



# POST-BREEDING TERN REPORT 2017



BirdWatchIreland



I-WeBS



An Roinn Cultúir,  
Oidhreacht agus Gaeltachta  
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### **Front Cover Photos:**

B. Burke (Common Tern, Common Tern flock, Whooper Swan, Light-bellied Brent Geese), C. Clarke (Shelduck), R.T. Mills (Lapwing), C. Timmons (Ringed Plover, Golden Plover).

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## Summary

- In August and September 2017, a selection of sites around the Irish coast Ireland were surveyed for post-breeding tern aggregations by volunteer counters, coordinated through the I-WeBS Office. This survey was also carried out in 2016 but was limited to the east and south coasts.
- Counters were asked to undertake two or more visits to known and suspected tern roost sites between mid-August and early September, when numbers of congregating terns were expected to be at their peaks. Where the importance of a site was unknown, counters were asked to undertake at least one of the counts at dusk, when the tide is rising and approximately mid-way between low and high tide and the terns are pushed into a small area of the beach and are closer to the observer and easier to count.
- Counters recorded total tern numbers, numbers of each species (Sandwich, Common, Arctic, Common/Arctic and Roseate Tern) and count quality (accurate, accurate total but estimated species total, estimated total and species total, estimated total and not identified to species level). The precise location used by terns was then recorded via points on a map via ArcGIS.com.
- Forty-seven sites were surveyed in 11 counties around the Irish Coast. Ninety-five counts were submitted directly, with a further 15 counts provided from a Sandwich Tern roost survey in County Cork in August, and from the IrishBirding website. Seventy-nine of these counts were carried out during the recommended period from 14th August to 13th September.
- Sandwich Terns were recorded at 39 sites, Common Terns at 15, Arctic Terns at 13 and Roseate Terns at seven sites. Common Terns were the most numerous species recorded overall and formed the largest part of most mixed Common/Arctic Tern flocks.
- South Dublin Bay held by far the largest numbers of terns with a peak count of 7,000 terns and other counts ranging from 420-6,600. Counts of >1,000 terns were also recorded at Cruisestown Beach (Louth), Gormanstown Beach (Meath) and Crossfintan Point (Wexford). Peak counts of 500-1,000 terns were recorded for one site, nine sites recorded peak counts of 100-500 and 29 sites recorded peak counts of <100 terns.
- As in 2016, repeated counts at sites found varying total numbers, species numbers, age-class ratios and different marked birds, all of which highlight the regular movement of terns between sites during the post-breeding season. Thus, even the largest count at a site is likely to represent a small fraction of the individual birds that use the site in late summer and early autumn.
- Recreational disturbance continued to be noted as a problem at several sandy beach sites during tern roost counts, particularly at high tide.
- This survey identified many sites of importance for four *Sterna* tern species during the post-breeding season around the Irish coast, and added to knowledge gathered for east and south coast sites in 2016. It provided an indication of the relative numbers and species of terns using each site, and adds to the known value of these sites as important roosting and staging sites for tern species listed in Annex I of the EU Birds Directive.
- It is recommended that this survey be replicated on an annual basis, as the transient nature of post-breeding tern flocks combined with the difficulty in achieving thorough site coverage during August and September mean that the true importance of a site is unlikely to be ascertained during a single season. Some I-WeBS counters have provided historic counts for post-breeding tern flocks at different locations, and a targeted appeal for similar records would likely prove useful.

## 1. Introduction

The Irish Wetland Bird Survey (I-WeBS) is designed to gather information on the distribution and abundance of Ireland's wintering waterbirds and their important sites. To date, more than 80 sites have been identified as of significant importance for wintering waterbirds and have been designated as Special Protection Areas (SPAs) under the European Union Birds Directive. The importance of these sites and justification for designation is largely based on the results of counts undertaken as part of I-WeBS.

I-WeBS counts are focussed over the winter period, specifically from September to March each season (Boland and Crowe 2012). It is known that some of these important sites are of importance during other times of the year, most notably for birds on passage during months that are outside the regular core-count period. Accordingly, these records often remain undocumented. Once the breeding season has ended each year, usually anytime between end July and mid-September, it is known that large numbers of terns can congregate at some sites. Aggregations of up to 10,000 birds have been recorded using South Dublin Bay for example (Merne *et al.*, 2008; Merne 2010). In August and September 2016, the I-WeBS Office focused on gathering additional information on site use by post-breeding terns at sites along the east and south coasts of Ireland. In 2017, this survey coverage was expanded to include the north and west coasts.

As in 2016, a selection of sites known to be used by post-breeding terns were targeted for surveys. The majority of these sites were on the east and south coasts, having been surveyed in 2016. On the north and west coasts, tidal sites with open sandy beaches or rocky outcrops were selected for surveying, some of which were thought to hold terns based on consultation with local observers as well as records on the Irish Birding website (<http://www.irishbirding.com/>).

## 2. Methods

### 2.1 Survey methodology

Survey methodology followed that used in 2016. Local counters were asked to survey sites that were known to be used by post-breeding Terns, or sites that seemed likely to be used by roosting Terns based on the nature of the site (i.e. open sandy beaches, rocky outcrops). Counters were sourced through the I-WeBS network and from the 2016 post-breeding tern survey, and local BirdWatch Ireland branches were consulted for records of Terns on the north and west coasts where there was no reliable information on tern roosting sites. In addition, photos and reports of tern roosts on social media (i.e. Facebook, Twitter) were followed up with a request for further information.

### 2.2 Assessment of numbers and distribution

Local counters were asked to undertake a number of visits (ideally at least two) between mid-August (Monday 14th August) and early September (Sunday 13th September), the period over which numbers of congregating terns are expected to be at their peaks. Where the importance of a site was unknown, counters were asked to undertake at least one of the counts at dusk, when the tide was rising and approximately mid-way between low and high tide. This is typically when the terns are pushed into a small area of the beach and are closer to the observer and easier to count.

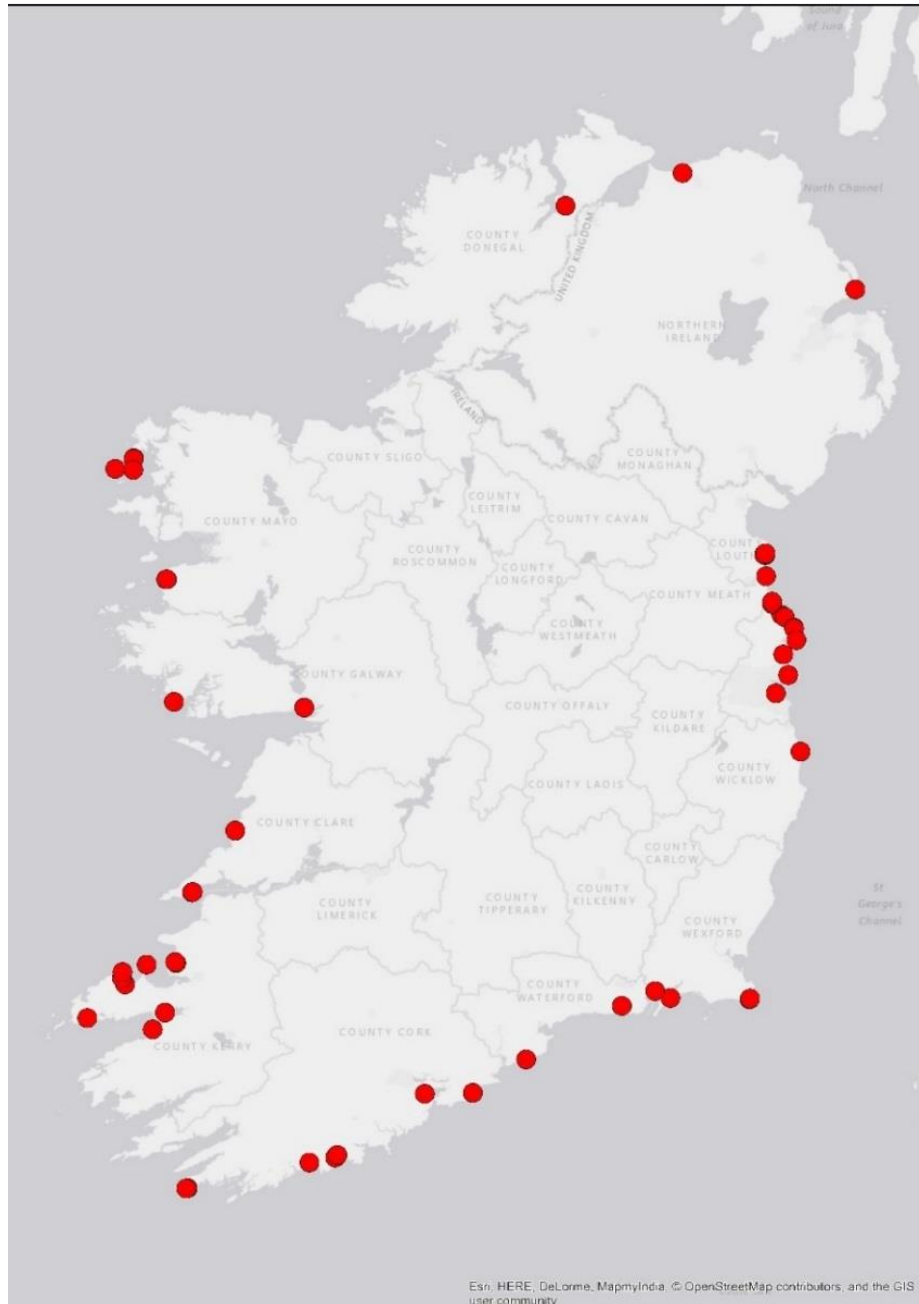
During each count session, the total numbers of terns present were recorded and the totals of each species present were recorded or estimated where possible and assigned to one of four levels of count quality. Count quality was recorded as 1) accurate, 2) accurate total with estimated species counts, 3) estimated total with estimated species counts and 4) estimated total and not identified to species level. Counters were asked to delineate the specific point used by any flocks on a map via an ArcGIS.com mapping app.

A concurrent study was organised by Tom Gittings as part of his work in Cork Harbour. This study involved a co-ordinated count of Sandwich Tern roosts in County Cork on 17<sup>th</sup> August and involved 15 surveyors at 13 sites/subsites. While some data from this survey were made available for this report, additional data will be made available in the near future.

## 3. Results

### 3.1 Coverage

Forty-seven sites were surveyed around the coasts of the Republic of Ireland (Figure 1). In total, 110 counts were completed (Table 1) – 95 of which were submitted directly and an additional 15 which were provided from the County Cork Sandwich Tern roost survey (T. Gittings pers. comm.) or sourced from the IrishBirding website. Of these counts, 79 were undertaken during the recommended period.



**Figure 1:** Locations where post-breeding terns were recorded in 2017.



**Table 1:** Site coverage during the post-breeding tern survey 2017. 'Others' column refers to counts from the Co. Cork Sandwich Tern roost survey (T. Gittings pers. comm.) and the Irish Birding website.

	<b>Site</b>	<b>County</b>	<b>Start</b>	<b>End</b>	<b>Counts</b>	<b>Others</b>
<b>1</b>	Cruisetown Beach	Louth	18-Aug	26-Aug	3	
<b>2</b>	Baltray	Louth	14-Jul	31-Aug	5	
<b>3</b>	Gormanston beach	Meath	13-Aug	25-Aug	4	
<b>4</b>	Barnageeragh (Balbriggan & Skerries)	Dublin	05-Aug	18-Aug	3	
<b>5</b>	Loughshinny	Dublin	29-Aug	25-Sep	2	
<b>6</b>	Portrane Burrow	Dublin	16-Aug	07-Oct	6	
<b>7</b>	Malahide Estuary	Dublin	10-Aug	07-Oct	3	
<b>8</b>	Dollymount Strand	Dublin	11-Aug	17-Aug	4	
<b>9</b>	South Dublin Bay	Dublin	17-Aug	25-Sep	9	
<b>10</b>	Sandycove	Dublin	17-Aug	31-Aug	4	1
<b>11</b>	Crossfintan	Wexford	14-Jul	25-Aug	6	
<b>12</b>	Fethard Quay	Wexford	03-Aug	21-Sep	4	
<b>13</b>	Duncannon	Wexford	03-Aug	21-Sep	7	
<b>14</b>	Tramore Backstrand	Waterford	23-Aug	23-Aug	1	
<b>15</b>	Ardmore Bay	Waterford	05-Sep	18-Sep	2	
<b>16</b>	Ballycotton	Cork	17-Aug	17-Aug		1
<b>17</b>	Ballymacoda	Cork	17-Aug	17-Aug		1
<b>18</b>	Cork Harbour - Lough Beg	Cork	17-Aug	17-Aug		1
<b>18</b>	Cork Harbour - Monkstown Creek	Cork	17-Aug	17-Aug		1
<b>18</b>	Cork Harbour - Ringabella Creek	Cork	17-Aug	17-Aug		1
<b>18</b>	Cork Harbour - Ringaskiddy	Cork	11-Aug	11-Aug	1	1
<b>19</b>	Bullen's Bay/Garretstown	Cork	17-Aug	17-Aug		1
<b>20</b>	Courtmacsherry	Cork	17-Aug	17-Aug		1
<b>21</b>	Clonakilty Bay	Cork	15-Aug	07-Sep	2	1
<b>22</b>	Muckcross Estuary/Inchydoney	Cork	17-Aug	17-Aug		1
<b>23</b>	Owenahincha	Cork	17-Aug	17-Aug		1
<b>24</b>	Rosscarbery	Cork	17-Aug	17-Aug		1
<b>25</b>	Lissagriffin Lake	Cork	16-Aug	09-Sep	3	1
<b>26</b>	Glenbeigh	Kerry	13-Sep	13-Sep	1	
<b>27</b>	Cromane	Kerry	13-Sep	13-Sep	1	
<b>28</b>	Ventry Harbour	Kerry	07-Sep	07-Sep		1
<b>29</b>	Brandon Point & Pier	Kerry	11-Sep	11-Sep	1	
<b>30</b>	Fermoyle	Kerry	21-Aug	21-Aug	1	
<b>31</b>	Castlegregory	Kerry	12-Sep	12-Sep	1	
<b>32</b>	Carrahane	Kerry	25-Aug	25-Aug	1	
<b>33</b>	Blackrock Strand	Kerry	05-Sep	05-Sep	1	
<b>34</b>	Blennerville, Tralee	Kerry	27-Aug	27-Aug	1	
<b>35</b>	Poulnasherry Bay	Clare	15-Aug	26-Aug	2	
<b>36</b>	Rinevilla Bay	Clare	30-Aug	30-Aug	1	
<b>37</b>	Seafield /Quilty beach	Clare	14-Aug	14-Aug	1	



**Table 1:** (continued)

	Site	County	Start	End	Counts	Others
38	Mutton Island	Galway	12-Sep	12-Sep	1	
39	Oilean na Lachan , Connemara	Galway	13-Aug	13-Aug	1	
40	Roonah Lough	Mayo	09-Aug	26-Aug	2	
41	White Strand	Mayo	09-Aug	26-Aug	2	
42	Cahernan Island, Murrisk	Mayo	09-Aug	26-Aug	2	
43	Elly Bay, Belmullet Peninsula	Mayo	16-Aug	15-Sep	2	
44	Tarmon beach, Belmullet Peninsula	Mayo	16-Aug	15-Sep	2	
45	Rusheen Island, Inishkea	Mayo	06-Aug	06-Aug	1	
46	Donegal Bay	Donegal	18-Aug	18-Aug	1	
47	Inch Lake	Donegal	16-Aug	16-Aug	1	

### 3.2 Overview of totals recorded in 2017

An overview of the totals recorded at county level is as follows:

- **Louth** – Around 4,000 Common terns were recorded at Cruisetown Beach on two separate dates in August. Counts of 110-120 Sandwich Terns at Cruisetown and Baltray in late July and early August consisted of c.50% juveniles, including juveniles ringed at Lady’s Island Lake in Wexford, indicating that this is an important ‘nursery’ area immediately following the breeding season. Baltray was not surveyed in 2016, but previous reports from the Little Tern colony indicate the site is used annually by post-breeding terns of other species.
- **Meath** – Counts at Gormanstown exceeded those of 2016, with a peak of 1,300 Common terns recorded in mid-August 2017. Numbers of Sandwich Terns were also significantly higher than in 2016. Gormanstown was one of four sites with recorded peaks of over 1,000 terns in 2017, and one of seven sites where Roseate Terns were recorded.
- **Dublin** - South Dublin Bay sites at Sandymount and Merrion Gates again had by far the largest numbers of roosting terns during the survey period with a peak of 7,000 terns. Counts from sites elsewhere in Ireland and reports from tern researchers in the UK indicate that this site might be the most important post-breeding tern site in Ireland and Britain. Up to 2,000 Roseate Terns were estimated to be part of the peak count here in 2017, which may account for up to half of the European population of the species. Elsewhere in Dublin, peak counts of 500-1,000 terns were recorded at Barnageeragh, Malahide, Dollymount and Portrane. In some cases, numbers were lower than in 2016 but this is likely a reflection of survey effort. Sandwich Terns don’t roost with the Common, Arctic and Roseate Terns in South Dublin Bay but are regularly found on Dollymount Strand and at Sandycove instead.
- **Wexford** – Crossfintan Point again proved to be an important site, with large numbers of Common, Arctic and Roseate Terns in July and August. Further west, Duncannon and Fethard were used by 20-60 Sandwich Terns through August and September, including birds known to have originated from the Lady’s Island colony.
- **Waterford** – Survey effort in Waterford was significantly lower than in 2016 and sites at Ballinclammer and Dungarvan were not surveyed this year. A single record of 204 Sandwich

and 14 Common Terns at Tramore Backstrand was several multiples higher than anything recorded in 2016. Ardmore Bay continues to be used by tens of Sandwich Terns.

- **Cork** – A separate Sandwich Tern roost survey was organised across sites in County Cork on 17<sup>th</sup> of August by Tom Gittings, who made the results available for this study. The count took place at dusk at 13 locations, carried out by 15 counters, and recorded 473 Sandwich Terns. Over half of that count was at Lough Beg in Cork Harbour, with 90 at Rosscarberry, 49 at Ballycotton, 44 at Muckcross Estuary and 17 at Lissagriffin. A week previously, 472 Sandwich Terns roosted at Lough Beg and similar numbers were there again at the end of August. In addition, 130 Common Terns were recorded in Cork Harbour during the Sandwich Tern roost count. In September, 51 Sandwich Terns roosted at Clonakilty Bay. No counts were made at Ballymacoda or Ballycotton on other dates due to the unavailability of the normal counter, though he noted very few (low 10's) present in early August. The post-breeding tern survey in 2016 only extended as far west as Cork Harbour, so this year we received and collated data for an additional seven sites in the county.
- **Kerry** – Sandwich Terns were recorded at 7 sites, ranging from flocks of 5 to 90 individuals. Several hundred Arctic Terns were recorded at Brandon Point and Castlegregory, which was notable given the lack of records for Arctics or Commons on the west coast during the post-breeding season, particularly in mid-September. It was also reported that Sandwich Terns were seen feeding fledglings at Fermoy in late July.
- **Clare** – Small numbers of Sandwich and Common Terns were recorded at Rinevilla, Carrigaholt and Poulasherry Bays at the mouth of the Shannon Estuary, and terns from here are known to move across the Shannon Estuary to Beale Strand at this time of year.
- **Galway** – Small numbers of Sandwich, Common and Arctic Terns were reported at Mutton Island in Galway Bay in September. Local knowledge indicates that the Commons and Arctics that breed on the site usually leave soon after the breeding season, with small numbers of Sandwich Terns remaining here overwinter. Fifty-five Sandwich terns were recorded on Oilean na Lachan in Connemara; a site that is subjected to regular disturbance at high tide.
- **Mayo** – High numbers of Sandwich Terns were recorded at Cahernan Island (Murrisk) on two dates in August, with smaller numbers of Common terns also present. Small numbers of Sandwich Terns also roosted on the rocks at White Strand, but none were found at nearby Roonagh Lough. Water levels on the lough were very high and covering the sand usually used by Sandwich Terns on survey dates.

On the Belmullet Peninsula, Sandwich Terns were recorded at neighbouring Elly Bay and Tarmon Beach. Both Sandwich Terns and Little Terns were seen roosting on Rusheen Island (Inishkeas) in early August too.
- **Sligo** – Although no counts were received for County Sligo in 2017, records of roosting Sandwich Terns were received for a number of sites in the county dating back as far as the 1980's. This includes tern counts at locations in Ballysadare Bay, Mullaghmore Bay, Drumcliff Bay, Dunmorán Strand, Portavaud, Sligo Harbour, Trawbane Strand, Yellow Strand and the Moy Estuary. Many of the available counts range from 50-100 Sandwich Terns, with some counts of more than 100.
- **Donegal** – A small number of feeding Sandwich Terns were reported feeding in Donegal Bay. Though not a roosting record, it may indicate these birds were roosting nearby and Sandwich Terns have been recorded roosting at Mountcharles at the north side of the bay in the past. Further North at Inch Lough, 32 Common Terns roosted on Tern Island in August and a similar

number of Sandwich Terns were present during the pre-breeding season. Both species roost on the site.

Further details about the site-level records are given below.

### 3.3 Species Composition

Sandwich Terns were by far the most frequently recorded species, and present at 39 of 44 sites where terns were recorded. Similarly, in 2016, Sandwich Terns were recorded at 19 of 20 sites, and almost all additional west coast sites included in the survey in 2017 recorded Sandwich Terns. By contrast, very few other tern species were recorded on the west coast. Comments from I-WeBS counters and tern researchers in the west of Ireland indicate that most Common and Arctic Terns depart the area very soon after the breeding season and possibly make their way to the Irish Sea, based on their presence in large numbers on east coast sites and absence from most sites along the west coast. Sandwich Terns are also thought to depart their colonies very soon after breeding (B. Robson pers. comm.), although based on west coast counts in 2017, they seemingly prefer west and south coast sites to those on the east coast.

Common Terns were the second most frequently recorded species, recorded at 16 sites in 2017 (15 sites in 2016). Of the 29 west coast sites surveyed for the first time in 2017, Common Terns were only recorded at Poulmasherry Bay, Mutton Island and Inch Lake. Common Terns were recorded at both Ardmore Bay and Ballycotton in 2016, but low survey effort at both sites likely explains their absence in 2017. Ballinclamper (Clonea Bay, Waterford) had a peak count of 750 Common Terns in 2016 but was not surveyed in 2017. In terms of actual numbers, Common Terns were the most numerous species recorded and formed the largest proportion of flocks where mixed Common tern flocks were recorded.

Arctic Terns were recorded at 13 sites in 2017, including significant counts at Castlegregory (400) and Brandon Point & Pier (935) in County Kerry. They were also noted as part of Common tern flocks, usually in smaller proportions than Common Terns, at a number of east coast sites.

Roseate Terns were only recorded in significant numbers in South Dublin Bay and Crossfintan Point, and in small numbers at four more east coast sites. Again, these are lower numbers and fewer sites than recorded in 2016 and are likely a reflection of survey effort rather than any change in numbers or sites used.

### 3.4 Peak Counts

In terms of overall numbers, South Dublin Bay again held by far the largest numbers of terns with a peak count of 7,000 terns on 30<sup>th</sup> August. A similar count of 6,600 was recorded the following evening, with large numbers during counts earlier in the month (4,500 on 17<sup>th</sup> August) and several hundred still using the site from the middle to the end of September (420-780). Comparison with other sites in the Republic of Ireland in 2016 and 2017 and counts from some of the largest UK post-breeding tern sites (pers. comm.) indicate that the tern roost in south Dublin Bay is the largest such roost in Ireland and Britain. Tern counts from South Dublin Bay were not broken down to species level, though estimates

on all nights indicated that Common Terns were the most numerous species present, with varying numbers of Roseate Terns (up to a possible 2,000+ on 30<sup>th</sup> August), smaller numbers of Arctic Terns (up to c.1,000 on 30<sup>th</sup> August) and occasional Sandwich Terns (peak 6). Sandwich Terns in the area seemingly prefer to roost elsewhere, with up to 40 recorded at Sandycove and 18 at Dollymount on 17<sup>th</sup> August.

In addition to South Dublin Bay, peak counts of more than 1,000 were recorded at three east coast sites – Cruisetown in Louth, Gormanstown in Meath and Crossfintan in Wexford. Peak counts in 2017 were over twice as high as those in 2016 at Cruisetown and Gormanstown, again highlighting the importance of repeated surveying within and between years.

Numbers at Crossfintan were high in 2017, but lower than 2016 when a peak of 2,500 was recorded. That count was recorded in late July however, when large numbers of terns from the colony at Lady’s Island had likely moved to Crossfintan immediately after breeding. Surveying at Crossfintan in 2017 also covered dates in July but may have missed the repeat occurrence of what may be a very short-lived event. Similarly, high numbers at Barnageeragh in 2016 were likely the result of birds having very recently departed from Rockabill and seemingly went unrecorded in 2017.

In total during 2017, counts of >1,000 terns were recorded at four sites, 500-1,000 terns at one site, 100-500 terns at nine sites and 29 sites recorded less than 100 terns.

It is important to note that peak counts represent only a proportion of the terns likely to use a site over the course of the post-breeding season, because the turnover in birds at site level is evident from these surveys, from sightings of ringed birds and counts of juveniles in flocks, and from surveys in previous years.

**Table 2:** The number of Common (CN), Arctic (AE), Common/Arctic (UI), Roseate (RS) and Sandwich Terns (TE) and peak number of terns during a single count during the post-breeding tern survey 2017. Where counts of ‘Commic’ terns were not broken down to species level, a tick mark indicates the species was present.

	Site	County	Peak	CN	AE	UI	RS	TE
1	Cruisetown Beach	Louth	4000	✓	✓	4000		120
2	Baltray	Louth	110	✓	✓	20	1	110
3	Gormanston Beach	Meath	1300	650	20	1300	30	250
4	Barnageeragh (Balbriggan and Skerries)	Dublin	400	120	40	400	16	210
5	Loughshinny	Dublin	25	12				13
6	Portrane Burrow Beach	Dublin	106	32				106
7	Malahide Estuary	Dublin	160	✓	10	150		28
8	Dollymount Strand	Dublin	150	32	Yes	150	7	18
9	South Dublin Bay	Dublin	7000	4500	500	7000	500+	6
10	Sandycove	Dublin	43	10	2			40
11	Crossfintan Point	Wexford	1500	✓	✓	✓	200+	4
12	Fethard Quay	Wexford	45					45
13	Duncannon	Wexford	66					66

**Table 2:** (continued)

	<b>Site</b>	<b>County</b>	<b>Peak</b>	<b>CN</b>	<b>AE</b>	<b>UI</b>	<b>RS</b>	<b>TE</b>
14	Tramore Backstrand	Waterford	218	14				204
15	Ardmore Bay	Waterford	43					43
16	Ballycotton	Cork	49					49
17	Ballymacoda	Cork	0					
18	Cork Harbour - Lough Beg	Cork	271					271
18	Cork Harbour - Monkstown Creek	Cork	0					
18	Cork Harbour - Ringabella Creek	Cork	2					2
18	Cork Harbour - Ringaskiddy	Cork	34	5				29
19	Bullen's Bay/Garretstown	Cork	0					
20	Courtmacsherry	Cork	0					
21	Clonakilty Bay	Cork	51					51
22	Muckcross Estuary/Inchydoney	Cork	44					44
23	Owenahincha	Cork	0					
24	Rosscarbery	Cork	90					90
25	Lissagriffin Lake	Cork	27					27
26	Glenbeigh	Kerry	80					80
27	Cromane	Kerry	70					70
28	Ventry Harbour	Kerry	20					20
29	Brandon Point & Pier	Kerry	935		935			
30	Fermoyle	Kerry	90					
31	Castlegregory	Kerry	400		400			
32	Carrahane	Kerry	20					20
33	Blackrock Strand	Kerry	10					10
34	Blennerville, Tralee	Kerry	5					5
35	Poulnasherry Bay	Clare	50-100	✓	✓	✓		✓
36	Rinevilla Bay	Clare	60					60
37	Seafield /Quilty beach	Clare	0					
38	Mutton Island	Galway	18	3	3			12
39	Oilean na Lachan , Connemara	Galway	55					55
40	Roonagh Lough	Mayo	0					
41	White Strand	Mayo	23					23
42	Cahernan Island, Murrisk	Mayo	276			19		257
43	Elly Bay, Belmullet Peninsula	Mayo	96					96
44	Tarmon beach, Belmullet Peninsula	Mayo	38					38
45	Rusheen Island, Inishkea	Mayo	45					45
46	Donegal Bay	Donegal	15					15
47	Inch Lake	Donegal	32	32				

### 3.5 Site Reports

#### 1) Cruisetown Beach

Four thousand Commicterns (predominantly Commons) were estimated at Cruisetown Beach in mid- and late-August, with smaller numbers on an intervening date at high tide indicating there may have been some turnover between these counts. A flock of 120 Sandwich Terns was recorded on the 22<sup>nd</sup> of August, with a roughly 50:50 ratio of adults to juveniles, and including at least one juvenile ringed at Lady's Island Lake in Wexford. Roosting Terns were recorded in the southern half of the beach on the three occasions the site was surveyed.



**Figure 2:** Locations where post-breeding Tern flocks were recorded on Cruisetown Beach (County Louth) in August 2017.



## 2) Baltray

A similar number of Sandwich Terns (110), again with a 50:50 ratio of Adults:Juveniles and including juveniles ringed at Lady's Island Lake were recorded at Baltray on 15<sup>th</sup> of July (Lynch et al., 2017). This record is similar to that at Cruisetown, though was three weeks before. As above, this indicates the importance of the area for dispersing Sandwich Terns and their still-dependent young. Small numbers of Common and Arctic Terns were also seen roosting at Baltray in July and August. Baltray was not surveyed for post-breeding Terns in 2016, and no wardens were present on site late in the season as Little Terns did not initiate breeding in 2016 or 2017. Previous reports from the Baltray Little Tern project allude to the site being used by roosting Common, Arctic, Roseate and Sandwich Terns late in the season (Doyle *et al.* 2013).



**Figure 3:** The locations where post-breeding Tern flocks were recorded at Baltray (County Louth) in July and August 2017.



### 3) Gormanstown Beach

A peak count of 1300 Common terns were recorded at Gormanstown in mid-August, the majority of which were likely to have been Common terns based on counts on other dates. Two other counts ranged between 500-1000 terns, and included counts of 150 and 250 Sandwich Terns – much higher than any previous site records (i.e. via L. Lenehan and Irishbirding). Total tern numbers recorded here during 2017 are consistent with previous high counts between 1999 and 2007 (range 300-3,000 Common Terns), and significantly higher than the peak of 550 terns at Gormanstown in 2016. Historic records via Irishbirding show that the site has been used by several hundred Common, Arctic and Roseate Terns in previous years (i.e. since 2009).



**Figure 4:** The locations where post-breeding Tern flocks were recorded at Gormanstown Beach (County Meath) in August 2017.

#### 4) Barnageeragh North (Balbriggan) and South (Skerries)

Roosting terns were counted at both Barnageeragh north (once) and south (twice) in August 2017. Numbers were lower than in 2016, although that is likely a reflection of survey effort as this area is thought to be used by terns dispersing from the nearby colony at Rockabill Island from late July onwards. Counts of up to 3,000 birds, mostly comprising of Common and Roseate Terns (the main breeding species on Rockabill) are known here from previous years. Two hundred and ten Sandwich Terns were recorded here in mid-August 2017, which is higher than 2016 (peak 20) or any records available via IrishBirding. High levels of disturbance were noted at the rocks close to Skerries in 2016 due to walkers and beach-goers, although disturbance was not noted from the three counts in 2017.



**Figure 5:** The locations where post-breeding Tern flocks were recorded at Barnageeragh North (Balbriggan) and South (Skerries) (County Dublin) in August 2017.

## 5) Loughshinny

Totals of 25 and 14 terns were recorded at Loughshinny in late August and September 2017 respectively, and comprised of both Common and Sandwich Terns. These low counts, at a site that held over 300 terns during counts last autumn, and one that is relatively close to the breeding colony at Rockabill, are likely due to low survey effort and it seems probable that higher numbers of terns might have been present on other nights.



**Figure 6:** The locations where post-breeding Tern flocks were recorded at Loughshinny (County Dublin) in August and September 2017.



## 6) Portrane Burrow Beach

Varying numbers of terns were recorded at Portrane Burrow from mid-August through to mid-October (6 counts), peaking at 105 and 106 terns on 21<sup>st</sup> August and 4<sup>th</sup> of September, with a lower count of 42 terns between those dates. Sandwich Terns formed most, or all of the flocks recorded, with small numbers of Common Terns in August and early September. In 2016 it was commented that roosting terns on the beach here are very susceptible to disturbance from walkers and dogs.



**Figure 7:** The locations where post-breeding Tern flocks were recorded at Portrane Burrow Beach (County Dublin) in August, September and October 2017.

## 7) Malahide Estuary

A peak of 160 Common terns was recorded roosting on the north side of the outer part of Malahide Estuary in August, with a flock of 28 Sandwich Terns present on 1<sup>st</sup> September. This site had not been surveyed in 2016, but a flock of 320 Sterna terns (including Roseates) was listed on Irishbirding in September 2016. Further to this, the roost site is also used by large numbers of gulls, waders and waterfowl, and small numbers of Sandwich Terns are regularly seen around the Marina in August and September.



**Figure 8:** The location where post-breeding Tern flocks were recorded at Malahide Estuary (County Dublin) in August, September and October 2017.

## 8) Dollymount Strand

Small numbers of Common and Sandwich Terns were seen roosting at the north end of Dollymount Strand in mid-August, and a larger aggregation of around 150 terns was recorded at the end of the North Bull Wall during the afternoon of 12<sup>th</sup> August. Walkers and dogs are a regular presence and cause of disturbance here (Lewis & Adcock 2017).



**Figure 9:** The location where post-breeding Tern flocks were recorded at Dollymount Strand (County Dublin) in August 2017.

## 9) South Dublin Bay

South Dublin Bay (Sandymount and Merrion Strands) was counted at dusk on nine dates from mid-August to late-September. This area has long been known to be a hugely important roost site for post-breeding terns (Tierney *et al.* 2016), and based on counts elsewhere in Ireland in the last two years, and additional data gathered by the I-WeBS Office from counters and ring-readers in the UK, it would appear that South Dublin Bay is the most important site for terns in both Ireland and the UK in autumn.

A peak of 7,000 terns was recorded on 30<sup>th</sup> August, with at least 6,600 present the following night. The peak count was estimated to contain around 50% Common Terns, 30% Roseate Terns and 20% Arctic Terns, though it is difficult to obtain accurate species ratios of large flocks at this site. In general, Common Terns form the largest proportion of flocks at this site, with varying numbers of Roseate Terns and Arctic Terns. Small numbers of Sandwich Terns (peak 6) were also recorded. Of the nine tern counts in South Dublin Bay, three were greater than 5,000, another three were between 2,000 and 5,000, and the three final counts from 14<sup>th</sup> to 25<sup>th</sup> September were between 400 and 800 terns.

The 2017 peak count is in line with what has come to be expected in South Dublin Bay in autumn, although falls below the exceptionally high peak count of 17,440 recorded in 2016. Unusually high peak counts such as this have been recorded in Dublin Bay in the past and are likely somewhat short-lived, but probably occur more than has been recorded over the years. The 2017 peak count occurred later than that in 2016 (12<sup>th</sup> August). As in previous years, small numbers of Black Terns were recorded amongst the South Dublin Bay tern flocks. Colour-ringing of terns at this site in recent years as part of the Dublin Bay Birds Project has yielded re-sightings from colonies in Ireland, Northern Ireland, England, Scotland and Wales, adding further evidence to the hypothesis that terns from all over Ireland and the UK congregate in South Dublin Bay before initiating migration.

Recreational disturbance (walkers, joggers, dog-walkers) continues to be a source of some disturbance at this site.

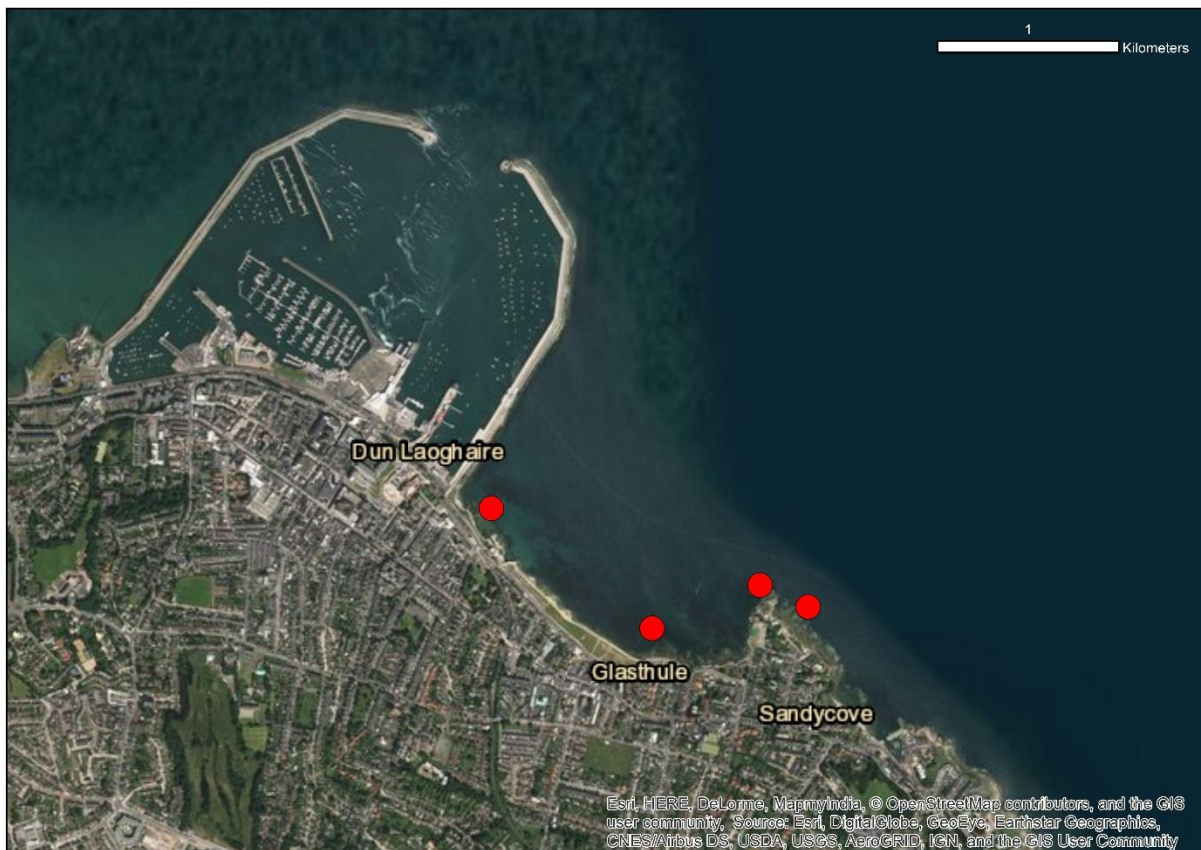




**Figure 10:** The location where post-breeding Tern flocks were recorded at South Dublin Bay (County Dublin) in August and September 2017.

## 10) Sandycove

Rocky areas along the coast at Dun Laoghaire, Glasthule, Sandycove and Bullock Harbour were surveyed for Terns on four dates in August, before surveying the main tern roost in South Dublin Bay above. Small numbers of terns were recorded, with peaks of 40 Sandwich Terns, 10 Common Terns and 2 Arctic Terns. An additional count of 30+ Roseate Terns was listed on IrishBirding on 3<sup>rd</sup> September. Counts here took place between 17:00 and 18:30 each evening, so were likely too early to capture the true number of terns roosting at the site. It seems likely that Sandwich Terns in south Dublin choose to roost here, given their absence from the main roost in South Dublin Bay, while the other Tern species likely move into the main roost as night falls. Given the nature and size of the site, it is not expected to hold significantly larger numbers of terns than were recorded here in 2017. Ladys Island-ringed juvenile Sandwich Terns were seen regularly amongst the flocks here.



**Figure 11:** The location where post-breeding Tern flocks were recorded at Sandycove (County Dublin) in August and September 2017.

## 11) Crossfintan Point

Counts of around 300 terns, mostly Arctics with some Commons and small numbers of Roseates, were recorded on the rocks at Crossfintan on three of four dates from mid-July until mid-August. Counts peaked at 1,500 birds, including at least 1,000 Commons and 200 Roseates, on 22<sup>nd</sup> August – at a similar time to the second peak recorded in 2016 (1,150 terns on 25<sup>th</sup> August).

Included in roost counts were an Arctic Tern ringed in the Netherlands, and Common and Roseate Terns from the Dublin colonies, as well as birds from the Lady's Island colony (T. Murray, pers. comm.).



**Figure 12:** The location where post-breeding Tern flocks were recorded at Crossfintan Point (County Wexford) in July and August 2017.

## 12) Fethard Quay

Counts of 12 to 45 Sandwich Terns were recorded on the beach at Fethard in August and September, with small numbers of juveniles in each flock. No records were received for nearby Bannow Bay, where 30 Sandwich Terns were recorded in August 2016.



**Figure 13:** The location where post-breeding Tern flocks were recorded at Fethard Quay (County Wexford) in August and September 2017.



### 13) Duncannon

The peak count of Sandwich Terns at Duncannon was 66 birds on 22<sup>nd</sup> August, significantly lower than in 2016 (peak 170, two additional counts >100), despite good survey coverage (7 counts in as many weeks). Multiple disturbances were recorded during one of this year's counts, including dog-walkers and bathers. As at Fethard, proportions of juveniles at Duncannon were low. Sandwich Terns ringed at Lady's Island Lake and Scotland were recorded (T. Murray pers. comm.).



**Figure 14:** The location where post-breeding Tern flocks were recorded at Duncannon (County Wexford) in August and September 2017.

## 14) Tramore Backstrand

A single record of 218 terns was received for Tramore Backstrand, consisting of 204 Sandwich Terns and 14 Commons, on 23<sup>rd</sup> August. In 2016, only 40 terns were present during counts at Tramore, but counters had noted that numbers were lower than expected based on previous years. The regular counter was not able to survey Tramore Backstrand this year, so coverage was lower than in 2016.



**Figure 15:** The location where post-breeding Tern flocks were recorded at Tramore Backstrand (County Waterford) in August 2017.

## 15) Ardmore Bay

Flocks of 37 and 43 Sandwich Terns were recorded on rocks at the 'Curragh Strand' in Ardmore Bay in September. The flocks included Sandwich Terns ringed in England and Holland (A. Malcolm pers. comm.).



**Figure 16:** The location where post-breeding Tern flocks were recorded at Ardmore Bay (County Waterford) in September 2017.



## 16) Ballycotton

The only data available for Ballycotton in 2017 was from the County Cork Sandwich Tern roost count on 17 August, as the regular counter for the site was unavailable for subsequent counts. On that date, 49 Sandwich Terns were recorded roosting at the back of the lake.



**Figure 17:** The location where post-breeding Tern flocks were recorded at Ballycotton (County Cork) in August 2017.

## 17) Ballymacoda

No terns were recorded at Ballymacoda during the County Cork Sandwich Tern roost count on the 17<sup>th</sup> August, and only very few were noted in the preceding weeks (low 10's). No data were received for the site on subsequent dates as the regular counter was unavailable.

## 18) Cork Harbour (Ringaskiddy, Lough Beg, Monkstown Creek, Ringabella Creek)

In Cork Harbour, 271 Sandwich Terns were recorded at Lough Beg, 2 at Ringabella Creek and none at Monkstown Creek or Ringaskiddy-Luc Strand. The week before the coordinated count, 472 Sandwich Terns roosted at Lough Beg, and 476 were there on 31<sup>st</sup> August. These counts highlight the importance of this site for Sandwich Terns in Cork and along the Irish coast more generally. In addition, 80-130 Common Terns were recorded in Monkstown Creek and 14 roosted at Lough Beg.

The concurrent study organised by Tom Gittings of Sandwich Tern roosts in County Cork on 17<sup>th</sup> August recorded a total of 473 Sandwich Terns at six of the sites surveyed. Additional counts for Cork Harbour, carried out as part of work by Tom Gittings, will be made available to this project in the near future.



**Figure 18:** The location where post-breeding Tern flocks were recorded at Cork Harbour (County Cork) in August 2017.

### 19) Bullen's Bay/Garretstown

This site was surveyed as part of the County Cork Sandwich Tern roost count on 17<sup>th</sup> August, but no roosting Terns were recorded.

### 20) Courtmacsherry

This site was surveyed as part of the County Cork Sandwich Tern roost count on 17<sup>th</sup> August, but no roosting Terns were recorded.

### 21) Clonakilty Bay

Sandwich Terns were recorded twice in Clonakilty Harbour, both times roosting with gulls and waders on the beach at the back of Inchydoney dunes. No Sandwich Terns were recorded during the Cork Sandwich Tern roost count on 17<sup>th</sup> August, but 20-30 individuals were noted earlier in the week. Eight Sandwich Terns were present a week later and a total of 51 individuals were recorded in early September. Disturbance from dogs was noted during the counts.

## 22) Muckross Estuary/Inchydoney

This site was surveyed as part of the County Cork Sandwich Tern roost count on 17 August, when 44 Sandwich Terns were recorded. The counter commented that this number was more than expected.



**Figure 19:** The locations where post-breeding Tern flocks were recorded at Clonakilty Harbour and Muckross Estuary/Inchydoney (County Cork) in August and September 2017.



### 23) Owenahincha

This site was surveyed as part of the County Cork Sandwich Tern roost count on 17<sup>th</sup> August, but no roosting terns were recorded. The counter noted that c.50 Sandwich Terns were in the area, but all flew in the direction of Rosscarberry before 21:00 hours.

### 24) Rosscarberry

Ninety Sandwich Terns roosted at Rosscarberry during the County Cork Sandwich Tern roost count on 17<sup>th</sup> August, with birds from Owenahincha noted to have moved in the direction of Rosscarberry at dusk.



**Figure 20:** The location where post-breeding Tern flocks were recorded at Rosscarberry (County Cork) in August 2017.

## 25) Lissagriffin Lake

A high count of 27 Sandwich Terns was recorded at Lissagriffin Lake in mid-August, with lower counts the following day and again in early September. Terns predominantly roosted on the mud/sand at the south-eastern end of the lake, though utilised sand west of the causeway when that roost site was underwater.



**Figure 21:** The location where post-breeding Tern flocks were recorded at Lissagriffin Lake (County Cork) in August and September 2017.



## 26) Glenbeigh

Eighty Sandwich Terns were recorded at Glenbeigh on 13<sup>th</sup> September

## 27) Cromane

Over seventy Sandwich Terns roosted at Cromane on 13<sup>th</sup> September.



**Figure 22:** The location where post-breeding Tern flocks were recorded at Glenbeigh and Cromane (County Kerry) in September 2017.



## 28) Ventry Harbour

Twenty Sandwich Terns were recorded on the strand at Ventry Harbour on 7<sup>th</sup> September.



**Figure 23:** The location where post-breeding Tern flocks were recorded at Ventry Harbour (County Kerry) in September 2017.

### 29) Brandon Pier & Point

On 11<sup>th</sup> September, around 900 Arctic Terns roosted at Brandon Point, with a further 35 nearby at Brandon Pier, as well as two Black Terns.

### 30) Fermoyle

Ninety Sandwich Terns were recorded at high tide on 21<sup>st</sup> August, and the counter noted that adults were feeding fledged young at the same location in July. The terns used a sandbank to rest and roost on, with large numbers of gulls and oystercatchers.

### 31) Castlegregory

Four hundred Arctic Terns roosted at Castlegregory on 12<sup>th</sup> September.



**Figure 24:** The location where post-breeding Tern flocks were recorded at Brandon Point and Pier, Fermoyle and Castlegregory (County Kerry) in August and September 2017.

### 32) Carrahane

Twenty Sandwich Terns were counted at high tide, roosting with a mixed flock of up to 200 gulls, in late August. Terns use various parts of this large site depending on the tidal state. Disturbance levels here are usually low.



**Figure 25:** The location where post-breeding Tern flocks were recorded at Carrahane (County Kerry) in August 2017.

### 33) Blackrock Strand

Ten Sandwich Terns were recorded roosting at Blackrock Strand in early September.

### 34) Blennerville

Five Sandwich Terns were recorded on site on the morning of 27<sup>th</sup> August, at high tide. Given the time of day this is unlikely to represent true roosting numbers in the area, but is indicative that the site is used by roosting birds.



### 35) Poulnasherry Bay

Records were received indicating that terns use the small islands in Poulnasherry Bay as roost sites, with an estimate of 50-100 terns estimated in early and mid-August, predominantly thought to be Sandwich Terns though Commics are probably present too.

### 36) Rinevilla Bay

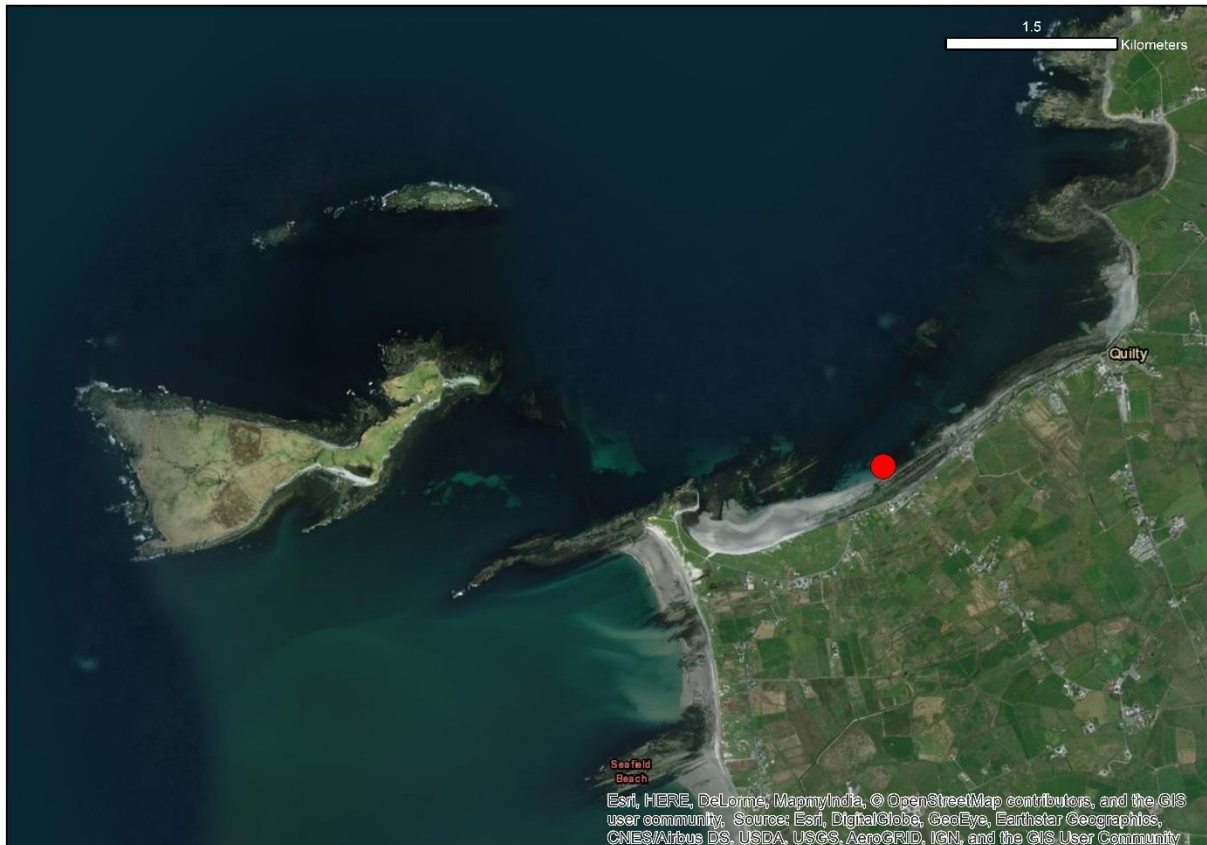
Sandwich Terns were recorded feeding and roosting in Rinevilla Bay in late August. Terns using this site are known to move between Beale Strand in Kerry and the Clare side of the estuary (i.e. Rinevilla Bay and Carrigaholt Bay). Eleven Common terns were recorded roosting on intertidal mudflats at Carrigaholt Bay during monthly counts by McCarthy Keville O'Sullivan consultants on 30<sup>th</sup> of August, with 7 Sandwich Terns feeding at Rinevilla on the same day. Smaller numbers (1-2 birds) of Common and Sandwich Terns were recorded feeding and roosting in various parts of the Shannon and Fergus Estuary site during September counts by McCarthy Keville O'Sullivan, as well as earlier in the year.



**Figure 26:** The location where post-breeding Tern flocks were recorded at Rinevilla Bay (County Clare) in August 2017.

### 37) Sea field/Quilty Beach

This area was checked for terns at high tide on an afternoon in mid-August, but none were recorded. This is unlikely to be representative of the site throughout the post-breeding season however. The counter notes that at high tide, disturbance at this site is constant. The approximate position where flocks have been recorded in the past is shown in Figure 25 below.



**Figure 27:** The location where post-breeding Tern flocks have been seen at Seafield/Quilty Beach (County Clare) in in previous years.



### 38) Mutton Island

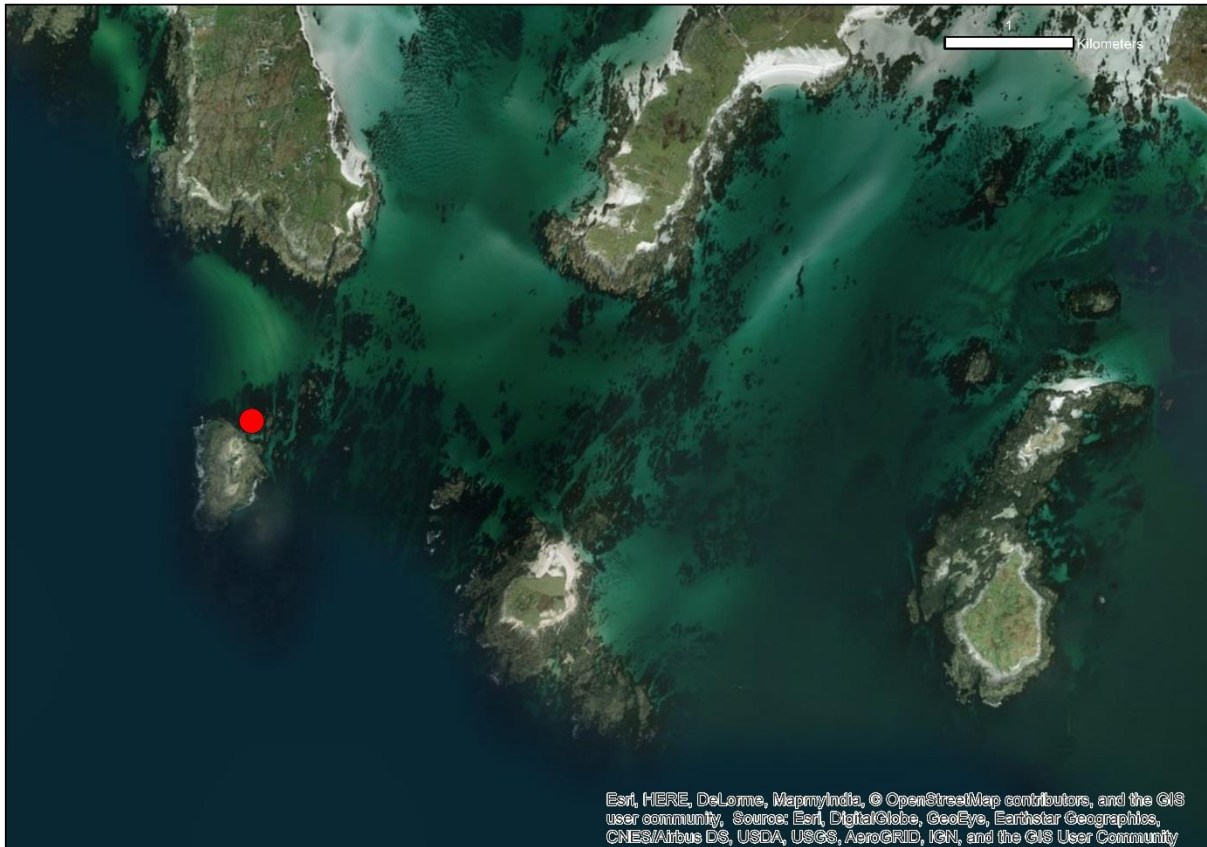
A small flock of Common, Arctic and Sandwich Terns (18 total) were recorded in mid-September. The site is a breeding colony for Common and Arctic Terns, and possibly Sandwich Terns, and terns roost here in spring and summer. At the end of the breeding season the terns only spend a short amount of time roosting here, before moving south along the coast. In general, the site is used as a day time roost during the post-breeding season for terns feeding in the area, before moving to an unknown location to roost. In winter, up to 10 Sandwich Terns and a Forster's Tern (every winter since November 2003) forage and roost in the area during the day.



**Figure 28:** The location where post-breeding Tern flocks were recorded at Mutton Island (County Galway) in September 2017.

### 39) Oilean na Lachan (Connemara)

Fifty-five Sandwich Terns were recorded here in mid-August. At high tide the site is subject to disturbance from cars, quad bikes, horses and dog walkers. Terns are only present here at low tide as a result.



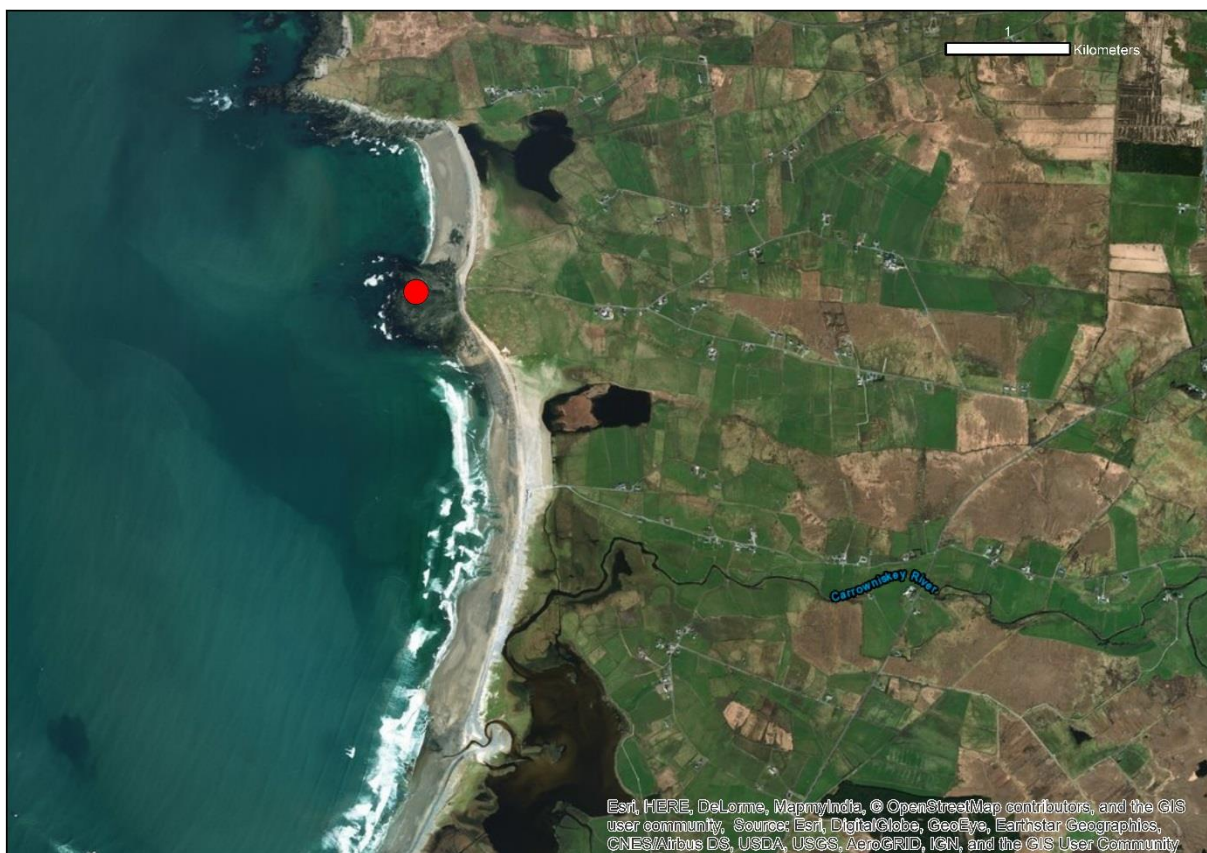
**Figure 29:** The location where post-breeding Tern flocks were recorded at Oilean na Lachan, Connemara (County Galway) in August 2017.

#### 40) Roonagh Lough

Roonagh Lough was surveyed for roosting Terns twice in August, but no terns were recorded. On both dates water levels at Roonagh Lough were very high and because the sandwich terns here often roost on the bare sand this probably explains the zero counts. Nearby White Strand was used, however.

#### 41) White Strand

Twenty-three Sandwich Terns roosted on the rocks at White Strand, during a rising tide on 9<sup>th</sup> August.



**Figure 30:** The location where post-breeding Tern flocks were recorded at White Strand (County Mayo) in August 2017.



#### 42) Cahernan Island, Murrisk

This site, an island at high tide, had 163 and 276 terns on two dates in August. These were predominantly Sandwich Terns, with 10-20 Commics.



**Figure 31:** The location where post-breeding Tern flocks were recorded at Cahernan Island, Murrisk (County Mayo) in August 2017.



### 43) Elly Bay (Belmullet Peninsula)

Roosting Sandwich Terns (n= 89 and 96) were recorded on the strand at Elly Bay on two dates in mid-August.



**Figure 32:** The location where post-breeding Tern flocks were recorded at Elly Bay, Belmullet Peninsula (County Mayo) in August 2017.

#### 44) Tarmon Beach

In addition to the 89 Sandwich Terns recorded at Elly Bay on the 16<sup>th</sup> August, 38 (24 adults, 14 juveniles) roosted on nearby Tarmon Beach. A visit to the neighbouring sites on the 15<sup>th</sup> September found no roosting terns.



**Figure 33:** The location where post-breeding Tern flocks were recorded at Tarmon Beach, Belmullet Peninsula (County Mayo) in August 2017.

#### 45) Rusheen Island, Inishkea

Forty-five Sandwich Terns, and 20 Little Terns, were recorded roosting on Rusheen Island in early August.



**Figure 34:** The location where post-breeding Tern flocks were recorded at Rusheen Island, Inishkeas (County Mayo) in August 2017.



#### 46) Donegal Bay

No records of roosting terns were received for Donegal Bay in 2017, though an observer noted 10-15 feeding in the bay in mid-August and records from previous years on IrishBirding in 2011 and 2015 had 120 and 30 Sandwich Terns (respectively) roosting at Mountcharles at the north side of the bay.

#### 47) Inch Lough

Thirty-two Common Terns were recorded on Tern Island in Inch Lough in mid-August. A record of 30 roosting Sandwich Terns was listed on IrishBirding during the pre-breeding season (2 April). Both species breed here.



**Figure 35:** The location where post-breeding Tern flocks were recorded at Inch Lake (County Donegal) in August 2017.



## 4. Discussion

Although we have a good knowledge of some breeding tern colonies on the east coast (Rockabill, Dublin Port, Dalkey Island, Lady's Island), the locations, numbers and species of post-breeding terns at sites around Ireland has presented something of a knowledge gap to date. Though many important sites used by post-breeding terns are surveyed as part of I-WeBS, the core focus period of that survey is often weeks and months after terns have departed and so their presence is often missed, and/ or peak numbers were heavily under-recorded due to the timing of the I-WeBS counts. The 2016 post-breeding tern survey showed that there are significant numbers of *Sterna* terns of four species using coastal wetland sites along the east and south coasts of Ireland throughout August and September. The continuation of this survey in 2017, and expansion around the Irish Coast, has resulted in records for an additional 24 sites on the west coast between Cork Harbour in the south and Inch Lough in the north. In addition, it has added to our knowledge of many of the sites surveyed in 2016 and in some cases recorded much higher peak counts (e.g. 4,000 terns at Cruisetown in 2017, peak 400 in 2016). In addition, roosting terns were recorded on two east coast sites which weren't surveyed in 2016 – Baltray in Louth supported four tern species and a peak count of 110, and Malahide Estuary in Dublin recorded three species and a peak of 150 terns.

The counts from this survey provide an indication of the relative numbers of terns using each site during the post-breeding season. It is important to note however that counts at sites during 2017 should not be interpreted as an increase or decrease on numbers from 2016. The frequent movement and turnover of birds at post-breeding tern sites has been well-documented for the South Dublin Bay roost (Tierney *et al.* 2016), and there is similar evidence for it at other sites. Given that each site is rarely counted more than a handful of times in the three-month window it could be used by post-breeding terns, the likelihood that the true peak number of birds will coincide with a date the local counter is present are slim. For some sites near large colonies, the peak count may occur as early as July (e.g. Barnageeragh in Dublin, Crossfintan in Wexford). In other cases, sites have held significant numbers into mid- and late September (e.g. Castlegregory and Brandon Point). In the case of the South Dublin Bay roost, the peak count this year was two weeks later than the 2016 peak. With this in mind, site records should not be used to calculate trends between years but rather should be accumulated and used to better describe the number of terns and range of species that a site has the potential to accommodate during the pre-migration period. In 2017, this survey has increased our knowledge of the numbers and species of terns using sites along the east and south coasts during this important stage of the year, as well as providing initial records for many west coast sites that can be added to in the years to come. In the last two years, historic records have been received for sites in Dublin, Wexford and Sligo. Historic records also exist for the South Dublin Bay roost, and there are likely to be many useful records available via IrishBirding, BirdTrack and directly from birders and I-WeBS counters. It would be worthwhile to collate these records to provide as complete a picture as possible of a site's usefulness as a post-breeding tern roost in recent times.

Survey coverage along the east and south coasts was lower than in 2016, with 71 records in 2017 compared to 80 records along the same stretch of coast in 2016. For most 'new' sites along the west coast, only single records were received. Post-breeding tern roost sites on the west coast were largely unknown before the current survey, in stark contrast to the east and south coast where most tern roost sites are well-known, if not well-documented. The lack of any existing information or knowledge

of many west coast sites undoubtedly hindered efforts to convince volunteers to carry out counts. With that in mind, even the single records in 2017 have allowed us to identify a significant number of sites to target in future years. In Cork, the provision of data from the co-ordinated Sandwich Tern roost count (T. Gittings pers. comm.) ensured at least one record from each known site in the county at a time in the post-breeding season when numbers would expect to be relatively high. It is recommended that in future years, early discussions should be held with the organiser (T. Gittings) to ensure greater synchronicity between the two surveys. In both 2016 and 2017, volunteer counters were presented with a window of four weeks in which to carry out multiple site visits to ascertain what numbers and species of terns are using the site. For many of the larger sites, individuals or groups have already been collecting this information in previous years and have submitted several counts from within and outside the core survey period in both years. In other cases, volunteers either carried out the bare minimum of a single count or in some cases reliable surveyors were unavoidably unavailable during the core period despite anticipating that they would be able to partake in the survey earlier in the year. The merits of agreeing two or three designated count weekends for the post-breeding tern survey in future years should be considered. Although some surveyors may not adhere to the recommended weekends as it may not suit their own work or research schedule, providing recommended dates may encourage other volunteers to get out and count more often. Providing recommended count dates may also encourage volunteers to notify the I-WeBS office if they aren't available in advance of count weekends, allowing time to find alternative counters. Although it was only targeted at a single date in mid-August, the coordinated count of Sandwich Tern roosts was very successful in terms of coverage and an adaptation of this method may be worth considering for the national survey. At some sites the terns can be more difficult to count at high tide (e.g. Lough Beg), so this should be considered if choosing weekends on which to count.

South Dublin Bay continues to accommodate huge numbers of terns during the post-breeding season. This year's peak count was 7,000 terns on the 30<sup>th</sup> of August, with 6,600 present the following day. Counts of 2,100-5,500 were recorded there earlier in August. By mid-September there was still 400-500 terns present, which would be considered a large count at most other Irish sites. During 2017 the I-WeBS office made some enquiries and encouraged the submission of records from tern roosts in Northern Ireland, Wales and England – particularly those in the Irish Sea. Counts in the low hundreds of Common and Sandwich Terns, and small numbers of Arctics and Roseates, were received for sites in Antrim and Down in Northern Ireland, going back several years. Important tern roosts are known around the mouths of the Mersey and Ribble rivers in England, including at Seaforth where peak counts since 2013 have been in the range of 1,000-1,200 (mostly Common) terns, and nearby Ainsdale where counts of 2,000+ Sandwich Terns have been recorded. Other notable sites include Red Rocks at Cheshire (England), and Gronant and Point of Ayr (Wales), which regularly had several hundred Sandwich Terns and occasional large counts of Common Terns too. The peak amongst these sites in 2017 was 1,200 Sandwich and 7 Common Terns at Gronant in late August. Gronant too, was used by up to 600 Little Terns in August. A roost at Teesmouth on the east coast of England has been documented as an important post-breeding tern site. Recent data for the site has been difficult to obtain, but peak counts from the 1990's had >2,000 Common Terns and 3,500-4,000 Sandwich Terns (Ward 2000), though it is not clear if these counts were in the same year. Although this doesn't represent a complete list of post-breeding tern sites in the Irish Sea or the UK as a whole, it does provide strong evidence that the 7,000 terns recorded in South Dublin Bay in 2017 and the unusual (though not unprecedented) count of 17,440 terns in 2016, make this site one of the most important

tern roosting sites in north-west Europe. Given the existence of a trans-Pennine migratory route used by Common Terns, moving from Teesmouth on the west coast to Seaforth on the east coast of England, it seems possible that many of these terns move across the Irish Sea to sites including South Dublin Bay before migrating southwards. There is some ringing data from the Dublin Bay Birds project (R. Whelan pers. comm.) to support this hypothesis.

Frequent recreational disturbance continues to be a problem at many strandline sites, particularly at high tide, and is listed as a potential impact in the conservation objectives for some SPAs (e.g. South Dublin Bay and River Tolka Estuary SPA, 004024). The ongoing issue of disturbance highlights the importance of nearby alternate roosts, so that terns are not forced to travel far if disturbed.

In conclusion, the results of this survey help add to the known value of a number of wetland sites, many of which are protected as important roosting and staging sites for significant numbers of tern species listed in Annex I of the EU Birds Directive. It is recommended that the post-breeding tern survey be continued in future years to continue to build our knowledge of the relative importance of these sites, the species that use them and the time of the year when they most rely on them.

## 5. References

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