Algal bloom wildlife post-mortem report

Government of South Australia
Department for Environment and Water

Species – Long-nosed fur seal

Date collected – 4 September 2025

Location – Bluff Jetty, Victor Harbor

History relating to the animal

A juvenile female long-nosed fur seal (*Arctocephalus forsteri*) was found near Bluff Jetty, Victor Harbor on 4 September 2025.

Clinical examination

The seal was very thin and had a fishing lure and line in its mouth. The animal was humanely euthanised.

Necropsy

The necropsy (looking at the whole body) revealed that the animal was in poor body condition, weighing 7.9kg and was 80cm in length. The subcutaneous (under the skin) fat was less than 10mm thick on the ventral abdomen (the underside of the body) and over the vertebrae (the spine). There was mild atrophy (wasting) of the muscles along the spine (epaxial) and between the ribs (intercostal). There was minimal autolysis (decomposition of tissues after death).

There was a cut (40cm long and 2cm wide) over the cranial edge (toward the head) of the left pectoral fin (flipper), extending over the upper and lower surfaces of the flipper.

The lungs were both mottled red, and the tissue was slightly depressed (sunken). The stomach contained no food, but several ascarids (roundworms). There was scant food material within the small intestines, and minimal faeces in the rectum.

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

Histopathology

Samples from every major body system were examined under the microscope. Examination of the lung revealed mild, acute (recent) pulmonary haemorrhage (bleeding in the lungs), hyperaemia (increased blood) and pulmonary congestion (lung tissues full of fluid, usually from circulation problems). Pulmonary lungworm (*Parafilaroides sp*) were identified.

There was a moderate, focal (defined area), chronic (long-term), necrotising (causing tissue death), pyogranulomatous (inflammation with pus and nodules) dermatitis (inflammation of the skin) with intralesional (within the abnormal tissue) coccoid (spherical shaped) bacteria on the

Algal bloom wildlife post-mortem report

left flipper. There was moderate autolysis (decomposing after death) of the gastrointestinal (gut) sections. There were no other significant findings within the other collected tissues.

Bacteriology

Culture of the lung revealed a moderate growth of *Streptococcus phocae* and a light growth of multiple other organisms (unidentified). No fungi, yeast or *Mycobacterium* species bacteria were seen when the lung tissue was examined using special stains. Polymerase chain reaction (PCR) testing for *MTb* complex organisms was negative.

Virology

Testing results for avian influenza were negative.

Brevetoxins

No samples were above the limits of reporting.

Other algal biotoxins

No samples were above the limits of reporting.

Summary

A very thin young female long-nosed fur seal (*Arctocephalus forsteri*) was euthanised after being found with a fishing lure and line in its mouth. Laboratory examination revealed the seal had a mild lungworm burden, with a concurrent (occurring at the same time) mild bacterial infection of the lungs and upper airways. There was a long-term injury and bacterial infection in the skin of the left flipper. This injury may have decreased this animal's ability to seek food and led to its weight loss.

Testing for avian influenza and tuberculosis (*Mycobacterium tuberculosis* complex organisms) was negative. Brevetoxins and other algal biotoxins were also not detected.

Outlook

PATH RESULTS: FUR SEAL LONG NOSED, (Ma) [redacted]

From [redacted]
Date Fri 05/09/2025 2:30 PM
To [redacted]

[redacted]

[redacted]

Tested on 05/09/25
Reported on 05/09/25 15:00
Referred on 04/09/25 **by:** [redacted]

Owner:
FUR SEAL LONG NOSED
BLUFF JETTY
VICTOR HARBOR 5211

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 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 long nosed fur seal was severely emaciated. The animal was found on the rocks near the Bluff jetty at Victor Harbor. Fishing lure and line were found in the mouth. The animal was euthanized [redacted] by NPWS on 4/9/2025

SAMPLES SUBMITTED
One dead juvenile female long nosed fur seal, Arctocephalus forsteri

NECROPSY FINDINGS
The animal is in poor body condition and weighs 7.9 kg and the animal was approximately 80 cm long. The subcutaneous fat over the ventral abdomen is < 10 mm deep and the subcutaneous fat over the vertebrae is 10 mm deep. There is mild atrophy of epaxial muscle and intercostal muscles.There are minimal post mortem autolytic changes.

There is a 5mm hole in the skin over the head. The underlying cranium is extensively fractured, the brain is macerated and there is extensive haemorrhage (consistent with euthanasia [redacted]).

There is a laceration approximately 400mm long and 20mm wide over the cranial edge of the left pectoral fin / flipper, extending over the upper and lower surfaces of the flipper.

Multifocally the lungs are bilaterally mottled red and the parenchyma slightly depressed.

There is no ingesta in the stomach. There are low numbers of ascarids, 20-40 mm long in the stomach. There is scant ingesta in the intestines and scant faeces in the rectum.

GROSS SUMMARY
Probable bronchopneumonia
Cutaneous laceration of the left pectoral fin / flippper

SAMPLES COLLECTED & TESTING
Formalin fixed tissues will be processed for histopathology as you requested.

[redacted]

[redacted]

Tested on 05/09/25
Reported on 05/09/25 15:00
Referred on 04/09/25 **by:** [redacted]

Owner:
FUR SEAL LONG NOSED
BLUFF JETTY
VICTOR HARBOR 5211

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

Fresh liver, kidney, spleen, heart, lung, brain, (in 5ml, 70ml and 200ml containers), an oropharyngeal swabs in virus transport medium and a swab from subcutaneous abscess in Ames transport medium are stored.

A swab of the skin lesions in Ames transport medium is stored.

COMMENTS
The laceration of the flipper and the fish line and lure (these were removed prior to the animal being submitted to the laboratory), contributed to the animal's poor body condition.

Histopathology is in progress.
In light of the probable bronchopneumonia, the following tests are recommended

a) Avian influenza testing on liver, lung, spleen, heart, kidney, brain and oropharyngeal swab at [redacted] and ACDP
b) microbiological culture of lung at [redacted] for endemic pathogens
c) Mycobacterium tuberculosis complex testing of lung and liver at ACDP

Does the Chief Veterinary Officer approve Avian influenza testing at [redacted] and ACDP and Mycobacterium testing at ACDP ?

Please contact the laboratory if culture of endemic pathogens at [redacted] is required; additional charges will apply

Microbiological culture of the swab of the flipper laceration will unlikely provide useful diagnostic information.

[redacted]

Specialist Veterinary Anatomic Pathologist

[redacted]

Validated by [redacted]

[redacted]

Tested on 05/09/25
Reported on 05/09/25 15:00
Referred on 04/09/25 **by:**

[redacted]

[redacted]

Owner:
FUR SEAL LONG NOSED
BLUFF JETTY
VICTOR HARBOR 5211

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

CASE MANAGEMENT DETAILS

Case Managed by:
Case Management Requested by: [redacted]
Case Management Requested on: 05/09/25

Case Details: The juvenile long nosed fur seal was found with a fishing line injury at Victor Harbour

Outlook

PATH RESULTS: FUR SEAL LONG NOSED, (Ma) [redacted]

From [redacted]
Date Wed 17/09/2025 12:00 PM
To [redacted]

[redacted]

[redacted]

Tested on 05/09/25
Reported on 17/09/25 12:30
Referred on 04/09/25 **by:** [redacted]

Owner:
FUR SEAL LONG NOSED
BLUFF JETTY
VICTOR HARBOR 5211

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

HISTOPATHOLOGY FROM NECROPSY

REF: [redacted]
ADDITIONAL FINDINGS 17/9/2025
CLINICAL HISTORY
Please refer to the clinical history on the request form. A brief summary of the clinical history;
The long nosed fur seal was severely emaciated. The animal was found on the rocks near the Bluff jetty at Victor Harbor. Fishing lure and line were found in the mouth. The animal was euthanized [redacted] by NPWS on 4/9/2025

One dead juvenile female long nosed fur seal, Arctocephalus forsteri

MACROSCOPY
Brain
A: medulla
No cassette B
C: thalamus and parietal cortex
D: basal ganglia

E: frontal cortex
F: kidney, heart, adrenal gland, spleen
G: liver, kidney, pancreas
H: lung
I: stomach, duodenum, jejunum, ileum, caecum, colon
J: left flipper ulcer; Ae GK

MICROSCOPY
Lung: Diffusely there is hyperaemia / congestion expanding the alveolar interstitium and multifocal haemorrhage within alveolar spaces. Multifocally within low numbers of alveolar spaces are alveolar macrophages and neutrophils. (Mild multifocal acute pulmonary haemorrhage and pulmonary hyperaemia / congestion)
Within bronchoalveolar junctions are cross sections of filarid nematodes, 30 micron across (with smooth cuticle, pseudocoelom, platymyrian musculature, lateral cords and alimentary tract lined by monolayer of cuboidal epithelium. (Pulmonary lungworm (filardiasis), Parafilaroides sp)

Left flipper: Focally there is effacement and replacement of the epidermis by abundant viable and degenerate neutrophils, eosinophilic deposits, colonies of coccoid bacteria. The inflammation (neutrophils,

[redacted]

[redacted]

Tested on 05/09/25
Reported on 17/09/25 12:30
Referred on 04/09/25 **by:** [redacted]

Owner:
FUR SEAL LONG NOSED
BLUFF JETTY
VICTOR HARBOR 5211

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

macrophages, lymphocytes, plasma cells) extends into and effaces the dermis and is admixed with fibrosis. (Moderate, focal, chronic necrotizing pyogranulomatous dermatitis with intralesional coccoid bacteria)

There is moderate autolysis of the alimentary sections. Aside from this artifact there are no other significant findings.

Those tissues not described are unremarkable.

DIAGNOSIS
Lung: Mild multifocal acute pulmonary haemorrhage and pulmonary hyperaemia / congestion and Pulmonary lungworm (filardiasis), Parafilaroides sp

Left flipper: Moderate, focal, chronic necrotizing pyogranulomatous dermatitis with intralesional coccoid bacteria

COMMENTS
There is mild haemorrhage and congestion in the lungs. Possible causes for the mild haemorrhage include Influenza A (Avian influenza), brevetoxins or the acute haemorrhage could be an agonal process. Tissues are stored if biotoxin and brevetoxin testing are required. Influenza A (Avian influenza) testing is in progress.

The lung worm contributed to the bronchopneumonia. There is a very mild inflammatory response and special stains will be done to look for bacteria (including Mycobacterium sp.) and fungi. Mycobacterium sp. testing is in progress at Aust. Centre for Disease Preparedness.

There is chronic bacterial dermatitis over the left flipper. Could this

have been due to a laceration from a fishing line ? The seal had a fishing lure and line in its mouth.

The chronic injury to the skin on the flipper may have decreased this animal's ability to seek food and led to weight loss.

MICROSCOPY 17/9/2025
Lung: Gram positive cocci are seen within the inflammation.
Microorganisms are not seen on PAS (no fungi or yeast) and Ziehl Neelsen stains (no acid-fast bacteria such as Mycobacterium sp.)

DIAGNOSIS

[redacted]

[redacted]

Tested on 05/09/25
Reported on 17/09/25 12:30
Referred on 04/09/25 **by:** [redacted]

Owner:
FUR SEAL LONG NOSED
BLUFF JETTY
VICTOR HARBOR 5211

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

Lung: Mild multifocal acute pulmonary haemorrhage and pulmonary hyperaemia / congestion
Pulmonary lungworm (filardiasis), Parafilaroides sp
Very mild Streptococcus phocae bronchopneumonia

Left flipper: Moderate, focal, chronic necrotizing pyogranulomatous dermatitis with intralesional coccoid bacteria

COMMENTS
The long nosed fur seal had mild Parafilaroides sp. (lung worm) burden and intercurrent Streptococcal bronchopneumonia.

There are no gross or histological findings consistent with disease due to Mycobacterium sp. (such as Mycobacterium pinnipedii).

[redacted]
Specialist Veterinary Anatomic Pathologist
[redacted]

Validated by [redacted]

Outlook

PATH RESULTS: FUR SEAL LONG NOSED, (Ma) [redacted]

From [redacted]
Date Sat 13/09/2025 12:30 PM
To [redacted]

[redacted]

[redacted]

Tested on 05/09/25
Reported on 13/09/25 13:00
Referred on 04/09/25 **by:** [redacted]

Owner:
FUR SEAL LONG NOSED
BLUFF JETTY
VICTOR HARBOR 5211

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

MICROBIOLOGY

SPECIMEN: Lung
ANIMAL ID:Long-nosed fur seal

MICROSCOPY
A small number of gram negative bacilli. A small number of gram positive cocci. A small number of leucocytes.

CULTURE
1. Moderate growth of Streptococcus phocae
2. Light growth of Mixed organisms

COMMENT: Anaerobes NOT isolated.
No Salmonella or Listeria spp. isolated.

Antibiotic	Organism 1	Organism 2	Organism 3
Erythromycin	S		
Amoxycillin	S		
Oxytetracycline	S		S
Trim/Sulpha			S
Amp/Amoxycillin			S
Chloramphenicol	S		S

Legend:
S = Sensitive
I = Intermediate susceptibility
R = Resistant
Due to the antimicrobial resistance characteristics of certain bacteria some organism/antibiotic combinations are not validated by the CLSI method.

Antimicrobial disk diffusion susceptibility testing is performed according to the methods and standards of the Clinical Laboratories Standards Institute (CLSI).

Organim 3: Growth of Edwardsiella tarda from broth culture only.

[redacted]

[redacted]

Tested on 05/09/25
Reported on 13/09/25 13:00
Referred on 04/09/25 **by:** [redacted]

Owner:
FUR SEAL LONG NOSED
BLUFF JETTY
VICTOR HARBOR 5211

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

Organism 1: This organism was identified using the MALDI-TOF at [redacted]

Final Report
13/09/25

Outlook

PATH RESULTS: FUR SEAL LONG NOSED, (Ma) [redacted]

From [redacted]
Date Wed 12/11/2025 3:00 PM
To [redacted]

[redacted]

[redacted]

Tested on 05/09/25
Reported on 12/11/25 15:30
Referred on 04/09/25 **by:** [redacted]

Owner:
FUR SEAL LONG NOSED
BLUFF JETTY
VICTOR HARBOR 5211

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received All Tests Complete

REFERRED TEST

Disease/Test : Mycobacterium Isolation
Specimen Type: Lung

RESULT : Mycobacterium sp. was not isolated

Comment : NATA accreditation does not cover the performance of this service.
Cultures were incubated for 8 weeks.

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

Outlook

PATH RESULTS: FUR SEAL LONG NOSED, (Ma) [redacted]

From [redacted]
Date Wed 17/09/2025 12:30 PM
To [redacted]

[redacted]

[redacted]

Tested on 05/09/25
Reported on 17/09/25 13:00
Referred on 04/09/25 **by:** [redacted]

Owner:
FUR SEAL LONG NOSED
BLUFF JETTY
VICTOR HARBOR 5211

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

REFERRED TEST

Disease/Test : Mycobacterium avium complex Taqman
Specimen Type: Lung

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.

REFERRED TEST

Disease/Test : Pan-Mycobacterium Taqman
Specimen Type: Lung

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.

[redacted]

[redacted]

Tested on 05/09/25
Reported on 17/09/25 13:00
Referred on 04/09/25 **by:** [redacted]

Owner:
FUR SEAL LONG NOSED
BLUFF JETTY
VICTOR HARBOR 5211

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

REFERRED TEST

Disease/Test : Mycobacterium tuberculosis complex IS6110
Method : TaqMan Assay
Specimen Type: Lung

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.

Outlook

PATH RESULTS: FUR SEAL LONG NOSED, (Ma) [redacted]

From [redacted]
Date Fri 19/09/2025 4:30 PM
To [redacted]

[redacted]

[redacted]

Tested on 05/09/25
Reported on 19/09/25 17:00
Referred on 04/09/25 **by:** [redacted]

Owner:
FUR SEAL LONG NOSED
BLUFF JETTY
VICTOR HARBOR 5211

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

MOLECULAR DIAGNOSTICS

INFLUENZA A RNA PCR (REAL TIME REVERSE TRANSCRIPTASE)

Specimen type: Tissue & Oropharyngeal swab in VTM (OP SWAB)

SPECIMEN ID	Type A	H5	H7
OP SWAB	Not detected		
LIVER	Not detected		

LUNG	Not detected
SPLEEN	Not detected
HEART	Not detected
KIDNEY	Not detected
BRAIN	Not detected

COMMENT: NATA accreditation does not cover the performance of this test for non-avian species.

Validated by [redacted] Laboratory Scientist.

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: 6/02/2026
Status: Final

CERTIFICATE OF ANALYSIS

Customer: [redacted]
Address:
Contact:

Submission Description: Biotoxin and Brevotoxins long nosed fur seal
Sample Received Date: 11/12/2025
Contract Number:
Client Order Number: [redacted]
Program/Quote Reference: Biotoxin and Brevotoxins

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	05-02-2026
3411A	Brevetoxins in Shellfish by LC-MS/MS	06-02-2026
3416	PST in Biota by LC-MS/MS (Boundy Method)	05-02-2026

Chemistry Test Results (Biota - Food)

	Sample Description	Spleen	Heart	Faeces	Lung	Kidney	Brain	Liver
	Sampled Date/ Time	05/09/25 0:00	05/09/25 0:00	05/09/25 0:00	05/09/25 0:00	05/09/25 0:00	05/09/25 0:00	05/09/25 0:00
Method ID	Analyte	Units	391803	391804	391805	391806	391807	391808	391809
3411	AZA1	mg/kg WMB	<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*
	AZA3	mg/kg WMB	<0.01*	<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*	<0.05*
	DTX1 Free	mg/kg WMB	<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*
	DTX2 Free	mg/kg WMB	<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*
	GYM	mg/kg WMB	<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*
	OA Free	mg/kg WMB	<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*
	PnTx-G	mg/kg WMB	<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*
	SPX1	mg/kg WMB	<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*
	YTX	mg/kg WMB	<0.01*	<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*	<0.10*
	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*
3416	C1	STX.2HCl eq. mg/kg	<0.01*	<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*	<0.02*
	C3	STX.2HCl eq. mg/kg	<0.02*	<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*	<0.02*
	dcGTX1	STX.2HCl eq. mg/kg	<0.02*	<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*	<0.02*
	dcGTX3	STX.2HCl eq. mg/kg	<0.02*	<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*	<0.02*

* NATA accreditation does not cover this result

Chemistry Test Results (Biota - Food)

	Sample Description	Spleen	Heart	Faeces	Lung	Kidney	Brain	Liver
	Sampled Date/ Time	05/09/25 0:00	05/09/25 0:00	05/09/25 0:00	05/09/25 0:00	05/09/25 0:00	05/09/25 0:00	05/09/25 0:00
Method ID	Analyte	Units	391803	391804	391805	391806	391807	391808	391809
3416	dcNEO	STX.2HCl eq. mg/kg	<0.02*	<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*	<0.01*
	doSTX	STX.2HCl eq. mg/kg	<0.01*	<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*	<0.01*
	GTX2	STX.2HCl eq. mg/kg	<0.01*	<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*	<0.01*
	GTX4	STX.2HCl eq. mg/kg	<0.01*	<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*	<0.02*
	GTX6	STX.2HCl eq. mg/kg	<0.02*	<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*	<0.02*
	STX	STX.2HCl eq. mg/kg	<0.01*	<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*	<0.10*

* NATA accreditation does not cover this result

Outlook

PATH RESULTS: FUR SEAL LONG NOSED, (Ma) [redacted]

From [redacted]
Date Tue 21/10/2025 6:00 PM
To [redacted]

[redacted]

[redacted]

Tested on 05/09/25
Reported on 21/10/25 18:30
Referred on 04/09/25 **by:** [redacted]

Owner:
FUR SEAL LONG NOSED
BLUFF JETTY
VICTOR HARBOR 5211

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

SUMMARY DIAGNOSIS
Lung: Mild multifocal acute pulmonary haemorrhage and pulmonary hyperaemia / congestion
Pulmonary lungworm (filardiasis), Parafilaroides sp
Very mild Streptococcus phocae bronchopneumonia

Left flipper: Moderate, focal, chronic necrotizing pyogranulomatous dermatitis with intralesional coccoid bacteria

SUMMARY COMMENTS
There is mild haemorrhage and congestion in the lungs. Influenza A is encluded as a cause for this finding by PCR testing.

The long nosed fur seal had mild Parafilaroides sp. (lung worm) burden and intercurrent Streptococcal bronchopneumonia.

There is chronic bacterial dermatitis over the left flipper. Could this

have been due to a laceration from a fishing line ? The seal had a fishing lure and line in its mouth.

The chronic injury to the skin on the flipper may have decreased this animal's ability to seek food and led to weight loss.

There are no gross or histological findings consistent with disease due to Mycobacterium sp. (such as Mycobacterium pinnipedii).

[redacted]

Specialist Veterinary Anatomic Pathologist

[redacted]

Validated by [redacted]