document emanating from these conditons of authorisation.				NA	

## **ANNEXURE C – ENVIRONMENTAL MANAGEMENT PROGRAMME**

ID	3. Design Phase	Compliant	Partially Compliant	Non-Compliant	Not Audited	Findings & Recommendations
<b>Table 3.1 Design Phase - ADZ level mitigation measures</b>						
<b>ADZ Layout</b>						
1	Avoid the following areas to mitigate impacts (these are already excluded in Figure 1-1): <ul style="list-style-type: none"> <li>• Big Bay North: 100 m-wide buffer around reefs and blinders and 1 km buffer from residents along the eastern shoreline (to mitigate marine ecology and visual impacts);</li> <li>• Big Bay South: entire precinct (to mitigate marine ecology and socio-economic impacts);</li> <li>• Outer Bay North: 1 000 m buffer for finfish and 500 m buffer for shellfish around the Malgas Island MPA and 100 m-wide buffer around reefs and blinders (to mitigate marine ecology impacts); and</li> <li>• Outer Bay South: 250 m-wide buffer around Jutten Island MPA (aligned with the island) and portion between Jutten Island and Donkergat Peninsula (to mitigate marine ecology, socio-economic and heritage impacts).</li> </ul>	2				
2	Compile detailed site-layout plans for ADZ precincts approved as part of the EA, including recommended layout of farms within precincts and longlines / rafts / cages within individual farms.	2				<b>Farm boundaries/precincts are identified in ECO reports. Longlines/Rafts/Cages for individual farms: site layout plan of longlines/rafts/cages not reviewed.</b>
3	Do not restrict access to fishing rights areas where practically possible.	2				
<b>ADZ Phasing</b>						
4	Implement a phased approach for the expansion of shellfish farms in the ADZ, limiting annual ungraded shellfish production to 10 000 tpa for the first two years, increasing thereafter annually by up to 5 000 tpa only if monitoring results indicate that environment health has been maintained and impacts remain manageable, to a maximum of 27 600 tpa ungraded production.	2				<b>This guideline is being compiled as one of the deliverables of Anchor Research and Monitoring’s two year monitoring contract started 1st September 2021</b>
5	Implement a phased approach for the development of finfish cage culture in the ADZ: <ul style="list-style-type: none"> <li>• Limit annual increases in finfish production to no more than 1 000 t to a maximum of 5 000 tpa only if monitoring results indicate that environment health has been maintained and impacts remain manageable.</li> <li>• Split the recommended annual increase in production between Big Bay and Outer Bay.</li> </ul>				NA	
6	Finfish production beyond 5 000 tpa, to a maximum of 10 000 tpa, should only be pursued if: <ul style="list-style-type: none"> <li>• Ecological monitoring indicates that production of 5 000 tpa has no adverse ecological effects, and there is adequate information to permit further expansion in fish production;</li> <li>• Intensified monitoring is applied (a detailed monitoring plan to be implemented) and that expanded production can only occur by following a more precautionary ramp up approach; and</li> <li>• In the ramp up period, and for any production beyond five years, a further period of strict monitoring and environmental quality standards is introduced. Should standards or precautionary limits be approached or exceeded, sampling and monitoring plans must include a response procedure that leads to appropriate downward adjustments of fish production.</li> </ul>				NA	
7	Commission dispersion modelling to inform the detailed EMPr / Sampling Plan, ADZ layout and expansion.				NA	

ADZ management specifications						
8	Specify requirements applicable to all existing and future operators with regards of aquaculture farms, which must be in compliance with farm-specific measures listed in the EMPr and include specifications with regards to: <ul style="list-style-type: none"> <li>• Lighting;</li> <li>• Equipment visible at the surface;</li> <li>• Safety and security;</li> <li>• Waste management;</li> <li>• Biosecurity management; and</li> <li>• Vessel launch, mooring and loading / offloading protocols.</li> </ul> Communicate such requirements to all existing and prospective operators.				NA	
9	Confirm with key stakeholders (notably Port Captain, representatives of water users in the area and the South African National Defence Force / South African Navy) whether certain boundaries of the ADZ located away from night-time traffic require lighting at all.				NA	
10	Develop maintenance and operational guidelines and standards in relation to potential entanglement risks at farms, including loose ropes, lines, buoys or floats.	2				Maintenance plans for SBOC and BOM implemented from August 2022
11	Specify a period within in which existing operators must adhere to specifications applicable to all operators.				NA	
Expansion of existing/establishment of new farms						
12	Develop a template for individual operators to provide farm establishment / expansion proposals to the DFFE for review and comment. Such proposals should contain information on the proposed: <ul style="list-style-type: none"> <li>- Location;</li> <li>- Layout;</li> <li>- Stocking density, with reference to the maximum production volume authorised;</li> <li>- Mooring plan, with reference to heritage resources on the seabed;</li> <li>- Measures to ensure equipment is securely in place;</li> <li>- Emergency procedures in the event of loose equipment, loss of stock, entanglement of animals etc; and</li> <li>- Any other aspects deemed relevant.</li> </ul>	2				
13	Review farm establishment / expansion proposals of individual operators and provide comment to proponents.	2				
14	Give consideration to the development of Integrated Multi-Trophic Aquaculture (IMTA), which combines, in appropriate proportions, the cultivation of organic extractive aquaculture species (e.g. shellfish) and inorganic extractive aquaculture species (e.g. seaweeds) in close proximity to fed aquaculture species (e.g. finfish).	2				
Emergency response						
15	Draw up species-specific emergency response protocol(s) to respond to a range of potential incidents in the ADZ, including: <ul style="list-style-type: none"> <li>- Loose / drifting equipment;</li> <li>- Accidents (collisions) with other water users;</li> <li>- Loss of stock; and</li> <li>- Disease outbreak or algal bloom.</li> </ul> Communicate the protocol to all ADZ aquaculture operators and registered stakeholders.	2				

16	Develop disentanglement protocols in collaboration with DFFE and the SA Whale Disentanglement Network and establish a rapid response unit to deal with entanglements	2				
<b>Stakeholder communication</b>						
17	Invite the general public to register as stakeholders on a stakeholder database maintained by the AMC.	2				
18	Make available updates to all registered stakeholders / consultative forum on aspects relating to the ADZ, including: - Location of existing and planned aquaculture farms; - Results of environmental monitoring in the reporting period; - Any other relevant aspects.	2				
<b>Table 3.2 Design Phase - Farm level management and mitigation measures</b>						
<b>EMP</b>						
1	Compile an individual environmental management programme (EMPr) for each farm to allow for efficient management at the individual farm scale. The EMPr must be compatible, supportive and facilitative of the EMPr for the ADZ.	2				
<b>Farm layout</b>						
2	Consult the AMC specifications regarding the layout of aquaculture farms.	2				
3	Ensure a minimum width of 10 m between lines to allow for access.	2				
4	Fish farming: Ensure that finfish cages are suspended at least 5 m above the seabed to allow for adequate dispersion to prevent build-up of wastes (uneaten food and faeces) below the cages.				NA	
5	Ensure that finfish cages do not occupy more than 30% of the total area allocated for finfish farming at any one time, both within individual licence areas and overall within the portions of the ADZ identified for finfish culture.				NA	
6	Submit detailed proposals for expansions / new farms to the Branch Fisheries Management DFFE, reporting on the following aspects: - Location (coordinates, size); - Species; - Equipment specifications; - Layout (location and orientation of individual structures); - Mooring plan; - Surveys to be conducted prior to installation; - Measures to ensure equipment is securely in place; - Stocking density; - Feeding protocols (if any); and - Any other information deemed relevant or requested by the AMC.	2				
<b>Equipment</b>						
7	Use aquaculture structures and equipment that are suitable for the environmental conditions in the farming area, e.g. that can withstand the maximum recorded wave / swell heights.	2				
8	Ensure mooring systems will prevent / limit movement of anchors and chains over the sea floor.	2				

9	Minimise entanglement by using mesh size less than 6 cm.	2				
10	Use environmentally safe aquaculture infrastructure to prevent entanglement of faunal species such as fish, whales, dolphins and turtles.	2				
<b>Visual Impacts</b>						
11	Use grey based hues for all project components visible above the water surface (rafts, cages, barrels, buoys / flotation devices) as far as possible.	2				Project components were of black or grey hues.
12	Ensure project components are of a similar style, scale and have a consistent spacing between them as far as possible to promote visual cohesiveness	2				
13	Utilise the minimum number of safety / warning buoys as far as possible. Only demarcate the corner points of each precinct and the minimum interval distance along the precinct boundary to meet Ports Authority (Transnet) safety requirements.				NA	
14	Use only minimal non-navigational lighting at night.				NA	
15	Use downward-pointing and shaded lights where possible.				NA	
16	Mark all equipment (buoys, raft and cage components) with an identifier unique to the operator to enable tracing of loose equipment / debris.				NA	
<b>Decommissioning</b>						
17	Plan and make adequate financial provision for removal of all infrastructure upon cessation of farming operations.	2				



ID	4. Construction Phase	Compliant	Partially Compliant	Non-Compliant	Not Audible / Not Audited	Findings & Recommendations
<b>Table 4.1 Construction Phase - ADZ level management and mitigation measures</b>						
<b>Stakeholder communication</b>						
1	Make available updates to all registered stakeholders on aspects relating to the ADZ, including: <ul style="list-style-type: none"> <li>- Location of existing and planned aquaculture farms;</li> <li>- Results of environmental monitoring in the reporting period;</li> <li>- Any other relevant aspects.</li> </ul>	2				All updates available via CF & ADZ meetings
<b>Complaints Register</b>						
2	Maintain and disclose a complaints / comments register. The register must record: <ul style="list-style-type: none"> <li>• Name and contact details of person complaining / commenting;</li> <li>• Date submission was lodged;</li> <li>• Person who initially received the submission;</li> <li>• Nature of the submission;</li> <li>• Operator that is subject to the submission;</li> <li>• Actions taken to investigate a complaint and outcome of the investigation;</li> <li>• Action taken to remedy the situation; and</li> <li>• Date on which feedback was provided to the complainant.</li> </ul>				NA	No new construction during this audit period.
<b>Response to environmental incidents</b>						
3	Record all environmental incidents related to aquaculture farm construction / expansion, including (but not limited to): <ul style="list-style-type: none"> <li>- Loose / drifting equipment;</li> <li>- Accidents (collisions) with other water users;</li> <li>- Entanglement of marine animals;</li> <li>- Spill of pollutants; and</li> <li>- Waste in the marine environment.</li> </ul>				NA	No new construction during this audit period.
4	Coordinate a response to environmental incidents related to aquaculture operations, if necessary.				NA	
5	Initiate the emergency response protocol to respond to an environmental incident if it cannot be dealt with at farm level.				NA	
<b>Table 4.2 Construction Phase - Farm level management and mitigation measures</b>						
<b>ECO</b>						
1	Appoint an Environmental Control Officer (ECO) during the construction and operational phase (installation of new farms) to ensure compliance with stipulations in the Environmental Authorisation and EMPr.	2				
<b>Visual Impacts</b>						
2	Use grey based hues for all project components visible above the water surface (rafts, cages, barrels, buoys / flotation devices) as far as possible.	2				Most farms have grey based hue infrastructure.
3	Ensure project components are of a similar style, scale and have a consistent spacing between them as far as possible to promote visual cohesiveness.	2				

4	Utilise the minimum number of safety / warning buoys as far as possible. Only demarcate the corner points of each precinct and the minimum interval distance along the precinct boundary to meet Ports Authority (Transnet) safety requirements.	2				
5	Demarcate all equipment (buoys, raft and cage components) with the operators logo / name to enable tracing of lose equipment / debris.	2				
<b>Protection of heritage resources</b>						
6	Undertake diver surveys prior to / while setting anchor / mooring arrays, and do not place mooring blocks on visible shipwreck features.				NA	No new construction during this audit period.
7	Contact an archaeologist if shipwreck material is identified at mooring sites				NA	No new construction during this audit period.
8	Provide the location and nature of any identified maritime and underwater cultural heritage resources to a maritime archaeologist and to SAHRA for inclusion on their shipwreck database.				NA	No new construction during this audit period.
9	Obtain a permit from SAHRA prior to continuing with activities that have disturbed a wreck site or part thereof, including objects or artefacts.				NA	No new construction during this audit period.
10	Submit a detailed anchor / mooring distribution plan to the Maritime and Underwater Cultural Heritage Unit at the South African Heritage Resources Agency (SAHRA).				NA	No new construction during this audit period.
<b>Equipment</b>						
11	Ensure that, upon installation of the aquaculture structures: - Primary longline / raft / net is secured appropriately so that it is kept taut and rigid at all times. Nets of fish cages should be weighted; - Ropes and anchor lines are taut, especially after rough seas; and - There is adequate separation between rafts and longlines, even during strong currents and rough seas; or - There is adequate separation between the primary and secondary nets of fish cages, even during strong currents and rough seas.				NA	No new construction during this audit period.
<b>Vessel operation</b>						
12	Implement maritime safety protocols while working on vessels and at sea.	2				
13	Do not discard any waste overboard.	2				
14	Take waste generated on vessels back to shore and dispose of properly.	2				
15	In the event of litter and debris entering the sea, remove these as soon as possible.	2				
<b>Land-bases activities</b>						
16	Ensure that contaminants are not placed directly on the ground to prevent runoff reaching the marine environment.	2				
17	Develop (or adapt and implement) procedures for the safe transport, handling and storage of potential pollutants.				NA	
18	Avoid unnecessary use and transport of hazardous substances.				NA	
19	Keep Material Safety Data Sheets (MSDS) for all hazardous materials on site and ensure that they are available for reference by staff responsible for handling and storage of materials.				NA	
<b>Waste Management</b>						
20	Ensure that no litter and debris reaches the marine environment during construction activities.				NA	

21	Train all staff in the effects of debris and litter in the marine environment.				NA	
22	Minimise waste through reducing and re-using (packaging) material.				NA	
23	Prevent littering by construction staff at work sites by providing bins or waste bags in sufficient locations.				NA	
24	Provide separate bins for hazardous / polluting materials and mark these clearly.				NA	
<b>Employment/Procurement</b>						
25	Utilise local labour (Saldanha Bay municipality) as much as possible.				NA	
26	Procure goods and services from local, provincial or South African suppliers as far as possible, with an emphasis on BBBEE suppliers where possible.				NA	
27	Procure ancillary services for goods purchased overseas, such as installation, customisation and maintenance, from South African companies as far as possible.				NA	
<b>Environmental awareness training</b>						
28	Provide environmental awareness training to all personnel on site at the start of their employment. Training should include discussion of: <ul style="list-style-type: none"> <li>• Potential impact of waste and construction activities on the environment;</li> <li>• Suitable disposal of waste;</li> <li>• Key measures in the EMPr relevant to worker's activities;</li> <li>• How incidences and suggestions for improvement can be reported.</li> </ul> Ensure that all attendees remain for the duration of the training and on completion sign an attendance register that clearly indicates participants' names.				NA	
<b>Complaints Register</b>						
29	Forward all public submissions received by operators the ADZ ECO.	2				
30	ADZ ECO to provide a response to the submission, where required.	2				
<b>Response to environmental incidents</b>						
31	In the event of environmental pollution, e.g., through spillages, immediately stop the activity causing the problem.				NA	
32	Only resume activity once the problem has been stopped, the equipment has been repaired and/or the pollutant can be captured without reaching the marine environment.				NA	
33	Repair faulty equipment as soon as possible.				NA	
<b>Response to environmental incidents</b>						
34	Report all environmental incidents related to aquaculture farm construction / expansion to the Branch Fisheries Management, including: <ul style="list-style-type: none"> <li>- Loose / drifting equipment;</li> <li>- Accidents (collisions) with other water users;</li> <li>- Entanglement of marine animals;</li> <li>- Spill of pollutants; and</li> <li>- Waste in the marine environment.</li> </ul>				NA	

35	Initiate steps to contain the environmental incident at a farm level.				NA
36	Request and support assistance with environmental incidents from the DFFE Branch Fisheries Management/ AMC if the incident cannot be dealt with at farm level.				NA

ID	5. Operation Phase	Compliant	Partially Compliant	Non-Compliant	Not Audited	Findings & Recommendations
Demarcation of ADZ precincts						
1	Ensure that all active aquaculture farms are accurately marked on navigational charts	2				All aquaculture farms are accurately marked on navigational charts as published in Notice to Mariners 2022
2	Ensure that the outside boundaries of all active aquaculture areas are accurately marked day and night using markers compliant with South African Marine Safety Authority (SAMSA) regulations.		1			The ADZ is accurately demarcated on charts but not accurately marked using markers compliant with the South African Marine Safety Authority (SAMSA).DFFE Branch Fisheries Management have been in consultation with the South African Maritime Safety Authority (SAMSA) to develop an Aids to Navigation (AtoN) plan for the ADZ.Final AtoN plan is developed and it was identified that a Navigational Risk Assessment is now required before the AtoN can be implemented. A workshop for this Risk assessment is planned for June 2023.
3	Monitor that markers are fully functional.	2				This condition is monitored by Transnet National Ports Authority (TNPA)
4	If the Ports Authority requires flashing lights, ensure the lights flash simultaneously.				NA	
5	Do not restrict access to fishing rights areas where practically possible.	2				
Supervision of farming activities						
6	Enforce maintenance and operational guidelines and standards in relation to potential entanglement risks at farms, including loose ropes, lines, buoys or floats.		1			Saldanha Bay Oyster Company (SBOC) and Blue Ocean Mussels (BOM) provided maintenance plans in July 2022. Three farms that are not compliant have provided a maintenance plan and are making progress towards compliance, as recorded in ECO reports.
7	Implement monitoring as per the environmental monitoring requirements stipulated in Section 7 of the EMPr.	2				
8	Update the dispersion model with monitoring information as it becomes available to inform further monitoring and the phased implementation of the ADZ.	2				
Stakeholder communication						
9	Notify registered stakeholders of new farms commences. Provide detail on the proposed farm type and location.				NA	

10	Make available ADZ Report updates to all registered stakeholders on aspects relating to the ADZ, including: - Location of existing and planned aquaculture farms; - Results of environmental monitoring in the reporting period; - Any other relevant aspects.	2				Made available through CF & AMC meetings and ECO Reports
<b>Complaints register</b>						
6	Maintain and disclose a complaints / comments register. The register must record: • Name and contact details of person complaining / commenting; • Date submission was lodged; • Person who initially received the submission; • Nature of the submission; • Operator that is subject to the submission; • Actions taken to investigate a complaint and outcome of the investigation; • Action taken to remedy the situation; and • Date on which feedback was provided to the complainant.	2				
<b>Response to environment incident</b>						
11	Record all environmental incidents related to aquaculture farm operations, including: - Loose / drifting equipment; - Accidents (collisions) with other water users; - Entanglement of marine animals; - Loss of stock; and - Disease outbreak or algal bloom. - Spill of pollutants; and - Waste in the marine environment.	2				Incidents recorded in monthly ECO reports. Whale disentanglement training conducted to mitigate further incidents.
12	Coordinate a response to environmental incidents related to aquaculture operations, if necessary.				NA	Emergency Response Protocol version 3 was developed and was distributed on 20 June 2022. No incidents since 2021.
13	Activate the emergency response protocol to respond to an environmental incident if it cannot be dealt with at farm level.				NA	Emergency Response Protocol version 3 was developed and was distributed on 20 June 2022. No incidents since 2021.
<b>Sector development</b>						
14	Liaise with relevant authorities to encourage the development of South African spat and fingerling hatcheries to reduce the reliance on import, and associated risk of non-intentional introduction of associated alien species and diseases.				NA	
15	Encourage the municipality, in cooperation with aquaculture operators and the AMC, to initiate a study to identify industries or projects that could benefit from the direct and indirect opportunities generated by the ADZ, and mechanisms to promote or establish such industries or projects.				NA	
16	Encourage the municipality, in cooperation with aquaculture operators and the AMC, to encourage and support projects and / or networks that provide training and support for small and medium enterprises in the Saldanha Bay Municipality to benefit from the opportunities generated by the ADZ.				NA	
<b>Auditing</b>						

17	<p>Condition 32 of the EA stipulates that: The frequency of auditing and of submission of the environmental audit reports must be as per the frequency indicated in the EMPr, taking into account the processes for such auditing as prescribed in Regulation 34 of GN R. 982. This condition was amended in the (Sept 2020 Amended EA) to read:</p> <p>Auditing and submission of the environmental audit reports must be undertaken annually, conducted over the period of five (5) consecutive years, after which the audit frequency can be reviewed based on the audit findings, taking account the processes for such auditing as prescribed in Regulation 34 of GNR.982.</p>	2				External audit conducted annually. 2023 will be the fourth audit.
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**Table 5.2 Operation Phase - Farm level management and mitigation measures**

Bio-fouling						
1	Undertake routine surveillance for indications of non-native fouling species on and around marine farm structures and associated vessels and infrastructure.				NA	
2	Maintain effective antifouling coatings and monitor for fouling.	2				Routine fouling checks are done. ECO also checks fouling on site visits.
3	Clean structures and hulls regularly to ensure eradication of pests before they become established.				NA	
4	Avoid using chemicals for the cleaning of cage nets. It is recommended that high-pressure water hoses and drying or sunning be used to clean cage nets of algae and debris.				NA	
5	Minimise the impact of bio-fouling organisms by using smooth, plastic coated, knotless mesh on nets, or copper-alloy mesh.				NA	
6	Do not use of antifouling products based on heavy metals.				NA	
7	Use only prescribed veterinary chemicals and antifoulants.				NA	
8	Establish and adhere to guidelines around the use of anti-fouling products in the mariculture industry.				NA	
9	Do not apply antifoulants on site and use environmentally friendly alternatives where effective.				NA	
10	Ensure that veterinarian protocols to eliminate any pests, parasites and diseases are strictly adhered to.				NA	
11	Obtain health certificates for any new batches of fry / finfish introduced into the bay (finfish and oysters).				NA	
Biosecurity						

12	<p>Ensure that a high level of biosecurity management and planning is in place to limit the introduction of pests and diseases and to be able to respond quickly and effectively should biosecurity risks be identified. Comply with procedures prescribed by the DFFE Aquatic Animal Health Plans. Key components to biosecurity management include:</p> <ul style="list-style-type: none"> <li>• Prevention of incursions, focussing on the management of: <ul style="list-style-type: none"> <li>- High-risk pathways (including international source regions);</li> <li>- New pathways; and</li> <li>- Regional sources known to be infected by recognised high-risk pests;</li> </ul> </li> <li>• Surveillance (detection), focussing on: <ul style="list-style-type: none"> <li>- Passive surveillance (screening at airports and ports)</li> <li>- Routine surveillance (undertaken on and around marine farm structures and associated vessels and infrastructure by farm operators); and</li> <li>- Targeted surveillance of high-risk areas; and</li> </ul> </li> <li>• Control of populations and outbreaks through coordination with, and support from: <ul style="list-style-type: none"> <li>- All marine stakeholders whose activities can spread unwanted organisms; and</li> <li>- Agencies at local, regional and national scales.</li> </ul> </li> </ul> <p>Eradication measures and / or application of therapeutants (pharmaceutical products, or 'medicines') are only advised if the risk of re-invasion can be managed and pests can be detected before they become widespread.</p>				NA	
<b>Maintenance of aquaculture infrastructure</b>						
13	Maintain all project infrastructure in good working order. Operators are required to maintain documented records of inspections and maintenance.	2				Maintenance plans in place for each farm. ECO documents if any infrastructure is needing to be replaced/checked.
14	Regularly clean cages, rafts etc and inspect for alien species. . Operators are required to maintain documented records of inspections and maintenance.	2				
15	Regularly inspect aquaculture infrastructure for integrity of the structure, anchorage and general wear and tear. . Operators are required to maintain documented records of inspections and maintenance.	2				Entanglement of seabird occurred in January 2023 due to the rope and crate on Spreewalle Beach. Following the sea bird entanglement operators conducted a large scale beach clean-up. Operators have also committed to cleaning beaches in Big Bay every 2 weeks and weekly in Small Bay. This evidence is provided to the ECO on the 15th of each month.
16	Keep all lines taught through regular inspections and maintenance. . Operators are required to maintain documented records of inspections and maintenance.	2				
17	Leave mooring anchors or blocks in place when undertaking cage or raft maintenance or fallowing sites to avoid repetitive impacts on the seabed. Operators are required to maintain documented records of inspections and maintenance.	2				
18	Keep marine structures clean and free of unnecessary equipment. . Operators are required to maintain documented records of inspections and maintenance.	2				
19	Maintain service barges and boats to withstand local weather conditions and fit them with the necessary safety equipment to provide a safe working environment. Operators are required to maintain documented records of inspections and maintenance.	2				
<b>Vessel operation</b>						
20	Implement maritime safety protocols while working on vessels and at sea.				NA	



21	Minimise noise and air emissions from vessels.				NA	
<b>Safety</b>						
22	Clearly mark cages and other offshore infrastructure with clear warning markers, bells and radar reflectors to ensure visibility to marine traffic.				NA	
23	Keep necessary safety equipment (e.g. life rings) on platforms in an accessible position.				NA	
<b>Human consumption</b>						
24	Ensure that products intended for human consumption are of an acceptable quality and comply with health standards for seafood as prescribed by the relevant authorities such as the South African Bureau of Standards (SABS) and DFFE.				NA	
<b>Waste Management</b>						
25	Minimise waste through reducing and re-using material (e.g. packaging).				NA	
26	Collect recyclables separately and deliver these to suitable facilities or arrange for collection.				NA	
27	Collect all waste in bins and/or skips. Prevent littering by staff at work sites by providing bins or waste bags in sufficient locations.				NA	
28	Provide separate bins for hazardous / polluting materials and mark these clearly.				NA	
29	Ensure no debris and waste material used at the operations enters the marine environment (particularly plastics), to minimise the risk of attraction, harming and entanglement by seabirds, marine mammals and large predators. Organic waste in the form of biofouling removed during harvesting is traditionally discarded overboard. Active investigations to alternative disposal methods must be pursued.				NA	
30	Do not discard non-organic waste overboard vessels.				NA	
31	In the event of equipment, litter and debris entering the sea, remove these as soon as possible.				NA	
32	Remove debris washed onshore. This should be done / paid for by the operator the debris belongs to (which should be marked).	2				Debris washes on shore such as buoys, cages and ropes. Ongoing cleaning is in place and monitored by the ECO. Not all debris has been removed from Spreewaulle Beach. Evidence of beach clean-ups are provided to the ECO on 15th of each month in the form of waste collection data.
33	Investigate alternative uses for wastes (such as using shell grit for driveway gravel, gardening or chicken farming) prior to disposing to landfill.	2				Verbal agreements with NatGro for disposal of biological waste.
<b>Employment</b>						
34	Procure goods and services from local, provincial or South African suppliers as far as possible, with an emphasis on BBBEE suppliers where possible.	2				Pers.comms with ECO
35	Procure ancillary services for goods purchased overseas, such as installation, customisation and maintenance, from South African companies as far as possible.				NA	



36	Utilise local labour (Saldanha Bay municipality) as much as possible. Where non-local specialist staff is required, implement a training programme to upskill local labour to assume these positions over a period of 5 years.				NA	
37	Implement a local recruitment policy, to discourage an uncoordinated influx of outside workers.				NA	
38	Collect data on staff numbers, composition and origin and report these to the DFFE.				NA	
<b>Environmental awareness training</b>						
39	Provide environmental awareness training to all personnel on site at the start of their employment. Training should include discussion of: <ul style="list-style-type: none"> <li>• Potential impact of waste and farming activities on the environment;</li> <li>• Suitable disposal of waste;</li> <li>• Key measures in the EMPr relevant to worker's activities;</li> <li>• How incidences and suggestions for improvement can be reported.</li> </ul> Ensure that all attendees remain for the duration of the training. Operators to keep a record of personnel that received environmental inductions / informal training and include this in the monthly reporting to the ADZ ECO.				NA	
<b>Mussel farm management</b>						
40	Seed ropes with specimens present in the area and do not introduce mussels from other areas.	2				
41	Do not dispose of mussels in the Bay during red tides.	2				
42	Avoid high density culture (overcrowding). The recommended density is: <ul style="list-style-type: none"> <li>• One raft of 800 droppers per ha; or</li> <li>• 11 longlines of 832 droppers per ha.</li> </ul>	2				
<b>Oyster farm management</b>						
43	Use only spat sourced from bio secure certified hatcheries and/or quarantine facilities.	2				
44	Inspect imported spat for other species before introduction into the Bay. Destroy any other species associated with oyster spat and report the incident to the DFFE.	2				
45	Avoid high density culture (overcrowding). The recommended density is 11 longlines of 176 oyster stacks / abalone barrels per ha.	2				
46	Do not discard fouling organisms removed from cultured stock taken onshore for maintenance back into the marine environment.	2				
<b>Finfish farm management - Farm layout and density</b>						
47	Ensure that finfish cages do not occupy more than 30% of the total area allocated for finfish farming at any one time, both within individual licence areas and overall within the portions of the ADZ identified for finfish culture.				NA	No finfish farming.
48	Rotate cages within a production area to allow recovery of benthos.				NA	No finfish farming.
49	Destock, or fallow, a site after a growing cycle to allow seabed recovery prior to restocking.				NA	No finfish farming.
<b>Finfish farm management - Feed</b>						

50	Purchase only registered aquaculture feeds from recognised feed companies that produce high quality feeds of which the ingredients, composition and manufacturing methods are known.				NA	No finifish farming.
51	Use palatable feeds of the correct pellet or grain size to ensure low levels of feed loss.				NA	No finifish farming.
52	Use high digestibility, high energy and low phosphorus feeds, species and system-specific feeds and maximize food conversion ratios (and minimize waste).				NA	No finifish farming.
53	Store and use feed on a “first-in-first-out” basis to prevent unnecessary aging and deterioration in quality.				NA	No finifish farming.
54	Ensure that feed storage areas are well ventilated, cool, dry and free of vermin that can damage, contaminate and consume feeds.				NA	No finifish farming.
55	Use feeding regimes that minimise direct feed wastage and excessive faecal and metabolite releases from fish.				NA	No finifish farming.
56	Record feed types and feeding rates daily so that conversion efficiency can be calculated and monitored.				NA	No finifish farming.
57	Monitor and manage feeding regimes to minimise feed wastage and chemical usage.				NA	No finifish farming.
<b>Finifish farm management - Genetics</b>						
58	Use all female or triploid salmonids in the farms.				NA	No finifish farming.
59	Implement suitable management and planning measures to limit the possibility of genetic interactions.				NA	No finifish farming.
60	Adhere to DFFE genetic management guidelines.				NA	No finifish farming.
61	Use appropriate spawning regimes in the hatchery to maintain genetic diversity in the offspring.				NA	No finifish farming.
62	Implement annual genetic monitoring between wild caught and farmed fish to monitor for any significant differences.				NA	No finifish farming.
63	Implement the “Genetic Best Practice Management Guidelines for Marine Finifish Hatcheries in South Africa” developed by DFFE and ensure adequate genetic monitoring of brood stock rotation.				NA	No finifish farming.
<b>Finifish farm management - Escapes</b>						
64	Ensure good physical and biological containment to limit the effects of escaped stocks.				NA	No finifish farming.
65	Use robust, well-maintained containment systems. Operators are required to maintain documented records of inspections and maintenance.				NA	No finifish farming.
66	Maintain cage integrity through regular maintenance and replacement. Operators are required to maintain documented records of inspections and maintenance.				NA	No finifish farming.
67	Develop and implement recovery procedures should escapes occur.				NA	No finifish farming.
<b>Finifish farm management - Maintenance</b>						
68	Keep cage netting clean, free of algal growth and free of any damage that could lead to the escape of farmed organisms or the penetration of predators.				NA	No finifish farming.
69	Keep nets well maintained (e.g. repair holes immediately). Operators are required to maintain documented records of inspections and maintenance.				NA	No finifish farming.

Finfish farm management - Waste						
70	Do not discard fouling organisms removed from netting taken onshore for maintenance back into the marine environment.				NA	No finifish farming.
71	Do not discard sick or dead fish into the marine environment.				NA	No finifish farming.
72	Provide fish mortality to fishmeal farms in the area, where possible. Where not possible, dispose of fish mortality in line with legal requirements.				NA	No finifish farming.
Finfish farm management - Predators						
73	Remove any injured or dead fish from cages promptly.				NA	No finifish farming.
74	Do not release any blood and/or offal (organic waste) from finfish into the bay.				NA	No finifish farming.
75	Use predator exclusion nets. Enclose nets at the bottom to minimise entanglement, keep nets taut, use mesh sizes of <25mm and keep nets well maintained (e.g. repairing holes).				NA	No finifish farming.
76	Monitor whether predators are attracted to cages, e.g. through the presence of wild fish close to the cages.				NA	No finifish farming.
Finfish farm management - Diseases						
77	Ensure all fry undergoes a health examination prior to stocking in sea cages.				NA	No finifish farming.
78	Take necessary action to eliminate pathogens through the use of therapeutic chemicals or improved farm management as per veterinary identification and prescriptions.				NA	No finifish farming.
79	Regularly inspect stock for disease and/parasites as part of a formalised stock health monitoring programme approved by DFFE.				NA	No finifish farming.
80	Maintain comprehensive records of all pathogens and parasites detected as well as logs detailing the efficacy of treatments applied.				NA	No finifish farming.
81	Locate cages stocked with different cohorts of the same species as far apart as possible; if possible stock different species in cages successively.				NA	No finifish farming.
82	Implement good house-keeping practices in place at all times i.e. keep nets clean and allow sufficient fallowing time on sites to ensure low environmental levels of intermediates hosts and or pathogens.				NA	No finifish farming.
83	Treat adjacent finfish cages simultaneously even if infections have not yet been detected if prescribed by veterinarian.				NA	No finifish farming.
84	Quarantine new juveniles or new broodstock when introduced to identify and treat potential diseases and parasites under the supervision of a veterinary professional. OR Ensure all newly introduced organisms undergo a health exam by a suitably qualified veterinarian and are certified as disease free.				NA	No finifish farming.
85	Humanely euthanize production animals that are injured or diseased to a point that causes excessive suffering.				NA	No finifish farming.
86	Remove and dispose of dead organisms daily (weather permitting) and dispose of in a responsible manner.				NA	No finifish farming.
87	Clean and sanitise equipment used for disposing of dead organisms.				NA	No finifish farming.

88	Appoint an aquaculture veterinarian to conduct a health assessment at least annually.				NA	No finifish farming.
89	Take the following actions in the event of a disease breakout: <ul style="list-style-type: none"> <li>• Notify the branch DFFE Fisheries Management immediately;</li> <li>• Isolate the affected individuals / cages;</li> <li>• Identify the disease;</li> <li>• Consult a veterinarian for treatment advice;</li> <li>• Apply treatment recommended by veterinarian; and</li> <li>• Monitor the efficacy of the treatment.</li> </ul>				NA	No finifish farming.
<b>Finifish farm management - Medication and pesticides</b>						
90	Seek assistance of an aquaculture veterinarian in the use of therapeutics and treatments, where required.				NA	No finifish farming.
91	Avoid using excessive amounts of medication, antibiotics, hormones and pesticides.				NA	No finifish farming.
92	The use of chemicals in disease management is discouraged due to negative impacts on the aquatic environment, consumer reluctance, and because the frequent use of traditional therapeutics may trigger the emergence of disease-resistant strains of pathogens.				NA	No finifish farming.
93	Reduce levels of nutritional therapeutants and trace contaminants in feed, using only the lowest effective doses.				NA	No finifish farming.
94	Use the most efficient drug delivery mechanisms that minimise the concentrations of biologically active ingredients entering the environment.				NA	No finifish farming.
95	Malachite Green as a bactericide or fungicide is discouraged.				NA	No finifish farming.
96	Reduce reliance on therapeutic chemicals through the use of sound husbandry practices aimed at disease and stress prevention.				NA	No finifish farming.
97	Antibiotics use as a prophylactic or preventative measure is discouraged but may be used in consultation with the authorities.				NA	No finifish farming.
98	Use bait type pesticides with care to prevent poisoning of non-target species.				NA	No finifish farming.
99	Use only recognised and registered chemicals as treatments, medicines, herbicides, insecticides, pesticides and for other purposes.				NA	No finifish farming.
100	Record dosages, application methods and the resultant outcome of all treatments in a treatment register.				NA	No finifish farming.
101	File Material Safety Data Sheets (MSDS) or medicine datasheets and reference during use, storage and disposal.				NA	No finifish farming.
<b>Gracilaria management</b>						
102	Use only locally sourced Gracilaria for stocking the ropes.				NA	
103	Avoid the use of fertilizers or chemicals in the culture of seaweeds.				NA	

104	Use as a co-culture species for use in Integrated Multi-Trophic Aquaculture (IMTA) rather than as monoculture, if possible.				NA	
<b>Predatory birds</b>						
105	Use exclusion devices to prevent killing of stock by predatory birds and do not kill predatory birds.				NA	
<b>Other</b>						
106	Comply with all management programmes required by DFFE Branch Fisheries Management (e.g. health management programme) including the reporting requirements of these programmes.	2				
<b>Response to environmental incidents</b>						
107	In the event of environmental pollution, immediately stop the activity causing the problem.				NA	No Environmental incidents occurred.
108	Initiate steps to contain the environmental incident at a farm level.				NA	
109	Only resume activity once the problem has been stopped or (in the case of spillages) the pollutant can be captured without reaching the marine environment.				NA	
110	Repair faulty equipment as soon as possible. Operators are required to maintain documented records of inspections and maintenance.				NA	
111	Report all environmental incidents related to aquaculture farm operation to the branch Fisheries Management, including: - Loose / drifting equipment; - Accidents (collisions) with other water users; - Entanglement of marine animals; - Loss of stock; and - Disease outbreak or algal bloom. - Spill of pollutants; and - Waste in the marine environment.				NA	
112	Request assistance with environmental incidents from the DFFE Branch Fisheries Management/ AMC if the incident cannot be dealt with at farm level.				NA	
113	Rectify activities that elicit noise or odour complaints.				NA	
<b>Entanglement</b>						
114	Ensure that exclusion nets are clearly visible under and above water.				NA	
115	Ensure all mooring lines and rafts are highly visible (use thick lines and bright antifouling coatings).		1			Sunken infrastructure was present on for one site which posed an entanglement risk to marine life as stated in ECO Reports and Pers.Comm with ECO
116	Implement the relevant AMC protocol in case of entanglement.				NA	
117	Request assistance with entanglement incidents from the DFFE: Branch Fisheries Management / AMC if the incident cannot be dealt with at farm level.				NA	
118	Contact experts from the NSRI in the event of large marine mammals becoming entangled in cage systems.				NA	
119	Keep record of all incidents of entanglement and the outcome of these incidents.				NA	Last entanglement occurred in 2021.

**Incident logging**

120	Maintain an incident register in which all events caused by farming activities or farm infrastructure, such as escape events or the dislodging of infrastructure, which may have environmental risks, are recorded.	2				ECO Reports contain any incidents.
121	Report all non-routine events that may have an environmental impact to the DFFE Branch Fisheries Management / AMC ECO.	2				

ID	6. Decommissioning phase	Compliant	Partially Compliant	Non-Compliant	Not Audited	Findings & Recommendations
<b>Table 6.1 Decommissioning Phase - Farm level management and mitigation measures</b>						
<b>Determine requirements</b>						
1	Initiate consultation with the AMC before decommissioning to discuss potential decommissioning options, methods and requirements.	2				
2	Determine other potential commercial uses for the plant equipment and infrastructure to be decommissioned.	2				
3	Identify and assess any potential environmental and societal risks associated with the preferred method of decommissioning and implement mitigation to minimise risks.	2				
4	Notify the AMC before decommissioning activities commence in a formal decommissioning plan with actions and deliverable dates.	2				On 17 June 2022 Transnet Ports Authority (TNPA) advertised two water lease sites in Outer Bay North ( <b>Chapmans</b> and Requa farms) with an application deadline of 18 July 2022. Chapmans Aquaculture in North Bay is now decommissioned.
<b>Removal of aquaculture equipment</b>						
5	Remove all aquaculture infrastructure and equipment and dispose of it appropriately.				NA	
6	Do not deposit any parts of the decommissioned infrastructure and equipment in the Bay.				NA	
7	Ensure that no litter and debris reaches the marine environment during the removal of equipment, cleaning of infrastructure and general decommissioning activities.				NA	
8	In the event of equipment, litter and debris entering the sea, remove these as soon as possible.				NA	
9	Train all staff in the effects of debris and litter in the marine environment and appropriate disposal procedures.				NA	
10	Aim to reuse or recycle decommissioned items.				NA	
11	Collect recyclables separately and deliver these to suitable facilities or arrange for collection.				NA	
12	Do not allow any burning or burying of waste on site.				NA	

ID	7. Environmental Monitoring and Corrective Action	Compliant	Partially Compliant	Non-Compliant	Not auditable / Not Audited	Findings & Recommendations
<b>Table 7.1 Monitoring - ADZ level monitoring requirements</b>						
<b>General</b>						
1	Ensure that the aquaculture industry association in Saldanha Bay designates an individual to monitor the shoreline of the Bay, Spreeuvalle and Paradise Beaches weekly for any aquaculture equipment washed ashore. The frequency of monitoring can be reduced after 6 months with the approval of the AMC if incidents of equipment washing ashore are very limited.		1			Significant debris washed ashore as per the January 2023 ECO report. Continuous monitoring is required by operators and ECO. Monitoring not be reduced due to the amount of equipment on shore.
2	Ensure that the shoreline of the bay, including Spreeuvalle and Paradise Beaches is monitored for any aquaculture equipment washed ashore.	2				Monitored by ECO and operators. ECO notes equipment on Spreeuvalle Beach.
3	Appoint / nominate a suitably qualified specialist to compile a comprehensive Sampling Plan for the ADZ and present the Sampling Plan to the AMC and consultative forum for review.	2				Anchor Research and Monitoring appointed to amend plan if necessary.
4	Ensure that a suitably qualified specialist conducts sampling and sample analysis in line with the Sampling Plan.	2				Anchor Research and Monitoring conducts surveys and sampling.
5	Appoint a suitably qualified specialist to monitor / audit compliance of aquaculture operators with specifications in the EMPr.	2				Anchor Research and Monitoring ECO appointed.
6	Ensure that a suitably qualified specialist monitors / audits compliance of aquaculture operators with specifications in the EMPr and submits EMPr Compliance Reports.	2				Anchor Research and Monitoring ECO appointed.
7	Support ongoing State of the Bay monitoring and aim to include parameters that are also relevant to monitoring potential impacts of aquaculture and respective baselines.	2				All the monitoring studies are listed in the ADZ compliance databases spreadsheet maintained by DFFE Branch Fisheries Management and the ADZ ECO.
8	Review and interpret results of environmental monitoring in Saldanha Bay and make decisions based on the outcomes of environmental monitoring, which could lead to the amendment of operations within the authorised limits.	2				Anchor Research and Monitoring interprets results and informs management
9	Develop effective protocols to report on stocking densities, mortalities, graded and ungraded production, biofouling discards.	2				



**Table 7.2: Farm level monitoring requirements that must be implemented by individual operators**

Equipment					
1	Establish an effective monitoring protocol to ensure that longline / raft / net integrity and supporting infrastructure are maintained. Ensure that: - Primary longline / raft / net is secured appropriately so that it is kept taut and rigid at all times. Nets of fish cages should be weighted; - Ropes and anchor lines are taut, especially after rough seas; - Ropes are routinely inspected for wear, especially after rough conditions, and replaced as and when required; and - There is adequate separation between rafts and longlines, even during strong currents and rough seas; or - There is adequate separation between the primary and secondary nets of fish cages, even during strong currents and rough seas.	2			ECO documents all infrastructure integrity in monthly reports. However, some farms have loose lines and needs replacement and or maintenance. ECO recommends to individual farmers on improvements via ECO reports. Monitoring protocol for the infrastructure includes ECO inspections and ECO notifies operators; and operators notify ECO of incidents regarding loose lines etc and report when it has been resolved.
2	Maintain a comprehensive and detailed register of the quantities of chemicals, antibiotics, antifoulants and hormones etc. that are utilised.			NA	
Water quality					
3	Monitor water quality and sediment quality as required for operations and/or by other authorisations.	2			DFFE's and Anchor Research and Monitoring's reports on water and sediment sampling should indicate what effect aquaculture is having on the biogeochemistry of the bay, so this matter is being monitored.
Biosecurity					
4	Establish a traceability protocol of the cultured finfish / shellfish and its products.			NA	
5	Develop and implement a stock health monitoring programme, including regularly inspecting stock for disease and parasites, in collaboration with the DFFE branch Fisheries Management.			NA	
6	Ensure that facilities are inspected by an aquaculture veterinarian to allow for monitoring of the health status of cultured stock.			NA	
Fish farming					
7	Monitor culture-fish mortalities to ensure dead fish are quickly removed, to minimise contamination and fluxes in waste production.			NA	
8	Monitoring feed input and uptake to ensure feed waste is limited (i.e. prevent overfeeding by maximising the feed conversion ratio of cultured fish).			NA	
9	Develop and implement a protocol to monitor escapes from finfish farms.			NA	
10	Adopt the MOM management system (or similar) for monitoring.			NA	
11	Ensure adequate genetic monitoring of brood stock rotation.			NA	
Marine animals					
12	Keep a log of all cetaceans, seabirds and predators recorded in the vicinity of fish farms, including behavioural observations. These data should be periodically compiled and analysed by experts.	2			Boat operators are encouraged to record species seen daily. Pers comm with ECO
13	If predator deterrents are used, closely monitor cetacean, seal, shark and seabird behaviour.			NA	
14	Record all marine vertebrate mortalities resulting either directly or indirectly from aquaculture operations. Where appropriate modify equipment and/or implement other measures to reduce mortalities.			NA	