Algal bloom wildlife post-mortem report

Government of South Australia
Department for Environment and Water

Species – Silver gull

Date collected – 24 February 2026

Location – Glenelg North beach

History relating to the animal

An adult male silver gull (*Chroicocephalus novaehollandiae*) was found dead at Glenelg North beach near the rocks. No dead fish or foam was found near the bird. This bird was found and submitted together with another silver gull (on a separate report) on 24 February 2026.

Clinical examination

The bird was found dead and so could not be examined prior to death.

Necropsy

The necropsy (looking at the whole body) revealed that the bird was in moderate body condition, weighing 200 g. There were mild post-mortem autolytic changes (decomposition after death). In the cranial (toward the head) air sacs (part of bird lung anatomy) there were three 1 mm diameter pale white foci (defined areas). There was no ingesta (food material) in the proventriculus (bird's upper gut), gizzard (muscular part of gut that grinds food, often containing stones) or intestines.

Tissues were collected for histopathology (looking at tissues under the microscope for more detailed information), and testing for avian influenza, Newcastle disease, 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 air sacs revealed a moderate, diffuse (throughout the tissue), chronic (long-term), pyogranulomatous (inflammation with pus and nodules) air sacculitis (air sac inflammation). Examination of the spleen revealed a moderate, diffuse, chronic, histiocytic (accumulation of this type of immune cells) splenitis (inflammation of the spleen) with lymphoid depletion (a reduction in B and T lymphocytes – a type of white blood cell). Air sac tissue samples were examined with special stains; no bacteria, fungi or yeast were seen.

Virology

Polymerase chain reaction (PCR) testing for avian influenza and Newcastle disease 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 male silver gull was found dead. Another silver gull was submitted with this bird and was examined and reported on separately. Laboratory examination revealed chronic (long-term) air sacculitis (inflammation of the air sacs) and splenitis (inflammation of the spleen) which contributed to the morbidity (illness) of the bird. Testing for avian influenza and Newcastle disease was negative. Brevetoxins and other algal biotoxins were also not detected.

Outlook

PATH RESULTS: SILVER GULL, (Wi) [redacted]

From [redacted]
Date Tue 24/02/2026 4:30 PM
To [redacted]

[redacted]

[redacted]

Tested on 24/02/26
Reported on 24/02/26 17:00
Referred on 24/02/26 **by:** [redacted]

Owner:
SILVER GULL
NORTH GLENELG BEACH
GLENELG 5045

Animal/s:
Wild Birds

DOB: N/A

Collected: 24/02/26 09:13 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

NECROPSY REPORT

CLINICAL HISTORY
The dead silver gull was found at North Glenelg beach close to the rocks. There were no dead fish or foam around the birds

SAMPLES SUBMITTED
2 x dead silver gulls are received in one bag. One bird is allocated to this submission number.

NECROPSY FINDINGS
The bird is in moderate body condition and weighs 200g. There are mild post mortem autolytic changes.

In the cranial air sacs there are 3 x 1mm diameter pale white foci.

There is no ingesta in the proventriculus, gizzard or intestines.

GROSS SUMMARY
Possible mycotic air sacculitis

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

Biotoxin and brevetoxin testing on liver, spleen, heart, lung, kidney, brain will be done.

Fresh brain, liver, spleen, heart, lung, kidney and cloacal and tracheal swabs in virus transport medium are stored.

COMMENTS
The fine plaques in the air sacs may be fungi and this may have contributed to morbidity and death. Histopathology will clarify the gross changes.

[redacted]
Specialist Veterinary Anatomic Pathologist
[redacted]

Validated by [redacted]

Outlook

PATH RESULTS: SILVER GULL, (Wi) {1 2} [redacted]

From [redacted]
Date Fri 27/02/2026 4:00 PM
To [redacted]

[redacted]

[redacted]

Tested on 25/02/26
Reported on 27/02/26 16:30
Referred on 24/02/26 **by:** [redacted]

Owner:
SILVER GULL
NORTH GLENELG BEACH
GLENELG NORTH 5045

Animal/s: 1 2
Wild Birds

DOB: N/A

Collected: 24/02/26 09:30 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received All Tests Complete

MOLECULAR DIAGNOSTICS

INFLUENZA A RNA PCR (REAL TIME REVERSE TRANSCRIPTASE)

Specimen type: Cloacal & Tracheal swabs

SPECIMEN ID	Type A	H5	H7
BIRD 1&2	Not detected		

Validated by [redacted] Laboratory Scientist.

[redacted]

[redacted]

Tested on 25/02/26
Reported on 27/02/26 16:30
Referred on 24/02/26 **by:** [redacted]

Owner:
SILVER GULL
NORTH GLENELG BEACH
GLENELG NORTH 5045

Animal/s: 1 2
Wild Birds

DOB: N/A

Collected: 24/02/26 09:30 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received All Tests Complete

MOLECULAR DIAGNOSTICS

NEWCASTLE DISEASE VIRUS RNA PCR (REAL TIME REVERSE TRANSCRIPTASE)

Specimen type: Cloacal & Tracheal swabs
Number of specimens: 1

SPECIMEN ID	F Gene	M Gene	L Gene
BIRD 1&2	Not detected	Not detected	Not detected

Validated by [redacted] Laboratory Scientist.

Outlook

PATH RESULTS: SILVER GULL, (Wi) {BIRD 1} [redacted]

From [redacted]
Date Fri 13/03/2026 4:00 PM
To [redacted]

[redacted]

[redacted]

Tested on 24/02/26
Reported on 13/03/26 16:30
Referred on 24/02/26 **by:** [redacted]

Owner:
SILVER GULL
NORTH GLENELG BEACH
GLENELG NORTH 5045

Animal/s: BIRD 1
Wild Birds

DOB: N/A

Collected: 24/02/26 09:30 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

HISTOPATHOLOGY FROM NECROPSY

REF: [redacted]
ADDITIONAL FINDINGS 13/3/2026
CLINICAL HISTORY
The dead silver gull was found at North Glenelg beach close to the rocks. There were no dead fish or foam around the birds.

SAMPLES SUBMITTED
2 x dead silver gulls, Larus novaehollandiae are received in one bag.
One bird is allocated to this submission number.

MACROSCOPY
Cassettes contain the following tissues:
A: liver, spleen, heart, lung, kidney, air sacs
B: gizzard, proventriculus, duodenum, jejunum, pancreas
C: brain, skeletal muscle; Ae GK

MICROSCOPY

Air sacs: Diffusely there is expansion of the air sacs by large numbers of macrophages, heterophils fewer lymphocytes plasma cells and hyperplasia of the overlying epithelium. (Moderate, diffuse, chronic, pyogranulomatous air sacculitis)

Spleen: Widespread there are increased numbers of macrophages cuffing ellipsoid vessels (5-8 cells deep). There are decreased numbers of lymphoid cells. (Moderate, diffuse, chronic, histiocytic splenitis with lymphoid depletion)

Those tissues not described appear normal.

DIAGNOSIS
Air sacs: Moderate, diffuse, chronic, pyogranulomatous air sacculitis)

Spleen: Moderate, diffuse, chronic, histiocytic splenitis with lymphoid depletion

COMMENTS
Chronic air sacculitis with splenitis contributed to morbidity for this bird. Special stains are pending to assess for microorganisms.

MICROSCOPY 13/3/2026

[redacted]

[redacted]

Tested on 24/02/26
Reported on 13/03/26 16:30
Referred on 24/02/26 **by:** [redacted]

Owner:
SILVER GULL
NORTH GLENELG BEACH
GLENELG NORTH 5045

Animal/s: BIRD 1
Wild Birds

DOB: N/A

Collected: 24/02/26 09:30 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

Air sacs: Microorganisms are not seen on Gram, or PAS (no fungal hyphae or yeast are seen).

COMMENTS
Microbiological culture of the spleen is not recommended due to the post mortem autolytic changes in the bird which will confound the culture results.

[redacted]
Specialist Veterinary Anatomic Pathologist
[redacted]

Validated by [redacted]

SUMMARY DIAGNOSIS
Air sacculitis and splenitis

SUMMARY COMMENTS
Air sacculitis and splenitis contributed to morbidity for this bird.

Testing for biotoxins and brevetoxins is in progress.

[redacted]
Specialist Veterinary Anatomic Pathologist
[redacted]

Validated by [redacted]

Tasmanian Government

ANALYTICAL SERVICES TASMANIA

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www.analyticalservices.tas.gov.au

Submission Number: [redacted]
Report Number:
Issue Date: 13/05/2026
Status: Final

CERTIFICATE OF ANALYSIS

Customer: [redacted]
Address:
Contact:

Submission Description: [redacted] Silver Gull
Sample Received Date: 11/03/2026
Contract Number:
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	11-05-2026
3411A	Brevetoxins in Shellfish by LC-MS/MS	08-05-2026
3416	PST in Biota by LC-MS/MS (Boundy Method)	12-05-2026

Chemistry Test Results (Biota - Food)

	Sample Description	HEART	LUNG	LIVER	KIDNEY	BRAIN	SPLEEN
	Sampled Date/ Time	24/02/26 0:00	24/02/26 0:00	24/02/26 0:00	24/02/26 0:00	24/02/26 0:00	24/02/26 0:00
Method ID	Analyte	Units	440362	440363	440364	440365	440366	440367
	AZA1	mg/kg WMB	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
	AZA2	mg/kg WMB	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
	AZA3	mg/kg WMB	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
	Domoic Acid	mg/kg WMB	*IS*	<0.05	<0.05	<0.05	*IS*	*IS*
	DTX1 Free	mg/kg WMB	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
	DTX1 Total	mg/kg WMB	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
	DTX2 Free	mg/kg WMB	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
	DTX2 Total	mg/kg WMB	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
3411	GYM	mg/kg WMB	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
	Homo-YTX	mg/kg WMB	*IS*	<0.02	<0.02	<0.02	*IS*	*IS*
	OA Free	mg/kg WMB	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
	OA Total	mg/kg WMB	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
	PnTx-G	mg/kg WMB	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
	PTX2	mg/kg WMB	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
	SPX1	mg/kg WMB	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
	Total DST	OA eq. mg/kg	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
	YTX	mg/kg WMB	*IS*	<0.01	<0.01	<0.01	*IS*	*IS*
	Brevetoxin 1	mg/kg WMB	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*
3411A	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*
	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*
3416	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)

Method ID	Analyte	Units	Sample Description	HEART	LUNG	LIVER	KIDNEY	BRAIN	SPLEEN
			Sampled Date/ Time	24/02/26 0:00	24/02/26 0:00	24/02/26 0:00	24/02/26 0:00	24/02/26 0:00	24/02/26 0:00
				440362	440363	440364	440365	440366	440367
	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*
3416	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