

# Algal bloom wildlife post-mortem report



## **Species – Bottlenose dolphin**

## **Date collected – 25 September 2025**

## **Location – Minnipa Road, Port Adelaide**

### History relating to the animal

A juvenile female bottlenose dolphin (*Tursiops aduncus*) was found dead near Minnipa Rd, Port Adelaide on 25 September 2025. The animal is suspected to be 'Rocket', that was orphaned, from the Port River Dolphin Sanctuary.

### Clinical examination

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

### Necropsy

The necropsy (looking at the whole body) revealed that the dolphin was in good body condition, weighed 68kg, and was 1.72m in length. There was mild post-mortem autolytic change (decomposing after death). The subcutaneous (under the skin) fat was 30mm on the ventral abdomen (the underside of the animal) and 25mm under the dorsal fin (fin in the middle of the back).

There were severe lacerations (cuts) on the left side of the peduncle (part of the back between the dorsal fin and the tail), through the skin down to the skeletal muscle (the muscle type that is attached to bones and enables voluntary movements, like swimming), with moderate haemorrhage (bleeding). There were transverse fractures (from the left to right) through the caudal vertebrae (bones of the spine toward the tail). There were multiple semicircular fine lacerations over the intact skin over the peduncle. There was a full thickness (through all skin layers) horizontal laceration through the top of the dorsal fin (approximately 50mm from the top).

The stomach contained fine fish bones. In the right lung there was a small (20 x 30 mm) red area extending from the pleural surface (outside) into the underlying lung tissue. There was scant brown food material in the intestines.

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

# Algal bloom wildlife post-mortem report



## Histopathology

Samples from every major body system were examined under the microscope. There was mild autolysis (decomposition) of the intestinal tissues (gut), with no significant findings in any of the other collected tissues.

## Bacteriology

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

## Brevetoxins

Brevetoxin 2 was found in the stomach contents (0.02mg/kg).

## Other algal biotoxins

Domoic acid was found in the liver (0.12mg/kg).

## Summary

A juvenile female bottlenose dolphin (*Tursiops aduncus*), believed to be “Rocket” of the Port River Dolphin Sanctuary, was found dead. Laboratory examination revealed that trauma (injury), likely from a boat strike, was the cause of death. There was no other evidence of disease found. Changes seen in the lung on necropsy were likely agonal vascular changes (occurring at the time of death), as no abnormalities were found on histopathology.

Testing for brucellosis (*Brucella* species bacteria) was negative. Brevetoxin 2 was found in the stomach contents and domoic acid (another algal biotoxin) was found in the liver. As these are neurotoxins (nerve toxins), it is possible that they contributed to abnormal behaviour in this animal, leading to the injury (suspected boat strike) that caused death. However, given the animal was not observed prior to death, this is purely speculative.

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

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**From** [REDACTED]

**Date** Sat 27/09/2025 6:00 PM

**To** [REDACTED]

[REDACTED]

**Tested on** 26/09/25  
**Reported on** 27/09/25 18:30  
**Referred on** 25/09/25 **by:**

[REDACTED]

[REDACTED]

**Owner:**  
DOLPHIN  
MINNIPA RD  
PORT ADELAIDE 5015

**Animal/s:**  
Marine Mammal  
  
**DOB:** N/A

**Collected:** 25/09/25 18:30 **Subm.No:** [REDACTED] **Lab No.:** [REDACTED]

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**Samples tested as received**

NECROPSY REPORT  
The clinical history is added 27/9/2025

CLINICAL HISTORY  
Please refer to the clinical history on the request form and the clinical notes sent with the request form. A brief summary of the clinical history;  
The juvenile bottle nosed dolphin was found dead at Minnipa Rd Port Adelaide. The animal had significant wounds on it peduncle, which were assumed to be due to a boat strike.

SAMPLES SUBMITTED  
One dead female juvenile bottlenose dolphin, Tursiops aduncus

NECROPSY FINDINGS  
There are mild post mortem autolytic changes.

The animal is in good body condition, the subcutaneous fat over the ventral midline is 30mm and the over dorsal midline is 25mm. The animal weighs 68 kg and is 1.72 m long. The circumference around the chest cranial to the dorsal fin is 1.12m. The dorsal fin is 150mm high.

There are severe lacerations through the peduncle on the left side extending from the skin through the subcutaneous tissue skeletal muscle. The lacerations form a jagged, irregular line from the dorsal aspect of the peduncle to ventral aspect. There are transverse fractures, full-thickness, through the caudal vertebrae of the peduncle. There is moderate haemorrhage around these fractures and the lacerated overlying skeletal muscle. There are multiple semicircular fine lacerations over the intact skin over the peduncle. There is a full thickness horizontal laceration through the top of the dorsal fin (approximately 50mm from the top).

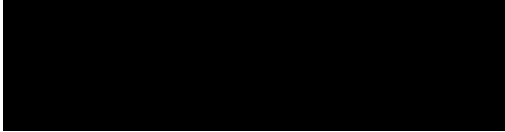
The stomach contains fine fish bones. In the right lung there is a small (20 x 30 mm area) red area extending from the pleural surface into the underlying pulmonary parenchyma.

There is scant brown ingesta in the intestines.

GROSS SUMMARY



**Tested on** 26/09/25  
**Reported on** 27/09/25 18:30  
**Referred on** 25/09/25 **by:**



**Owner:**  
DOLPHIN  
MINNIPA RD  
PORT ADELAIDE 5015

**Animal/s:**  
Marine Mammal  
  
**DOB:** N/A

**Collected:** 25/09/25 18:30 **Subm.No:** [REDACTED] **Lab No.:** [REDACTED]

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**Samples tested as received**

Severe cutaneous and muscular lacerations of the left side of the peduncle and transverse fractures of caudal vertebrae  
Lacerations to the dorsal fin

**SAMPLES COLLECTED & TESTING**

Formalin fixed tissues are processed for histopathology as requested.

Analytical Services Tasmania will be contacted for a quote to test biotoxins and brevetoxins on liver, spleen, heart, lung, kidney, brain, stomach content. We will forward this quote to you for review and approval.

The samples requested by [REDACTED] including 2 - 3 skin samples for genomics, dry swabs from, Oral cavity, Blowhole, Anus, Genital slit, Skin lesions x 3, Normal skin, Stomach, Intestine, Liver, Lung, Kidney, Brain, Heart are stored at -80 degrees Celsius and can be collected from the laboratory.

Fresh liver, lung, kidney, brain, heart, spleen are stored in 5ml and 220ml containers at -80 degrees Celsius, if additional tests are required.

**COMMENTS**

Trauma, likely boat strike, caused the death of the dolphin. The findings are similar to those described by Kirkwood et al (2022). Grossly there are no other intercurrent disease processes evident, which would have caused severe morbidity. The minor changes in the lung will be interpreted cautiously. They may be due to mild bronchopneumonia, acute haemorrhage or agonal vascular change. Histopathology will clarify the diagnosis.

[REDACTED]  
Specialist Veterinary Anatomic Pathologist  
[REDACTED]

Validated by [REDACTED]

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

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**From** [REDACTED]

**Date** Wed 01/10/2025 4:30 PM

**To** [REDACTED]

[REDACTED]

**Tested on** 26/09/25  
**Reported on** 01/10/25 17:00  
**Referred on** 25/09/25 **by:**

[REDACTED]

[REDACTED]

**Owner:**  
DOLPHIN  
MINNIPA RD  
PORT ADELAIDE 5015

**Animal/s:**  
Marine Mammal  
  
**DOB:** N/A

**Collected:** 25/09/25 18:30 **Subm.No:** [REDACTED] **Lab No.:** [REDACTED]

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**Samples tested as received**

HISTOPATHOLOGY FROM NECROPSY

REF: [REDACTED]

CLINICAL HISTORY

The juvenile bottle nosed dolphin was found dead at Minnipa Rd Port Adelaide. The animal had significant wounds on it peduncle, which were assumed to be due to a boat strike.

MACROSCOPY

Brain (right hemisphere; the left hemisphere is submitted for biotoxin testing)

- A: basal ganglia
- B: frontal cortex
- C: parietal cortex
- D: cerebellum
- E: medulla
- F: midbrain
- G-H: thalamus
- I: parietal cortex
- J: occipital cortex
- K: spleen, liver, heart

L: lung, adrenal gland  
M: kidney  
N: jejunum, duodenum, colon  
O: stomach; Ae GK

#### MICROSCOPY

There is mild autolysis of the alimentary sections. Otherwise the tissues are unremarkable.

All other tissues appear normal.

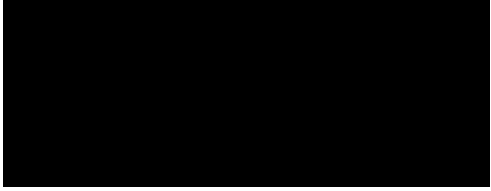
#### DIAGNOSIS

Severe cutaneous and muscular lacerations of the left side of the peduncle and transverse fractures of caudal vertebrae  
Lacerations to the dorsal fin

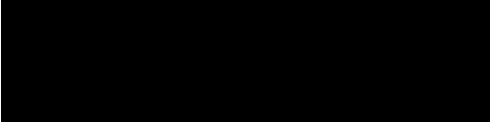
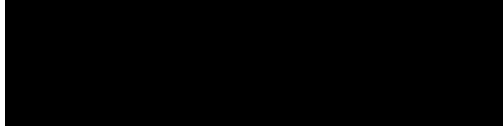
#### COMMENTS

There are no histological findings to indicate intercurrent disease processes. Trauma , likely boat strike caused the animal's death.





**Tested on** 26/09/25  
**Reported on** 01/10/25 17:00  
**Referred on** 25/09/25 **by:**



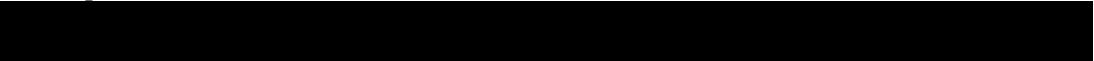
**Owner:**  
DOLPHIN  
MINNIPA RD  
PORT ADELAIDE 5015


**Animal/s:**  
Marine Mammal  
  
**DOB:** N/A

**Collected:** 25/09/25 18:30 **Subm.No:**  **Lab No.:** 

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**Samples tested as received**



Specialist Veterinary Anatomic Pathologist  


Validated by 

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

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**From** [REDACTED]

**Date** Wed 29/10/2025 12:30 PM

**To** [REDACTED]

[REDACTED]

**Tested on** 26/09/25  
**Reported on** 29/10/25 13:00  
**Referred on** 25/09/25 **by:**

[REDACTED]

[REDACTED]

**Owner:**  
DOLPHIN  
MINNIPA RD  
PORT ADELAIDE 5015

**Animal/s:**  
Marine Mammal  
  
**DOB:** N/A

**Collected:** 25/09/25 18:30 **Subm.No:** [REDACTED] **Lab No.:** [REDACTED]

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**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

Validated by [REDACTED] Laboratory Scientist.

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

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**From** [REDACTED]

**Date** Tue 18/11/2025 2:00 PM

**To** [REDACTED]

[REDACTED]

**Tested on** 26/09/25  
**Reported on** 18/11/25 14:30  
**Referred on** 25/09/25 **by:**

[REDACTED]

[REDACTED]

**Owner:**  
DOLPHIN  
MINNIPA RD  
PORT ADELAIDE 5015

**Animal/s:**  
Marine Mammal  
  
**DOB:** N/A

**Collected:** 25/09/25 18:30 **Subm.No:** [REDACTED] **Lab No.:** [REDACTED]

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**Samples tested as received**

**REFERRED TEST**

**Disease/Test :** Brucella species Isolation  
**Specimen Type:** Brain

**RESULT :** Brucella spp. was not isolated

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

Validated by [REDACTED] Laboratory Scientist.

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## CERTIFICATE OF ANALYSIS

Customer: [REDACTED]  
 Address: [REDACTED]

Submission Description: Dolphin samples  
 Sample Received Date: 30/10/2025  
 Contract Number: [REDACTED]  
 Client Order Number: [REDACTED]  
 Program/Quote Reference: [REDACTED] Dolphin samples

*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
[REDACTED]	Chemist

**Test Information:**

Method ID	Test Description	Date Commenced:
3411	Lipophilic Toxins in Shellfish by LC-MS/MS	13-11-2025
3411A	Brevetoxins in Shellfish by LC-MS/MS	13-11-2025
3416	PST in Biota by LC-MS/MS (Boundy Method)	13-11-2025

Chemistry Test Results (Biota - Food)		Sample Description	Liver	Kidney	Spleen	Heart	Lung	Brain	Stomach contents	Intestinal Content
Method ID	Analyte	Units	26/09/25 0:00	26/09/25 0:00	26/09/25 0:00	26/09/25 0:00	26/09/25 0:00	26/09/25 0:00	26/09/25 0:00	26/09/25 0:00
3411	AZA1	mg/kg WMB	<0.01*	<0.01*	<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*	<0.01*	<0.01*
	AZA3	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	Domoic Acid	mg/kg WMB	0.12*	<0.05*	<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*	<0.01*	<0.01*
	DTX1 Total	mg/kg WMB	<0.01*	<0.01*	<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*	<0.01*	<0.01*
	DTX2 Total	mg/kg WMB	<0.01*	<0.01*	<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*	<0.01*	<0.01*
	Homo-YTX	mg/kg WMB	<0.02*	<0.02*	<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*	<0.01*	<0.01*
	OA Total	mg/kg WMB	<0.01*	<0.01*	<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*	<0.01*	<0.01*
	PTX2	mg/kg WMB	<0.01*	<0.01*	<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*	<0.01*	<0.01*
	Total DST	OA eq. mg/kg	<0.01*	<0.01*	<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*	<0.01*	<0.01*
	3411A	Brevetoxin 2	mg/kg WMB	<0.02*	<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*	<0.02*	<0.02*
3416	C1	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	*IS*
	C2	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	*IS*
	C3	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	*IS*
	C4	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	*IS*
	dcGTX1	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	*IS*
	dcGTX2	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	*IS*
	dcGTX3	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	*IS*
	dcGTX4	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	*IS*
dcNEO	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	

\*IS\* - Insufficient Sample

\* NATA accreditation does not cover this result

Chemistry Test Results (Biota - Food)		Sample Description	Liver	Kidney	Spleen	Heart	Lung	Brain	Stomach contents	Intestinal Content
		Sampled Date/ Time	26/09/25 0:00	26/09/25 0:00	26/09/25 0:00	26/09/25 0:00	26/09/25 0:00	26/09/25 0:00	26/09/25 0:00	26/09/25 0:00
Method ID	Analyte	Units	367548	367549	367550	367551	367552	367553	367554	367555
3416	dcSTX	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	*IS*
	doSTX	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	*IS*
	GTX1	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	*IS*
	GTX2	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	*IS*
	GTX3	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	*IS*
	GTX4	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	*IS*
	GTX5	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	*IS*
	GTX6	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	*IS*
	NEO	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	*IS*
	STX	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	*IS*
	Total PST	STX.2HCl eq. mg/kg	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*	*IS*

\*IS\* - Insufficient Sample

\* NATA accreditation does not cover this result