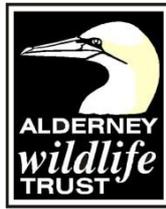


ALDERNEY WILDLIFE TRUST

Annual Ramsar Project Review 2015



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Les Etacs 2015. Photo credit: Bill Black.

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Executive Summary

-The first year of the Channel Islands Seabird Census on Alderney as led by Catherine Veron and coordinated on island by the Ramsar Ecologist (**Section 1.1**).

-The Puffin population decreased to 112 Apparently Occupied Burrows (AOB) (from 143 AOB in 2014) but this only accounted for the two main colonies, the true value will be much higher (**Section 2.1.1**).

- As a part of the five yearly cycle, both Les Etacs and Ortac were photographed for the colony census. Both colonies are increasing; Les Etacs has increased from 5,765 Apparently Occupied Sites (AOS) in 2011 to 5,909 AOS in 2015 (6% increase), Ortac has increased from 2,120 AOS in 2011 to 2,777 AOS in 2015 (31% increase) (**Section 2.1.6**).

- Apparently Occupied Nest (AON) counts for all three Gull species was not done on Burhou this year due to bad weather but a total of 194 chicks were ringed (192 Lesser Black-backed gulls and two Herring Gulls) (**Section 2.1.2**).

- Storm-Petrel ringing continued this year with a greater effort than last year with 6 Channel Island ringers and two members of Alderney Wildlife Trust (AWT) present. Over two nights 504 Storm-Petrels were ringed (**Section 2.1.4**).

- A public awareness campaign continued for the Ringed Plovers, with the addition of a trial year of roped off boundaries on Platte Saline (**Appendix 5.2**). Ringed Plover chicks were also seen at Hannaine Bay and Saye Bay for the first time (**Section 2.1.8**).

- 2015 was the last year of field work for the University of Liverpool PhD. 32 gannets tagged, 11 with accelerometers. 18 tags were recovered with 11 accelerometers. (**Section 2.1.6**).

- A series of marine surveys were implemented both within the Ramsar Site and around Alderney. This included a marine intertidal habitat survey, intertidal species assessments and marine mammal species surveys (**Section 2.2**).

- The work of the AWT and the Ramsar site were promoted via national television pieces with BBC One's Natural History programme, Big Blue UK filming the tagging of the Gannets, while on island promotion and awareness

continued through a full schedule of events and tours (**Section 2.4**).

- LIVE: Teaching Through Nature saw a decrease in participants this year from 73 in 2014 to 34 in 2015 despite the addition of a new streaming seabird camera (Nest Cam) and a new History Unit led by Guernsey historian Jason Monahan (**Section 2.4.5**).

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1. Introduction

2015 marked the fourth year of work with the second five-year management strategy for the Alderney West Coast and Burhou Islands Ramsar site, formally named Alderney Ramsar Strategy 2 (ARS2). The overall aim of the management strategy is to ‘broaden the scope of the work in order to gain a greater understanding of all aspects of the ecological status of the Ramsar site, while maintaining a key interest in seabird populations’. The work of the ARS2 is largely undertaken by the Alderney Wildlife Trust (AWT), their staff, volunteers and other organisations including the Channel Island Ringing Group, on behalf of the States of Alderney (SoA). This report describes and analyses the work undertaken in 2015, under the 2015 Annual Action Plan. It aims to review the results against the action plan to identify both shortcomings and successes and to make recommendations for the year 2016, based on the overall strategy as laid out in ARS2.

1.1 Channel Islands Seabird Census

This year was the first year of the Channel Islands Seabird Census, coordinated by Catherine Veron (Channel Islands Ringing Group). The census is due to take place over 2-3 years in Alderney, Guernsey (including all outlying islands) and Jersey in conjunction with the National UK Seabird Census which also started this year. The results from the Channel Islands will be fed into the UK Seabird Census; therefore it is imperative that the monitoring methods used are in accordance with those of the UK which follows the JNCC Seabird Monitoring Handbook for Britain and Ireland. Fortunately most of the monitoring methods used within the Ramsar site for Alderney were initially taken from the handbook and therefore didn't need to be changed for this year's census.

2. Work Areas

2.1 Seabirds

Using standardised methods set out in the Seabird Monitoring Handbook, population and productivity monitoring continued throughout the 2015 breeding season for the 10 species of breeding seabirds within the Ramsar site. Results and details of the methods used are described in sections 2.1.1 – 2.1.8.

2.1.1 Atlantic Puffin (*Fratercula artica*)

Predicting the effects of the seabird wreck upon the Puffin population of Burhou

During January and February of 2014, severe weather in the Bay of Biscay and western end of the English Channel killed large numbers of seabirds. 50,000 dead birds, mainly Puffins, Guillemots and Razorbills, were washed up on the shores of Spain, France, the Channel Islands and Southern England and it is possible the real number of casualties may have been double this figure. The majority of the dead birds were immature.

Between 2005 and 2013 the Burhou Puffin population had increased steadily from 120 to 168 pairs but in 2014 it fell to 143 pairs. This was not as large a fall as might have been expected from the losses suffered the preceding winter. However, the report showed that most of the recovered dead birds were immature, suggesting that the breeding population of Burhou Puffins might continue to decline over the coming years. In an attempt to predict the pattern of change for the Burhou Puffins we used a population model, which included the immature birds which remain at sea for the first five years of their life. The initial pattern of age distribution was consistent with that occurring for the Burhou Puffins between 2005 and 2013. Figure 1 shows the numbers of Puffins of each age group that would be expected for a sub-population in a normal year (blue curve). These numbers were then arbitrarily reduced to reflect mortality suffered during the early months of 2014 and this is shown by the red curve in Figure 1.

The numbers surviving through to the summer of 2014 (the red curve of Figure 1) were then used to predict the population trends over the next 20 years. Because the number of new recruits to a colony at the beginning of a breeding season is directly proportional to the number of chicks fledging five years previously, one sees a decline in population which continues for over five years before it reaches a plateau. This is shown in Figure 2. Because there is no evidence to suggest that the survival of both immature and adult Puffins is improved when the Puffin numbers are reduced, a recovery in the breeding population is not predicted and suggests that we might expect the Burhou Puffin population to decrease over the next five years at least. This would be consistent with the effects of the wreck of the Torrey Canyon on the Puffin populations of Les Sept Iles in the 1960's, which most probably had similar effects on the Puffins of Burhou.

Obviously there are considerable uncertainties in such an exercise but the advantage of using a model of this kind is that its assumptions are clearly defined so that deviations from its predictions

should point to changes in survival and breeding success or possibly recruitment from other colonies.

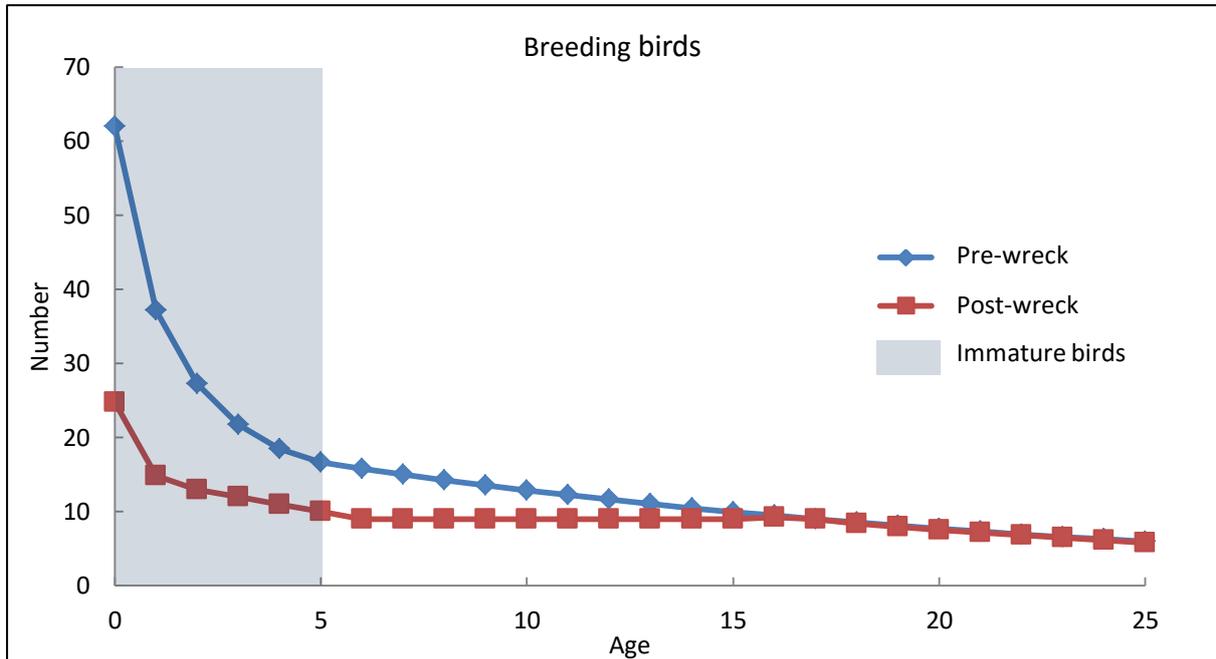


Figure 1. Predictions of Burhou Puffins the winter before the 2014 wreck and the summer after the wreck.

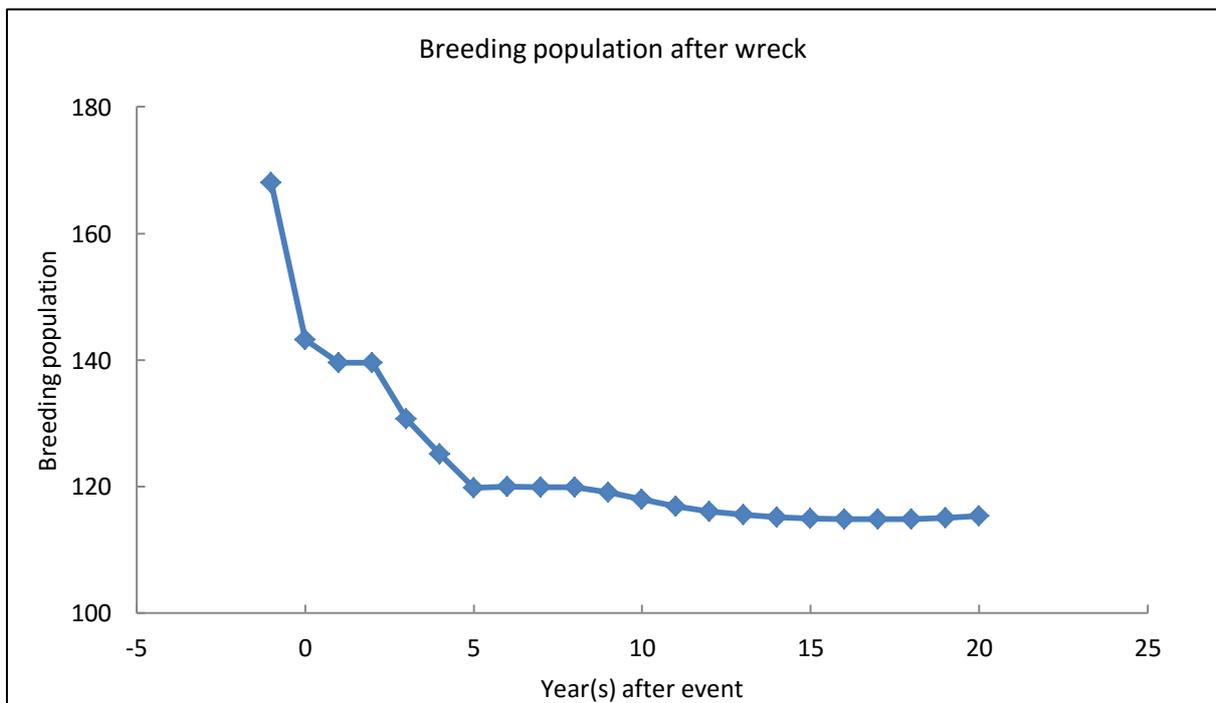


Figure 2. The breeding population of Apparently Occupied Burrow (AOB) after the seabird wreck.

Population and Productivity Monitoring

The Puffins arrived back on Burhou on 16th March, a lot earlier than in 2014 when their arrival was delayed by three weeks as a direct consequence of the Seabird Wreck (as mentioned in Morley et al, 2014). Live stream cameras were set up to coincide with the Puffin's arrival (**Section 2.4.3**).

Monitoring methods used a combination of raft counts from the shore to estimate breeding pairs and Apparently Occupied Burrow (AOB) counts, gathered from vantage point watches of the main colony (V1 and V2) and burrow entrance checks at the end of the season.

Monitoring

Counting the numbers of rafting Puffins (birds resting on the sea <200m away from the shoreline) early on in the season is the most useful time when trying to determine the number of breeding birds present. By counting the number of Puffins present in the raft during this time it is assumed that all the birds present are of breeding age (5 years+), compared to rafts later on in the season which may include immature and non-breeding birds. Especially useful are counts done during incubation (mid-April to early May) as they are thought to be directly related to the number of active burrows on Burhou (Soanes et al, 2010). All 2015 raft counts were done from the main rafting area to the south of Burhou, adjacent to the main colony. It should also be noted that both sub-colonies on the north-west and north-east coasts of Burhou showed significant rafts of 20-30 Puffins each throughout the season, although due to a lack of time and resources it is unclear whether these were breeding birds, immatures or non-breeders.

The highest count early on in the season was on 25th April when 114 Puffins were counted in the bay. The highest count during the incubation period was 168 recorded on 24th June.

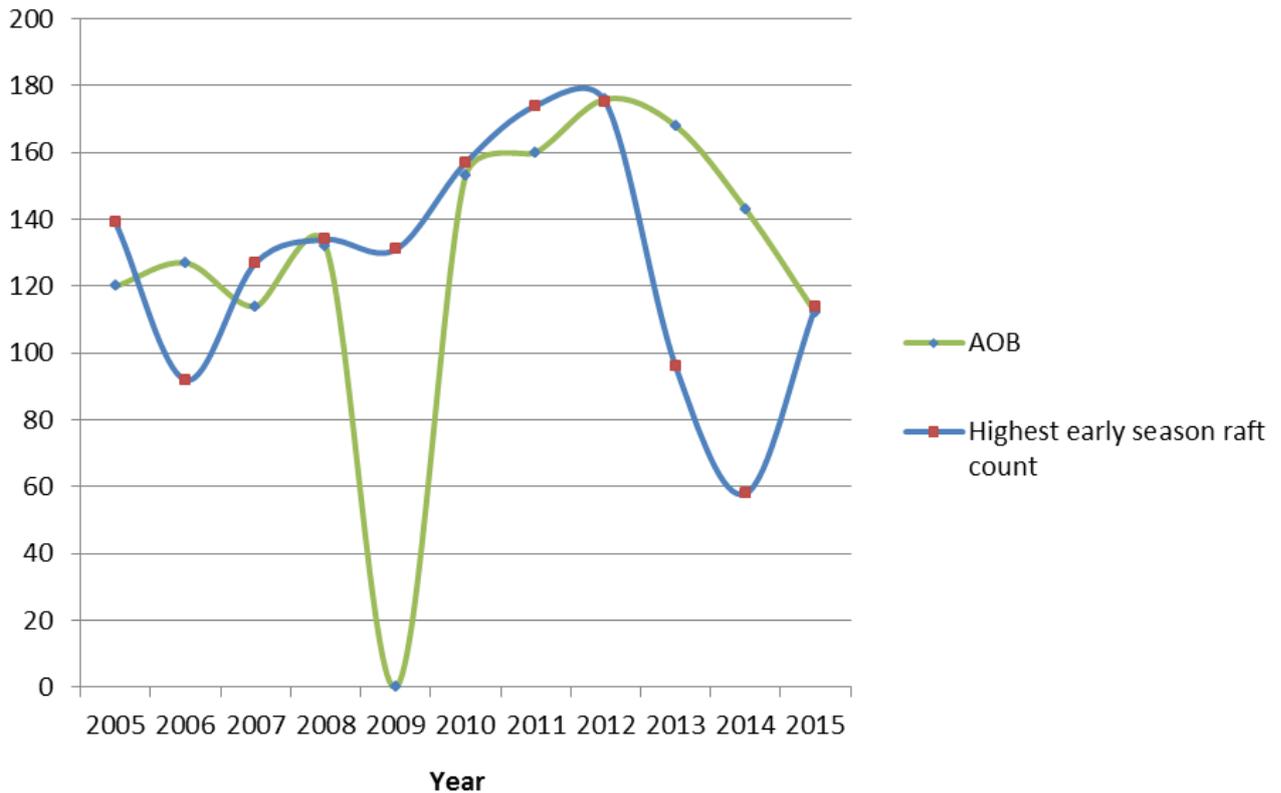


Figure 3. AOB and raft count observations of Puffins since 2005.

Productivity

Due to the sensitivity of the Puffin population on Burhou it is imperative to ensure that there is minimal disturbance during the breeding season. The majority of Puffins on the island also nest down old rabbit warrens, meaning that direct methods of examining the burrows for evidence of chicks are impractical. Therefore less direct observational methods are used when trying to determine the productivity of the colony.

Productivity was estimated using a sample of burrows from the main colony using two-hour vantage point watches of V1 and V2 (Figure 4). Burrows seen to be active during the incubation stage of breeding were also monitored for the presence of fish carrying adults later on in the season (mid-July) to assume successful chick rearing. The burrows that were assumed to be active during the breeding season were also checked at the end of the season, once the Puffins had left Burhou, for presence of feathers, guano, nesting material, footprints and egg shells in and around the burrows. This helped to confirm that the burrow had definitely been active during the season and most likely fledged a chick.



A single pair of Puffins were seen going into a burrow in Hannaine Bay on 18th June. Re-visits were made several times a week but the Puffins were only seen on the one occasion (Charles Michel, pers. comms. 14/10/15).

2.1.2 Gulls (*Larus sp.*)

Due to adverse weather conditions on Burhou a full population count of the three species of breeding Gull; Lesser Black-backed Gull (*Larus fuscus*), Herring Gull (*Larus argentatus*) and Great Black-backed Gull (*Larus marinus*) did not take place this year. However a full population count will take place in 2016 as a part of the Channel Islands Seabird Census (**Section 1.1**).

Alderney

Apparently Occupied Nest (AON) counts were made from the AWT boat, Sula of Braye from Essex Castle (south-east) to Braye Beach (north). A small team from Guernsey, including Catherine Veron,

Paul Veron, Vic Froome and Sophie Veron did the Gull AON survey from Clonque Bay (north-west) to Essex Castle (south-east) aboard the Guernsey Sea Fisheries RIB, as a part of the Channel Island (CI) Seabird Census on 17th June. The survey was timed so that the majority of gulls would still be incubating and therefore have at least one adult present at the nesting site during the time of the count.

Totals for Alderney were 72 Lesser Black-backed Gull AON, 140 Herring Gull AON and 20 Great Black-backed Gull AON. This is compared with 2014 when 315 Gulls (species were undistinguished due to the nature of the survey) were counted on the cliffs and rocky outcrops of Alderney (Morley et al. 2014).

Productivity monitoring

In order to gain a better understanding of the Gull population on Burhou chicks are colour ringed in an on-going project led by Paul Veron. This year chick ringing was done over 2 days on the 10th and 11th June when chicks were of an age to take both a metal and colour ID ring. An additional ringing trip was done during the Storm-Petrel ringing (**Section 2.1.4**) weekend on the 17-19th July to ring chicks that were too small to ring on the previous trip and to ring any that were accidentally missed within the colony.

The ringing was done by members of the Channel Islands Ringing Scheme and on both occasions, led by Paul Veron. Holly Marshall (AWT staff) and Jenni Godber (trainee ringer in the UK and AWT staff) helped on the initial ringing trip while Chris Mourant, Ian Buxton, Phil Alexander, Harriette Clarke and Cristina Sellares were present on the second trip.

Table 2. Gull sp. chick ringing totals since 2003.

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Lesser Black-backed Gull	308	-	386	140	-	3	281	335	11	202	28	276	194
Herring Gull	16	-	-	3	-	1	8	17	6	4	12	18	2

Great Black-backed Gull	-	-	-	-	-	0	5	0	1	4	1	2	0
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2.1.3 European Shag (*Phalacrocorax aristotelis*)

Shag monitoring continued this year on Burhou, Little Burhou and on the south cliffs of Alderney. Unfortunately due to bad weather conditions on each planned trip, Coque Lihou remained unsurveyed this year, however a full and comprehensive survey will be done next year in conjunction with the Channel Islands Seabird Census (**Section 1.1**).

Population and productivity monitoring

Alderney

On Alderney the Shag population tends to breed among the cliffs to the South of the island. Due to accessibility issues, productivity counts were done by monitoring 14 nests that were observable from points along the cliff footpath every 7-10 days while a full population count was done by Catherine Veron and her team at the time of the Gull survey (**Section 2.1.2**).

Burhou and Little Burhou

On Burhou, Shags are monitored every 7-10 days by walking around known nesting sites (AON), therefore productivity of all nests is known accurately on every visit. However, despite the accuracy of the monitoring the method causes a high level of disturbance to the breeding birds and may be subject to change in the 2016 Action Plan, based on recommendations from the Ramsar Steering Group.

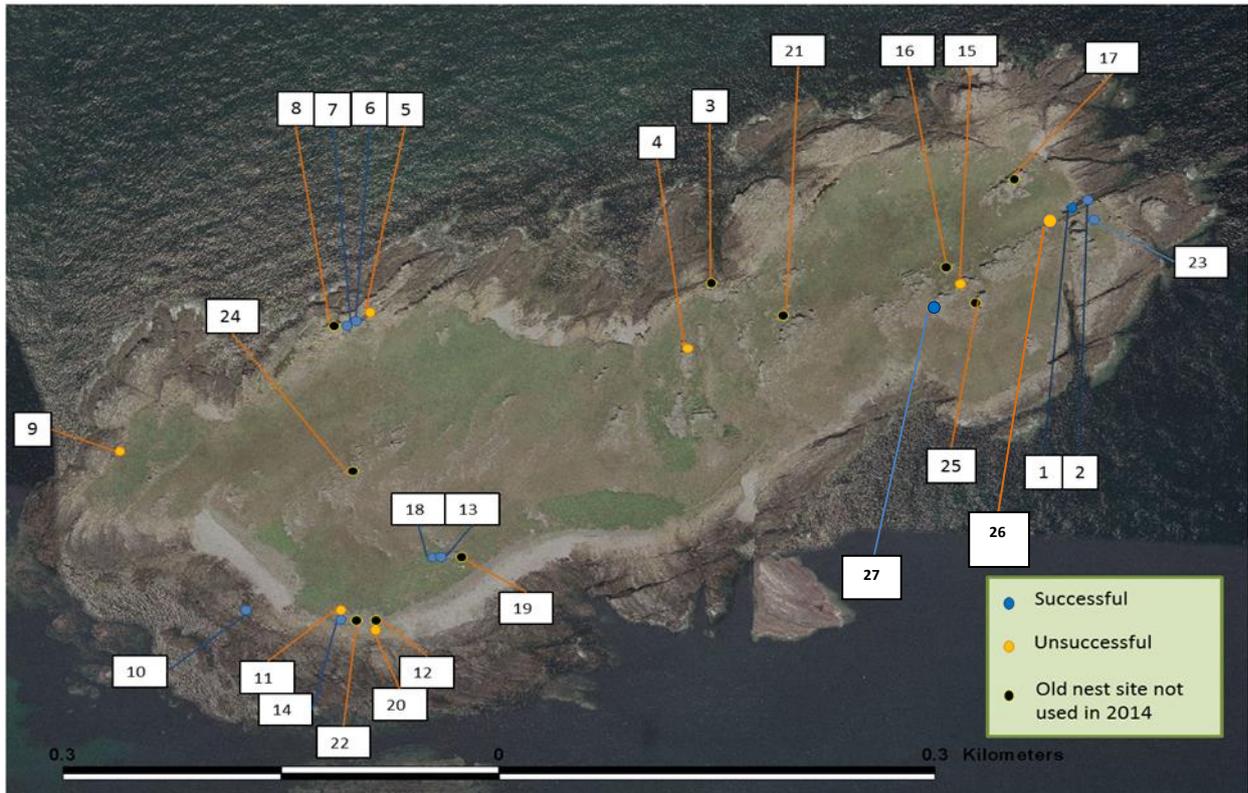


Figure 5. The nesting sites of European Shag on Burhou.

Due to the difficulty of accessing Little Burhou only two visits were made to the islet to assess initial AONs and overall productivity. The first on the 7th May was timed so that the majority of birds would still be incubating and the second on the 30th June was timed when the chicks were close to fledging. Due to the limited surveying of Little Burhou the overall productivity should be considered as a minimum (see Table 3).

Table 3. Shag AON and productivity since 2007.

Location	2007	2008	2009	2010	2011	2012	2013	2014	2015
Burhou	19	21 (0.14)	19 (0.21)	24	23	20 (1.24)	21 (0.57)	14 (0.21)	17 (1.12)
Alderney	-	-	-	-	-	-	18* (1.00)	51** (0.41)	118*** (1.08)
Little Burhou	-	-	-	-	-	-	35 (0.74)	36 (0.61)	43 (0.35)
Coque Lihou	-	-	-	-	-	-	77 (0.69)	66 (0.62)	-

*Monitored nest count only **Full AON count, of which 17 monitored for productivity ***Full AON count, of which 14 were monitored for productivity

2.1.4 Storm-Petrel (*Hydrobates pelagicus*)

Storm-Petrels are known to nest in crevices of rocks and burrows under the ground and only return to their breeding grounds at night after spending the day out in pelagic water. Therefore, due to the nature of their breeding habits, survey methods are often limited to playback (where a tape of the adult call is played next to potential nesting sites) and ringing.

On the weekend of the 17th-19th July a team of ringers from the Channel Island Ringing Scheme, led by Chris Mourant (full licensed CI ringer) and including; Jenni Godber (AWT), Robert Manzano Rubio (AWT), Paul Veron (fully licensed CI ringer), Ian Buxton (fully trained CI ringer), Phil Alexander (trainee CI ringer), Harriette Clarke (trainee CI ringer) and Cristina Sellares (trainee CI ringer), conducted two nights of successful mist netting on Burhou.

On the first evening, four 18m fine mesh mist nets were positioned in a south-easterly direction on the eastern corner of Burhou (Figure 6). Good conditions allowed for an extremely productive evening with 179 new birds and 62 retraps. On the second evening, all four of the nets were moved to the north-west of Burhou (Figure 6) and after a slow start a further 184 new birds were ringed,

along with 79 retraps (Table 4). Chris Mourant noted that several of the retraps were birds ringed last year which helps to prove that the birds breeding on Burhou most likely aren't using it for transience. Other retraps included birds from France, Jersey and the UK.



Figure 6. Mist netting sites for Storm-Petrels.

Table 4. Storm-Petrel ringing totals since 2000.

Year	2000	2003	2005	2006	2008	2014	2015
Number of petrels caught (including re-traps)	204	300	465	317	171	433	504

2.1.5 Northern Fulmar (*Fulmaris glacialis*)

The main site for nesting Fulmars remains in the Trois Vaux Bay which is taken as a full population. Fulmars have been noted along other sections of the cliff face, in particular two pairs in Vau de Fret and for the first time this year a pair was spotted in the cliffs opposite the Sister Rocks. Fulmar

productivity calculations should therefore be taken as a minimum.

Population and productivity monitoring

To confirm that areas where the birds were present were Apparently Occupied Sites (AOS) and not perching spots, Trois Vaux Bay was visited five times from late May until early June. If birds were present on every occasion during those visits the site was considered to be a potential AOS. From July onwards each AOS was monitored every seven days to determine overall productivity.

Table 5. Fulmar productivity and AOS 2007-2015.

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
Population	26	20*	38	34	16	34	29	29	30
Productivity	-	-	0.47	0.53	-	0.56	0.52	0.55	0.40

2.1.6 Northern Gannet (*Morus bassanus*)

This year the Gannets were monitored for population and productivity. Due to the requirement of aerial photography the population of the colony is counted on a five year cycle. The last time Les Etacs and Ortac were counted was in 2011.

Population

The most accurate method of counting breeding pairs of Gannets (AOS) are from photos taken from a small light aircraft directly above the colony. To ensure that the maximum number of birds are present at the colony, aerial photographs are timed so that birds are sat on eggs or small chicks (<2 weeks old).

On Thursday 4th June, Rod Paris (pilot and owner of the light aircraft), Bill Black (photographer) Jenni Godber (AWT) and Vicky Warwick-Evans (University of Liverpool PhD) flew over both Les Etacs (Figure 7) 500m west of Alderney, and Ortac (Figure 9) 5km west of Alderney at 10:00 BST.

Conditions were excellent with light winds and moderate cloud cover (which ensured little glare from sunlight on the gannetries). Les Etacs is directly under the flight path of planes both landing and taking off from Alderney, therefore the Gannets were undisturbed by the presence of the plane. An initial circle of the larger gannetry (Les Etacs) was made at 700m; this allowed Bill Black to take a series of photographs from all angles of the rock and since Les Etacs is made up of four separate

rocky outcrops this was especially important (Figure 7). Ortac was covered using the same method but the pictures were taken from a lower height of 400m (Figure 9). All pictures were taken with a Canon EOS 5D Mark III camera using an EF 100-400mm lens.



Figure 7. Les Etacs. Photo credit: Bill Black.

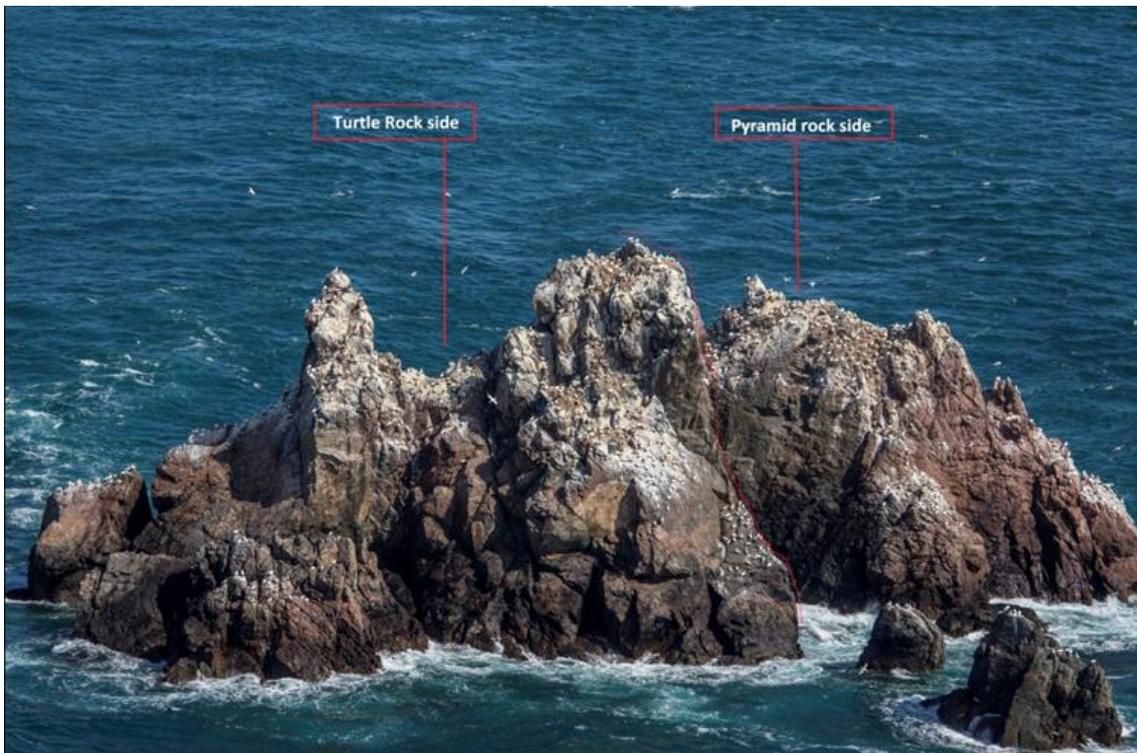


Figure 8. An example photo from which the counts were made. Photo credit: Bill Black.



Figure 9. Ortac, taken from 400m. Photo credit: Bill Black.

Once the pictures had been assessed by Jenni Godber (AWT) and Roland Gauvain (AWT Manager), selections were chosen that covered as many angles of both colonies as possible. These photos were then distributed to Mike Harris and Stuart Murray (Centre of Ecology and Hydrology in Scotland), Roland Gauvain (AWT) and Jenni Godber (AWT). Counts were made using photo editing software which allowed counters to zoom into the photographs and count AOS. The unit for counting Gannets is defined as one or two Gannets present, irrespective of the presence of nesting material. To reduce bias none of the counters were aware of the previous counts or of each other's counts until they were compiled together in an Excel spreadsheet by Mike Harris and then averaged. The results are shown in the graph below (Figure 10).

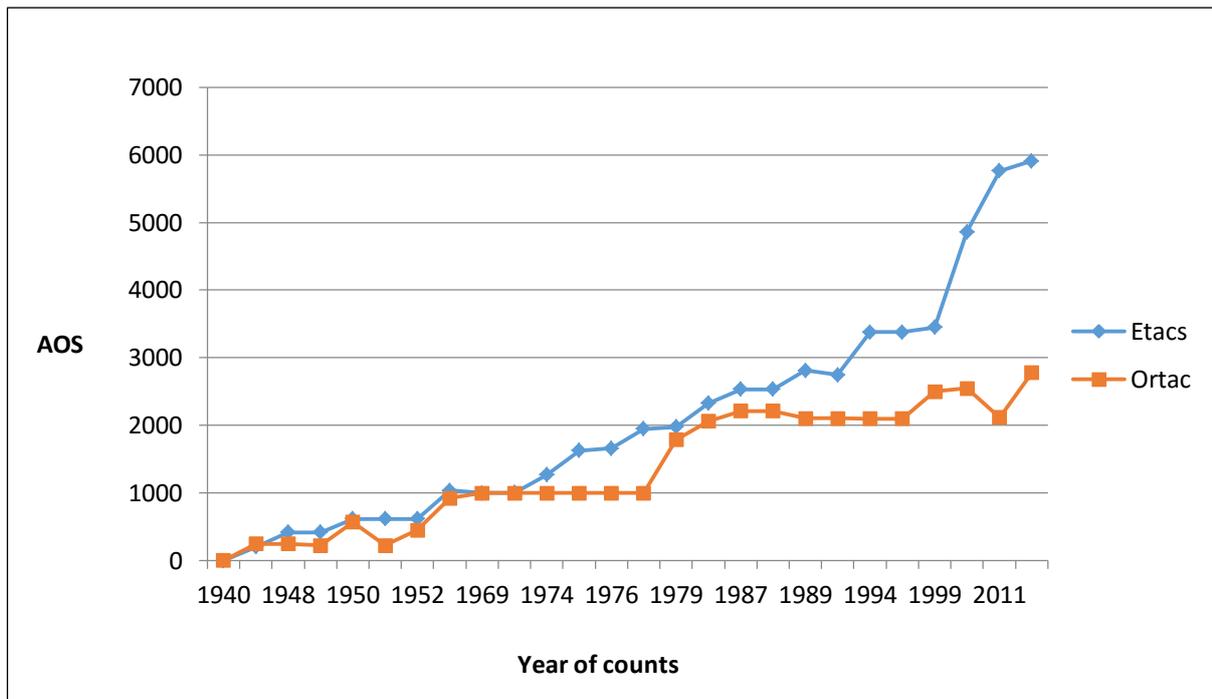


Figure 10. Shows the trends in AOS between both of Alderney's Gannet colonies.

According to the previous count in 2011, Les Etacs has increased by 6% (from 5,765 pairs to 5,909 in 2015) and Ortac, an astonishing 31% (from 2,120 to 2,777 in 2015). Due to the unexpectedly high increase from the Ortac colony, a recount from the 2011 pictures will be done when resources allow. Looking at the graph it is quite clear to see that both Gannetries on Alderney are doing extremely well. Les Etacs has tripled in size from just over 2,000 AOS in the 1980's to just under 6,000 AOS in 2015.

Productivity

Gannets are monitored for productivity from the cliffs of Alderney on Les Etacs. Within a Gannetry there is a hierarchy whereby the older and more successful breeders are situated in the centre of the colony and the younger less experienced birds nest on the outside. Therefore since the area monitored for productivity is limited to what can be viewed from the cliff edge, productivity is taken as a minimum.

At the start of the incubation period, five photographed plots of approximately 50 birds were chosen. These plots had 50 numbered birds that were monitored every seven days once the chicks had become visible and could be aged (to determine potential fledging dates). Plot locations are shown in Figure 11.

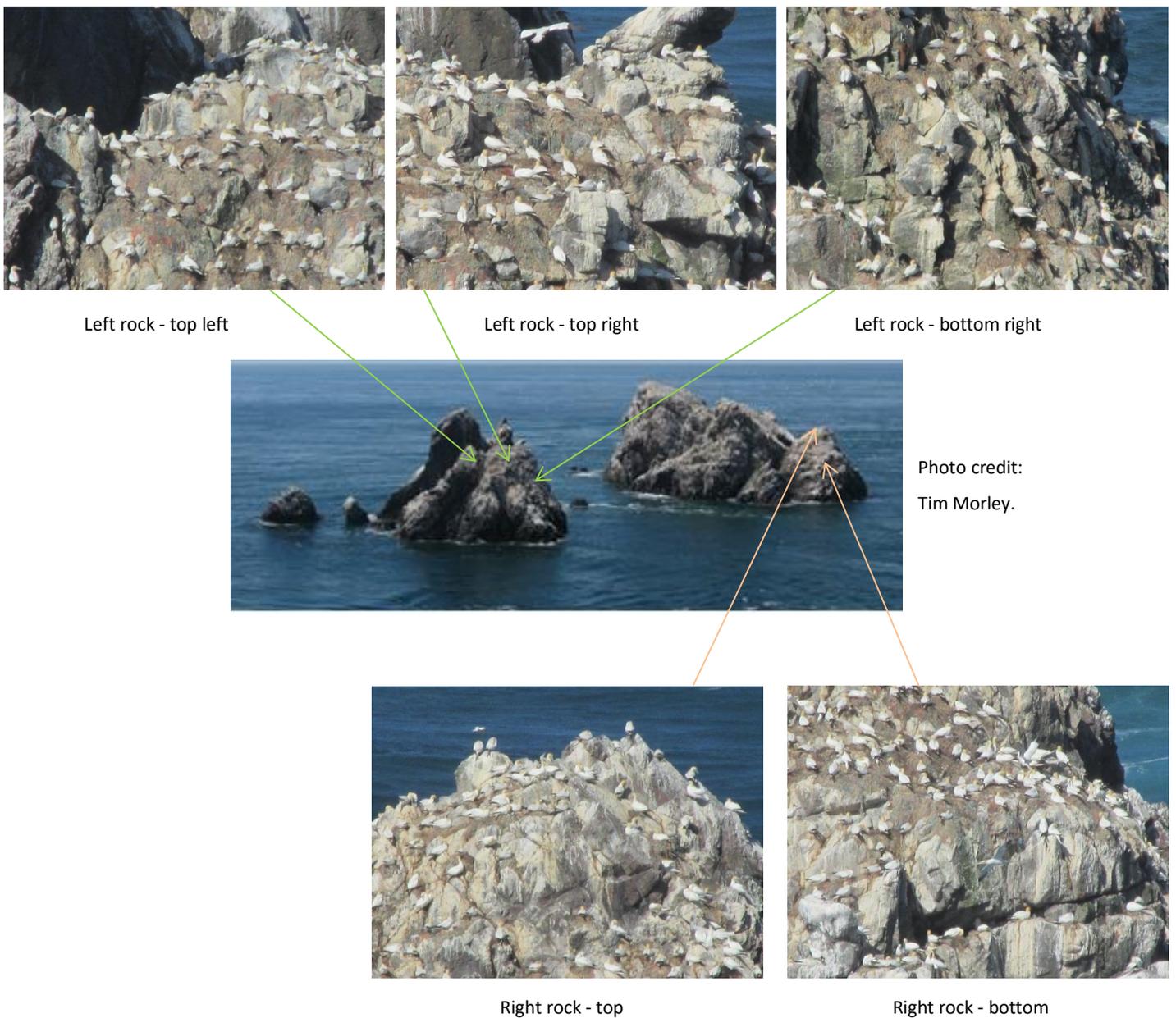


Figure 11. Shows the plots monitored for Gannet productivity.

Table 6. Productivity of Gannet plots monitored in 2015.

Plot	Nests monitored	Chicks fledged	Productivity
Left rock - top left	50	27	0.54
Left rock - top right	50	31	0.62
Left rock - bottom right	44	21	0.42
Right rock - top	50	18	0.36
Right rock - bottom	50	20	0.40
Total	244	117	0.48

The low productivity values seen in Table 6 may come as a surprise after the exponential increase in the colony, seen in the 2015 census. The reason behind this may be due to the area of the colony observed for the productivity. Due to accessibility issues, the area of the colony monitored for productivity is on the outskirts of the main colony. Since the most successful breeders tend to be in the centre of the colony there is a high chance that the area monitored for productivity contains a high proportion of younger, less experienced breeding Gannets. Therefore the productivity may be lower within this area of the colony which would account for the low values seen in Table 6.

University of Liverpool PhD – Gannet Tagging Study

This year was the third and final year of field work for Vicky Warwick-Evans's PhD studying the foraging behaviour of Gannets (and previously Shags) to help predict potential impacts of changes in their ecosystem due to factors such as wind farm development. With the help of Phil Atkinson (BTO), Vicky Warwick-Evans (University of Liverpool) and Jenni Godber (AWT) 33 GSM tags (11 with accelerometers) were attached to the tail feathers of Les Etacs Gannets on 8th June. A further ten GPS/GSM tags were attached to Ortac Gannets on the same day. These tags were the result of a fundraising effort by the AWT for Project T.A.G (**Section 2.1.9**). From the 22nd-25th June, four retrieval trips were made to Les Etacs to recapture the Gannets so the GPS tags could be removed and the data downloaded. Altogether, 18 tags were retrieved which will enable Vicky to add to her current data set and begin the write up process, details of which will be made available to the Ramsar management plan in due course.

2.1.7 Common Tern (*Sterna hirundo*)

As noted in Morley et al. 2014, the Common Terns do not breed within the Ramsar site but as Alderney had the last remaining breeding population in the Channel Islands they are considered an important species of interest.

Productivity and population monitoring

Due to the accessibility of where the Common Terns breed on Alderney (and also to reduce disturbance), Houmet des Pieds is only visited three times during the breeding season. The first time, mid-June to assess initial nests and estimate the breeding population. The second time, mid-July to count the number of chicks and the third time, at the beginning of August to count the chicks that

are left and those that are assumed to have fledged.

On the first check in mid-June the Tern colony had seemingly increased from 25 pairs in 2014 to 32 pairs with all nests holding three eggs or newly hatched chicks. However, on the second visit to the site in mid-July most of the eggs had disappeared (with little evidence of shells) and there were very few visible chicks. A couple of weeks after the second visit, all the Terns had left Alderney much earlier than in previous years and after a brief visit to the site it was assumed that none of the chicks had fledged (Table 7). There are several possibilities that could have caused the Terns to abandon their breeding such as predation (from rats, hawks or crows), human disturbance (the islet is accessible at low tide) or from low fish stocks. These issues will be addressed and mitigation methods proposed within the 2016 Ramsar Action Plan.

Table 7. Productivity and AON for Common terns since 2012.

Year	2012	2013	2014	2015
Population	5	14	25	32
Productivity	-	0.57	0.44	0.00

2.1.8 Ringed Plover (*Charadrius hiaticula*)

Technically Ringed Plovers aren't seabirds but are within a class known as waders which means they use the shoreline to breed and feed. Although not considered to be a threatened species, the Ringed Plovers on Alderney are the last remaining breeding population in the Channel Islands and are therefore a species of interest and are monitored as part of the Ramsar Management Plan.

Ringed Plovers nest in small scrapes on the ground, which to the untrained eye are extremely well camouflaged (Figure 12). Along with this the Ringed Plovers also breed on Platte Saline, a long shingle beach that is currently one of only two beaches on the island open to dog walkers all year round. To ensure successful protection of the birds during the breeding season (April - July) it is important to have community support. In 2014 a public awareness campaign was instigated by Tim Morley (and can be seen in more detail in Morley et al. 2014) highlighting the importance of

protecting this species. The work Tim did appeared to have been well received and this year a Ringed Plover Recovery Action Plan (see attached **Appendix 5.2**) was put into place to further protect the species. Along with signage located at every entrance to both Platte Saline and Clonque Bay (where a pair was known to be breeding late in 2014), local press publications and radio interviews were undertaken to explain the Plan. A number of roped off areas (Figure 13) were an addition this year. With permission from the States of Alderney, this year two 5m x5m roped off areas were placed on Platte Saline. Once a nest had been identified, Jenni Godber and Ashleigh Carden (AWT) placed the roped off area around the nest and observed from a distance to make sure the bird went back to incubate the eggs (Figure 14). This didn't prove to be a problem as within a couple of minutes one of the adults returned to the nest. The other roped off area acted as a 'dummy area', which the public were not made aware of. This was hoped to draw beach users away from the nesting Plovers. Each roped off area also had a small wooden sign board on the outskirts explaining the reasoning behind the exclusion zone. Along with this, several local residents and walkers who used the beach regularly, were contacted and asked to monitor the enclosures to see whether they attracted unwanted attention from humans or dogs.



Figure 12. The image on the left shows a Ringed Plover nest on Platte Saline this year. The image on the right is the first image zoomed in. Plovers will use markers around their nest such as seaweed to enable them to re-locate their nests.



Figure 13. The 5m x 5m roped off area on Platte Saline that encompassed a Ringed Plover nest.



Figure 14. After placing the boundaries around the nesting site Jenni Godber and Ashleigh Carden (AWT) observed the area from a distance to ensure the birds returned to incubate the eggs. On this occasion, the bird returned within a few minutes of leaving.

Population and Productivity Monitoring

Of the two pairs of Ringed Plovers previously known to breed on Platte Saline, one pair bred twice. Both of these breeding attempts reached chick stage, however it is assumed that the chicks were predated as neither brood was seen past three days (Table 8).

Due to the substrate on Clonque Bay of small and large rocky pebbles finding Ringed Plover nests

proved to be extremely difficult. Nevertheless one, possibly two breeding attempts from two different pairs of Ringed Plovers were discovered and monitored. One of these attempts led to the successful fledging of three chicks. Also a first for this year was a pair of Ringed Plovers with two chicks at Hannaine Bay and three adults were seen with four chicks at Saye Bay. These are both areas that should be considered for monitoring in the future.

Table 8. Ringed Plover AON and productivity on Platte Saline.

Year	2008	2009	2010	2011	2012	2013	2014	2015
Population	1	3	5	3	2	2	4	4
Productivity	-	0.66	0.20	0.00	0.00	1.50	1.00	0.00

2.1.9 Project Track A Gannet (T.A.G)

This project, as led by the AWT’s 2014/15 People and Wildlife Officer (Holly Marshall) saw the AWT fundraise over £4,000 to buy ten GPS/GSM Gannet Tags. The tags were attached to ten Gannets alongside the University of Liverpool tag deployment trip on June 8th on Ortac.

Each tag weighed about 18g and consisted of a GPS device, SIM card chip and two solar panels (to charge the system remotely). The components of each tag were put into plastic shrink wrap tubing to keep them all together and then attached to the Gannet’s tail feathers using epoxy glue and waterproof electrical tape (Figure 15). It was hoped that the tags would last approximately 8-12 weeks after an initial trial in 2014 (Morley et al. 2014), however the tag with the most longevity lasted approximately four weeks before it was lost or moulted.



Figure 15. Picture of a Gannet with one of the GPS/GSM tags attached to the tail feathers.

When a tagged bird returned to the colony or was within ten miles of mobile phone signal range (of either England or France) the data collected on the tag would download remotely to the internet, creating an online interactive 'real-time' map which could be viewed by the public on the LIVE website (www.teachingthroughnature.co.uk) (Figure 16).

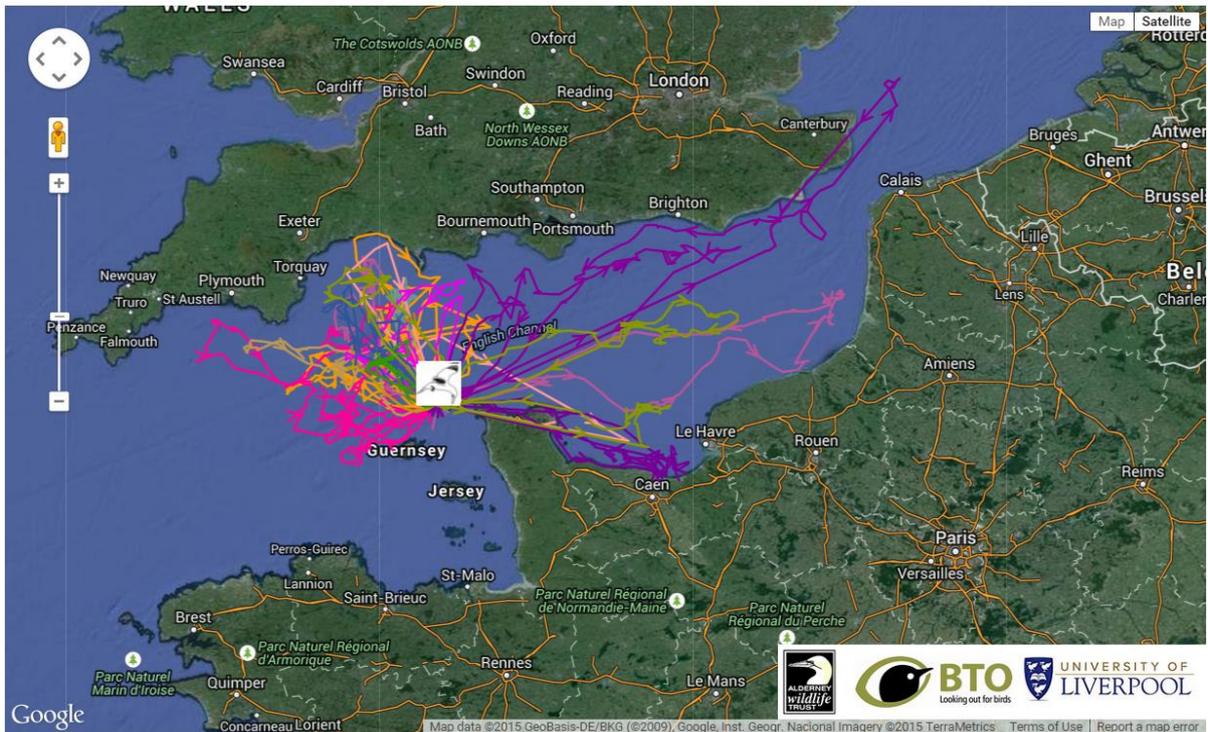


Figure 16. This online interactive map was made available to the public at www.teachingthroughnature.co.uk. Each colour track represents an individual tagged Gannet.

Initially a trial, the project proved relatively successful. Details of the project outcomes will be presented in a report in the near future, with plans for 2016 tied into the next Ramsar Action Plan. The launching of the T.A.G project saw five national and more than 20 regional print media publications covering the project. In addition at least five radio and two television pieces were recorded within the Channel Islands, and a small segment was shown on BBC1's Big Blue UK series which aired in August (**Section 2.5.1**).

2.2 Marine

2.2.1 Intertidal Phase II Survey

An intertidal Phase II survey of Clonque Bay was conducted in September (2015). A written report is appended to the digital version of this report which will be published on the Alderney wildlife Trust's website for public access.

2.2.2 Strandline survey

Strandline surveys were completed within Clonque Bay and Hannaine Bay. The survey method consisted of recording marine life across the two bays' intertidal strandlines. A number of shark egg cases, cuttlefish bones, marine algae debris and rubbish were recorded within both bays.

2.2.3 Benthic ecology and pelagic ecology desk-based surveys

This year an intertidal Phase II species monitoring survey of Clonque Bay was completed. The aim of the survey was to provide a quantitative record of intertidal species' biological diversity and composition found within four important marine habitat biotopes. These biotopes were identified from a marine habitat biotope survey of the bay, completed by the AWT in 2014.

The survey identified a range of intertidal substrates, macroalgae and faunal species within the four selected marine habitat biotopes. In general the recorded species were regarded as common intertidal rocky shore species, found throughout the Channel Islands and the British Isles. The information will be used for future monitoring surveys of Clonque Bay's marine environment.

A written report combining these two desk-based surveys will be published separately from this document.

2.2.4 Important Marine Species

A number of important marine species were recorded within the Ramsar Site and Alderney's territorial waters. This primarily includes:

Green ormer (*Haliotis tuberculata*)

The Green ormer (*H. tuberculata*) is considered an important species within the Channel Islands. As such annual surveys are conducted within Clonque Bay to assess the species' population dynamics. This year, surveys were undertaken in March and September (during spring and autumn equinox spring tides), in conjunction with La Société Guernesiaise.

During the March survey, seven Green ormers were recorded. All recorded specimens showed good shell quality, with shell length and height ranging from 72 - 160 mm and 40 - 82 mm respectively. No Green ormers were recorded in the September survey.

Eelgrass (*Zostera spp.*)

Within Europe, Eelgrass species are considered an important marine habitat. Past records identify Eelgrass present (primarily Dwarf Eelgrass, *Zostera noltii*) throughout Alderney (both intertidal and sub-littoral environments).

An intertidal Eelgrass habitat survey was undertaken by Mel Broadhurst and Jenni Godber (AWT) within Longis Bay to assess its general presence and distribution. The survey showed Eelgrass presence and distribution within the bay was greater than previously recorded (anecdotal records).

2.2.5 Marine Mammal Species Surveys

A number of different surveys and recording strategies for marine mammal species have been instigated this year, primarily:

Monthly land-based observation surveys

Monthly surveys were implemented to record marine mammal species from a land-based observation point, from April - October. The observation point was located at Fort Tourgis (with the view-point overlooking the Ramsar Site). The survey method follows guidelines from the Sea Watch Foundation (SWF). No marine mammal species were recorded during these surveys. The information was passed onto the SWF at the end of 2015.

Marine user boat-based observation surveys

A number of local marine users were contacted to undertake boat-based observation surveys (along their general transit routes) within Alderney's terrestrial waters and beyond. The survey method follows guidelines from the SWF. Marine users included commercial and private shipping, fishing and tour boats which frequently transit to Alderney, Guernsey, Jersey, Sark and Poole (UK).

This year, marine users recorded limited sightings of marine mammal species. However, the sightings included species which are considered rare or uncommon to Alderney, such as Minke whale (*Balaenoptera acutorostrata*) and Harbour porpoise (*Phocoena phocoena*). The results were passed onto the SWF at the end of 2015.

Marine user and public recording forms

The AWT/SWF marine mammal species recording form designed for marine users and the public was given out at key locations around Alderney (the harbour office, sailing club and tourism office) and at key events (Wildlife Week and boat trips).

Returned sighting forms from the public outlined the presence of Harbour porpoise (*P. phocoena*) and Grey seal (*Halichoerus grypus*) within Alderney's waters.

Grey seal photographic identification catalogue

A photographic identification catalogue has been created to identify individual Grey seals (*Halichoerus grypus*) throughout the Channel Islands. This was developed to enable a more in-depth population assessment of the species (i.e. presence, abundance, life stage and distribution). The method entails a number of Channel Island photographers (currently: Alderney, Guernsey and Sark)

submitting photographs of Grey seals to the AWT. The individuals within the photographs are identified and distinguished in terms of body markings, fur patterns, head/torso shape, sex and size.

Currently, 31 individual Grey seals have been identified using this method. The catalogue is shared between key Grey seal experts and photographers within the Channel Islands and the UK for guidance and photograph verification.

Grey seal population dynamics survey

A trial survey was undertaken in October 2014 to assess the Grey seal (*H. grypus*) population dynamics (presence, abundance, individual and life stage (i.e. pup, adult) within the offshore islet, Renonquet. This follows the survey methods provided by the JNCC. It identified a small number of breeding Grey seals and also the presence of Common seal. A survey was scheduled for 2015, but was cancelled due to bad weather and limited access to suitable boats for working within this area.

2.2.6 Marine renewable energy developments

Navitus Bay Wind Farm Development

During 2015 the AWT and the SoA have been formally engaging with the UK Planning Inspectorate (PINS) regarding the proposed Navitus Bay wind farm development. The potential wind farm was to be developed south-west of the Isle of Wight by the developers, Navitus Bay Development Limited (NBDL). Issues were raised by the AWT and SoA regarding the use of the proposed site as a location where the Alderney gannet population transit to and forage within, and hence the potential for environmental impacts such as disturbance.

A significant level of input to the PINS process was required from Alderney and this led to an environmental monitoring programme (EMP) worth an estimated £140,000 over five years, being developed and accepted into the Development Consents by Developer. This work was undertaken by the AWT and SOA, working with The Wildlife Trusts in the UK.

Unfortunately the development was not given the consent to build by the UK Secretary of State in September 2015, and the developers formally withdrew from the project in October 2015.

Perpetuus Tidal Energy Centre

A small offshore tidal energy renewable energy device test centre (30 MW) is potentially to be

developed on the south coast of the Isle of Wight. The AWT and SoA are currently in engagement activities with the UK regulator, the Marine Management Organisation (MMO) regarding the impact of the development upon Alderney's gannet populations.

2.3 Terrestrial

Invasive Species Management

No observations of the invasive species, Hottentot-fig (*Carpobrotus edulis*) were made on Burhou this year. This means the island has been free of the species since 2013 and will hopefully remain this way.

Bracken control was not undertaken as the plant did not encroach on the Puffin colonies. Some areas of bracken were also used by nesting Gulls so the bracken remained untouched for the entire season.

As reported last year by Morley et al. 2014, grass growth was an issue, possibly as a consequence of a very wet winter and a reduction in the rabbit population due to myxomatosis. However, due to a relatively dry winter and an apparent resurgence in the rabbit population this year, the grass remained short and the burrows observable.

Small Mammal Trapping

Due to the unavailability of staff no small mammal trapping, using Longworth traps and hair traps, was undertaken on Burhou. This will hopefully be completed in 2016.

Phase I Survey of the South Cliffs

Again, due to a lack of staff availability, the South Cliffs remain un-surveyed. It is hoped this will also be completed in 2016.

2.4 Education and Publicity

2.4.1 Publicity

2015 was the 10th Anniversary of Alderney's Ramsar site. Throughout the year the site received significant media coverage.

In April, the site received local media attention when the Ringed Plover roped off areas were introduced to Platte Saline (**Section 2.1.8**). In July, a small team from the BBC Natural History Unit came to Alderney to film Vicky Warwick-Evans (University Of Liverpool), Jenni Godber and Holly Marshall (AWT) attaching GPS/GSM tags to Gannets on Les Etacs for the BBC series, Big Blue UK which was aired on BBC1 in August 2015. Joining the team on the same trip was Simon Barnes, previous writer for The Times and The Independent newspapers. Simon went on to write an article about his time on Alderney tagging the Gannets which reached a wide audience.

Links with local media sources such as The Alderney Journal, The Alderney Press, The Guernsey Press, Quay FM, Island FM, BBC Guernsey and Channel TV continued throughout the year and covered many aspects of the Ramsar site. This further helped to engage the public and increase awareness about work done within the site.

2.4.2 Events

The Alderney Wildlife Trust's boat Sula of Braye was used for a full season of Seabird Boat trips, lasting 1.5 hours and taking a maximum of ten passengers. The seabird tours continued until the end of August when the boat was pulled out of the water for an engine replacement, due to be re-fitted in February 2016.

Several events were focused around the Ramsar site itself, the first of which was for World Wetlands Day in February where a public beach clean was done on Clonque Bay. In June a special Wildlife Watch boat trip was put on for members of the Watch Group. This was later written up by the

children in the quarterly Watch magazine which is printed and written on island. During Wildlife Week in May, and at the Wildlife Fayre in August, special beach event days were held with activities such as rock-pooling, foraging and children's games.

2.4.3 Live Streaming Seabird Cameras

Two live cameras were positioned back within the main Puffin Colony, starting in March, to observe the Puffin breeding season as part of the Key Stage 1 & 2 educational programme LIVE:Teaching Through Nature (**Section 2.5.5**). The grass remained short throughout the breeding season, due to an increase in the rabbit population and a relatively dry winter. Therefore the issues raised last year (poor visibility due to grass growth) were not experienced this year.

After an unsuccessful trial year in 2014, GannetCam was re-deployed on Ortac in March with several amendments. With a smaller resolution camera, three 10ft solar panels, two 20kg gel batteries and a team of four staff from the AWT (Roland Gauvain, Jenni Godber, Holly Marshall and Robert Manzano Rubio) and Alderney electrician David Sumner, the camera deployment and repositioning proved successful; the live camera continued to work throughout the season (with a few minor blips). It is hoped that next year the camera will be replaced with a higher resolution model that could be of a quality sufficient to carry out productivity monitoring - a first for the Ortac colony.

2.4.4 Social Media and Website

Facebook and Twitter have been used as a platform to reach a wider audience, reaching out beyond the island. This year the Alderney Wildlife Trust's Facebook page has increased from 1,046 'likes' to 1,445, while Twitter followers have also increased from 600 to 954 in just over a year. Both Facebook and Twitter have been used to spread news of the Alderney Wildlife Trust's work and to advertise upcoming events to an audience who would otherwise be unaware of the Trust's work within the community.

2.4.5 LIVE: Teaching Through Nature

Due to problems that arose last year regarding issues viewing the LIVE cameras and direct engagement with all available resources (such as conference calls with ecologists and weekly activity days) recruitment of schools was much lower than anticipated. In 2014 73 schools participated in the programme, but this reduced to 34 schools in 2015 (this included schools that had signed up in 2014 and some that were new to the programme).

Despite the initial set back, the project ran smoothly and included new additions to the programme. One of these 'Nest Cam' was situated on the islet of Jethou off the coast of Guernsey and focused on a European Shag nest. The camera took still images of the nest every five minutes and at the end of each day a video was compiled and uploaded to the LIVE website via YouTube. The nest was extremely successful and saw three chicks hatch and successfully fledge during the programme. The second addition to the programme was a History unit, led by leading Guernsey historian and Museums Director, Jason Monahan.

Further details about the LIVE: Teaching Through Nature programme can be seen on the website www.teachingthroughnature.co.uk.

2.5 Legislation

2.5.1 Conventions List

Alderney is a Crown Dependency of the British Isles, meaning that in terms of legislation it is responsible for its own wildlife protection law and policy, although if agreed by the States of Alderney, it can still become a signatory to conventions outside of the Channel Islands. As the Ramsar site is located within Alderney's territorial waters it is responsible for all legislation and conventions that Alderney is signed to. These are:

Existing Legislation

- Wild Birds (Alderney) Ordinance, 2005
- Fishery Control Regulation, Enforcement of Community control measures and the enforcement of community satellite monitoring measures - Extended to Alderney EU 1999/45
- Sea Fish Licensing (Bailiwick of Guernsey) Law, 2012

Conventions & Agreements

- [Bonn Convention](#) - Guernsey code A.8 Extended to Alderney 1979
- [Conservation of Afro-Eurasian Migratory water birds \(part of Bonn\)](#) - EC/GEN 1993/10
Alderney amended law 1995
- Bonn Convention Agreement on Conservation of Bats in Europe
- [ASCOBANS - Agreement on the conservation of small cetaceans of the Baltic and North Sea](#) -
UN Agreement 60 Guernsey code C.33. Extended to Alderney 1999
- Ramsar Convention on Wetlands of International Importance
- Environmental Impact Assessment in Transboundary Context - UN convention Extended to
Alderney 2004

- Convention on Climate Change - Alderney 1992
- Conservation of European Wildlife - Agreed 20.04.93
- [CITES](#) - Extended to Alderney 1997

2.5.2 Oil Spill Action Plan

An oil spill action plan has been provided to the AWT via Guernsey's Emergency Planning Officer. The liaison in Alderney is the States' Chief Executive Officer but the plans are immediately available in emergency events through the AWT Manager and Ramsar Ecologist.

2.5.3 Ramsar Stakeholder Group

The Ramsar site is monitored and controlled by key stakeholders; the day-to-day running is managed by the AWT on behalf of the States of Alderney (SoA), more specifically the General Services Committee (GSC). All work is overseen by the Ramsar Steering Group (RSG) which contains members specialising in the fields of ornithology and marine ecology. Current members are:

- Charles Michel - Chairman

AWT - Board Member

- Paul Veron

SoA - Economic Development Officer

- Phil Atkinson

British Trust for Ornithology (BTO) - Head of International Research

- Helen Booker

Royal Society for the Protection of Birds (RSPB) - Senior Conservation Officer

- Dan Laffoley

International Union for Conservation of Nature (IUCN) - Marine Vice Chair

- Chris Morris

States of Guernsey, Commerce and Employment - Senior Sea Fisheries Officer

- Paul Chambers

States of Jersey - Natural Environment Officer

La Société Jersiaise - Secretary for Marine Biology Section

On Alderney the other key stakeholders are Mark Gaudion, Harbour Master and the Alderney Commission for Renewable Energy (ACRE) as both have direct influence and responsibility within the marine environment of the Ramsar site.

Besides the key stakeholders there are multiple other organisations across the Channel Islands, UK and France that contribute to or have interest in the Ramsar site. These are:

- Alderney Renewable Energy (ARE)
- Braye Harbour Developments Limited
- Alderney License Fishing Vessel Owners Association (ALFVOA)
- Sailing Club
- Guernsey Sea Fisheries (GSF)
- Local Anglers (includes recreational and commercial)
- States of Guernsey (SoG)
- La Société Guernesiaise
- La Société Serquaise

- States of Jersey (SoJ)
- La Société Jersiaise
- Durrell Conservation Trust (DCT)
- Birds on the Edge
- British Trust of Ornithology (BTO)
- Royal Society for the Protection of Birds (RSPB)
- Joint Nature Conservation Committee (JNCC)
- International Union for Conservation of Nature (IUCN)
- Groupe Ornithologique Normande (GONm)
- Ligue pour la Protection des Oiseaux (LPO)
- Sea Watch Foundation
- Agence des Aires Marines Protégées
- Living Islands
- Marine Biological Association
- Cornwall Seal Group
- Trinity House

3. Summary

A number of key results were achieved throughout 2014. These are reported in the **Executive Summary**. Aside from these key results a number of specific works recommendations from 2013 have been carried out (Table 9). Any recommendations from 2013 not carried out or that require amending, have been projected for 2016 (Table 9) to accompany the overall works to be completed as outlined by the 2012-2016 Alderney Ramsar Strategy 2 plan (Table 10).

Table 9. Summary of recommendations from 2013, to be completed by the end of the ARS2 Action Plan in 2016.

Recommendations from 2013	Work carried out in 2014/15	Recommendations for 2016
<p>1 Lesser Black-backed Gull AON count - not yet done in ARS2. A specific Burhou trip for this count alone will need to be organised for when most nests have three eggs laid in them, but before the chicks begin to hatch and move out of the nest, so as to count the maximum number of AON possible. A count of occupied and empty nests to be done side by side.</p>	<p>Count completed on 31/05/14</p> <p>It does not need to be carried forward as a specific recommendation as it falls under the regular monitoring program and the gap that had been creeping into the data for Gull AON counts has been stopped.</p>	<p>n/a</p>
<p>2 Benthic ecology and topography survey work needs to be started if resources allow, by completing large scale bathymetry, video works and sediment analysis.</p>	<p>Resources unavailable, no work completed.</p>	<p>CONTINUED: Benthic ecology and topography survey work continue to be a priority if resources allow.</p>
<p>3 Establish a 3rd live camera on Ortac to bring live images of the gannet breeding season in to the LIVE: Teaching Through Nature website and educational programme.</p>	<p>Camera established on Ortac (Section 2.5.3).</p>	<p>CONTINUED: Camera establishment needs to be continued in advance of the colony returning. Both Gannet Cam and Puffin Cam software to be reviewed and improved.</p>
<p>4 Storm-Petrel monitoring will improve by researching better techniques for population size analysis. A combination of playback and ringing techniques will be used to ascertain population level. The artificial nest site will be improved by including tunnels on the artificial nest boxes and by using playback to attract Petrels to the site. Nest boxes</p>	<p>Storm-Petrel ringing conducted between 17th and 19th July (2015) with 504 individuals caught and population estimate techniques improved (Section 2.1.4).</p> <p>Storm-Petrel ringing does not need to be carried forward as a specific recommendation as it now falls under the regular</p>	<p>AMENDED: Combination of playback and ringing techniques to be carried into 2016. After three years of continuous ringing calculations can be accurately made to estimate the overall breeding population on Burhou.</p>

	will be tested in a known breeding site to test suitability.	monitoring program.	
5	Repeated survey of invasive species (particularly Japweed), whenever workloads allow, to follow spread within the area, mapped on the invasive species GIS map. Removal of these invasive species should be targeted within the Ramsar site whenever possible.	Japweed is surveyed as part of the marine Phase I surveys (Section 2.2.1) and will therefore be included in any GIS maps of the intertidal surveys. Hottentot-fig (Section 2.3) incorporated in terrestrial Phase I surveys. As such they are included in the regular monitoring program and don't need to be specific recommendations.	AMENDED: If work on invasive species needs to be expanded or improved they could become a topic of study for future MSc students.
6	Adequately signpost and make the general public aware of the Ringed Plover nesting sites on Platte Saline.	Full public awareness campaign and signage carried out (Section 2.1.8). This now falls within standard monitoring program and therefore is not a specific recommendation for 2016.	AMENDED: Public awareness to continue. Clonque Bay observations to continue with the addition of Hannaine Bay and Saye Bay.
7	Enlist Terrestrial Ecologist to do bat, moth, butterfly and botanical surveys to better understand the terrestrial composition of Burhou.	Staff unavailable, no work completed.	AMENDED: Priority terrestrial work is the completion of Phase I and II surveys of the South Cliffs and Burhou. Small mammal trapping on Burhou and investigation into management of any species confirmed as present required.
8	PhD project: monitor Lesser Black-backed Gull behavioural patterns in the colony (Section 2.1.2 (2013)). MSc project: analysis of the Puffin monitoring methods (Appendix 6.8 (2013)).	Gull PhD proposal with University of Liverpool and Puffin MSc proposal with University of York. Former awaiting funding approval to begin field work in 2016, latter available for student as soon as viable.	AMENDED: PhD proposal was unsuccessful in 2015/2016 due to issues with funding. The MSc proposal still remains an option in 2016.
9	The Puffin population is currently only monitored around the south of Burhou. This programme can be extended to include other known Puffin breeding sites. A location for a fourth vantage watch point has been proposed	Due to the seabird wreck in 2014 it was decided that the existing monitoring locations are to be kept as the priority and expansion of this monitoring is unnecessary when results that are comparable to previous years	AMENDED: Puffin burrow and raft count observations around the main colony should remain a priority, however observations of the sub-colonies on Burhou and along Hannaine Bay should also be attempted to

	on the west Burhou colony of Puffins and staked with a red peg, a fifth vantage watch point can also be done at Hannaine Bay (regular raft counts would also be done at both to support the AOB count).	are most important. Considering the long-term implications the wreck may have, consistent monitoring methods will continue to be the priority; no expansion recommended.	further determine the implications of the seabird wreck.
10	Seabird colony descriptions of the Sister Rocks, South cliffs of Alderney and Casquets.	Surveys of the South cliffs completed for Gulls (Section 2.1.2) and Shags (Section 2.1.3), these included the sister rocks. Full survey of Casquets completed in 2014. Full colony census count of Les Etacs and Ortac was completed in 2015 for the CI Seabird Census.	AMENDED: Colony surveys of Gulls and Shags along the South Cliffs should be repeated in 2016. NEW: Re-count of Ortac Gannetry from 2011.

Table 10. Outline of works for 2016 from ARS2 (including work due from 2014/15).

	Outline 2014	Notes for 2014	Outline 2015	Notes for 2015	Outline 2016
Marine	<p>Intertidal ecology: Marine intertidal habitat mapping and quadrat surveys of Burhou (Phase I & II), Clonque Bay (Phase I) and Casquets (Phase I & II).</p> <p>Benthic ecology & topography: Bathymetry survey. Video habitat and species assessments (Phase I).</p>	<p>Sections 2.2.1 (Clonque Bay), 2.2.4 (Braye Beach Bay) and 2.4 (Casquets).</p> <p>Benthic ecology & topography: Lack of necessary equipment and time restrictions meant that</p>	<p>Intertidal ecology: a) Marine intertidal habitat mapping and quadrat surveys of Burhou (Phase I), Clonque Bay (Phase II) and South cliffs (Phase I). b) Strandline survey of Clonque Bay. c) Important and invasive species assessments of Clonque Bay.</p> <p>Benthic ecology & topography: a) Desk-based bathymetry study of Ramsar Site from available GIS marine resources. b) Video habitat and species</p>	<p>Sections 2.2.1 (Clonque Bay) - 2.2.2 (Strandline survey).</p> <p>Sections 2.2.3 - 2.2.4</p>	<p>Intertidal ecology: a) Marine intertidal habitat mapping of Burhou and South Cliffs (Phase I). b) Strandline survey of Clonque Bay and Hannaine Bay. c) Important and invasive species assessments of Clonque Bay and Hannaine Bay.</p> <p>Benthic ecology & topography: a) Video habitat and species assessments of Clonque Bay (Phase I) using snorkel and Go-Pro video techniques.</p>

	<p>Pelagic ecology: None</p> <p>Marine Mammals: a) Grey seal population dynamics study. b) Grey seal photographic ID catalogue. c) Effort based land/boat surveys. d) Marine user/public marine recording strategy.</p> <p>Academic research: MSc project on marine intertidal and sub-littoral ecology of Bray Beach Bay.</p>	<p>this work could not be carried out.</p> <p>Pelagic ecology: None</p> <p>Marine Mammals: Collected effort based data and collated with observational data.</p> <p>Academic research: Details can be seen in Rossiter, T. (2014).</p>	<p>assessments of Clonque Bay (Phase I) using snorkel and Go-Pro video techniques (but dependent on weather and time). c) Potential eelgrass survey - intertidal or sublittoral using snorkel and video techniques.</p> <p>Pelagic ecology: a) Desk-based abiotic parameter assessment of Ramsar Site which includes: Tidal Flow, Turbidity, pH and Salinity from available GIS marine resources.</p> <p>Marine Mammals: a) Grey seal population dynamics study. b) Grey seal photographic ID catalogue. c) Effort based land/boat surveys. d) Marine user/public marine recording strategy.</p> <p>Academic research: Potential MSc project on either: ecology of rockpools; invasive species or barnacle population dynamics not taken in 2015.</p>	<p>Section 2.2.3</p> <p>Marine Mammals: Section 2.2.5</p> <p>Academic research: n/a</p>	<p>b) Potential eelgrass survey - intertidal or sublittoral using snorkel and video techniques.</p> <p>Pelagic ecology: None</p> <p>Marine Mammals: a) Grey seal population dynamics study. b) Grey seal photographic ID catalogue. c) Effort based land/boat surveys. d) Marine user/public marine recording strategy.</p> <p>Academic research: Potential MSc project on either: ecology of rockpools; invasive species or barnacle population dynamics (Appendix 5.1).</p>
Terrestrial	Phase I & II Habitat Survey South cliffs of Alderney.	Staff unavailable to conduct surveys so must be carried	Phase I & II Habitat Survey South cliffs of Alderney.	Staff unavailable to conduct surveys so must be carried	Phase I & II Habitat Survey South cliffs of Alderney and Burhou.

	Phase I Casquets.	forward. See Appendix of Morley et al. (2014).	n/a	forward. n/a	n/a
	Terrestrial Phase I Habitat Survey Map Review.	Staff unavailable to conduct review.	Terrestrial Phase I Habitat Survey Map Review.	Staff unavailable to conduct review.	Terrestrial Phase I Habitat Survey Map Review.
Seabird	Burhou Seabird Monitoring.	Section 2.1 (2014)	Burhou Seabird Monitoring.	Section 2.1	Burhou Seabird Monitoring.
	Alderney and Other Islet Seabird Monitoring.	Section 2.1 (2014)	Alderney and Other Islet Seabird Monitoring.	Section 2.1	Alderney and Other Islet Seabird Monitoring.
	PhD	Section 2.1.9 (2014)	PhD	Section 2.1.6	
	Rat survey of Burhou.	Section 2.5.1 (2014)	Small mammal survey of Burhou.	Staff unavailable to conduct surveys.	Small mammal survey of Burhou.
Invasives	Control of Hottentot-fig within the Ramsar site.	Small amounts removed on Burhou; ongoing work by conservation volunteers around Alderney.	Control of Hottentot-fig within the Ramsar site.	Section 2.3	Control of Hottentot-fig within the Ramsar site.
	Monitor and mapping of the distribution of Slipper Limpet & Japweed.	No Slipper Limpets; Japweed locations being mapped.	Monitor the distribution of Slipper Limpet & Japweed.	Section 2.2	Monitor the distribution of Slipper Limpet & Japweed.
	Invasive Species (Marine & Terrestrial) Review Report Point.	Work carried out within standard report but no	Invasive Species (Marine & Terrestrial) Review Report Point.	Work carried out within standard	Invasive Species (Marine & Terrestrial) Review Report Point.

		specific publication.		report but no specific publication.	
Education Publicity	Events/programmes for the public and schools.	Section 2.4 (2014)	Events/programmes for the public and schools.	Section 2.5	Events/programmes for the public and schools.
Advisory Legislative	Production of Conventions list.	Section 2.7.1 (2014)	Conventions list available within consequent Ramsar Annual Reviews.	Section 2.6.1	Conventions list available within consequent Ramsar Annual Reviews.
	Oil Spill Action Plan.	Section 2.7.2 (2014)	Oil Spill Action Plan.	Section 2.6.2	Oil Spill Action Plan.
	Alderney Environmental Conservation Act.	Section 2.7.3 (2014)	Alderney Environmental Conservation Act.	Section 2.6.3	Alderney Environmental Conservation Act.
	Production of Ramsar Stakeholder List and Ramsar Stakeholder Group.	A topic of discussion during Inter-Islands meeting (Oct 9 th /10 th); any outcomes must be followed up during 2015.	Ramsar Stakeholder List and Ramsar Stakeholder Group.	Section 2.6.3	Ramsar Stakeholder List and Ramsar Stakeholder Group.
	Investigate co-operative CI Ramsar Network.		Investigate co-operative CI Ramsar Network.		Investigate co-operative CI Ramsar Network.
Ramsar	Update Ramsar Information Sheet.	To be completed over the	Update Ramsar Information Sheet.	To be completed over the	Update Ramsar Information Sheet.

		Winter.		Winter.	
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4. References

Morley, T. (2014). *Annual Project Review 2014*. In House Publication.

Rossiter, T. (2014). *Uncharted waters: A baseline study on the ecological composition of Braye Bay, Alderney, using mapping and environmental surveys*. University of York Research Thesis.

Soanes, L., Ratcliffe, N., Booker, H., Atkinson, P. and Michel, C.C. (2010). *Is an increase in Gull numbers responsible for limiting Atlantic Puffin *Fratercula arctica* numbers on Burhou, Channel Islands?* Seabird 23. 91-103.

Data obtained for previous years from:

Independent Annual Reports for the Alderney West Coast and Burhou Islands Ramsar Site Management Strategy. Reports written by: Soanes, L. (2007), Broadhurst, M. (2008), Skene, A. (2009), Stockdale, J. (2010), Morgan, L. (2011), Allison, J. & Bohan, A. (2012) and Morley, T. (2013).

5. Appendix

5.1 MSc options for University of York 2016

1. Ecology of intertidal rock-pool habitats.

Assessment: The project will entail investigating species' biological diversity and composition of intertidal rock-pool habitats on Alderney, using field-based methods. This will include researching different rock-pool habitats (i.e. *Ulva* spp., *Sargassum muticum* and *Corallina officinalis* rock-pool habitat types) in terms of: species bio-diversity, composition and ecological status (i.e. invasive/rare species). Surveys will be completed across different intertidal environments (including bays within the island's Ramsar Site, harbour and recreational areas). Research methods will include timed species searches and environmental parameter assessments (i.e. size, depth of rock-pools, water temperature).

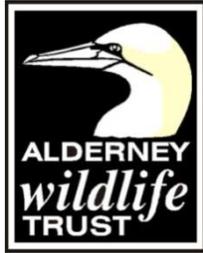
2. Barnacle population dynamics: measuring future climate change impacts on Alderney.

Assessment: The project will entail investigating barnacle species' population dynamics across different intertidal environments (bays and shoreline heights) within Alderney. This will include barnacle species' presence, bio-diversity, density (% proportion), individual age structure (adult or juvenile) and predator presence. The field-based survey methods will follow the 2008 MarClim survey protocol, which uses barnacle species as a biological indicator of climate change impacts.

3. Investigating the invasive species, *Sargassum muticum* on Alderney.

Assessment: The project will entail investigating the invasive intertidal algae species, *Sargassum muticum* on Alderney, using field-based and desk-based methods. The field-based survey methods will include determining the presence, distribution, frequency and composition of associated marine species (i.e. attached marine species) of this invasive species within different intertidal environments. Desk-based methods could include comparative assessments from previous anecdotal surveys and records using GIS analysis.

5.2 Ringed Plover Recovery Action Plan



Ringed Plover Recovery Action Plan

Reported by: Jenni Godber

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Introduction

Common Ringed Plovers (*Charadrius hiaticula*) (Fig 1.) are small waders (17-19cm from head to tail) that breed on open shores. They prefer beaches with patches of shingle and short grass where they can camouflage themselves better when incubating eggs. The nest is an extremely shallow scrape in the ground and doesn't contain any nesting materials (such as twigs etc.) apart from 4 pear shaped, pale buff eggs that are sprinkled with black spots (Fig 2.) that are extremely well camouflaged. The breeding season lasts from late April until early July and each pair of birds may attempt to breed twice within this time period (Fitter and Richardson, 1968).



Figure 1. An adult Ringed Plover about to settle down on 4 eggs in the nest.

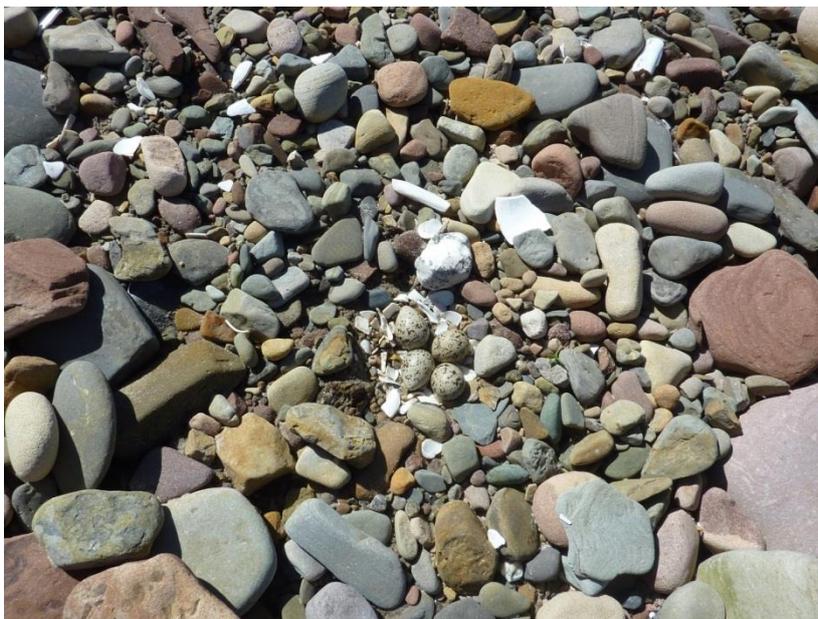


Figure 2. Shows 4 Ringed Plover eggs well camouflaged against the rocks and pebbles.

Background

Until the end of the breeding season in 2014, Platte Saline was known to be the last regular breeding population of Ringed Plover in the Channel Islands, but for the first time on record they were seen to extend their range to Clonque Bay (south west of Platte Saline). This is a huge improvement on previous years. These birds have been monitored for breeding success as part of the Alderney's Ramsar Management Plan since 2008 and up until 2014 only 6 chicks had been successfully raised to fledging age. This is potentially due to a combination of birds being inexperienced breeders in their first year as a breeding pair, selecting unsuitable areas for egg laying, and disruption to incubation and fledging of the chicks through human disturbance due to lack of awareness.

However, last year with the aid of signs (Fig 3.) which were placed at key entry points to Platte Saline and articles in the press, one pair of Ringed Plovers managed to raise 4 chicks from two separate breeding attempts which is the most Ringed Plover chicks ever recorded fledged from one place on Alderney. Another pair attempted to breed on the beach but they were nesting in a much more open area where they were more likely to be affected by disturbance so were unsuccessful at raising any chicks. Success was also seen on Clonque, but as they were only discovered late on into the season due to the difficulties of finding the birds on a much rockier beach and being unaware of a breeding population on the site. It was not possible to make an accurate count of all the chicks that were fledged, two were definitely sighted fledging on Clonque beach, but the actual number could be as high as four.

Despite the success of last year's breeding season we still consider the population on Platte Saline to be extremely vulnerable and at a high risk of declining due to human disturbance. It is for this reason the AWT wish to introduce a trial year of roped off areas in an attempt to keep disturbance to a complete minimum.

Ringed Plover awareness at Platte Saline

The Alderney Wildlife Trust and Living Islands project are asking the public to be aware of Ringed Plovers nesting on Platte Saline when out walking in this area.

Platte Saline has been the home for nesting Plovers for many years and is the last known regular breeding place in the Channel Islands. They would like people to be especially careful when walking their dogs and to try and keep to the lower part of the beach. The breeding season is between now and July. Plovers have been monitored for breeding success as part of Alderney's Nature Management Plan since 2008. In this time six chicks have been successfully raised, with three in 2013. A nest has already been spotted on the beach with another possibly being established. Although the eggs are well camouflaged and not easy to spot they need



Ringed plover nesting area

to be incubated as it is important that the adult is not frightened away. If you come across a nest, please leave the area quickly. The Alderney Wildlife Trust and Living Islands project are doing their part by monitoring the birds for breeding suc-

cess, they will be putting up some information boards in the area and asking the public to read them and make themselves aware of the wildlife around them. It is with the help of residents and visitors that a difference can be made to help improve the breeding success of these birds.

Exploring and Protecting Alderney's Marine Life

Exploring Alderney's shorelines and rockpools is a must for your summer plans this year. Alderney has a variety of marine life for you to discover, from the common limpet and fleshy seaweeds to gummy crabs and feisty sea anemones. Bivalves and sea anemones can be found during the springtime with colorful fish, crabs and seaweeds. In the summer and autumn times, Marine life under boulders is particularly sensitive and susceptible to damage, therefore please turn boulders back over after your marine exploration expedition. The Seashore



Figure 4: Paphos

HOMES & GARDENS
OVER 20 YEARS OF EXPERIENCE
FULL GARDEN MAINTENANCE UNDERTAKEN INCLUDING REGULAR CONTRACTS
GARDEN WASTE REMOVAL
LIGHT GARDEN CONSTRUCTION INCLUDING WATER PONDS, DECKING, GARDEN SHEDS AND FENCING
PRESSURE CLEANING AND EXTENSIVE PROPERTY PAINTING
QUALITY WORKMANSHIP FOR ALL WORK
ADVICE AND ESTIMATES CONTACT MARK 07911 723301 ANDREW 07811 758037
12 alderney@aol.com



Figure 3. Press articles and signs relating to the AWT Ringed Plover Awareness Campaign.

Aims and Objectives

Aim: The AWT aims to preserve the last regular breeding population of Ringed Plover in the Channel Islands through; intensive monitoring, on site management through roped off areas and a public awareness campaign.

Objectives: To avoid the decline in breeding success and entire loss of breeding Ringed Plovers on Platte Saline and Clonque Bay through human disturbance.

Action Plan

With the colony expanding to 4 pairs across two of Alderney's beaches, and a year in which at least 6 chicks were raised to fledging age, the Ringed Plovers had a brilliant 2014. It is with this in mind that the AWT want to begin the 2015 breeding season with an even stronger effort than was taken last year with a proposed trial of introducing roped off areas where the nests have been spotted. We hope that this, along with our community efforts will help ensure that the birds continue to increase in population size and breeding output.

By roping off the areas where the two current regular breeding pairs breed on Platte Saline we hope to make the public aware of where the birds are nesting so that they can walk safely on the beach

without being conscious of where they are walking. These numbers could potentially be higher as sexually mature birds show high site fidelity and return to the same breeding sites each year (web 1). The nests are extremely well camouflaged and even when immediately next to them they are almost impossible to spot with the untrained eye (Fig 2.) so we are hopeful that while the areas will obviously draw some initial curiosity, with well positioned information signs people will generally adhere to our suggestions and stay a reasonable distance away from the sites.

Ringed Plovers Nesting on Platte Saline

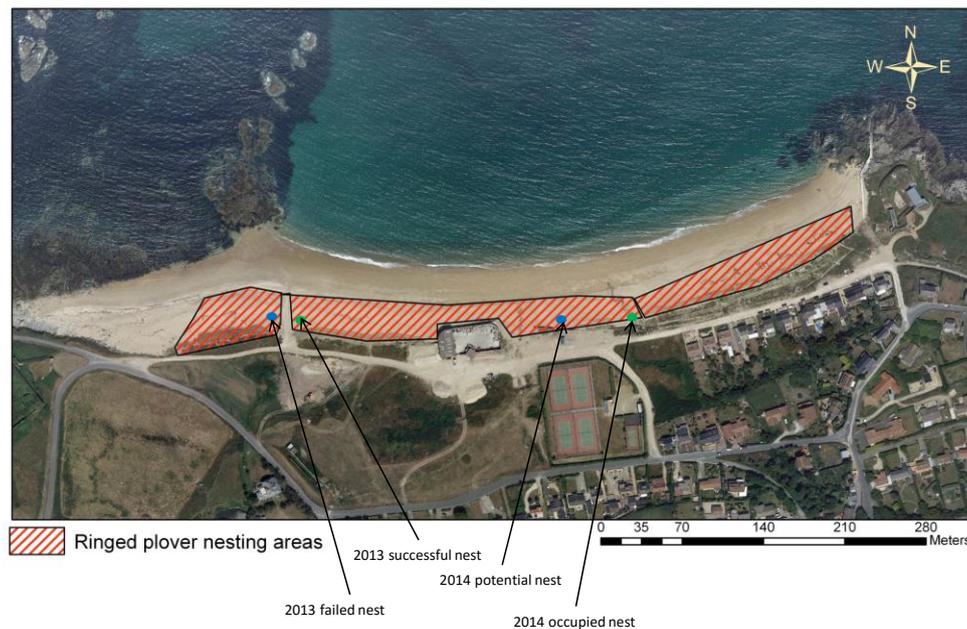


Figure 4 shows where the birds attempted to breed in 2013 and 2014, along with successful and unsuccessful nesting sites and the overall area above the high tide mark where they have the potential to breed in 2015.

The proposed method of protecting the nests is to allow a large enough buffer zone around the nesting area that will not disturb the bird if people pass by the nest site too closely. With this in mind, and after asking for advice from organisations such as Natural England and Wildlife Trusts in the UK, we have decided that a 25m² boundary around each nest would allow enough distance between public activity on the beach and breeding birds. We hope to create these boundaries using reinforcing bar with a 4ft rise and 2ft buried into the ground to provide stability. Blue rope will be tied together to create a 5x5m square around the nest site. While this will not protect the birds from inquisitive people, we hope to reduce the amount of disturbance with some wooden information signs which stand about 4ft tall, that will accompany each roped off area and will be placed within 5m of each site.

As the population of Ringed Plovers on Platte Saline is particularly vulnerable, we also wish to

propose a dummy roped off area. This will be the same size as the other areas and will take on the same layout and design. We hope by doing this it will slightly reduce the pressure of the public getting too close to the sites where the nests are present without overpowering the beach. The AWT ecologists will be the only people aware which areas the birds are nesting in.

The parents are extremely aggressive around the nest and will fiercely defend it by calling loudly and swooping at intruders (web 1.) and it will be in the best interest of the AWT that this message is put across throughout the breeding season. The site will also be closely monitored a minimum of once per week throughout the 12 week breeding season and this will allow us to assess whether the areas are proving to be successful. Since it is a trial we plan to keep Clonque beach free from roped off areas, but signs will be placed warning people that birds are breeding on the beach and to stick with the same guidelines given for Platte Saline. This area will also be monitored and can be used for comparison to measure if roped areas are an effective means of improving the nesting success for these birds for review in 2016.

The results of this year's monitoring effort will be available in the end of year Annual Ramsar Project Review. This is usually made available once the review has been compiled and the survey season is over around October.

Bibliography

<http://murfswildlife.blogspot.com/2013/06/ringed-plover-nest.html> (figure 1)

<http://edayranger.blogspot.com/2013/06/hello-summer.html> (Figure 2)

M. Broadhurst and T. Morley (2014) Annual Ramsar Project Review (In House Publication) (Figure 3)

<http://www.arkive.org/common-ringed-plover/charadrius-hiaticula/> (web 1.)

R.S.R. Fitter and R.A. Richardson (1968). Collins Pocket Guide to Nests and Eggs.

5.3 Summary of Seabird Population Monitoring

Location	Species	Method	SCR	Seabird 2000				-	Burhou Project		Ramsar ARS1					Ramsar ARS2				
			1987	1999	2000	2002	2003	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Les Etacs Ortac	Gannet (<i>Morus bassanus</i>)	AON	2391 1985	3450 2500	- -	- -	- -	4862 2547	- -	- -	- -	- -	- -	5765 2120	- -	- -	- -	5909 2777	- -	
Coque Lihou	Shag (<i>Phalacrocorax aristotelis</i>)	AON	80	-	-	-	-	-	-	-	-	-	-	-	-	77	66	-	-	
Little Burhou			8	-	-	-	-	-	-	-	-	-	-	-	-	-	35	36	42	-
Burhou			6 ⁽¹⁾	47	-	-	-	-	-	19	21	19	24	23	20	21	14	17	-	-
Alderney			31	160	-	-	-	-	-	-	-	-	-	-	-	18 ⁽²⁾	51	118	-	-
Burhou	Puffin (<i>Fratercula arctica</i>)	AOB (Raft)	210 ⁽³⁾ -	180 ⁽³⁾ -	- -	- -	- -	120 (139)	127 (92)	114 (127)	132 (134)	- (131)	153 (157)	160 (174)	176 (175)	168 (96)	143 (58)	112 ⁽⁴⁾ 114	-	
Burhou	Storm-Petrel (<i>Hydrobates pelagicus</i>)	Ind. ⁽⁷⁾ (Rung) ⁽⁸⁾	- (35)	- -	2,800					- (171)	- -	- -	- -	- -	- -	- (433)	- (504)	-	-	
Burhou	Herring Gull (<i>Larus argentatus</i>)	AON (Chicks)	70 -	125 ⁽⁴⁾ -	- -	- (16)	- -	202 -	110 (3)	148 -	164 (1)	52 ⁽²⁾ (8)	85 (17)	73 (6)	5 (4)	18 (12)	32 (18) ⁽⁵⁾	- (2) ⁽⁷⁾	-	
Alderney			96	285 ⁽⁴⁾	-	-	-	-	-	-	-	-	-	-	-	-	315 ⁽⁶⁾	140	-	
Burhou	Lesser BBG (<i>Larus fuscus</i>)	AON (Chicks)	105 -	313 ⁽⁴⁾ (232)	- -	- (308)	- -	1103 (386)	936 (140)	994 -	1001 (3)	640 ⁽²⁾ (281)	1074 (335)	1236 (11)	991 ⁽⁴⁾ (202)	- (28)	1392 (276)	- (192)	-	
Alderney			13	70 ⁽⁴⁾	-	-	-	-	-	-	-	-	-	-	-	-	315 ⁽⁶⁾	72	-	
Burhou	Great BBG (<i>Larus marinus</i>)	AON (Chicks)	22 -	27 ⁽⁴⁾ -	- -	- -	- -	18 -	18 -	16 -	17 (0)	- (5)	23 (0)	23 (1)	4 (4)	1 (1)	6 (2) ⁽⁵⁾	- 0	-	
Alderney			5	21 ⁽⁴⁾	-	-	-	-	-	-	-	-	-	-	-	-	315 ⁽⁶⁾	20	-	
Alderney	Fulmar (<i>Fulmarus glacialis</i>)	AOS	53	50	-	-	-	-	-	26	20 ⁽²⁾	38	34	16 ⁽²⁾	34	29	29	30	-	
Platte Saline	Ringed Plover (<i>Charadrius hiaticula</i>)	AOS	-	-	-	-	-	-	-	-	1	3	5	3	2 (8)	2 (8)	4 (4)	4(0)	-	
Clonque		(Ind.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 ⁽²⁾ (4)	4 (3)	-	
Houmet des Pies	Common Tern (<i>Sterna hirundo</i>)	AON (Ind.)	18 -	20 ⁽⁴⁾ -	- -	- -	- -	15 -	- -	11 (64)	- -	- -	- -	- -	5 (24)	14 (43)	25 (28)	30 (32)	-	

⁽¹⁾ Counted in 1988; ⁽²⁾ Partial colony count only; ⁽³⁾ Individuals on land; ⁽⁴⁾ AOS not AON; ⁽⁵⁾ Inc. Little Burhou; ⁽⁶⁾ All Gull spp. together; ⁽⁷⁾ Calc. from ringing; ⁽⁸⁾ Inc. re-traps