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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 10



January 2023



SALDANHA BAY AQUACULTURE DEVELOPMENT ZONE (ADZ) ENVIRONMENTAL CONTROL OFFICER (ECO) MONTHLY SUMMARY REPORT 10

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Report prepared for:

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



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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

PROJECT TEAM

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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.



27 January 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.



30 January 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 1.1

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. 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.

1.1 Assumptions and Limitations of the Audit

The audit findings are based on information relayed in documentation, during interviews as well as the 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 about 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, DFFE: Regulatory Compliance and Sector Monitoring under Chief Directorate Sector Compliance, and Chief Directorate Sector Enforcement.

2 INTRODUCTION AND BACKGROUND

Mussel farming has occurred in Saldanha Bay since 1981 and was subsequently followed by oyster farming in the early 2000s. In order to conduct aquaculture activities, potential aquaculture farmers must conduct an Environmental Impact Assessment (EIA) and obtain an Environmental Authorisation (EA) from the Department of Forestry, Fisheries and the Environment (DFFE). As this process can be

arduous and costly it presents a barrier to entry to the aquaculture industry. To facilitate investment and development of additional aquaculture in the Bay, the then Department of Agriculture, Forestry and Fisheries (DAFF)¹ proposed the establishment of a sea-based Aquaculture Development Zone (ADZ) in Saldanha Bay.

The Branch Fisheries Management (formally DAFF now DFFE) 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.

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.

The Marine Living Resources Fund (MLRF)² under the auspices of DFFE: Fisheries Management has appointed Anchor Research & Monitoring (Pty) Ltd (Anchor)³ as ADZ 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.

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

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).

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

³ Part of the Anchor group of companies.

2.1 Site 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.

2.2 Project Description

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).

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

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.

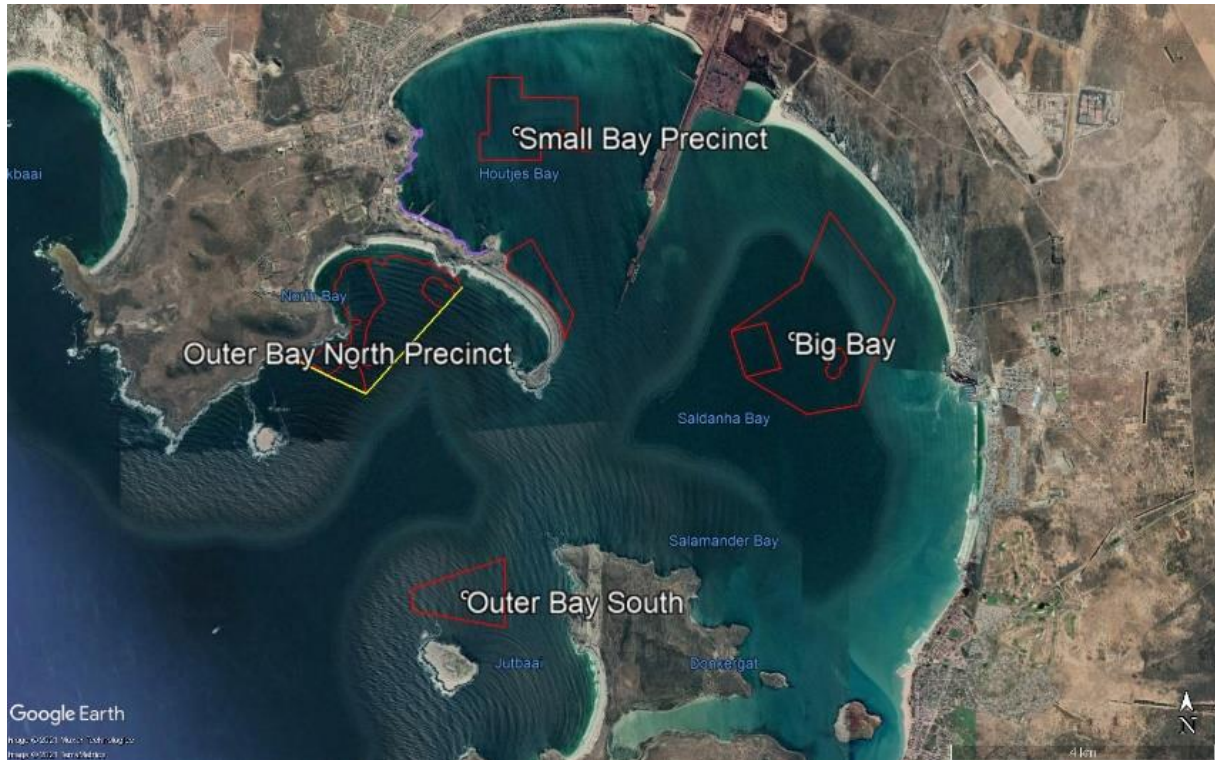


Figure 1. Saldanha Bay ADZ precincts.



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

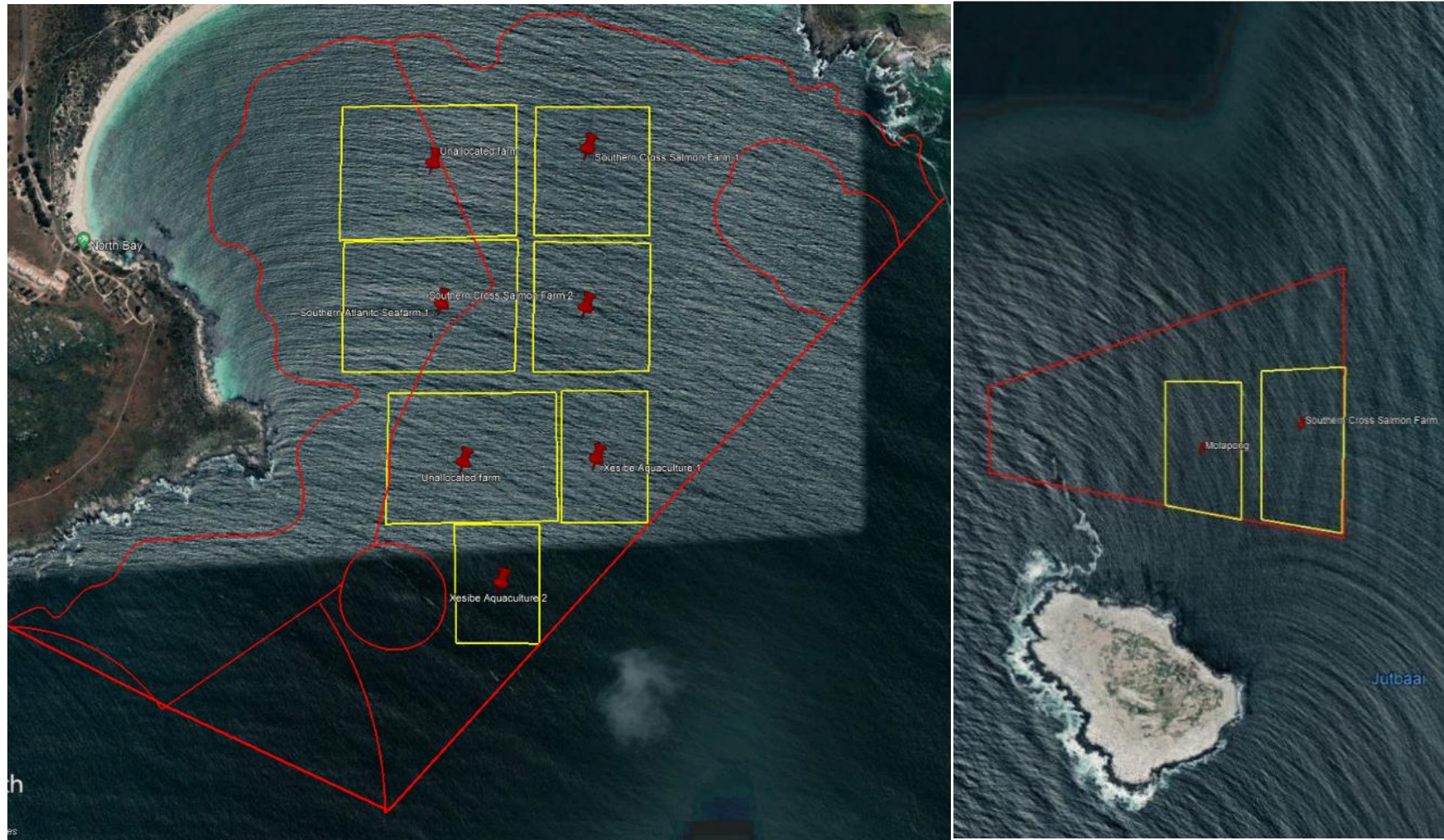


Figure 3. (Left) Bivalve culture in OBN and (right) finfish culture in Outer Bay South.

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 January 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; 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 Operators and 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 January 2023 audit period, progress was made towards improving the status of three partial compliances. Progress has continued with regard to the Aids to Navigation (AtoN) plan which is being developed in order to comply with EMPr table 5-1, condition 2. For further detail on the progress with the AtoN plan see Section 5.1

Farm maintenance on Blue Ocean Mussels (BOM) and Saldanha Bay Oyster Company (SBOC) continued through January 2023. The maintenance on these farms brings operators closer to being compliant with maintenance and operational guidelines and compliance with EMPr table 5-1, condition 6.

Operators provided evidence of beach monitoring and aquaculture debris removal for Small Bay which contributes towards compliance with EMPr table 7-1, condition 2. However, no such evidence was provided for Big Bay and Outer Bay North resulting in this condition remaining partially compliant. It should be noted that the ECO observed extensive aquaculture debris on Spreeuwalle beach (main receiving beach for Big Bay). An incident report was subsequently generated and is discussed in further detail in Sections 3.5.4 and 4.

3.3 ADZ level findings

The DFFE: Food Safety Office (FSO) issued a notice on 29 November 2022 to operators to cease harvesting in Big Bay and Outer Bay North precincts due to non-compliance with management programmes and reporting requirements. On 15 December 2022 DFFE: FSO notified operators that test results for the Bivalve National Residue Control Programme (NRCP) were outstanding for approximately 70% of the Aquaculture farms in Saldanha Bay. This constitutes a non-compliance by the Operators with EMPr Table 5-2, conditions 24 and 106. It should be noted that no action or remediation of this non-compliance is required by the Branch Fisheries Management. The DFFE: FSO further advised Operators that should these biotoxin test results not be provided by the end of 2022 further steps will need to be taken in terms of placing product on the market, which will include closing various clusters of farms. Operators should ensure compliance with the NRCP to avoid further action being taken and to resume compliance with the EMPr. On 20 January 2023 the DFFE: FSO confirmed that Big Bay and Outer Bay North were still closed for harvesting.

During the January 2023 site inspection, the ECO observed extensive aquaculture debris and waste on Spreeuwalle beach (the main receiving beach for Big Bay). The ECO identified and notified responsible

Operators and requested that an Action Plan for waste removal be developed and that Operators commence with waste removal as a matter of urgency. It is recommended that DFFE: Compliance and Monitoring follow up with Operators to monitor compliance with removal of aquaculture debris on Spreeuwalle beach. Further detail on the aquaculture debris on Spreeuwalle beach is discussed in Sections 3.5.4.

3.4 Summary of ADZ compliance with the EA and EMPr

The ADZ scored an overall compliance of 87% for the audit period of January 2023 indicating **no change** in compliance percentage since the previous audit in December 2022 (Table 5, Figure 4). Although no change in compliance was observed there was progress towards improving the status of three partial compliances (see Section 3.2 for detail). The ADZ has maintained a high level of compliance (>80%) with the audit standard for 2022 and January 2023, and the management team should be commended.

Table 5. Compliance over time, January 2022 to January 2023.

Audit Date	Total applicable Conditions	Compliant	Partially Compliant	Non-compliant	Not applicable	To be confirmed
26/1/2022	23	22	1	0	3	0
24/2/2021	23	22	1	0	3	0
23/3/2022	23	20	3	0	3	0
20/04/2022	23	20	3	0	4	0
31/05/2022	25	22	3	0	2	0
01/06/2022	24	21	2	1	3	0
06/07/2022	24	20	4	0	3	0
15/08/2022	24	20	4	0	3	0
14/09/2022	23	19	4	0	4	0
19/10/2022	23	20	3	0	4	0
08/11/2022	23	20	3	0	3	1
07/12/2022	23	20	3	0	4	0
20/01/2023	23	20	3	0	4	0

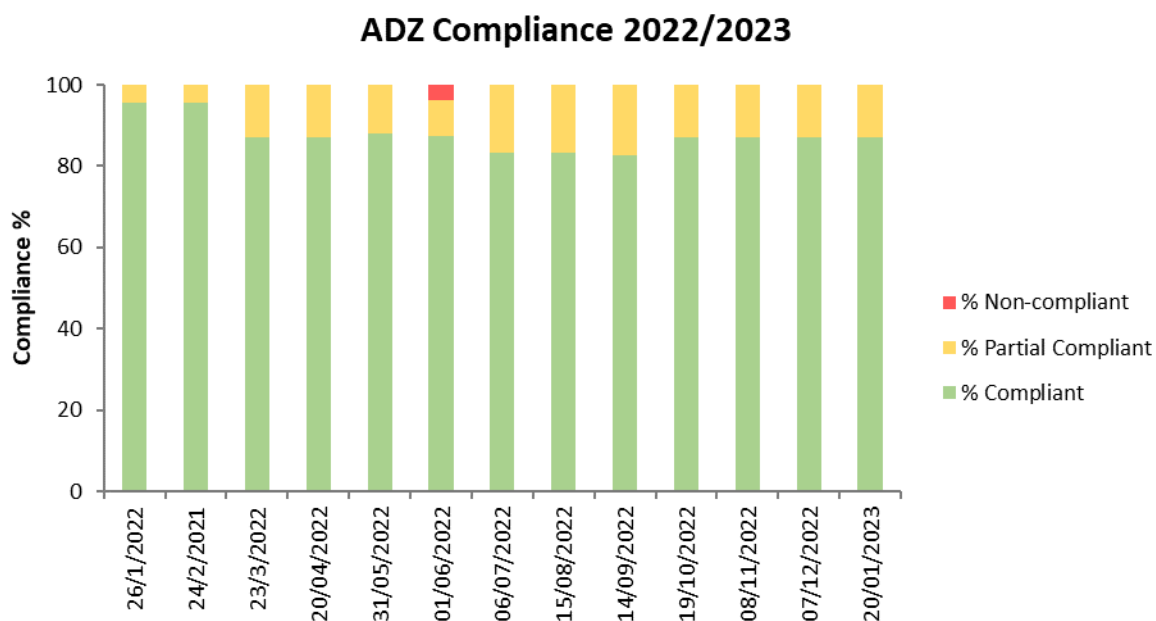


Figure 4. ADZ compliance over time from January 2022 to January 2023.

3.5 Operator level findings

3.5.1 Farm Inspections

On-water inspections were conducted for two farms (AquaFoods SA Big Bay and Small Bay) on 20 January 2023. Compliance feedback is provided in Table 6 and supporting photographic evidence is presented below.

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

Farm name	Location	Species	Date	Comment
AquaFoods SA	Small Bay	Oysters & Mussels	2023/01/20	28 lines in the water (Figure 5). Lines were taught, straight and end buoys were unique and red ribbons used to mark other infrastructure (Figure 6). Although floats are not muted in colour, the colour of floats were approved when AquaFoods initially established. It is recommended that, as floats are retired, new floats be of a muted colour.
AquaFoods SA	Big Bay	No farming activity	2023/01/20	2 lines in the water. One line had sunken (Figure 7). It is recommended that both lines be maintained, cleaned, and removed from the site as no farming activity is occurring on this site.



Figure 5. (Left) Live Google Earth pin of location of compliance photograph in relation to AquaFoods SA, Small Bay licence area (yellow boundaries). (Right) Red ribbon used as unique markers on floats, and oyster stacks.



Figure 6. Unique infrastructure used for end buoys (orange floats) on Aquafoods SA, Small Bay farm. Although other floats are not consistent in colour these floats were recommended and approved when AquaFoods initially established in the ADZ.



Figure 7. (Left) Live Google Earth pin of location of compliance photograph in relation to AquaFoods SA, Big Bay licence area (yellow boundaries). (Right) One line and float visible on the surface and the second line had sunken.

3.5.2 Farm Management

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 December 2022 audit period for meeting the FMR submission deadline. Out of a possible 24 FMRs, 23 were submitted on time and one was outstanding at the time of drafting this report (Blue Lagoon Products). Note that Blue Lagoon Products is no longer actively farming. All farms with sales provided supporting documents (Table 7). Operators are to be commended for maintaining a high level of compliance.

Table 7. 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	2023/01/13	yes	yes
Aqua Foods SA	Small Bay	Mussels/ oysters	2023/01/15	yes	yes
Aqua Foods SA	Big Bay	Mussels/ oysters	N/A – no active farming		
Blue Lagoon Products	Big Bay	Oysters	Not provided at the time of drafting this report.		
Blue Ocean Mussels	Small Bay	Mussels	2023/01/13	yes	yes
Blue Sapphire Pearls	Big Bay	Mussels	2023/01/13	no sales	yes
Blue Sapphire Pearls	Small Bay	Oysters	2023/01/14	yes	yes
CEX Enterprises	Big Bay	Mussels	Not operational		
Imbaza Mussels	Small Bay	Oysters	2023/01/13	no sales	yes
K2019005713	Big Bay	Mussels	2023/01/13	no sales	yes
K2019005725	Big Bay	Mussels	2023/01/13	no sales	yes
Lagoon Aqua Farm	Big Bay	Mussels	No aquaculture permit		
Madima General Agriculture Trading	Big Bay	Mussels	2023/01/13	no sales	yes
Mika Growers	Big Bay	Mussels	2023/01/13	no sales	yes
Mmmagri Consult	Big Bay	Mussels	2023/01/13	no sales	yes
Pluto Mussels and Trading	Big Bay	Mussels	2023/01/13	no sales	yes
Requa Enterprises	North Bay	Mussels	N/A – no active farming		
Saldanha Bay Oyster Company	Small Bay	Oysters	2023/01/11	yes	yes
Saldanha Bay Oyster Company	Big Bay	Oysters	N/A – no active farming		
Salmar Trading	Small Bay	Oysters	2023/01/15	yes	yes
Simunye Mussels	Big Bay	Mussels	2023/01/13	no sales	yes
Southern Atlantic Sea Farms 1 (SASF1)	Outer Bay North	Mussels	2023/01/13	no sales	yes
Southern Atlantic Sea Farms 2 (SASF2)	Big Bay	Mussels	2023/01/13	no sales	yes
Southern Cross Salmon Farm	Outer Bay North	Mussels	2023/01/13	no sales	yes
Ulwazi Kukutya	Big Bay	Mussels	2023/01/13	no sales	yes

Farm name	Location	Species	Date	Supporting docs	Visual Inspection Log
Wada Projects	Big Bay	Mussels		N/A - not operational	
Well Done Works	Big Bay	Mussels		N/A - not operational	
West Coast Aquaculture	Small Bay	Oysters	2023/01/13	no sales	yes
West Coast Oyster Growers BB	Big Bay	Mussels/ oysters	2023/01/13	no sales	yes
West Coast Oyster Growers SB	Small Bay	Oysters	2023/01/13	yes	yes
Xesibe Aquaculture	North Bay	Mussels	2023/01/13	no sales	yes

3.5.3 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 8).

Table 8. 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	Monthly
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

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 (see Table 9). Beach clean-up feedback is provided the following month to ensure data for the entire month is captured. Feedback has been provided for beach clean-ups for Small Bay for September - December 2022 and for Big Bay for September - November 2022 (Table 9). Detailed feedback has not been provided for the Outer Bay North precinct or Marcus Island to date. Although no waste data has been provided, some photographic evidence of beach clean-ups at Marcus Island were provided in September 2022. Beach clean-up data should be provided for December 2022 for Big Bay and for September 2022 to December 2022 for Outer Bay North as a matter of urgency.

Table 9. Aquaculture industry waste collection data, September to December 2022.

Date	Location	Waste collected (kgs / volume / number of units)	Waste collected		
			Majority waste type (litter, aquaculture debris, etc.)	Aquaculture debris collected (floats, rope offcuts, PVC pipes, chestos, crates, etc.)	Estimated waste % aquaculture debris
Sep-22	SB - Northern Beach	± 30 refuse bags	Litter	Rope offcuts	< 5 %
Sep-22	BB - Spreeuwalle to Paradise beach	± 3 refuse bags and 10 floats	Aquaculture debris and litter	Broken cages, ropes, pvc pipes, floats	~ 100%
Sep-22	OBN - West and Eastern Beach	-	-	-	-
Sep-22	SB - Marcus Island	-	-	-	-
Oct-22	SB - Northern Beach	± 33 refuse bags	Litter	Rope offcuts, 4 longline buoys	< 5 %
Oct-22	BB - Spreeuwalle to Paradise beach	± 3 refuse bags and 25 floats	Aquaculture debris and litter	Floats	~100%
22-Oct	OBN - West and Eastern Beach	-	-	-	-
22-Oct	SB - Marcus Island	-	-	-	-
Nov-22	SB - Northern Beach	± 40 refuse bags	Litter	Rope offcuts	< 5 %
Nov-22	BB - Spreeuwalle to Paradise beach	18 Floats	Aquaculture debris	Floats	100%
Nov-22	OBN - West and Eastern Beach	-	-	-	-
Nov-22	SB - Marcus Island	-	-	-	-
Dec-22	SB - Northern Beach	± 30 refuse bags	Litter	some rope offcuts	< 5 %
Dec-22	BB - Spreeuwalle to Paradise beach				
Dec-22	OBN - West and Eastern Beach	-	-	-	-

3.5.4 Beach inspection by ECO

The main receiving beach of Big Bay (Spreeuwalle beach) was inspected by the ECO on 20 January 2023. Extensive aquaculture waste and debris were observed along this beach from both oyster and mussel industries (see Sections 3.5.5.1 to 3.5.5.11). The waste observed included 161 floats (large and small), 7 oyster crates, 1 oyster stack, long lengths of rope, rope off-cuts, netlon bags, pvc pipes, and a host of broken plastic from aquaculture infrastructure. Floats made up the vast majority of this debris and approximately 99% of the floats are still in usable condition. Not only does the extensive debris have an impact on the environment but also an impact on the finances of each operator. Equipment used in the aquaculture industry is often purpose built and expensive, and new floats are

valued at between R 3 000 and R 5 000. Using a conservative estimate of R 3 500 per float, the value of equipment on Spreeuwalle beach is in excess of R 560 000.

Operators are required to have unique equipment or use unique identifiers on their equipment. Eight operators were identified as being responsible for the aquaculture debris on the beach (three from the oyster industry and five from the mussel industry, see Table 10). The operators identified as being the primary contributors to this waste were SASH (112 floats), BLP (24 floats), WCOG (9 floats/drums and 7 crates) and SBOC (9 floats, 2 end floats and 1 oyster stack) (Table 10). Of note is that a crate from WCOG had trapped a seabird between the crate and rocks, which resulted in the death of the bird (Figure 18).

Table 10. Responsible farmers and waste contribution.

Responsible Party	Industry	Debris type	Quantity	Figure reference
SASH	Mussels	Floats	112	Figure 8 - Figure 11
K13	Mussels	Float	1	Figure 13
K25	Mussels	Float	1	Figure 14
Mika	Mussels	Floats	1	Figure 15
Pluto	Mussels	Float	1	Figure 16
Xesibe	Mussels	Float	1	Figure 12
BLP	Oysters	Floats	24	Figure 17
WCOG	Oysters	Crates	7	Figure 18
		Floats/drums	9	Figure 18 - Figure 19
SBOC	Oysters	Floats	9	Figure 20
		End floats	2	Figure 20
		Oyster stacks	1	Figure 21

Operators are responsible for removing aquaculture debris that enters the environment in accordance with the EMPr (Table 5-2: sections 29, 31 and 32). The ECO has provided Operators an opportunity to rectify the matter and avoid being issued with a notice of non-compliance. Operators were notified of the aquaculture debris on 24 January 2023 and the ECO requested that an Action Plan for removing the debris be developed and sent to the ECO within 1 business week (31 January 2023). Furthermore, the ECO requested that Operators commence clean-up activities so that progress may be seen by 9 February 2023 (3.5 business weeks from date of notification). SASH volunteered to conduct beach inspections and clean-ups in September 2022 as they have majority interest in Big Bay, furthermore SASH are responsible for the majority of the waste observed on Spreeuwalle beach. The ECO therefore recommended that Ernie Malan (of SASH) co-ordinate the development of the Action Plan with the other responsible farmers and in consultation with Vos Pienaar (in his capacity as co-chairperson of BSASA).

The following is recommended for the Action Plan:

- Planned clean-up activities for the next 12 months.
- Weekly beach clean-ups.

- The beach should be addressed in sections of 1 km to ensure all aquaculture debris is removed.
- Clean-up crews should be aware that debris may be under rocks or in crevices and ensure all aquaculture debris is collected.
- All aquaculture debris should be collected, not just usable floats.

3.5.5 Aquaculture debris on Spreeuwalle beach

3.5.5.1 SASH group

The majority of aquaculture waste washed up on Spreeuwalle beach belonged to the SASH group and included mussel floats and ropes or droppers lodged under rocks, floats that had been collected and grouped but not removed, end floats and rope.



Figure 8. SASH aquaculture debris on Spreeuwalle beach included mussel floats and ropes or droppers lodged under rocks.



Figure 8 (cont.). SASH aquaculture debris on Spreuwalle beach included mussel floats and ropes or droppers lodged under rocks.



Figure 9. SASH aquaculture debris on Spreuwalle beach. Floats from mussel industry collected and grouped but not removed.



Figure 10. SASH mussel float and rope aquaculture debris on Spreuwalle beach.



Figure 11. SASH end floats and floats with rope washed up on Spreuwalle beach.

3.5.5.2 Xesibe mussel farm



Figure 12. An end float from Xesibe mussel farm washed up on Spreeuwalle beach.

3.5.5.3 K13 mussel farm



Figure 13. End float from mussel farm K13 on Spreeuwalle beach.

3.5.5.4 *K25 mussel farm*



Figure 14. End float from mussel farm K25 washed up on Spreeuwalle beach.

3.5.5.5 *Mika mussel farm*



Figure 15. End float from Mika Mussel farm on Spreeuwalle beach.

3.5.5.6 Pluto mussel farm float



Figure 16. End float from mussel farm Pluto washed up on Spreeuwalle beach.

3.5.5.7 Blue Lagoon Products floats



Figure 17. Floats under rocks from Blue Lagoon Products on Spreeuwalle beach.

3.5.5.8 West Coast Oyster Growers



Figure 18. A crate from WCOG oyster industry on Spreeuwalle beach that trapped, and almost certainly resulted in the death of, a sea bird.



Figure 19. WCOG oyster crates and floats from on Spreeuwalle beach.

3.5.5.9 Saldanha Bay Oyster Company floats and infrastructure



Figure 20. Saldanha Bay Oyster Company floats on Spreeuwalle beach.



Figure 21. Float and stack from Saldanha Bay Oyster Company on Spreeuwalle beach.

3.5.5.10 Ropes and general debris from aquaculture industry



Figure 22. (Left) Mussel long line and (right) ropes from mussel industry washed ashore at Spreuwalle beach.



Figure 23. (Left) Piece of oyster stack and (right) Rope off-cuts, netlon bags, and broken plastic from aquaculture industry on Spreuwalle beach.



Figure 24. Ropes from mussel or oyster industry wrapped around rocks on Spreuwalle beach.



Figure 25. Broken plastic from various aquaculture infrastructure, rope offcuts, and netlon bags.

3.5.5.11 Multiple floats and crates from various operators



Figure 26. Crates and floats from aquaculture industry washed ashore on Spreeuwalle beach.



Figure 27. End floats washed ashore on Spreuwalle beach.



Figure 28. Floats from SASH washed ashore on Spreuwalle beach.



Figure 29. Floats washed ashore on Spreewalle beach.

4 INCIDENTS DURING THE LAST MONTH

One incident was reported in the January 2023 audit period. Extensive aquaculture debris and waste was observed on Spreewalle beach which is the main receiving beach for Big Bay farms (IR Jan 23-01). Seven Operators were identified as responsible for the debris including (in descending order of contribution towards waste volume) SASH, BLP, WCOG, SBOC, K13, K25, Mika, and Pluto. The ECO notified all Big Bay Operators of this incident and (as an allowance for remediation prior to issuing any notices of non-compliance) requested that the responsible parties (lead by Ernie Malan of SASH) develop and Action Plan to remove all debris from Spreewalle beach. The Action Plan is to be provided to the ECO by 31 January 2023 and visible progress with waste removal must be made by 9 February 2023. Details of the observed debris and waste are provided in Section 0.

5 ADZ MANAGEMENT

5.1 Bay user safety

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. The fifth draft of the AtoN plan has been developed and during this process SAMSA has identified that a Risk Assessment must be conducted before the AtoN plan may be finalised. Stakeholder engagement is required as part of developing the Risk Assessment and to this end a workshop is planned for May/June 2023.

5.2 External Audit

NCC Environmental Services (Pty) Ltd have been appointed as external auditors to conduct the 2023 annual audit. The 2023 annual external audit site inspections will occur in February 2023.

5.3 Bivalve production threshold

The AMC decided to increase the annual bivalve production threshold in August 2022 from 10 000 tpa to 12 500 tpa based on the findings of the environmental monitoring report. Due to the increased threshold, Operators were invited to submit written requests to install additional infrastructure. After assessing the Operator requests, the AMC took a decision (on 24 November 2022) to increase the bivalve production threshold further, to 15 000 tpa ungraded, to accommodate the economic demand to sustain aquaculture businesses. Operators were notified of the AMCs decision regarding each increase request and the new infrastructure allowances on 14 December 2022.

5.4 Bivalve production volumes

Graded production volumes in the ADZ are recoded monthly. Production volumes for December 2022 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) (see Section 5.3 for details on the current production limit). 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 December 2022	Graded production Feb 2019-Jan 2020 (Year 1 prod)	Graded production Feb 2020-Jan 2021 (Year 2 prod)	Graded production Feb 2021 - Jan 2022 (Year 3 prod)	Graded production Feb 2022 – Jan 2023 (Year 4 prod)
Small Bay	127	2847	1936	2921	2340
Big Bay	0	189	240	480	700
Outer North Bay	0	433	297	330	175
Outer South Bay	-	-	-	-	-
Total graded	127	3 468	2473	3731	3214
Approximate ungraded production	200	6 497	4 707	7 228	6150

5.5 Environmental Monitoring

None to report.

6 CONSULTATIONS AND COMMUNICATIONS

6.1 Consultations

1. Interviews
 - AquaFoods SA - Wayne Maree & Damian Norman
 - Requa - Cliffie Vraagom & Leon Moodaley
2. Information requested by the competent authority:
 - None.

6.2 Communications

Communications received by the ADZ ECO during the January 2023 audit period included:

- Risk Assessment to be conducted and to feed into AtoN plan for ultimate installation of SAMSA approved markers around the ADZ.
- Operators notified of Aquaculture debris on Spreeuwalle beach.
- Big Bay and Outer Bay North remain closed for harvesting.
- Annual external audit site visit to be conducted on the 9-10 February 2023.

7 RECOMMENDATIONS

The following recommendations are made by the ECO:

- Operators responsible for aquaculture debris on Spreeuwalle beach should develop an Action Plan and commence waste removal as outlined in section 3.5.4 and 4.
- DFFE: Compliance and Monitoring should follow up with Operators to monitor compliance with removal of aquaculture debris on Spreeuwalle beach.
- Once the Risk Assessment is concluded, the AtoN Plan should be finalised, and the responsible parties should ensure implementation and execution of this plan.

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 and EMPr.



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