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Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

SALDANHA BAY AQUACULTURE DEVELOPMENT ZONE (ADZ)

ENVIRONMENTAL CONTROL OFFICER (ECO)

MONTHLY SUMMARY REPORT 13



April 2023



SALDANHA BAY AQUACULTURE DEVELOPMENT ZONE (ADZ) ENVIRONMENTAL CONTROL OFFICER (ECO) MONTHLY SUMMARY REPORT 13

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Report prepared for:

Department of Forestry, Fisheries, and the Environment
Branch: Fisheries Management



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Citation: Anchor Research & Monitoring (Pty) Ltd. 2023. *Saldanha Bay Aquaculture Development Zone (ADZ) Environmental Control Officer (ECO) ADZ Monthly Summary Report 13*. Specialist Report no. 2014/13_3c prepared by Anchor Research & Monitoring (Pty) Ltd for the Department of Forestry, Fisheries, and the Environment Branch: Fisheries Management. 32 pp.

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LIST OF ABBREVIATIONS

ADZ	Aquaculture Development Zone
AMC	Aquaculture Management Committee
Anchor	Anchor Research & Monitoring (Pty) Ltd
BB	Big Bay
BOM	Blue Ocean Mussels
BSASA	Bivalve Association of South Africa
C	Compliant
CF	Consultative Forum
DFFE	Department of Forestry Fisheries and the Environment
EA	Environmental Authorization
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan (for individual farms)
EMPr	Environmental Management Programme
ETP	Endangered, Threatened and Protected species
FMR	Farm Monitoring Report
FSO	Food Safety Office
IR	Incident Report
LST	Lipophilic Shellfish Toxin
MLRF	Marine Living Resources Fund
NC	Non-compliant
OBN	Outer Bay North
OBS	Outer Bay South
PC	Partial Compliance
SAMSA	South African Maritime Safety Authority
SASH	South Atlantic Seafoods Holdings (Pty) Ltd
SB	Small Bay
SBIDZ	Saldanha Bay Industrial Development Zone
SBM	Saldanha Bay Municipality
SBOC	Saldanha Bay Oyster Company
SBWQFT	Saldanha Bay Water Quality Forum Trust
TNPA	Transnet Ports Authority
NRCP	National Residue Control Programme

PROJECT TEAM

Details of the Environmental Control Officer

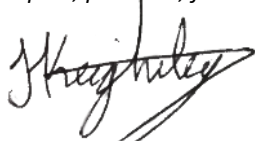
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Details of the Independence in terms of Chapter 5 of the National Environmental Management Act of 1998)

Box 1: Declaration of Independence of Environmental Control Officer

I, Jenna May Keightley hereby declare that I have no conflicts of interest related to the work of this report. Specifically, I declare that I have no personal financial interests in the property and/or development being assessed in this report, and that I have no personal or financial connections to the relevant property owners, developers, planners, financiers or consultants of the development.



02 May 2023

Box 2: Declaration of Independence of Reviewer

I, Amy Grace Wright, hereby declare that I have no conflicts of interest related to the work of this report. Specifically, I declare that I have no personal financial interests in the property and/or development being assessed in this report, and that I have no personal or financial connections to the relevant property owners, developers, planners, financiers or consultants of the development.



02 May 2023

Compliance with Regulation 34 of the EIA Regulations, 2014 (as amended)

The National Environmental Management Act (NEMA, Act 107 of 1998) provides for co-operative environmental governance of South Africa. As promulgated under NEMA (sections 24(5) and 44), the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended) are the key regulatory instrument to manage and mitigate environmental impacts caused by any activities or new developments with the potential to affect the environment. Anchor Research and Monitoring carries out audits in terms of Regulation 34 of the EIA Regulations (as amended) and the following should be noted:

- Anchor Research and Monitoring (Anchor) follows the prescribed format for audit reports listed under Regulation 34 of the amended EIA Regulations (Table 1).
- Anchor will report on compliance achieved and adequacy of the Environmental Management Programme (EMPr).
- Anchor does not assume the responsibility of ensuring compliance to all other prescriptions listed under Regulation 34 of the EIA Regulations (such as seeking amendment to the EMPr or associated licences/permits). Ensuring compliance is the obligation of the proponent.

Table 1. Legal requirements for Audit Reports per Regulation 34 of the EIA Regulations, 2014 (as amended).

Content of an Environmental Audit report	Section of this report
Details and expertise of independent ECO and author of this audit report.	Project Team
Declaration that the independent auditor is independent.	Project Team
Scope and the purpose of environmental audit report.	Section 1
Methodology adopted in preparing the environmental audit report.	Section 3.1
Evaluation of the ability of the EMPr to sufficiently:	
1. provide for continued avoidance, management, and mitigation of environmental impacts and at closure.	Section 7.1
2. Ensure compliance with EA, EMPr and if applicable, closure plan.	
Description of any assumptions, uncertainties or gaps in knowledge.	Section 1.2

1 INTRODUCTION

1.1 Purpose of this report

This Environmental Control Officer (ECO) summary report provides feedback on Saldanha Bay Aquaculture Development Zone (ADZ) compliance with the Environmental Authorisation (EA) and approved Environmental Management Programme (EMPr). This summary report is distributed to Operators, members of the Consultative Forum (CF), members of the ADZ Management Committee (AMC) and the Department of Forestry, Fisheries, and the Environment (DFFE): Compliance Monitoring Directorate. The two primary purposes of this report include:

- Ensuring stakeholders are updated on ADZ activities; and,
- Highlighting areas for improvement in ADZ activities to allow for adaptive management.

This document is intended to highlight significant issues and summarised monthly audits of the ADZ and individual farms (this report is for the April 2023 audit period). The summaries are drawn from the monthly ECO compliance and site inspection reports which are issued to the AMC and individual farms. The monthly ECO compliance and site inspection reports are retained by the DFFE, ECO and AMC for reference as they contain proprietary information.

1.2 Assumptions and limitations of the audit

The audit findings are based on information relayed in documentation to the ADZ ECO by Operators, email correspondence, in-person interviews, as well as observations made during physical site inspections, at a specific point in time. Although the site inspection can reveal evidence of activities carried out during the month for which the audit covers, it cannot fully show the auditor what activities have been carried out on site. The auditor, therefore, must rely on observations made on the day of the audit as well as the information provided by the Operators, proponent, and other relevant stakeholders in order to make conclusions regarding compliance during the preceding month.

It should be noted that the role of the ADZ ECO is to independently monitor compliance, to implement the Audit Standard, as well as to provide input and guidance to the DFFE Project Management Team on a strategic level. Due to the independent nature of the ADZ ECO role, the ECO appointment is not to enforce compliance but to monitor. Compliance with the provisions contained in the EMPr, EA, Permit or any condition imposed by the environmental approvals shall become the responsibility of DFFE. The following Branches and Directorates of DFFE are considered responsible for compliance for this project including DFFE: Chief Directorate Aquaculture and Economic Development (now Chief Directorate: Aquaculture Development and Freshwater Fisheries), DFFE: Regulatory Compliance and Sector Monitoring under Chief Directorate Sector Compliance, and Chief Directorate Sector Enforcement.

2 THE SALDANHA BAY AQUACULTURE DEVELOPMENT ZONE

2.1 Introduction and background

Mussel farming has occurred in Saldanha Bay since 1981 and was subsequently followed by oyster farming in the early 2000s. As the development and expansion of sea-based aquaculture activities comprise a number of Listing Notices in terms of the National Environmental Management Act (NEMA) (No. 107 of 1998, as amended), these activities require that an Environmental Impact Assessment (EIA) process be undertaken to obtain Environmental Authorisation (EA) from the Department of Forestry, Fisheries and the Environment (DFFE). This process can be arduous and costly, which presents a barrier to entry. Therefore, to facilitate investment and development of additional aquaculture in the Bay, the then Department of Agriculture, Forestry and Fisheries (DAFF)¹ undertook the establishment of a sea-based Aquaculture Development Zone (ADZ) in Saldanha Bay.

The Branch Fisheries Management (now DFFE: Fisheries Management) conducted an EIA and obtained an EA for the ADZ in Saldanha Bay on 8 January 2018, which (after appeals) was upheld on 7 June 2018. The DFFE: Fisheries Management must appoint an independent Environmental Control Officer (ECO) during the construction and operational phases of the ADZ, in terms of condition 29 of the EA and condition 1 of Table 4-2 of the EMPr (see Table 2 for ADZ ECO appointments to date). The role of the ADZ ECO is to monitor compliance with stipulations in the EA and EMPr for the construction and operational phases of the ADZ.

Table 2. ADZ ECO appointments to date.

Company name	ECO	Period
Ecosense CC	Errol Cerff	September 2018 to August 2019
SRK Consulting (South Africa) (Pty) Ltd.	Kelly Armstrong	September 2019 to February 2020
Errol Cerff	Errol Cerff	March 2020 to September 2020
Errol Cerff	Errol Cerff	October 2020 to September 2021
Errol Cerff	Errol Cerff	October 2021 to March 2022
Anchor Research & Monitoring (ARM)	Jen Keightley	April 2022 to March 2025

The EA and EMPr have undergone several amendments since the inception of the ADZ, which have been incorporated into the ECO audit scope. The audit scope includes the original EA and its amendments and the most recent amendment of the EMPr. The original EA was issued on 8 January 2018 and amendments to the EA were issued on 10 July 2019 and 14 September 2020 (DEA ref. 14/12/16/3/3/1/1728, 14/12/16/3/3/1/1728/AM1 and 14/12/16/3/3/1/1728/AM2, respectively). The original approved EMPr is dated August 2017 and has been amended three times in May 2020, June 2021, and June 2022. While the next amendment of the EMPr was scheduled for June 2023, no

¹ Following a Ministry reshuffle in mid-2019, Fisheries and Forestry has merged with The Branch Environment under the Ministry of Forestry, Fisheries, and the Environment (DFFE).

changes to the EMPr have been recommended by the ECO or the annual external auditors, and the EMPr will remain unchanged for this year. Should changes to the EMPr be recommended after June 2023, the next review of the ADZ EMPr is scheduled for June 2024.

The Marine Living Resources Fund (MLRF)² under the auspices of DFFE: Fisheries Management has appointed Anchor Research & Monitoring (Pty) Ltd (Anchor) as ECO for the Saldanha Bay ADZ for a period of three (3) years. This document is intended to highlight significant issues only and summarised monthly audits of the ADZ and individual farms.

2.2 Site and project description

Saldanha Bay is located on the West Coast, approximately 120 km north of Cape Town and supports many economic activities. The Port of Saldanha is South Africa's premier iron ore export port and supports a number of industrial operations in the area. An aquaculture industry predominantly reliant on bivalves was established in Saldanha Bay prior to the establishment of the ADZ. Saldanha Bay is considered an historically important area for fishing activity and multiple fish processing plants are located therein. It is also a tourist destination and caters to various water-based tourism.

When the ADZ was originally proposed the Basic Assessment identified issues of concern including changes to the water quality, visual landscape, and productivity of the Saldanha Bay and Langebaan Lagoon environments. Measures to mitigate such impacts were detailed in the Environmental Management Programme (EMPr) and were made mandatory in the Environmental Authorisation (EA). A phased approach to production was adopted to monitor the impacts of expanding aquaculture before production levels were increased. The phased approach also allowed time to determine whether the mitigation measures had the desired effect of limiting impacts and only if mitigation measures proved effective could production be increased.

The Saldanha Bay ADZ comprises 4 precincts, namely Small Bay (SB), Big Bay (BB), Outer Bay North (OBN), and Outer Bay South (OBS) (Figure 1). The BA Report summarised the scope for expansion in the ADZ and comprised a mix of finfish and bivalve farms (Table 3). Details of each existing lease are depicted in Figure 2 and Figure 3. Note that there are two lease areas in OBN that are unallocated and have been advertised for lease applications by Transnet Ports Authority (TNPA). Sea-based activities associated with aquaculture in the ADZ include:

- Servicing and maintenance of aquaculture structures (such as rafts, lines, cages).
- Harvesting of cultivated species.
- Initial processing of bivalves, including de-clumping and grading, typically on the raft or support vessel.
- Vessel trips between the shore and aquaculture areas.

² Schedule 3A Public Entity established in terms of the Public Finance Management Act, 1999 (Act No 1 Of 1999).

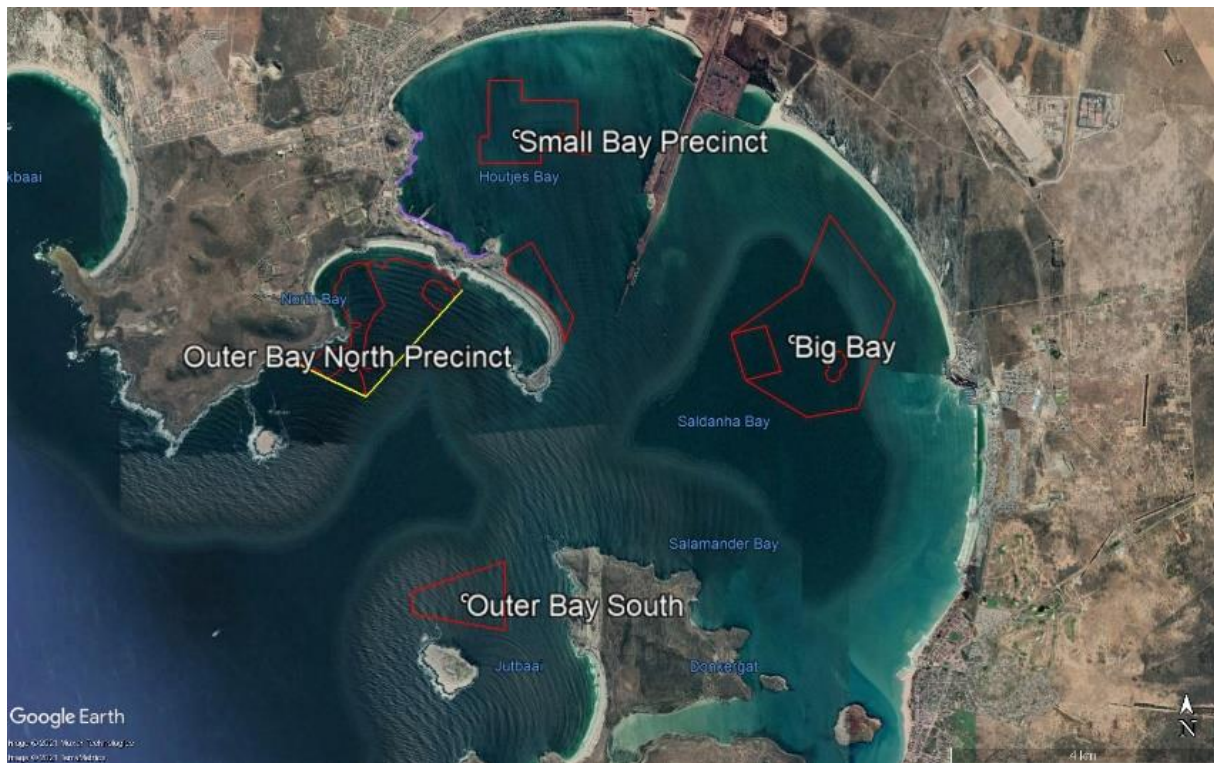


Figure 1. Saldanha Bay ADZ precincts.

Table 3. ADZ precincts in Saldanha Bay and area suitable for cultivation.

Precinct	ADZ Area (ha)	Area suitable for bivalve cultivation (ha)	Area suitable for fish and bivalve cultivation (ha)
Small Bay (SB)	163	163	-
Big Bay (BB)	409	367	42
Outer Bay North (OBN)	216	76	140
Outer Bay South (OBS)	96	-	96
Total	884	606	278



Figure 2. (Left) Bivalve culture in SB and (right) mixed bivalve and finfish culture in BB.

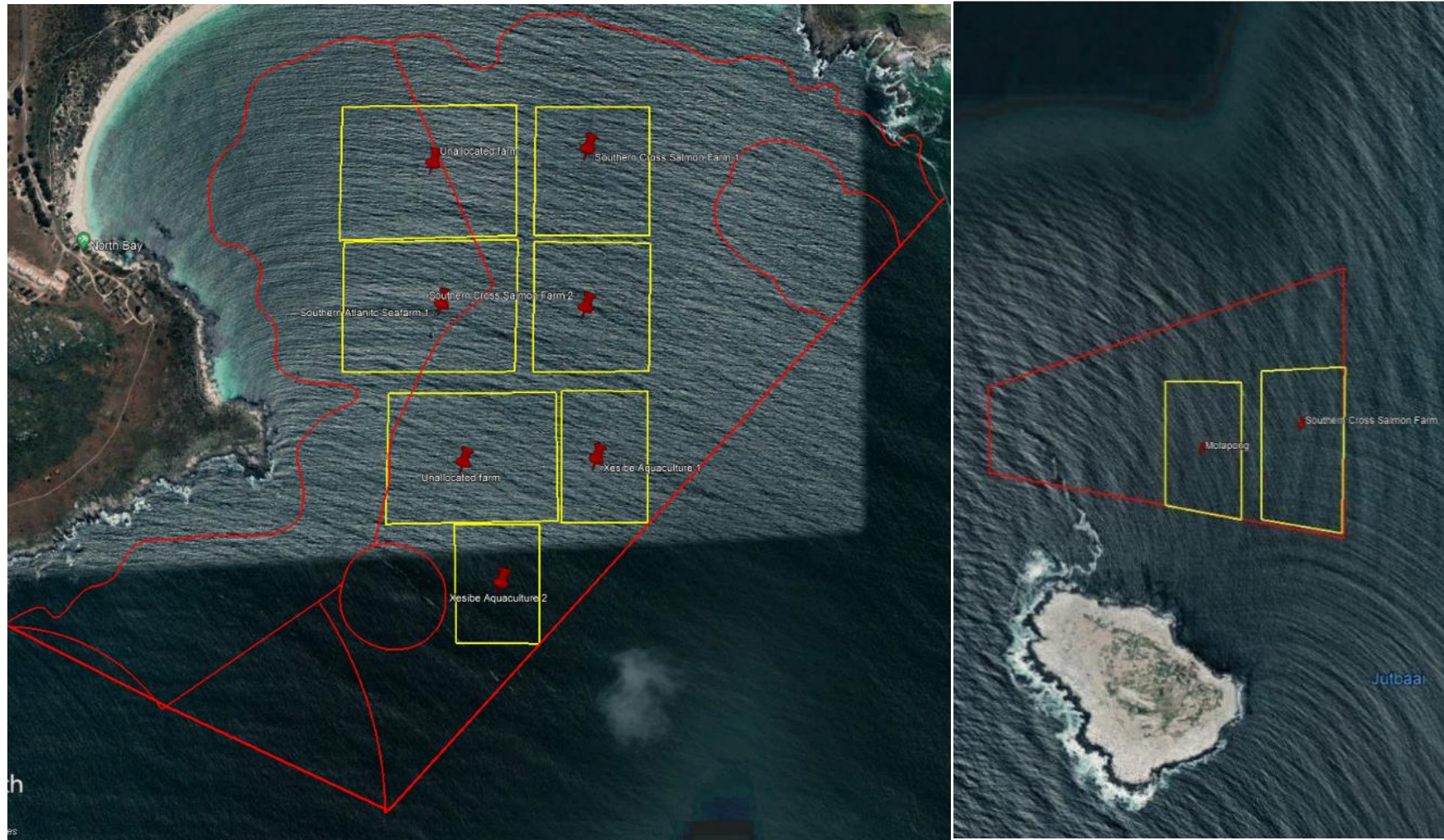


Figure 3. (Left) Bivalve culture in OBN and (right) finfish culture in Outer Bay South.

2.3 Operators in the ADZ

An essential aspect to assessing actual impact and possibility of expanding operations relies on accurate production data received from each farm. Farms submit production figures in the form of a monthly Farm Monitoring Report (FMR) to the ADZ ECO and DFFE. As such all farms are required to submit FMRs in terms of the aquaculture permit. Since this is essential to the monitoring of impacts, tracking compliance with this requirement will form part of the ADZ ECO duties even though this is not specified in the EMPr. A list of Operators in the ADZ as of April 2023 is presented in Table 4.

Table 4. Operators in the Saldanha Bay ADZ.

Farm name	Species	Precinct	Right No. MAQUA
African Olive Trading 232 (Pty) Ltd	Mussels	SB	1027
Aqua Foods SA (Pty) Ltd	Mussels/ oysters	SB & BB	1029
Blue Lagoon Products (Pty) Ltd	Oysters	BB	1057
Blue Ocean Mussels (Pty) Ltd	Mussels/ Oysters	SB	11828 & 0004
Blue Sapphire Pearls CC	Mussels / Oysters	SB	0006
Imbaza Mussels (Pty) Ltd	Oysters	SB	0019
K2019005713 (Pty) Ltd	Mussels	BB	1053
K2019005725 (Pty) Ltd	Mussels	BB	1052
Lagoon Aqua	Oysters	BB	1057
Madima General Agriculture Trading (Pty) Ltd	Mussels	BB	1048
Molapong Aquaculture (Pty) Ltd	Salmon	BB	1033
Mika Growers (Pty) Ltd	Mussels	BB	1047
MMMAgri Consult (Pty) Ltd	Mussels	BB	1045
Pluto Mussels and Trading (Pty) Ltd	Mussels	BB	1051
Requa Enterprises (Pty) Ltd	Mussels	OBN	1035
Saldanha Bay Oyster Company (Pty) Ltd	Oysters	BB	0012 & 0007
Salmar Trading (Pty) Ltd	Oysters	SB	1032
Simunye Mussels (Pty) Ltd	Mussels	BB	1047
Southern Atlantic Sea Farms (Pty) Ltd	Mussels	BB / OBN	1028
Southern Cross Salmon Farming (Pty) Ltd	Mussels	OBN	1037
Ulwazi Kukutya (Pty) Ltd	Mussels	BB	1050
West Coast Aquaculture (Pty) Ltd	Mussels/ oysters	SB & BB	0003
West Coast Oyster Growers CC	Oysters/ Mussels	SB & BB	0013
Xesibe Aquaculture Project (Pty) Ltd	Mussels	OBN	1046

3 ECO AUDITS

3.1 Approach and Methodology

Monthly ECO audits comprise monthly site inspections using the approved checklist and audit standard; rotational compliance audits on individual farms using monthly Farm Monitoring Reports and supporting documentation; and ongoing regular audits of compliance of the ADZ administration as a whole. The monthly ECO audit cycle involves communication with Operators and the AMC as

required as well as developing and distributing the following documents:

- Detailed monthly ADZ compliance reports issued to the AMC and Compliance Monitoring Directorate at DFFE.
- ECO site inspection report issued to the AMC.
- Summary report (this report) submitted to the CF, AMC, and Operators.

3.2 Progress with Partial or Non-Compliances

Although no previous partial-compliances were considered resolved for the April 2023 audit period, progress was made towards improving the status of three partial compliances. These partial compliances relate to demarcation of the ADZ, enforcing maintenance and operational guidelines, and monitoring the shoreline for aquaculture debris:

- The ADZ must be accurately demarcated with South African Maritime Safety Authority (SAMSA) approved marker buoys (EMPr table 5-1, condition 2). See Section 5.1 for further detail.
- Operators must remain compliant with maintenance and operational guidelines (EMPr table 5-1, condition 6). Progress has been made with farm maintenance plans and is discussed in detail under Section 3.5.2.
- Managers of the ADZ should ensure that the shoreline of the Bay is monitored for aquaculture equipment washed ashore (EMPr table 7-1, condition 2). Progress has also been made with operators monitoring the shoreline and removing aquaculture debris, which is discussed in detail in Sections 3.5.4 and 3.5.5.

3.3 Activities in the ADZ — April 2023

The Year 4 annual external audit of the ADZ was conducted in February 2023 and the final version submitted in March 2023 (see Section 5.2 for details).

For the April 2023 audit period, all farms in the Big Bay and Small Bay precinct were open for harvesting. No harvesting is currently allowed from farms in Outer Bay North, due to non-compliances with reporting requirements of DFFE: Food Safety Office (FSO). Due to the status of the microbiological testing in Outer Bay North, DFFE: FSO will reclassify it as a Restricted (Class B) production area (no harvesting for direct human consumption is allowed). To reclassify this precinct to a Class A production area will require three months, and an additional nine months to restore Outer Bay North for harvesting for direct human consumption. Microbiological testing will continue to maintain the classification status of Outer Bay North.

To remove the fouling organisms from in-water infrastructure, operators have been using pressure sprayers to wash equipment on Pepper Bay Jetty. This results in fouling organisms being discarded back into the marine environment. The accumulation of such organic matter within the Small Bay environment as a result of this activity may result in changes in Dissolved Oxygen (DO) and Chemical Oxygen Demand (COD) of both the water column and sediment, which can have a negative impact on

the marine environment. Furthermore, the shell waste has resulted in sedimentation next to Pepper Bay Jetty, which has decreased the depth of the water next to the Jetty. The shallower water prevents vessels from coming alongside the Jetty at low tide and restricts aquaculture activities such as offloading harvested product. Land-based activities, including those described above, are excluded from the EMPr and EA. However, as these activities are linked to the operation of the ADZ and contravene other environmental legislation (e.g. Section 28 of NEMA, Duty of care and remediation of environmental damage), meetings are being held with Operators, and within the AMC to identify possible solutions or alternative practices.

3.4 Summary of ADZ compliance with the EA and EMPr

In April 2023, 23 conditions of a possible 27 were auditable, which is equivalent to the auditable conditions for the March 2023 period (Table 5).

The ADZ scored an overall compliance of 87% for the audit period of April 2023 indicating **no change** in compliance percentage since the previous audit in March 2023 (Table 5, Figure 4). Progress was also made towards improving the status of three partial compliances (see Section 3.2).

During the first year of ECO audits conducted by Anchor (April 2022 – March 2023) the ADZ maintained a high level of compliance (>83%) with the audit standard, and the management team should be commended (Figure 4).

Table 5. Compliance for April 2023.

Audit Date	Total applicable Conditions	Compliance percentage	Compliant	Partially Compliant	Non-compliant	Not applicable
06/04/2023	23	87%	20	3	0	4

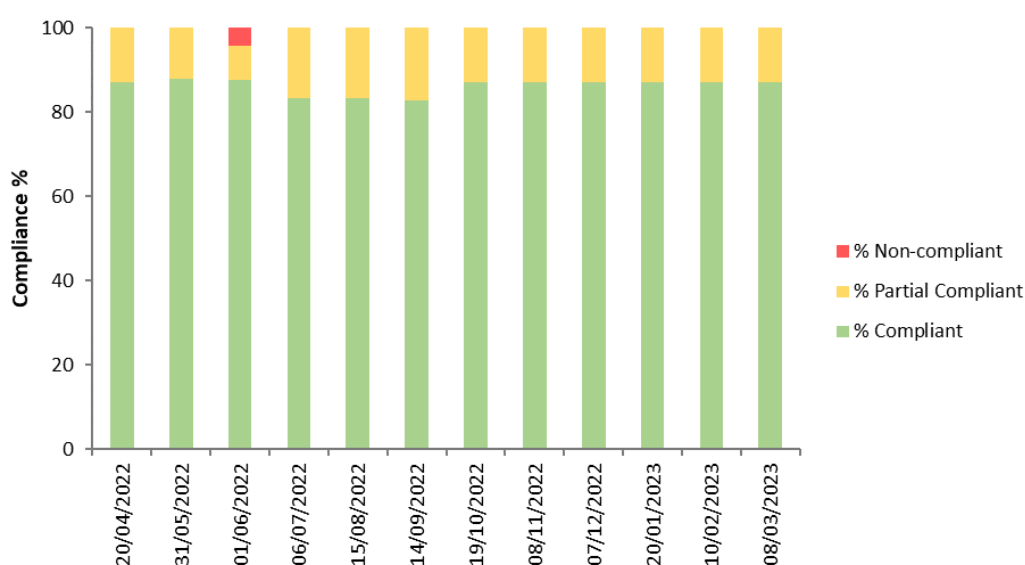


Figure 4. ADZ compliance over 2022/2023 year of ECO audits conducted by Anchor (April 2022 to March 2023).

3.5 Operator level findings

3.5.1 Farm inspections

On 5 April 2023, the ECO conducted on-water inspections for four farms in Big Bay in the Saldanha Bay ADZ. Names of the farms inspected, farm location, date, compliance with operational guidelines and a comment on the observations are provided in Table 6. Two farms were fully compliant with the Operational guidelines (K13 and Mika) and two farms were partially compliant (K25 and Pluto).

Table 6. Farms inspected during the April 2023 ECO site inspection and compliance feedback.

Farm name	Location	Date	Compliance status (Operational Guideline)	Comment
K13	Big Bay	05/04/2023	C	Five lines in water (lines number 2, 3, 4, 6, and 7). Lines number 1 and 5 were not in the water. All lines were taught, straight, suitably marked, and not sinking (Figure 5).
K25	Big Bay	05/04/2023	PC	Seven lines in water. All lines were taught, suitably marked, and not sinking (Figure 6). Six of the seven lines were straight, but line 1 was attached to the same end float as line 2 on the northern side of the farm (Figure 7).
Mika Growers	Big Bay	05/04/2023	C	Twelve lines observed in water. Lines were taught, straight, suitably marked, and not sinking (Figure 8).
Pluto Mussels and Trading	Big Bay	05/04/2023	PC	Either three or four lines were in the water (operator to clarify). Visible end floats were suitably marked with unique identifiers (Figure 9). Three end floats were sunken, and one was sinking or very low in the water (Figure 9); on the southern side of the farm end float number 3 was sunken and end float 6 was very low in the water; on the northern end of the farm, end floats number 5 and 6 had sunken. Due to the sunken end floats, it could not be determined whether lines were taught and straight.

3.5.1.1 K13 — Compliance photographs



Figure 5. Farm K13 in Big Bay. (Left) Live Google Earth pin of location of compliance photograph in relation to K13, Big Bay licence area (yellow boundaries). (Middle and right) Lines were taught, straight, suitably marked using unique infrastructure, and not sinking.

3.5.1.2 K25— Compliance photographs



Figure 6. K25 farm in Big Bay, lines were observed to be taught, suitably marked, and not sinking. All but line 1 was observed to be straight.

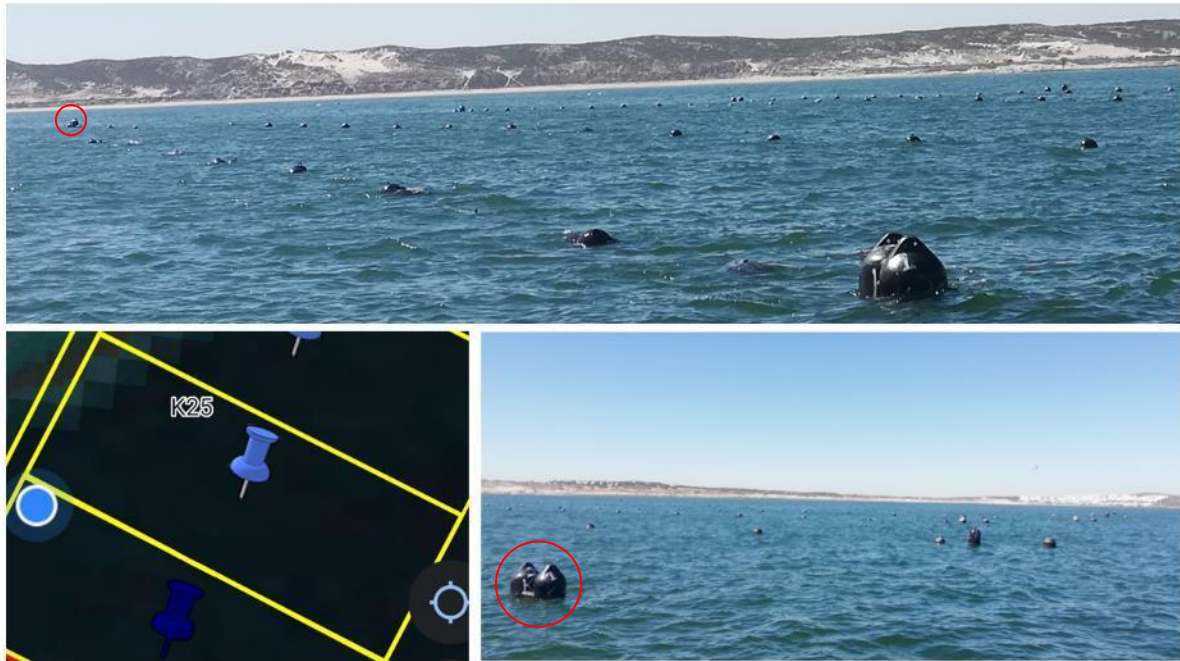


Figure 7. (Bottom left) Live Google Earth pin of location of compliance photograph in relation to K25, Big Bay licence area (yellow boundaries). (Top and bottom right) Lines 1 and 2 are attached to the same end float on the northern side of the farm (red circle).

3.5.1.3 Mika Growers

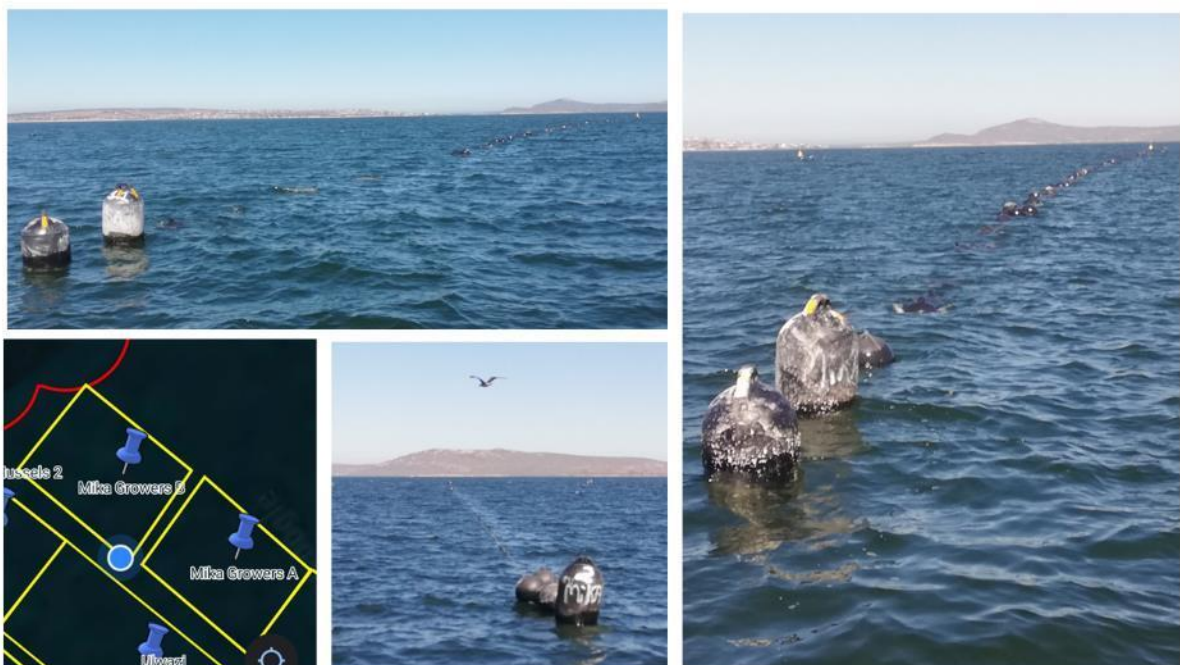


Figure 8. Mika growers farm in Big Bay. (Bottom left) Live Google Earth pin of location of compliance photograph in relation to Mika growers licence area (yellow boundaries). (Top left and right) Lines with product were taught, straight, suitably marked, and not sinking. (Bottom centre) Lines empty of product were also taught, straight, suitably marked, and end floats were not sinking.

3.5.1.4 Pluto Mussels and Tracing

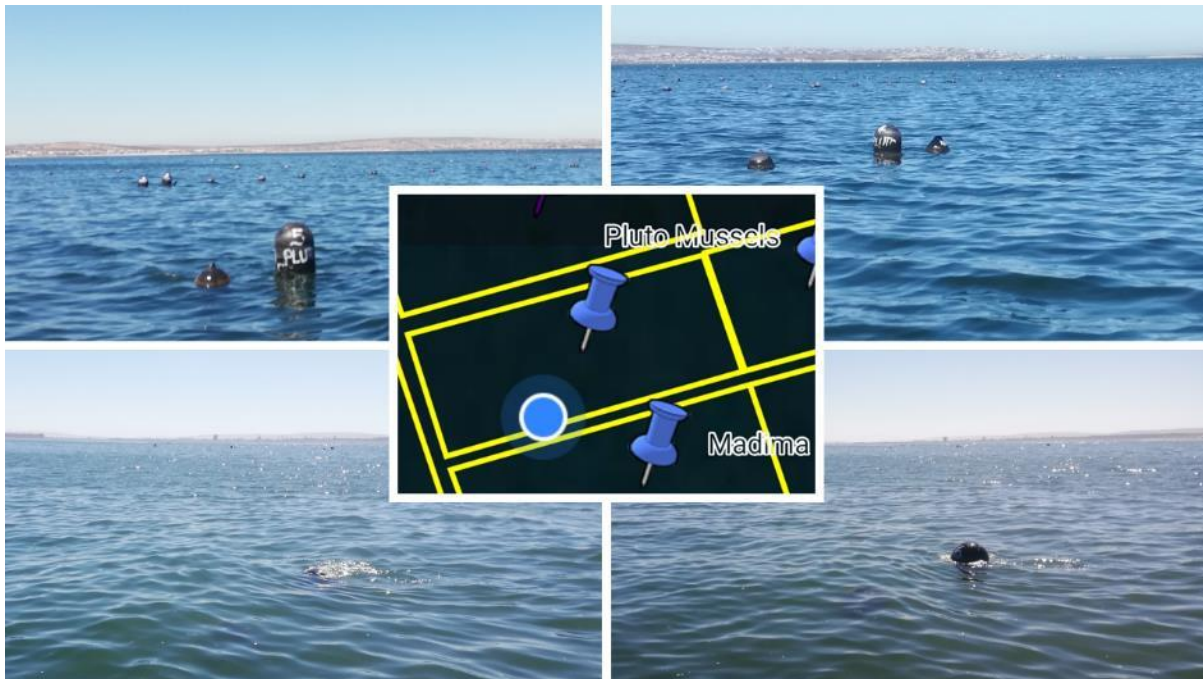


Figure 9. Pluto Mussels farm in Big Bay. (Centre) Live Google Earth pin of location of compliance photograph in relation to Pluto licence area (yellow boundaries). (Top left and right) Unique infrastructure and unique markers present on visible end floats. (Bottom left and right) End float on the southern side of line 6 was low in the water and sinking.

3.5.2 Farm maintenance plan feedback

Blue Ocean Mussels (BOM) and Saldanha Bay Oyster Company (SBOC) provided farm maintenance plans on 20 July 2022 as requested by the ADZ ECO in response to non-compliances with the infrastructure guidelines reported during the July 2022 audit period. These plans were reviewed by the ADZ ECO and AMC and implemented by the relevant operators. Progress as per these plans has continued during the April 2023 audit period, and included maintenance to clean and remove lines, to repair and rebuild dilapidated rafts, and to put each raft on its own mooring (per the operational guidelines). Detailed feedback for progress made up to 30 April 2023 with maintenance plans are given under Section 3.5.2.1 (for SBOC) and Section 3.5.2.2 (for BOM).

Non-compliances with the infrastructure and operational guidelines were observed on Requa Enterprises Outer Bay North farm during the February 2023 site inspection. The progress with maintenance and the development of the maintenance plan during the April 2023 audit period are provided in Section 3.5.2.3.

3.5.2.1 Saldanha Bay Oyster Company (SBOC)

The maintenance plan provided by SBOC includes removing longlines, cleaning biofouling from buoys, conducting subsurface inspections, and mooring inspections (Table 7). The completion date is

anticipated for end May 2023. The SBOC maintenance plan was 12% complete in October 2022, 82% complete in December 2022, 92% complete in January 2023 and remained at 92% complete through April 2023 (Table 7). Two additional top lines were removed in April 2023 and the only outstanding maintenance is the retrieval and removal of two buried lines, the associated buried mooring buoys, removal of biofouling and mooring inspections (Table 7). The dive service provider, contracted by SBOC, are searching for the two buried lines and once they have been located the associated mooring buoys will also be located and all can be addressed.

Table 7. Maintenance progress for SBOC, April 2023.

Maintenance item	Initial number	Number addressed	Total remaining
Longlines for removal	11	9	2
Buoys to be cleaned of biofouling	32	30	2
Subsurface inspection and cleaning of biofouling (shackles, mooring lines and chains)	32	30	2
Divers inspect moorings to ensure that they have not moved and are in place	24	22	2

3.5.2.2 Blue Ocean Mussels (BOM)

From July 2022 to April 2023, BOM have restored 15 rafts to seeding condition, rebuilt 3, moved 10 onto their own moorings, and conducted regular maintenance on 20 rafts (Table 8). Regular maintenance of rafts is ongoing, and all major repairs and raft rebuilds (except raft 14) have been completed. The majority of rafts are positioned parallel to the prevailing current and swell which reduces risk of damage to and breakage of rafts. Raft 14 must still be rebuilt and BOM have been in contact with the Small Harbour Master to secure land space where the raft can be placed for the rebuild. During the March 2023 site inspection, raft 16 had been struck by a vessel and was sinking. During April 2023, BOM contracted a dive company to repair and re-float this raft. The BOM team are to be commended for their swift action in repairing this raft.

Table 8. Maintenance progress for BOM, April 2023.

Maintenance item	Initial number	Number addressed	Total remaining
Restore raft	15	15	0
Maintain raft	20	20	0
Rebuild raft	4	3	1
Move to separate mooring	26	10	16

During the March 2023 site inspection, raft 16 was observed to be sinking. The level to which the raft had sunken overnight suggests a vessel or some other external force impacting the raft resulting in its state, rather than wear and tear (which would result in the raft slowly sinking over time). The BOM team are investigating the matter and raft 16 will need to be rebuilt.

In order to separate rafts lashed to one another, mooring blocks need to be moved and repositioned. The existing mooring blocks are embedded to the ocean floor, which represents a challenge to repositioning. However, new mooring blocks have been sourced. Procuring the chain required to attach rafts to the mooring blocks is the current challenge as new chain is very costly but, BOM are investigating their options. To reduce buffeting impact between rafts, prevent further damage, and reduce the risk of environmental incident, 25 litre drums have been placed between the rafts to act as fenders.

Rafts remaining lashed together include:

- 14 & 8
- 30 & 37
- 47 & 43
- 17 & 6
- 34 & 46
- 22 & 41
- 20 & 44
- 39 & 40

3.5.2.3 Requa Enterprises

On 9 February 2023, the ECO observed that all infrastructure on Requa Enterprise Outer Bay North Farm was sunken. Requa have been unable to harvest due to the lack of a valid aquaculture permit and therefore, maintenance has also fallen behind. The ADZ ECO requested that Requa develop and provide a maintenance plan by 17 March 2023 which should outline what maintenance will occur and provide a timeline for estimated dates of completion. The required maintenance will include cleaning biofouling from all infrastructure (lines, floats, and risers), and mooring inspections by divers. Requa contacted the ECO on 17 March 2023 to describe the progress that they have made towards developing the maintenance plan. Requa has engaged a service provider to conduct an underwater visual inspection to determine what maintenance will need to occur (number of lines, buoys, and moorings to clean, number of moorings to inspect). Requa notified the ECO on 26 April 2023 that once the service provider invoice has been settled the report will be made available. Once the service provider has issued their report, Requa will be able to establish a timeline and provide a maintenance plan to the ECO.

3.5.3 Farm Management – Monitoring reports

Monitoring Reports (FMRs) are completed and submitted by all operators prior to the 15th of the following month along with verification documentation (such as invoices or other means of tracking

production). Each farm must submit a separate FMR for each farmed product and precinct in which they farm. Therefore, the feedback given below reports on the number of FMRs submitted.

A high level of compliance was maintained during the April 2023 audit period for meeting the FMR submission deadline. Out of a possible 23 FMRs, 20 were submitted on time and three were submitted late. It should be noted that the FMRs that were submitted late were only 1-2 working days late. All farms with sales provided supporting documents (Table 9). Operators are to be commended for maintaining a high level of compliance.

Table 9. FMR Submission status, supporting production verification documents and visual inspection logs. Late submissions, lack of supporting documents and not providing visual logs are highlighted in red.

Farm name	Location	Species	Date	Supporting docs	Visual Inspection Log
African Olive Trading	Small Bay	Mussels	14/04/2023	yes	yes
Aqua Foods SA	Small Bay	Mussels/ oysters	18/04/2023	yes	yes
Aqua Foods SA	Big Bay	Mussels/ oysters	N/A – no active farming		
Blue Lagoon Products	Big Bay	Oysters	N/A – no active farming		
Blue Ocean Mussels	Small Bay	Mussels	17/04/2023	yes	yes
Blue Sapphire Pearls	Big Bay	Mussels	14/04/2023	yes	yes
Blue Sapphire Pearls	Small Bay	Oysters	14/04/2023	yes	yes
Cex Enterprises	Big Bay	Mussels	N/A - not operational		
Imbaza Mussels	Small Bay	Oysters	14/04/2023	yes	yes
K2019005713	Big Bay	Mussels	14/04/2023	no	yes
K2019005725	Big Bay	Mussels	14/04/2023	yes	yes
Lagoon Aqua Farm	Big Bay	Mussels	No aquaculture permit		
Madima General Agriculture Trading	Big Bay	Mussels	14/04/2023	no	yes
Mika Growers	Big Bay	Mussels	14/04/2023	no	yes
Mmmagri Consult	Big Bay	Mussels	14/04/2023	yes	yes
Pluto Mussels and Trading	Big Bay	Mussels	14/04/2023	no	yes
Requa Enterprises	North Bay	Mussels	N/A – no active farming		
Saldanha Bay Oyster Company	Small Bay	Oysters	14/04/2023	yes	yes
Saldanha Bay Oyster Company	Big Bay	Oysters	N/A – no active farming		
Salmar Trading	Small Bay	Oysters	16/04/2023	yes	no
Simunye Mussels	Big Bay	Mussels	14/04/2023	yes	yes
Southern Atlantic Sea Farms 1	Big Bay	Mussels	14/04/2023	no	yes
Southern Atlantic Sea Farms 2	North Bay	Mussels	14/04/2023	no	yes
Southern Cross Salmon Farm	North Bay	Mussels	14/04/2023	no	yes
Ulwazi Kukutya	Big Bay	Mussels	14/04/2023	no	yes
Wada Projects	Big Bay	Mussels	N/A - not operational		
Well Done Works	Big Bay	Mussels	N/A - not operational		

Farm name	Location	Species	Date	Supporting docs	Visual Inspection Log
West Coast Aquaculture	Small Bay, Big Bay	Mussels/ oysters	14/04/2023	yes	yes
West Coast Oyster Growers	Big Bay	Mussels/ oysters	14/04/2023	yes	yes
West Coast Oyster Growers	Small Bay	Oysters/ mussels	15/04/2023	yes	yes
Xesibe Aquaculture	North Bay	Mussels	14/04/2023	no	yes

3.5.4 Beach monitoring by operators

In September 2022, the Bivalve Shellfish Association of South Africa (BSASA) provided names of three members of the Aquaculture Industry who have committed to monitoring and cleaning beaches (Table 10). The ECO provided a feedback template to the volunteer operators to record waste volume estimates, dominant waste type and percentage of collected waste that comprises aquaculture debris. Beach clean-up feedback is provided the following month to ensure data for the entire month is captured. Waste data has been provided for beach clean-ups for Small Bay and Big Bay. Detailed feedback has not been provided Marcus Island to date, however photographic evidence was provided in September 2022, due to the direction of the prevailing swell and current, minimal waste is anticipated to wash up on Marcus Island. No evidence of clean-up or waste data have been provided for Outer Bay North to date. However, Ernie Malan of SASH group (responsible for this clean-up) has advised that they are sourcing someone to conduct these clean-ups as the area falls within the Military Academy and has restricted access. Once a suitable candidate has been identified and appointed, data and evidence of waste removal will be provided for the Outer Bay North beaches.

Table 10. Members of Aquaculture Industry committed to beach monitoring and clean-up as required by EMP conditions 1 and 2 of Table 7-1.

Responsible party	Group/affiliation	Precinct	Beach	Frequency
Ernie Malan	South Atlantic Seafood Holdings (SASH)	Big Bay (BB)	Spreeuwalle – Paradise beach	Twice a month
Ernie Malan	SASH	Outer Bay North (OBN)	West and Eastern Beach	Monthly
Vos Pienaar	Imbaza Mussels	Small Bay (SB)	Small Bay Northern beaches – Hoedjies Bay to Mossgas	Weekly
SJ Poggenpoel	Blue Ocean Mussels (BOM)	Small Bay (SB)	Marcus Island – SB side	Monthly

Although no waste data has been provided for Marcus Island, some photographic evidence of beach clean-ups were provided in September 2022. Beach clean-up data should be provided for Outer Bay North as a matter of urgency. Most waste collected from Small Bay is litter and general waste, with a small portion of the waste coming from the aquaculture industry (Figure 10). In October 2022, and January and February 2023 some floats were collected from Small Bay beaches (Figure 11). Aquaculture floats constitute the majority of waste collected from Big Bay beaches (Figure 11) and a smaller portion of the waste is made up of rope offcuts that is collected in refuse bags (Figure 10). All the waste collected in refuse bags from Big Bay comes from the aquaculture industry (Figure 10).

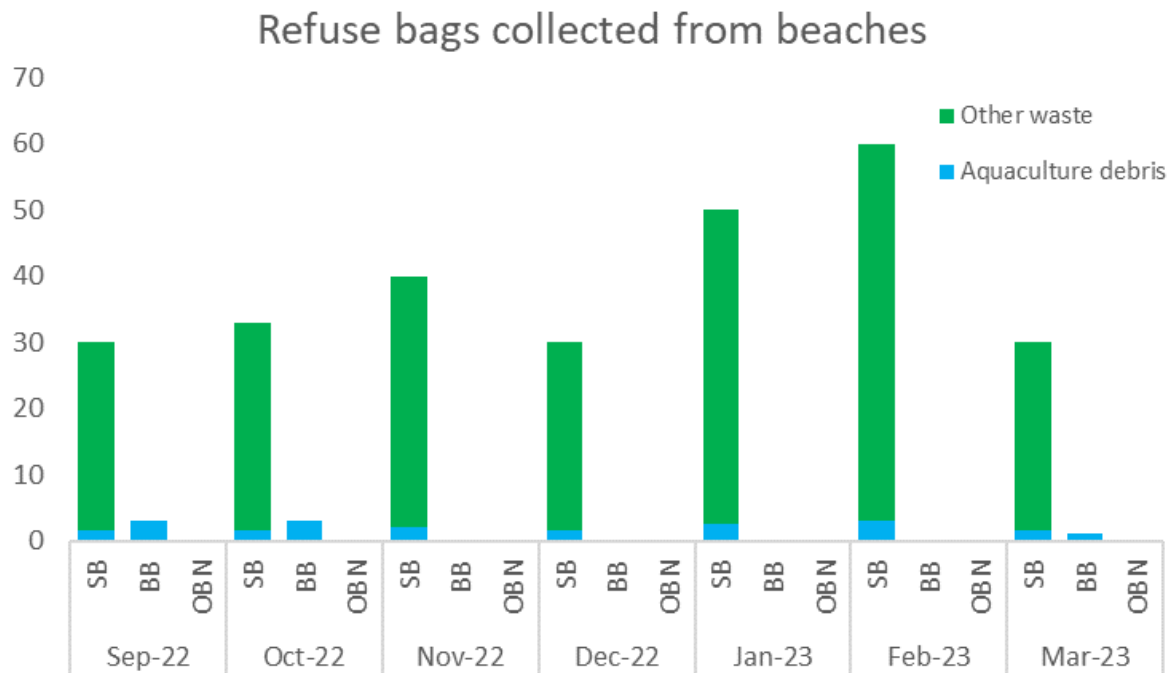


Figure 10. Waste collected in refuse bags from beaches in the various precincts. Total waste collected and portion of waste constituting aquaculture debris is presented.

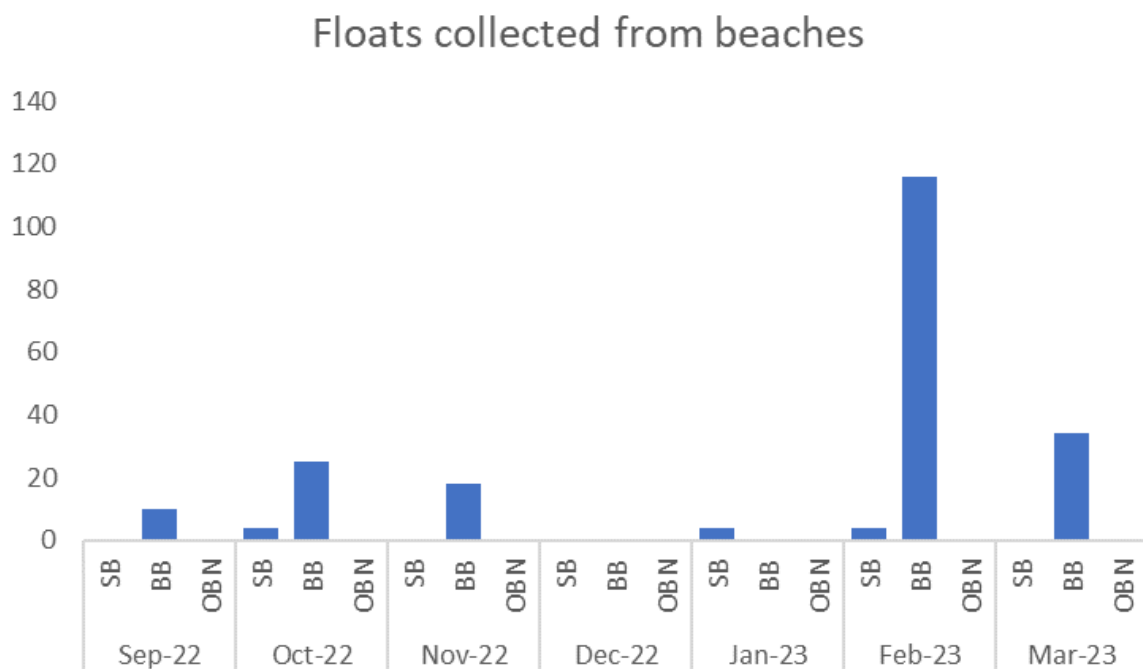


Figure 11. Floats collected from beaches in the various precincts.

3.5.5 Beach inspection by ECO

The receiving beaches in Small Bay were inspected by the ECO during the April 2023 site inspection. Minor aquaculture debris was observed on the beaches including rope offcuts, short pvc pipes, netlon bags, and one grey float from Blue Sapphire Pearls (Figure 12).



Figure 12. Small Bay beach inspected for aquaculture debris by the ECO in April 2023. (Left) Live Google Earth pin of location of compliance photographs in relation to the Small Bay precinct (yellow and red boundaries). (Centre) Rope off cut from one of the farms. (Top right) Small grey float from Blue Sapphire Pearls in Small Bay. (Bottom right) Collection of rope offcuts, netlon bags, pvc pipes, and other aquaculture debris.

4 INCIDENTS DURING THE LAST MONTH

One incident was reported in the April 2023 audit period. Top line number 10 on Mika farm in Big Bay was found loose and had either broken or been cut by a propeller (IR Apr 23-01). This cut line incident again highlights the necessity for the ADZ being demarcated with approved marker buoys and implementation of the Aids to Navigation (AtoN) Plan. It should be noted that a Navigational Risk Assessment of Saldanha Bay needs to be developed before the AtoN plan can be implemented. A workshop for this Risk Assessment is planned for 14-15 June 2023.

5 ADZ MANAGEMENT

5.1 Bay user safety

The ADZ must be accurately demarcated with South African Maritime Safety Authority (SAMSA) approved marker buoys (EMPr table 5-1, condition 2). To identify the required marker buoys for the ADZ, an Aids to Navigation (AtoN) Plan was developed (final draft submitted on 27 November 2022).

Before the AtoN plan can be implemented, a Navigational Risk Assessment needs to be conducted for Saldanha Bay. The first workshop for stakeholder engagement on this Risk Assessment has been scheduled for 14-15 June 2023.

5.2 External Audit

The Year 4 annual external audit of the ADZ was conducted on 9 and 10 February 2023 by the audit team from NCC Environmental Services (Nick Gates and Julia Booysen), who accompanied the ECO for a site inspection during the February 2023 ECO audit. The draft Year 4 Annual External Audit Report was submitted on 18 March 2023 for comment by the ADZ ECO and DFFE: Fisheries Management. This report has been finalised and was be distributed to the AMC and DFFE: Director of Compliance on 30 March 2023, and to the CF and Operators on 3 April 2023.

The external auditors use a weighted scoring system to adjust for a three-tiered scale for compliance (compliant, partially compliant, and non-compliant). The findings of the year 4 annual report indicate 100% compliance with the Environmental Authorisation and 98.26% compliance with the EMPr (Figure 13 and Figure 14, respectively).

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

Overall Compliance Rating	100%
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Figure 13. Year 4 annual external audit compliance rating with the EA (NCC 2023).

The Year 4 annual external audit of the ADZ had zero partial- or non-compliances with the EA, and three partial non-compliances with the EMPr. It was concluded that the EMPr suitably provides for environmental management of the ADZ, and no amendments were recommended. The Partial Compliances identified in the external audit are the same as those identified in the ECO audit reports. These include the ADZ should be accurately demarcated (EMPr table 5-1, condition 2), Operators must remain compliant with maintenance and operational guidelines (EMPr table 5-1, condition 6), and the shoreline of the Bay should be monitored for aquaculture equipment washed ashore (EMPr table 7-1, condition 2).

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

Figure 14. Year 4 annual external audit compliance rating with the EMPr (NCC 2023).

5.3 Bivalve production volumes

Graded production volumes in the ADZ are recoded monthly. Production volumes for March 2023 and cumulative production to date supplied by the Branch: Fisheries Management using the approved formula to calculate total ungraded production are presented in Table 11. Production is below the current limit of 15 000 tpa ungraded shellfish (7 500 tpa graded). Per the EA, bivalve production may be increased by an additional 5 000 tons annually but only if monitoring results indicate that the environment health has been maintained and impacts remain manageable. To ensure sustainable development, the Saldanha Bay Aquaculture Development Zone Management Committee (AMC) must consider the results and reports from environmental monitoring as well scientific recommendations, which will inform the possible increase in production.

Table 11. ADZ bivalve production (tons). The Approximate ungraded production is based on the conservative assumption that the ratio of ungraded to graded shellfish volume is ~2:1.

ADZ Precinct	Monthly graded production March 2023	Graded production				
		Feb 2019-Jan 2020 (Year 1 prod)	Feb 2020-Jan 2021 (Year 2 prod)	Feb 2021 - Jan 2022 (Year 3 prod)	Feb 2022 – Jan 2023 (Year 4 prod)	Feb 2023 – Jan 2024 (Year 5 prod)
Small Bay	293	2847	1936	2921	2621	859
Big Bay	97	189	240	480	700	119
Outer North Bay	0	433	297	330	175	0
Outer South Bay	-	-	-	-	-	-
Total graded	390	3 468	2473	3731	3496	977
Approximate ungraded production	735	6 497	4 707	7 228	6664	1816

5.4 Environmental Monitoring

None to report.

6 CONSULTATIONS AND COMMUNICATIONS

6.1 Consultations

1. Copies of comments received:
 - Communications register April 2023.
 - Documents register April 2023.
2. Information requested by the competent authority:
 - None.
3. Interviews, discussions, and other communications (see Section 6.2).

6.2 Communications

Communications received by the ADZ ECO during the April 2023 audit period (Table 12).

Table 12. Individual, organization, and purpose of consultation during the April 2023 audit period.

Individual	Organization	Subject
Alma Vermeulen	SASH	Line cut incident
	ADZ ECO	Distribute ADZ annual external audit report
John Foord	DFFE: Food Safety Office	Outer Bay North remains closed for harvesting due to insufficient microbiological monitoring.
Mellisa Naiker	Department of Environmental Affairs and Development Planning	Kelp farming in Saldanha Bay – impact and risk identification report
Maxhoba Jezile	DFFE: SAM	SAWDN disentanglement training
	ADZ ECO	AMC record of proceedings
	ADZ ECO	Notification to operators to change in ADZ Project Management
	ADZ ECO	CF meeting invite
	ADZ ECO	AMC Task Team meeting
	ADZ ECO	Operator meeting

7 RECOMMENDATIONS

The following recommendations are made by the ECO for the consideration of Branch Fisheries Management.

- Once the Navigational Risk Assessment is concluded, the AtoN Plan should be finalised, and the responsible parties should ensure implementation and execution of this plan.
- Monitoring progress with the maintenance plans should continue.
- Monitoring of beach waste data submitted by the Operators should continue.
- Main receiving beaches should continue to be included in ECO site inspections.
- The DFFE: Fisheries Management should engage with the Operators to determine a solution to the accumulation of sediment due to wash down activities on Pepper Bay Jetty.
 - This matter was raised in the last AMC meeting (27 March 2023), and it was agreed that discussions between the Department and Saldanha Bay municipality need to occur. Operators have concerns relating to biological waste disposal and this should be tabled at the meeting between the Department and Saldanha Bay municipality.

The following recommendations are made by the ECO for the consideration of Operators:

- Frequent cleaning of biofouling from lines and infrastructure should occur to reduce the risk of lines chaffing and breaking.
- Beach monitoring and removal of aquaculture debris should occur twice a month (minimally) to ensure that beaches are free of aquaculture debris.
- Monitoring and gathering data on Endangered, Threatened, and Protected (ETP) species should be considered a priority as it is a requirement for Marine Stewardship Council (MSC) accreditation which will aid in accessing European markets.
- The Operators must engage with DFFE: Fisheries Management to assist in determining a solution to the accumulation of sediment due to wash down activities on Pepper Bay Jetty.
 - A meeting was held on 26 April 2023 with Operators, the ECO, and the ADZ project management team. One of the main discussion items for this meeting is alternatives to the current washdown practices. Unfortunately, an alternative solution could not be agreed upon during this meeting. Operators noted concerns with waste disposal of the biological waste as the local landfill cannot accept biological waste and the composting facility no longer accepts mussel waste. These concerns should be tabled at a meeting between the Department and Saldanha Bay municipality.

7.1 Evaluation of the suitability of the EMPr

In the opinion of the ECO, no changes should be made to the EMPr to ensure continued avoidance, management, and mitigation of environmental impacts. Furthermore, the ECO does not recommend changes to the EMPr to ensure compliance with the EA. The Saldanha Bay ADZ EA and EMPr annual external audit report (section 6) concurs with the opinion of the ECO and suggests no changes to the EMPr.



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