

Black-legged kittiwake *Rissa tridactyla* breeding data recorded on the River Tyne during 2023

A brief summary report for presentation at the Tyne Kittiwake Partnership meeting on 15 Dec 2023 and for later storage on the Natural History Society of Northumbria website

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Note. This version of the report (version 1) is an **interim**. A more detailed report will come later

These breeding data relate to surveys performed by the author only.

Key: AON Apparently Occupied Nests (well-built nests capable of containing eggs, with at least one adult present).

Breeding Productivity Minimum number of young fledged per Apparently Occupied Nest.

Table 1. **2023** River Tyne and Tynemouth cliffs kittiwake AON (maximum) and minimum breeding productivity summary.

Location	AON (max) (May 25 to June 17)	Chicks (July 7 to 15)	Min. prod.	No. of failed nests	% of failed nests
1. Tynemouth cliffs (natural site)	327 (24 June)	263 (24 July)	0.80	134	41.0 %
2. North Shields Ferry Landing	23 (22 June)	8	0.35	16	70.0 %
3. Smiths Dock, North Shields	5 (27 June)	0	[0.00]	5	[100 %]
4. Akzo Nobel (Int. Paints, Felling)	229	176	0.77	88	38.4 %
5. Saltmeadows Tower (Gateshead)	127	95	0.75	50	39.4 %
6. H G Nichol Tower (RWE Renewables)	0	0	---	---	---
7. 200 metres E from Baltic FM, quayside	8	5	[0.63]	4	[50.0 %]
8. Baltic Flour Mill (Art Centre, G/head)	193	135	0.70	76	39.4 %
9. Under HMS Calliope (Gateshead)	0	0	---	---	---
10. St Mary's Heritage Centre, Gateshead	4	4	[1.00]	1	[25.0 %]
11. Lombard House (Newcastle quayside)	24	15	0.63	12	50.0 %
12. Queen Street north side (Newcastle)	19	12	[0.63]	10	[52.6 %]
13. Phoenix House (Queen St and Sandhill, Newcastle quayside)	53	28	0.53	28	52.8 %
14. Tyne Bridge – North abutment	421	291	0.69	175	41.6 %
15. Tyne Bridge – North abutment girders	210	127	0.60	103	49.0 %
16. Tyne Bridge – South abutment	312	227	0.73	111	35.6 %
17. Tyne Bridge – South abutment girders	162	110	0.68	64	39.5 %
18. Guildhall (Newcastle quayside)	47	42	0.89	16	34.0 %
19. Bessie Surtees House (Newcastle)	24	11	0.46	15	62.5 %
20. Railway Bridge, Dean St. (Newcastle)	114	71	0.62	49	43.0 %
21. Newcastle quayside, miscellaneous	16	10	[0.63]	9	[56.3 %]
22. High Level Bridge	11	10	[0.91]	4	[36.4 %]
Totals: River Tyne (excl. Tynemouth)	2002	1377	0.69	836	41.8 %
Totals (including Tynemouth)	2329	1640	0.70	970	41.6 %

General Notes to Table 1.

- **What is a 'failed nest'?** This is an occupied nest on which the adults failed to rear (fledge) any chicks. So, the table records a short-hand term '% of failed nests' which represents 'percentage of pairs which fail'. 'No. of failed nests' is number of nests which failed to rear any chicks.
- Where there were less than 20 AON at any site, the figures for: a) minimum breeding productivity and b) % of failed nests, have been placed in square brackets [] due to small sample sizes.

- The dates of the surveys at Tynemouth cliffs, depicted in Table 1, show later dates than in the column headings since the kittiwake season on the cliffs at Tynemouth runs a little behind that on the river.
- Fine AON detail needs checking, particularly for rows 4 & 14-17. This is mainly due to the fact that the AONs at the river sites were each surveyed twice in detail during the period shown.
- Breeding productivity and chick numbers relate to those dates indicated.
- Many more data were collected and will be incorporated in a future more detailed report.

Table 2. 2023 River Tyne and Tynemouth cliffs kittiwake AON (maximum), chick totals and brood sizes.

Location	AON (max) (May 25 to June 17)	Chicks (July 7 to 15)	Brood sizes (broods of 1, 2 or 3 chicks)
1. Tynemouth cliffs (natural site)	327 (24 June)	263 (24 July)	123x1, 70x2
2. North Shields Ferry Landing	23 (22 June)	8	6x1, 1x2
3. Smiths Dock, North Shields	5 (27 June)	0	-----
4. Akzo Nobel (Int. Paints, Felling)	229	176	106x1, 35x2
5. Saltmeadows Tower (Gateshead)	127	95	59x1, 18x2
6. H G Nichol Tower (RWE Renewables)	0	0	-----
7. 200 metres E from Baltic, quayside	8	5	3x1, 1x2
8. Baltic Flour Mill (Art Centre, G/head)	193	135	99x1, 18x2
9. Under HMS Calliope (Gateshead)	0	0	-----
10. St Mary's Heritage Centre, Gateshead	4	4	2x1, 1x2
11. Lombard House (Newcastle quayside)	24	15	9x1, 3x2
12. Queen Street north side (Newcastle)	19	12	6x1, 3x2
13. Phoenix House (Queen St and Sandhill, Newcastle quayside)	53	28	22x1, 3x2
14. Tyne Bridge – North abutment	421	291	201x1, 45x2
15. Tyne Bridge – North abutment girders	210	127	87x1, 20x2
16. Tyne Bridge – South abutment	312	227	175x1, 26x2
17. Tyne Bridge – South abutment girders	162	110	86x1, 12x2
18. Guildhall (Newcastle quayside)	47	42	20x1, 11x2
19. Bessie Surtees House (Newcastle)	24	11	7x1, 2x2
20. Railway Bridge, Dean St. (Newcastle)	114	71	59x1, 6x2
21. Newcastle quayside, miscellaneous	16	10	4x1, 3x2
22. High Level Bridge	11	10	4x1, 3x2
Totals: River Tyne (excl. Tynemouth)	2002	1377	955x1, 211x2
Totals (including Tynemouth)	2329	1640	1078x1, 281x2

General Notes to Table 2.

- The finer AON detail may need checking for certain rows (e.g. 4 & 14-17) due to the fact that two full AON surveys were completed for all river sites.

Table 3. River Tyne (excluding Tynemouth) kittiwakes, summary 2019-2023.

Year	AON (Apparently Occupied Nests)	Chicks (and brood sizes)	Minimum breeding productivity	% of nests that failed to raise young to fledge
2019	1,355	1,307: (661x1, 317x2, 4x3)	0.96	27.5 %
2020	1,639	1,507: (798x1, 353x2, 1x3)	0.92	29.7 %
2021	1889 - 1895	2,481: (700x1, 853x2, 25x3)	1.31	16.6 %
2022	[2,030]	2,196: (871x1, 643x2, 13x3)	1.08	24.8 %
2023	2,002	1,377: (955x1, 211x2, 0x3)	0.69	41.8 %

Note. AON for 2022: fine detail needs to be checked.

Table 4. Tynemouth cliffs (natural site) kittiwakes, summary 2019-2023.

Year	AON (Apparently Occupied Nests)	Chicks (and brood sizes)	Productivity (chicks per AON)	% of nests that failed to raise young to fledge
2019	350 (18 June)	376 (24 July): (102x1, 134x2, 2x3)	1.07	32 %
2020	328 (20 June)	334 (24 July): (135x1, 98x2, 1x3)	1.02	28.7 %
2021	357 (29 June)	417 (27 July): (132x1, 135x2, 5x3)	1.17	23.8 %
2022	387 (30 June)	428 (1 Aug): (159x1, 133x2, 1x3)	1.11	24.3%
2023	327 (24 June)	263 (24 July): (123x1, 70x2, 0x3)	0.80	41.0 %

Table 5. 2023 River Tyne kittiwake surveys showing deterioration in breeding productivity.

Results for surveys up to this date	Number of AONs checked up to this date	Running total of chicks	Breeding productivity up to date
7 July	229	176	0.77
8 July	557	411	0.74
10 July	978	705	0.72
11 July	1,290	929	0.72
12 July	1,571	1,109	0.71
13 July	1,858	1,300	0.70
15 July	2,002	1,377	0.69

The season had got off well, with strong numbers of apparently occupied nests, but during the chick surveys there were obviously less live chicks present than had been expected and hoped for. There were reasonable numbers of dead nestlings seen in nests and many empty nests indicating something was amiss. Breeding productivity was noticeably low for the river (see Tables 3 and 4 for recent years) and progressively fell during the main chick survey period (see Table 5). The weather was reasonable and there seemed to be plenty of food at sea. The problem seemed likely to be caused by avian influenza which was still present in the seabirds of Britain. The Tyne kittiwakes were little affected (if at all) by HPAI in 2022, but is seemed to affect the population this year as the summer progressed and I saw several dead adults too – another warning sign. A small number of kittiwakes from the Tyne tested positive for HPAI (Defra results). I have three further Tyne kittiwake nestlings from 2023 for testing along with four nestlings and an adult from 2022. Table 5 shows the progressively falling breeding productivity along the Tyne in 2023 and this could be surmised to have continued for a little while longer.

The first chick this season was seen in the nest on 27 May at the south abutment of the Tyne Bridge (high on the east face).

I have been involved in further discussions recently (with Alastair Swan, Newcastle City Council) in regard to placement of mitigation ledges for nesting as kittiwake ‘hotels’ on the towers of the Tyne Bridge.

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Brief Summary Report (version 1), 14 December 2023, Daniel M Turner

Note. This report is still in work

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