

Duck Bay

Management Plan

Issued: 23/12/2025

This Management Plan revokes and replaces all previous Duck Bay Management Plans and remains in force until revoked.

Growing Area	Duck Bay
Completed by	ShellMAP
Issued	23/12/2025

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2 Harvest Area Operation

The Shellfish Market Access Program (ShellMAP) monitors the food safety risk of commercial Tasmanian shellfish in accordance with the Australian Shellfish Quality Assurance Program (ASQAP) guidelines. ShellMAP regulates the harvesting of shellfish from defined harvest areas to ensure shellfish is safe to eat and the public health risk is adequately managed.

ShellMAP will communicate regulatory decisions to growers and issue regulatory Classification Notices.

Shellfish harvest area Classification Notices are published online and are available via <https://nre.tas.gov.au/aquaculture/shellmap>.

It is the responsibility of each grower to ensure that the management criteria have been met, and the harvest area is open prior to commencing harvest.

Growers are encouraged to consult with ShellMAP when food safety risk is elevated, or if they would like to know more about what can be done to reduce or manage risk in their area.

3 Harvest Area Description

Duck Bay Harvest Area	
Classification	Conditionally Approved
Species harvested	Pacific oyster (<i>Magallana gigas</i>)
Growing method	Intertidal – Rack and rail
Lease numbers	22, 23, 24
Phytoplankton sample frequency	Monthly
Bacteriological sampling strategy	Adverse Pollution Conditions (APC)

Kemps Bay Harvest Area	
Classification	Conditionally Approved
Species harvested	Pacific oysters (<i>Magallana gigas</i>)
Growing method	Intertidal – Rack and rail
Lease numbers	248
Phytoplankton sample frequency	Monthly
Bacteriological sampling strategy	Adverse Pollution Conditions (APC)



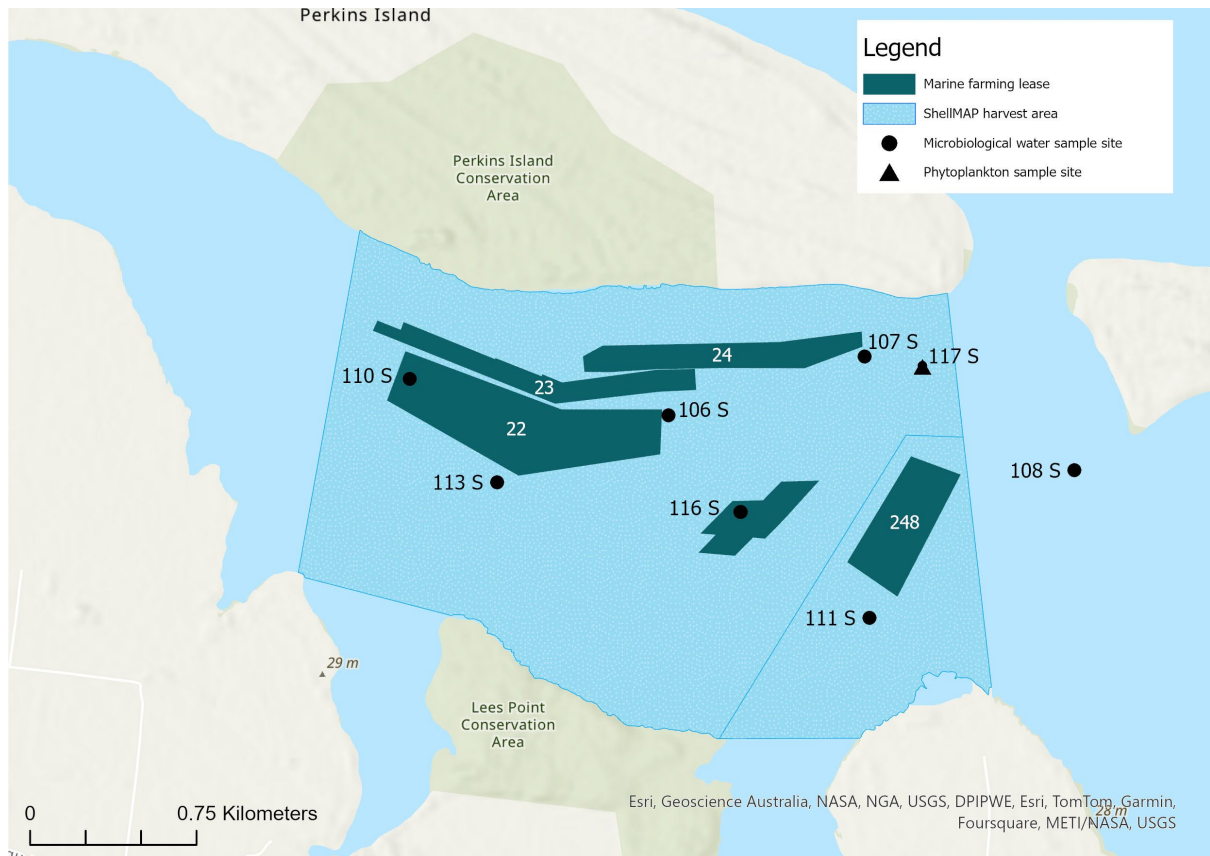


Figure 1. Microbiological and phytoplankton sample locations in Duck Bay, with marine farming leases and ShellMAP harvest area boundaries.

4 Conditional Environmental Management

Harvest areas with a **Conditional Classification** can be in either “open” or “closed” status, based on environmental parameters which indicate predictable pollution events.

Conditionally Approved and **Conditionally Restricted** harvest areas must meet the relevant ASQAP classification requirements when in the “open” status. This Management Plan issued by ShellMAP states the environmental criteria which dictate “open” status and allow shellfish to be harvested for safe consumption.

Conditionally Approved and **Conditionally Restricted** harvest areas can be managed based on either combined environmental criteria or a salinity-only criterion, if a ShellPOINT salinity sensor is installed and deemed suitable for management by ShellMAP. For harvest areas with dual management systems, ShellMAP can notify growers of the management system currently utilised for the harvest area (i.e Salinity-Only or Combined Environmental).



Growers with a ShellPOINT salinity sensor installed in their harvest area are eligible to be managed utilising a Salinity-Only management criterion. When utilising a Salinity-Only criterion the harvest area will have opted in to being managed under two separate management systems (Salinity-Only and Combined Environmental). A salinity sensor may be considered unsuitable for management due to the following reasons:

- The sensor has exceeded its manufacturer’s service period,
- The sensor shows abrupt or unusual salinity values indicative of malfunction, or
- The sensor is no longer consistently providing data.

If the salinity sensor is not suitable for management, or a harvest area is unable to be managed using the salinity sensor for other reasons, the combined environmental management criteria will be used to manage the food safety risk.

4.1.1 Combined Environmental Management Criteria

River flow station: *Duck River at Scotchtown Rd, 14214*

<https://portal.wrt.tas.gov.au/Data/DataSet/Chart/Location/14214-1/DataSet/Discharge/1>

Rainfall station: *Smithton Aerodrome, 091292*

<http://www.bom.gov.au>

Table 1. Environmental criteria (combined) for Duck Bay harvest areas.

Harvest Area	Salinity (‰)	Smithton 7 Day Rainfall (mm)	Smithton 3 Day Rainfall (mm)	Duck River flow (Cumeecs)	Meat Testing
Duck Bay	<32.5	≥40	≥25	≥5	-
Kemps Bay	-	≥25	-	-	Fortnightly

4.1.2 Depuration Management Criteria

The Duck Bay harvest areas met ASQAP Restricted requirements under all environmental conditions. Growers may depurate shellfish under all environmental conditions unless otherwise notified by ShellMAP.

Please note growers must meet all Primary Produce Safety Program requirements for depuration.



4.1.3 Closure Procedure - Environmental Management Criteria (Combined & Salinity-Only)

Temporary harvest area closures may occur due to an exceedance of environmental management criteria, shown in Table 1 and Table 2.

ShellMAP will communicate a harvest area closure to growers, industry and regulators through appropriate communication channels and regulatory Classification Notices.

Combined environmental criteria harvest area closures will occur based on environmental data from approved stations (rainfall and riverflow). For combined criteria, daily rainfall totals are measured in 24 hour periods from 0900 hrs and riverflow is measured instantaneously in 15 minute increments. Rainfall closures occur from 1000 hrs following exceedance of the rainfall criterion and riverflow closures occur from the first exceedance of the riverflow criterion.

Salinity-only harvest area closures will occur based on salinity data from the ShellPOINT sensor network. **Salinity-only closures will be determined by ShellMAP based on the following criteria:**

- **At least four consecutive salinity readings below the salinity-only management criteria, and**
- **Evidence of a consistent downward trend in salinity levels within the harvest area, and**
- **Occurrence of an associated adverse pollution event.**

The harvest area will be closed from the time of the first salinity value below the salinity-only management criterion.

4.1.4 Reopening Procedure – Environmental Criteria Combined

To open a harvest area following a combined environmental closure:

- all environmental criteria outlined in Table 1 must be satisfied; and
- rainfall has either ceased or daily rainfall is less than 10 % of 7-day rainfall criterion (rainfall closures only), and
- 48 hours of satisfactory salinity above the salinity criterion must be demonstrated

To demonstrate satisfactory salinity, there must be either 48 hours of satisfactory ShellPOINT salinity data or shellfish growers are required to manually collect three satisfactory salinity measurements.



The three manual salinity measurements (T_0 , T_1 , T_2) must be collected within the harvest area at low tide, over 48 hours. The salinity measurements must be taken from representative locations in the lease area and must meet salinity criteria outlined in Table 1. All other environmental criteria outlined in Table 1 must also be satisfied in the 48-hour period. A template for submission is given in Appendix – Grower Submission Template - Re-opening Salinity.

Shellfish growers should notify ShellMAP of their intentions to open and submit their salinity measurements to shellmap@nre.tas.gov.au.

4.1.5 Reopening Procedure - Salinity-Only

To open a harvest area following a salinity-only environmental closure:

- 48-hours of satisfactory salinity must be demonstrated on the ShellPOINT sensor, and
- There is evidence that the adverse pollution event is no longer significantly impacting the harvest area

T_0 for re-opening using ShellPOINT sensors is calculated from the first value above the salinity-only management criteria. If the sensor observes **at least four consecutive values below the salinity only management criteria** within the 48-hour period, the exceedance will trigger a new “closure” event requiring a new T_0 to be calculated from the first salinity value above the salinity-only management criteria.

Shellfish growers should notify ShellMAP of their intentions to open following a salinity-only harvest area closure.

4.1.6 Alternate Reopening Procedure - Shellfish Meats

Harvest areas may be opened if shellfish growers can demonstrate safe levels of *E. coli* in shellfish meats. If you would like to open a harvest area using shellfish meat samples, please contact ShellMAP to arrange a sampling plan.

To re-open utilising shellfish meats, 5 dozen shellfish must be submitted for analysis at the Public Health Laboratory and *E. coli* results must be less than 2.3 CFU/g, however it is acceptable to have one sample between 2.3 - 7 CFU/g.



5 Biotoxin Management

The testing of shellfish meats for biotoxins, and monitoring of water for potentially toxic phytoplankton, is undertaken to control biotoxin risk in Tasmania. An updated biotoxin sampling schedule is distributed to growers each year. The frequency of testing is dependent on the growing area's biotoxin risk rating.

Biotoxin and phytoplankton samples will be analysed in accordance with the Biotoxin Management Plan which can be found online ([ShellMAP Biotoxin Management Plan](#)). Biotoxin shellfish meat samples must be taken from representative locations within the harvest area and can manage the biotoxin risk for the entire growing area. The regulatory limits for biotoxin and phytoplankton samples can be found in Table 4 and Table 5. ShellMAP may request additional samples following any unusual results.

Table 2. Regulated biotoxin groups and associated limits.

	Toxin Group	Regulatory limit
PST	Paralytic Shellfish Toxin (Saxitoxin dihydrochloride equivalent)	0.8 mg/kg
AST	Amnesic Shellfish Toxin (Domoic Acid equivalent)	20 mg/kg
DST	Diarrhetic Shellfish Toxin (Okadaic Acid equivalent)	0.16 mg/kg
NST	Neurotoxic Shellfish Toxin	200 MU/kg

In addition to the regulated biotoxins, other toxin groups which pose a food safety risk are monitored by ShellMAP. This includes Tetrodotoxins (TTXs) which are a group of potent neurotoxins with a similar action and potency to PSTs and with a similar acute toxicity to saxitoxin.

Although TTX is found in bivalves it is not regulated due to uncertainty around the sources and mechanism of TTX in bivalve molluscs. The European Food Safety Authority has proposed a TTX safety limit of 0.044mg/kg. New Zealand has demonstrated that shellfish containing PST below regulatory limits could be found to be above saxitoxin equivalents when TTX is included.

Analytical Services Tasmania will report TTX separately. TTX is considered a cumulative total for saxitoxin with an equivalence of one e.g. if PST result is 0.5 mg/kg and TTX is 0.3 mg/kg then an area can be closed based on a saxitoxin equivalent of 0.8 mg/kg. In this way TTX levels may be used to regulate closure for PST toxins. To date the levels of TTX reported in bivalve molluscs are generally low, however growers need to be aware that TTX may be regulated in the future.



Table 3. Toxin producing phytoplankton species and associated alert levels.

Phytoplankton species	Toxin Type	Grower Alert Level (Cells/L)	Closure Alert Level (Cells/L)
Alexandrium catenella ¹	PST	200	500
Alexandrium minutum ¹	PST	200	500
Alexandrium tamarense ¹	PST	200	500
Alexandrium ostenfeldii ¹	PST	200	500
Gymnodinium catenatum	PST	1000 (Mussels) or 2000 (Shellfish other)	5000
Dinophysis acuminata	DST	1000	-
Dinophysis acuta	DST	1000	-
Dinophysis caudata	DST	1000	-
Dinophysis fortii	DST	1000	-
Prorocentrum lima	DST	500	-
Pseudo-nitzschia seriata group ²	AST	50,000	500,000
Pseudo-nitzschia delicatissima group ²	AST	500,000	
Karenia brevis	NST	1000	5000
Karenia/Karlodinium/Gymnodinium group ³	NST	250,000	300,000

Growers will be advised when counts of toxic phytoplankton species are elevated and all phytoplankton results will be communicated through weekly news bulletins.

Growers will be advised of biotoxin sample results through AST messages and weekly ShellMAP news bulletins.

5.1.1 Biotoxin Closure

If phytoplankton are detected in the water exceeding the closure alert limits in Table 5, ShellMAP will close the relevant harvest areas, pending a passing biotoxin result.

If biotoxins are detected in shellfish exceeding the regulatory limits in Table 4, ShellMAP will close the growing area. In some cases, closures may be backdated to the last passing sample.

If a biotoxin result exceeds the regulatory limit, preparations should be made in case a withdrawal or recall is required. In the event of a withdrawal or recall growers will be contacted by the Primary Produce Safety Program. For further information please refer to section 10 - Shellfish Recall



5.1.2 Reopening Procedure - Biotoxin Closure

Following a biotoxin closure, two successive passing shellfish (biotoxin) samples must be collected to demonstrate the shellfish are safe for consumption.

The biotoxin samples must be taken from representative locations in the harvest area.

The passing samples must be collected at least 7 days apart to allow enough time for the algal bloom to subside and to demonstrate that biotoxins in the shellfish are consistently below the regulatory limits.

The second passing sample must be collected at least 7 days after the first passing sample.

If you have any technical questions regarding biotoxin testing or are not receiving your biotoxin results from Analytical Services Tasmania (AST) please contact AST on the following:

AST:

Ph: 03 6165 3300

E-mail: enquiries@ast.tas.gov.au

6 Microbial Sample Management

ShellMAP requires microbial samples to be submitted as a part of regular management of shellfish harvest areas. This can include shellfish water (TTC) samples and shellfish meat (*E.coli*) samples.

6.1.1 Shellfish waters (thermotolerant coliforms)

Shellfish water results from investigative and Adverse Pollution Condition (APC) sampling are monitored by ShellMAP and will be used to change the status of a harvest area if required.

The ASQAP requirements for Approved passing shellfish water samples are:

- No more than 10% of water samples exceed 21 CFU/100ml
- Median must not exceed 14 CFU/100ml

The ASQAP requirements for Restricted passing shellfish water samples are:

- No more than 10% of water samples exceed 21 CFU/100ml
- Median must not exceed 14 CFU/100ml

Note: The Public Health Laboratory does not count beyond 100 colonies on a plate. These results are reported as >100 CFU/100 mL and are considered high level failures indicating polluted water.



6.1.2 Shellfish waters Closures

If shellfish water samples taken as part of routine APC water sampling show elevated levels of thermotolerant coliforms a closure will generally be enacted, pending further results. The criteria for Conditionally Approved harvest area closure and further investigation, can be found below.

- >21 and <70 CFU/100ml – ShellMAP determination of **CLOSURE**.
- >70 CFU/100ml – **CLOSURE**

When determining a closure decision, ShellMAP will check individual sampling site results and may request additional information (including salinities) from growers. Primary Produce Safety Program will also assess the information.

ShellMAP will communicate any harvest area closures to growers through relevant communication channels.

6.1.3 Re-opening after failed thermotolerant coliform results

If investigative or APC sampling result in closure, ShellMAP will discuss the re-opening process with growers. The re-opening requirements will vary based on individual closure circumstances such as harvest area export status and will be communicated to growers by ShellMAP. The typical re-opening process includes the following:

- Relevant environmental management criteria are met for 48 hours following failing shellfish water sample time.

or

- 5 dozen passing shellfish meat (*E. coli*) samples
- Relevant environmental management criteria are met

6.1.4 Shellfish meats (*E. coli*)

ShellMAP may request meat samples for sewage spill re-openings, ShellMAP investigations and if there are ongoing pollution concerns in a growing area.

The ASQAP requirements for **Approved Classification** for harvest areas are as follows:

- no more than 10% of [microbiological] shellfish meat samples to exceed 7 *E. coli* CFU/g.
- shellfish meat median must not exceed 2.3 *E. coli* CFU/g.

The FSANZ requirements for **direct harvest** of shellfish are as follows:

- **FSANZ Schedule 27- Requires all Approved harvest area samples to be below 2.3 CFU/g, however one sample can be between 2.3 CFU/g and 7 CFU/g.**

The ASQAP requirements for **Restricted Classification** for all harvest areas are as follows:



- no more than 10% of [microbiological] shellfish meat samples to exceed 141 *E. coli* CFU/g.
- shellfish meat median must not exceed 46 *E. coli* CFU/g.

Sampling Requirements

- 5 dozen unshucked shellfish must be submitted to the Public Health Laboratory.

Regulatory Requirements for direct harvest (Approved Harvest Areas/ OPEN Conditionally Approved)

- All samples must be below 2.3 CFU/g, however one sample can be between 2.3 CFU/g and 7 CFU/g (FSANZ Schedule 27).

Regulatory Requirements (Restricted Harvest Areas)

- If samples are harvested for depuration, all samples must meet relevant depuration criteria (Usually 46 *E. coli* CFU/g) and
- must meet the ASQAP classification requirements (no more than 10% of shellfish meat samples to exceed 141 *E. coli* CFU/g and shellfish meat must not exceed 46 *E. coli* CFU/g).

Five dozen shellfish is the FSANZ standard and ShellMAP requirement for shellfish meat sampling. Any alternate sampling arrangements should be discussed with ShellMAP.

Note: Any shellfish sample above the regulatory limit must be reported to the Primary Produce Safety Program as standard protocol.

Growers should clearly label any meat samples that you may be testing for your own purposes (e.g. trials) so that there is no confusion caused by mandatory reporting.

7 Sewage Spill Management

7.1.1 Sewage spill closures

TasWater will contact growers and ShellMAP when a spill to the environment has occurred, or is about to occur, near a shellfish zone.

If growers have received an alert from TasWater advising of a sewage spill that may impact a harvest area, it is advisable that harvest be suspended pending further advice from ShellMAP.

ShellMAP assesses each spill after communicating with TasWater regarding the spill volume, duration and type of effluent involved (treated or untreated). ShellMAP will action a closure if necessary, or a precautionary closure if more time is needed to assess the risk to



the harvest area. ShellMAP will communicate a harvest area closure to growers, industry and regulators through appropriate communication channels and regulatory classification notices.

If a closure is not deemed necessary by ShellMAP following investigation, ShellMAP will notify growers, to advise that a closure will not be actioned.

7.1.2 Re-opening after sewage spill

Viruses such as Norovirus can persist in the tissues of bivalves long after bacterial indicators of pollution are detectable. For this reason, harvest areas must remain closed for an extended period (typically 21 days) following the cessation of a sewage spill determined to impact the harvest area. Growers have two options (*E.coli* only or *E.coli* & Phage testing) to re-open a harvest area following a sewage spill. Growers should contact ShellMAP to discuss reopening procedures and ensure the required sampling conditions are met:

E.coli Only Testing

- Shellfish sample collection at least 14 days after spill cessation
 - 5 dozen unshucked shellfish
- Passing shellfish meat *E. coli* test result
- A period of 21 days since spill cessation
- Passing Environmental Criteria

E.coli & Phage Testing

- Shellfish sample collection at least 7 days after spill cessation (Phage and *E.coli*)
 - 5 dozen unshucked shellfish for each test
- Passing *E. coli* test result
- Passing Phage test result
- Passing Environmental Criteria

The cost of testing shellfish meat samples (excluding Phage testing) following a sewage spill will be paid by ShellMAP.

8 Extended Closure Management

Growers may voluntarily enter periods of extended closure due to operational requirements or environmental circumstances. An extended closure is generally considered to be approximately 6 months or longer. A voluntary closure period must be unanimous for all growers in the area. In addition, growers should be aware that a voluntary closure includes the suspension of relay (out) activities as well as direct harvest.

Growers should notify ShellMAP if intending to enter a voluntary extended closure to discuss sampling requirements.



8.1.1 Extended Closure Procedure

Growers to notify ShellMAP of intention to remain “closed” or to “close” the harvest area for an extended period.

8.1.2 Extended Closure Reopening Procedure

Please contact ShellMAP to discuss the re-opening requirements after a prolonged closure, as specific re-opening requirements may vary depending on the potential risk levels in the growing area. ShellMAP may require the following:

- Environmental management criteria must be within acceptable limits.
- 48 hours of satisfactory salinity must be demonstrated
- Two successive passing biotoxin samples must be submitted 7 days apart. If all results (PST, DST, AST) from the initial sample are below the limit of detection a second sample may not be required.
- One phytoplankton sample must be submitted, with results below regulatory limits.
- ShellMAP may also request a shellfish meat sample to be submitted to the Public Health Laboratory for *E. coli* testing. The cost will be covered by ShellMAP.



9 Vibrio Management

Any re-opening following a detection of *Vibrio spp.* in shellfish must occur in consultation with the Primary Produce Safety Program. The food safety program team will be able to provide further information and instruction on the closure and re-opening process as it relates to Vibrio.

Food Safety Program

Ph: 03 6165 3777

E-mail: foodsafety.enquiries@nre.tas.gov.au

10 Shellfish Recall

Food withdrawals and recalls are the responsibility of the Primary Produce Safety Program. The food safety program team will be able to provide further information and instruction on the withdrawal and recall process.

The contact details for the food safety program can be found below.

Ph: 03 6165 3777

E-mail: foodsafety.enquiries@nre.tas.gov.au

11 Shellfish Relay

Shellfish may be moved between harvest areas throughout the state with a relay authorisation issued by ShellMAP. Shellfish and associated marine farming equipment must be moved in accordance with the conditions of the relay authorisation and POM's permit issued by the Chief Veterinary Officer.

Where relay authorisations are in place, the closure type of the harvest area may impact on minimum holding periods, particularly if the closure is due to sewage or biotoxins.

It is the responsibility of the relay authorisation holder to inform the receiving business of any relevant minimum holding periods.

Relaying From	Authorisation Required From ShellMAP	Minimum Holding Period Post Relay
Unclassified Areas (Under Certain Conditions)	Yes	60 days*
Restricted or Conditionally Restricted Areas	Yes	14 days



Restricted or Conditionally Restricted Areas that have exceeded thermotolerant coliform water results	Yes	21 days**
Conditionally Restricted Areas that have exceeded environmental criteria	Yes	21 days**
Conditionally Approved or Approved Areas in Closed Status	Yes	14 days***
Any Permitted Harvest Area Closed Due to Sewage Contamination	Yes	21 days
Any Permitted Harvest Area Closed Due to Biotoxins	Yes	60 days****

*Additional testing may be required at the cost of the business and all necessary wild fisheries/marine farming authorisations must be obtained.

**Relay times for Restricted or Conditionally Restricted Areas that have exceeded thermotolerant coliform water results, or Conditionally Restricted Areas that have exceeded environmental criteria, may resume to 14 days following 48 hours of acceptable salinity at low tide. Stock relayed before the 48-hour period is subject to the 21-day extended relay condition.

*** If regulatory sampling is not being undertaken in the relevant harvest area (i.e biotoxin sampling) the minimum holding period will be extended (i.e for biotoxins 60 days).

**** Biotoxin relay times may be reduced to 14 days following two biotoxin results from samples of relayed stock collected at least 7 days apart to be within limits set out in the Food Standards Code. If biotoxin samples from relayed stock are not submitted, a minimum 60 day holding period is required.

12 Harvest Area Sampling

Growers are responsible for meeting the requirements of the ShellMAP sampling schedule for Duck Bay. The collection of samples must continue during periods of closure unless discussed with and approved by ShellMAP. Please refer to section 8 - Extended Closure Management, for information on entering a voluntary closure.

Non-compliance with the sampling schedule may result in harvest area closure.

If you are the designated sampler for a given growing area and you are unable to collect the samples as per the sampling schedule (e.g. holidays), it is your responsibility to arrange an alternate person to collect and submit the relevant sample.

Please advise ShellMAP of any changes in sampling arrangements.



13 ShellMAP Contact Details

Contact Number: (03) 6165 3771

Email: shellmap@nre.tas.gov.au

Postal Address: GPO Box 44, Hobart Tasmania 7001

Office Address: Lands Building, Level 3, 134 Macquarie St, Hobart 7000



14 Appendix



I 4.1 Appendix - Duck Bay Management Plan Summary

Date Issued:	23/12/2025
Classification:	Conditionally Approved (All Harvest Areas)

Environmental Monitoring Stations	
River flow station:	<i>Duck River at Scotchtown Rd, 14214</i> https://portal.wrt.tas.gov.au/Data/DataSet/Chart/Location/14214-1/DataSet/Discharge/1
Rainfall station:	<i>Smithton Aerodrome, 091292</i> http://www.bom.gov.au

Environmental Management Criteria (Combined)

Harvest Area	Salinity (‰)	Smithton 7 Day Rainfall (mm)	Smithton 3 Day Rainfall (mm)	Duck Riverflow (Cumeecs)	Meat Testing
Duck Bay	<32.5	≥40	≥25	≥5	-
Kemps Bay	-	≥25	-	-	Fortnightly

The Duck Bay harvest areas are eligible to depurate shellfish under all environmental conditions unless otherwise notified by ShellMAP.

Laboratory	Submission Information	Contact
Public Health Laboratory (PHL)	Type: Shellfish waters (TTC) and Shellfish Meat (<i>E.coli</i>) Submission Monday – Friday. Please contact the laboratory if planning to submit a large quantity of samples.	18 St Johns Avenue, New Town, TAS 7008 Phone: 03 6166 1106
Analytical Services Tasmania (AST)	Type: Biotxin (Meat) and Phytoplankton Sample Biotxin sample analysis occurs Monday and Wednesday. Submission Monday – Friday with after-hours drop off available.	18 St Johns Avenue, New Town, Tas, 7008 Ph: 03 6165 3300



Closure Type	Closure Criteria
Environmental (combined) Management Criteria	<ul style="list-style-type: none"> Environmental conditions outside relevant management criteria
Salinity Only Management Criteria	<ul style="list-style-type: none"> At least four consecutive salinity readings below the salinity-only management criteria, and Evidence of a consistent downward trend in salinity levels within the harvest areas, and Occurrence of an associated adverse pollution event.
Biotoxin	<ul style="list-style-type: none"> Paralytic Shellfish Toxin (PST) ≥0.8 mg/kg Amnesic Shellfish Toxin (AST) ≥20 mg/kg Diarrhetic Shellfish Toxin (DST) ≥0.16 mg/kg Neurotoxic Shellfish Toxin (NST) ≥200 MU/kg
Phytoplankton	<ul style="list-style-type: none"> Phytoplankton count above closure alert level in ShellMAP Biotoxin Management Plan. <p>Note: Biotoxin meat sample results can be utilised for harvest area management decisions.</p>
Shellfish Waters – APC Sampling	<ul style="list-style-type: none"> Shellfish Water sampling with elevated TTC counts. <ul style="list-style-type: none"> >21 and <70 CFU/100ml – ShellMAP determination of CLOSURE. >70 CFU/100ml – CLOSURE
Shellfish Meats	<ul style="list-style-type: none"> In 1 dozen shellfish: >2.3 CFU/g In 5 dozen shellfish: more than 1 sample >2.3 CFU/g, and/or any sample >7 CFU/g
Sewage Spill	<ul style="list-style-type: none"> Notification of sewage spill closure from ShellMAP following a TasWater sewage spill notification.
Sampling Compliance	<ul style="list-style-type: none"> Failure to submit relevant samples as per Management Plan and ShellMAP requirements.
Closure Type	Re-Opening Criteria
Environmental (combined) Management Criteria	<ul style="list-style-type: none"> all environmental conditions must be satisfied; and rainfall has either ceased or daily rainfall is less than 10 % of 7-day rainfall criteria (rainfall closures only), and 48 hours of satisfactory salinity must be demonstrated
Salinity Only Management Criteria	<ul style="list-style-type: none"> 48-hours of satisfactory salinity must be demonstrated on the ShellPOINT sensor, and There is evidence that the adverse pollution event is no longer significantly impacting the harvest area
Biotoxin	<ul style="list-style-type: none"> 2 successive passing biotoxin meat samples taken at least 7 days apart <p>Note: the first sample may be taken at any time following closure.</p>
Shellfish Waters – APC Sampling	<ul style="list-style-type: none"> Relevant environmental management criteria are met for 48 hours following failing shellfish water sample time. <p style="text-align: center;">or</p> <ul style="list-style-type: none"> 5 dozen passing shellfish meat (E.coli) samples & Relevant environmental management criteria are met
Extended closure	<ul style="list-style-type: none"> Environmental management criteria must be within acceptable limits. 48 hours of satisfactory salinity must be demonstrated Two successive passing biotoxin samples must be submitted at least 7 days apart. If all results (PST, DST, AST) from the initial sample are below the limit of detection a second sample may not be required. One phytoplankton sample must be submitted, with results below regulatory limits. ShellMAP may also request a shellfish meat sample to be submitted to the Public Health Laboratory for <i>E. coli</i> testing. The cost will be covered by ShellMAP.



14.1 Appendix – Grower Submission Template - Re-opening Salinity

#	Sampling officer	Time taken	Date taken	Source (Growing area, harvest area, lease number)	Tide	Salinity (‰)
<i>Example</i>	<i>e.g. John Smith</i>	<i>09:55</i>	<i>01/06/2026</i>	<i>Big Bay, Zone B, Lease 10</i>	<i>Low</i>	<i>30.0</i>
1 (T_{0hrs})						
2 (T_{24hrs})						
3 (T_{48hrs})						



I 4.2 Appendix – Harvest Area Map

Duck Bay Growing Area



Harvest Area	MF No.
Kemps Bay	248
Duck Bay	22, 23, 24

Legend			
	ShellMAP Harvest Area		Classification
	MF - Lease		Phytoplankton
	MF - Zone		ShellPOINT Sensor



I 4.3 Appendix – ShellMAP Sample Sites and ShellPOINT Sensor Sites

Site Number	Purpose	Harvest Area	Latitude	Longitude
106 S	Shellfish Waters (Microbiological)	Duck Bay	-40.80023	145.08798
107 S	Shellfish Waters (Microbiological)	Duck Bay	-40.79801	145.09853
110 S	Shellfish Waters (Microbiological)	Duck Bay	-40.79852	145.07422
113 S	Shellfish Waters (Microbiological)	Duck Bay	-40.80279	145.07875
116 S	Shellfish Waters (Microbiological)	Duck Bay	-40.80421	145.09173
108 S	Shellfish Waters (Microbiological)	Kemps Bay	-40.80282	145.10960
111 S	Shellfish Waters (Microbiological)	Kemps Bay	-40.81061	145.09692
117 S	Phytoplankton	All	-40.79844	145.10161

Sensor Name	Harvest Area	Latitude	Longitude
Duck Bay	Duck Bay	-40.79959	145.08700
Duck Bay Kemps Bay	Kemps Bay	-40.80285	145.10354

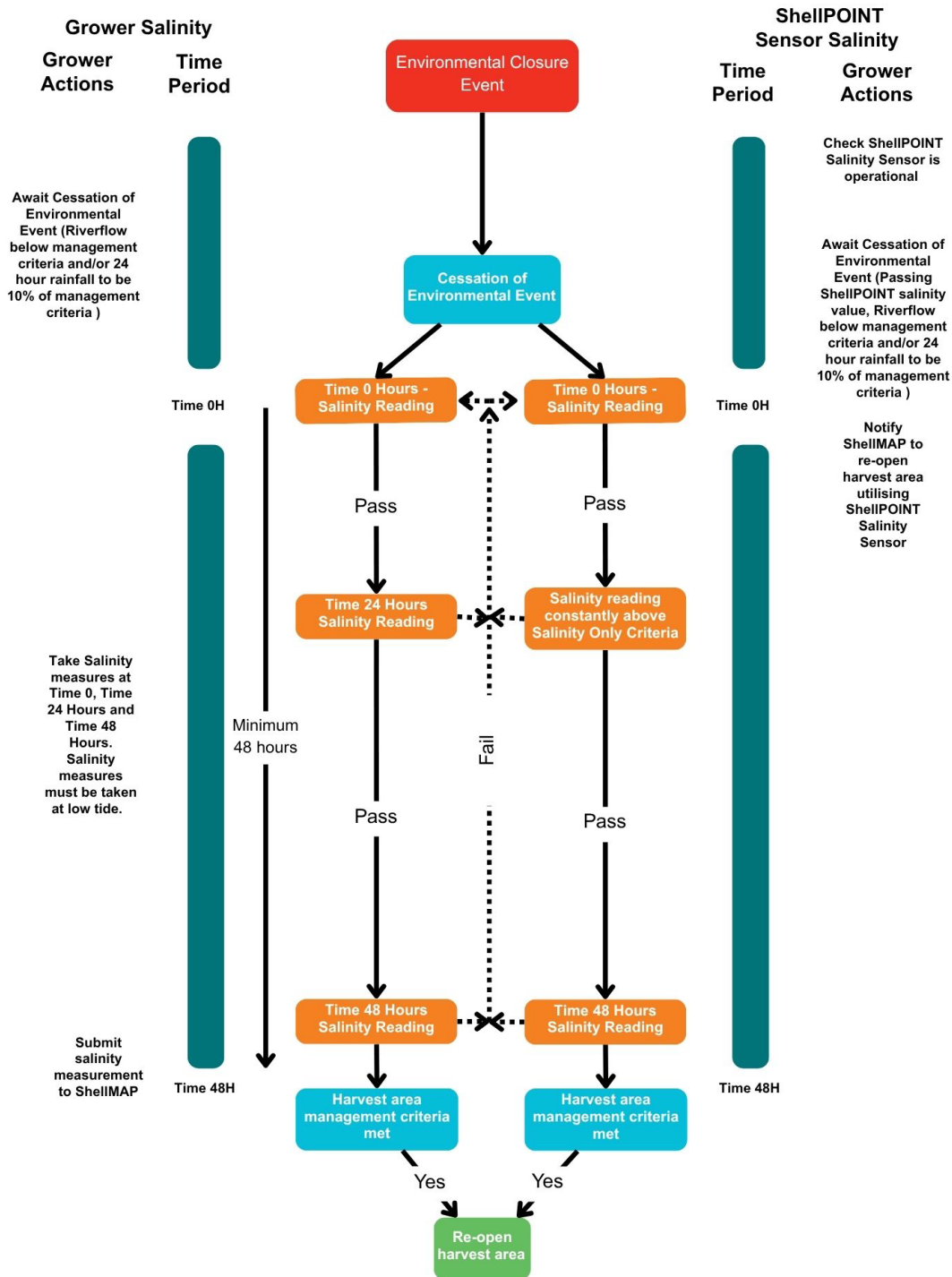
Biotoxin and microbial shellfish meat samples must be taken from representative locations within the harvest area.

Biotoxin and phytoplankton samples manage the biotoxin risk for the entire growing area.

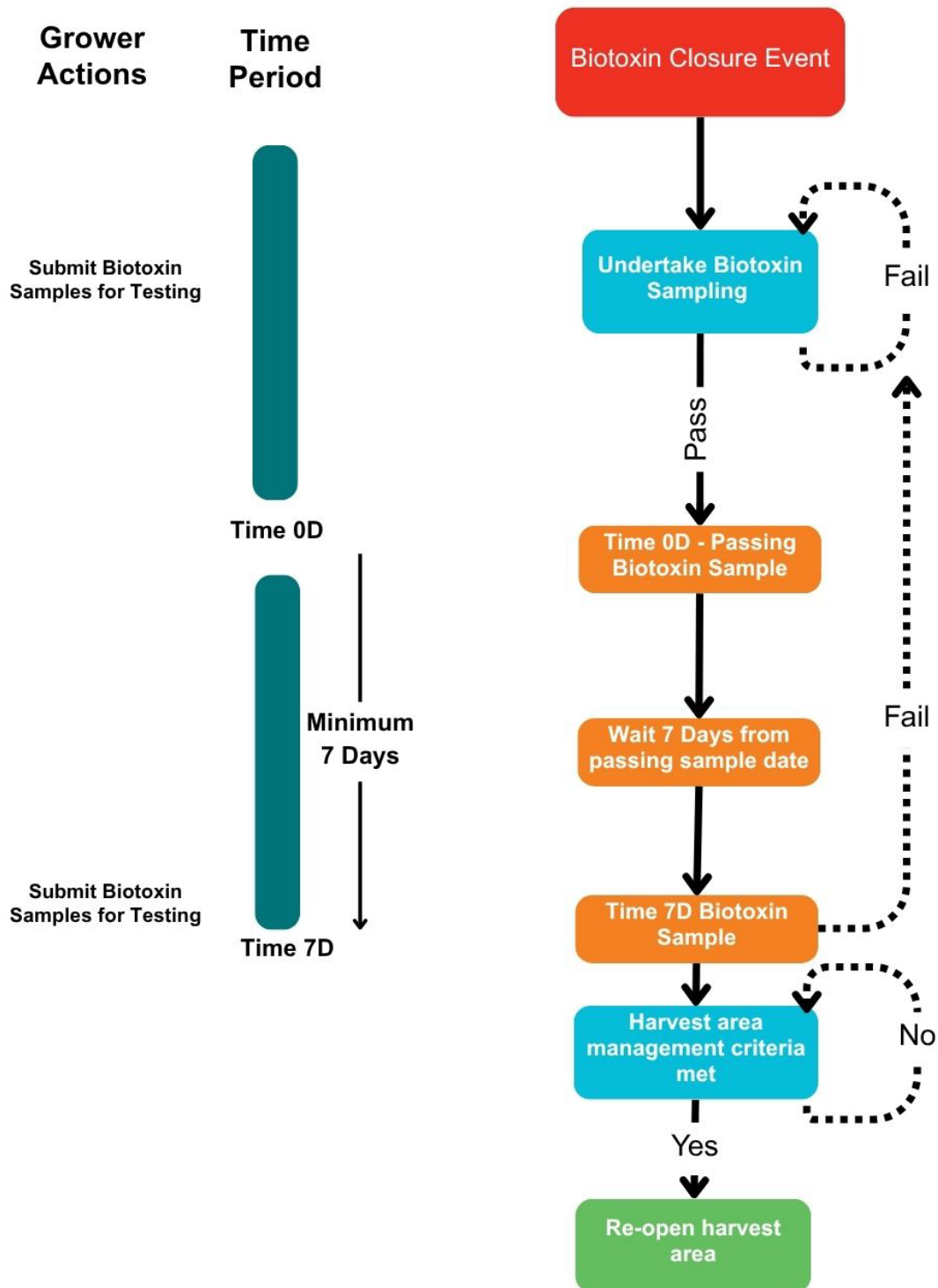


14.4 Appendix – Re-opening Procedure Flowcharts

Reopening following an Environmental Closure



Reopening following a Biotoxin Closure



Reopening following a Sewage Closure

