

Algal bloom wildlife post-mortem report



Government
of South Australia

Department for
Environment and Water

Species – Little penguin

Date collected – 15 February 2026

Location – Petrel Cove, Encounter Bay

History relating to the animal

An adult little penguin (*Eudyptula minor*) was found dead at Petrel Cove, Encounter Bay on 15 February 2026.

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 little penguin was in poor body condition and weighed 900 g with marked atrophy (wasting) of the pectoral (chest) muscles. There was moderate post-mortem autolytic change (decomposing after death); the spleen was not seen due to the level of decomposition.

There were low numbers of ascarids (gut parasites) and scant mucoid ingesta (mucus and food material) in the ventriculus (muscular part of gut that grinds food, often containing stones). There was scant pasty brown ingesta in the intestines.

Tissues were collected 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 every major body system were examined under the microscope. There was moderate autolysis (decomposition after death) of all tissues. There was vacuolation (small fluid-filled cavities) within the white matter of the cerebellum and hippocampus of the brain, which could be due to decomposition.

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 little penguin was found dead. Laboratory examination revealed the animal was very underweight, but the cause of weight loss and death could not be determined. It is suspected that poor nutrition contributed to the animal's weight loss and death, possibly due to reduced food availability in the environment, although this could not be confirmed. Brevetoxins and other algal biotoxins were not detected.

PATH RESULTS: LITTLE PENGUIN, (Ma) [REDACTED]

From [REDACTED]

Date Tue 17/02/2026 4:00 PM

To [REDACTED]

[REDACTED]

Tested on 17/02/26
Reported on 17/02/26 16:30
Referred on 16/02/26 **by:** [REDACTED]

[REDACTED]

Owner:

LITTLE PENGUIN
PETREL COVE
ENCOUNTER BAY 5211

Animal/s:

Marine Mammal

DOB: N/A

Collected: 16/02/26 00:25

Subm.No: [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

NECROPSY REPORT

CLINICAL HISTORY

The little penguin was found dead yesterday (15/2/2026) afternoon at Petrel Cove, Encounter Bay

SAMPLES SUBMITTED

One dead adult little penguin; Eudyptula minor

NECROPSY FINDINGS

The bird weighs 900 g, is in poor body condition and there is marked atrophy of the pectoral muscles. There are moderate post-mortem autolytic changes. There are low numbers of ascarids in the ventriculus.

There is scant mucoid ingesta in the ventriculus. In the intestines there is scant pasty brown ingesta.

GROSS SUMMARY

Chronic weight loss

SAMPLES COLLECTED & TESTING

Formalin fixed tissues will be process for histopathology.

A quote for biotoxin and brevetoxin testing on liver, kidney, heart, lung, brain, gizzard (ventricular) contents will be requested from Analytical Services Tasmanian. The quote will be emailed to Dr K. Hillyard for approval.

Cloacal and tracheal swabs in VTM, liver, heart, lung, kidney, brain are stored.

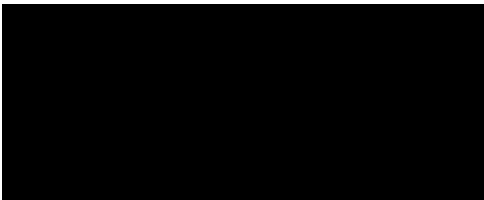
COMMENTS

There are no findings at necropsy to explain the cause of the chronic weight loss and death. Could decreased feed abundance associated with the variable *Karenia* sp. bloom be a contributing factor to decreased feed abundance ?

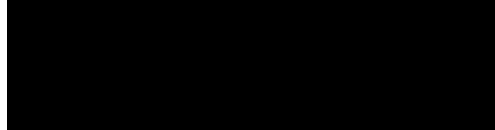
[REDACTED]

Diplomate ACVP

[REDACTED]



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Owner:
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Animal/s:
Marine Mammal

DOB: N/A

Collected: 16/02/26 00:25

Subm.No:



Lab No.:



Samples tested as received



Validated by



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PATH RESULTS: LITTLE PENGUIN, (Wi) [REDACTED]

From [REDACTED]

Date Sat 21/02/2026 6:30 PM

To [REDACTED]

[REDACTED]

Tested on 17/02/26
Reported on 21/02/26 19:00
Referred on 16/02/26 **by:** [REDACTED]

[REDACTED]

Owner:

LITTLE PENGUIN
PETREL COVE
ENCOUNTER BAY 5211

Animal/s:

Wild Birds

DOB: N/A

Collected: 16/02/26 00:25

Subm.No: [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

SUMMARY DIAGNOSIS

No diagnosis is concluded

SUMMARY COMMENTS

The cause of death is not found. You will be forwarded a quote for biotoxin and brevetoxin testing at Analytical Services Tasmania for your approval.

[REDACTED]

Specialist Veterinary Anatomic Pathologist

[REDACTED]

Validated by [REDACTED]

[REDACTED]

Tested on 17/02/26
Reported on 21/02/26 19:00
Referred on 16/02/26 **by:** [REDACTED]

[REDACTED]

Owner:
LITTLE PENGUIN
PETREL COVE
ENCOUNTER BAY 5211

Animal/s:
Wild Birds

DOB: N/A

Collected: 16/02/26 00:25

Subm.No: [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

HISTOPATHOLOGY FROM NECROPSY

REF: [REDACTED]

CLINICAL HISTORY

The little penguin was found dead yesterday (15/2/2026) afternoon at Petrel Cove, Encounter Bay

One dead adult little penguin; Eudyptula minor

MACROSCOPY

Cassettes contain the following tissues;

A:, Heart, lung, kidney, liver, testis

B: gizzard, pancreas, duodenum, jejunum, trachea, air sacs

C: ileum, caecae

D-E brain

Please note, due to the autolytic changes the spleen is not seen at necropsy; Ae GK

MICROSCOPY

There is moderate autolysis of all tissues.

Brain: Within the white matter of the cerebellum and hippocampus there is vacuolation.

DIAGNOSIS

Please refer to comments

COMMENTS

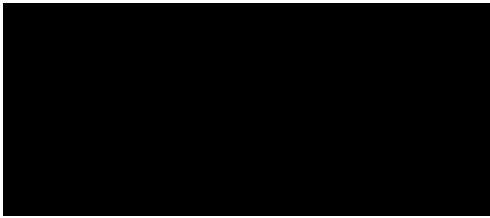
The white matter vacuolation in the brain will be interpreted cautiously because it may be a post-mortem autolytic change.

There are no remarkable gross or histopathological findings to explain the cause of death.

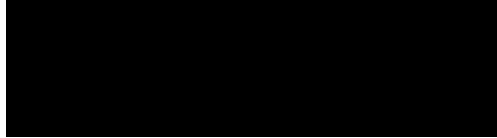
[REDACTED]

Specialist Veterinary Anatomic Pathologist

[REDACTED]



Tested on 17/02/26
Reported on 21/02/26 19:00
Referred on 16/02/26 by:



Owner:
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Animal/s:
Wild Birds

DOB: N/A

Collected: 16/02/26 00:25

Subm.No:



Lab No.:



Samples tested as received

Validated by



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CERTIFICATE OF ANALYSIS

Customer: [REDACTED]
Address: [REDACTED]
Contact: [REDACTED]

Submission Description: [REDACTED] Avian Sample
Sample Received Date: 11/03/2026
Contract Number: [REDACTED]
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
[REDACTED]	Section Head - Organic Chemistry

Test Information:

Method ID	Test Description	Date Commenced:
3411	Lipophilic Toxins in Shellfish by LC-MS/MS	07-05-2026
3411A	Brevetoxins in Shellfish by LC-MS/MS	01-05-2026
3416	PST in Biota by LC-MS/MS (Boundy Method)	07-05-2026

Chemistry Test Results (Biota - Food)			BRAIN	LIVER	HEART	KIDNEY	LUNG	GIZZARD CONTENT
Sample Description			17/02/26 0:00	17/02/26 0:00	17/02/26 0:00	17/02/26 0:00	17/02/26 0:00	17/02/26 0:00
Sampled Date/ Time			17/02/26 0:00	17/02/26 0:00	17/02/26 0:00	17/02/26 0:00	17/02/26 0:00	17/02/26 0:00
Method ID	Analyte	Units	440264	440265	440266	440267	440268	440269
3411	AZA1	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	AZA2	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	AZA3	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	Domoic Acid	mg/kg WMB	<0.05	<0.05	<0.05	<0.05	*IS*	*IS*
	DTX1 Free	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	DTX1 Total	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	DTX2 Free	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	DTX2 Total	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	GYM	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	Homo-YTX	mg/kg WMB	<0.02	<0.02	<0.02	<0.02	*IS*	*IS*
	OA Free	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	OA Total	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	PnTx-G	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	PTX2	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	SPX1	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	Total DST	OA eq. mg/kg	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	YTX	mg/kg WMB	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
3411A	Brevetoxin 1	mg/kg WMB	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*	*IS*
	Brevetoxin 2	mg/kg WMB	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	*IS*
	Brevetoxin 3	mg/kg WMB	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	*IS*
3416	C1	STX.2HCl eq. mg/kg	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	C2	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	*IS*	*IS*
	C3	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	*IS*	*IS*
	C4	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	*IS*	*IS*
	dcGTX1	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	*IS*
	dcGTX2	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	*IS*	*IS*
	dcGTX3	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	*IS*	*IS*

IS- Insufficient Sample

* NATA accreditation does not cover this result

Chemistry Test Results (Biota - Food)			BRAIN	LIVER	HEART	KIDNEY	LUNG	GIZZARD CONTENT
Sample Description			17/02/26 0:00	17/02/26 0:00	17/02/26 0:00	17/02/26 0:00	17/02/26 0:00	17/02/26 0:00
Sampled Date/ Time			17/02/26 0:00	17/02/26 0:00	17/02/26 0:00	17/02/26 0:00	17/02/26 0:00	17/02/26 0:00
Method ID	Analyte	Units	440264	440265	440266	440267	440268	440269
3416	dcGTx4	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	*IS*
	dcNEO	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	*IS*	*IS*
	dcSTX	STX.2HCl eq. mg/kg	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	doSTX	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	GTx1	STX.2HCl eq. mg/kg	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	GTx2	STX.2HCl eq. mg/kg	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	GTx3	STX.2HCl eq. mg/kg	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	GTx4	STX.2HCl eq. mg/kg	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	GTx5	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	*IS*	*IS*
	GTx6	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	*IS*	*IS*
	NEO	STX.2HCl eq. mg/kg	<0.02	<0.02	<0.02	<0.02	*IS*	*IS*
	STX	STX.2HCl eq. mg/kg	<0.01	<0.01	<0.01	<0.01	*IS*	*IS*
	Total PST	STX.2HCl eq. mg/kg	<0.10	<0.10	<0.10	<0.10	*IS*	*IS*

IS- Insufficient Sample

* NATA accreditation does not cover this result