

Algal bloom wildlife post-mortem report



Government
of South Australia

Department for
Environment and Water

Species – Common dolphin

Date collected – 28 September 2025

Location – West Beach, Adelaide

History relating to the animal

An adult common dolphin (*Delphinus delphis*) was found dead at West Beach, Adelaide on 28 September 2025.

Clinical examination

The animal was already dead and so could not be examined prior to death. There were significant wounds to the peduncle (part of the back between the dorsal fin and the tail) and abdomen, which appeared to be a boat strike injury.

Necropsy

The necropsy (looking at the whole body) revealed that the dolphin had sustained severe trauma (injury), with the caudal abdomen (belly/underside towards the tail) and peduncle (part of the back between the dorsal fin and the tail) almost completely separated from the rest of the body. The edges of the wounds were jagged and covered in sand. There were multiple erosions (shallow loss of tissue) and ulcerations (deeper loss of tissue) over the skin of the head and thorax (chest). There were limited organs remaining within the body cavities due to the level of trauma sustained.

Tissues were collected from the available organs for histopathology (looking at tissues under the microscope for more detailed information) and testing for brevetoxins and other algal biotoxins (a possibility due to the algal bloom).

Histopathology

Samples from available organs were examined under the microscope. There were no clinically significant changes or evidence of infectious diseases caused by bacteria, fungi, viruses or parasites.

Bacteriology

Polymerase chain reaction (PCR) testing for *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

An adult common dolphin was found dead. Laboratory examination revealed that the trauma, likely from a boat strike, caused the death of this dolphin. Besides these injuries, there was no evidence of disease. Testing for brucellosis (*Brucella* species bacteria) was negative. Brevetoxins and other algal biotoxins were also not detected.

PATH RESULTS: DOLPHIN COMMON, (Ma) [REDACTED]

From [REDACTED]

Date Tue 21/10/2025 2:30 PM

To [REDACTED]

[REDACTED]

Tested on 21/10/25
Reported on 21/10/25 15:00
Referred on 28/09/25 **by:** [REDACTED]

[REDACTED]

Owner:
DOLPHIN COMMON

Animal/s:
Marine Mammal

WEST BEACH 5024

DOB: N/A

Collected: 28/09/25 00:25

Subm.No: [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

NECROPSY REPORT

CLINICAL HISTORY

Please refer to the clinical history on the request form. A brief summary of the clinical history;
The adult common dolphin was found at West Beach, hit by a boat.

SAMPLES SUBMITTED

One dead adult common dolphin, *Delphinus delphis*

NECROPSY FINDINGS

There are moderate post mortem and freeze artefacts.

The caudal abdomen and peduncle are almost completely separated, their edges are jagged and there is abundant sand over the jagged edges and through the abdomen. There are multiple ulcerations and erosions of the skin over the head and thorax.

There is no feed in the stomach

GROSS SUMMARY

Trauma ; Almost complete separation of the peduncle for the caudal abdomen

SAMPLES COLLECTED & TESTING

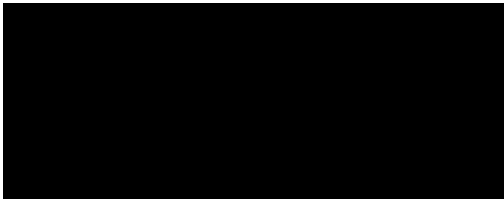
There are limited organs found in the body.

Formalin fixed tissues (liver, heart, lung, brain) will be processed for histopathology.

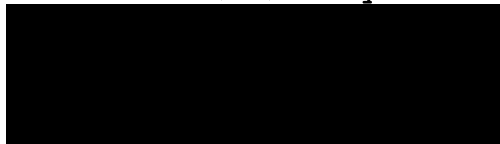
Fresh liver, heart, lung and brain in 5ml duplicate tubes; liver, heart, lung brain in 70ml containers (approximately 10-20g ; for biotoxin and brevetoxin testing if required); and an oropharyngeal swab in virus transport medium (if AI testing is required) are stored.

COMMENTS

The gross findings are consistent with boat strike as you described in the history. Although there will be some freeze artifact in the tissues, brain, liver, heart and lung will be processed for histopathology to assess for intercurrent disease processes, unrelated to the boat strike. The brain may take some time to fix. For this reason, histology may not be reported for up to 2 weeks.



Tested on 21/10/25
Reported on 21/10/25 15:00
Referred on 28/09/25 by:

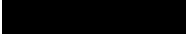


Owner:
DOLPHIN COMMON

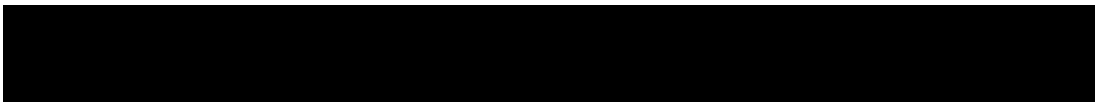
WEST BEACH 5024

Animal/s:
Marine Mammal

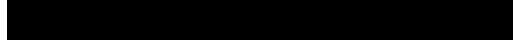
DOB: N/A

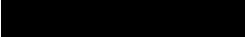
Collected: 28/09/25 00:25 **Subm.No:**  **Lab No.:** 

Samples tested as received



Specialist Veterinary Anatomic Pathologist



Validated by 

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PATH RESULTS: DOLPHIN COMMON, (Ma) [REDACTED]

From [REDACTED]

Date Mon 27/10/2025 3:00 PM

To [REDACTED]

[REDACTED]

Tested on 21/10/25
Reported on 27/10/25 15:30
Referred on 28/09/25 **by:** [REDACTED]

[REDACTED]

Owner:
DOLPHIN COMMON

Animal/s:
Marine Mammal

WEST BEACH 5024

DOB: N/A

Collected: 28/09/25 00:25

Subm.No: [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

HISTOPATHOLOGY FROM NECROPSY

REF: [REDACTED]

CLINICAL HISTORY

Please refer to the clinical history on the request form. A brief summary of the clinical history;

The adult common dolphin was found at West Beach, hit by a boat.

One dead adult common dolphin, *Delphinus delphis*

MACROSCOPY

1A: liver and lung

1B: stomach

1C-D: heart

Brain

2A-C: multiple longitudinal sections of thalamus, hippocampus

2D: parietal cortex

2E: cerebellum

2F: occipital cortex

3A: basal ganglia

3B: frontal cortex; Ae GK

Please note only limited abdominal organs (liver and stomach) were found intact in the abdomen for histology. The small intestines were torn, covered in sand and not suitable for histology.

MICROSCOPY

Brain, sections of parietal cortex, cerebellum, occipital cortex, basal ganglia and frontal cortex were examined and there were no changes of clinical significance.

Liver, there was a significant degree of autolysis throughout the tissue. But overall there were no changes of clinical significance.

Lung, there was terminal vascular congestion, and alveolar emphysema. There were no clinically significant changes.

Stomach, there were no clinically significant changes.

Heart, there were no clinically significant changes.

[REDACTED]

Tested on 21/10/25
Reported on 27/10/25 15:30
Referred on 28/09/25 **by:** [REDACTED]

[REDACTED]

Owner:
DOLPHIN COMMON

Animal/s:
Marine Mammal

WEST BEACH 5024

DOB: N/A

Collected: 28/09/25 00:25

Subm.No: [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

DIAGNOSIS

Brain, liver, lung, stomach, heart; No changes of clinical significance.

COMMENTS

On examination of the histological tissues of this dolphin that was hit by a boat. There were no significant histological changes. More specifically there was no evidence of infectious diseases caused by bacteria, viruses, fungi, or parasites. Infectious diseases such as Morbillivirus and Brucella ceti were not evident.

[REDACTED]
Specialist Veterinary Pathologist

Validated by [REDACTED] Veterinary Pathologist.

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PATH RESULTS: DOLPHIN COMMON, (Ma) [REDACTED]

From [REDACTED]

Date Mon 22/12/2025 12:30 PM

To [REDACTED]

[REDACTED]

Tested on 22/12/25
Reported on 22/12/25 13:00
Referred on 28/09/25 **by:** [REDACTED]

[REDACTED]

Owner:
DOLPHIN COMMON

WEST BEACH 5024

Animal/s:
Marine Mammal

DOB: N/A

Collected: 28/09/25 00:25 **Subm.No:** [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

REFERRED TEST

Disease/Test : Brucella sp. PCR
Specimen Type: Brain

RESULT : Negative

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

PATH RESULTS: DOLPHIN COMMON, (Ma) [REDACTED]

From [REDACTED]

Date Wed 12/11/2025 5:30 PM

To [REDACTED]

[REDACTED]

Tested on 21/10/25
Reported on 12/11/25 18:00
Referred on 28/09/25 **by:** [REDACTED]

[REDACTED]

Owner:
DOLPHIN COMMON

Animal/s:
Marine Mammal

WEST BEACH 5024

DOB: N/A

Collected: 28/09/25 00:25

Subm.No: [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

All Tests Complete

SUMMARY DIAGNOSIS

Trauma ; Almost complete separation of the peduncle from the caudal abdomen

SUMMARY COMMENTS

Aside from the massive trauma there are no other laboratory findings. In the brain, hippocampal degeneration (commonly seen in domoic acid toxicoses) is not seen.

Pathological findings consistent with disease due to cetacean morbillivirus infection or Brucella ceti / Mycobacterium sp. infection are not evident grossly or on histopathology.

[REDACTED]

Specialist Veterinary Anatomic Pathologist
[REDACTED]

Validated by



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CERTIFICATE OF ANALYSIS

Customer:

Address:

Contact:

Submission Description:

Sample Received Date:

Contract Number:

Client Order Number:

Common Dolphin

11/03/2026

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

Section Head - Organic
Chemistry

Test Information:

Method ID

Test Description

Date Commenced:

3411	Lipophilic Toxins in Shellfish by LC-MS/MS
3411A	Brevetoxins in Shellfish by LC-MS/MS
3416	PST in Biota by LC-MS/MS (Boundy Method)

30-03-2026
27-03-2026
30-03-2026

Chemistry Test Results (Biota - Food)			HEART	LUNG	BRAIN	LIVER	FAECES
Sample Description							
Sampled Date/ Time			21/10/25 0:00	21/10/25 0:00	21/10/25 0:00	21/10/25 0:00	21/10/25 0:00
Method ID	Analyte	Units	439722	439723	439724	439725	439726
3411	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
	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
3411A	Brevetoxin 1	mg/kg WMB	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*
	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*
3416	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
	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)			HEART	LUNG	BRAIN	LIVER	FAECES
Sample Description							
Sampled Date/ Time			21/10/25 0:00	21/10/25 0:00	21/10/25 0:00	21/10/25 0:00	21/10/25 0:00
Method ID	Analyte	Units	439722	439723	439724	439725	439726
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