

Algal bloom wildlife post-mortem report



Government
of South Australia

Department for
Environment and Water

Species – Common dolphin

Date collected – 17 November 2025

Location – Tennyson Beach, Adelaide

History relating to the animal

An adult common dolphin (*Delphinus delphis*) was found dead at Tennyson Beach, Adelaide on 17 November 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 had sustained severe trauma (injury), with the peduncle (part of the back between the dorsal fin and the tail) and the tail missing. The remaining skin, muscles, and vertebrae (bones of the spine) were ragged and torn, possibly from a shark attack.

The animal was in moderate body condition, with the length of the body cranial to (in front of) the dorsal fin (fin on the middle of the back) 89 cm long, and the remaining body weighing 33 kg. There were limited organs remaining within the body cavities due to the level of trauma sustained. The stomach was empty and there was a small amount of pasty brown faeces.

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 was mild, multifocal (multiple areas), chronic (long-term), interstitial nephritis (inflammation within the kidneys) with fibrosis (scarring) in the kidney. There was moderate autolysis (decomposition) of heart, lung, spleen, liver, duodenum, stomach, adrenal gland and brain. There were no remarkable findings in these organs.

Bacteriology

Polymerase chain reaction (PCR) testing for *Brucella* species bacteria was negative.

Brevetoxins

No samples were above the limits of reporting.

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Other algal biotoxins

No samples were above the limits of reporting.

Summary

An adult common dolphin was found dead. Laboratory examination revealed that massive trauma, possibly caused by a shark attack, was the cause of death of this animal. There was no evidence of underlying disease that may have predisposed the animal to a shark attack. Mild inflammation of the kidneys was found, but it is uncertain if this was clinically significant (making the animal unwell). 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 Wed 19/11/2025 7:00 PM

To [REDACTED]

[REDACTED]

Tested on 17/11/25
Reported on 19/11/25 19:30
Referred on 17/11/25 **by:** [REDACTED]

[REDACTED]

Owner:
DOLPHIN COMMON
TENNYSON BEACH

Animal/s:
Marine Mammal

DOB: N/A

Collected: 17/11/25 00:25

Subm.No: [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

NECROPSY REPORT

CLINICAL HISTORY

This is a transcription of the clinical history from the request form
Dead common dolphin being collected by DEW from Tennyson Beach
Initial report suggests animal may have been involved in a shark attack

SAMPLES SUBMITTED

One dead subadult common dolphin, *Delphinus delphis*

NECROPSY FINDINGS

The animal is in moderate body condition. The circumference around the body cranial to the dorsal fin is 890mm. The dorsal and ventral subcutaneous fat is 20mm thick. The body weighs 33kg (with no peduncle / tail)

The peduncle and tail are absent. The remaining skin, epaxial muscle and vertebrae are ragged and torn.

There are putrefactive changes.

The stomach is empty, the intestines contain scant pasty brown faeces and the bladder, rectum and genital tract are absent due to the hole in the caudal abdomen.

GROSS SUMMARY

Loss of peduncle and tail, with massive trauma to skeletal muscles and bones (characteristic of shark attack)

SAMPLES COLLECTED & TESTING

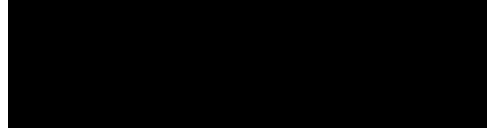
Formalin fixed liver, spleen, heart, lung, kidney, brain, alimentary tract will be processed for histopathology, in spite of the artefact changes and the gross findings consistent with trauma. The reason for histopathology is to see if there are intercurrent disease processes and to interpret any biotoxin and brevetoxin test results in light of microscopic histological findings.

Analytical Services Tasmania will be contacted for a quote for biotoxin and brevetoxin testing on liver, spleen, heart, lung, kidney, brain. There was no bladder or rectum with faeces found in the body.

Oropharyngeal swab in virus transport medium is stored if AI testing is



Tested on 17/11/25
Reported on 19/11/25 19:30
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Owner:
DOLPHIN COMMON
TENNYSON BEACH

Animal/s:
Marine Mammal

DOB: N/A

Collected: 17/11/25 00:25

Subm.No:



Lab No.:



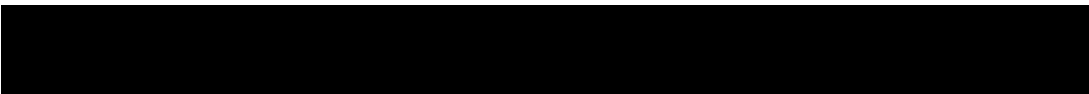
Samples tested as received
required.

Does the CVO of South Australia approve Brucella sp. and Mycobacterium sp. testing of the lung ?
This testing has been requested for samples sent to AST Hobart. Please note, Gribbles veterinary pathology recommends that samples from marine mammals are handled in a biological safety cabinet class II.

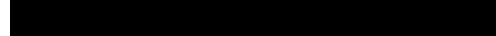
COMMENTS

Massive trauma, possibly predation from a Great white shark, was the cause of death of this animal.

A quote will be sent to you for biotoxin and brevetoxin testing.
Histopathology is pending to assess for intercurrent diseases which may have contributed to morbidity in the dolphin and increased its susceptibility to predation.



Specialist Veterinary Anatomic Pathologist



Validated by



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

From [REDACTED]

Date Wed 26/11/2025 5:30 PM

To [REDACTED]

[REDACTED]

Tested on 17/11/25
Reported on 26/11/25 18:00
Referred on 17/11/25 **by:** [REDACTED]

[REDACTED]

Owner:

DOLPHIN COMMON
TENNYSON BEACH

Animal/s:

Marine Mammal

DOB: N/A

Collected: 17/11/25 00:25 **Subm.No:** [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

All Tests Complete

HISTOPATHOLOGY

REF: [REDACTED]

CLINICAL HISTORY

Dead common dolphin being collected by DEW from Tennyson Beach. Initial report suggests animal may have been in a shark attack.

One dead subadult common dolphin, *Delphinus delphis*

MACROSCOPY

[REDACTED]

A = liver + lung
B = kidney + spleen
C = heart
D = duodenum, stomach, adrenal gland
E - F = hippocampus x2
G = thalamus
H = basal ganglia
I = cerebellum
J = frontal cortex

K = midbrain
L = cervical spinal cord
M = occipital cortex
GK + EW 20/11/25

MICROSCOPY

Kidney: There is moderate autolysis. Aside from this artifact there is mild multifocal interstitial fibrosis within the cortex. (Mild, multifocal, chronic interstitial nephritis with fibrosis)

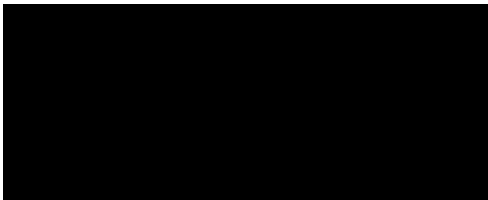
There is moderate autolysis of heart, lung, spleen, liver, duodenum, stomach, adrenal gland and brain. There are no remarkable findings in these organs.

DIAGNOSIS

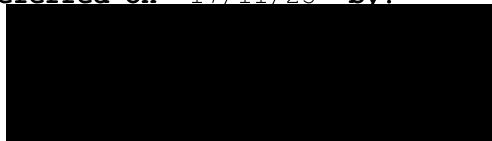
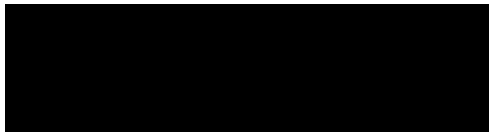
Kidney: Mild, multifocal, chronic interstitial nephritis with fibrosis

COMMENTS

The clinical significance of the mild interstitial nephritis is equivocal. There are no significant histological findings to indicate



Tested on 17/11/25
Reported on 26/11/25 18:00
Referred on 17/11/25 by:



Owner:
DOLPHIN COMMON
TENNYSON BEACH

Animal/s:
Marine Mammal

DOB: N/A

Collected: 17/11/25 00:25 **Subm.No:**



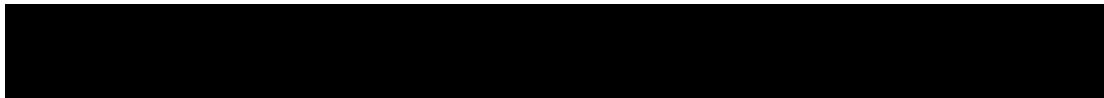
Lab No.:



Samples tested as received

All Tests Complete

underlying disease predisposed this animal to predation.



Specialist Veterinary Anatomic Pathologist



Validated by

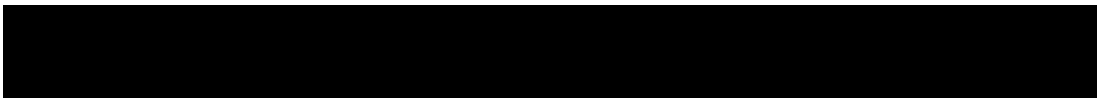


SUMMARY DIAGNOSIS

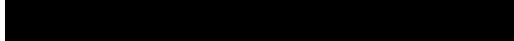
Massive trauma and loss of peduncle and tail, consistent with shark attack (predation)

SUMMARY COMMENTS

Underlying or intercurrent disease processes predisposing to predation are not evident on gross and histopathological investigation. Biotoxin and brevetoxin testing is pending.



Specialist Veterinary Anatomic Pathologist



Validated by



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 17/11/25 **by:** [REDACTED]

[REDACTED]

Owner:

DOLPHIN COMMON
TENNYSON BEACH

Animal/s:

Marine Mammal

DOB: N/A

Collected: 17/11/25 00:25

Subm.No: [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

REFERRED TEST

Disease/Test : Brucella sp. PCR

Specimen Type: Brain Tissue

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

CERTIFICATE OF ANALYSIS

Customer:
Address:
Contact:

Submission Description: Common Dolphin
Sample Received Date: 11/03/2026
Contract Number:
Client Order Number:

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	23-03-2026
3411A	Brevetoxins in Shellfish by LC-MS/MS	20-03-2026
3416	PST in Biota by LC-MS/MS (Boundy Method)	24-03-2026

Chemistry Test Results (Biota - Food)

Sample Description			LIVER	SPLEEN	HEART	BRAIN	LUNG	KIDNEY
Sampled Date/ Time			19/11/25 0:00	19/11/25 0:00	19/11/25 0:00	19/11/25 0:00	19/11/25 0:00	19/11/25 0:00
Method ID	Analyte	Units	439616	439617	439618	439619	439620	439621
3411	AZA1	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	AZA2	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	AZA3	mg/kg WMB	<0.01	<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	<0.05
	DTX1 Free	mg/kg WMB	<0.01	<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	<0.01
	DTX2 Free	mg/kg WMB	<0.01	<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	<0.01
	GYM	mg/kg WMB	<0.01	<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	<0.02
	OA Free	mg/kg WMB	<0.01	<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	<0.01
	PnTx-G	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	PTX2	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	SPX1	mg/kg WMB	<0.01	<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	<0.01
	YTX	mg/kg WMB	<0.01	<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*	<0.10*
	Brevetoxin 2	mg/kg WMB	<0.02*	<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*	<0.02*
3416	C1	STX.2HCl eq. mg/kg	<0.01	<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	<0.02
	C3	STX.2HCl eq. mg/kg	<0.02	<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	<0.02
	dcGTX1	STX.2HCl eq. mg/kg	<0.02*	<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	<0.02
	dcGTX3	STX.2HCl eq. mg/kg	<0.02	<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*	<0.02*

* NATA accreditation does not cover this result

Chemistry Test Results (Biota - Food)		Sample Description	LIVER	SPLEEN	HEART	BRAIN	LUNG	KIDNEY
		Sampled Date/ Time	19/11/25 0:00	19/11/25 0:00	19/11/25 0:00	19/11/25 0:00	19/11/25 0:00	19/11/25 0:00
Method ID	Analyte	Units	439616	439617	439618	439619	439620	439621
3416	dcNEO	STX.2HCl eq. mg/kg	<0.02	<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	<0.01
	doSTX	STX.2HCl eq. mg/kg	<0.01*	<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	<0.01
	GTX2	STX.2HCl eq. mg/kg	<0.01	<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	<0.01
	GTX4	STX.2HCl eq. mg/kg	<0.01	<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	<0.02
	GTX6	STX.2HCl eq. mg/kg	<0.02	<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	<0.02
	STX	STX.2HCl eq. mg/kg	<0.01	<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	<0.10

* NATA accreditation does not cover this result