

# Northumberland Coast Breeding Ringed Plover Territory Survey 2023

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## Objective

In the last 30 years the number of breeding Ringed Plovers along the Northumberland coast has declined by 60% and been classified on the UK red list. To understand the reasoning behind this decline and how many breeding Ringed Plovers use the Northumberland coast we need to gather data from early season, as they set up breeding territories, until late July to include any re-lays and others that may have been displaced from other areas. The locations of breeding territories found whilst undertaking the surveys will also help land managers set up protective fencing around potential or actual nests of Ringed Plovers. These give breeding pairs protection from disturbance by people, dogs and predators.

## Methodology

The coast was split into sections, each section would be surveyed every two weeks, ideally every week if time and personnel allowed.

Following the principles of what has been carried out at Lindisfarne NNR previously, Natural England produced survey forms (Appendix 2) and maps for Lindisfarne NNR and gave the National Trust the survey forms to disseminate to their volunteers. Space for Shorebirds staff and Coast Care volunteers survey the wider Northumberland coast and use app based recording ArcGIS Survey 123 - <https://arcg.is/bzDyq0>.

Each surveyor walked the section recording all Ringed Plover behaviour and locations. At Lindisfarne NNR they also recorded any disturbance events and recorded locations on a map and with what3words.

**Map Reference** – your own reference to mark on the Map (e.g. Mark A on map where the RP activity is).

**what3words** - download the app to your phone and you can record the location of the Ringed Plover territory/nest without having to be at the location.

**Behaviour** - Record the behaviour and numbers of birds.

Behaviours to include:

Roosting – any birds resting along the shore

Territorial – walking/running away and calling/repeatedly hearing calling

Breeding – sat on nest/distraction display/nest found

**Disturbance** – Record any disturbance – walkers close by dogs on or off lead, predators. Then the Ringed Plover's response.

**Comments** – Any other information, any interactions you have.

The survey should not cause any disturbance to the Ringed Plover, especially when setting up territories. This is also why we have chosen to record location via what3words as you can easily record the location of the Ringed Plovers without being next to them to get a GPS. From what3words we can gain co-ordinates to plot locations on digital maps.

## Results

### Effort

Surveys at Lindisfarne NNR started on 10<sup>th</sup> March through to 28<sup>th</sup> July, each section was counted on the same day, every Friday, and roughly at the same time (certain section timings depended on tide times). There were 9 sections from Spittal to Bamburgh, including all of Lindisfarne NNR. Total Natural England volunteer hours amounted to 146.25 hours.

Space for Shorebirds started surveys on 17<sup>th</sup> March through to 11<sup>th</sup> July, they along with volunteers, surveyed 24 sections from Little Beach at Berwick in the North to Blyth, not including Lindisfarne NNR. There was no regularity to when the surveys were undertaken with some sections being counted once and others eight times throughout the season. Total volunteer effort time was not recorded in the ArcGIS123 app.

National Trust volunteers covered Beadnell to Low Newton, Long Nanny and Druridge Bay, surveys commenced on 31<sup>st</sup> March through to late April. Total volunteer hours 25 hours.

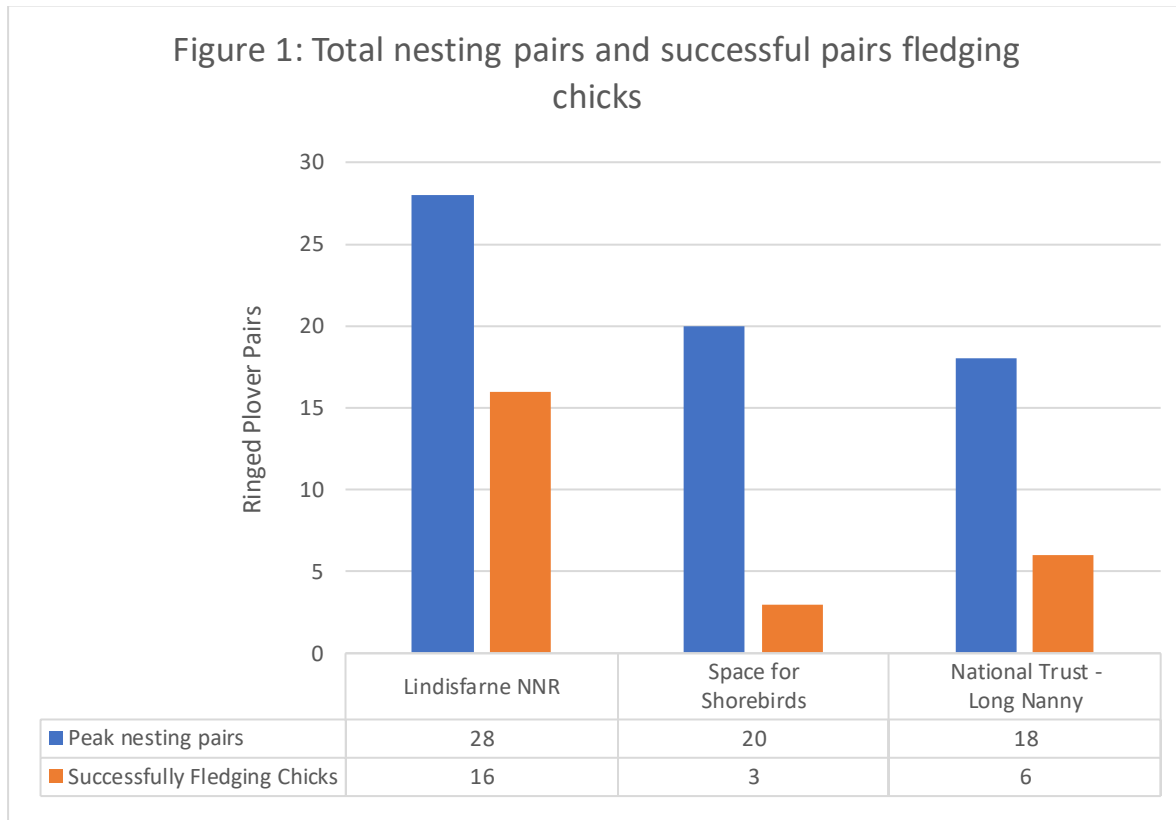
### Overall Numbers

To find the overall number of Ringed Plover territories is difficult as the early nesting birds, either successful or failed, will move around. For example, a pair nesting at the Heugh, Holy Island, were successful but moved on once the chicks fledged and another pair moved into the same location to

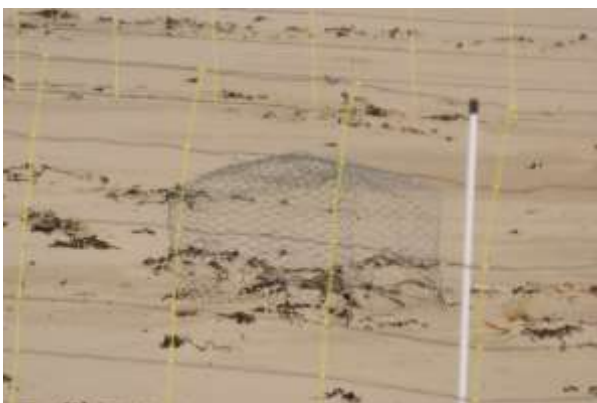
nest. At this location only one territorial pair was ever recorded during the surveys, this could have then been replicated at other locations.

From the surveys and information gathered from Space for Shorebirds and Natural England, June was the month where the highest number of territorial pairs were noted. This includes successful pairs that are with chicks, those that are incubating and those setting up territories.

Across the whole coast 66 pairs of Ringed Plover nested with 25 of these going on to successfully fledge young – Figure 1.



For all organisations this years productivity was lower than 2022, where all had a large increase from 2021 – Figure 2. All organisations recorded predation by crows at both egg and chick stage which will have contributed to the lower productivity. The high tide in early July also washed out some nests



Caged Ringed Plover nest within protective fenced area



Fox caught on a remote camera within a protective fenced area



that had incubating eggs, with this being later in the season these pairs were unlikely to have layed again. Fox predation occurred at several sites and possible predation by dogs was noted at some Space for Shorebirds sites this season. Avian Influenza, H5N1, was recorded at both Goswick and Long Nanny in both Little Terns and Artic Terns, however no positive cases were recorded in Ringed Plover.

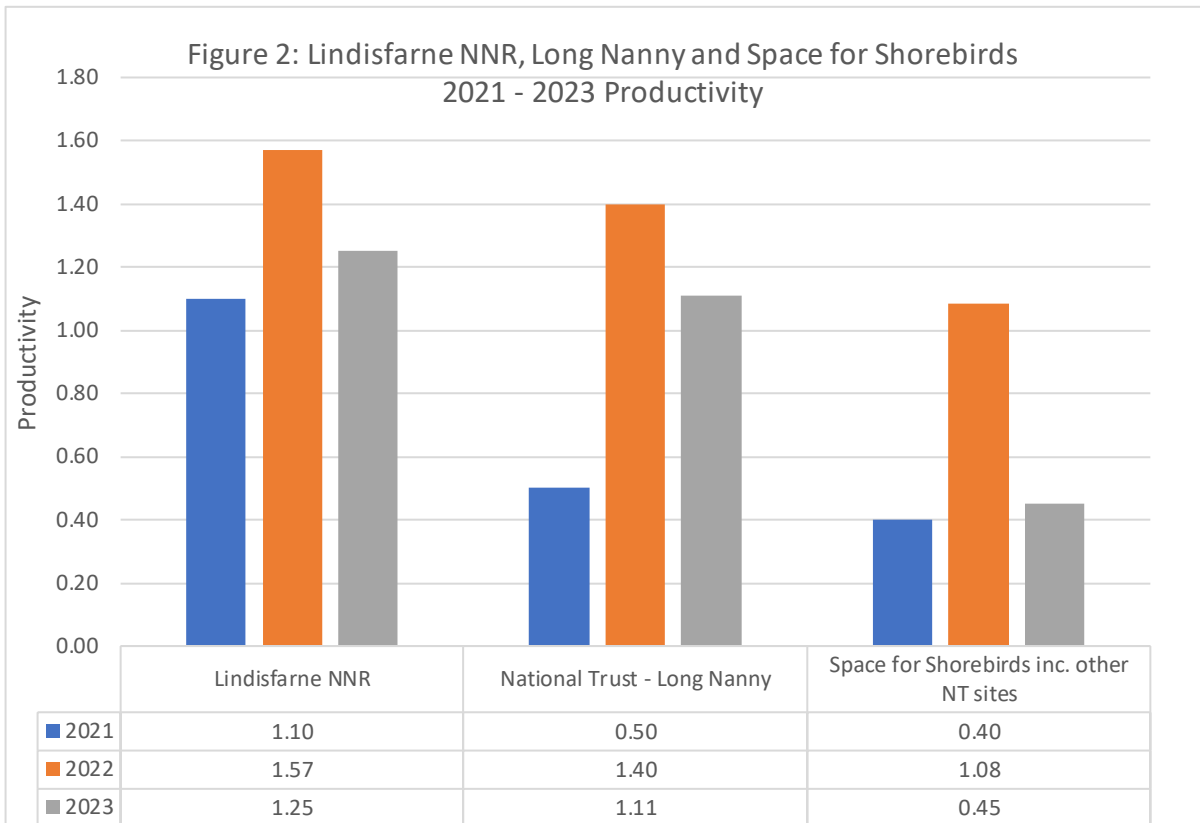
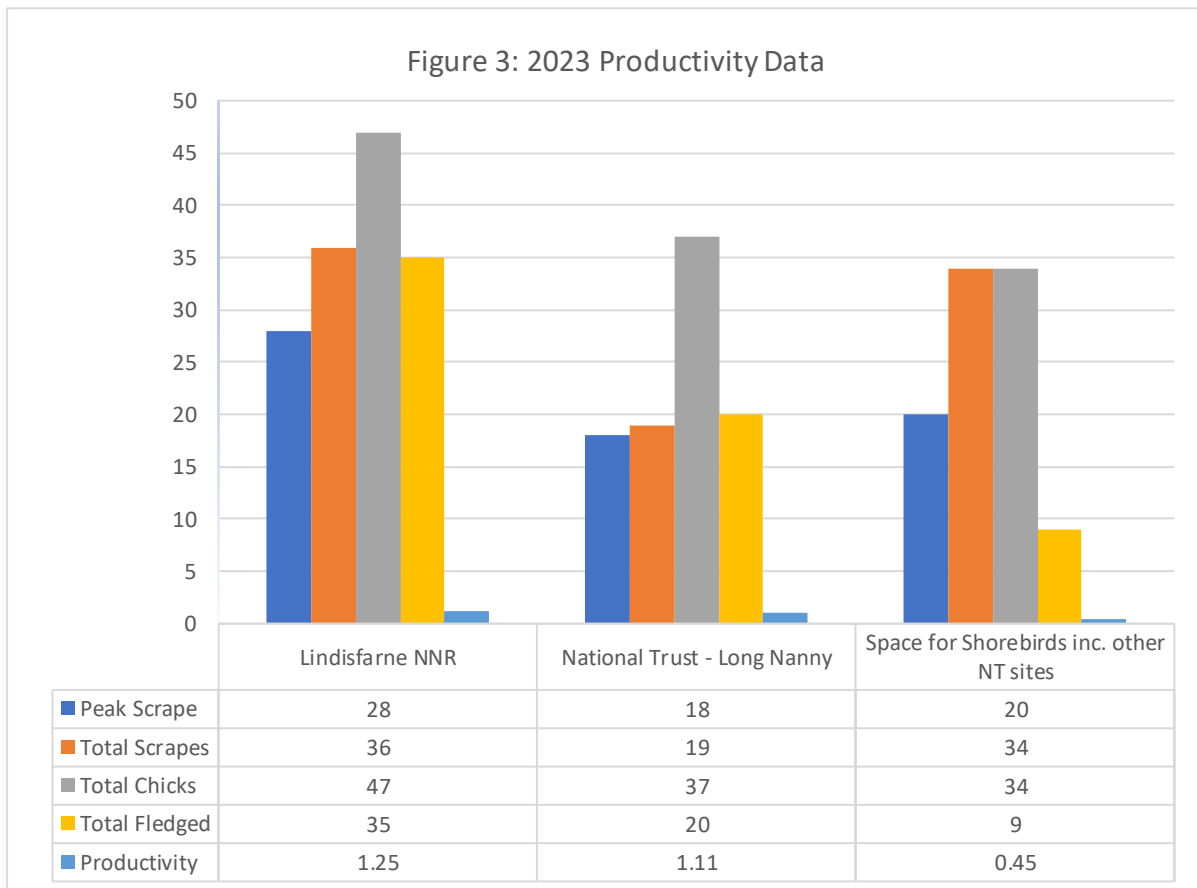


Figure 3 shows a more detailed look at the productivity figures for this season across the three organisations.



### Natural England - Lindisfarne National Nature Reserve and neighbouring sites

The peak number of territories at any one given time was 21 recorded in June. Overall, 28 pairs bred across the Reserve with 16 successfully fledging young. Carrion Crow predation was persistent at Ross south with other areas recording predation from fox and badger, see Appendix 1 for more detailed site summary. The peak number of individuals occurred in May when an influx of Ringed Plovers was recorded using the Reserve; 711 being recorded during the survey on 19<sup>th</sup> May – Figure 5.

There were no Ringed Plover territories picked up on the neighbouring sites of the NNR; Spittal, Cocklawburn or Budle Point to Bamburgh.

Figure 4 shows the number of territorial pairs each month at all the sites. It is worth noting that the fenced protection areas were not established until late April and could be the reason why there was a drop in pairs in April compared to March and May at sites where fencing is installed; Goswick protection area and Ross South.

**Table 1: Natural England Ringed Plover surveys, monthly peak territories and total successful pairs**

Location	Number of Surveys	Total territories					Peak Nesting Pairs	Total Successful Pairs fledging chicks
		March	April	May	June	July		
1a - Spittal	10	0	0	0	0	0	0	0
1b - Cocklawburn	10	0	0	0	0	0	0	0
2 - Cheswick	15	0	0	0	0	0	0	0
2 - Goswick Protection Area	15	2	1	4	5	5	5	4
3 - Goswick South	15	0	3	0	1	0	1	0
4 - Sand Rigg	10	0	0	2	1	0	3	2
4 - North Shore	10	0	1	0	1	0	0	0
4 - Emmanuel Head	10	0	1	1	1	0	1	1
5 - Heugh	10	1	1	1	1	1	2	2
6a - Beacons	11	0	0	2	0	0	0	0
6a - WO	11	2	3	3	3	3	4	3
6a - Ross Mid	11	1	1	1	1	0	1	0
6b - Ross South	15	4	3	4	4	0	4	0
7 - Budle Bay	8	1		2	2	2	3	2
7 - Budle Point	8				1		1	1
Black Law *	0						3	1
<b>Total</b>	<b>169</b>	<b>11</b>	<b>14</b>	<b>20</b>	<b>21</b>	<b>11</b>	<b>28</b>	<b>16</b>

\*Not routinely surveyed due to its location

Figure 4 : Monthly number of territories and total pair nesting - Natural England

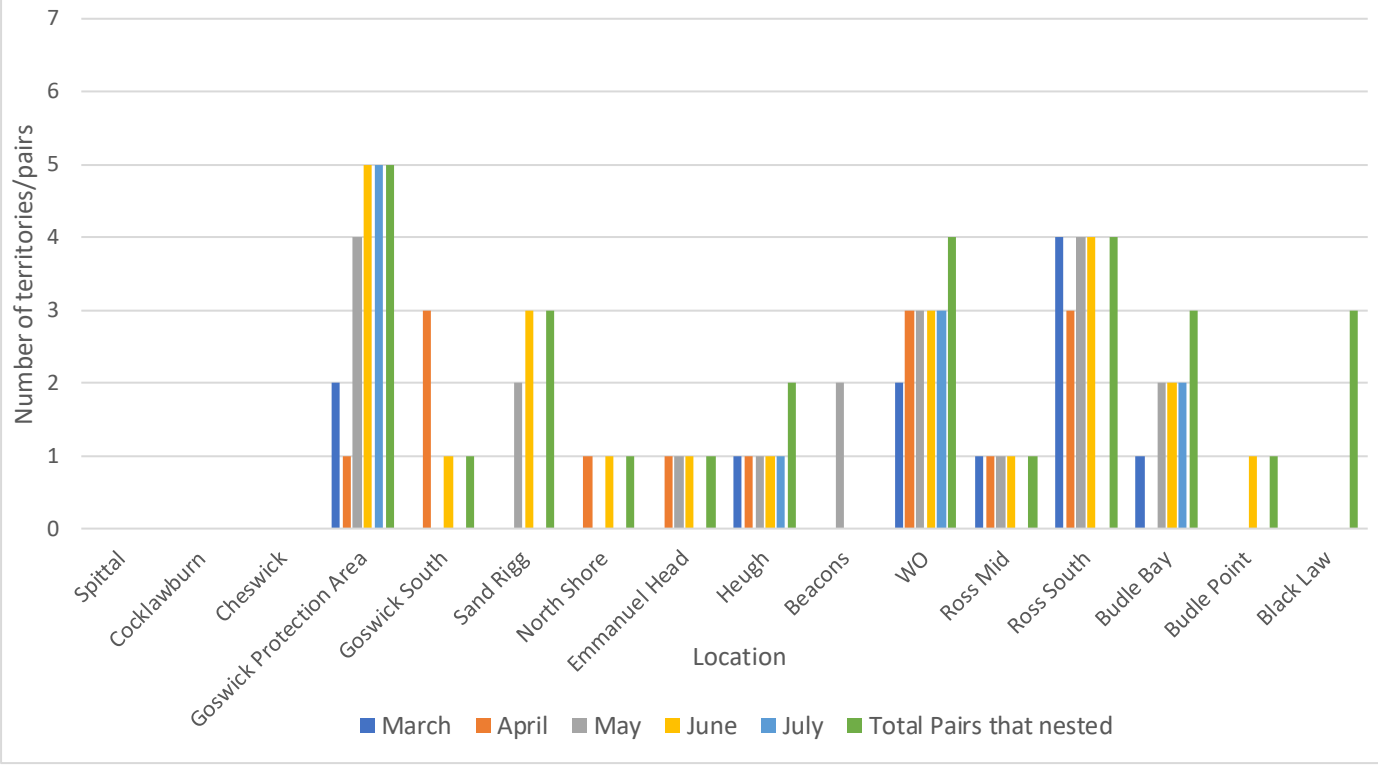
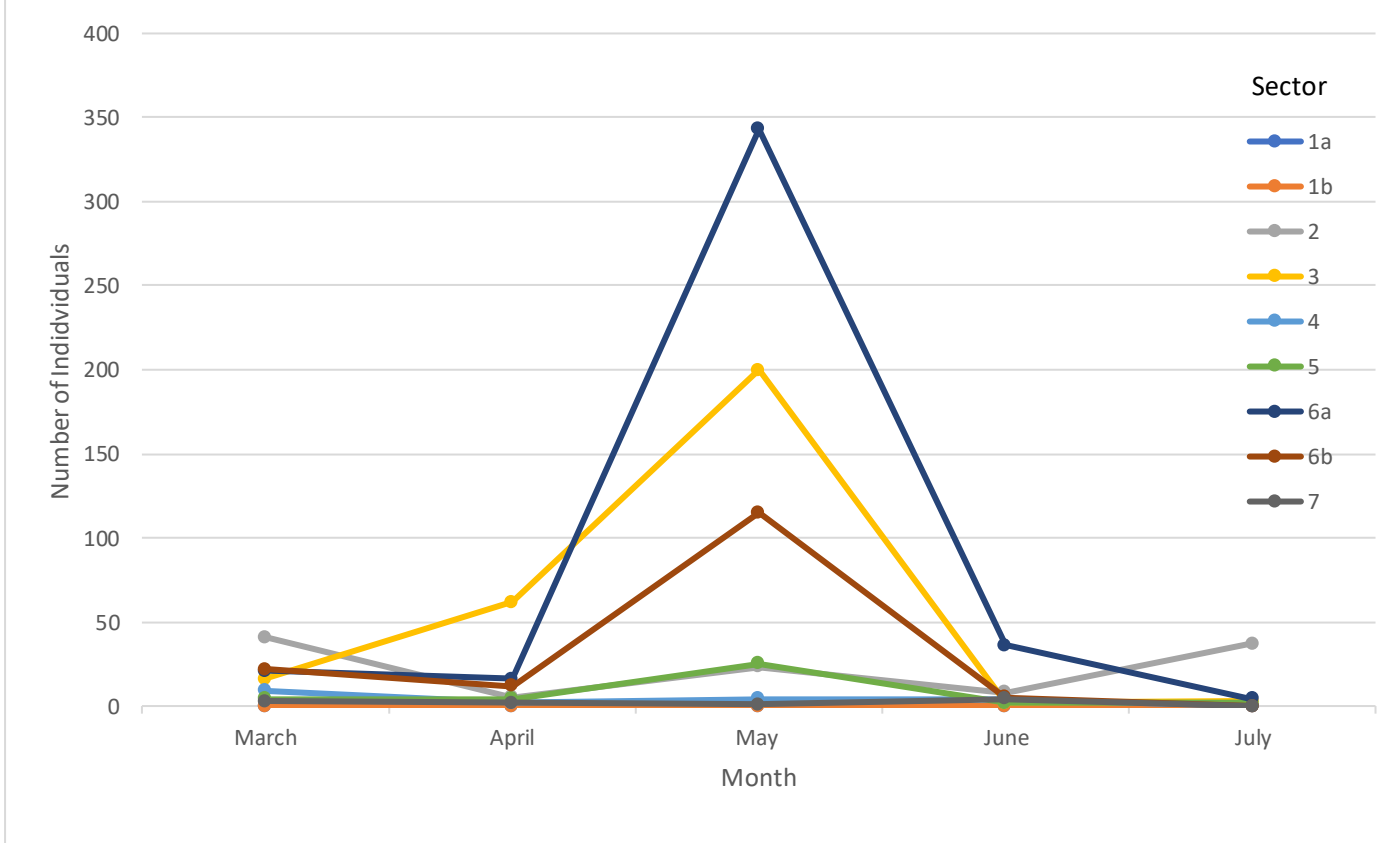


Figure 5: Total number of individual Ringed Plovers in each section





## National Trust

The National Trust monitor the Long Nanny breeding bird site from early May until end of July, they employ six seasonal rangers to monitor all breeding birds; Ringed Plover, Arctic and Little Terns. Volunteers assist with the monitoring and public engagement. The National Trust also own and manage 11 miles of coastline and volunteers undertook surveys along the coastline see Table 2. Space for Shorebirds operate on this land also and protect nesting Ringed Plovers outside of the Long Nanny. The Long Nanny was the most productive site with a peak of 18 nesting pairs with six going onto the fledge 20 young.

Table 2: National Trust Ringed Plover surveys, monthly peak territories and total successful pairs

Location	Number of Surveys	Total Territories					Peak Nesting Pairs	Total Successful Pairs
		March	April	May	June	July		
National Trust - Long Nanny							18	6
Druridge	5	2	1	1			0	
Beadnell to Low Newton	5		2	3				
Low Newton to Craster	1		1				0	
Seahouses to Stag Rocks	1						0	
<b>Total</b>	<b>12</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>6</b>

## Space for Shorebirds

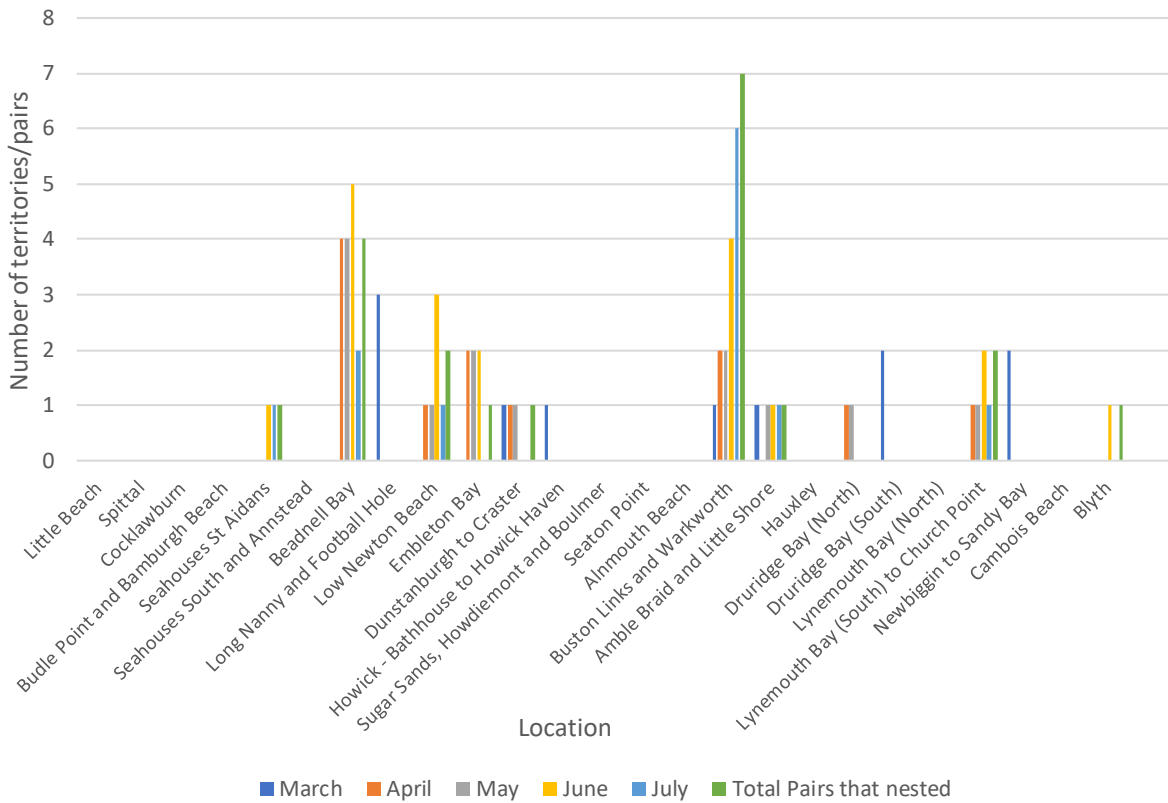
The peak number of territories observed was in June with a peak of 21, Table 3, this echoed Natural Englands results. Below is more detailed view of the monthly break down at each survey site for the number of territories and total nesting pairs. Buston Links and Warkworth beach was the site where the most numerous Ringed Plovers nested with a total of seven pairs nesting and one pair going onto the fledge young. The most successful site was Beadnell where two pairs fledged young from a total of four.

Table 3: Space for Shorebirds Ringed Plover surveys, monthly peak territories and total successful pairs

Location	Number of Surveys	Total Territories*					Peak Nesting Pairs	Total Successful Pairs
		March	April	May	June	July		
Little Beach	2						0	0
Spittal	3						0	0
Cocklawburn	3						0	0
Budle Point and Bamburgh Beach	3						0	0
Seahouses St Aidans	2				1	1	1	0
Seahouses South and Annstead	2						0	0
Beadnell Bay	2	3	4	4	5	2	4	2
Long Nanny and Football Hole	6							
Low Newton Beach	5		1	1	3	1	2	0
Embleton Bay	6	1	2	2	2		1	0
Dunstanburgh to Craster	0	1	1	1			1	0
Howick - Bathhouse to Howick Haven	2						0	0
Sugar Sands, Howdiemont and Boulmer	5						0	0
Seaton Point	5						0	0
Alnmouth Beach	2	1					0	0
Buston Links and Warkworth	6	1	2	2	4	6	7	1
Amble Braid and Little Shore	5			1	1	1	1	0
Hauxley	2							0
Druridge Bay (North)	7				2		0	0
Druridge Bay (South)	2						0	0
Lynemouth Bay (North)	2						0	0
Lynemouth Bay (South) to Church Point	7	2	1	1	2	1	2	0
Newbiggin to Sandy Bay	1						0	0
Cambois Beach	1						0	0
Blyth	8				1		1	0
<b>Total</b>	<b>89</b>	<b>9</b>	<b>11</b>	<b>12</b>	<b>21</b>	<b>12</b>	<b>20</b>	<b>3</b>

\*Number of territories taken from surveys, ArcGIS and season overview of nesting pairs from Space for Shorebirds.

Figure 7: Monthly number of territories and total nesting pairs - Space for Shorebirds



## Conclusion

From Berwick to Blyth there were 66 Ringed Plover pairs that bred, of these 25 were successful in fledging young. Lindisfarne NNR had the greatest number of breeding pairs, 29, and had the highest productivity of 1.25.

The most productive sites for Ringed Plovers were those that were largely staffed every day and have the added protection of terns (terns chase off predators such as Carrion Crows). These were at Long Nanny site where 20 chicks fledged from six pairs and Goswick where 10 chicks fledged from four pairs.



Little Terns chasing away a Herring Gull

Those that nested earlier in the season were also more productive, having chicks before the high spring tides in early July they were able to escape the water, either chicks had fledged or adults were able to guide chicks to higher ground.

Across the coast all but three pairs fledged chicks from protective fencing; these were at Emmanuel Head, Budle Point and Buston. The adults used the habitat, boulders and marram grass, as protection. Perhaps the increase in signage and more awareness around breeding shorebirds had also contributed to positive respect from the public.



Ringed Plover nest well hidden within the Marram grass

There wasn't a consistent approach for recording and surveying the whole coast. From the data received, the number of Ringed Plover territories noted were fewer than the number of nests found. This indicates that there were more territorial pairs present that were not seen, these could have been protected therefore leading to more potential breeding pairs being recorded in the area.

## Recommendations

We seek to standardise the methodology along the whole coast to be able to have comparable data and to survey on the same day to avoid any cross over of Ringed Plovers. This will require commitment from all organisations to gain buy in from volunteers and encouragement to continue the surveys throughout the season. This was feedback from some; that as the season went on and no Ringed Plovers or territorial activity were recorded then volunteer commitment dwindled.

To standardise the methodology would require use of the same recording tools by all surveyors, either paper forms coupled with what3words/maps or ArcGIS123 app, both have pros and cons.

Using paper forms – either posted in or emailed – it can be easily seen whether all data was captured, allowed for recording timings of surveys. The participant could then either use maps or what3words for the location of Ringed Plover activity. This was done specifically not to alienate those without smart phones and not able to use what3words or digital apps. The downside of paper is that they can get lost or people do not return the forms – this could be easily rectified by having a monthly return system, where the Wildlife Warden would collate the months data and chase for late returns.

The data from ArcGIS123 app was not consistent and not all surveys were recorded on the app or records from the app didn't correlate to the survey date data provided. To extract the data from the app was not easy and not always complete, much of the information in this report came from Space for Shorebirds end of season report. There are positives; no paper used, data is easily saved and instantly accessed with exact locations but does require volunteers to have smartphone or tablet with good battery.

Having collated data this season I would advocate for paper forms with map reference or physical maps, it allows for all information to be collected in one place, (e.g. start and finish time to collate effort time), and any missing information can easily be picked up. It also allows for information to be collected even if no Ringed Plovers were seen.

Going forward next year, sectors for the whole coast would need to be agreed across all organisations and mapped. To gain more volunteer interest and commitment, I propose a meeting and training session at the start of the season inviting all organisations

## Acknowledgements

I would like to thank all the organisations for their support and providing of data used to compile this report, Natural England, National Trust, Space for Shorebirds. Additional funding was provided by the EU LIFE WADER project co-funded by the European Union.

A special thanks goes to all the volunteers that undertook the majority of the surveys, without their effort this project and report would not have been possible. They are invaluable, as staff alone would not have been able to cover the surveys along the whole coast, recording territories and nests.

## Ringed Plover Surveyors

### Natural England

Andrew Craggs  
Andy Denton  
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Gill Sanders  
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Max Whitby  
Richard Poyer  
Robert McKibbin  
Roger Birch

### National Trust

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Geraldine Terry  
Jan Drabble  
John Craig  
Joyce Clayton  
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Penny Edwards  
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## Appendix 1: Site Summaries

### Berwick – Spittal – Cocklawburn (NE Section 1a & 1b)

Spittal and Cocklawburn were monitored by Natural England during the weekly/bi-weekly surveys. No Ringed Plovers were seen during these surveys. Space for Shorebirds and Coast Care volunteers cover Berwick to Cocklawburn and again no Ringed Plovers were seen.

### Cheswick – Goswick (NE Section 2 & 3)

No territorial behaviours were noted at Cheswick or north of the protection area at Goswick. In April, three Ringed Plover territories were recorded at South Goswick (Natural England section 3), these however were not seen again until one nest was found in June. The other pairs presumably moved north to the protection area north of the Low at Goswick, where territorial pairs increased from one to three in May and then to five in June and July. A total of six pairs bred at Goswick fledging ten chicks – all nested within the protection areas.

### Sand Rigg – North Shore – North Holy Island (NE Section 4)

Two pairs were on nests at the Sand Rigg in May and went on to fledge young. A third pair nested in June but was washed out during the high tides in early July. A territorial pair was seen on the east side of the North Shore in April and June, However no nest was found.

A pair nested at Emmanuel Head, however they were only discovered once chicks had hatched, no netting was put out as the ground of boulders and vegetation provided enough cover for chicks and adults the hide. This area is also less frequented by people.

### Holy Island South (NE Section 5)

A pair set up territory in March and went on to fledge two chicks in June. A second pair then used the netted area to nest in June and went on to fledge three chicks in August. This is a busy area for people walking dogs, but the small, netted area provided refuge for the chicks and adults.

#### **Ross North (NE Section 6a)**

The Ringed Plover surveys at this site provided valuable intel as there was less staff presence from the seasonal shorebird and engagement wardens here, as more of the shorebird protection areas were located across Lindisfarne NNR. Territorial Ringed Plovers were seen throughout the season at the Wide Open; in May two territorial pairs were recorded at the Beacons and three at the Wide Open. However, Ringed Plovers at the Beacons did not manage to nest and overall four pairs bred at the Wide Opens, three fledging chicks. This whole area is a refuge and the public are asked not to enter when they arrive Ross Sands, however as staff presence was concentrated at the entrances, visitors would either get confused and walk past the fencing (especially at low tide) or not see a member of staff to remind them that this was a no access area. This could have been why the pairs at the Beacons did not nest and also predator signs were present (fox and badger prints).

Mid-way up Ross beach a pair was seen regularly at the start of the season and nested, netting was put around but eventually they were predated by fox.

#### **Ross South (NE Section 6b)**

Four pairs were seen in March all displaying territorial behaviour. One nest was found during the surveys in April before our shorebird protection netting was set out, this was then fenced the next day however, the birds abandoned the nest. The whole fencing was set in late April and three pairs were still active and displaying. Four pairs went on to breed within the protection area, however, all were predated by crows. Relays were made and four nests were caged; one nest was washed out and others were predated once chicks hatched and left the safety of the cages. None were found nesting outside of the protection area at Ross South.

#### **Budle Bay to Bamburgh (NE Section 7)**

One territorial pair was seen in March at the spit near Kiln point. This area was fenced off and buffer rope added this season. During the season this provided safety for four pairs of Ringed Plovers, two pairs went on to have chicks and the others were predated. The fencing was largely respected by the public and gave space for the Ringed Plovers to return once chicks were mobile.

One pair of Ringed Plovers were discovered at Budle point and fledged one chick; the exact site of the nest was unknown but through the surveys this pair were found though they remained elusive, confining themselves to the marram grass.

#### **Bamburgh Beach (Surveyed 3 times)**

No Ringed Plover territories were recorded here.

#### **Seahouses (Surveyed 2 times)**

A nest was found in June by a member of the public, the area was fenced by Space for Shorebirds but failed at chick stage.

#### **Seahouses South and Annstead (Surveyed 2 times)**

No Ringed Plover territories were recorded here.

### **Beadnell Bay (Surveyed 2 times)**

This is a site where pre-planned protection area is installed. The first three nests were washed out by high tides. The fourth fledged four chicks in late June. Fifth nest was found predated. The sixth and seventh nest were at Dell point and Ebbs point, outside of the protection area but subsequent netting was installed. However both failed, either by predation, tides or human activity (trampling or dog predation). Two further nests were found in the main protection area, one in early June and fledged three chicks. The final ninth nest in this area was found mid-June, three chicks hatched but only one chick was dead with broken neck, presumably dog as lots of prints around where the chick was found.

### **Long Nanny (National Trust – monitored daily from early May to 31<sup>st</sup> June by Seasonal Wardens Surveyed, surveyed 6 times)**

18 pairs made 19 nesting attempts, laying a total of 74 eggs. Predation occurred by crows at egg stage, but a minimum of 37 chicks hatched with at least 20 of those chicks making it to fledging age. This is the highest number of ringed plover fledglings recorded at the Long Nanny in a decade.

### **Low Newton**

Three scrapes were found, the first two (separate pairs) were predated the third was caged and raised to avoid being washed out. It was found to have been predated presumably by fox as prints were found by the cage.

### **Embleton Bay (Surveyed 6 times)**

This site is a pre-planned protection area with fencing installed at the beginning of the season. At least two pairs were noted on territory with only one nest found. This however was washed out by tides.

### **Dunstanburgh**

A nest was found by a member of the public in late May close to a main pathway. Fencing was installed but the adults abandoned probably due to the high visitor disturbance.

### **Howick (Surveyed 2 times)**

No territorial behaviour reported.

### **Sugar Sands to Boulmer (surveyed 5 times)**

No territorial behaviour reported.

### **Seaton point (Surveyed 5 times)**

No territorial behaviour reported.

### **Alnmouth (Surveyed 2 times)**

A pair was seen in March below the golf course but no further sightings.

### **Buston Links to Warkworth (Surveyed 6 times)**



A pre-planned protection area was installed at the north-end of Buston. In this area seven nests were identified; the first two were washed out, the rest were predated by crows, although dog may have been the cause. Two chicks were found towards the southern end of Buston beach that went on to fledge and second nest in this area was washed out in early July. Two nests were found south of Warkworth beach, fencing was installed, the first went on to hatch chicks and moved away from the fencing as the second moved in. Both failed, presumably predation.

#### **Amble (Surveyed 5 times)**

Two nests were noted, the first hatched four chicks but were predated. The second was found 22 days later about 200m south of the first nest. The nest was washed out in the early June high tides however the adults gathered two eggs and one went on to hatch. There was no sign of chick or adults in late July, due to business of the site, dog could be the cause.

#### **Hauxley (Surveyed 2 times)**

No territorial behaviour reported.

#### **Druridge Bay**

North (Surveyed 7 times), South (Surveyed 2 times)

A pair was noted in the north and south in June but no nesting attempt was noted.

National Trust volunteers also surveyed this area and noted territorial behaviour in March, April and May.

#### **Lynemouth (Surveyed 9 times)**

A pre-planned protection area was installed at the beginning of the season. The first three nests were found to be predated, the fourth nest found was caged and three chicks hatched in mid-July, one chick was observed to be predated by Carrion Crow, the other chicks were not seen after this. Another nest was found – chicks being predated at least two by crows.

#### **Newbiggin (Surveyed 1 time)**

No territorial behaviour reported.

#### **Blyth (Surveyed 8 times)**

A pre-planned protection area was installed. A nest was found mid-June but however failed at either egg or chick stage.

## Appendix 2: Ringed Plover Paper Survey Forms

Site		Date		Start Time		Finish time		Dead Birds Species <small>(if known)</small>	Tally
Observer		High Water Time		High Water height (m)					
Weather conditions									
Ringed Plover Location/Activity									
Map Ref.	what3words	Behaviour <small>(Roosting/territorial/on nest)</small>	Number of birds	Number of Eggs/chicks <small>(if found)</small>	Disturbance <small>Brief description if any, People/dogs/birds response</small>	Comments <small>(Public interactions)</small>			

### Appendix 3: Natural England Lindisfarne NNR Sector Maps

