



National  
Trust

# **Blakeney National Nature Reserve Breeding Bird Report and Other Wildlife 2017**



Little Terns (Richard Porter)

Edited by  
**Ajay Tegala**

## Summary

The 2017 breeding bird season was mixed for terns. Little Terns nested in slightly greater numbers than 2016. For the first time, the majority nested at the Watch House colony, where they experienced the highest productivity since 2011. Sandwich Terns experienced the lowest number of breeding pairs since 1975 due to the absence of Black-headed Gulls on Far Point and the presence of over 160 nesting large gulls. However, the Norfolk population, as a whole, had a productive year, with Scolt Head Island experiencing high breeding success for a third year running. Common Terns showed a decrease in nesting pairs of just over 50%. Arctic Terns appear to be stable.

As usual, there were three Marsh Harrier nests, with one of the two males serving two of the three females. Two of the nests were successful, fledging a combined total of at least three young. The usual Barn Owl pair bred in the nest box by Marsh Lane again, fledging two young. There were no Bittern sightings during the breeding period or preceding winter.

A minimum of 42 Avocet pairs bred; similar numbers to 2016. The number of breeding Lapwing showed an increase from 25 pairs, in 2016, to 37. A minimum 43 Redshank pairs bred; very similar to 2016. For a second year, two pairs of Little Ringed Plover bred on Blakeney Freshes, again fledging one brood. A total of 14 Ringed Plover pairs bred on the reserve, fledging five broods. For the first time since 2002, Water Rail breeding was confirmed, with two young observed on Blakeney Freshes.

Four pairs of Mediterranean Gulls were present during the breeding season, but did not successfully nest. Four Bearded Tit territories were recorded, fledging a minimum of six young. Three pairs of Cetti's Warbler were present, although no young were observed. Common passerine species bred in usual numbers.

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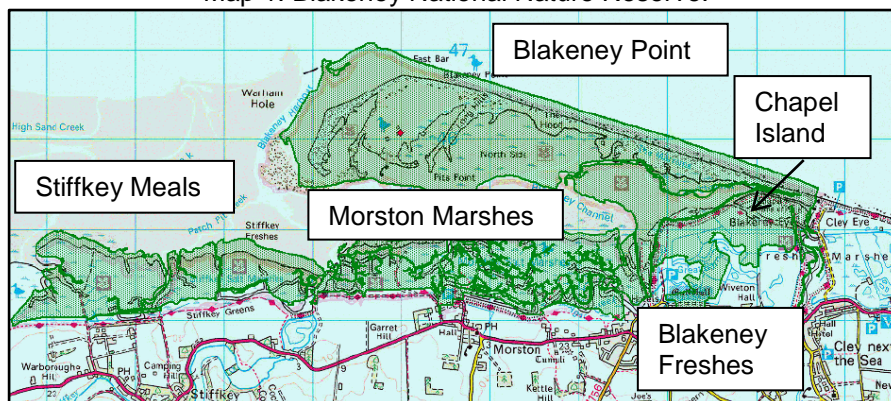


## Introduction

### Location and context

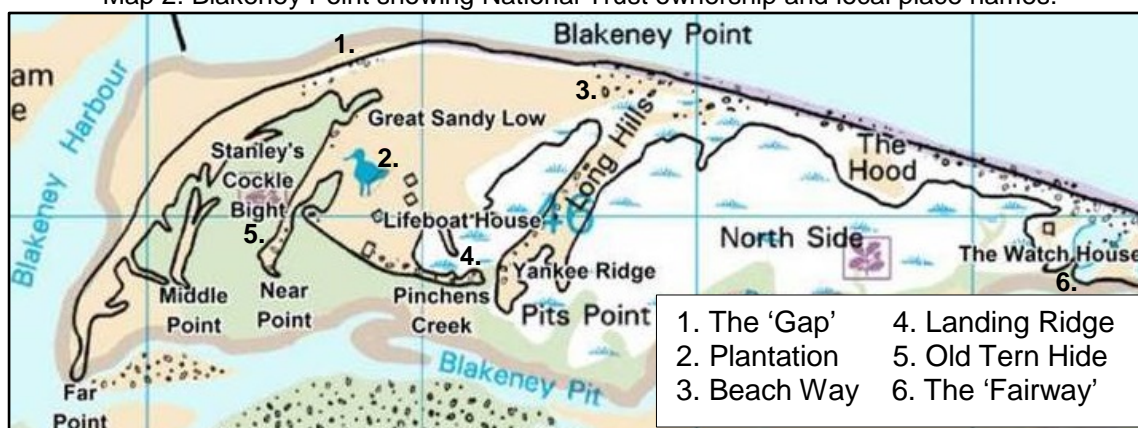
The 1,097-hectare Blakeney National Nature Reserve, on the north Norfolk coast, comprises of vegetated shingle, sand dunes, saltmarsh, freshwater grazing marsh, reedbed, ponds and ditches. The National Nature Reserve supports up to eight Schedule 1 breeding bird species, seven of which bred in 2017. Blakeney National Nature Reserve comprises of Blakeney Point, Blakeney Freshes, Chapel Island, Stiffkey Meals and Morston Marshes.

Map 1: Blakeney National Nature Reserve:



Blakeney Point is a four-mile shingle spit with an expanse of sand dunes at the western end. The spit encloses Blakeney Harbour, to the south of which lie Morston Marshes; an expanse of saltmarsh. Stiffkey Meals are located to the west, a ridge of sand on the northern edge of the saltmarsh. To the east are Blakeney Freshes; an area of freshwater grazing marsh enclosed by a sea wall, containing reedbed, ponds and ditches. In 2006, the River Glaven was realigned, to alleviate flooding upstream, cutting through the north-east corner of Blakeney Freshes at Blakeney Eye, creating Chapel Island; an island of rough grassland with a saltmarsh fringe.

Map 2: Blakeney Point showing National Trust ownership and local place names:



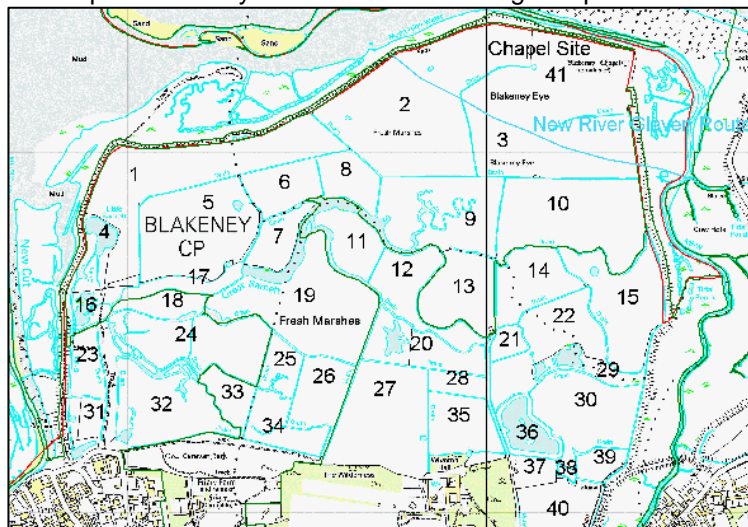


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Map 3: Blakeney Freshes, Friary Hills and Chapel Island showing National Trust ownership:



Map 4: Blakeney Freshes bird recording compartments:



Note that not all of the compartments shown in Map 4 are owned by the National Trust [see Map 3]. The following are owned by the National Trust: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 16, 17, 19, 25, 26, 33, 34 and 41, the remaining compartments are privately owned.

## **Methodology**

Between April and August, breeding bird surveys were undertaken weekly on Blakeney Point and Blakeney Freshes and undertaken monthly on Stiffkey Meals and Chapel Island. In order to undertake survey work for Schedule 1 species, the appropriate Natural England license was held. The appropriate Natural England license was also held for Herring Gull control to protect breeding terns.

For wildfowl and waders, early morning visits were made in April, May and June, counting adults from a discrete distance. Maximum counts were divided by two to establish the number of pairs. Weekly visits were made in June and July to monitor young.

For passerines, early morning counts of signing males were undertaken in May and June. For terns and gulls, sitting birds were counted and nest counts conducted where possible.

Dawn surveys were conducted fortnightly from mid-March to late April to listen for booming Bitterns. Regular surveying of Blakeney Freshes from Friary Hills and the surrounding sea wall enabled Marsh Harrier nesting areas to be located and young monitored.

# Blakeney National Nature Reserve Breeding Bird Report 2017

Table 1: Breeding bird species on Blakeney National Nature Reserve:

Species	Methodology	Blakeney Point	Blakeney Freshes	Stiffkey Meals	Chapel Island	Total
Mute Swan	Minimum pairs	0	6	0	0	6
Greylag Goose	Minimum pairs	1	3	0	0	4
Canada Goose	Minimum pairs	0	2	0	0	2
Egyptian Goose	Pairs*	0	1	0	0	1
Shelduck	Pairs*	62	9	0	3	74
Gadwall	Minimum pairs	3	6	0	1	10
Shoveler	Minimum pairs	0	8	0	2	10
Mallard	Minimum pairs	3	14	0	0	17
Pochard	Minimum pairs	0	1	0	0	1
Tufted Duck	Minimum pairs	0	2	0	0	2
Marsh Harrier	Nesting females	0	3	0	0	3
Red-legged Partridge	Nesting pairs	0	2	0	0	2
Grey Partridge	Nesting pairs	11	0	0	0	11
Pheasant	Territories	3	3	0	0	6
Water Rail	Minimum pairs	0	1	0	0	1
Moorhen	Minimum pairs	0	5	0	0	5
Coot	Minimum pairs	0	2	0	0	2
Avocet	Nesting pairs	15	22	0	1	38
Oystercatcher	Territories	64	3	5	1	73
Lapwing	Territories	0	37	0	0	37
Ringed Plover	Territories	12	0	2	0	14
Little Ringed Plover	Territories	0	2	0	0	2
Redshank	Territories	19	14	7	3	43
Black-headed Gull	Pairs*	485	60	30	0	595
Mediterranean Gull	Pairs*	4	0	0	0	4
Common Gull	Nesting pairs	1	0	0	0	1
Lesser Black-backed Gull	Nesting pairs	48	1	1	0	50
Herring Gull	Nesting pairs	118	0	0	0	118
Little Tern	Nesting pairs	64	0	0	0	65
Sandwich Tern	Nesting pairs	3	0	0	0	3
Common Tern	Nesting pairs	60	0	3	0	63
Arctic Tern	Nesting pairs	4	0	0	0	4
Wood Pigeon	Nesting pairs	6	0	0	0	6
Barn Owl	Nesting pairs	0	1	0	0	1
Barn Swallow	Nesting pairs	2	0	0	0	2
Skylark	Singing males	28	25	8	3	64
Meadow Pipit	Singing males	84	15	2	2	103
Pied Wagtail	Singing males	1	2	1	0	4
Wren	Singing males	6	1	0	0	7
Dunnock	Singing males	8	0	0	0	8
Sedge Warbler	Singing males	0	24	0	1	24
Cetti's Warbler	Singing males	0	3	0	0	3
Reed Warbler	Singing males	0	21	0	0	21
Blue Tit	Singing males	0	1	0	0	1
Bearded Tit	Singing males	0	4	0	0	4
Green Finch	Singing males	0	2	0	0	2
Linnet	Singing males	32	2	2	2	38
Reed Bunting	Singing males	29	11	1	1	42

\* indicates pairs that *attempted* to nest, but did not necessarily progress to the egg-laying stage

## Systematic List

### **Mute Swan** *Cygnus olor* (Green List)

Minimum pairs: 6  
 Fledged young: 4 (1 brood)  
 Productivity: 0.67

On Blakeney Freshes, six pairs were recorded. A nest was found in compartment 13 on 18<sup>th</sup> April, which had been abandoned by late May. On 9<sup>th</sup> May, a nest was found in compartment 6. Four cygnets were observed in compartment 6 on 10<sup>th</sup> July.

### **Greylag Goose** *Anser anser* (Amber List)

Minimum pairs: 4  
 Fledged young: 11 (2 broods)  
 Productivity: 2.75

On Blakeney Point, a nest containing eggs was found on the Hood. No young were observed. On Blakeney Freshes, a minimum of three pairs held territories. Two broods, of 5 and 6 goslings, were observed in compartment 3 on 12<sup>th</sup> May.

### **Canada Goose** *Branta Canadensis* (Naturalised)

Minimum pairs: 2  
 Fledged young: 0

Up to ten individuals were recorded on Blakeney Freshes throughout April. Two pairs displayed territorial behaviour. No young were seen.

### **Egyptian Goose** *Alopochen aegyptiaca* (Naturalised)

Pairs: 1  
 Fledged young: 0

A pair was observed frequently on Blakeney Freshes between mid-April and early May, but did not go on to breed.

### **Shelduck** *Tadorna tadorna* (Amber List)

Pairs: 74  
 Fledged young: 76 (11 broods) minimum  
 Productivity: 1.03

An early morning coordinated count, of birds gathered in breeding areas, was conducted on 26<sup>th</sup> April. A total of 148 birds – interpreted as 74 pairs – were recorded across the National Nature Reserve [see Table 1], of which most are presumed to have nested, although the number of nests is uncertain due to most pairs nesting underground. It is therefore a possibility that the number of pairs that actually nested was lower than 74.

Table 1: Nesting Shelduck pairs:

Location	Pairs
Blakeney Point	62
Blakeney Freshes	9
Chapel Island	3
<b>Total:</b>	<b>74</b>

On Blakeney Freshes, a pair with eight young was seen in compartment 3 on 4<sup>th</sup> June and again on 27<sup>th</sup> in the harbour north of the Freshes. In the harbour off Blakeney Point, a minimum of ten pairs were observed throughout the season with broods totalling 68 young.



**Gadwall** *Anas strepera* (Amber List)

Minimum pairs: 9

Fledged young: none seen

Three pairs nested along Blakeney Point, although no young were observed. Six pairs were recorded on Blakeney Freshes, also with no young were observed.

**Shoveler** *Anas clypeata* (Amber List)

Minimum pairs: 10

Fledged young: none seen

Eight pairs were recorded on Blakeney Freshes and two on Chapel Island. No young were observed at either location.

**Mallard** *Anas platyrhynchos* (Amber List)

Minimum pairs: 17

Fledged young: 60 minimum (12 broods)

Productivity: 2.82

On Blakeney Freshes, 14 breeding pairs were recorded. A brood of 3 ducklings was observed in compartment 26 on 22<sup>nd</sup> April and a brood of 8 ducklings was observed in compartment 33 on 23<sup>rd</sup>. Two ducklings were recorded in compartment 10 on 9<sup>th</sup> May and four in compartment 31 on 12<sup>th</sup>. On 28<sup>th</sup> May, five small ducklings were observed in compartment 27. On 1<sup>st</sup> June, two broods of three were observed in compartments 36 and 23. On 11<sup>th</sup> June, 12 three-week-old chicks were observed near the cart track. On 27<sup>th</sup> June, six chicks were recorded in compartment 33. Four large young were observed in compartment 34 on 24<sup>th</sup> July.

On Blakeney Point, two pairs bred along the edge of the main shingle ridge. On Far Point, a Domestic Mallard was observed incubating eggs on 7<sup>th</sup> May, with a brood of 12 young seen later in the month. A second clutch of 12 eggs was laid in June, with young observed in July.

**Pochard** *Aythya farina* (Red List)

Minimum pairs: 1

Fledged young: 3 (1 brood)

Productivity: 3.0

A pair nested in the vicinity of compartment 36, on Blakeney Freshes. Three young were observed swimming there on 1<sup>st</sup> June.

**Tufted Duck** *Aythya fuligula* (Amber List)

Minimum pairs: 2

Fledged young: 6 (1 brood)

Productivity: 3.0

Two pairs were recorded on Blakeney Freshes; in compartments 2 and 36. Six young were observed swimming at the latter location on 1<sup>st</sup> June.

**Marsh Harrier** *Circus aeruginosus* (Amber List) (Schedule 1)

Nesting females: 3 (2 males)

Fledged young: 3 minimum (2 broods)

Productivity: 1.0

Two females nested successfully in the Great Barnett reedbed in association with one male. A pair also nested to the east, in the vicinity of compartment 29. Three fledged young were observed from the Barnett nests on 11<sup>th</sup> July. No young from the eastern nest were observed.

**Kestrel** *Falco tinnunculus* (Amber List)

Nesting pairs: 1  
Fledged young: none seen

A pair bred in woodland at Wiveton Hall fruit farm, adjacent to Blakeney Freshes, on land outside of National Trust ownership. There were sightings of both the male and female on Blakeney Point, predated Little Tern chicks from the Watch House colony.

**Red-legged Partridge** *Alectoris rufa* (Naturalised)

Nesting pairs: 2  
Fledged young: none seen

Two territories were identified on Blakeney Freshes on 18<sup>th</sup> April. No young were seen. A lone adult was observed frequently on Blakeney Point throughout the season, often in the dunes near the Gap. A lone adult was also recorded at the Marrams on the evening of 14<sup>th</sup> March.

**Grey Partridge** *Perdix perdix* (Red List)

Nesting pairs: 11  
Fledged young: 21 (4 broods) minimum  
Productivity: 1.9

On 2<sup>nd</sup> February, a total of 42 birds were recorded on the headland of Blakeney Point; four coveys and two additional pairs. A separate pair was observed by the Old Glaven channel on 10<sup>th</sup> January. On 7<sup>th</sup> March, 12 territories were recorded across the Point. Of these, 11 were recorded in the breeding season; five pairs from Cley beach to Yankee Ridge and six pairs on the headland. A nest containing 18 eggs was observed in the dunes northwest of Great Sandy Low. This clutch hatched, as identified by adult behaviour. Two broods were observed frequently between late July and mid-September; 12 on Far Point and 10 near the Plantation. The latter consisted of 18 young of which ten fledged. In addition, groups of five and two fledged young were observed on 4<sup>th</sup> October. A lone adult was recorded on Blakeney Freshes on 18<sup>th</sup> April, but no sign of a pair was recorded throughout the breeding season.

**Pheasant** *Phasianus colchicus* (Naturalised)

Territories: 6  
Fledged young: 1 minimum  
Productivity: 0.17

On Blakeney Point, a male was observed on the shingle ridge near the Fairway on 1<sup>st</sup> January and another was flushed from the main dunes on 2<sup>nd</sup> February. The latter, displaying a characteristic silver back, was observed frequently throughout the year. A male held a territory on the western side of the Hood from 7<sup>th</sup> March onwards. Although these three males were seen regularly, no females were observed.

Three males were present on Blakeney Freshes throughout the breeding season, in the northern fields. Two of these males were regularly observed with females. A fledged juvenile was observed in compartment 3 on 15<sup>th</sup> August.

**Water Rail** *Rallus aquaticus* (Green List)

Territories: 1  
Fledged young: 2  
Productivity: 2.0

On Blakeney Freshes, an adult with two large juveniles was observed in compartment 4 on 24<sup>th</sup> July.

**Moorhen** *Gallinula chloropus* (Green List)

Minimum pairs: 5

Fledged young: none seen

Five pairs were recorded on Blakeney Freshes. No young were observed.

**Coot** *Fulica atra* (Green List)

Minimum pairs: 2

Fledged young: 2

Productivity: 1.0

Two pairs were recorded on Blakeney Freshes. A brood of two young were observed in the pond in compartment 32 on 24<sup>th</sup> May.

**Avocet** *Recurvirostra avocetta* (Amber List) (Schedule 1)

Nesting pairs: 38

Fledged young: 14 minimum

Productivity: 0.37

The first egg was laid on Blakeney Point on 18<sup>th</sup> April. A total of 14 pairs nested along the shingle ridge west of Cley beach. This colony was enclosed by a fence line approximately 500 metres long. One pair nested further west, inside the Little Tern enclosure east of the Watch House. An additional pair were seen prospecting near the Hood, but did not nest. Three broods were observed, totalling nine young.



Figure 2: Avocets displaying (Richard Porter)

On Blakeney Freshes, 22 nesting pairs were recorded [see Map 5]. Ten birds were observed by the east scrape within compartment 3 on 14<sup>th</sup> April, with three birds sat by 16<sup>th</sup>. This had risen to 11 pairs by 18<sup>th</sup>. On the same date, nine nesting pairs were recorded by the west scrape in compartment 3, plus further pairs in compartments 6 and 24, the former fledging a single chick. Three chicks hatched by the east scrape on 5<sup>th</sup> May, dropping to two on 12<sup>th</sup>. Further broods of three, three and four were observed on 18<sup>th</sup> May, the latter having crossed the sea wall in to the Glaven channel. Another brood of four was observed on 25<sup>th</sup> May plus one fledged juvenile. Predation by Grey Heron was observed on two occasions in the second half of May.

**Oystercatcher** *Haematopus ostralegus* (Amber List)

Territories: 73

Fledged young: 30 minimum

Productivity: 0.41

On Blakeney Point, 64 territories were recorded; 25 along the main ridge and 39 on the headland. Nine nests were monitored on the Landing Ridge, of which six were successful (0.67 productivity): three pairs fledged two young, two pairs fledged a single young and one pair fledged four. Of the three unsuccessful nests, two were predated by Herring Gull and one was washed out by a large tide. The latter pair laid a second clutch on a *Suaeda* bush, but the eggs fell through. A pair near the Gap fledged a single young, a pair by the huts fledged three and a pair in the dunes northwest of Great Sandy Low fledged two. Common Gull predation was recorded on the beach. A minimum of 30 young fledged on the headland. An adult with a metal leg ring was observed at the Gap, presumed to be the same individual recorded in this location for numerous breeding seasons.



Figure 3: Oystercatcher chick amongst Sea Sandwort (Richard Porter)

Three pairs were present on Blakeney Freshes throughout the breeding season, although no nests or young were recorded. On Stiffkey Meals, five pairs bred and four juveniles fledged; a brood of three in late June plus an individual in July.

**Lapwing** *Vanellus vanellus* (Red List)

Territories: 37  
Fledged young: 8 minimum  
Productivity 0.21

A total of 37 territories were recorded on Blakeney Freshes [see Map 7]. Birds were sat on eggs by 18<sup>th</sup> April. Chicks were first observed on 4<sup>th</sup> May, with a minimum of five broods observed in compartments 5, 24, 32 and 35. Three fledged young were recorded on 25<sup>th</sup> May and three on 8<sup>th</sup> June. Young were observed being led over the sea wall on 27<sup>th</sup> June.

**Ringed Plover** *Charadrius hiaticula* (Red List)

Territories: 14  
Fledged young: 8 (5 broods) minimum  
Productivity: 0.57

On Blakeney Point, 12 territories were recorded; six along the main ridge and six on the headland. Three pairs nested in the Little Tern enclosure east of the Watch House; two pairs fledged two young and one pair fledged one. On the beach between Near Point and the Lifeboat House, a pair laid two clutches of four eggs, both of which were predated by Common Gulls. A second pair nested in this area, also experiencing



Common Gull predation within days of hatching. Three newly-hatched chicks in Great Sandy Low were predated, as was a brood on Beach Way. A single fledged chick was observed on the headland; recorded on the beach east of the Gap. Two pairs nested on Stiffkey Meals, one of which fledged two young.

**Little Ringed Plover** *Charadrius dubius* (Green List) (Schedule 1)

Territories: 2  
Fledged young: 1  
Productivity: 0.5

A bird was holding territory in compartment 1 on Blakeney Freshes by 16<sup>th</sup> April and on eggs by 3<sup>rd</sup> May. A second pair nested further west in the same field, later in May [see Map 6], laying four eggs, which were predated by 31<sup>st</sup>. The first pair hatched three chicks around 26<sup>th</sup> May, this had dropped to two by 31<sup>st</sup> and one by 4<sup>th</sup> June. The second pair had laid a second clutch by 4<sup>th</sup> June, but this clutch also failed at the egg stage in late June. A fledged juvenile was observed in compartment 2 on 10<sup>th</sup> July; the remaining chick from the first pair.

**Redshank** *Tringa tetanus* (Amber List)

Territories: 43  
Fledged young: good

On Blakeney Point, 19 territories were recorded; a minimum of ten along the main ridge plus nine on the headland. Two nests were found near the Old Tern Hide and four territories were recorded on Yankee Ridge. Hatching success was good. One adult was found predated by a fox, on Yankee Ridge. Chicks were observed in the Avocet enclosure on 22<sup>nd</sup> May and a fledged juvenile in the Little Tern enclosure on 22<sup>nd</sup> July.

On Blakeney Freshes, 14 territories were recorded. Pairs with young were observed leading young over the sea wall on 25<sup>th</sup> May. A minimum of seven territories were recorded on Stiffkey Meals.

**Black-headed Gull** *Chroicocephalus ridibundus* (Amber List)

Pairs: 595  
Fledged young: 2  
Productivity: <0.01

On Blakeney Point, approximately 450 pairs attempted to nest on the Marrams saltmarsh, where birds held territory from mid-March. Many nests were washed out by two high tides. Of the 450 pairs attempting to nest, few were successful. It was not possible to conduct a nest count, due to the colony being located on saltmarsh. It is estimated that approximately 50 pairs reached the egg-laying stage. Only two pairs fledged. A further 35 pairs, approximately, nested on the adjacent shingle ridge, within the Little Tern enclosure [see Map 8] from where none fledged.

On the tip of Far Point, 308 birds were recorded roosting on 13<sup>th</sup> March; however these had all deserted by 23<sup>rd</sup> due to disturbance caused by *Larus* gulls. Approximately 20 pairs nested on the tip of Far Point in late May [see Map 9], all of which were predated in June.

On Blakeney Freshes, 60 pairs nested, with no young fledging. A count of 150 birds was made on Stiffkey Meals on 13<sup>th</sup> May. Approximately 30 pairs went on to nest, although no fledged young were observed.



Figure 4: Fledged young Black-headed Gull (Richard Porter)

**Mediterranean Gull** *Larus melanocephalus* (Amber List) (Schedule 1)

Pairs: 4

Fledged young: 0

Four pairs were present amongst the Black-headed Gull colony on the Marrams saltmarsh [see Map 8]. None of these birds nested, simply loafing intermittently.



Figure 5: Mediterranean Gull (Richard Porter)

**Lesser Black-backed Gull** *Larus fuscus* (Amber List)

Territories: 50

Fledged young: 0

On Blakeney Point, approximately 48 pairs nested amongst Herring Gulls on Far Point [see Map 9]. Roosting began in early March with egg-laying from late April. All eggs were pricked, ensuring no young fledged. A pair was observed on Stiffkey Meals on 13<sup>th</sup> May, but did not go on to nest. Likewise, a pair was frequently seen on Blakeney Freshes throughout the breeding season – often in compartment 32 – but did not nest.

**Herring Gull** *Larus argentatus* (Red List)

Nesting pairs: 128

Fledged young: 0

On Blakeney Point, 127 pairs nested on Far Point and one on the tip of Middle Point [see Map 9]. The first nest scrape was discovered on Far Point on 1<sup>st</sup> March, with egg-laying commencing in late April. All eggs were pricked, under licence from Natural England, ensuring that no young fledged. Birds were seen in the vicinity of Stiffkey Meals early in the season, although none went on to nest there.



**Little Tern *Sternula albifrons*** (Amber List) (Schedule 1)

Nesting pairs: 65  
 Fledged young: 56  
 Productivity: 0.88

The first sighting was of two birds near the Gap on 21<sup>st</sup> April. Birds nested in four separate colonies along Blakeney Point.

Table 3: Little Tern productivity on Blakeney Point:

Colony	Total nesting pairs	Young fledged	Productivity
Watch House	53	55	1.04
Gap	2	1	0.5
Beach	3	0	0
Tip of Far Point	7	0	0
<b>Total:</b>	65	56	0.86

On 9<sup>th</sup> June, a coordinated count recorded 33 occupied nests at the Watch House. This had risen to 42 by the 26<sup>th</sup>, due to the arrival of birds elsewhere in Norfolk that suffered from tidal flooding, such as nearby Scolt Head Island. The first chick hatched on 19<sup>th</sup> June. By 2<sup>nd</sup> July, around 20 chicks were present. Late arriving nesting pairs, recorded on 10<sup>th</sup> July, took the total nests to 53 at the Watch House colony [see Map 8]. The drawn out nature of the nesting meant that birds fledged in waves, with 40 fledged by the end of July, followed by a further 15 fledging in the first half of August. There were frequent Kestrel visits to the colony in July, with a minimum of four chicks predated.



Figure 6: Little Tern fledgling (Richard Porter)

Elsewhere on the Point, seven nests on the tip of Far Point [see Map 9], recorded on 9<sup>th</sup> June, had all been predated by large gulls by the end of the month. Three nests in the beach colony succumbed to wind-blown sand in June. In the Gap colony, one nest succumbed to wind-blown sand whilst the other fledged a single chick.

**Sandwich Tern *Sterna sandvicensis*** (Amber List)

Nesting pairs: 3  
 Fledged young: 0

The first sighting was of six birds on Far Point on 23<sup>rd</sup> March. Roosting numbers increased throughout the first half of April, peaking around 300 birds. Birds did not set up territory on Far Point as a consequence of the absence of nesting Black-headed Gulls, which were deterred by the presence of a colony of Herring and Lesser Black-backed Gulls. In late April, the birds settled on the tip of Middle Point for approximately a week. They abandoned this territory in the first week of May, heading to breed on Scolt Head Island in west Norfolk.

Table 4: Sandwich Tern roost counts:

Date	Roost count
04/04/2017	80+
05/04/2017	200
10/04/2017	300
25/04/2017	300
02/05/2017	300

A late arrival of 276 birds was recorded on Far Point in the second week of June. On 15<sup>th</sup> June, a survey of the tip of Far Point recorded a single Sandwich Tern nest, containing a single egg. Two predated eggs were found nearby, doubtless predated by *Larus* gulls nesting nearby [see Map 9]. The single nest suffered the same fate, there were no further nesting attempts.

**Common Tern *Sterna hirundo* (Amber List)**

Nesting pairs: 63  
 Fledged young: 3 minimum  
 Productivity: 0.05

The first bird was observed on Blakeney Point on 18<sup>th</sup> April. Approximately 100 birds were recorded roosting on the tip of Far Point on 23<sup>rd</sup> May. On 15<sup>th</sup> June, a nest count was conducted on Far Point. A total of 60 nests were recorded [see Map 9], none of which had yet hatched. Three flying young were observed near the Watch House on 31<sup>st</sup> July, presumed to have come from Far Point. Other nests from this location were predated by the nearby nesting *Larus* gulls. Three pairs attempted at Stiffkey Meals, although no young were observed.

**Arctic Tern *Sterna paradisaea* (Amber List)**

Nesting pairs: 4  
 Fledged young: 1  
 Productivity: 0.25

Two pairs attempted to nest on the end of Middle Point in May, but were predated by Common Gulls. Both pairs went on to lay second clutches on the very tip of Far Point, alongside two other nesting pairs [see Map 9]. A minimum of two young hatched. One large chick was observed in July. On 1<sup>st</sup> June, an adult was observed feeding in the pond in compartment 4 on Blakeney Freshes.



Figure 7: Arctic Tern with chick (Richard Porter)

**Wood Pigeon** *Columba palumbus* (Green List)

Nesting pairs: 6  
Fledged young: 1  
Productivity: 0.17

On Blakeney Point, five nests with eggs were recorded amongst *Suaeda* along the Marrams. No young were subsequently observed in this area. A pair nested in the Plantation, fledging a single chick in September.



Figure 8: Wood Pigeon chick in nest (Ryan Doggart)

**Barn Owl** *Tyto alba* (Amber List) (Schedule 1)

Nesting pairs: 1  
Fledged young: 2  
Productivity: 2.0

On Blakeney Freshes, a pair utilised both boxes to the east of Marsh Lane, hatching three chicks. Feeding flights were noted from 12<sup>th</sup> May. Two fledged young were observed in early August, with a third found dead in grass near one of the nest boxes.

**Skylark** *Alauda arvensis* (Red List)

Territories: 64  
Fledged young: seen

On Blakeney Point, 28 pairs were recorded, eight of which were along the main ridge with the majority in the main dunes. Young were observed in the latter location. On Blakeney Freshes, 25 territories were recorded. Two juveniles observed on 24<sup>th</sup> July. Eight territories were recorded on Stiffkey Meals and three on Chapel Island.

**Barn Swallow** *Hirundo rustica* (Amber List)

Nesting pairs: 2  
Fledged young: 5  
Productivity: 2.5

On Blakeney Point, two pairs nested. One pair nested in the Old Tern Hide, but was unsuccessful. Five young fledged from a nest inside the generator shed.

**Meadow Pipit** *Anthus pratensis* (Amber List)

Territories: 103  
Fledged young: seen

On Blakeney Point, a minimum of 84 territories were recorded. Approximately 30 territories were along the main ridge with the majority in the main dunes. Young were



observed across the Point, with several pairs fledging second broods. A minimum of 15 pairs were recorded on Blakeney Freshes. Two territories were recorded on Stiffkey Meals and two on Chapel Island.

**Pied Wagtail** *Motacilla alba yarrellii* (Amber List)

Nesting pairs: 5  
Fledged young: 11  
Productivity: 2.2

On Blakeney Point, a pair bred in a nest box on the Lifeboat House lookout tower, fledging three young. A pair attempted to breed at the Watch House, but aborted before laying eggs. Two juveniles were observed on Blakeney Freshes on 24<sup>th</sup> July and three on 22<sup>nd</sup> September. Three juveniles were observed at Morston Quay on 6<sup>th</sup> September.

**Wren** *Troglodytes troglodytes* (Green List)

Territories: 7  
Fledged young: 3 broods minimum

On Blakeney Point, six territories were recorded; four along the main ridge, one on Yankee Ridge and one in the Plantation. Three successfully fledged broods were seen; at the Watch House, Hood and Long Hills. On Blakeney Freshes, a territory was recorded on the southern hedgerow of compartment 34.

**Duncock** *Prunella modularis* (Amber List)

Territories: 8 minimum  
Fledged young: none seen

On Blakeney Point, eight territories were recorded; three on the headland and a minimum of five along the main ridge. No young were seen.

**Sedge Warbler** *Acrocephalus schoenobaenus* (Green List)

Territories: 25 minimum  
Fledged young: seen

On Blakeney Freshes, a minimum of 24 territories were recorded. A territory was also recorded on the northern side of Chapel Island. On 1<sup>st</sup> June, an adult was observed feeding young by Marsh Lane.

**Cetti's Warbler** *Cettia cetti* (Green List) (Schedule 1)

Territories: 3  
Fledged young: none seen

On Blakeney Freshes, a bird was recorded in the southern ditch on 22<sup>nd</sup> April. A total of three territories were identified; one by the cart track, one north of Friary Hills and one by Marsh Lane. No young were seen.

**Reed Warbler** *Acrocephalus scirpaceus* (Green List)

Territories: 21 minimum  
Fledged young: seen

On Blakeney Freshes, a minimum of 21 territories were recorded.

**Blue Tit** *Cyanistes caeruleus* (Green List)

Territories: 1  
Fledged young: 4  
Productivity: 4.0

A pair nested by the cart track on Blakeney Freshes. On 8<sup>th</sup> June, four young were observed.

**Bearded Tit** *Panurus biarmicus* (Amber List) (Schedule 1)

Territories: 4  
Fledged young: 6 minimum  
Productivity: 1.5

A pair was observed by the Great Barnett reedbed on 5<sup>th</sup> April. A total of three pairs were identified by late May, with young observed on 27<sup>th</sup>. A minimum of six young fledged from this area, with a mixed age group of 12 birds recorded on 22<sup>nd</sup> September. A fourth pair held a territory in compartment 22.

**Greenfinch** *Chloris chloris* (Green List)

Territories: 2  
Fledged young: 2  
Productivity: 1.0

On Blakeney Freshes, two territories were recorded; one on the southern hedgerow of compartment 34 and one by the cart track. Two young were seen by the cart track on 1<sup>st</sup> June.

**Linnet** *Carduelis cannabina* (Red List)

Territories: 38  
Fledged young: seen

On Blakeney Point, 32 territories were recorded, of which 22 were along the main ridge and five in the Lifeboat House garden. Young were observed in the latter location. Two pairs were observed nest building in compartment 1 on Blakeney Freshes on 28<sup>th</sup> May. Two territories were recorded on Stiffkey Meals and two on Chapel Island.



Figure 9: Linnet with nesting material (Richard Porter)

**Reed Bunting** *Emberiza schoeniclus* (Amber List)

Territories: 42  
Fledged young: seen

On Blakeney Point, 29 territories were recorded, 24 of which were along the main ridge. Young were recorded on Far Point and Beach Way. Eleven territories were recorded on Blakeney Freshes around the sea wall and along both the cart track and Marsh Lane. A territory was also recorded on Stiffkey Meals and one on Chapel Island.

## Historical breeding bird data

Table 5: Breeding bird species on Blakeney Point 2008-17:

Species	Number of breeding pairs									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Greylag Goose	1	1	0	1	0	0	0	0	2	1
Shelduck	30	41	35	44	50	65	68	59	61	62
Gadwall	4	5	1+	2	3	4	5	5	5	3
Mallard	2	2	3	0	5	5	4	6	7	3
Grey Partridge	1	3	3	3	5	9	7	5	7	11
Pheasant	0	0	0	0	1	1	1	3	5	3
Oystercatcher	124	135	118	110	103	102	85	79	84	64
Avocet	0	0	0	0	9	12	13	16	17	15
Ringed Plover	13	13	15	17	14	12	11	13	11	12
Redshank	5	14	13	14	15	15	16	17	19	19
Black-headed Gull	1250	1900	1800	1807	2000	2200	2419	2104	875	505
Mediterranean Gull	3	5	5	10	12	15	8	4	5	4
Herring Gull	0	0	0	0	3	12	3	6	19	48
Lesser Black-backed Gull	0	0	0	0	0	1	1?	1?	4	118
Little Tern	101	86	70	150	139	121	110	52	61	65
Sandwich Tern	2400	3100	2500	3562	3575	4120	2859	1113	451	3
Common Tern	103	81	75	92	67	48	87	130	128	60
Arctic Tern	17	9	9	7	7	5	4	4	3	4
Wood Pigeon	4	2	2	1	1	2	1	1	2	6
Skylark	36	39	43	32	35	33	39	49	48	28
Barn Swallow	5	3	4	7	5	3	2	1	2	2
Meadow Pipit	107	109	111	102	110	100	102	128	151	84
Pied Wagtail	3	1	1	0	1	1	1	1	1	1
Wren	4	11	15	15	9	8	4	9	6	6
Dunnock	8	9	10	6	11	10	11	14	7	8
Linnet	22	17	30	20+	30	40	45	59	54	32
Reed Bunting	22	26	21	16	22	16	27	38	27	29

Table 6: Little Tern productivity on Blakeney National Nature Reserve 2008-17:

Year	Watch House		Hood		Gap		Beach		Tip of Far Point		Stiffkey Meals		Total		
	Pr.	Fl.	Pr.	Fl.	Pr.	Fl.	Pr.	Fl.	Pr.	Fl.	Pr.	Fl.	Pr.	Fl.	Prod.
2008	0	0	19	12	0	0	73	37	7	1	2	0	101	50	0.50
2009	0	0	30	21	0	0	56	30	0	0	2	0	88	51	0.58
2010	2	0	20	0	0	0	69	15	0	0	6	0	97	15	0.15
2011	5	10	10	18	1	0	119	80	15	12	10	0	160	120	0.75
2012	7	16	17	6	3	0	97	6	15	0	1	0	140	28	0.20
2013	15	7	11	1	3	0	78	12	13	4	3	0	123	24	0.20
2014	21	4	6	1	2	2	67	0	14	0	0	0	110	7	0.06
2015	19	21	0	0	10	12	7	0	16	0	2	0	54	33	0.61
2016	13	9	0	0	0	0	0	0	48	0	0	0	61	9	0.15
2017	53	55	0	0	2	1	3	0	7	0	0	0	65	56	0.86



## Blakeney National Nature Reserve Breeding Bird Report 2017

Table 7: Breeding bird species on Blakeney Freshes 2008-17:

Species	Number of breeding pairs									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Mute Swan	4	4	3	NC	7	5	5	5	5	6
Greylag Goose	6	10	6	NC	4	5	5	4	3	3
Canada Goose	2	2	2	NC	3	3	5	2	4	2
Egyptian Goose	1	2	2	NC	1	1	0	0	0	1
Shelduck	1	0	7	NC	20	1+	11	17	13	9
Gadwall	4	2	4	NC	5	7	2	2	1	6
Shoveler	4	4	4	NC	2+	8	3	2+	NC	8
Mallard	8	30	25	NC	23	27	20	11+	7	14
Pochard	1	3	3	NC	3	2	3	4	?	1
Tufted Duck	1	7	7	NC	11	11	7	5	?	2
Marsh Harrier	3	3	3	3	3	3	3	3	3	3
Red-legged Partridge	2	2	1	NC	1	1	1	2	NC	2
Grey Partridge	0	0	1	NC	1?	2	1	0	1	1
Pheasant	?	5	3	NC	9	11	3	3	NC	3
Moorhen	11	10	8	NC	9	8	6	3+	3	5
Coot	16	14	10+	NC	10+	10+	10	10+	2+	2
Oystercatcher	19	9	14	NC	16	16	10	7	6	3
Avocet	14	7	12	NC	9	9	15	17	22	22
Little Ringed Plover	0	0	0	0	0	0	1	1	2	2
Lapwing	39	45	45	NC	37	32	32	35	25	37
Redshank	21	19	18	NC	23	22	15	15	15	14
Black-headed Gull	8	10	10	0	0	0	12	10	62	60
Barn Owl	1	1	1	1	1	1	1	1	1	1
Skylark	22	27	24	NC	20+	20+	20+	24	NC	25
Meadow Pipit	14	19	18	NC	15+	15+	15+	15+	NC	15
Sedge Warbler	51	65	55	NC	30+	35+	35+	21	NC	24
Cetti's Warbler	7	4	2	NC	3	2	1	2	2	3
Reed Warbler	19	36	48	NC	30+	30+	30+	23	NC	21
Bearded Tit	4	4	4	NC	3	1	2	3	2	4
Reed Bunting	8	9	7	NC	7	7	7	11	NC	11

NC = note counted

Table 8: Breeding bird species on Chapel Island 2008-17:

Species	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Shoveler	NC	NC	NC	NC	NC	NC	1	1	2	2
Shelduck	NC	NC	NC	NC	NC	NC	NC	3	3	3
Oystercatcher	NC	NC	NC	NC	NC	NC	NC	1	1	1
Avocet	16	14	10	7	0	0	0	1	1	1
Redshank	NC	NC	NC	NC	NC	NC	NC	3	3	3
Skylark	NC	NC	NC	NC	NC	NC	NC	4	3	3
Meadow Pipit	NC	NC	NC	NC	NC	NC	NC	2	2	2
Sedge Warbler	NC	NC	NC	NC	NC	NC	NC	1	1	1
Linnet	NC	NC	NC	NC	NC	NC	NC	3	2	2
Reed Bunting	NC	NC	NC	NC	NC	NC	NC	2	1	1

## Comments and observations

### Little Tern breeding behaviour

For a second year, predation by Herring and Lesser Black-backed Gulls prevented fledging from the tip of Far Point. All seven nests failed at the egg stage. For a third year, no birds nested in the Hood colony. Like in 2016, the Watch House colony did not experience predation by large gulls but did experience chick predation by Kestrel. The size of the colony resulted in the Kestrel being driven away by the terns with a high level of success. Provision of shelters supported chick survival and vegetation cover profile assisted in concealing chicks. For a second year, the presence of nesting Black-headed Gulls in the Watch House colony had no impact on Little Tern nesting.

With birds on nests at the Watch House colony from late May to early July, the successional colony meant a significant number of birds were in the vicinity of the colony throughout the whole season, enabling predation and disturbance to be absorbed. Additional birds from other colonies, which suffered tidal flooding of nests, contributed to the size and successional nature of the colony.

A high level of protection from disturbance, and observation hours, was afforded from dedicated volunteers and seasonal rangers, further reducing the impact of predation. This protection meant that human disturbance was minimised, with presence at the Watch House colony almost daily from late May to mid-August. Numerically and strategically improved dog signs helped alleviate dog disturbance. Siting of the mobile hide in the middle of the colony increased surveillance.

Weather conditions in June and July were, with a few exceptions, sympathetic to breeding success. Unlike other breeding sites in Norfolk, there was no detrimental effect from tidal surges at Blakeney. Food supply was reliable throughout the season. A high delivery rate to chicks was frequently observed.

In total, four more pairs bred at Blakeney than the 61 in 2016. However, this is still significantly below the five-year average of 98 pairs. The Norfolk population, as a whole, saw an increase from 573 pairs in 2016 to 603, just below the five-year average of 674 pairs. A total of 10.78% of breeding Little Tern pairs in Norfolk bred at Blakeney, the same percentage as 2016. Blakeney experienced the second highest productivity in Norfolk, after Eccles. Productivity at Blakeney was twice that of Norfolk as a whole.

Table 9: Little Tern productivity across Norfolk:

Location	Breeding pairs	Fledglings	Productivity
Holme	12	3	0.25
Scolt Head Island	93	0	0
Holkham	47	1	0.02
Blakeney	65	56	0.86
Eccles	146	154	1.05
Winterton	140	52	0.37
Scroby Sands	100	0	0
<b>Total:</b>	603	266	0.44

## **Shorebird protection**

In October 2016, following advice from Dr Tony Martin, a shorebird protection project was implemented. This consisted of a system of permanent and seasonal bait stations for rat control across Blakeney Point. Bait stations were monitored weekly throughout November and December and fortnightly between January and March, replenishing bait as necessary. A drop in bait uptake indicated a reduction in the rat population. The geography of Blakeney Point is such that rats can continually colonise it by spreading from the mainland. Keeping the dense network of bait stations stocked ensures that arriving rats can be poisoned before becoming established.

As a result of this project, the rat predation issues experienced in 2016 did not reoccur. Although a rat was seen on the Landing Ridge in the breeding season, there was no significant impact on the nearby nesting Oystercatchers, unlike in 2016. It is therefore assumed that the rat was poisoned by the bait. Although a rat-free colony area was available for Sandwich Terns on Far Point, other factors prevented their colonisation. For several decades, Sandwich Terns have only settled on Blakeney Point – and Scolt Head – after Black-headed Gulls had settled. Despite kleptoparasitism, the terns benefit from nesting near Black-headed Gulls, as they are more effective at driving off predators. Decoys were put out to attract Black-headed Gulls; however the presence of a mixed Herring and Lesser Black-backed Gull colony prevented their colonisation. It is also possible that increased vegetation cover was unattractive to the Sandwich Terns.

During March and early April, the Herring and Lesser Black-backed Gulls were disturbed frequently. From late April, an agri-laser was used daily for a three week period, to increase disturbance. Between late April and early May, 147 hours were spent deterring gulls on Far Point. During this period, no Black-headed Gulls or terns settled on Far Point. Gull deterrence ceased in early May, when Little Terns began prospecting in the vicinity. Between 6<sup>th</sup> May and 3<sup>rd</sup> July, all Herring and Lesser Black-backed Gull eggs were pricked – under licence from Natural England, which was extended three times to cover 120 nests – this resulted in zero productivity.

Between January and July, approximately 200 hours were spent on predator control work across both Blakeney Freshes and Point. This work was undertaken by a contractor working alongside National Trust staff.

## **Habitat management**

Working closely with the grazier on Blakeney Freshes, cattle were moved onto fields with the least breeding activity to minimise trampling of nests. Topping was undertaken to control thistles and also Ragwort on Blakeney Eye, keeping cattle off for a specified period afterwards. Ragwort was manually uprooted on Friary Hills and at Morston. Control of water levels on Blakeney Freshes enabled the desired amount of water to be retained throughout the breeding season to the benefit of breeding wading bird species. In the preceding winter, ditch clearance took place in accordance with the six-year rotation management scheme. Water levels were dropped, in February, to complete reedbed cutting in accordance with the five-year rotation management scheme. Levels were raised again in March and kept high throughout the breeding season, sufficiently filling scrapes and pools, creating islands for breeding waders.

## Discussion

The breeding Marsh Harrier population on Blakeney Freshes appears to be stable. With the same pairs – three females and two males – believed to have bred for at least the last ten years. As usual, they managed to fledge young, with two broods. The usual pair of Barn Owls nested in the box near Marsh Lane, fledging two young. For a second year, a Kestrel bred near the reserve and predated Little Terns near the Watch House.

Avocet numbers appear to be stable across the reserve. Chick predation by Grey Heron was witnessed on Blakeney Freshes. For a third year, Little Ringed Plovers bred successfully on Blakeney Freshes. Like in 2016, two pairs bred, with one pair fledging young. Breeding Ringed Plover pairs are low but appear to be stable on Blakeney Point. Redshank appears to have had another good year across the reserve. The decline in the Oystercatcher population on Blakeney Point appears to be continuing, with a 24% decrease in breeding pairs from 2016 to 2017. However, estimated productivity rose from 0.3 to 0.41.

No breeding birds on the reserve were significantly affected by foxes or rats. The bait station program on Blakeney Point successfully prevented significant rat predation. There was, however, *Larus* gull predation on Far Point due to the presence of a mixed breeding colony of Herring and Lesser Black-backed Gulls. All eggs were pricked, ensuring no young fledged. However, their presence appeared to prevent Black-headed Gulls from colonising their usual area on Far Point. This consequently prevented the Sandwich Terns from colonising. Instead, the Sandwich Terns deserted to Scolt Head Island, for a third consecutive year – where approximately 4665 pairs fledged approximately 4300 young (0.92 productivity) – continuing to demonstrate how valuable it is that they have two suitable breeding areas in Norfolk should one experience predator problems. Black-headed Gulls dispersed across the reserve. Like in 2016, birds bred on Stiffkey Meals, Blakeney Freshes and the main ridge of Blakeney Point. A large colony also formed on saltmarsh at the Marrams, where only two birds fledged due to repeated tidal flooding. Like in 2016, four pairs of Mediterranean Gulls were present on the Point, although none successfully nested.

Little Terns nested in four colonies on Blakeney Point. Unlike in 2016, the majority did not nest on the tip of Far Point, this year favouring the Watch House colony. A small number nested in the beach and Gap enclosures for the first time since 2015. For a third year, none nested east of the Hood. A mixture of good weather, good feeding, low disturbance aided by volunteer presence led to high productivity at the Watch House colony; 1.04. The successional nature of the colony, with additional birds arriving throughout the season, enabled the colony to cope with Kestrel predation.

Common Tern numbers showed a decrease on Blakeney Point, with the lowest number breeding since 2013. This is most likely a consequence of disturbance and predation by nesting *Larus* gulls close to the colony. Three pairs nested at Stiffkey Meals, presumably failed breeders from the Point, but were not successful.

Numbers of Bearded Tit pairs nesting on Blakeney Freshes rose to four pairs, from two in 2016, with a minimum of six young fledging. Cetti's Warbler territories rose to three, from two in 2016, but with no young seen for a third consecutive year.

Following two years of suspected, but unproven breeding, Water Rail breeding was confirmed, with two young observed on Blakeney Freshes. This is the first sighting of young on the reserve since 2002.

Breeding pairs of Shelduck appear to be stable, with a marginal increase in productivity this year. Mallard experienced a particularly high productivity, with several broods observed on Blakeney Freshes.

The Grey Partridge population continues to grow on Blakeney Point, with a record number of breeding pairs. Like in 2016, four broods were observed, although productivity showed a decrease.

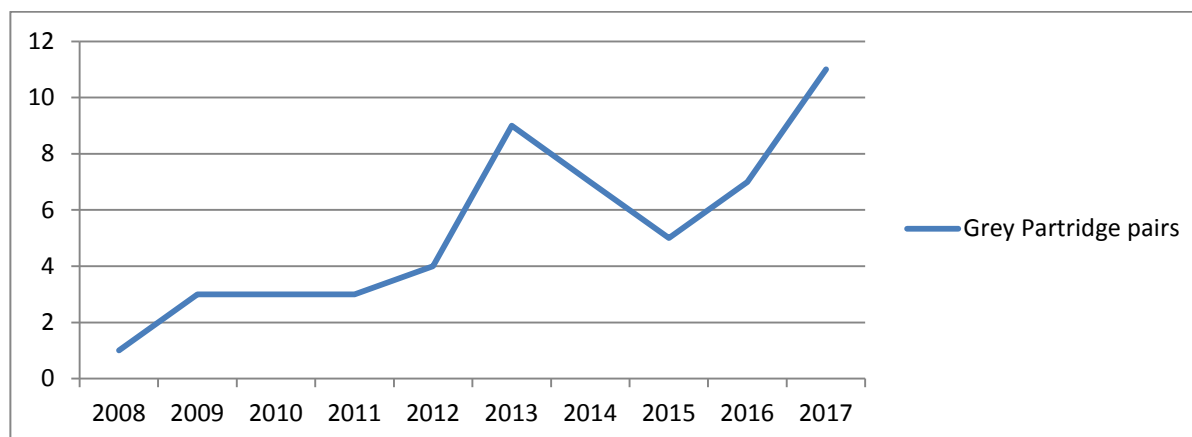


Figure 10: Graph showing Grey Partridge population change on Blakeney Point 2008-2017

Breeding passerine populations appear to be stable across the reserve. Meadow Pipits continue to be the most productive passerine species.

## Acknowledgements

Breeding bird surveys were conducted by Ryan Doggart, Howard Jones, Richard Porter, myself, Tom Whiley and Luke Wilkinson with valuable observations by Carl Brooker, Malcolm Davies, John Furse, Mark Golley, George Kendall, Bill Landells, James McCallum, Paul Nichols, Barrie Slegg and Stuart Warrington. Huge thanks to the Little Tern volunteers for their commitment to protecting the Watch House colony. Thanks also to the wider National Trust team for support – and to Richard Porter for his photography.

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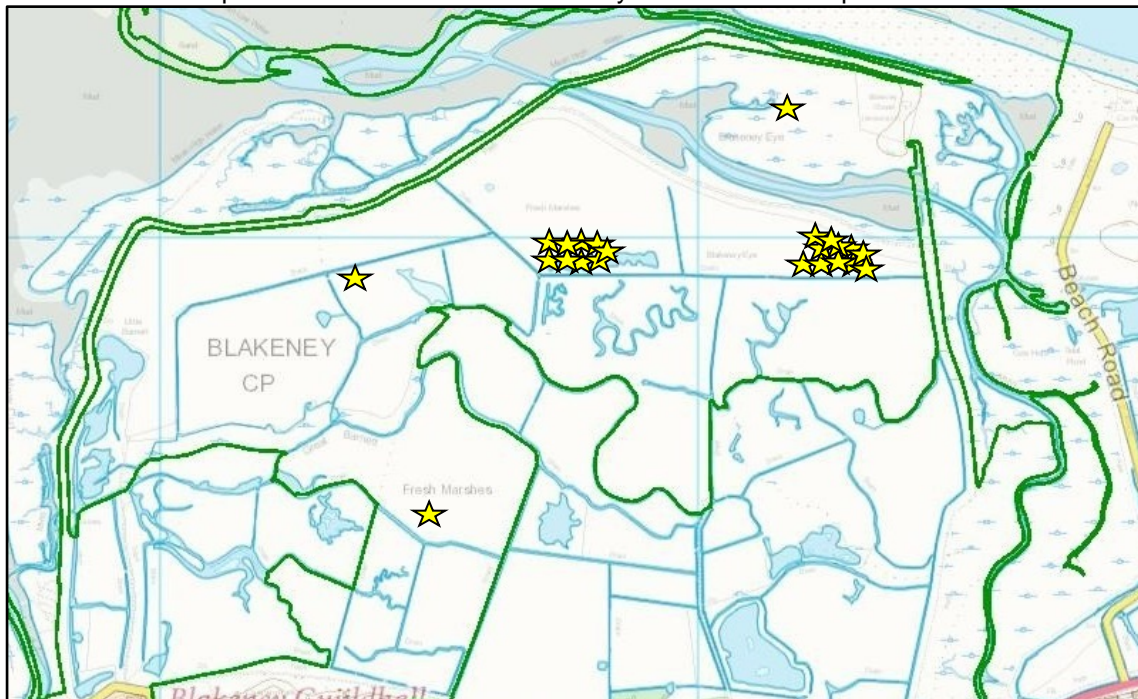
**Tel. 01263 741694  
Mob. 07786 690062**



## Additional maps

### Breeding wader territories on Blakeney Freshes

Map 5: Avocet nest sites on Blakeney Freshes and Chapel Island:

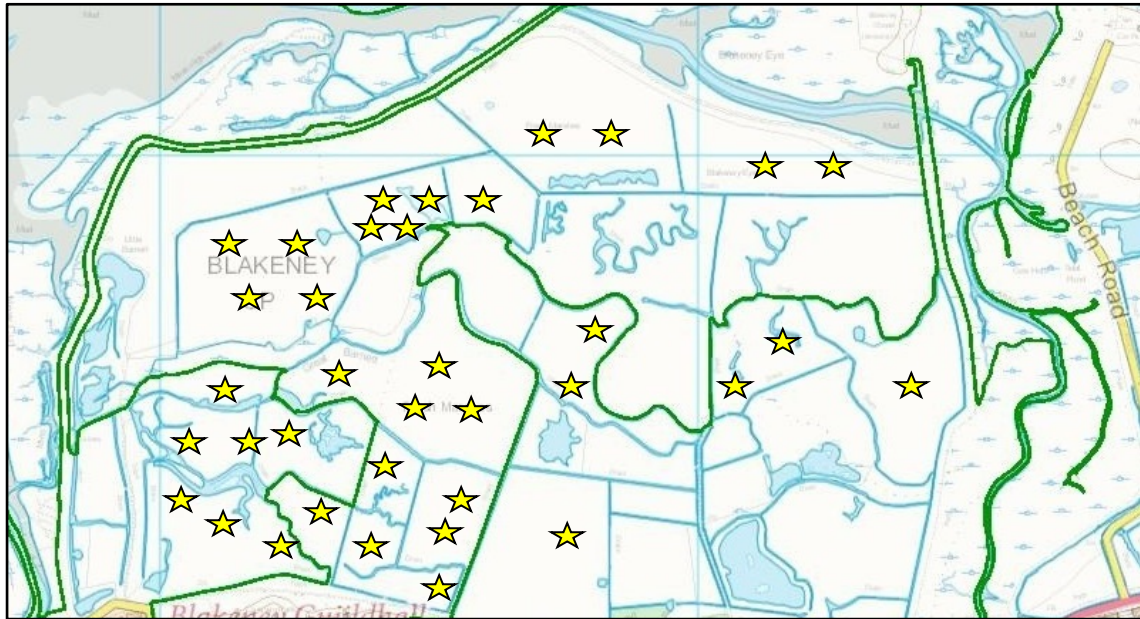


Map 6: Little Ringed Plover nest sites on Blakeney Freshes:





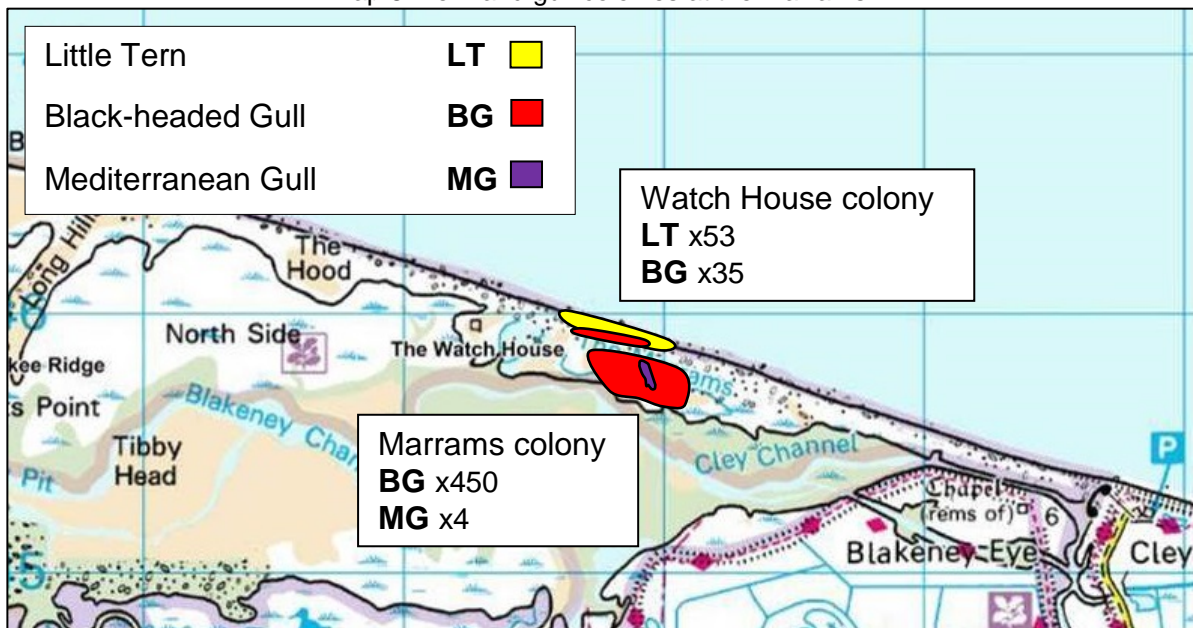
Map 7: Lapwing territories on Blakeney Freshes:



### Tern and gull colonies on Blakeney Point

Exact shape and size of the colonies may not be completely accurate. The aim is to show the location and proximity of colonies. Numbers shown are peak pair counts.

Map 8: Tern and gull colonies at the Marrams:



Map 9: Tern and gull colonies on Far Point:





## Breeding birds on Friary Hills

Although not part of Blakeney Freshes, a breeding bird survey was conducted on the adjacent Friary Hills on 1<sup>st</sup> June. On this date, two Wren territories and a Chaffinch territory were recorded. Two Greenfinch young and four Great Tit young were also recorded. Linnet, Long-tailed Tit, Blackbird and Wood Pigeon have all been known to breed on the site, but were not recorded on this survey.

## Breeding birds at Salthouse

Although not part of Blakeney National Nature Reserve, some land further to the east, at Salthouse, is owned and managed by the National Trust. This includes Little Eye and Gramborough Hill.

Map 10: National Trust ownership at Salthouse:



Two enclosures were erected; one to the west of Beach Road and one to the east. An Avocet nested in the western enclosure. A fledged juvenile Avocet was observed on 22<sup>nd</sup> July. A Ringed Plover pair also nested in the western enclosure, with two chicks recorded on 9<sup>th</sup> June and at least one on 13<sup>th</sup>. A second pair held a territory west of Gramborough Hill, with no young recorded.

As usual, Sand Martins nested in the northern cliff face of Gramborough Hill. A minimum of 22 nesting pairs were recorded.

A Goldfinch was observed carrying nesting material at Gramborough Hill on 26<sup>th</sup> April. This is the first recorded breeding attempt on this site. A Linnet with nesting material was recorded on 28<sup>th</sup> May. A male Stonechat was observed carrying food on 27<sup>th</sup> April, two broods of three were observed throughout the season. A brood of Reed Buntings were also recorded and at least one young Common Whitethroat. Other breeding bird species included Wood Pigeon, Skylark, Meadow Pipit, Wren and Dunnock.

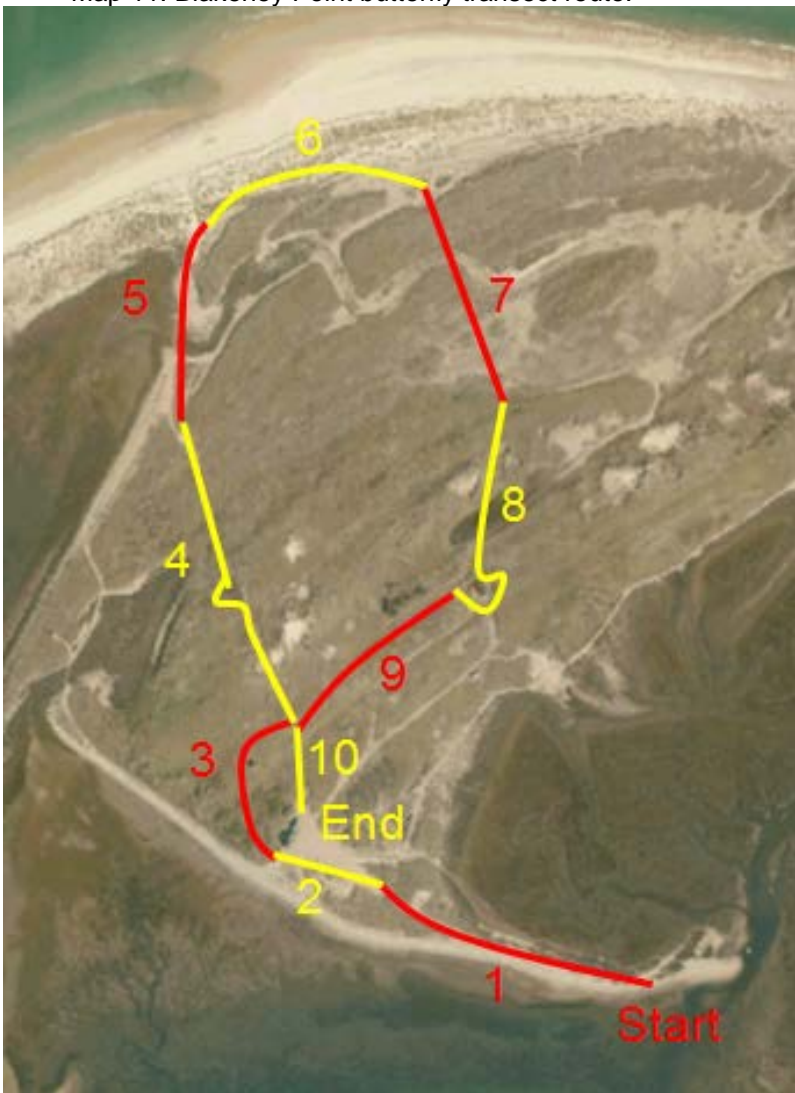
## Butterfly transect data

Table 10: Butterfly data from the Blakeney Point transect:

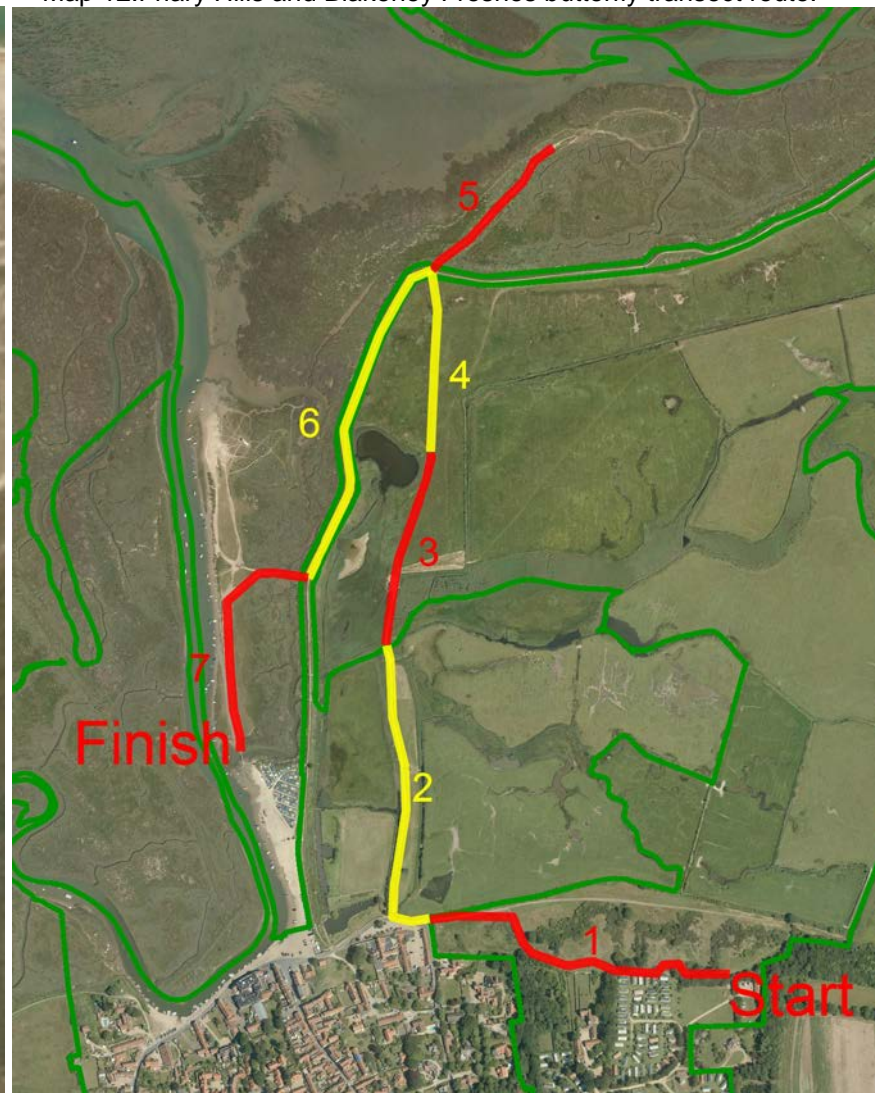
Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Total
Date (of week commencing)	Apr	Apr	Apr	Apr	Apr	May	May	May	May	Jun	Jun	Jun	Jun	Jul	Jul	Jul	Jul	Jul	Aug	Aug	Aug	Aug	Sep	Sep	Sep	
	1	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	2	9	16	
Small Skipper			0	0	0	0	0	0	0	0	0		2	0	0	0	0	0	0	0	0	0	0	0	0	2
Brimstone			0	0	0	0	1	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	1
Large White			0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	1	0	1
Small White			0	0	0	0	0	0	2	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	2
Small Copper			0	0	0	4	3	2	0	0	0		4	0	0	0	1	1	1	2	3	2	1	0	2	26
Brown Argus			0	0	0	0	0	1	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	1
Common Blue			0	0	0	0	0	5	1	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	6
Red Admiral			0	0	0	0	0	4	0	1	4		2	0	0	3	2	2	2	2	0	0	0	0	0	22
Painted Lady			0	0	0	0	1	3	3	1	3		0	0	0	1	0	2	0	0	2	0	0	0	0	16
Small Tort'shell			0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	2	0	0	0	0	0	0	2
Peacock			0	0	0	1	1	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	2
D. G. Fritillary			0	0	0	0	0	0	0	0	0		2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grayling			0	0	0	0	0	0	0	0	0		0	0	0	1	0	0	0	0	0	0	0	0	0	1
Gatekeeper			0	0	0	0	0	0	0	0	0		0	0	0	10	0	0	0	0	0	0	0	0	0	10
Ringlet			0	0	0	0	0	0	0	0	0		1	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total:</b>			0	0	0	5	6	15	6	2	7		11	0	0	15	3	5	5	4	5	2	2	0	2	95

A total of 15 butterfly species were recorded on the Blakeney Point transect [see Map 11 for route]. A peak count of 14 Dark Green Fritillaries was recorded in the Glaux Low area on 18<sup>th</sup> June. Notably low numbers of Grayling were recorded this year.

Map 11: Blakeney Point butterfly transect route:



Map 12: Friary Hills and Blakeney Freshes butterfly transect route:





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Table 11: Butterfly data from the Friary Hills and Blakeney Freshes transect:

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total
Date (of week commencing)	Apr	Apr	Apr	Apr	Apr	May	May	May	May	Jun	Jun	Jun	Jun	Jul	Jul	Jul	Jul	Jul	Aug	Aug	Aug	Aug	
	1	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	
Small Skipper		0					0		0	0		0				12		1	0	0	0	0	13
Brimstone		1					0		0	0		0				0		0	0	0	0	0	1
Large White		1					0		5	1		3				0		5	5	2	0	5	27
Small White		0					2		1	0		0				3		3	4	4	0	5	22
Green-v. White		1					0		0	0		0				0		0	0	0	0	0	1
Orange Tip		3					0		0	0		0				0		0	0	0	0	0	3
Small Copper		3					0		0	0		0				10		0	0	0	0	0	13
Common Blue		0					0		6	5		0				0		4	6	1	2	2	26
Red Admiral		0					12		2	0		1				0		4	0	0	0	0	19
Painted Lady		0					0		0	1		2				0		0	0	0	0	0	3
Small Tort'shell		0					1		1	0		9				0		0	0	0	0	0	11
Peacock		2					1		1	0		0				0		0	0	0	0	0	4
Speckled Wood		0					0		0	0		0				0		0	1	1	1	3	6
Wall		0					0		0	0		0				0		1	0	0	0	0	1
Gatekeeper		0					0		0	0		0				0		6	2	0	0	0	8
Meadow Brown		0					0		0	0		34				8		0	3	0	0	0	45
Ringlet		0					0		0	0		0				1		0	0	0	0	0	1
<b>Total:</b>		11					16		16	7		49				34		24	21	8	3	15	204

A total of 17 butterfly species were recorded on the Friary Hills and Blakeney Freshes transect [see Map 12 for route]. The greatest abundance and diversity was found on the Friary Hills sectors.

## Low tide seal counts

Seals hauled out on Stiffkey West Sands at low tide were counted approximately fortnightly throughout the spring and summer. Low tide is defined as the two-hour window opening one hour before and closing one hour after low water.

Table 12: Low tide seal counts:

Date	Grey Seal ( <i>Halichoerus grypus</i> )	Common Seal ( <i>Phoca vitulina</i> )	Total
02/02/2017	68	1	69
08/02/2017	18	0	18
14/02/2017	65	0	65
10/03/2017	43	12	55
14/03/2017	51	11	62
29/03/2017	54	13	67
11/04/2017	98	57	155
20/04/2017	86	22	108
10/05/2017	94	56	150
22/05/2017	155	64	219
28/05/2017	229	98	327
10/06/2017	413	182	595
22/06/2017	414	134	548
06/07/2017	369	202	571
21/07/2017	552	302	854
06/08/2017	114	392	506
11/08/2017	420	312	732
25/08/2017	216	455	671
10/09/2017	290	363	653
05/11/2017*	597	2	599
14/11/2017*	1094	8	1102
21/11/2017*	2591	0	2591
03/12/2017*	2435	0	2435
11/12/2017*	1713	0	1713
<b>Mean (Mar–Sep):</b>	225	167	392

\* Excluding Grey Seal pups

The counts showed that the number of seals hauling out on the reserve is stable for both species. There is a very similar mean summer to 2015 and 2016. Table 13 shows the summer mean counts over the past ten years. In summer 2017, mean Common Seal numbers were fractionally above the ten-year average and Grey Seals numbers were 28% below.

Table 13: Annual mean low tide seal counts 2008-17:

Year	Summer (Mar–Sep) mean		
	Grey Seal ( <i>Halichoerus grypus</i> )	Common Seal ( <i>Phoca vitulina</i> )	Total
2008	328	197	525
2009	143	116	259
2010	43	105	148
2011	253	187	440
2012	577	190	767
2013	634	153	787
2014	462	30	492
2015	219	160	579
2016	193	160	353
2017	225	167	392
<b>Ten-year summer (Mar–Sep) average:</b>	308	147	455

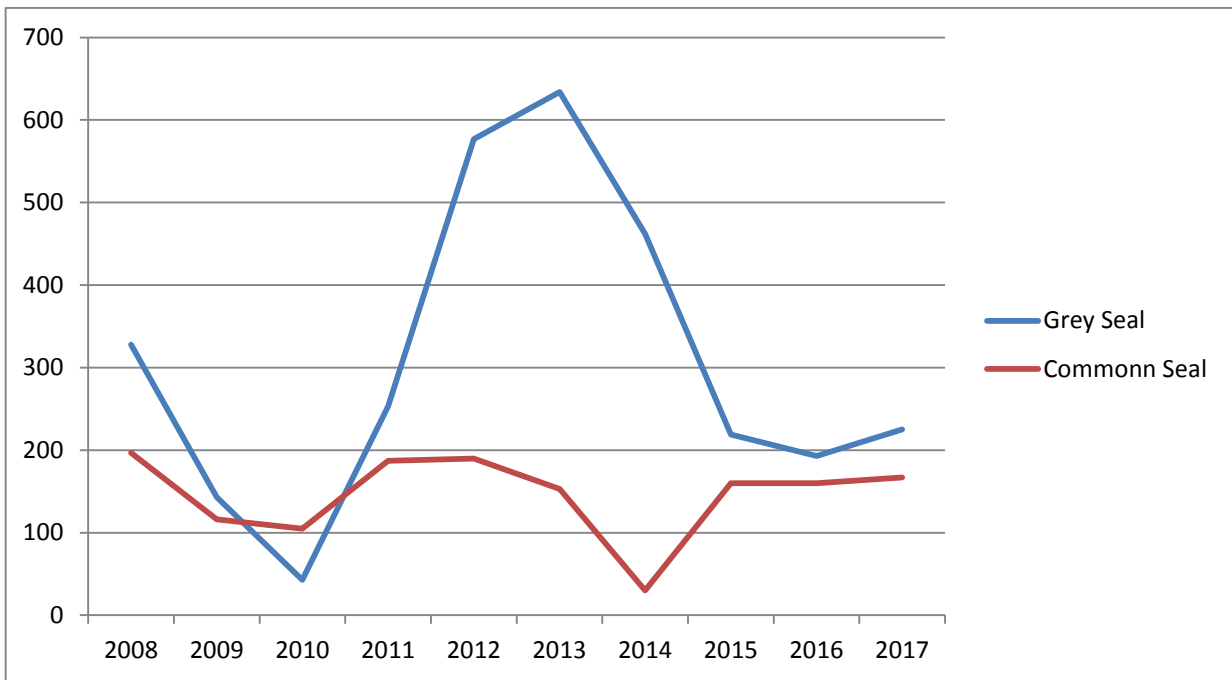


Figure 11: Graph showing mean summer (Mar-Sep) low tide seal counts 2008-17

Between July and September, a total of two sick Common Seal pups were taken to the RSPCA animal hospital at East Winch. Common Seal pups in the care of East Winch experienced a higher than usual mortality of around 80%, compared to their usual 40%. This mortality was found to be caused by usually high amounts of puss inside the pups. During this period, seven pups were found dead on the Point; three on Far Point, two along the main beach, one on the Landing Ridge and one on the main shingle ridge.

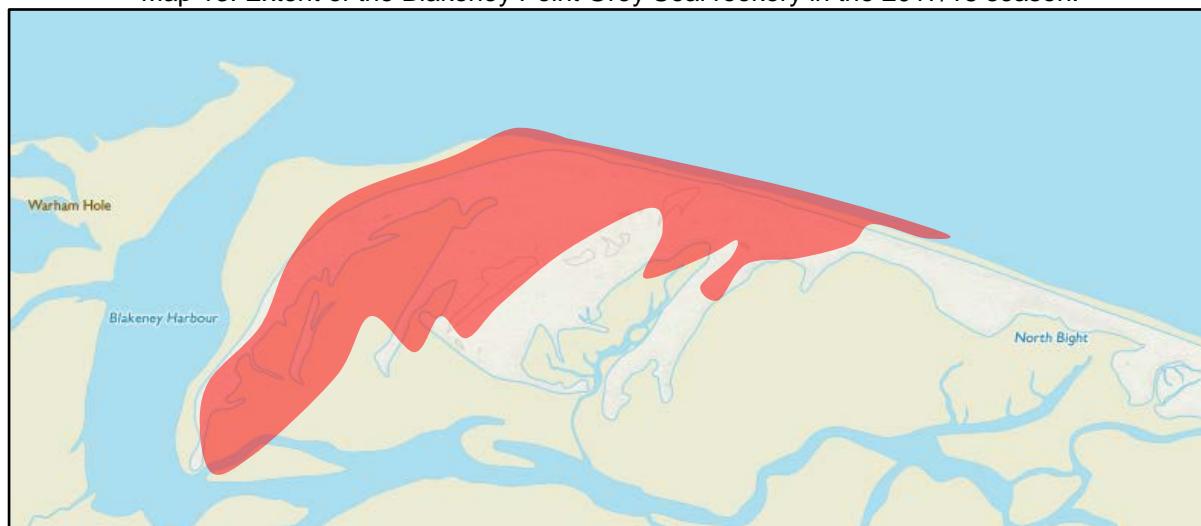


Figure: Common Seal pup being rescued (Ryan Doggart)

## Grey Seal pup counts

The winter 2017/18 total Grey Seal pup count showed a 12.3% increase from winter 2016/17 and a 10% increase from the previous peak pupping season; winter 2014/15. The rookery occupied a similar space to the previous winter, with some spreading slightly further south, into the main dunes, and 17 pups born at the Long Hills and Yankee Ridge. As in 2016/17, pups were born on as far east as the Hood; a total of 48 east of the Long Hills. For the first time in recent years, a pup was born on the Landing Ridge – there are anecdotal records of occasional pup sightings on the Landing Ridge between 1988 and 2000, prior to the formation of a rookery.

Map 13: Extent of the Blakeney Point Grey Seal rookery in the 2017/18 season:



For the first time, the rookery was divided into eight zones for pup counting purposes. This will enable any future spreading to be quantified. The below figure shows the zone boundaries and total pups recorded in each.

Table 14: Blakeney Point zones for pup counts:

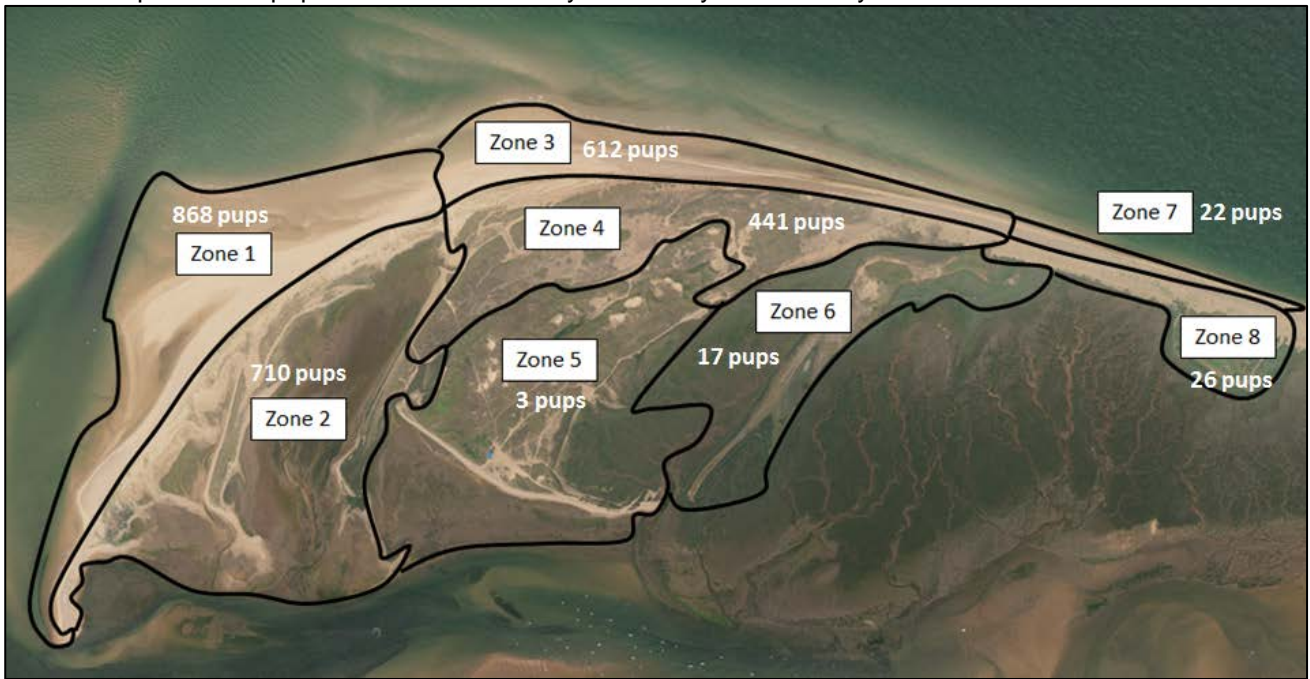
<b>Zone 1</b>	Beach between tip of Far Point and the Gap
<b>Zone 2</b>	Far Point (shingle and dunes) and Stanley's Cockle Bight (saltmarsh)
<b>Zone 3</b>	Beach between Gap and Long Hills
<b>Zone 4</b>	Great Sandy Low and northern dunes
<b>Zone 5</b>	Main Dunes and Landing Ridge (shingle)
<b>Zone 6</b>	Long Hills (dunes) and Yankee Ridge (shingle)
<b>Zone 7</b>	Beach between Long Hills and the Hood
<b>Zone 8</b>	Shingle between Long Hills and the Hood



Figure 13: Grey Seal pup (Ian Ward)

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Map 14: Total pups born in the Blakeney Point Grey Seal rookery in the 2017/18 season:



Pups were counted throughout the breeding season. Total pups present were counted approximately weekly from late October to 21<sup>st</sup> November. For the next month, newborn pups were counted every three days and added to the previous total due to the dispersal of earlier weaned pups. For the final three weeks of the season – from late December to mid-January – when pupping had almost finished, counts were conducted approximately weekly to record the much smaller number of later pups.

Table 15: Grey Seal pup counts 2017/18:

Date	Running total		
	Live pups	Dead pups	Total births
18/10/2017	0	1	1
23/10/2017	1	1	2
24/10/2017	2	1	3
27/10/2017	3	1	4
31/10/2017	8	2	10
02/11/2017	14	3	17
05/11/2017	78	6	84
14/11/2017	709	13	722
21/11/2017	1525	21	1546
24/11/2017	1846	37	1883
27/11/2017	2073	45	2118
30/11/2017	2231	48	2279
03/12/2017	2341	54	2395
06/12/2017	2436	62	2498
09/12/2017	2495	63	2558
11/12/2017	2534	64	2598
14/12/2017	2567	64	2631
18/12/2017	2591	70	2661
21/12/2017	2606	70	2676
28/12/2017	2625	70	2695
31/12/2017	2627	70	2697
05/01/2018	2629	70	2699
12/01/2018	2530	70	2700



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For the first time, adults were also counted during some pup counts. A peak of 2555 adults was recorded on 21<sup>st</sup> November alongside 1525 live pups, totalling 4080 seals.

Table 16: Grey Seal adult counts 2017/18:

Date	Cows	Bulls	Total adults	Total live pups	Total seals
05/11/2017	351	246	597	78	675
14/11/2017	691	403	1094	709	1803
21/11/2017	1849	706	2555	1525	4080
03/12/2017	1601	834	2435	Unrecorded	Unknown
11/12/2017	1374	339	1713	Unrecorded	Unknown
10/01/2018	46	13	59	199	258

A total of 2,700 pup births were recorded, of which 70 died at the suckling stage; 2.6% mortality. A single seal was taken to the RSPCA animal rescue centre at East Winch; a weaned pup with a head wound. An early dead pup was observed on Far Point on 18<sup>th</sup> October, followed by the first live pup five days later. The last pup was born on 10<sup>th</sup> January and weaned by 1<sup>st</sup> February. Pupping peaked around 21<sup>st</sup> November, with an estimated birth rate of 118 per day.

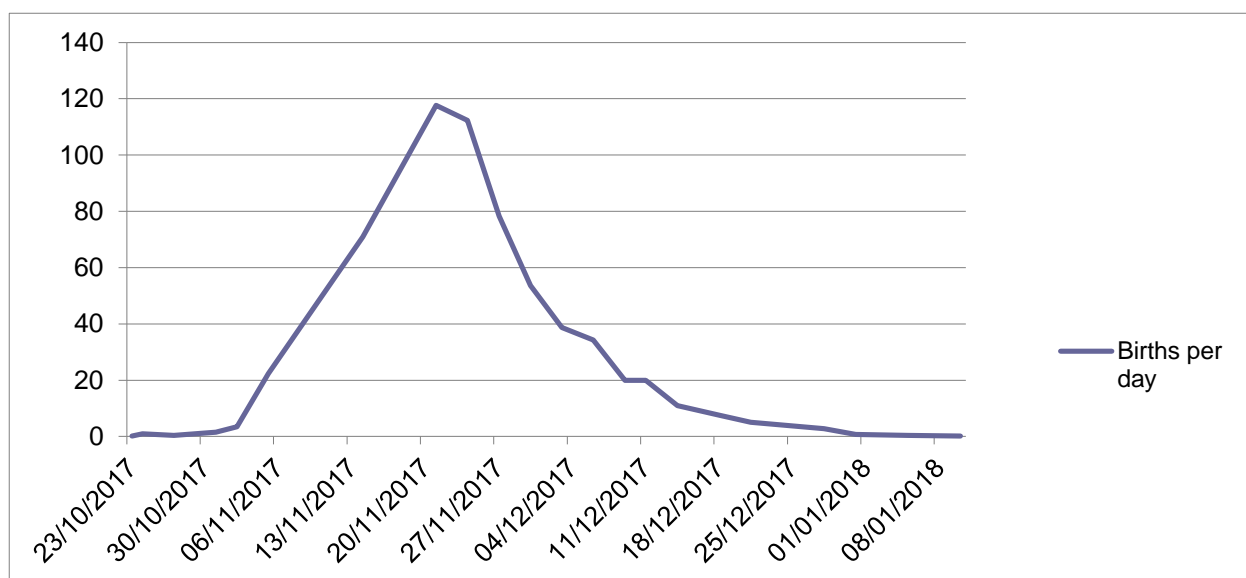


Figure 14: Graph showing Grey Seal pup birth rate 23<sup>rd</sup> October 2017 – 12<sup>th</sup> January 2018

For a third year, volunteers were present on the edge of the rookery to greet visitors and prevent disturbance. Volunteers were present in pairs at weekends and during the holiday period for a total of 120 hours, speaking to 723 people. During this period there was just one disturbance event; walkers crossing the fence-line.

Table 17: Volunteer time spent protecting the Grey Seal rookery 2015/16–2017/18:

Date	Total shifts	Total hours	Visitors spoken to	Mean visitors per hour
2015/16	33	165	561	3
2016/17	16	48	636	13
2017/18	23	115	723	6

Historical Blakeney Point records are shown in the table below. The first Grey Seal pups recorded on the Point were in late 1988. Pups were not counted in the 1990s, but anecdotal evidence states that the occasional pup was observed, sometimes on the Landing Ridge, but not necessarily every year.

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Table 18: Grey seal pup counts 1988/89–2017/18:

Date	Estimated total pups weaned	Estimated total additional dead pups	Estimated total births
1988/89	2	0	2
1989/90	Unrecorded	Unrecorded	Unknown
1990/91	Unrecorded	Unrecorded	Unknown
1991/92	Unrecorded	Unrecorded	Unknown
1992/93	Unrecorded	Unrecorded	Unknown
1993/94	Unrecorded	Unrecorded	Unknown
1994/95	Unrecorded	Unrecorded	Unknown
1995/96	Unrecorded	Unrecorded	Unknown
1996/97	Unrecorded	Unrecorded	Unknown
1997/98	3	0	3
1998/99	Unrecorded	Unrecorded	Unknown
1999/00	5	0	5
2000/01	Unrecorded	Unrecorded	Unknown
2001/02	25	Unrecorded	25
2002/03	50	Unrecorded	50
2003/04	80	Unrecorded	80
2004/05	100	Unrecorded	100
2005/06	175	Unrecorded	175
2006/07	200	13	213
2007/08	290	7	297
2008/09	413	20	433
2009/10	579	24	603
2010/11	747	42	789
2011/12	933	40	973
2012/13	1223	25	1248
2013/14	1566	48	1614
2014/15	2426	27	2453
2015/16	2343	29	2372
2016/17	2369	34	2403
2017/18	2630	70	2700
<b>Minimum total births (1988/89 – 2017/18):</b>			<b>16542+</b>

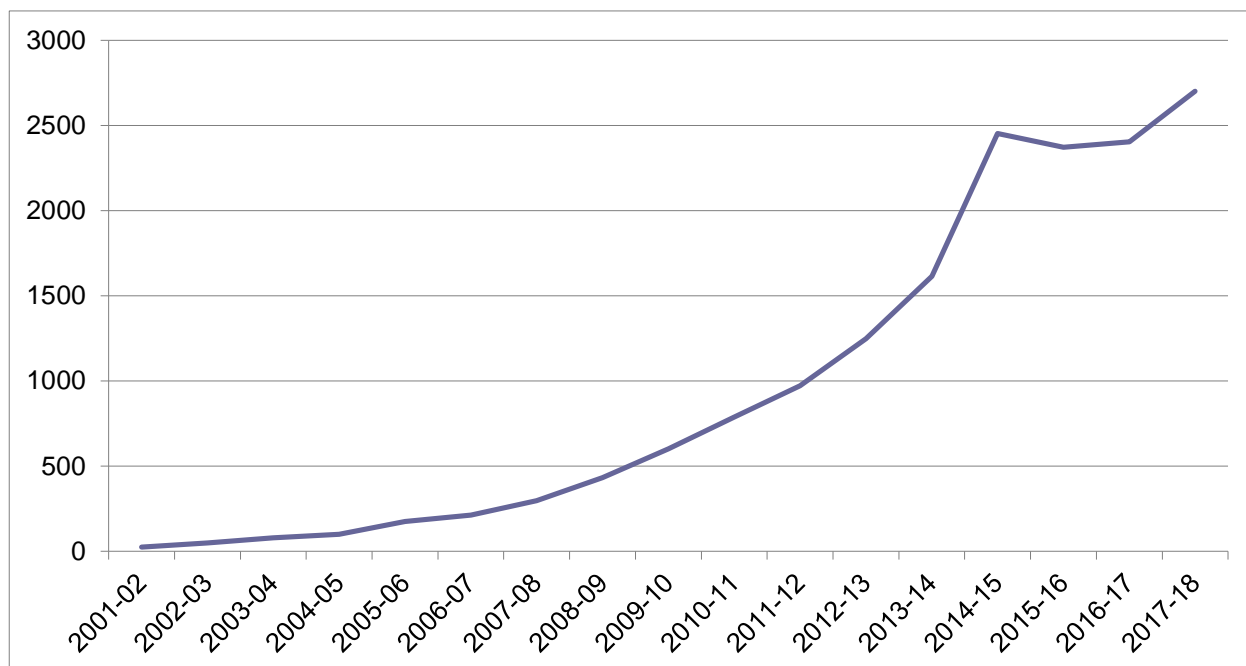


Figure 15: Graph showing Grey Seal pup births 2001/02–2017/18

## Other wildlife

### Cetaceans

#### **Harbour Porpoise** *Phocoena Phocoena*

There were two sightings of carcasses – both dead for about a week – washed up on Blakeney Point; on 3<sup>rd</sup> and 6<sup>th</sup> January. There were also anecdotal records of two live animals observed in the North Sea off the Point during the summer.

### Terrestrial mammals

#### **Hedgehog** *Erinaceus europaeus*

Two were observed on Marsh Lane at night on 20<sup>th</sup> April.

#### **Mole** *Talpa europaea*

One was found dead on Friary Hills on 23<sup>rd</sup> April.

#### **Rabbit** *Oryctolagus cuniculus*

There was only one sighting of the lone rabbit near the Lifeboat House, in June. A minimum of ten were found dead at Morston throughout the spring, having suffered from a fatal virus.

#### **Brown Hare** *Lepus europaeus*

Usual numbers were observed on Blakeney Point. On Blakeney Freshes, one to two individuals were frequently observed on Blakeney Eye.

#### **Water Vole** *Arvicola amphibius*

On Blakeney Freshes, one was heard dropping into the Great Barnett behind the cart track sluice on 14<sup>th</sup> March. University College London also recorded them in June/July.

#### **Wood Mouse** *Apodemus sylvaticus*

One was observed in the Blakeney Point main dunes on 14<sup>th</sup> January.

#### **Harvest Mouse** *Micromys minutus*

A nest was found at Morston [TF9944] on 15<sup>th</sup> February.

#### **Brown Rat** *Rattus norvegicus*

One was recorded in Morston car park [TF9944] on 12<sup>th</sup> March.

#### **Stoat** *Mustela ermine*

On Blakeney Freshes, an adult was observed close to the University College London Laboratory on 1<sup>st</sup> October.

#### **Weasel** *Mustela nivalis*

On Blakeney Freshes, a trail camera recorded one by the cart track on 5<sup>th</sup> January.

#### **Otter** *Lutra lutra*

Two adults were observed on Blakeney Freshes in daylight on 20<sup>th</sup> April. They were seen running across the southern fields into the Great Barnett reedbed. Tracks and signs were recorded on the Freshes throughout the year.

### **Reeve's Muntjac** *Muntiacus reevesi*

There were several sightings on Blakeney Freshes. An adult with two young were recorded on 11<sup>th</sup> June. On Blakeney Point, an individual was observed near the Watch House in July. On Friary Hills, an adult was observed on 14<sup>th</sup> August.

### **Aerial mammals**

The following bat species were recorded on Blakeney Freshes [TG0344] using the Norfolk Bat Survey equipment, as part of the Norfolk Coast Bioblitz on the nights of 21<sup>st</sup> and 22<sup>nd</sup> July:

Table 19: Bat species recorded on Blakeney Freshes:

<b>Species</b>	<b>Number of passes</b>
Barbastelle	4
Brown long-eared Bat	2
Common pipistrelle	95
Daubenton's bat	11
Leisler's bat	8
Natterer's bat	11
Noctule	43
Serotine	5
Soprano pipistrelle	597

### **Amphibians**

#### **Common Toad** *Bufo bufo*

On 14<sup>th</sup> August, three were observed under wood piles at Friary Farm [TG032441].

### **Invertebrates**

#### **Sea aster mining bee** *Colletes halophilus*

Sightings were made on saltmarsh in the usual locations at both Morston [TG004447], on 28<sup>th</sup> August, and west of Blakeney Freshes [TG027448], on 7<sup>th</sup> August. On 25<sup>th</sup> September, burrows were observed at Stiffkey [TF964447].



Figure 16: Sea aster mining bee (Ajay Tegala)

#### **Ivy mining bee** *Coletes hederæ*

Sightings were made at Morston Quay [TG006443] on 28<sup>th</sup> September, with holes observed immediately west of the café.