Algal bloom wildlife post-mortem report

Government of South Australia
Department for Environment and Water

Species – Dolphin (species not identified)

Date collected – 12 December 2025

Location – Brighton Beach

History relating to the animal

A dolphin foetus (species unable to be identified) was found at Brighton Beach on 12 December 2025.

Clinical examination

The animal was already dead and so could not be examined prior to death.

Necropsy

The necropsy (looking at the whole body) revealed that the dolphin foetus was in moderate body condition, weighing 5.5 kg and measuring 76 cm in length. There were putrefactive post-mortem changes (decomposition after death), with a hole in the ventral abdomen (the underside of the animal/body), with the majority of the digestive tract (gut) outside of the body.

Tissues were collected for histopathology (looking at tissues under the microscope for more detailed information) and testing for *Brucella* species bacteria, *Mycobacterium tuberculosis* (*MTb*) and *Mycobacterium avium* (*M. avium)* complex organisms, and brevetoxins and other algal biotoxins (a possibility due to the algal bloom).

Histopathology

Samples from available organs were examined under the microscope, which revealed mild autolysis (decomposition of tissues after death) of all examined tissues. No other abnormalities were noted.

Bacteriology

Polymerase chain reaction (PCR) testing for *MTb* and *M. avium* complex organisms, and *Brucella* species bacteria was negative.

Brevetoxins

No samples were above the limits of reporting.

Other algal biotoxins

No samples were above the limits of reporting.

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Summary

A dolphin foetus was found dead. Laboratory examination was unable to determine the cause for the abortion of this animal. Testing for tuberculosis (*Mycobacterium tuberculosis* and *Mycobacterium avium* complex organisms) and brucellosis (*Brucella* species bacteria) was negative. Brevetoxins and other algal biotoxins were also not detected.

Outlook

PATH RESULTS: DOLPHIN, (Ma) {DOLPHIN} [redacted]

From [redacted]
Date Fri 12/12/2025 4:00 PM
To [redacted]

[redacted]

[redacted]

Tested on 12/12/25
Reported on 12/12/25 16:30
Referred on 12/12/25 **by:** [redacted]

Owner:
DOLPHIN
BRIGHTHON BEACH

Animal/s: DOLPHIN
Marine Mammal

DOB: N/A

Collected: 12/12/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

NECROPSY REPORT

CLINICAL HISTORY
This is a summary of the clinical history from the request form;
The dead dolphin foetus (species not identified) was collected by Department of Environment and Water South Australia staff from Brighton Beach on 12th December 2025

SAMPLES SUBMITTED
1 x dolphin foetus; species cannot be confirmed

NECROPSY FINDINGS
The animal is in moderate body condition and there are putrefactive post-mortem changes. The foetus weighs 5.5kg and is 760mm long. There is a hole in the ventral abdomen and the majority of the alimentary tract is externalised (predation).

GROSS SUMMARY
Aborted foetus

SAMPLES COLLECTED & TESTING
Formalin fixed samples are processed for histopathology.

Liver, kidney, brain, heart lung will be stored frozen, AST Hobart will be contacted for biotoxin and brevetoxin testing and we will forward that quote to you for approval.
Lung and brain will be sent to ACDP for Brucella sp. and Mycobacterium sp. testing as approved by the CVO SA.

Lung, heart, liver, kidney, brain are stored in 5ml pots and oropharyngeal swab in VTM.

COMMENTS
There are no gross findings to explain the cause of the abortion.

[redacted]
Specialist Veterinary Anatomic Pathologist
[redacted]

Validated by [redacted]

Outlook

PATH RESULTS: DOLPHIN, (Ma) {DOLPHIN} [redacted]

From [redacted]
Date Thu 18/12/2025 1:30 PM
To [redacted]

[redacted]

[redacted]

Tested on 12/12/25
Reported on 18/12/25 14:00
Referred on 12/12/25 **by:** [redacted]

Owner:
DOLPHIN
BRIGHTHON BEACH

Animal/s: DOLPHIN
Marine Mammal

DOB: N/A

Collected: 12/12/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

HISTOPATHOLOGY

REF: [redacted]
CLINICAL HISTORY
Dead dolphin fetus (species not identified) collected by DEW from Brighton Beach on 12 December 2025.

MACROSCOPY
Pot labelled '[redacted]' and organs listed below.
A = lung
B = liver + kidney
C - D = heart
E = aorta

Ed

MICROSCOPY
There is mild autolysis of all tissues.

DIAGNOSIS
Aborted foetus

COMMENTS
There are no histopathological findings to explain the cause of abortion.

[redacted]
Specialist Veterinary Anatomic Pathologist
[redacted]

Validated by [redacted]

Outlook

PATH RESULTS: DOLPHIN, (Ma) {DOLPHIN} [redacted]

From [redacted]
Date Tue 23/12/2025 11:00 AM
To [redacted]

[redacted]

[redacted]

Tested on 12/12/25
Reported on 23/12/25 11:30
Referred on 12/12/25 **by:** [redacted]

Owner:
DOLPHIN
BRIGHTHON BEACH

Animal/s: DOLPHIN
Marine Mammal

DOB: N/A

Collected: 12/12/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

REFERRED TEST

Disease/Test : Mycobacterium avium complex Taqman
Specimen Type: Lung & Brain Tissue

RESULT : Negative for both samples.

Comment : NATA/RCPA accreditation does not cover the performance of this service

This test was performed by: Australian Centre for Disease Preparedness (CSIRO)
NATA accreditation number: 13546

REFERRED TEST

Disease/Test : Brucella sp. PCR

Specimen Type: Lung & Brain Tissue

RESULT : Negative for both samples.

Comment : NATA/RCPA accreditation does not cover the performance of this service

This test was performed by: Australian Centre for Disease Preparedness (CSIRO)
NATA accreditation number: 13546

REFERRED TEST

Disease/Test : Mycobacterium tuberculosis complex IS6110 - TaqMan Assay
Specimen Type: Lung & Brain Tissue

RESULT : Negative for both samples.

Comment : NATA/RCPA accreditation does not cover the performance of this service

This test was performed by: Australian Centre for Disease Preparedness (CSIRO)
NATA accreditation number: 13546

[redacted]

[redacted]

Tested on 12/12/25
Reported on 23/12/25 11:30
Referred on 12/12/25 **by:**
[redacted]

Owner:
DOLPHIN
BRIGHTHON BEACH

Animal/s: DOLPHIN
Marine Mammal

DOB: N/A

Collected: 12/12/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

REFERRED TEST

Disease/Test : Pan-Mycobacterium Taqman
Specimen Type: Lung & Brain Tissue

RESULT : Negative for both samples.

Comment : NATA/RCPA accreditation does not cover the performance of this service

This test was performed by: Australian Centre for Disease Preparedness (CSIRO)
NATA accreditation number: 13546

Tasmanian Government

ANALYTICAL SERVICES TASMANIA

18 St Johns Avenue New Town 7008 TAS
03 6165 3300
enquiries@ast.tas.gov.au
www.analyticalservices.tas.gov.au

Submission Number: [redacted]
Report Number:
Issue Date: 16/04/2026
Status: Final

CERTIFICATE OF ANALYSIS

Customer: [redacted]
Address:
Contact:

Submission Description: [redacted] Dolphin
Sample Received Date: 11/03/2026
Contract Number:
Client Order Number: [redacted]

Sample(s) analysed as received. Sampling date and time data supplied by the client. The document shall not be reproduced except in full.
Additional information relating to this submission can be found in the sample receipt notification.
This report supersedes any previous reports with this submission number.
Many tests specify a holding time which gives the recommended timeframe by which a sample should be preserved/extracted and/or analysed after the sample is taken.
Holding time information can be found on the AST website https://analyticalservices.tas.gov.au/our-services/containers-samples-and-submissions .
Whilst every effort is made to analyse samples within these timeframes, situations can occur where this is not possible.
Where a test has been conducted outside the recommended sample holding time this should be taken into account when interpreting results.

The results in this report were authorised by:

Name	*Position*	*Name*	*Position*
[redacted]	**Analytical Chemist**	[redacted]	**Section Head - Organic Chemistry**

Test Information:

Method ID	*Test Description*	*Date Commenced:*
3411	Lipophilic Toxins in Shellfish by LC-MS/MS	16-04-2026
3411A	Brevetoxins in Shellfish by LC-MS/MS	10-04-2026
3416	PST in Biota by LC-MS/MS (Boundy Method)	15-04-2026

Chemistry Test Results (Biota - Food)

		Sample Description	BRAIN	LUNG	LIVER	HEART	KIDNEY
		Sampled Date/ Time	12/12/25 0:00	12/12/25 0:00	12/12/25 0:00	12/12/25 0:00	12/12/25 0:00
Method ID	Analyte	Units	439990	439991	439992	439993	439994
	AZA1	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01
	AZA2	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01
	AZA3	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01
	Domoic Acid	mg/kg WMB	<0.05	<0.05	<0.05	<0.05	<0.05
	DTX1 Free	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01
	DTX1 Total	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01
	DTX2 Free	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01
	DTX2 Total	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01
3411	GYM	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01
	Homo-YTX	mg/kg WMB	<0.02	<0.02	<0.02	<0.02	<0.02
	OA Free	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01
	OA Total	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01
	PnTx-G	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01
	PTX2	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01
	SPX1	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01
	Total DST	OA eq. mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01
	YTX	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01
	Brevetoxin 1	mg/kg WMB	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*
3411A	Brevetoxin 2	mg/kg WMB	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	Brevetoxin 3	mg/kg WMB	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	C1	STX.2HCl eq. mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01
	C2	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02
	C3	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02
	C4	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02
3416	dcGTX1	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	dcGTX2	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02
	dcGTX3	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02
	dcGTX4	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*

* NATA accreditation does not cover this result

Chemistry Test Results (Biota - Food)

		Sample Description	BRAIN	LUNG	LIVER	HEART	KIDNEY
		Sampled Date/ Time	12/12/25 0:00	12/12/25 0:00	12/12/25 0:00	12/12/25 0:00	12/12/25 0:00
Method ID	Analyte	Units	439990	439991	439992	439993	439994
3416	dcNEO	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02
	dcSTX	STX.2HCl eq. mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01
	doSTX	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	GTX1	STX.2HCl eq. mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01
	GTX2	STX.2HCl eq. mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01
	GTX3	STX.2HCl eq. mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01
	GTX4	STX.2HCl eq. mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01
	GTX5	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02
	GTX6	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02
	NEO	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02
	STX	STX.2HCl eq. mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01
	Total PST	STX.2HCl eq. mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10

* NATA accreditation does not cover this result