LIFE Project Number

LIFE14 NAT/UK/000394 ROSEATE TERN

Final Report

Covering the project activities from 1/10/2015 to 31/12/2020

Reporting Date

31/12/2020

LIFE PROJECT NAME or Acronym

Improving the conservation prospects of the priority species roseate tern throughout its range in the UK and Ireland – LIFE14 Roseate Tern

Data Project

Project location:	**Ireland**: Mid-East; South East **UK**: North; Northern Ireland; Scotland; South East; Wales
Project start date:	1/10/2015
Project end date:	30/09/2020 **Extension date:** 31/12/2020
Total budget:	€ 3,229,020
EU contribution:	€ 2,421,765
(%) of eligible costs:	75%

Data Beneficiary

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Package completeness and correctness check	
Obligatory elements	**✓ or N/A**
Technical report	
The correct latest template for the type of project (e.g. traditional) has been followed and all sections have been filled in, in English *In electronic version only*	✓
Index of deliverables with short description annexed, in English *In electronic version only*	✓
Mid-term report: Deliverables due in the reporting period (from project start) annexed Final report: Deliverables not already submitted with the MTR annexed including the Layman's report and after-LIFE plan Deliverables in language(s) other than English include a summary in English *In electronic version only*	✓
Financial report	
The reporting period in the financial report (consolidated financial statement **and** financial statement of each Individual Beneficiary) is the same as in the technical report with the exception of any terminated beneficiary for which the end period should be the date of the termination.	✓
Consolidated Financial Statement with all 5 forms duly filled in and signed and dated *Electronically Q-signed or if paper submission signed and dated originals* and in electronic version (pdfs of signed sheets + full Excel file)*	✓
Financial Statement(s) of the Coordinating Beneficiary, of each Associated Beneficiary and of each affiliate (if involved), with all forms duly filled in (signed and dated). The Financial Statement(s) of Beneficiaries with affiliate(s) include the total cost of each affiliate in 1 line per cost category. *In electronic version (pdfs of signed sheets + full Excel files) + in the case of the Final report the overall summary forms of each beneficiary electronically Q-signed or if paper submission signed and dated originals**	✓
Amounts, names and other data (e.g. bank account) are correct and consistent with the Grant Agreement / across the different forms (e.g. figures from the individual statements are the same as those reported in the consolidated statement)	✓
Mid-term report (for all projects except IPs): the threshold for the second pre-financing payment has been reached	N/a
Beneficiary's certificate for Durable Goods included (if required, i.e. beneficiaries claiming 100% cost for durable goods) *Electronically Q-signed or if paper submission signed and dated originals* and in electronic version (pdfs of signed sheets)*	✓
Certificate on financial statements (if required, i.e. for beneficiaries with EU contribution ≥750,000 € in the budget) *Electronically Q-signed or if paper submission signed original and in electronic version (pdf)*	✓
Other checks	
Additional information / clarifications and supporting documents requested in previous EASME letters (unless already submitted or not yet due) *In electronic version only*	✓
This table, page 2 of the Mid-term / Final report, is completed - each tick box is filled in *In electronic version only*	✓

**signature by a legal or statutory representative of the beneficiary / affiliate concerned*

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1 List of key-words and abbreviations

Associated Beneficiaries or Partners – BWI and NWWT
BWI – BirdWatch Ireland (associated beneficiary)
BTO – British Trust for Ornithology
CAW – Centre for African Wetlands (contractor for the tern trapping study in Ghana)
DEFRA – Department for Environment, Food and Rural Affairs (UK)
EASME - The Executive Agency for Small and Medium-sized Enterprises
EC or Commission – European Commission
HCC – Hampshire County Council (key stakeholder)
HIOWT – Hampshire and Isle of Wight Wildlife Trust (key stakeholder)
IFMU – RSPB's International Finance Management Unit
JNCC – Joint Nature Conservation Committee
MTR – mid-term report
NADEG - EU Expert Group on the Birds and Habitats Directive
NE – Natural England (statutory body in England)
NEEMO - LIFE Monitoring Team UK/IE
NIEA – Northern Ireland Environment Agency
NNR – National Nature Reserve
NPWS – National Parks and Wildlife Service (statutory body for RoI, key stakeholder)
NRW – Natural Resources Wales (statutory body in Wales)
NWWT – the North Wales Wildlife Trust (associated beneficiary)
PA – Project Assistant
PM – Project Manager
PR – progress report
Project Beneficiaries - RSPB HQ, BWI, NWWT and all the RSPB regions involved in the project (SE England, NE England, Scotland, Northern Ireland and Northern Wales)
RSPB – Royal Society for the Protection of Birds (main beneficiary)
RoI – Republic of Ireland
SNH – Scottish Natural Heritage (statutory body in Scotland), now NatureScot
SPA – Spatial Protection Area as defined in the European Union Birds Directive

2 Executive Summary (maximum 2 pages)

The overall purpose of this project was to improve the conservation prospects of the roseate tern *Sterna dougallii* in the UK and Republic of Ireland (RoI). This aim contributed to a longer-term goal of improving the conservation status of roseate tern right across Europe. There were six specific objectives: (1) Increase the population size through management of the current viable colonies; (2) Provide conditions for recolonisation at other roseate tern SPAs; (3) Identify long-term management options; (4) Improve knowledge on key issues in Europe and Africa; (5) Develop and disseminate guidance and (6) Develop international conservation strategy. The delivery of the first two objectives was at the core of the project through a step-up approach to management within both the current roseate tern colonies and potential future recolonization sites (C1-C3). This included increasing wardening level, controlling predation, creating and improving nesting sites, replacing equipment and infrastructure. The management was underpinned by the new or systematised knowledge from several research actions, such as prey ecology and tern diet review (A3), demography study (A4), spatial utilisation of foraging areas, migration routes and staging areas outside of the breeding season (D1) as well as identification of key issues in Africa (C5). Good management practices were disseminated through the exchange of knowledge between site managers as part of networking activities, workshops (E3) and seminars (E7). The effectiveness of the management was monitored as part of actions D1 and D4. Lessons learnt from the practical management, networking and research actions were used for the development of the long-term management options (A2), best practice guidance and finally in the International (East Atlantic) Action Plan, developed within the EU framework (E3). In the process of developing the above documents, it was important to involve and secure commitment from statutory agencies in each country (C4). Finally, we have developed a range of promotional materials (E1-E2, E4), media (E6) and public engagement/ educational activities (E5).

As expected, the first half a year focused on launching the project (start-up meetings, partnership agreements), recruitment of staff and reviewing management options. Activities and budgets were reviewed with all RSPB regions and partners, as well as with the finance department within the RSPB. It was decided that the salaries of four site wardens from Coquet and the Skerries should be relocated to match funding, which generated a contingency funding for unexpected purchases and underestimated activities, for example the restoration of Blue Circle Island (Larne Lough SPA) as part of C3. The partnership structure did not change and the cooperation between partners worked well throughput the project.

Preparatory actions started as planned except for the tern diet review (A3) due to a major review of seabird diet monitoring programmes in the UK, which came to light in April 2016. This review informed the scope of work for the Species Recovery Officer. Following the completion of the sandeel and tern diet reviews, we carried out several dissemination workshops (see action A3). The SPA assessment (A1) was completed earlier than planned. The review of long-term management options (A2) was completed on time, in March 2018. The demography study (A4) was completed and published, although with a delay due to a sheer amount of data, requiring three contract extensions for the lead scientist. The Communication Strategy (A.5) was developed and updated annually. Biosecurity plans were developed for all sites and are currently implemented.

Concrete conservation actions (C1, C2 and C3) were all completed with some modifications and delays, which did not compromise the project objectives. The island restoration project at Larne Lough was delayed by changing the delivery strategy, difficulties with finding a contractor and long application process for the marine construction licence and planning

permission. The island has eventually been completed after corrective works in winter 2019-2020. The shingle bar repairs at Cemlyn was not feasible and instead we prepared the plans and obtained the consent from NRW for the restoration of tern island at Cemlyn Bay (C3). The island was be restored in the first quarter of 2018. Conservation plans and consents were also prepared for Lymington cheniers and breakwaters at Solent and Southampton SPA and the habitat work was completed in March 2017 (C3). With regards to Hurst Spit (Solent), the dispute with one of the landowners instigated considerable staff time, legal costs and stress to both parties, and therefore it was decided to withdraw from this site. Instead, we deployed tern rafts in spring 2017, restored shingle islands and predator fence at Normandy Lagoon and carried out outreach activities at Hurst Spit and other locations to mitigate for this setback. Following the assessment of management options for Forth Islands SPA, we have started working on the restoration of Long Craig and deployment of tern platforms in Port Edgar. We commissioned a civil engineering consultant - Wallace Stone from Glasgow to provide us with the restoration options for the island. The estimated cost of the construction work (£150,000) would exceed the budget we have for this project and would represent a poor value for money in terms of ecological impact. The high cost was due to a narrow tidal window to approach the island and therefore an estimated 4-6-weeks construction period. To this end, it was decided not to proceed with the restoration. Tern raft were installed at Port Edgar in March 2018, and networking activities with other colony managers in the Firth of Forth, including Isle of May, were carried out to compensate for the lack of other management opportunities.

Contract with the Centre for African Wetland was signed in September 2016, the first field season was completed and the second is underway. Daniel Piec (PM) visited Ghana at the end of September to improve the communication, gain perspective on constrains and improve methodology of the survey. The final report revealed that the trapping continues but at a lower rate.

There were no conflicting issues on the project sites and hence no need for the public meetings (C4), however we organised or participated in 327 events and talks with over 33000 people participating. We have also delivered an educational project in Larne Lough as part of the new set of deliverables and milestones (see C4 below). This change did not require amending the Grant Agreement.

Monitoring actions started and were carried out as planned. Site monitoring reports were used to compile an annual summary report with recommendations (D1, D4). The population of roseate tern in the UK and Ireland grew 7% between 2016 and 2020. The assessment of public attitudes and awareness was completed on selected sites Results from over 500 questionnaires were summarised in a report (D2).

Public awareness and dissemination actions were fully implemented but a change in the delivery of site leaflets and information boards was required (E1) to allow accommodating the needs of the sites, for which these actions were designed. Project website (www.roseatetern.org) (E2) has been operational since January 2016 and a total of 7720 unique visitors. Facebook and Twitter pages were also operational with 180 (122 in 2016) and 163 (72 in 2016) followers respectively. A networking visit to the Netherlands was undertaken in 2016, together with the Little Tern LIFE project, to France in 2017 and the Azores in 2018. Numerous exchange visits between project sites and a predator workshop were organised. Communication actions resulted in more than 140 media features published traditional media and specialised magazine articles.

3 Introduction (maximum 2 pages)

Description of background, problems and objectives (as foreseen in the proposal)

The overall purpose of this project was to improve the conservation prospects of roseate tern *Sterna dougallii* in the UK and Republic of Ireland (RoI). This aim contributed to a longer-term goal of improving the conservation status of roseate tern right across Europe.

The main objectives of the project were as follows:

1. Increase the population of roseate tern in the UK and RoI by enhancing habitat management and reducing threats at the three principal colonies.
2. Provide the conditions needed for a re-expansion of roseate tern in the UK and RoI through enhanced management and restoration of the other SPAs for this species.
3. Identify longer-term options for the management and establishment of tern colonies across NW Europe, in view of predicted changes to the climate and coastlines.
4. Improve understanding of key issues affecting roseate terns in NW Europe and in wintering areas in West Africa.
5. Develop and disseminate guidance and plans for the management of roseate tern breeding sites.
6. Develop the first ever conservation strategy covering the whole NW European metapopulation of roseate tern.

The project was implemented at the following sites (viable roseate tern colonies in bold): England (**Coquet Island SPA**, Solent and Southampton SPA); Scotland (Forth Islands SPA); Wales (Ynys Feurig, Cemlyn Bay and The Skerries SPA); Northern Ireland (Larne Lough SPA); Republic of Ireland (**Rockabill SPA**, Dalkey Islands SPA). **Lady's Island Lake SPA** is also listed as a SPA covered by the project, however, apart from the knowledge exchange and networking, no direct actions were implemented within this SPA. Networking and close collaboration was also established with Bretagne Vivante – an NGO managing **Ile aux Moutons** and **La Colombiere** colonies in Brittany, France.

The main target species of the project was the roseate tern, however other species of terns also benefitted from the project, namely common tern *Sterna hirundo*, Arctic tern *Sterna paradisea* and Sandwich tern *Sterna sandvicensis*. As a matter of fact, in Western Europe roseate terns only breed in mixed colonies receiving protection against predators from more aggressive species such as common and Arctic terns. Therefore, improving conservation prospects of the associated species is a prerequisite for a potential colonisation of new sites by roseate terns. Roseate terns nest offshore on islands or along the coast on inland lagoons, but always near the sea. The species winters in the Gulf of Guinea, mainly in Ghana.

The main, site-based issues targeted by the project were: avian and mammalian predation, loss of breeding habitat, disturbance and egg collecting, competition for nesting space with large gulls, site protection and food resources. The project focused on filling the knowledge gaps required to inform better metapopulation management in the areas of demography, diet, spatial utilisation and protection of foraging areas, migration patterns and tern trapping.

At the start of the project, an increase of roseate tern population was anticipated up to at least 100 pairs on Coquet and up to 1710 in Ireland (Rockabill and Lady's Island Lake) by 2020. This was to be achieved through a step-up approach to managing habitats, predation and disturbance leading to an increased productivity during the project period at the three colonies (Objective 1). The steady increase of the roseate tern population was to eventually result in an

anticipated expansion to former and new colonies, hence a large part of the project focussed on restoring these sites to suitable condition, mostly through the strengthening populations of common terns and other associated species (Objective 2). It was impossible to warrant that this management would result in the establishment of new roseate tern colonies during the project lifetime, as the expansion was to be driven by natural demographic processes.

Other anticipated results of the project included reports on long-term management opportunities (Objective 3), and studies looking into population parameters responsible for driving the metapopulation trends, prey species ecology and tern diet, spatial utilisation of foraging areas, migration patterns and tern trapping in Ghana (Objective 4). The practical knowledge and results of the studies were to be summarised in the best practice guidance (Objective 5) and the international strategy (Objective 6).

The results of the project were thought to be highly transferable and replicable to other tern colonies in the Northern hemisphere. All offshore and coastal tern colonies face similar issues. The aim of site managers is to provide secure nesting conditions, free from competition with other species, predation and other disturbance. A suit of predator species might differ, but majority of sites contend either mammalian (fox, otter, mink) or avian predators (usually large gulls, raven, peregrine, crow or kestrel). Another important part of the project was biosecurity, i.e. prevention from rat and other invasive species incursion onto off-shore islands. Most of the tern species migrate south after the breeding season and face similar challenges during migration and on the wintering grounds, namely overexploitation of forage fish resources in productive cold water upwelling systems and tern trapping.

The project assumed some socio-economic value. Breeding colonies of seabirds, and terns in particular, are one of the wildlife highlights of the UK, and as such attract large numbers of visitors. Moreover, roseate terns are ‘special’ in this respect, due to their rarity and beauty: they are often described as one of the most elegant of all seabirds. Sustaining and restoring colonies of this species ensures that this spectacle remains available to visitors and contributes to local economies. Many of the sites participating in the project are remotely located, so it was necessary to bring people closer to the conservation issues facing seabirds, including terns.

4 Administrative part (maximum 1 page)

The partners of the project are responsible for the management of the two extant and former roseate tern colonies in the UK and Ireland, i.e. **RSPB** (Coquet Island, Ynys Feurig, the Skerries, Larne Lough, Forth Islands and Solent and Southampton), **BirdWatch Ireland – BWI** (Rockabill and Dalkey Islands) and the **North Wales Wildlife Trust – NWWT** (Cemlyn Bay). Strategic partners included the National Parks & Wildlife Service (NPWS) for Lady's Island Lake and Bretagne Vivante (French colonies in Brittany). Therefore, the best practices and exchange of knowledge covered the whole NW European metapopulation.

There have been no changes in the partnership structure during the project lifespan. The organigram was submitted with the MTR.

The Project Manager (PM) started in his role on 2 November 2015 and remained in post throughout the project lifetime. The PM was line-managed by Leigh Lock – RSPB Species Recovery Project Development Manager and the Project Executive. Progress of the project was monitored through the Steering Group, consisting of senior managers from all Beneficiaries, whereas the technical implementation and evaluation of the results were supported by the Technical Advisory Group. There was no formal Communication Group in the project.

There was one substantial change to the Grant Agreement with regards to a 3-month postponement of the end date of the project from 30 September 2020 to 31 December 2020.

Due to serious cashflow problems at BWI, the RSPB agreed to cover the cost associated with refurbishing the outside shed and servicing the diesel power generator at Rockabill. RSPB will recover part of these funds through budget transfer from BWI, which has been agreed in the Annex to the Partnership Agreement (Annex 0).

Since the submission of the MTR, the following communication has been recorded and addressed in this final report:

- MRT was received by EASME on 5 January 2018, followed by the approval of the second prefinance payment in the letter from 12 March 2018 (Ref. Ares(2018)1345820 - 12/03/2018)
- NEEMO (Karen Lunan) mission to Anglesey (Wales) on 6-8 June 2018. Comments from EASME were received on 10 July 2018 (Ref. Ares(2018)3655669 - 10/07/2018).
- Second progress report was received by EASME on 8 February 2019 followed by the letter from 11 March 2019 (Ref. Ares(2019)1604412 - 11/03/2019)
- Joint EASME (Maja Mikosinska, Sylvia Barova and David Pistulka) and NEEMO (Karen Lunan) mission on 5-7 June 2019 to Northern Ireland and Ireland, followed by the letter from 12 August 2019 (Ares(2019)5159440)
- Third progress report sent on 20 December 2019, followed by electronic communication from EASME on 15 May 2020 (Ares(2020)2577246)
- Request for amending the Grant Agreement was sent to EASME on 4 June 2020 and accepted in the Letter amendment Nr. 3 to Grant Agreement from 14 July 2020 (Ares(2020)3709761)
- NEEMO (Karen Lunan) virtual monitoring mission on 30 July 2020, followed by the letter from 26 November 2020 (Ares(2020)6980474)

5 Technical part (maximum 25 pages)

5.1 Technical progress, per Action

A.1 Review SPA objectives, SPA condition assessments, and the wider planning context

Foreseen start date: October 2015 Actual start date: January 2016
Foreseen end date: March 2017 Actual end date: March 2017

Name of the Deliverable/ Milestone	D/M	Deadline	Completion
Assessments completed for all project SPAs	M	30/09/2016	30/11/2016
Report summarising SPA objectives and assessments, and relevant spatial and coastal plans	D	31/01/2017	31/03/2017

Activities undertaken
The report and its subsequent update reviewed the progress with roseate tern site condition assessments, current and planned site designations, relevant strategic plans and offshore/ coastal developments in the vicinity of the project SPAs. The information was sought in a structured way from the internet searchers and interviews with Beneficiaries' site protection and casework teams as well as with statutory agencies.

Most of the site protection and planning issues have already been monitored by the site conservation and casework teams of the respective Beneficiaries through engagement with the statutory agencies and local authorities. However, the project provided useful supporting information, such as population trends and productivity, diet data from the Skerries and Ynys Feurig (A3) or visual tracking data at Rockabill (D1) to inform the agencies on improving site protection and management. The most prominent development threat to the project sites was Wylfa nuclear power station at Anglesey, near Cemlyn Bay, which required a closer collaboration of the project team with the local coalition of NGOs commenting on the environmental statements and selecting mitigation sites for establishing potential new colonies in the area.

Deviations and problems
There were no deviations from the original description of this action, nor major problems with its delivery impacting other actions.

Results and outputs
The methods of the assessment were described in the first PR, the report was annexed in the MTR and further update is in Annex 1.

Continuation and complementary actions
The work towards improving the site protection and casework continues as part of the core work programmes of the respective Beneficiaries. The current priorities with regards to site security and offshore planning have been described in the After-LIFE plan.

A.2 Assess long-term options for colony maintenance and establishment throughout roseate tern range in northwest Europe

Foreseen start date: October 2015 Actual start date: January 2016
Foreseen end date: March 2018 Actual end date: March 2018

Name of the Deliverable/ Milestone	D/M	Deadline	Completion
Technical reports summarising threats and opportunities for both offshore islands and dynamic soft coastlines	D	31/03/2018	31/03/2018
Summary report	D	31/03/2020	Part of After-LIFE report

Activities undertaken
The report considers potential future distribution of roseate tern and food (A3), demography – especially emigration/ immigration between colonies (A4) as well as distribution of common tern colonies as the most likely sites for future expansion. We collated data on all tern colonies in the UK. This information was used to define target areas for recolonization with management recommendations. We highlighted the importance of the Irish Sea with the priority areas for roseate tern targeted action as the east coast of the Ireland and Northern Ireland, and the area from Anglesey to Cumbria, along with the other two areas that currently support roseate terns – Northumberland and Brittany. We also identified major coastal site restoration opportunities for projects such as managed realignment and beneficial use of dredgings, as well as island restoration/ management opportunities within these areas with a particular focus on invasive, non-native species eradications and biosecurity.

Deviations and problems
Rosie Miles's contract was extended till 31/03/2018, which was acknowledged by EASME in the letter from 15 May 2017 (Ref. Ares (2017) 2460203 - 15/05/2017).

We suggested a change in format of deliverables, namely incorporating the Summary report in the After-LIFE Plan, which was acknowledged by EASME in the letter from 12 March 2018 (Ref. Ares (2018) 1345820 - 12/03/2018).

Results and outputs
The technical report incorporating the offshore and coastal long-term management opportunities is in Annex 2. Colony register database is in Annex 3.

Continuation and complementary actions
The review has already been used in long-term planning in relation to large coastal habitat restoration projects, some of them initiated as part of the Life on the Edge project (LIFE19 NAT/UK/964). The identified target areas were incorporated in the International (East Atlantic) Roseate Tern Action Plan (F3).

A.3 Collate information on prey species and develop recommendations for marine management

Foreseen start date: October 2015 Actual start date: August 2016
Foreseen end date: March 2017 Actual end date: November 2018

Name of the Deliverable/ Milestone	D/M	Deadline	Completion
Report summarising findings on sandeel and clupeid ecology and management, and recommendations for management of sea areas near roseate tern sites	D	31/01/2017	21/10/2017
Workshop held to consult experts	M	30/09/2016	30/11/2018

Activities undertaken

The results of this review enabled us to identify "prey hotspots", which were used for selecting target areas for roseate tern recolonisation (A2). Several fishery management recommendations were proposed, including a large or complete closure of sandeel fisheries. These were consequently used in the official RSPB advocacy work in relation to post-Brexit Fisheries Act (see more in C4 and Annex 23). The Anglesey Tern Diet report provided for the first time a verification of the value of over 20 years of Arctic Tern diet data from the Skerries and Ynys Feurig. As expected, there were many discrepancies in the way the data was collected, which prohibited more in-depth analyses. This led to the development of data collection recommendations for wardens.

We organised a series of dissemination seminars rather than one workshop. We utilised regional tern conservation forum meetings to convey results of the review, which had an additional benefit of having the right audience (site managers, statutory agencies) to introduce a concept of target areas and partnership working at the regional level. The seminars were delivered in the following target areas:

Target Area	Group Meeting	Date and Place	No of participants
NW England and North Wales	NW Tern Working Group	31.08.2018 CWT Plumgarths, Kendal	10
	Cemlyn Reserve Liaison Group	27.09.2018 NWWT, Bangor	9
Firth of Forth to Northumberland	Forth Seabird Group	11.09.2018 RSPB Scotland HQ, Edinburgh	8
	Coquet Committee	7.09.2018 The Old Bath House, Broomhill, Northumberland	10
	N2k Group for NE England	19.09.2018 Northumberland County Hall, Morpeth	11
South Coast	South Coast Tern Network	16.10.2018 Natural England, Eastleigh	20
North Norfolk	Little Tern LIFE Project Final Conference	8.11.2018 Norwich	Ca. 130
Irish Sea	Irish Sea Tern Conservation Network	17-18.10.2019 Bangor	Ca. 50
Brittany	No workshop planned	Part of the East Atlantic Action Plan	N/a

Deviations and problems

The delivery of the expert workshop was delayed as the International Sandeel Workshop was organised in Iceland in 2014 and there was no need for another one. Moreover, the scope and

target audience for the workshop was not clear until the literature review was completed in October 2017. As a result, we have delivered several presentations at regional tern conservation forums and networks meetings, rather than one "sandeel" workshop, where the results of this action were presented in a context of roseate tern target areas for recolonisation.

Results and outputs
Following reports were produced:

- A literature review of the lesser (Raitt's) sandeel *Ammodytes marinus* in European waters (annexed in MTR)
- Tern diet in the UK and Ireland: a review of key prey species and potential impacts of climate change ((annexed in MTR)
- Anglesey Tern Diet Report (annexed in MTR)
- Example presentation and combined agendas for all the meetings were annexed to the second PR.

The results of the diet and prey species reviews were presented within five of the six target areas during 6 workshops (68 participants) and Final Little Tern Project Conference (ca. 130 participants). An example of PowerPoint presentation and agenda are in Annex 4.

Continuation and complementary actions
As mentioned above, the sandeel and tern diet reviews contributed prominently to the long-term management planning for roseate tern in terms (A2, F3) and RSPB's policy and advocacy work in relation to developing fishery recommendations for forage fish post-Brexit (Annex 23).

A.4 Collate and analyse data from all tern colonies to inform future conservation strategy

Foreseen start date: October 2015 Actual start date: November 2016
Foreseen end date: March 2017 Actual end date: December 2018

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
Report to Project Steering Group	31/01/2017	D	05/12/2016
Scientific paper	30/09/2020	D	31/12/2018
Database of ringing/re-sighting data	31/01/2017	M	31/03/2017

Activities undertaken
The paper "Metapopulation dynamics of roseate terns: Sources, sinks and implications for conservation management decisions" by A. Seward et al. was published in Journal for Animal Ecology. The paper revealed that between 1996 and 2016 the only source population was Rockabill, Lady's Island Lake was neutral, and Coquet has acted as a "cryptic sink". This means that the growth of Coquet colony was supported by immigration from Rockabill, rather than productivity and survival of birds breeding there. However, Coquet has in the last three years become more independent colony with 66% of breeding birds in 2020 originated there. The results have a direct consequence for the metapopulation management and long-term strategy. Instead of trying to lure roseate terns to new sites, we should focus on providing the best conditions for nesting on Rockabill and Lady's Island Lake, until these birds choose to expand "naturally". It will be then very important that the potential "receptor" sites are in good condition, which was the aim of Objective 2 of this project. The availability of food, controlled

predation, save nesting space and the right species composition within the assemblage are all important factors to consider.

Deviations and problems
There were two requests for extensions of Adam Seward's contract first till 31.03.2017 and then till 30th of June 2017. However, the sheer amount of data for the period of 1996-2016 meant that it took several months to just collate and clean the data for analyses. A single model had to be run for a week using powerful computers and this process had to be repeated several times. Moreover, Dr Seward was also engaged in the analyses of GPS/ boat tracking data on Arctic terns at the Skerries, which also resulted in a published scientific paper (more in D1). Due to limited availability of RSPB's scientists, it was decided that engaging Dr Seward to develop the Arctic tern manuscript was the only way to complete the analyses. However, it resulted in a further extension of his contract till 31.03.2018. Following the submission of the demography paper, the editors sent their comments after Dr Seward's departure from the RSPB and the edition of the manuscript required additional calculations. To this end, we issued an external contract for Dr Seward for £2,000, which also included finishing of a manuscript for the Arctic tern GPS/ boat tracking from the Skerries (D1). The first two extensions were acknowledged by EASME (Ref. Ares(2018)1345820 - 12/03/2018; Ref. Ares(2019)1604412 - 11/03/2019), pending evaluation of the final budget and outcomes. Dr Seward's work resulted in two scientific papers in respectable peer-reviewed journals, which added value to the originally planned assignment.

Results and outputs
The paper "Metapopulation dynamics of roseate terns: Sources, sinks and implications for conservation management decisions" by A. Seward et al. was published in Journal for Animal Ecology and is Annex 5. The MS Access database is enclosed in Annex 5a and has been made available to the BTO. The paper "Effect of GPS tagging on behaviour and marine distribution of breeding Arctic Terns *Sterna paradisaea*" by A. Seward et al. was published in Ibis. It has been discussed under D1 and enclosed in Annex 27.

Continuation and complementary actions
The data was organised in the database (milestone), which has been passed to the British Trust for Ornithology (BTO) to continue collecting demographic data in the future. This makes sense as the ringers need to report ringed and recovered (read) birds annually to the BTO. As part of the project, we developed with the BTO a so called "one ring" which has only four easy to read letters and a website address ring.ac, which eliminates the need for putting a BTO standard ring and reduces the time and disturbance needed to ring chicks. All viable colonies in Ireland, UK and France carry out intensive chick ringing and ring reading for future demography study analyses. The analyses need to be carried out every 5-10 years to pick up any issues with survival, especially in the context of a possible collapse of sardinella stock in Ghana (more in C5 and D1).

A.5 Develop communication strategy

Foreseen start date: October 2015 — Actual start date: November 2016
Foreseen end date: March 2020 — Actual end date: March 2020

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
Communications plan (reviewed annually after this date)	31/03/2016	D	31/03/2020

Activities undertaken
The Communication Strategy was developed to provide narrative summary for the project, conservation issues and hierarchy of communication teams and channels. The strategy was circulated for comments with the Project Beneficiaries. This document was used by the national, regional and local communication teams to unify basic facts about the project, long-term roseate status, conservation issues and rules for acknowledging the LIFE Programme and Natura 20000 network.

While the Communication Strategy remained relatively unchanged throughout the project, the Communication Plan was produced annually to consider communication uplift events each year and to strengthen the project's legacy through publicity and engagement with stakeholders. The Communication Plans were developed by the PM and Chantal Macleod-Nolan (RSPB Project Assistant) and distributed to the virtual Communication Group.

Deviations and problems
The Communication Group did not meet physically, due to the large number of people involved. Chantal Macleod-Nolan worked directly with the site and communication staff to capture and capitalise on communication opportunities.

Results and outputs
The Strategy (narrative summary) was updated in 2018 to include new findings from research actions and was enclosed with MTR. Communication Plans for 2018, 2019 and 2020 are enclosed in Annex 6, Annex 6a and Annex 6b. All communication outputs are reported under E actions.

Continuation and complementary actions
The core RSPB project team (PR and PA) remain the first point of contact support communication activities with regards to tern related topics.

C.1 Enhance conservation management of existing tern colonies within SPAs designated for roseate terns in the UK

Foreseen start date: October 2015	Actual start date: November 2015
Foreseen end date: September 2020	Actual end date: December 2020

Numerous indicators have been developed and are reported below separately for each SPA.

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
Numerous C1 indicators (see below for each site)	30/09/2020	M	31/12/2020

Impacts of the project on target species is discussed in section 5.4 Analyses of Benefits.

The list of all the project staff and their roles is in Annex 7.

Cross-cutting themes

Biosecurity plans were developed for all offshore project sites i.e. Coquet Island, the Skerries, Ynys Feurig, Blue Circle and Swan Islands (Larne Lough SPA), Fidra and Inchmickery (Forth

Islands SPA). Biosecurity recommendations (simplified plans) were developed for Rockabill and Dalkey Islands in Ireland. All plans were annexed in the MTR. The biosecurity plans were complemented with the purchase of biosecurity monitoring and rapid response kits for seven sites (Ynys Feurig, the Skerries, Dalkey, Rockabill, Blue Circle Island (Larne Lough), Inchmickery (Forth Islands) and Fidra (Forth Islands). Coquet island was already equipped. Biosecurity plans were subsequently included the management plans which are reviewed annually. Biosecurity management focuses on deployment and checking monitoring stations.

Gull scarers are an important element of preventing avian (mostly large gulls) predation. They were used near tern nesting areas to prevent large gulls from settling near terraces. Gull scarers were used in a combination with other methods, such as removal of nests, Agrilasers and direct disturbance. In total, six gull scarers were produced and distributed to Coquet, Ynys Feurig, the Skerries and Cemlyn (NWWT). Two devices were also provided to BWI. The gull scarers continue to be an integral part of the predation management at the sites.

Laser hazing was trialled and widely adopted by the project sites and other tern colonies across the country during the project implementation. Laser hazing was used to deter large galls from roosting near tern nesting areas. Agrilasers were purchased for Coquet, Solent and Southampton, the Skerries and Isle of May (Forth Islands). Today, Agrilasers are part of standard equipment used at tern colonies.

Coquet Island SPA (RSPB)

Name of the Indicator Output
Predator management implement biosecurity plan in Year 1 Implement gull management annually. Implement enhanced species protection plan in Year 1 and annually thereafter. Repair quay and upgrade warden facilities in Year 1. Repair and install additional nest boxes in Years 1 and 2

Activities undertaken
A new power generator, rubber boat (RIB) and Aerolaser were purchased in 2016.

In January 2017, a rat was detected on Coquet. Due to the ready biosecurity plan and a rapid response kit, the reserve staff were able to deploy traps across the island within days. A single rat was captured, and biosecurity monitoring has been carried out and no further incursions occurred at this site.

Semi-residential otter settled on the island during 2018 season. A provisional otter fence was erected around the terrasses, and a permanent fence deployed before 2019 season. No further otter incursions have been observed since 2018. Otter incursion and the installation of the fences were not foreseen in the project; however, it was required provide primary protection of the only viable colony of roseate terns in the UK.

Seasonal warden (gull management) was employed each year, apart from 2016 when the role was performed by a PhD student working on gull predation thesis. Site Manager, Assistant Warden and Seasonal Warden (species protection) were employed each year, the latter except for 2020 due to Covid pandemic. Gull management consisted of removing gull nests around the colony and several displacement methods (laser, audio scarer, physical presence).

New, bespoke hide was built for the Seasonal Warden (species protection) to monitor the colony against egg collectors. New surveillance cameras were purchased allowing to monitor the site from the lighthouse for any unauthorised landings.

A section of the Roseate Tern nesting terrace at night and Sandwich tern ring, captured with the new CCTV

New southern terrace built in 2019

The terrace was resurfaced with shingle collected from the island foreshore and two new terraces were created able to accommodate further 100 boxes. In total, 250 nest boxes were purchased.

Vegetation in common and Arctic tern plots was strimmed annually after the season. Milder winters mean that this management needs to continue throughout winter. We installed artificial platforms in common tern nesting areas. Apart from providing a shelter, the platforms help to keep common tern chicks from roseate tern terraces and therefore reducing the competition.

The quay (jetty) was repaired, and new ladder steps made for accessing the jetty. Solar panels and water purification system were installed, which are now both fundamental for long-term management of the site.

The Coquet Manual was developed comprising all the information required for managing the reserve. The handbook consists of several folders and numerous files and can be accessed here: https://drive.google.com/open?id=1DTHpMOVBFkTEqi_X9kC3t0c4xIlegGhC.

Deviations and problems

There were no deviations nor problems from the original plan, however some additional purchases were required such as a rubber boat, Aerolaser, otter fence, water desalination unit and solar array to provide 24-hour electricity for the new surveillance and live stream cameras. More information about additional purchases and justifications are in the Financial Report. Seasonal Warden and Seasonal Warden (species protection) were budgeted to be supported by LIFE funding, but a decision was made to cover these roles by the core RSPB funding. Assistant Administrator was employed on a short-term contract to complete the Coquet Manual.

Results and outputs
Coquet Operational Manual is in Annex 8. Seasonal reports for 2018-2020 are enclosed in Annexes 8a, 8b and 8c.

Continuation and complementary actions
Coquet Island continues to be managed as a RSPB reserve with the same staff allocation as during the LIFE project. The site has become a flagship reserve for the project with the live stream cameras from roseate tern terraces and nest boxes as well as the development of virtual reality Coquet tour, which has been widely used at various events (more details under E2 and E1 respectively). Coquet has participated in numerous research projects such as demography study (A4), geolocator study (D1) and hosted a PhD project on gull predation, which has been fundamental to guide further gull management strategy.

Solent and Southampton SPA (RSPB)

Name of the Indicator Output
Set up predator exclosure at Hurst Spit in Year 1 (removed) Deployment of eight rafts in Years 2-5 (new) Increase targeted predator and gull management annually throughout

See complementary habitat creation information in C3.

Activities undertaken
We employed the Tern Warden who focused on the monitoring of terns and community engagement (more in Action D.1 – D.3 and E.5). In 2020, the warden was engaged on a contract (external assistance) due to Covid. We hired a boat to carry out the monitoring and negotiated the office space with the HCC. The vehicle was purchased, but instead of a 4x4, the local team decided to purchase a minivan. Trap cameras were deployed at common tern nests to investigate potential predation issues.

A contract has been drawn with the HIOWT for the fox control in Western part of the SPA (Key Haven – Lymington reserve), which was carried out for three years out in 2017-2019. In 2020, the fox control was continued by HIOWT on their own. The fox control proved to be successful in reducing predation on Lymington-Keyhaven reserve and saltmarshes as after three seasons of control, the empty niche was occupied by very few foxes.

Agrilaser was purchased to discourage gull predation around the colonies as well as optical equipment and a drone for monitoring. New method of monitoring was tested using a drone under a Natural England licence. The method proved to be useful in monitoring of remote colonies without unnecessary disturbance.

Deviations and problems
There have been some issues with the landowner sharing the Hurst Spit with the RSPB, who objected to any conservation activities taking place on the spit. The issue was not known at the stage of proposal development, and it has not been resolved to date. As discussed in the progress report, to compensate for this setback, we installed two artificial rafts on Butts lagoon within Lymington-Keyhaven nature reserve and four at North Solent NNR, located in the SPA

and managed by the Natural England. A few pairs of common tern attempt to nest on the rafts at North Solent NNR.

Additionally, in winter 2019, we rejuvenated (clear vegetation) islands and replaced the damaged predator fence at Normandy Lagoon a nature reserve managed by HCC. This resulted in the increase of little and common terns at the site in 2020. The outcome is more sustainable than originally planned at Hurst Spit due to lack of disturbance and issues with the sea level rise at Normandy lagoon located behind the seawall.

New fence and rejuvenated islands in 2019 at Normandy Lagoon near Lymington

Results and outputs
The annual reports for 2018-2020 are in Annexes 9, 9a and 9b. Fox control reports for 2018-2019 are in Annexes 10 and 10a. Drone monitoring trial report is in Annex 11.

Continuation and complementary actions
RSPB had not carried conservation activities in the project implementation area in Western Solent before the project started. Currently, the management (including fox control) and monitoring of the colonies is carried out by HCC and HIOWT. Over the years, a strong partnership working has been built and with local stakeholders and further support has been secured as part of the Life on the Edge project (LIFE19 NAT/UK/000964) which will provide wardening support in the area.

<u>Ynys Feurig, Cemlyn Bay and the Skerries SPA</u>

The Skerries (RSPB)

Name of the Indicator Output
Design portable water facility in Year 1, install in Year 2. Carry out biosecurity assessment in Year 1. Implement biosecurity plan in Year 2 to 5. Increase gull management annually throughout.

Activities undertaken
Biosecurity plan and monitoring kit were delivered and deployed in 2017. Biosecurity monitoring has been in place and continues.

Two seasonal wardens were employed each year, apart from 2020 due to Covid pandemic. The wardens were managed by the North Wales Wetlands Warden. Gull-free zone was maintained 150 meters around the tern colony through nest removal under licence. Agrilaser, audio gull scarer and optical equipment were purchased to aid gull management and tern monitoring.

Approximately, 450-600 next boxes and chick shelters were deployed each year in an improved spatial configuration following advice from roseate tern site managers. Six small terraces were built, together with 43 roseate tern boxes, nine decoys and a tape lure played throughout the 2016 season. Initially, no roseate terns were seen responding to it but in 2019 two pairs of roseate terns bred at the site. Mayweed management continued annually to reduce chick mortality due to chilling in prolonged bad weather conditions.

Development and installation of potable water purification system was completed in 2019.

Deviations and problems
The only issue with the Skerries work programme was a significant delay with the development and deployment of the potable water system due the need of using Trinity House infrastructure, which was agreed as part of the long-term lease agreement completed only in 2019. The two seasonal wardens were supposed to be supported by LIFE funding, but it was decided to retain these positions within the RSPB core funding. The site suffered a couple of setbacks, namely a likely occurrence of botulism, which killed 477 adults and 355 juveniles of Arctic tern in 2016 and the collapse of the colony due to peregrine predation in 2020 in the absence of wardens. The colony recovered remarkably in 2021.

Results and outputs
The water purification system design and photographs are in Annex 12. The seasonal reports for 2018-2020 are in Annexes 13, 13a and 13b.

Continuation and complementary actions
The Skerries is managed as a RSPB reserve with the same staff allocation as during the project. The site hosted a research study on GPS tracking of Arctic terns (D1).

Ynys Feurig (RSPB)

Name of the Indicator Output
Upgrade wardening facilities in Year 1. Replace caravan accommodation in Year 4. Carry out biosecurity assessment in Year 1. Implement revised predator management plan annually, following assessment of threats/impacts in previous year.

Activities undertaken
Biosecurity assessment was undertaken, and the biosecurity plan produced. The biosecurity monitoring has been carried out using the purchased equipment, and no signs of rat presence have been detected.

The new monitoring hide was installed before the 2018 breeding season using a helicopter due to difficult topography of the island and the lack of access from water. Touring and stationary caravans were purchased. Two, thermo-vision scopes were purchased as they proved vital in

detecting foxes at night. We could not use lasers at this site due to its proximity to active RAF base, but audio scarers were used to deter large gulls from roosting near the colony.

Two seasonal wardens were employed each year, apart from 2020 due to Covid, when only the basic vegetation maintenance, fox patrols and monitoring were carried out using core RSPB staff.

Crow and fox control was initiated after heavy predation in 2016 season and continued throughout the project. This reduced predation significantly resulting in a boost of breeding pairs and productivity.

Approximately, 75 nest boxes were deployed each year. The islands and/or the beach were patrolled during all low-tide periods against fox incursion. Bilingual 'No Access' signs were placed on the beach at island access points covering all day-time low tide periods, and permanent "No Landing" signs were fixed on the outer and middle islands at the beginning of the season.

Deviations and problems
There were no deviations from the original work plan. Installation of the hide needed to be carried out using a helicopter, which was not foreseen in the project. Purchase of the stationary caravan was delayed as the previous one was in good condition throughout most of the project period.

Results and outputs
The seasonal reports for 2018-2020 are in Annexes 14, 14a and 14b.

Continuation and complementary actions
Ynys Feurig is managed as a RSPB reserve with the same staff allocation as during the project.

Cemlyn Bay (NWWT)

Name of the Indicator Output
Upgrade wardening facilities in Year 1. Install new predator fencing in Year 1 and maintain throughout. Increase predator and gull management annually throughout.

Activities undertaken
The project contributed to improvement of the accommodation facilities (bathroom refurbishment) at Hen Blas organised by the National Trust (NT – the owner of the site). NT provided the refurbished accommodation to NWWT' wardens. These facilities are located a walking distance from the colony, hence the caravan and further improvements to wardening infrastructure were not required.

Two wardens and Community Engagement Officer (E5) were employed each year to facilitate access control and monitoring, apart from 2020 when a part time contractor warden was engaged (external assistance) and the remaining time the colony was attended by the NWWT staff.

Electric fencing and sonic deterrents were installed before the 2018 season around the island following devastating otter predation in 2017. No otter attacks have been recorded since, and the colony has now recovered. Audio gull scarers were provided.

A tern raft has been deployed since 2018 next to the main island to support common terns, but it was occupied only in 2021 season. Aluminium boat was purchased to access the islands. The main weir holding the water in the lagoon was inspected by structure engineers to check for any damages, but the structure was in good condition and did not require repairs.

Deviations and problems
There were no major issues with the implementation of the action. Apart from the above-mentioned accommodation facilities, several minor equipment items were not required mainly due to law avian predation at this site.

Results and outputs
Community Engagement Reports for 2018-2019 are in Annexes 15 and 15a. A note on community and visitor engagement for 2020 under Covid restrictions is in Annex 15b. The annual reserve reports for 2018-2020 are in Annexes 15c, 15d and 15e.

Continuation and complementary actions
NWWT continues management of this site with two wardens.

Larne Lough SPA (RSPB)

Name of the Indicator Output
Carry out biosecurity assessment in Year 1. Implement increased predator management annually, following this assessment. Increase habitat management annually in Years 1 to 5.

Activities undertaken
Biosecurity assessment and the plan were completed. Full biosecurity monitoring kit was deployed for early detection of a potential rat incursion.

A Tern Warden was employed each year (external contractor for 2016-2018 and staff member for 2019-2020). Apart from the biosecurity and bird monitoring, the warden carried out vegetation management towards the end of the season to create open nesting space for common terns. Approximately 20 nest boxes were deployed annually, additionally to several concrete boxes already present. Monitoring hide and enclosures were built to improve population monitoring.

Mink monitoring traps were deployed, but no evidence of this predator was recorded. However, increased otter attacks were detected in 2017, which prompted the installation of otter fence on Blue Circle Island and sonic deterrents on Swan Island, where the installation of the fence was impractical. Mammalian predation was dramatically reduced to negligible numbers on both islands. The otter fence was further improved in 2020 for durability.

New otter fence installed in 2020. The photo on the left shows restored area of the island as part of C3

New boat engine and some refurbishments of the boat and safety equipment were purchased.

Deviations and problems
We had to change the mammalian predation management as the main predator was otter rather than American mink, which required to invest in the exclusion fence rather than mink traps. Otherwise, there were no major deviations from the planned work plan.

Results and outputs
The annual reserve reports for 2018-2020 are in Annexes 16, 16a and 16b.

Continuation and complementary actions
RSPB continues management of this site as a reserve with a part-time warden, which is an improvement as there was no wardening at this site before the LIFE project. Tarmac transferred the freehold of Blue Circle Island to the RSPB.

Forth Islands SPA (RSPB)

Name of the Indicator Output
Carry out strategic assessment of island restoration options, including control/eradication of invasive non-native mammals in Year 1. Assess options for tern rafts in Year 1. Deploy and manage rafts in Years 2 to 5. Assess gull management options in Year 1. *Implement gull management in Year 2 to 5 (removed)*

Set up a working group and organise annual meetings to improve management techniques and monitoring of tern colonies in Forth Islands SPA and the source population at Leith Docks (new indicator)

Activities undertaken

Biosecurity assessments for Inchmickery and Fidra islands were completed, and the biosecurity plans developed. Biosecurity monitoring kit was purchased for both islands. Project Officer was employed to carry out the strategic assessment of management options, gull management and tern rafts. The conclusion of this report was that the scope for creating gull-free zones on Inchmickery and Fidra was limited, because of the number of nesting gulls, together with their declining conservation status and previous unsuccessful attempts to remove them. Instead, the assessment of management options report identified two sites where conservation measures could be implemented, i.e. Long Craig and Port Edgar Marina. Therefore, further conservation activities at Inchmickery and Fidra ceased, as per EASME's request.

The Tern Warden was engagement on the external assistance contract throughout the project period apart from 2016 when the position was not necessary during the ongoing assessment of management options. Apart from the seasonal monitoring (including predation watches and provisioning), the Warden was involved in the work associated with deployment of the raft, soft engineering habitat improvements at Long Craig and engagement of stakeholders in the Forth Island SPA.

The restoration of Long Craig Island was explored instead of the output indicator "Implement gull management in Year 2 and 5". We contracted civil engineering consultants – Wallace Stone to carry out the assessment of restoration options for Long Craig. The construction alone would be in a region of £150,000 plus the cost associated with the development of the planning permission and marine construction licence. It was therefore decided that the conservation gain from this work would be disproportionally low against the estimated cost. However, a series of "soft" management recommendations were implemented in collaboration with the Scottish Wildlife Trust including: the provision of chick shelters and flat surface to nest, deployment of trap cameras and improved monitoring.

We deployed a large 8x8m tern raft in Port Edgar Marina, which is located 1.5 km from Long Craig Island and therefore is practically a satellite site for this colony, providing safe refuge for birds affected by the limited nesting space on the island. Unfortunately, because of the cost of the raft (over £23,000), deployment of the four originally planned rafts was beyond our budget however, one large raft is more effective than four small ones. Currently, we have the agreement with Port Edgar Marina to keep the raft in 2025, when the further arrangement will be reviewed. Marine Scotland issued a licence for the deployment covering the same period.

Laptop for the project officer, optical equipment, audio gull scarers, nest boxes and Agrilaser (Isle of May) were purchased for the SPA.

Deviations and problems

We delivered against three of the four output indicators for Forth Islands SPA. Unfortunately, the gull management at Fidra or Inchmickery and the restoration of the Long Craig were not possible. In the absence of any other large-scale management opportunities in the SPA, we proposed a new output indicator "Set up a working group and organise annual meetings to improve management techniques and monitoring of tern colonies in Forth Islands SPA and the source population at Leith Docks". As outlined in the mid-term report, apart from biosecurity

and other strategic assessments, as well as creating a new common tern site at Port Edgar, we proposed delivery of project objectives through intensifying partnership building with the SNH on Isle of May, Lothian Ringing Group at Leith Docks, Scottish Wildlife Trust (Long Craig) and local Forth Seabird Group (FSG).

The exchange of knowledge was facilitated through the establishment of a local working group, which convened once a year on the back of the annual FSG meeting. Since the submission of mid-term report we have organised two meetings September 2018 and November 2019. As part of the "soft management", we have purchased 40 nest boxes, which were deployed on Long Craig (20) and Isle of May (20). We also provided an Agrilaser to SNH managers to be used on Isle of May. Several recommendations were proposed for Long Craig), which were implemented and included provision of shingle material between larger stones to create nesting patches, remove all lower quality chick shelters, such as car tyres and old boxes and replace them with new nest boxes and ridge tiles, remove all the debris which limit nesting space and carry out trials with gabion baskets to create space for backfilling with nesting material.

Results and outputs
Forth Islands Tern Group meeting notes are in Annex 17. The annual site reports for 2018-2020 are in Annexes 18, 18a and 18b.

Continuation and complementary actions
Management of the raft at Port Edgar was taken over by the local RSPB team. Monitoring of terns within the SPA is carried out by Forth Seabird Group in collaboration with the RSPB.

C.2 Enhance conservation management of tern colonies in SPAs designated for roseate terns in the republic of Ireland

Foreseen start date: October 2015	Actual start date: November 2015
Foreseen end date: September 2020	Actual end date: September 2020

Numerous indicators have been developed and are reported on below separately for each SPA.

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
Numerous C2 indicators	30/09/2020	M	31/12/2020

Impacts of the project on target species is discussed in section 5.4 Analyses of Benefits.

Rockabill SPA (BWI)

Name of the Indicator Output
Increase/upgrade nest boxes in Year 1 and annually thereafter. Implement biosecurity plan throughout. Increase gull management annually throughout. Upgrade wardening infrastructure in Year 1 Install new generator in Year 1

Activities undertaken
Biosecurity assessment was completed in June 2016 and recommendations developed.

In 2016, the wardening season for two wardens was extended for 2 weeks early in the season to deal with the vegetation clearance. In 2017, a third warden was employed to deal with the gull predation. In 2017, for the first time an Agrilaser was used at dawn, dusk or during favourable atmospheric conditions (mist, very overcast) for beam visibility. Routine gull scaring activities were carried out by all wardens over the course of the season, which involved using audio gull scarers and patrolling the colony at dawn and dusk, when nests are most vulnerable. Crossings to the Bill were also made by wardens who would station themselves on the Bill to deter large gulls landing.

Nearly 900 nest boxes were deployed across the island each year, including 250 purchased/ built as part of the LIFE project. Two new observation hides were purchased increasing the capacity for ring reading. Every year, terraces were cleared from tree mallow before the season.

The new long-term lease was agreed between Irish Lights and the National Parks and Wildlife Service (NPWS). Wardens gained the access to light keepers' quarters, which were larger and in much better condition. All the minor refurbishment needs to the lighthouse quarters will be carried out by the NPWS as part of the lease agreement. This generated some savings in the LIFE budget to focus on larger repairs. The diesel power generator required servicing, together with water pipes for the provision of water for toilets and showering facilities. This was carried out by the Irish Lights servicemen who knew the system. The project also invested in refurbishment of the outside shed for storage of nest boxes. Smaller backup generator was purchased early in the project implementation.

Rockabill Operation Manual was developed covering all aspects of managing the colony, from living quarters, habitat management and monitoring.

Deviations and problems
The only issue at Rockabill was a prolonged uncertainty about responsibilities for maintaining the wardening facilities, which was a subject of the lease agreement between the Irish Lights and the NPWS. Hence, the planned refurbishments were on hold for much of the project implementation period. This lease and the responsibilities for the maintenance were agreed in 2019, with the LIFE project investing in refurbishment of diesel generator, pipework and outside storage shed, while the NPWS agreed to invest in smaller repairs of the building and the zip-line between the Rock and the Bill to facilitate large gull management. As explained in the administrative part of the report, most of the refurbishment costs were covered by the RSPB due to financial issues at BWI based on the Annex to the Partnership Agreement (Annex 0).

Results and outputs
The annual site reports for 2018-2020 are in Annexes 19, 19a and 19b. Rockabill Manual is in Annex 20 and the Manual Appendices in Annex 20a.

Continuation and complementary actions
NPWS signed a new 5-year contract with BWI for the management of the site at the same level of resourcing as during the LIFE project. Rope bridge/ zip line to the Bill has been suggested as a possible strategy to help wardens access the Bill regularly to deter "loafing" gulls by increasing the time present on the Bill and this is currently in a design phase. It has been agreed that the NPWS will cover the cost of building the zip-line.

Dalkey Islands (BWI)

Name of the Indicator Output
Assess island restoration options in Year 1. Implement programme of eradication/control informed by this assessment in Years 2 to 5. Increase habitat management to encourage nesting throughout.

Activities undertaken
Biosecurity assessment was completed in June 2016 and short biosecurity plan developed. The biosecurity monitoring kit was purchased, and monitoring has been in place.

Rat control programme began in March 2018 across Dalkey and Lamb Island. Bait uptake was low across Dalkey Island and no consumption of bait was recorded on Lamb Island. It is thought that low bait uptake was due to a combination of neophobic behaviour and the coinciding of the programme with a time of greater food availability. The 2018-19 winter season was more successful. The bait uptake on Dalkey Island initially followed the expected pattern of a successful baiting programme, with sharp uptake at the beginning of the project, followed by a rapid decrease in bait take as the population fell. While bait uptake and some definite instances of rat teeth marks on monitoring blocks indicates that rats were present on Dalkey Island at the end of the baiting programme, the success of the Dalkey Island Arctic Tern sub-colony suggests that the rat population was not as high as previously thought when the programme was completed. Signs of rat were not recorded on Lamb Island after Round 11 and, based on this, and the lack of footage of rats on the trail camera, Lamb Island was considered cleared of brown rats at the end of the programme. The rat control programme continued during the winter of 2019/2020. No incidences of rat predation or scavenging were recorded during the 2019 and 2020 breeding seasons. Brown Rats were not observed on trail cameras during either breeding season. It is still unclear if Brown Rats are present on Dalkey Island, as Covid-19 restrictions came into force immediately after the bait was removed from the islands and prior to monitoring work for their presence or absence. However, given the low levels of rat activity and bait uptake toward the end of the project, and the lack of evidence of mammalian predation over the last two seasons, it is assumed that if this species is present on the islands, the population size is very small.

Each year, the Tern Warden was employed and attended the site twice a week to mark nests, assess clutch size, hatching success and productivity. The Warden carried out an intensive public engagement programme with multiple tern watching sessions (more in E5).

Nesting space and nest boxes were deployed both on Maiden Rock and Lamb. Deployment of a new batch of Roseate Tern nest boxes on Lamb Island resulting in Arctic Terns nesting near the new box terraces and many chicks sheltered in them. In 2019, for the first time, Arctic terns started to breed on the main Dalkey Island, which has been one of the aims for this site since the beginning of the project. A grid pattern of canes set at 45-degree angles at 1m x 1m intervals across a portion of Lamb Island was installed to deter gull predation.

Fencing was erected around the gull colony on Dalkey Island. This was to minimise disturbance to breeding birds and protect visitors from potential attacks, particularly from great black-backed gulls. Signs were put in place at points along the fence to inform visitors of the presence of breeding birds, the necessity of minimising disturbance and the potential safety risks of entering the colony. Fencing was also constructed around the Arctic tern nest found on Dalkey

Island and signage was put in place at this site. The site is right in front of the busy town, so we could not use Agrilasers.

Deviations and problems
There were no major problems apart from a delay with implementation of the rat control due to regulatory issues with obtaining permissions and licences.

Results and outputs
The annual site reports for 2018-2020 are in Annexes 21, 21a and 21b.

Continuation and complementary actions
The Dalkey County Council has agreed to provide further financial assistance to BWI with 10,000 EUR allocated for 2021, which should provide funds for part-time wardening.

C.3 Carry out major habitat restoration and creation works within SPAs designated for roseate terns

Foreseen start date: October 2015 Actual start date: November 2015
Foreseen end date: March 2018 Actual end date: December 2018

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
Final plans for Blue Circle, Cemlyn Bay and Lymington breakwater works	30/04/2016	D	31/01/2017 (Solent) 24/03/2017 (Cemlyn) 30/11/2017 (BCI)
Final plans for Lymington cheniers	31/08/2016	D	31/01/2017
All major works complete	30/04/2017	M	30/04/2017 (Solent) 31/03/2018 (Cemlyn) 31/12/2019 (BCI)

Restoration of Blue Circle Island (Larne Lough SPA – RSPB)

Activities undertaken
The plans for Blue Circle Island restoration are in multiple documents. Baseline reports required for obtaining the marine licence and planning permission were prepared with assistance of the principal designer – Doran Consulting. These included HRA – Screening Report, HRA – Appropriate Assessment, Ornithological Assessment all of which were attached with the MTR.

In 2018, both the ring armour and the eroded area of the island were restored. The eroded area was filled in with larger gravel first and then covered with smaller size gravel suitable for nesting. However, the post construction topographic surveys revealed that the levels defined in the contract had not been achieved. The contractor came back to the site winter 2019-20 and brought extra material, which was satisfactory. According to the contractor, the repairs should last 30-40 years, as we assumed.

Deviations and problems
The project was delayed as, initially, we planned to tie the restoration to Tarmac's own development of their disused quarry, which received the planning permission in spring 2016.

This would have eliminated the need for a mobilisation of machinery and purchasing aggregate material. However, the site was sold to another developer. Consenting and procurement of a contractor caused further delays. Lastly, the project was vastly underestimated, but it was decided to use some of the savings generated in other actions and undersign expenditure with RSPB core funding if necessary (more in the financial part).

Results and outputs
Certificates from the Principal Designers for the satisfactory completion of the reparatory works are in Annexes 22 and 22a.

Continuation and complementary actions
RSPB continues management of this site with a part-time warden, which is an improvement as there was no wardening at this site before the LIFE project. Tarmac transferred the freehold of Blue Circle Island to the RSPB.

Recharge of cheniers and breakwater habitat (Solent and Southampton SPA – RSPB)

Activities undertaken
Project officer (Matthew Brown) was employed to lead on the habitat delivery in 2016-2017. Several meetings with Natural England, Lymington Harbour Commissioner, the Hampshire and Isle of Wight Wildlife Trust, Hampshire County Council and contractors were arranged to present the plans, address concerns, and prepare consents, which were obtained from Natural England and enclosed with the MTR. Chenier recharge and breakwater bunds were completed in 2017. Peregrine falcons and later great black-back gull set up their nest in one of the bunds and thus no common terns bred there. There were no breeding terns around the recharged area either, despite our efforts to lure them.

Deviations and problems
N/a

Results and outputs
N/a

Continuation and complementary actions
The main threat for the colonies scattered along the shingle cheniers is flooding and in longer-term – the erosion of saltmarshes, which will eventually vanish. We can slow down this process by depositing dredged materials to recharge saltmarshes and the cheniers. To achieve desirable impact, this would need to be done on a large scale and without detriment to saltmarsh plant communities, which are SAC feature. This was the reason we were limited by Natural England in the extent of the recharge operation. Any recharge of cheniers carries a risk of smothering saltmarshes behind them and even if this can be carried out with precision, it is difficult to foresee how the wave action would move the material. However, it seems that developing a partnership with the local stakeholders for using dredged material to recharge saltmarshes and cheniers might be the only solution for extending the life of this habitat. These projects are very costly and beyond the scope of this project, but we are part of the Solent Forum where beneficial use of dredged materials projects is being planned. This would be beneficial for all involved as saltmarshes provide shelter for Lymington Marina.

Another, more feasible option is to create nesting habitats behind the seawall on the existing lagoons along the stretch from Lymington to Keyhaven village. Habitat improvements we carried out in 2019 at Normandy Lagoon (C1) is a good example of how it could work.

Environment Agency (EA) is planning to strengthen sea defences around Hurst Spit, which can provide mitigation funding. We monitor development of this scheme closely and will engage with the EA once the plans are on the table.

Shingle bar at Cemlyn Bay (Ynys Feurig, Cemlyn Bay and the Skerries SPA – NWWT)

Activities undertaken
The repairs to shingle bar were not feasible (see below), but we identified a more urgent need to restore the main tern island which suffered from erosion. Localised erosion has resulted in low-lying areas becoming permanently flooded. Mudflats created by this process (up to 10% of the island) were not used for nesting by Sandwich terns, creating competition for nesting space with common terns. The plans were submitted with the MTR. The restoration was delayed by one year due to issues around finding a solution for transporting shingle to the island without disturbing rare aquatic invertebrates which are SAC feature. Eventually, NWWT obtained necessary consents and this work was completed in winter 2018.

Deviations and problems
The reinforcement of the shingle bar at Cemlyn was not possible as it would require removal of the eastern public parking located on top of the bar. This would restore the natural movement of the shingle and strengthen this part of the bar in the long-term. However, the removal of the parking would increase the traffic to the western parking (nearer the colony), which could increase the disturbance. NWWT met with the Anglesey Council and learnt that the Council has no intention removing the parking by a specific date unless an event occurs, which would damage the artificial wall. It was agreed that should such an event happen a solution would be found that would ensure the future resilience of the ridge. An option to move both car parks to a location near Plas Cemlyn is available according with the NT's vision. Following EASME mission in 2019, it was agreed that the restoration of the tern island adequately compensated for the lack of shingle bar repairs. The erosion of the island caused a reduction of approx. 10% of nesting space on this already crowded island, which further contributed to pushing common terns to the edge of the island. The restoration was therefore more urgent and directly beneficial for nesting terns.

Results and outputs
N/a

Continuation and complementary actions
NWWT continues to manage the site in collaboration with the National Trust.

C.4 Liaise closely with statutory bodies to address site protection and management issues and ensure that long-term conservation plans are in place to support roseate terns

Foreseen start date: October 2015	Actual start date: November 2015
Foreseen end date: September 2020	Actual end date: December 2020

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
Final-year report	30/09/2020	D	30/12/2020
At least one meeting at national level and one for each SPA (and annually after this date)	30/09/2016	M	30/12/2017
At least one major meeting for each SPA	30/09/2020	M	30/12/2020

Activities undertaken
We engaged statutory agencies through the delivery of the project's actions. Main engagement activities included:

- SPA review as part of A1 – contact with regards of condition assessment process, especially in Ireland.
- Fact-checking as part of the development of Tern Colony Register and development of the long-term options (A2).
- Six diet seminars within target areas with participation of statutory agencies (A3).
- Publication of the Demography Paper financially supported and co-authored by NE (A4)
- Annual licencing agreements for disturbance (monitoring) and gull management (C1)
- Consents for laser use and drone monitoring trial at Solent and Southampton (C1)
- Consents for otter fencing at Cemlyn Bay and Larne Lough (C1)
- Marine Licence with Marine Scotland for the tern raft in Forth Island SPA (Port Edgar) (C1)
- Lease agreement for Rockabill between Irish Lights and NPWS (C2).
- Marine Construction Licence with DAERA and consultation on planning application for BCI restoration with NIEA as part of Blue Circle Island restoration (C3)
- Biosecurity and rodenticide course on Anglesey (E3)
- Direct exchange of knowledge/ networking and resource sharing with sites managed by statutory agencies (E3)
- Development of the International (East Atlantic) Action Plan for roseate tern.

Site managers maintained the contact with statutory agencies in relation to the implementation of the project actions requiring licences for gull control and consents for proposed habitat work as part of C1-C3.

RSPB personnel working within the Site Conservation Policy and Marine Policy units were involved in the review of SPA boundaries to include tern foraging habitats and creation of Marine Conservation Zones (MCZ), review of which was presented in A1. The diet review carried out by Dr Elizabeth Green (A3) has been used to develop detailed internal briefings on fishery impacts on sandeel and early policy formulations for post-Brexit sandeel fisheries in the UK waters. Dr Richard Caldow (Senior Marine Ornithologist at Natural England) was one of the co-authors for the demography study paper (A4) and represented NE at the Technical Group.

The project team engaged statutory agencies in several networking activities, particularly with the Scottish Natural Heritage and National Parks and Wildlife Service in RoI in relation to the management of Isle of May (Karen Varnham - biosecurity) and Lady's Island Lake, respectively. These sites are not directly included in the project but are crucial for the long-term management of roseate tern population in Western Europe. Furthermore, statutory

agencies were present at numerous regional workshops and meetings organised by the project (more information in A3, E3).

Competent authorities and agencies from France, Ireland, Portugal, and the UK were engaged in the development of the International Action Plan, which has been adopted by the European Union and will be endorsed by AEWA in autumn 2021.

Deviations and problems
The meetings and other engagement were carried out as needed rather than as part of annual meetings as per milestones, but the level of engagement was overwhelmingly deeper than originally planned.

Results and outputs
Summary report with the list of the meetings and other engagements is in Annex 23.

Continuation and complementary actions
Site managers, policy, site protection and casework officers continue engaging statutory agencies as part of a day-to-day business in relation to key tern colonies. Complementary engagement with NPWS included rat eradication at Big Saltee island. Development of the Tern Colony Register (A2) contributed to an appointment of the RSPB to undertake seabird colony audit on behalf of Natural England for the preparation of the Seabird Strategy for England. Further exchange of knowledge activities at regional level are planned as part of the post-LIFE exit strategy. Implementation of the International Action Plan will require further engagement.

C.5 Engage with stakeholders in West Africa to assess conservation need and identify priority actions

Foreseen start date: October 2015 Actual start date: November 2015
Foreseen end date: June 2017 Actual end date: June 2018

Name of the Deliverable/ Milestone	**Deadline**	**D/M**	**Completion**
Interim report on winter threats and numbers	30/06/2016	D	30/06/2017
Final report on winter threats, numbers and solutions	30/06/2017	D	30/06/2018
First field season complete	31/03/2016	M	31/03/2017
Second field season complete	31/03/2017	M	31/03/2018

Activities undertaken
The contract with the Centre for African Wetland (CAW), incorporating the scope of the work, was signed in early September 2016. The work involved monitoring of the known hotspots along the coast and engagement with the local communities to determine methods used, identify the species and number of terns caught. The survey also investigated any conditions facilitating the trapping, e.g. concurrent landings by beach seine netting of small shoaling fish that may supply fish for baiting traps. The purpose of trapping was also explored to determine if it is, e.g., recreational or has any economic value, and to whom. The field work was carried out for two winter seasons 2016 and 2017 in six main roosting sites for terns. During the second season of the study more emphasis was placed on collecting questionnaires, while continuing visual surveys.

Out of 108 days (535 hours) of survey effort, trapping was detected on 3 days and 6 occasions. Four species were trapped: common, black, Sandwich and royal terns, which are the most numerous in scavenging groups. Roseate terns were not trapped and rarely observed in roosting groups (0.6% of all birds counted). These results compared to previous similar surveys in 1991 and 2001 suggest that trapping occur less frequently. This is most likely because trapping is performed mostly by children and the higher proportion of them are now attending the school.

Deviations and problems
The interim report was delivered in January 2017 and was submitted with the MTR. The first season report from 2016 and subsequent clarifications from CAW did not offer enough information to assess the trapping issue. Only one occurrence of trapping was detected, and the RSPB was not clear if the methodological approach was adequate to the local constraints and conditions. There was no additional information offered regarding the trapping issue, so we were not sure if it simply does not happen or is difficult to detect. Furthermore, it was very difficult to carry out consultations regarding the above questions without any knowledge of the sites, local customs, project staff and testing the methods in the field. To this end, the Project Manager travelled to Accra between 24 and 29 September and visited two sites and met with CAW personnel and Ghana Wildlife Society (BirdLife partner in Ghana). The trip resulted in improving the survey methods and communication between the RSPB and CAW. The PM's trip report was enclosed to the MTR.

Results and outputs
The final report is in Annex 24.

Continuation and complementary actions
The results of the study were sent to Ghana Wildlife Society for targeted educational activities in areas where trapping was detected. Continuation of the monitoring and educational activities was also included as an action in the International Action Plan.

D.1 Monitor roseate tern populations and other key ecological variables

Foreseen start date: October 2015 Actual start date: November 2015
Foreseen end date: September 2020 Actual end date: December 2020

Name of the Deliverable/ Milestone	**Deadline**	**D/M**	**Completion**
Reports/recommendations submitted to site managers (and annually after this date)	28/02/2017	D	28/02/2017
Papers for peer-reviewed publications in draft	30/09/2020	D	30/12/2020
Summary report on monitoring findings	30/12/2020	D	30/12/2020
Summary report on ringing/tagging findings	30/12/2020	D	30/12/2020
Monitoring data to Project Manager and Senior Research Assistant (and annually after this date)	31/08/2016	M	30/09/2016
Tags and rings fitted (and annually after this date)	31/08/2016	M	31/08/2016

Analysis of site data completed (and annually after this date)	31/12/2016	M	31/11/2016

Activities undertaken
All viable populations of the roseate tern, i.e. on Coquet, Rockabill and Lady's Island Lake have been monitored for many years. The monitoring protocols differ a little from each other, but all of them attempt to estimate the number of pairs, clutch size, hatching success and productivity. Long-term programmes of ringing and ring-reading has also been carried out in each colony, which was used to estimate immigration, survival of different age groups and chick recruitment in the demography study as part of A.4. To maintain the long-term comparability of numbers and demographic parameters, no new protocols were proposed as part of this project.

There was a very limited experience of attaching GPS tags on terns. Therefore, the technology and attachment techniques needed to be tested on other, more abundant species. To this end, we initiated a pilot study involving tagging 10 Arctic terns on the Skerries in 2016. This was combined with the simultaneous visual (boat) tracking in collaboration with ECON Ecological Services Ltd (on their own initiative and financial support) to compare both methods of tern tracking. The study revealed similar results in the range assessment for both methods (GPS and visual tracking), but there was a temporal decline in chick feeding rates for GPS-tagged birds, which had to be compensated by the non-tagged partner, with potential detrimental effects on brood survival.

RSPB has been in favour of using boat tracking to obtain similar spatial utilisation results and additional behavioural data without welfare risks, especially after the Skerries results came out. To this end, we engaged ECON Ecological Consultants who have originally developed the method and are the best in the field. The boat was hired separately from the local supplier. Visual tracking of roseate terns from Rockabill was carried out in 2018.

20 geolocators were deployed on adult roseate terns on Rockabill in 2017 and 20 Coquet in 2018. Most of the devices were recovered in 2018 and 2019 seasons. Stephen Newton, Stephen Dodd, Paul Morrison and Dr Chris Redfern from Newcastle University, who had previous experience with tagging Arctic terns, took part in trapping the terns.

Deviations and problems
The GPS tagging has been postponed till 2018 as an opportunity arose to work in a collaboration with University College Cork, who were successful in obtaining research fellowship funding, however the University withdrew their participation after the lead scientist left the project. Coquet Island has never been a target area for GPS tagging as the population of just over 100 pairs is too fragile for intensive studies like this. At the same time, Joint Nature Conservation Committee (JNCC) carried out a visual tracking study around Coquet in 2009-11[1] and there was no need to repeat it. Therefore, the visual tracking study was carried out only around Rockabill. GPS/ visual tracking studies do not need to be repeated more than once for a particular colony. It is a one-off snapshot of the spatial utilisation around the breeding colony (range and direction of feeding), with additional benefits of gathering behavioural data during

[1] Wilson L. J., Black J., Brewer, M. J., Potts, J. M., Kuepfer, A., Win I., Kober K., Bingham C., Mavor R. & Webb A. 2014. Quantifying usage of the marine environment by terns Sterna sp. around their breeding colony SPAs. JNCC Report No. 500

foraging. Therefore, only one year of tracking study was planned and executed around Rockabill.

Results and outputs
Information about the impact of the project on roseate tern and associated tern species are in section 5.4 *Analyses of benefits*. The summary reports for 2017-18 breeding seasons combined with the management recommendations are in Annex 25 and 25a. Due to Covid-19, the results of 2019 and 2020 seasons were combined in the Summary Report on Monitoring and Ringing Findings in Annex 26. Three papers were published as part of this action:

- **The Arctic tern GPS/ boat tracking on the Skerries**. The study showed similar spatial utilisation of terns tracked by both methods, but the provisioning rates of GPS tagged individuals dropped and needed to be compensated by an untagged partner. The study was published in Ibis (Annex 27).
- **The visual tracking study on roseate terns from Rockabill**. The study confirmed that multispecies foraging aggregations initiated by auks were driving prey to surface attracting a range of species. Roseates sample aggregations but appear to have low foraging success and leave quickly when gulls and gannets join aggregations. Birds were foraging at mean distance of 8.5 km from the colony, but maximum distance of almost 30 km was recorded. The British Bird paper is in Annex 28 and the report in Annex 29.
- **The geolocator study of roseate terns from Rockabill and Coquet**. The results show expected pattern of migration and wintering grounds in Ghana, but also in Sierra Leone and Guinea-Bissau. Staging stop overs were recorded off the coast of Banc D'Arguin and off Western Sahara/ Mauritania. The paper was published in Ibis (Annex 30).

Continuation and complementary actions
Standard monitoring and ringing continue at all roseate tern colonies and RSPB/ NWWT reserves. Monitoring at Solent and Southampton SPA and Forth Islands SPA continue with a support of local partners, namely HCC and Forth Seabird Group, respectively. The Summary Report on Monitoring and Ringing Findings lists the further research and monitoring priorities (Annex 26).

D.2 Assess impacts on public awareness and attitudes

Foreseen start date: April 2016 — Actual start date: April 2016
Foreseen end date: September 2020 — Actual end date: December 2020

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
Summary report on impacts on awareness and attitudes	30/09/2020	D	30/09/2020
First batch of questionnaires ('before') completed	30/09/2016	M	30/09/2017
Second batch of questionnaires ('after') completed	30/06/2019	M	30/06/2019

Activities undertaken
A questionnaire was developed for the collection of data during May-September 2016. The data were collected by Tern Wardens. The study was based on two series of interviews with members of the public visiting local areas, conducted at the beginning of the project in 2016-17 (281 responses) and towards its end in 2019-20 (228 responses). Fieldwork for this research

mainly took place between the beginning of July and the end of August 2019 although a few additional interviews were also undertaken at Cemlyn and Coquet during the summer of 2020.

Deviations and problems
We originally planned to collect information on five SPAs: Ynys Feurig, Cemlyn Bay & the Skerries; Coquet Island, Rockabill, Dalkey Islands and Solent and Southampton Water. However, the sites included in the scope of the research had been selected based on the accessibility, where the public could experience the tern assemblage and therefore express their knowledge and opinions. On that basis, some of the very remote project sites have been excluded from the study, i.e. Rockabill, Forth Islands and the Skerries. Ynys Feurig is not publicly promoted by the RSPB to reduce disturbance and therefore was also excluded from the study. Face to face interviews were undertaken with visitors at Dalkey Islands, Cemlyn Bay and Western Solent, while at Coquet Island and Larne Lough, questionnaires were collected from those attending community sessions and schoolteachers/ parents respectively.

Each of the five sites covered in this project appear to appeal to a mix of local and non-local visitors who are attracted to the site mainly for wildlife watching and to a lesser extent, just taking a walk or enjoying the fresh air. Among local and repeat visitors in particular, awareness that terns were using the sites appeared to have increased over the period covered by the two surveys. This increased awareness, not just among local and repeat visitors, appears to have been at least partly attributable to the provision of a mix of communications. Those provided local to the individual sites include, talks/meetings, signage, and an on-site warden presence. Overall, the surveys have indicated that a high level of visitor support throughout the duration of the project has been sustained and with an increased recognition of the supportive role performed by EU LIFE.

Results and outputs
Summary report on impacts on awareness and attitudes is enclosed in Annex 31.

Continuation and complementary actions
While public engagement continues at the selected study sites, no formal awareness and attitude studies are planned in the short-term.

D.3 Monitor socio-economic impacts

Foreseen start date: April 2016 — Actual start date: April 2016
Foreseen end date: September 2020 — Actual end date: December 2020

Name of the Deliverable/ Milestone	**Deadline**	**D/M**	**Completion**
Write-up on socio-economic impacts as part of Final Report	30/12/2020	D	30/12/2020
Assessment of current and expected impacts on SMEs	30/09/2019	M	30/09/2019
Monitoring of project jobs and visitor numbers (throughout project)	30/09/2020	M	30/09/2020

Activities undertaken
The project directly created 13 new jobs for 14 people (13 FTE) for the total duration of 309 months (on average for 25.75 months per person).

The project has also directly contributed to the local economy through the external assistance and infrastructure contracts for the total of 903,403 EUR.

The number of visitors were collected for the publicly open reserves: i.e. Cemlyn Bay, Solent and Southampton, Dalkey Island and Coquet Island (via Puffin Cruises). Remaining sites are not open to the public.

Solent and Southampton SPA – visitor data was recorded at Lymington seawall between January 2019 and December 2020 with an average number of 8712 visitors per month. The average number of summer visitors (May-August) in the two years analyses was 41826 visitors. The route along to seawall from Lymington to Keyhaven leads through Normandy Lagoon and overlooks saltmarshes, where the project was implemented.

Coquet Island – the site is closed to visitor, but we have managed to obtain data for the number of people who joined Puffin Cruises – a commercial boat trip provider from Amble. On average, 3455 people used the boat trip annually to experience the island from proximity during the project period.

Dalkey Islands are also a popular destination amongst visitors. Dalkey County Council provided us with a draft visitor management plan 2020-2025. Visitor usage of the Dalkey Islands is primarily in the summer period between May and September. The numbers are very weather-dependent with few people landing in wet or windy weather. In 2019 a peak daily number of 273 visitors was estimated to occur on Saturday 27th July when the weather was fine and settled. Average numbers on other weekends were less than half of this peak. This does not include the occupants of kayaks and other boats that land on the beaches which may reach 40 people per day at peak numbers.

Cemlyn Bay was visited by an average of 3409 visitors per year in the period 2016-2019.

2016	3064
2017	2836
2018	3079
2019	4660

Deviations and problems
N/a

Results and outputs
The project contributed directly to the local employment and contract work, but it is impossible to estimate the economic value of the visitors coming to the project areas. Certainly, natural areas are one of the most important factors people are drawn to, however it is much more difficult to estimate their motivations beyond this general statement. The results of the social attitude study carried out as part of D2 suggest that the most popular reason for visiting the sites in 2019 remained unchanged from 2016. Of those visiting in 2016 about half (50%) claimed that wildlife watching was the main reason for visiting the site - increasing to almost

two thirds (62%) of all informants in 2019. Of those stating that wildlife watching was one of their primary reasons to visit, 27% were day trippers and 16% came for longer holiday.

We can then take the average number of summer visitors at the four sites where data exists and apply the proportions of the day and holiday wildlife watching visitors from the Attitude Study (D2). We can then make some assumptions about the duration of a holiday stay and an average cost of the stay per day.

Using this arbitrary calculation, we can deduct that 17529 day visitors who are interested in wildlife watching, would spend on average £30/ person in the local area giving the total of £525,888 per year. The 16% of the summer visitors staying with their family on a 7-day holiday would spend on average £1,260 per holiday stay, giving a total of £15,109,457 per year. In total, for the whole project period, the estimated value of visitors interested in wildlife watching at the four project sites is £78,178,625.

These estimations are in the table below:

D2 Report statistics	**Live local**	**Day visitors**	**Holiday visitors**
No of people questioned	130	61	37
% of total (n=228)	**57%**	**27%**	**16%**
Site statistics			
Site	**Mean no of summer visitors/ year (May-Aug)**	**Day visitors**	**Holiday visitors**
Solent	41826	11190	6788
Coquet	3455	3455*	3455*
Dalkey	7371	1972	1196
Cemlyn	3409	912	553
Total	**56061**	**17529**	**11992**
Average cost of stay			
Mean no of days/ stay		1	7
Accommodation cost/ day		£0	£90
Food cost/ day		£20	£60**
Extras/ day		£10	£30**
Total		**£ 30**	**£1,260**
Estimated value of wildlife visitors		**£525,882**	**£15,109,457**

* Assumption – all Coquet cruise visitors are interested in wildlife watching
** Assumption – the cost per family

Continuation and complementary actions
N/a

D.4 Monitor ecosystem-level impacts

Foreseen start date: October 2015 Actual start date: November 2015
Foreseen end date: September 2020 Actual end date: December 2020

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
[All deliverables covered under D1]	30/09/2020	D	30/12/2020
Monitoring data from all sites submitted to Project Manager (and annually after this date)	31/08/2016	M	31/08/2016
Analysis of site data completed (and annually after this date)	31/12/2016	M	31/12/2016
Recommendations returned to site managers (and annually after this date)	28/02/2017	M	28/02/2017

Activities undertaken
In the project, ecosystem-level impacts were defined as those acting on the associated tern species (Sandwich, common and Arctic terns) and black-headed gulls which are often part of tern assemblages. The performance of the whole assemblage is important for roseate terns as they need more aggressive tern species to protect them from predators. Common terns are particularly important at former and potential new sites in the context of future recolonisation. Therefore, all the associated species were monitored annually at all the project sites.

Deviations and problems
N/a

Results and outputs
Information about the impact of the project on associated tern species are in section 5.4 *Analyses of benefits*. All deliverables are under D1.

Continuation and complementary actions
Standard monitoring continues at all project sites.

E.1 Produce interpretation signs and materials

Foreseen start date: October 2015 Actual start date: November 2015
Foreseen end date: March 2020 Actual end date: March 2020

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
Leaflets (deadline is for year 1 - reprinted by 31 March in all subsequent years)	31/05/2016	D	31/03/2020
Infographics	30/09/2016	D	30/06/2020
Postcards	30/09/2016	D	31/10/2016
Roller banners	30/09/2016	D	31/10/2016

Site-specific signage (deadline is for year 1 - replaced annually thereafter)	31/03/2016	M	31/03/2019
Main noticeboards	31/05/2016	M	31/06/2019

Activities undertaken

We produced the project **leaflet** (English and Welsh), and site-specific leaflets for Coquet, Solent, Cemlyn, Larne Lough and Dalkey Islands. Four online, interactive **infographics** were produced: Tern Diet, Cemlyn Bay, Coquet and Dalkey Islands. The migration infographic was produced by an artist and printed in a format of A1 poster. The **site-specific signs** were produced for Cemlyn, Coquet, the Skerries, Dalkey and Solent. **Interpretation boards** were produced for all sites apart from Rockabill and Ynys Feurig. Three types of **roller banners**, five types of **postcards**, project **t-shirts** and **pin-badges** were produced. An artist was commissioned to prepare six drawings of roseate terns to be used to produce these materials. In collaboration with the Coquet team, Credence Brewing Northumberland produced **Roseate Tern beer**. Together with Edinburgh Napier University, we have developed **a virtual reality (VR) experience for Coquet Island**, which allowed hundreds of people to virtually visit the island and experience seabird spectacle in 360-degree aspect. The VR experience was used at numerous talks and events, including Bird Fair, Scottish Parliament, RSPB members weekend, major visitor centre in Bempton RSPB reserve and other locations. In total, over 1600 people tried the VR experience. Coquet island is a sanctuary, and no physical access is allowed. It is one of the first VR experiences used in nature conservation and a very innovative and effective way of bringing people closer to experience a seabird colony.

Deviations and problems

The production of leaflets and site-specific signage was driven by targeted conservation and/ or awareness raising requirements for individual sites. Not all the sites required leaflets or site-specific signage to achieve the project objectives. We produced interpretation boards following the completion of the works at each site rather than all of them in the first year of the project as per the milestone deadline, which caused a formal delay. The number of 15 notice boards originally planned in the proposal was clearly put in error as there were only nine sites participating in the project and there was no need for more than one interpretation board per site, excluding Rockabill and Ynys Feurig, where placing the boards was not possible.

Results and outputs

The full list of produced materials is the table below. Interpretation boards and leaflets are available on the project's website: http://roseatetern.org/promo-materials.html

Site	**Type of material**	**Annex**
Cemlyn	Interpretation board and sign signage	Annex 32
Cemlyn	Site leaflet	Annex 33
Cemlyn	Site Infographics - online	http://roseatetern.org/cemlyninfographic/
The Skerries	Site signage	Annex 34
The Skerries	Interpretation board	Annex 35
Ynys Feurig	N/a	No public/ secure site (no publicity)
Solent	Site signage	Annex 36
Solent	Interpretation board	Annex 37
Solent	Site leaflet	Annex 38
Coquet	Interpretation board and sign signage	Annex 39
Coquet	Leaflet	Annex 40
Coquet	Coquet Infographic - online	http://roseatetern.org/coquetinfographics/

Coquet	Coquet VR Experience	https://www.youtube.com/watch?v=wHMG4uRrP04
Forth Islands	Interpretation board	Annex 41
Larne Lough	Interpretation board	Annex 42
Larne Lough	Leaflet	Annex 43
Rockabill	N/a	Remote site, no space for display
Dalkey Islands	Site signage – 2 boards	Annex 44
Dalkey Islands	Interpretation board	Annex 45
Dalkey Islands	Leaflet	Annex 46
Dalkey Islands	Site Infographic - onine	http://roseatetern.org/dalkeyinfographic/
Overarching	Project leaflet (EN, Welsh)	Annex 47 and 47a
Overarching	Diet Infographic	http://roseatetern.org/dietinfographic/
Overarching	Migration infographic	Annex 48
Overarching	T-shirt – 150	Annex 49
Overarching	Project Pin-badge	Submitted before MRT
Overarching	Project postcards	Submitted before MRT
Overarching	Roller-banners	Submitted before MRT

Continuation and complementary actions
Interpretation boards will be maintained by respective beneficiaries.

E.2 Create and maintain project web-pages

Foreseen start date: October 2015 Actual start date: November 2015
Foreseen end date: September 2020 Actual end date: December 2020

Name of the Deliverable/ Milestone	**Deadline**	**D/M**	**Completion**
Web-pages online	31/03/2016	M	31/01/2016

Activities undertaken
There have been 11876 visits (sessions) from 7720 individual visitors to the website (http://roseatetern.org) since January 2016 to December 2020. The website has gained a lot of intrinsic value with numerous resources including all the project reports and best practice guidance. The project also enabled the establishment of a remote broadband link between Coquet Island and the mainland, which supported live stream from the roseate tern colony from two cameras. The live stream is available in the breeding season from: www.rspb.org.uk/coquetlive.

We have also maintained a Facebook page (http://facebook.com/Roseate-Tern-LIFE-Recovery-Project-1047539198669761/) and Twitter account (https://twitter.com/RoseateTernLIFE), with 512 and 346 followers respectively.

Deviations and problems
N/a

Results and outputs
Google Analytics and Coquet Live cameras statistics for 2018 are in Annex 50 and for 2019-2020 in Annex 50a.

Continuation and complementary actions

The website and social media accounts will be maintained for further five years, when the resources will be transferred to the RSPB core website. Coquet LIVE stream gains popularity and we are not looking into a citizen science project to determine roseate tern diet from observations submitted by the public.

E.3 Carry out networking with other projects

Foreseen start date: October 2015 Actual start date: November 2015
Foreseen end date: September 2020 Actual end date: September 2020

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
Visit to France by this date	30/09/2016	M	30/09/2017
Visit to RoI by this date (and annually thereafter)	30/09/2016	M	30/09/2016
Visit to the Netherlands by this date	30/09/2017	M	30/07/2016
Visit to the Azores by this date	30/09/2018	M	30/09/2018

Activities undertaken
In 2016, the Roseate Tern and Little Tern LIFE project teams visited the Netherlands to scope for innovative habitat creation solutions.

There were several exchange visits within the project. Site managers of Rockabill and Coquet visited Anglesey colonies on 18-19 of April 2016. The Scottish team visited Coquet on 20 of June 2016 and the project teams from Coquet, Wales and Northern Ireland visited Rockabill on 8 of July 2016. Site and project managers also visited Isle of May on 21 of June 2016 and Lady's Island Lake on 7 of July 2016. On 5-6 July 2018, a networking visit to Coquet was organised for the teams from Anglesey (Chris Wynne, Frances Cattanah – Cemlyn NWWT, Ian Sims, Ben Dymond – the Skerries and Alex Cropper – Ynys Feurig). Matthew Tickner – Larne Lough had to resign because his flight was cancelled. On separate occasions, Paul Morrison and Ibrahim Alfarwi visited Rockabill to help with retrieving geolocators and Stephen Newton (BWI) visited Coquet to learn about solar and desalination unit.

The first international networking visit to the Netherlands was combined with the Little Tern Project (LIFE12 NAT/UK/000869) and took place 12-15 April 2016. The main aims of the study trip were to exchange information on tern management and conservation with partner organisations in the Netherlands. The trip involved 7 site visits and a meeting with Vogel Bescherming Nederland (VBN) to discuss the conservation strategy for terns in the Netherlands. The delegation consisted of Leigh Lock, Chantal Macleod-Nolan, Rosie Miles and Susan Rendell-Read (Little Tern Project).

Two networking visits were organised between roseate tern colony managers from Brittany (FR), the UK and Ireland in 2017. The visit of French managers from Bretagne Vivante – Benjamin Callard and Yann Jacob to Northumberland took place 3-5 July 2017. The visit of the UK and Irish managers to Brittany took place between 25-28 July 2017. The UK and Irish delegation comprised of the following managers: Daniel Piec (RSPB), Leigh Lock (RSPB), Paul Morrison (RSPB), Stephen Newton (BWI), Tony Murray (NPWS), Chantal Macleod-Nolan (RSPB), Matthew Brown (RSPB), Charlotte Belcher (RSPB).

The project team (Paul Morrison, Stephen Newton, Tony Murrey, Chantal Macleod-Noland and Daniel Piec) visited Azores between the 17th and 23rd of June 2018. Throughout the networking trip to the Azores, the Roseate Tern LIFE Project staff were accompanied by Vanda Carmo and Beatriz Rosa. Vanda's role is Técnica Superior at the Regional Directorate for Sea Affairs in Faial. The team visited and met mangers of colonies on Terceira, Flores and Graciosa. We have also met with managers of LIFE project for Azores Bullfinch at Sao Miguel (LIFE12 NAT/PT/000527).

As part of this action, we have organised a few workshops and webinars. First, the predator workshop in Anglesey, which took place on 22-23 November 2018 and was attended by almost 40 tern colony managers, statutory agencies, researchers and conservationists from the western part of the UK and Ireland. A summary report from the workshop.

On 9-10 May 2018, Karen Varnham (RSPB Island Restoration Manager) organised a rodent incursion response and LANTRA rodenticide workshop for the project and external managers. The workshop, which took place in NRW offices in Bangor, offered information on rapid responses, control and monitoring for rats and finished with formal qualifications from LANTRA for handling rodenticide. This increased our ability to respond to incursions in the future.

We organised the Irish Sea Tern Network for managers, researchers and policy officers from around the Irish Sea in Bangor 17-18 October 2019 with more than 50 people attending from England, Wales, Northern Ireland, Ireland and Isle of Man. The last workshop before Covid pandemic was organised in Norfolk 10-11 March 2020 attended by 32 people to share knowledge of tern and beach nesting bird management along the Norfolk coast.

During Covid pandemic we organised the North Atlantic Roseate Tern Webinar on 24-25 February 2020 on Zoom with participants from Europe, United States, Canada, South Africa and other countries.

Chantal Macleod-Nolan attended 14th International Seabird Group Conference in Liverpool, where we presented a poster. PM presented a project update at the US/ Canada Roseate Tern Conference on 27 November 2018 and on the 5th World Seabird Twitter Conference 9-11 April 2019, which was organised by British Ornithologists' Union (BOU). Chantal Macleod-Nolan gave a virtual presentation during the BirdFair (18-23 August 2020).

Chantal Macleod-Nolan produced annually the International Roseate Tern Newsletters for 2016-2020, which incorporates breeding season results from probably all the roseate tern colonies in the Northern Hemisphere.

Deviations and problems
N/a

Results and outputs
Reports from the Netherland and France trips and the predator workshop were submitted with the MTR. Report from the networking visit to the Azores is in Annex 51. Report from biosecurity training is in Annex 52.
Agendas and short reports for workshops and webinars are annexed as follows:

- The Irish Sea Network (Annex 53)
- Norfolk Beach Nesting Bird Workshops (Annex 54)

- North Atlantic Roseate Tern Webinar Agenda (Annex 55) and recordings (Annex 55a and 55b)
- Roseate Tern Newsletters for 2017-2020 (Annex 56, 56a, 56b and 56c)

Continuation and complementary actions
The project has strengthened collaboration and exchange of knowledge between sites managers both at the regional and national levels. It remains a RSPB's ambition to maintain this momentum through the currently being developed Tern Programme.

E.4 Produce layman's and other reports
This action hasn't started yet

Foreseen start date: January 2020 Actual start date: January 2020
Foreseen end date: September 2020 Actual end date: December 2020

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
Draft technical report	30/06/2020	D	30/06/2020
Final technical report	31/12/2020	D	31/12/2020
Consultation drafts of peer-reviewed papers	30/09/2020	D	30/09/2020
Layman's report	31/12/2020	D	31/12/2020

Activities undertaken
The technical report on species recovery management was developed in a form of the comprehensive best practice guidance on tern colony management and monitoring. It is currently, the most comprehensive and up to date set of guidance available. We have employed a dedicated project officer (Michael Babcock) from January to April 2019 to lead on the development of the guidance.

The target for two peer-revied papers was exceed twofold, i.e. in terms of the number of papers and their completion, as four peer reviewed papers were fully published. These papers were discussed under A4 and D1.

Reports on sandeel ecology and tern diet, developed as part of A3, provide the most comprehensive and up to date review for assessing the situation with food resources and formed the basis for selecting target areas for roseate tern colonisation.

All of the above was summarised in the International (East Atlantic) Roseate Tern Action Plan 2021-2030.

The Layman's report was produced, and 100 copies printed.

Deviations and problems
N/a

Results and outputs
Layman's report is in Annex 57. Research papers are referred to in A4 and D1. Sandeel and tern diet reviews are referred to in A3. International (East Atlantic) Roseate Tern Action Plan is referred to in F3. The best practice guidance is too large for the Annex, but it is available on the project's website: http://roseatetern.org/guidance.html

Continuation and complementary actions
N/a

E.5 Hold public meetings at each site (amended)

Foreseen start date: January 2016 — Actual start date: January 2017
Foreseen end date: September 2020 — Actual end date: December 2020

Please note, this action was amended as there were no "conflict sites" and hence two batches of public meeting were not required (see below for more info). The proposed and accepted new outcomes below are listed below:

Name of the Deliverable/ Milestone	**Deadline**	**D/M**	**Foreseen Completion**
Project staff participating in minimum 40 events/ talks per year to promote the project	31/08/2020	M	31/12/2020
Education programme designed for Larne Lough and schools invited to participate	30/11/2017	D	30/11/2017
Primary School Homework Activity Booklet (Larne Lough) designed and printed	31/01/2018	M	31/01/2018
12 Primary Schools visited around Larne Lough (2 outreach visits per school)	31/05/2018	M	31/05/2018
12 Primary Schools presented with individual certificates of participation and 'Memory Map' poster of the project	30/06/2018	M	30/06/2018

Activities undertaken
During the project, we organised or participated in 327 events, tern watches, talks, guided tours, etc., namely:

Type of event	**No of events**
Tern Watch	104
Guided Walk	79
Talk	59
Display Stall	26
VR display	24
Public Outreach Event	19
School Visits	9
Tern Watch	4
Boat trips	2
Poster Presentation	1

The disproportional high number of events for Dalkey, Solent and Cemlyn comes from a better accessibility of these sites and dedicated public engagement staff employed for these sites. Coquet staff was exceptionally active in giving talks, including using VR Coquet experience:

Site	**No of events**
Solent and Southampton	91
Dalkey Islands	86

Coquet Island	62
Cemlyn Bay	53
RSPB HQ	15
The Skerries	8
Forth Islands	8
Larne Lough	4

We have proposed and the Commission accepted carrying out educational activities around Larne Lough, where there were very limited opportunities for the public engagement otherwise. In 2018, the educational programme around Larne Lough was completed successfully in 12 schools with 395 P5-P7 children. The education programme raised awareness of the value of Larne Lough to migratory and resident seabirds. The Treasures of Larne Lough 'homework activity booklet' was developed. The activities cover a range of topics which link to the Northern Ireland Curriculum such as marine seabirds: ID, what they eat, how they nest, migration, marine issues, climate change and protected areas. RSPB's Jo Mulholland appeared on BBC Radio Ulster programme Your Place and Mine with Robyn Agnew, a Primary 7 pupil, to talk about the project on Saturday, 23 June 2018. The schools' programme was also covered by the Larne Time and The Irish News.

Deviations and problems
The action, as it was constructed, assumed that some controversial management will need to be delivered, especially in relation to gull culling. This was deemed necessary based on previous negative public reactions to such management. However, we did not have sites where such controversial measures were necessary as mass culling of gulls is not appropriate given their own declining trends. Therefore, organising these public meetings was not required and we proposed a new set of indicators around positive public engagement and educational programme with schools around Larne Lough. This was accepted by the Commission as a similar and more forthcoming approach, which did not require changing the Grant Agreement.

Results and outputs
The full list of events is in Annex 58. The full school programme report is Annex 59. Teacher notes are in Annex 60. Associated materials are in Annex 61.

Continuation and complementary actions
Public engagement at the site level will continue at various level of intensity depending on the conservation priorities.

E.6 Carry out media work

Foreseen start date: October 2016 Actual start date: November 2016
Foreseen end date: September 2020 Actual end date: December 2020

Name of the Deliverable/ Milestone	**Deadline**	**D/M**	**Completion**
One national media feature by this date (and annually thereafter)	30/09/2016	D	30/09/2016
Three local media features by this date (and annually thereafter)	30/09/2016	D	30/09/2016

Two press releases by this date (and annually thereafter)	30/09/2016	D	30/09/2016
Article in RSPB 'Nature's Home' magazine	30/09/2020	D	30/11/2018

Activities undertaken
In total, during the project 269 media features were recorded in the following formats:

Type of media feature	**No of media features**
Magazine article	73
Blog	84
Media feature	70
Newsletter	13
Podcast	1
Radio	11
TV	7
Video	10

We have issued 19 press releases resulting in 43 media features. We could not guarantee that media outlets always referred to the LIFE Programme. However, all the media features listed resulted from the communication efforts of the project team. National media picked up an excellent news of the first successful roseate tern pair on the Skerries. We invited a BBC journalist to the island, and this yielded 11 media features, including national: telegraph.co.uk, bbc.co.uk as well as radio and TV features. Another news picked up by national media was the record-breaking number of breeding roseates on Coquet, which included independent.co.uk and Countryfile magazine. Other national media outlets included: Irish Times, Irish Examiner, The Guardian and a number of magazines, such as: Irish Birds, Sunday Times Magazine, Birdwatching Magazine and others.

The breakdown of media features per region is in the table below:

Site	**No of media features**
Coquet Island	44
Forth Islands	16
France	1
Ireland	58
Larne Lough	19
RSPB HQ	60
RSPB Wales	22
Solent	23
Cemlyn Bay	25

The full 3-page feature in RSPB Nature’s Home Magazine was printed in 2018.

Deviations and problems
N/a

Results and outputs

The full list of media features is in Annex 62. The RSPB Nature's Home Magazine article is in Annex 63. Media cuttings for 2019 and 2020 are in Annexes 64 and 64a.

Continuation and complementary actions
Project partners continue to promote the sites through different communication channels.

E.7 Hold end-of-project conference

Foreseen start date: January 2020 Actual start date: July 2019
Foreseen end date: September 2020 Actual end date: September 2020

Name of the Deliverable/ Milestone	**Deadline**	**D/M**	**Completion**
Conference proceedings	30/09/2020	D	30/09/2020
Conference delegate pack (programme etc)	30/06/2020	D	30/06/2020
Conference held by this date	30/06/2020	M	30/09/2020

Activities undertaken
The conference was initially planned in a partnership with the Natural History Society of Northumberland at Newcastle University. The venue, catering and hotel rooms were provisionally booked for 80-100 people. However, due to Covid pandemic, it was decided that the conference would take place online using Zoom with the assistance of RSPB events team. Due to the change of format, we did not need to produce conference delegate packs and all the communication was electronic.

The conference called "The Roseate Tern Momentum Webinar" was organised over two days on the 10-11 September 2020 and covered all aspects of the LIFE project ranging from practical management, research, policy to strategic planning for creating a network of well-functioning colonies. 117 people attended the webinar over the two days out of 172 registered from 15 countries.

The proceedings were not produced, but the whole webinar has been recorded and is available here: http://roseatetern.org/momentum-webinar.html.

Deviations and problems
Apart from the issue with the pandemic, there were no other problems.

Results and outputs
The programme and attendees report are in Annexes 65 and 65a.

Continuation and complementary actions
N/a

F.1 Manage project effectively and efficiently

Foreseen start date: October 2016 Actual start date: November 2016

Foreseen end date: September 2020 Actual end date: December 2020

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
Minutes from Project Steering Group meeting (and every six months after this date)	31/12/2015	D	31/12/2015
Minutes from Communication Group meeting (and annually after this date - estimated)	30/09/2016	D	ongoing
Minutes from Technical Group meeting (and annually after this date - estimated)	30/09/2016	D	30/09/2016
Steering Group meeting held (and every six months after this date)	31/12/2015	M	31/12/2015
Communication Group meeting held (and annually after this date - estimated)	30/09/2016	M	ongoing
Technical Group meeting held (and annually after this date - estimated)	30/09/2016	M	30/09/2016

Activities undertaken
The PM – Daniel Piec stayed in the post throughout of the whole project duration and was line managed by the RSPB Species Recovery Project Development Manager – Leigh Lock, who was also the Project Executive. The PM reported to the Project Executive monthly, and internally to the relevant governance group of senior managers through quarterly highlight reports. Furthermore, the project was advised by the three groups:

Executive Group
Consisting of senior RSPB officers to manage major risks and changes, which did not require a strategic overview of other partners. The only serious matter which the Group dealt with was the restoration of the Blue Circle Island, which was vastly underestimated, hence only one meeting took place on 16/05/20217.

Steering Group
Consisting of the representatives of all Beneficiaries. The role of the Steering Group was to oversee the overall implementation of the project and make decisions on major changes requiring amendments to the grant agreement. In practice, this could happen in a few situations. Meetings took place on 5/05/2016, 16/05/2017, 15/11/2017, 21/05/2018, 15/11/2018, 19/07/2019, 31/10/2019, 24/04/2020 and 2/12/2020.

Technical Group
Consisting of experts and site managers involved in the implementation of the project actions from each SPA. The purpose of the Technical Group was to advice the project on ecology of the target species, practical delivery of conservation actions, monitoring and research. Meetings took place on: 15/03/2016, 17/10/2017, 27/11/2018, 15/11/2019 and 18/01/2020.

Deviations and problems
There was no Communication Group in this project as explained in A1.

Results and outputs
Minutes of the 2018 Steering Group meetings is in Annex 66 and for 2019 and 2020 meetings in Annexes 66 and 66a. Minutes of the Technical Group meetings for 2018 and 2019-2020 are in Annexes 67 and 67a.

Continuation and complementary actions
N/a

F.2 Commission audit of financial statements

Foreseen start date: July 2020 — Actual start date: March 2021
Foreseen end date: September 2020 — Actual end date: July 2021

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
Audit certificate	31/12/2020	D	31/07/2021
Final financial statements provided to auditors	30/11/2020	M	30/06/2021
Audit complete	31/12/2020	M	31/07/2021

Activities undertaken
The financial audit of the project was completed in July 2021.

Deviations and problems
The financial analyses and collation of the documentation was delayed due to the lockdown of offices during the Covid pandemic, which delayed retrieving the documentation. Therefore, the whole action was delayed. We are aware that this might result in the cost of audit to be ineligible.

Results and outputs
The audit certificate is in Annex 68.

Continuation and complementary actions
N/a

F.3 Produce After-LIFE Conservation Plan

Foreseen start date: October 2019 — Actual start date: October 2017
Foreseen end date: September 2020 — Actual end date: July 2021

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
Consultation draft of plan	31/03/2020	D	31/07/2021
Final version of plan	30/09/2020	D	30/06/2021

Activities undertaken
Relevant information from preparatory actions (A1, A3, A4) was used for the preparation of long-term management options report (A2). This report identified target areas for the potential recolonization of roseate terns. We initiated partnership working within these strategic areas to review common tern colony performance and management (most likely sites for the

colonisation). This worked involved organisation and participation in regional meetings and workshops (see E3) as well as desk analyses of the data.

The above information was ultimately used for the development of the International (East Atlantic) Action Roseate Tern Action Plan. We have approached the Commission (Sylvia Barova and Michael O'Briain) to propose that instead of the planned "International Strategy" we would update the official EU Roseate Tern Action Plan. This made sense as the old EU plan was developed in 1999 and has never been updated. The idea was welcomed by EU Expert Group on the Birds and Habitats Directive (NADEG) and we embarked on developing the Action Plan according to the international standards set by BirdLife International and AEWA. There were three consultations of the draft and a series of virtual workshops involving experts, statutory agencies and competent authorities from the five principal states, i.e. Ireland, France, the UK, Portugal (the Azores) and Ghana. The process was led by the PM with the assistance of Dr Euan Dunn, who was engaged initially on a one month employment contract and then on external assistance from September to December 2020. The Action Plan was eventually accepted for implementation on 28.04.2021 (PT, FR) and 12.05.2021 (IE). Since the UK left the EU, the plan was also consulted with the UK Department for Environment, Food and Rural Affairs (Defra) and it was accepted without comments on 15.02.2021. The Action Plan will also be presented for information at the AEWA MOP8 meeting in October 2021.

Since the development of the Action Plan took most of the PM's time towards the end of the project, the development of the After-LIFE was delayed, however the International Action Plan identified and consulted priority actions for further recovery of the NW European metapopulation, which in turn, provided a core framework for the development of the After-LIFE Plan. The After-LIFE plan provides additional information on the status of the project sites in the context of future priority actions and the cost of their implementation.

Deviations and problems
One positive deviation was the development of the updated Roseate Tern Action Plan under the EU Framework rather than a standalone International Strategy, which would not have any recognition amongst stakeholders.

Results and outputs
International Species Action Plan is in Annex 69. After-LIFE Plan is in Annex 70.

Continuation and complementary actions
The future conservation priorities have been defined in the International Action Plan and After-LIFE Plan. The RSPB will be hosting the Working Group for the implementation of the International Action Plan.

F.4 Compile information for indicator tables

Foreseen start date: December 2016 Actual start date: April 2016
Foreseen end date: December 2020 Actual (or anticipated) end date: December 2020

Name of the Deliverable/ Milestone	Deadline	D/M	Completion
Initial indicator tables	31/12/2016	D	31/04/2016

Final indicator tables	30/12/2020	D	30/12/2020

Changes in key levels indicators are described in Section 6.

5.2 Main deviations, problems and corrective actions implemented

1. We were in discussions with a landowner at the Hurst Spit (Solent and Southampton SPA), who wanted to transfer the land ownership to the RSPB, however this was blocked by her son. This meant that we could not carry out "hard" conservation activities there. In the light of considerable staff time, legal costs and stress to both parties, it was decided that the owner will leave its land at Hurst Spit as a legacy within her will, rather than a lifetime gift. As a compensatory measure, we deployed tern rafts on Key Haven – Lymington Reserve lagoons, restored islands and predator fence within the Normandy Lagoon and carried out public outreach activities on Hurst Spit and elsewhere in the SPA (C1). These measures sufficiently compensated for the lack of delivery at Hurst Spit and therefore there was no impact on Objective 2.
2. The assessment of gull management in Forth Islands SPA (C1) concluded that the number of nesting gulls, together with their declining conservation status and previous unsuccessful attempts to remove them, prohibit creating gull-free zones on Inchmickery and Fidra. Instead, the strategic assessment of management options for Forth Islands identified two sites where more meaningful conservation measures can be implemented, i.e. Long Craig island and Port Edgar Marina. Following the professional assessment of the restoration options for Long Craig, we however concluded that the restoration will be too costly to carry out (approx. £150,000) and would represent a poor conservation value for money. In summary, we have carried out the biosecurity assessment for two islands in Forth Island (Inchmickery and Fidra), explored all management options in Forth Islands SPA and deployed a tern raft in Port Edgar, creating practically a new site with over 100 pairs of common terns nesting. We maintained the project presence through continuing partnership building with the SNH on Isle of May, Leith Docks managers (the largest common tern colony in Forth), Scottish Wildlife Trust and local Forth Seabird Group. The advisory role related to biosecurity, colony management and monitoring. Despite that we were unable to carry out the gull management and restoration of Long Craig, we were still in a position to deploy tern rafts and improve management of Long Craig and Isle of May colonies through advisory activities. Considering biosecurity assessment, we have achieved 3 out of 4 output indicators for this site towards Objective 2 in Forth Islands SPA.
3. There was a 2-year delay in the implementation of Blue Circle Island restoration at Larne Lough (C3) due to the time it took to obtain the planning application and the requirement from NIEA to provide bird data from non-breeding period. Furthermore, the project cost was vastly underestimated, however the RSPB decided to use savings in other budget areas and underwrite any overspend. The construction took place in September-December 2018 with corrective works in winter 2019-2020. Therefore, the Objective 2 was compromised by this delay.
4. The repair to the shingle bar at Cemlyn Bay (C3) was not possible as it would require removal of the eastern public parking located on top of the bar. This would restore the natural movement of the shingle and strengthen this part of the bar in the long-term. However, the removal of the parking would increase the traffic to western parking (nearer the colony), which could increase the disturbance. NWWT met with the Anglesey Council and learnt that the Council has no intention removing the parking by a specific date unless

an event occurs, which would damage the artificial wall. It was agreed that should such an event happen a solution would be found that would ensure the future resilience of the ridge. An option to move both car parks to a location near Plas Cemlyn is available according with the NT's vision. Following EASME mission in 2019, it was agreed that the restoration of the tern island adequately compensated for the lack of shingle bar repairs. The erosion of the island caused a reduction of approx. 10% of nesting space on this already crowded island, which further contributed to pushing common terns to the edge of the island. The restoration was therefore more urgent and directly beneficial for nesting terns and therefore contributed in a more meaningful way to achieving Objective 2.

5.3 Evaluation of Project Implementation

The methodology applied focused on improving the breeding success (productivity) of the target and associated species of terns. The core of this management is around wardening with the aim to prepare habitats (vegetation management, terraces and boxes), managing competition for nesting space with large gulls, reducing impact of predation, as well as ringing and monitoring of population parameters. Management of tern colonies is not cheap, as in most cases, the presence of at least two residential wardens is required. Therefore, we also invested in improving wardening facilities and purchasing new equipment which will be used long after the LIFE project. The Covid pandemic and the subsequent absence of wardens at the Skerries in 2020 led to the abandonment of the colony by Arctic and common terns due to disturbance from residential peregrine falcons. This would not have had happened if the wardens were present on the island.

Apart from the wardening, we also carried out biosecurity assessments and introduced monitoring for all offshore sites.

This was underpinned by scientific studies and reviews we carried out as part of the project. Demography study based on the ringing data (A4) revealed that in order to sustain the UK population, we need to work closely with the Irish colonies, especially Rockabill, where a lot of the birds come from to breed on Coquet. This metapopulation management approach is fundamental to sustain the recovery of the species. The forage fish and diet reviews (A3) provided key insights for selecting target areas for recolonisation based on the abundance of key forage fish species and the distribution of key common tern colonies (A2). GPS and visual tracking research on Arctic tern from the Skerries and then on roseate tern from Rockabill (D1) revealed the foraging range needed to be protected and the importance of auks and marine mammal congregations driving forage fish to the surface, which roseate tern utilise to find and obtain food. Lastly, the geolocator study (D1) revealed the main wintering and stopover areas and the importance of cold water upwellings associated with large marine ecosystems – productive areas threatened by overfishing and climate change. This new knowledge was summarised in the International Action Plan for 2021-2030 (E3) which has been accepted for implementation under the EU framework.

The impact of the project was extended to other parts of Europe and the US through sharing best practice and knowledge via workshops, webinars, consultations, networking and days to day meetings. This knowledge was also summarised in the well acclaimed best practice guidance (E4). We also carried out publicity (E1, E2) and public engagement activities (E5) to promote the conservation issues and solutions applied.

Since the beginning of the project in 2015, we have observed an increase of roseate tern numbers at each of the three colonies, improved nesting conditions of terns in other colonies, advanced scientific studies and reviews and carried out several networking activities.

Action	Foreseen in the revised proposal	Achieved	Evaluation
A1. Review SPA objectives, SPA condition assessments, and the wider planning context	Objectives: To inform discussions with statutory agencies and long-term strategy. Expected results: In-depth understanding of regulatory and planning context	Fully achieved	Report produced on time providing insights into the level of protection and potential development threats to the project's SPA.
A2. Assess long-term options for colony maintenance and establishment throughout roseate tern range in northwest Europe	Objectives: To assess long-term options for management including target areas and habitat restoration opportunities Expected results: Identification of priority areas and habitat restoration opportunities for offshore and coastal sites	Fully achieved	Background analyses completed. Report completed. The analyses provided a focus on engaging in networking activities and exchange of knowledge.
A3. Collate information on prey species and develop recommendations for marine management	Objectives: Increase understanding on prey species ecology and threats and tern diet Expected results: Literature review on prey ecology and management	Fully achieved and extended	Three reports produced: Sandeel review Tern diet and alternative species review Data analyses from Anglesey Reports provided insights on distribution of forage fish for selecting target areas.
A4. Collate and analyse data from all roseate tern colonies to inform future conservation strategy	Objectives: Increase knowledge on population parameters responsible for population growth on each site Expected results: Database, scientific paper	Fully achieved	Paper published in the Journal of Animal Ecology. Highlighted the need for the whole metapopulation management.
A.5 Develop communications plan covering international, national and site-specific activities	Objectives: Achieve coherence in communication messages Expected results: Communication strategy	Fully achieved	Strategy developed and comms plan updated annually resulting in targeted communication activities.
C.1 Enhance conservation management of existing tern colonies within SPAs	Objectives: Improve breeding success on project sites in the UK Expected results:	Fully achieved with minor adjustments	Site based activities achieved at Forth Islands, Coquet, Solent, the Skerries, Ynys Feurig, Cemlyn and Larne Lough.

designated for roseate terns in the UK	Enhanced site management programmes		
C.2 Enhance conservation management of tern colonies in SPAs designated for roseate terns in the republic of Ireland	Objectives: Improve breeding success on project sites in the RoI Expected results: Enhanced site management programmes	Fully achieved with minor adjustments	Site based activities achieved at Rockabill and Dalkey Islands and in partnership with Lady's Island Lake.
C.3 Carry out major habitat restoration and creation works within SPAs designated for roseate terns	Objectives: To carry out three large habitat creation/ restoration projects Expected results: Restorations at Cemlyn Bay and Larne Lough. Habitat creation at Solent (cheniers and breakwater nesting sites)	Fully achieved	Fully achieved at all sites
C4. Liaise closely with statutory bodies to address site protection and management issues and ensure that long-term conservation plans are in place to support roseate terns	Objectives: Secure long-term commitment of the statutory bodies through involvement and consultations Expected results: Meetings to consult on issues identified in preparatory actions. Consultations of strategic documents.	Fully achieved and exceeded	Statutory agencies were involved in every aspect of the project implementation on a regular basis.
C5. Engage with stakeholders in West Africa to assess conservation need and identify priority actions	Objectives: Assess the impact of trapping in Ghana Expected results: Report summarising the current level of trapping	Fully achieved	The results showed a smaller rate of trapping overall and pointed out the areas where further educational programmes should be carried out.
D1. Monitor roseate tern populations and other key ecological variables	Objectives: To assess the impact of the management on the sites and carry out GPS tracking activities Expected results: Annual report with site recommendations Scientific papers	Fully achieved and extended	Reports for 2016-19 produced, 2020 included in the summary report. GPS/ visual tracking on the Skerries and Rockabill, and geolocator study completed. Three papers published. Further analyses of project impact in 6.4

D2. Assess impacts on public awareness and attitudes	Objectives: To assess the awareness and attitudes changes within the local communities and site visitors Expected results: Questionnaire surveys in Y1 and Y4 of the project	Fully achieved	Report produced showing an increase in visitor awareness.
D3 Monitor socio-economic impacts	Objectives: To assess the value of seabird colonies on local business and visitor experience Expected results: Results of the assessment in the final report	Fully achieved	Summary in D3
D4 Monitor ecosystem-level impacts	Objectives: To assess the impact of the project on associated species Expected results: Annual report with site management recommendations	Fully achieved	Deliverables under D1 and further assessment of project impact in 6.4
E1 Produce interpretation signs and materials	Objectives: To promote the project amongst practitioners and the public Expected results: Signs, leaflets, postcards, infographics, roller-banners	Fully achieved and extended	Apart from the planned interpretation signs, infographics, post cards, leaflets roller banners, we developed VR Coquet experience.
E2. Create and maintain project webpages	Objectives: To promote the project amongst practitioners and the public Expected results: Website	Full achieved and extended	Regularly updated website and social media channels in place. Coquet live stream cameras.
E3. Carry out networking with other projects	Objectives: To share experience between site managers Expected results: Three networking visits Multiple visits between project site managers Workshops	Full achieved and extended	Three networking visits to the Netherlands, the Azores and France were organised. Several exchanges between the project sites were carried out. Predator workshop, North Atlantic webinar and multiple regional workshops were organised.
E4. Produce layman's and other reports	Objectives: To increase replicability of the project and share knowledge	Fully achieved	Layman’s report, best practice guidance and four peer-reviewed papers produced (A4, D1).

E5. Hold public meetings at each site	Objectives: To engage directly with people living around the sites, so that we can explain the background to the project, its objectives, and the main issues to be addressed. Expected results: 40 events per year and educational project around Larne Lough	Fully achieved and extended	Event target exceeded. Educational programme delivered.
E6. Carry out media work	Objectives: To raise awareness of roseate tern, seabird conservation issues and project actions. Expected results: Press releases, feature articles in magazines, press articles	Fully achieved and extended	Targets for national and regional media features exceeded.
E7. Hold end-of-project conference	Objective: To celebrate and share achievements of the project Expected results: Conference, proceedings	Achieved with changed format due to Covid	Virtual webinar was organised due to Covid attended by over 100 participants from 15 countries. Recording of the webinar available on YouTube and project website.
F1. Manage project effectively and efficiently	Objectives: To ensure the delivery of project outcomes on time, budget and high standard. Expected results: Robust project management framework, well managed SG meetings	Fully achieved	Project governance and advisory groups were established.
E2. Commission audit of financial statements	Objectives: To assess and verify project expenditure. Expected results: Financial statement	Fully achieved	Financial audit completed, and statement produced
F3. Produce After-LIFE Conservation Plan	Objectives: To produce the International Conservation Strategy covering the whole Western European population. Expected results: International Strategy recognised and endorsed by main stakeholders, including statutory agencies and colony managers.	Fully achieved and extended	Strategy was developed and additionally adopted by the EU Framework and recognised by AEWA.

F4. Compile information for indicator tables	Objectives: To monitor key metrics of the project impact Expected results: Indicator table	Fully achieved	Indicator table was developed and updated as part of the mid-term and final report.

The results of preparatory actions (A1-A4) and research (D1) were used to improve management, policy/ advocacy actions and long-term strategy (F3). The most visible actions were associated with the creation and improvement of nesting conditions and predation control, with the aim to increase breeding success (C1-C3). Actions which will improve the prospects of tern species at other colonies in a medium to long-term are linked to the networking and exchange of knowledge activities.

The management practices and any other outputs developed as part of this project were shared with tern colony managers in Europe (France, the Netherlands, the Azores) and beyond (US and Canada). The replication opportunities have been described below and might as well improve the status of Natura 2000 sites elsewhere, for example in the main colony of roseate terns in France at Ile aux Moutons. More details on replication efforts are described below in section 5.4 pt. 4.

The website and social media channels are popular amongst colony managers, practitioners at amateur birders interested in roseate tern and seabird issues generally. It is difficult to establish the effectiveness of these activities, however the site and social media accounts have a wide readership, especially the reports and best practice pages, which are available for download. We have also developed several types of promotional materials, including interactive infographics and VR experience. We expanded our outreach activities through events and the educational programme, especially in places where people can interact with the project sites (Cemlyn, Dalkey, Solent). These were also the places where we are assessing public awareness and attitudes as part of D2.

The project supported the implementation of the Bird Directive through the direct conservation action targeting most of the Western European population of roseate terns. The project ensured the long-term security of the roseate tern sites and established partnership working with the managers of the remaining the colonies at Lady's Island Lake in Ireland and in Brittany, France. The nesting conditions at formerly occupied roseate tern SPAs improved and we are particularly pleased with the two new pairs established at the Skerries. Despite that no other sites recorded breeding roseate terns, we can consider Ynys Feurig, Cemlyn Bay and Larne Lough safe from flooding and predation and therefore ready to receive the species.

The best example of the project influencing the national policy is the literature review, carried out as part of A3, with regards to prey species ecology and distribution, climate change/ fisheries impacts and tern diet analyses. This work led to the identification of prey hotspots and brought new evidence on the vulnerability of sandeel stock around the North Sea. Subsequently, in December 2017 RSPB developed the sandeel fisheries policy statement to inform the development of the Fisheries Bill for post-Brexit Britain. RSPB published a policy report by Dr Euan Dunn that makes a range of proposals to strengthen the management of the North Sea sandeel fishery to improve prey availability for sandeel dependent seabirds and other marine fauna. The proposals received a high level of media attention and in Scotland the Courier newspaper has been running a series of stories. It also gained significant political profile. In response to questioning on the issue in the Scottish Parliament, the Cabinet Secretary

for Rural Affairs and Islands stated that the Scottish Government does not support fishing for sandeel or other industrial species in Scottish waters and that she had instructed officials to urgently examine what measures can be put in place. Additionally, the outcome of UK-EU annual negotiations on fishing opportunities for 2021 revealed that for sandeels the total allowable catch for waters east of Scotland and NE England was set some way below the level advised by the International Council for the Exploration of the Sea (ICES). It is hoped that this is an indication that in future years governments will show greater restraint on fishing for species such as sandeel that are key components of the marine ecosystem. A link to the report can be found on this blog: https://community.rspb.org.uk/ourwork/b/scotland/posts/shrinking-sandeels-shrink-the-fishery. The RSPB's advocacy team will take the recommendations further outside of the project framework.

Strategic evaluations and the compilation of Tern Colony Register, undertaken as part of A2, led to a close collaboration between the RSPB and Natural England with regards of the development of Seabird Strategy for England. We are currently (July 2021) carrying out the seabird colony audit with recommendations for implementation by the Strategy.

The project developed the International Species Action Plan which has been adopted within the EU Framework and recognised by AEWA. Due to our efforts, the roseate tern has been retained on the list of priority species for higher LIFE funding, despite the Least Concern IUCN conservation status globally and in Europe.

The most prominent legislative barrier to the delivery of the project is a conflict of interest between SAC and SPA features when they overlap. This significantly reduced our ability to work in Solent and Southampton (saltmarshes), Cemlyn Bay (invertebrate interest associated with the bay) and Lady's Island Lake. Specifically, at Solent we were only allowed small scale recharge of cheniers in fear that the brought material would smother saltmarsh plant communities. However, the proposed recharge would potentially affect only a fraction of a percent of all saltmarsh habitat in the area. In Cemlyn Bay, we were restricted with the deployment of the otter fencing to the perimeter of the tern island as positioning the fence posts in the water (which would be more effective) would potentially disturb the invertebrate communities. It is not possible to assess where they are exactly or even what their habitat requirements are. In Lady's Island Lake, the preferred increased control of water levels might result in changes in salinity affecting SAC features, however a feasible solution has been developed by specialist contractors. Statutory bodies are afraid to damage any of the SAC features, even in a tiny proportion, despite of the declining status of the SPA-listed species, in our case, terns. It is difficult to keep the integrity of Natura 2000 network in such situations.

Another hinder to the delivery of conservation measures for the roseate tern, especially in the context of potential expansion of the population, is the LIFE funding rule for working only within the SPAs designated for target species. However, the best common tern colonies located within target areas for expansion might not be within SPAs designated for the roseate tern. From the metapopulation conservation point of view, the largest source colonies should be secured first, as they are net "exporters" of birds to adjacent colonies. The best example of this situation is Firth of Forth, where the conservation of Leith Dock colony should be the priority, not only because there is a high probability that roseate terns would settle there, but also because this colony boosts common tern populations within Forth Islands SPA.

5.4 Analysis of benefits

1. Environmental benefits

a) Direct / quantitative environmental benefits:

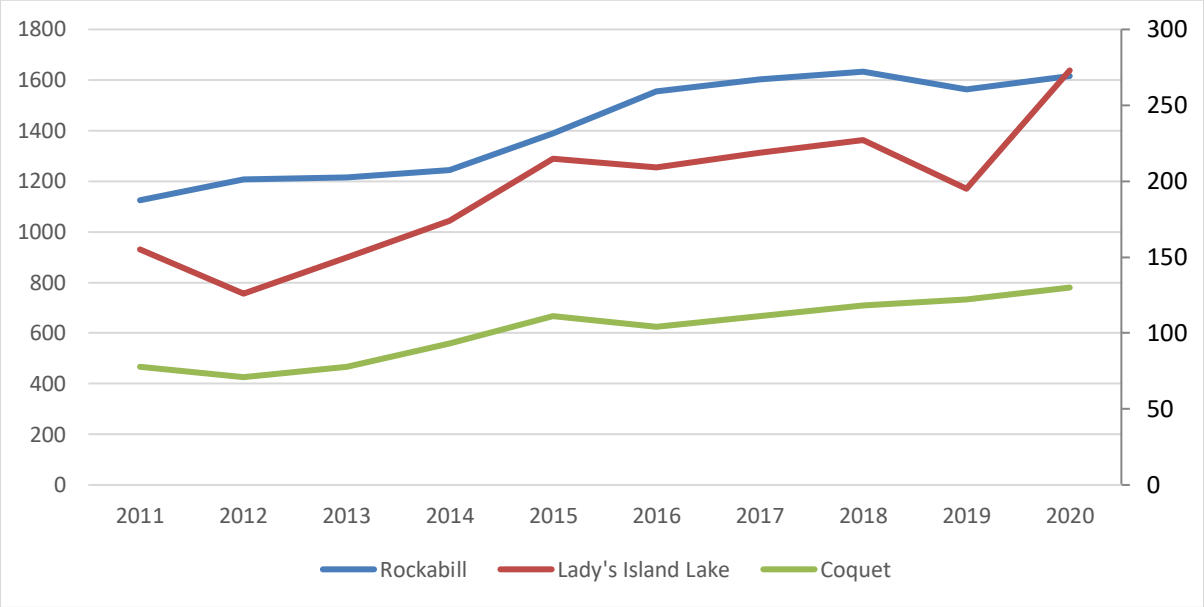
Below we provide an assessment of project delivery against two main project objectives relating to the site management and therefore impact on the population of the target and associated species. Population figures have been provided for roseate tern colonies only, while the assessment of habitat improvements and threat management was offered for the remaining sites.

Objective 1: Increase the population of roseate tern in the UK and RoI by enhancing habitat management and reducing threats at the three principal colonies

The UK breeding population of roseate tern will increase from 73 breeding pairs in 2013 to at least 100 pairs by the end of the project (EOP). The RoI breeding population will increase from 1,413 pairs in 2014 to 1,710 pairs by EOP.

All three roseate tern colonies covered by the project i.e. Rockabill and Lady's Island Lake in Ireland and Coquet Island in England have been increasing during the project timeline. The population size exceeded the indicator figure for 5 years beyond the project set for 1300 pairs at Rockabill and the end of the project indicator set at 100 pairs at Coquet. The same applies to the target population level in the Objective 1, i.e. 1710 pairs in RoI and 100 pairs in England.

In direct terms, the UK/ Ireland metapopulation has grown during the project 7% from 1869 pairs in 2016 to 2027 pairs in 2020 (see the graph and table below).



Medium-term trend of the number of roseate tern pairs in 2011-2020 for Rockabill, Lady's Island Lake (primary, left axis) and Coquet (secondary, right axis)

However, a comparison of the 5-year means provides a much better picture of the population performance as it flattens, sometimes large, year-to-year fluctuations. **During the project**

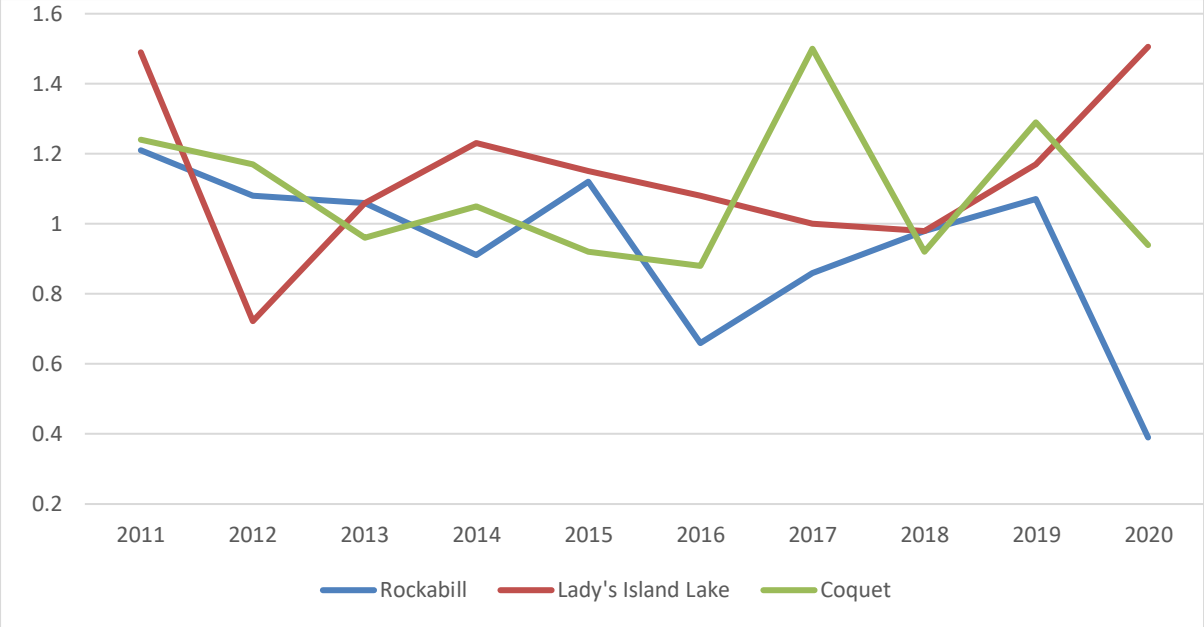
(2016-2020) Rockabill population grew 29%, Lady's Island Lake 37% and Coquet 36%, compared to the 2011-15 mean (see the table below).

5-year mean baseline (2011-2015), number of pairs in 2016-2020, 5-year project mean and % change between baseline and project means for Rockabill, Lady's Island Lake and Coquet

Site	Project mean baseline (2011-2015)	2016	2017	2018	2019	2020	Project mean (2016-2020)	% change between baseline and project means
Rockabill (IRL)	1235	1556	1603	1642	1564	1624	1598	+29%
Lady's Island Lake (IRL)*	164	209	219	227	195	273	225	+37%
Coquet Island (UK)	86	104	111	118	122	130	117	+36%
Total		1869	1933	1987	1881	2027	146	

* not under the direct project management

The long-term positive trend has continued since the project started; however, we are worrying by the decreasing productivity, especially on Rockabill (see graph below). This can be a sign of density dependent effects as birds need to crump in limited space and compete for resources, or some issues with the food availability, increased predation pressure or the weather impact in recent years.



As part of the project, we built new terraces and provide more nest boxes to accommodate the growing population. However, other threats cannot be eliminated entirely, as they are mostly biotic, i.e. competition and predation from other species, shortages of food or the weather. Therefore, roseate tern will always be conservation dependent. While we cannot do much to improve the weather or food resources, we are doing our best to manage predators.

Managing organisations of roseate tern colonies within the project area, i.e. RSPB, NPWS and BirdWatch Ireland, are deeply committed to the continuation of their efforts to improve the prospects of the species. This determination and commitment have begun before the project commenced and will continue beyond its lifespan. As a matter of fact, the step-up management in terms of increasing warden numbers and duration of wardening during the project have been sustained in 2021 on Rockabill and Coquet.

Population expansion: It is too early to speak about new viable colonies, but there has been one pair of roseate terns nesting at Blue Circle Island throughout the whole project and two pairs bred successfully in 2019 at the Skerries. Mixed pairs with common terns have bred during the project on the Isle of May, Leith Docks and Long Craig Island (Forth Islands). We are confident that Blue Circle Island, the Skerries, Ynys Feurig and Cemlyn Bay are now safe to receive roseate terns.

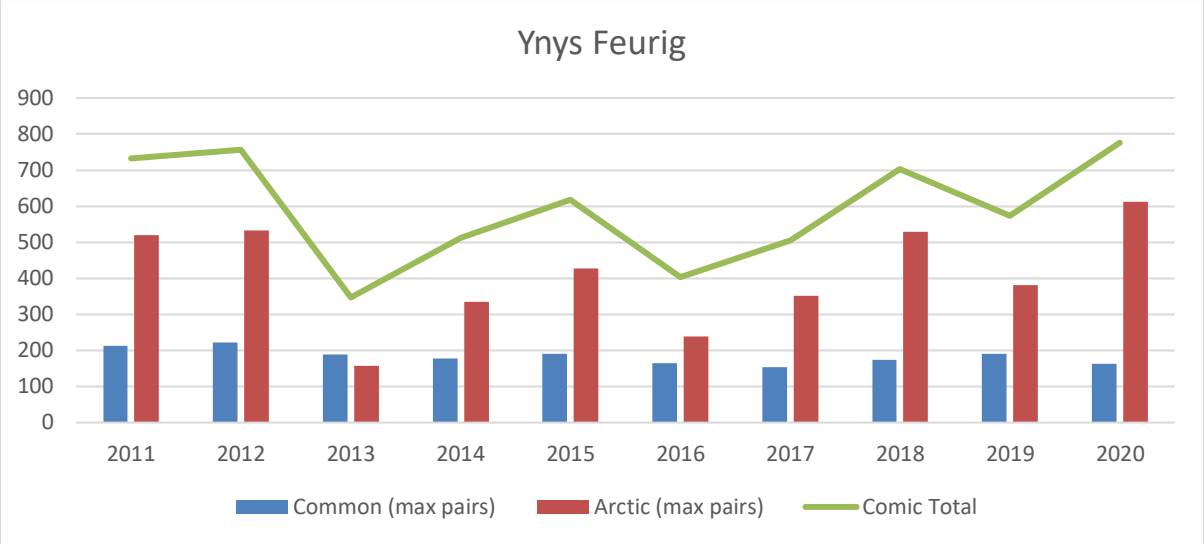
Objective 2: Provide the conditions needed for a re-expansion of roseate tern in the UK and RoI through enhanced management and restoration of the other SPAs for this species

Habitat for roseate terns will be created or restored, and threats from habitat change, predation and disturbance will be reduced, within all five other UK and RoI roseate tern SPAs.

Ynys Feurig (RSPB)

The colony suffered increased predation from foxes and crows before the project commenced, which was adequately addressed in 2017 resulting in a relatively high productivity (crow and fox control). Vegetation management and deployment of roseate tern next boxes and chick shelters continued. Biosecurity management was in place. Disturbance was managed with a combination of "no landing' signs and warden presence. New hide was installed improving wardens' capacity to control avian predation and monitoring. No tern wardens were employed in 2020 because of the Covid-19 pandemic. However, night patrols, some colony counts, and some basic island management was carried out by those local RSPB reserve staff that had not been furloughed.

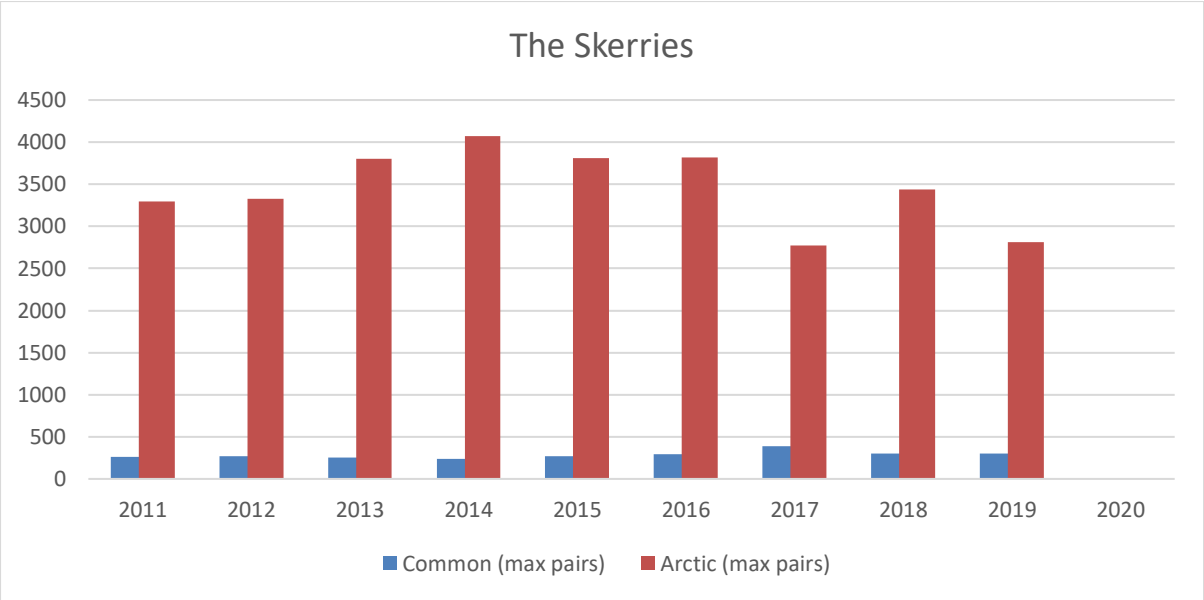
Overall, there was no change between the project 5-year mean baseline (2011-2015) to the project 5-year mean (2016-2020), with average 15% decline of common tern and 7% increase of Arctic tern. However, the improved predator management resulted in better productivity, which should bring the population increase in the coming years.



Number of common and Arctic tern pairs in 2011-2020.

The Skerries (RSPB)

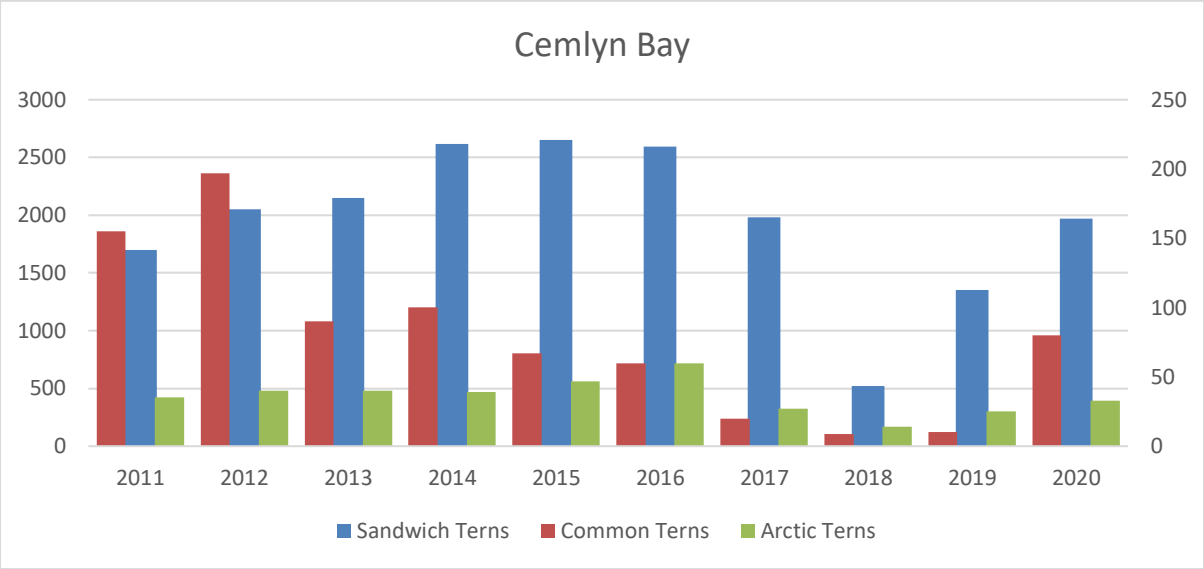
Management of the colony focused on improving the vegetation and avian predation control, as well as building terraces and nest boxes for roseate terns. Biosecurity measures were in place. Potable water system was installed for the two residential wardens. The improved management for common terns did not result in the overall increase of the population, but there were two pairs of roseate terns successfully breeding in 2019 for the first time in 29 years. The colony suffered from a couple of stochastic events. First, we had a botulism outbreak in 2016 killing hundreds of adult and juvenile Arctic and some common terns resulting in decline of the Arctic tern colony in 2017. Surprisingly however, the clutch size was higher than in recent years and overall good productivity in 2017, meaning that in lower density, the birds performed better. In 2020, the colony was abandoned due to the Covid pandemic and the lack of wardening, which resulted in a settlement of residential peregrine falcons on the island and the consequent predation pressure. Overall, there was a 30% decline of Arctic terns between the 5-year project mean baseline (2011-2015) to the 5-year project mean (2016-2020).



Number of Arctic (primary axis) and common tern (secondary axis) at the Skerries (2011-2020)

Cemlyn Bay (NWWT)

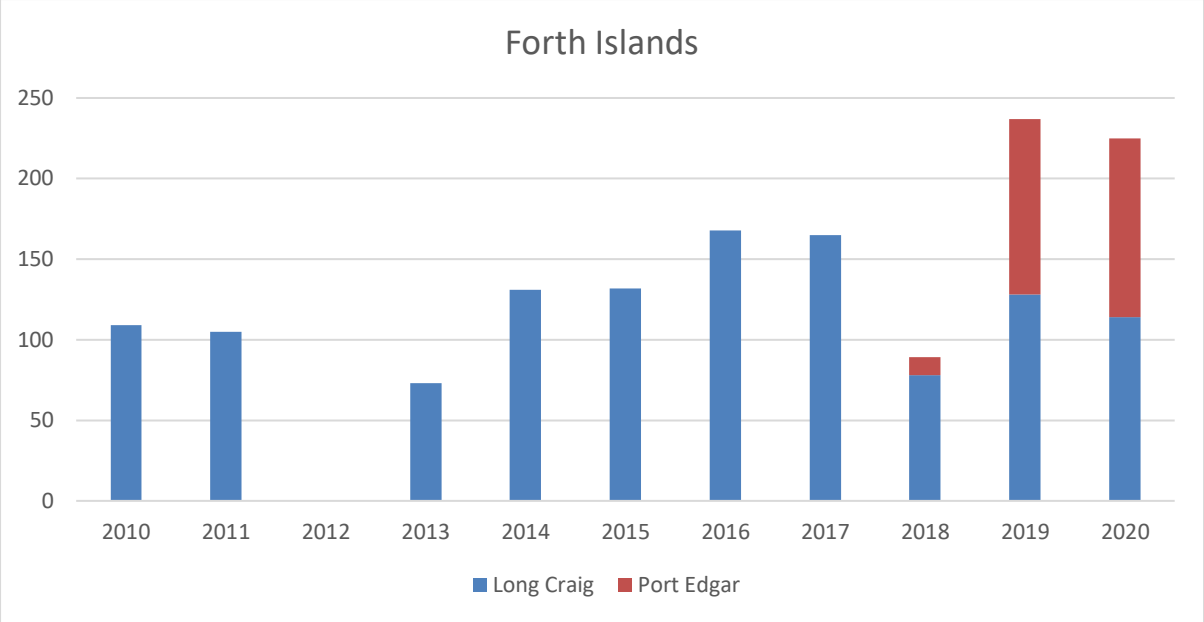
Cemlyn Bay is one of the most important colonies of Sandwich tern in the UK, but as the colony grew, the number of common and Arctic tern went down due to the lack of nesting space. In the first three years of the project otter predation became the main problem for the colony, initially negligible but in 2017 the predation caused the colony to collapse. The immediate priorities for the site were to control otter predation and enlarge nesting area. The restoration of the eroded part of the tern island took place in 2018, followed by the installation of the otter fence. Wardening was in place throughout the project focusing on habitat management and disturbance control. Following, the habitat work and fence installation, the population of Sandwich tern started to recover. The increase of common and Arctic terns in 2020 was due the collapse of the Skerries – as Cemlyn Bay accommodated some of the disturbed birds. It highlights the importance of a network of well-managed colonies. Despite these efforts and due to the otter predation, the 5-year project mean (2016-2020) was 25% lower for Sandwich tern, 71% lower for common and 21% lower for Arctic tern compared to the 5-year mean project baseline (2011-2015).



Number of Sandwich (primary axis), common and Arctic tern (secondary axis) at Cemlyn Bay (2011-2020)

Forth Islands (RSPB)

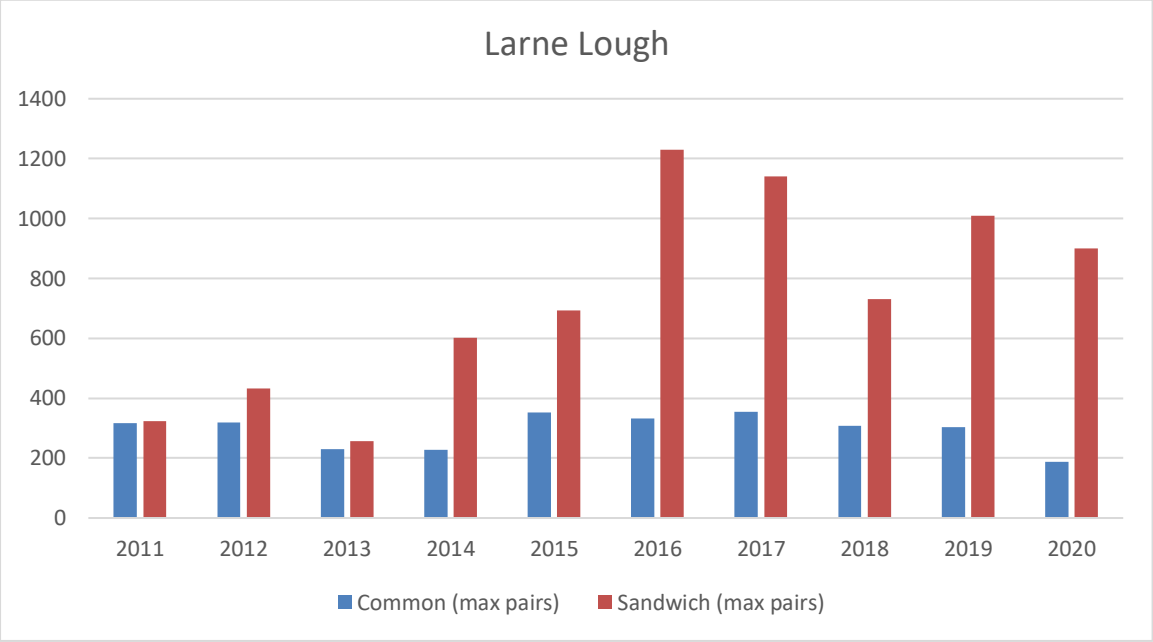
Assessments of management options concluded limited opportunities for active management, with the most active engagement focused on Long Craig Island – the last breeding site of roseate tern in the SPA, and Port Edgar Marina, located 1.5 km from Long Craig, where we installed the tern raft. Because of the close location, these two sites can be seen as one colony. Further afield, we developed biosecurity plans for Inchmickery and Fidra islands and strengthened the relationship with colony managers in a wider SPA, especially with Scottish Natural Heritage (SNH) on Isle of May. These actions resulted in a 60% increase of the 5-year project mean (2016-2020) for common tern in the Long Craig/ Port Edgar colony compared to the 5-year project baseline mean (2010-11 and 2013-15 to accommodate for the lack of data in 2012). Mixed pairs of roseate and common tern bred most years on Long Craig and one year on Isle of May during the project lifetime.



Number of common terns at Long Craig and Port Edgar Marina (2011-2020)

Larne Lough (RSPB)

Similarly to Cemlyn, otter predation became a moderate problem at Blue Circle and Swan islands in 2016-2017, which was addressed before 2018 season with the fencing and audio deterrents, followed by further fence reinforcement in 2020. Blue Circle Island suffered from erosion and was restored in 2018-2020 period. Wardening was installed resulting in a better habitat management. Biosecurity plan and measures were introduced. This resulted in 117% increase of Sandwich tern and 3% increase of the project 5-year mean (2016-2020) compared to the 5-year project baseline mean (2011-2015).

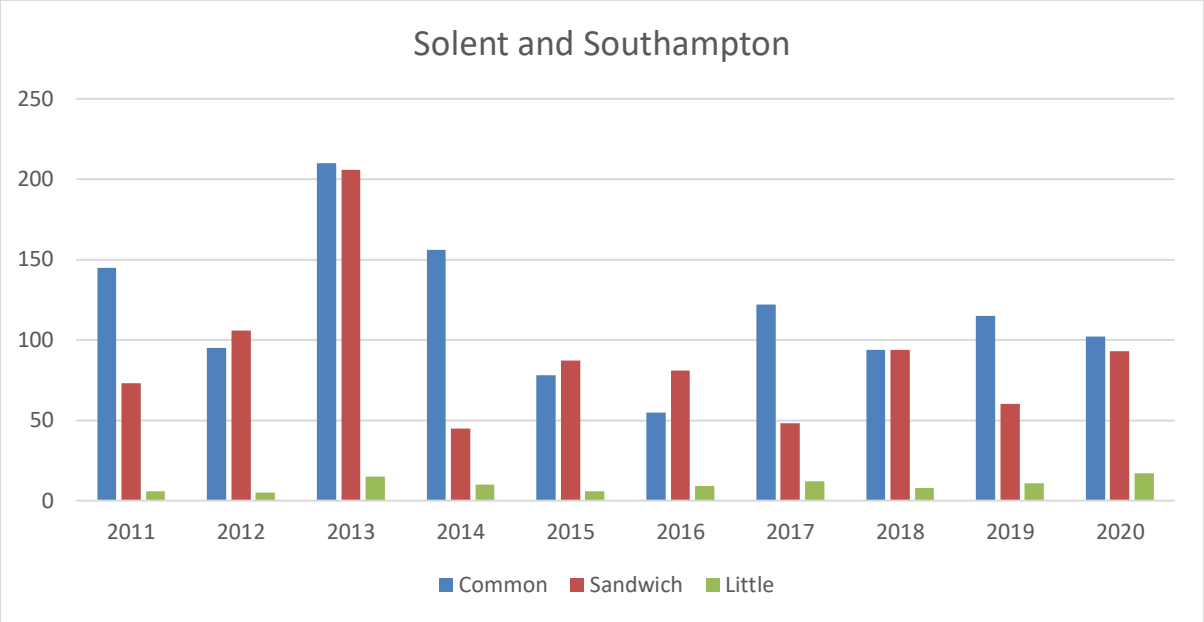


Number of Sandwich and common terns at Larne Lough (2011-2020)

Solent and Southampton (RSPB)

The project focused on partnership working at Lymington marshes managed by Hampshire County Council. Wardening was introduced during the season with focus on monitoring and

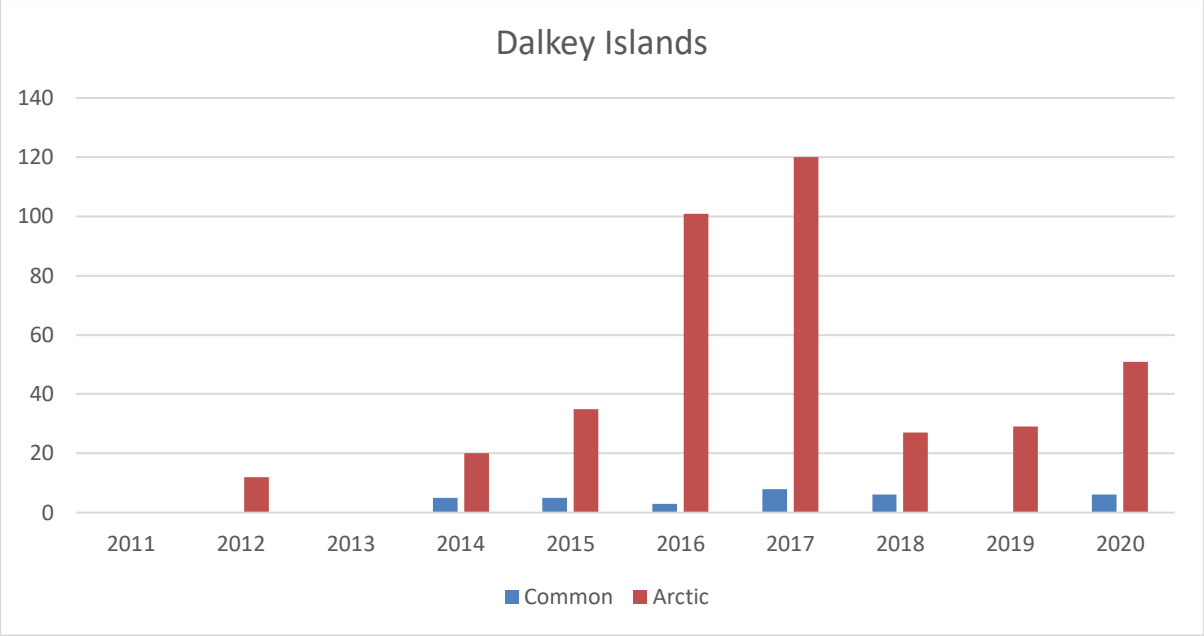
public engagement. Project officer was employed to lead on habitat creation focused on shingle recharge and breakwater bunds (C3). Successful fox control was carried out by HIOWT. The adversity with Hurts Spit was compensated with the introduction of tern rafts, habitat and predator fence improvements around Normandy Lagoon. The population of Sandwich and common terns remained stable throughout the project.



Number of common, Sandwich and little terns at Lymington Marshes (2011-2020)

Dalkey Islands (BWI)

The population of Arctic terns at Dalkey Islands group suffered a decline in 2018 from frequent flooding of Maiden Rock, as well as gull and rat predation. The main management aims were to control rats, manage habitat, predation and disturbance from visitors, as well as to move the colony from the low-laying Maiden Rock to the higher Lamb and Dalkey islands. The warden was employed each year to manage and monitor the colony and carry out the public engagement. Bamboo canes were deployed across the colony at Lamb Island to discourage avian predation. Fence and interpretation signs were installed to control access. Rat control was carried out for three winter seasons with no rats recorded in 2020 with signs of population recovery. There were no data available for 2011 and 2013, which prohibits comparing the means.



Number of common and Arctic terns at Dalkey Islands group (2011-2020)

b) Qualitative environmental benefits

The project directly contributed to the Bird Directive with regards to practical management of priority species, the roseate tern. This very practical project, as outlined in the objectives, focuses on the direct colony management, and otherwise provides evidence for the more effective management of the metapopulation, which was summarised in the International Action Plan (F3).

As presented above, the population of the target species, the roseate tern, has been increasing (including another record 2021 season), however there are two major risks associated with the concentration of the majority (58%) of the population in just one colony at Rockabill Island (IE):

a. there are signs of density dependent effects on Rockabill (the largest colony) with lower-than-average productivity in the last five years, meaning that the site is producing fewer individuals to sustain the recent growth rate of the metapopulation. We can expect that the growth will therefore slow down or plateau.
b. in the case of a stochastic event affecting Rockabill, the colony may disperse to less suitable sink sites where productivity might be below the population maintenance level (so-called buffer effect).

The following threats have been linked to reduced productivity on the breeding grounds:

- Predation by large gulls and other avian predators, native and invasive non-native mammals
- Disturbance through uncontrolled human access and egg collecting
- Climate change related threats
  - Extreme weather events
  - Loss of nesting sites to coastal change

    - Long-term impacts of climate-driven environmental change
- Shortages of food
- Development of offshore windfarms
- Lack of sufficient protection of foraging areas
- The impact of commercial fishing

The following threats have been linked to reduced survival of adults and fledged juveniles at wintering grounds and during migration:

- Tern trapping
- Overfishing and climate change impacts on cold water upwelling systems

The above threats cannot be completely eliminated, meaning that the roseate tern will always be conservation dependent even in the context of threats we can control.

The International Species Action Plan (2021-2030) provides a good overview of priority work areas (objectives) required to maintain the population growth with the main aim to maintain the growth of the East Atlantic roseate tern population, while securing suitable sites for colonisation within a coherent network of European colonies.

While it is necessary to maintain or introduce intensive management of the key roseate tern colonies (Objective 1), it is also important to provide safe nesting conditions at large common tern colonies in preparation for roseate tern expansion (Objective 2), either through the growth of the NW European metapopulation, or more likely, dispersal caused by deterioration of one of the key extant colonies. Target areas have been selected for potential colonisation in NW Europe, based on the distribution of multiple prey species, and historic and current key roseate and common tern colonies. Furthermore, protection of key coastal sites and forage fish stocks along the migration routes and on the wintering grounds will be secured through research, policy and advocacy work (Objective 3). Awareness raising, further scientific advances and improvement of monitoring methods (Objective 4) will be based on regional cooperation via knowledge and best practice sharing (Objective 5). The implementation of the plan will be coordinated and reported by a lead organisation under supervision of the Working Group and in collaboration with national authorities, statutory agencies and partners (Objective 6).

2. Economic benefits

This has been discussed in Action D3.

3. Social benefits (e.g. positive effects on employment, health, ethnic integration, equality and other socio-economic impact etc.).

The RSPB and partners have comprehensive equality policies. Some of the sites utilise volunteers. The project provided opportunities for people to join guided walks and other events and therefore benefited from the feeling of well-being. There are tour operators around Coquet Island (Puffin Cruises) and around Forth Islands.

4. Replicability, transferability, cooperation

Replication efforts concentrated around networking activities, workshops and best practice guidance. We organised trips to the Netherlands, France, the Azores and between project sites. For example, the visit to France resulted in the concrete plans to build terraces and introduced more nest boxes as well as better monitoring regimes at Ile Moutons – the main roseate tern colony in Brittany. We organised predator and biosecurity workshops as well as several

regional meetings and international webinars. Best practice guidance was produced and is available on the project website. We have reinstated the production of international roseate tern bulletin, which cover the sites from the US and Canada, Caribbean, Azores, Western Europe ending in Japan. We are in working relationship with practically all practitioners managing roseate tern colonies in the northern hemisphere. We also take part in the annual roseate tern meeting for the American colonies and organised a two-day North Atlantic Webinar. We have extended our advice on biosecurity assessment to closely linked sites which do not participate in the project, most notable the Isle of May in Forth Islands SPA and Farne Islands, located just 20 miles north of Coquet. Regional long-term options management assessments identify target areas for the potential future colonisation of roseate terns. We have identified specific sites, which will require partnership working to share our knowledge and improve nesting conditions. This is a progressive approach which will ensure the expansion of the project impact to other key sites in each of the identified target regions.

5. Best Practice lessons

The management of the colonies is based on many years of experience, especially on Rockabill and Coquet. This experience has been extensively shared as part of the networking activities between the project sites and elsewhere, and summarised in the best practice guidance and International Action Plan. The results of research actions shaped our thinking in relation to the metapopulation management (based on demography study) and prioritisation of future conservation action (based on long-term management options and diet review). We used this knowledge in the target areas for a potential expansion of roseate terns.

The main 'learning points' from the project include:

1. How to manage the complex and challenging issues of predation, disturbance and habitat change in different contexts and in ways that provide clear, measurable outcomes.
2. How to develop a metapopulation approach, in collaboration with a range of partners, covering an entire biogeographical region rather than a single Member State, and including the development of a detailed conservation strategy and a stakeholder group to oversee implementation of this strategy.
3. How to develop a long-term conservation strategy for a species under serious threat from climate change-related coastal change and sea level rise, through the restoration of current breeding sites and the creation of new sites in strategic areas.

6. Innovation and demonstration value

The project developed innovative gull scarers, which exceed everything which is currently available on the market in terms of technological capabilities. We also deployed geolocators on roseate terns, which happened for the first time on this side of the Atlantic. We carried out trials for using drones to monitor remotely located colonies. One of the most exciting technologies used by the project is Virtual Experience for Coquet, which enabled bringing hundreds of people to otherwise closed sanctuary.

7. Policy implications

Discussed under Section 5.3 *Evaluation of Project Implementation*.

6 Project Specific Indicators

The project KPI data have been updated. The final indicators have been discussed below in comparison with the original and mid-term review.

1.5 Project area/ length
No changes.

1.6 Humans influenced by the project

- Persons who may have been influenced via dissemination or awareness raising project-actions (reaching) at the end of the project increased from 3700 to 280305, based on the real data collected at Solent, Cemlyn, Dalkey and Coquet. The indicator for the 5 years beyond increased from 4900 to 560510 (double of the value at the end of the project), based on the real data collected at Solent, Cemlyn, Dalkey and Coquet.
- Other persons influenced through events, conferences, webinars, workshops, etc. decreased at the end of the project from 45000 to 33337 based on the actual data. The indicator for the 5 years beyond increased from 46000 to 50010 (half of the end of the project value was added due to a less intensive programme of events planned).

7.4 Wildlife Species

- Rockabill number of pairs increased for the end of the project from 1275 to 1624 based on the actual data. The indicator for the 5 years beyond increased from 1300 to 1900 pairs.
- Ynys Feurig, Cemlyn Bay and the Skerries number of pairs for the 5 years beyond increased from 0 to 3 due to two established pairs at the Skerries in 2019. The birds did not breed on 2020 as the colony collapsed due to the lack of wardening and peregrine predation because of Covid.
- Coquet number of pairs increased for the end of the project from 100 to 130 based on the actual data. The indicator for the 5 years beyond increased from 120 to 180 pairs based on the rate of population growth (150 pairs in 2021).
- Larne Lough number of pairs for the 5 years beyond increased from 0 to 3 due to persistence of an established pair and expected positive impact of the Blue Circle Island restoration and otter fence.

7.5.1 Invasive Alien Species

- Indicators for Forth Islands, Larne Lough, Coquet, Rockabill, Ynys Feurig, Cemlyn and the Skerries have been removed as no IAS were present at the beginning and the end of the project, and the biosecurity plans, monitoring and rapid response kit is available at these sites to deal with the incursions in the future.
- Estimated density of brown rats *Rattus norvegicus* at the beginning of the project was 37.6 per ha. Following the three-year eradication programme no signs of rates recorded so the end of the project and beyond 5 years indicators are 0.

10.2. Involvement of non-governmental organisations (NGOs) and other stakeholders in project activities

- NGOS – indicator for the beginning of the project increased from 2 to 3 to include the three beneficiaries. The indicator for the end of the project increased from 4 to 9 to include the actual working relationships developed during the project with the following NGOs and voluntary groups: BTO, Bretagne Vivante, Ghana Wildlife

Society, Centre for African Wetlands, Wildlife Trust, National Trust, Portuguese Society for the Study of Birds (SPEA), Forth Islands Seabird Group, Natural History Society of Northumbria. The indicator stays the same for the 5 years beyond the project.

11.1 Website

- The indicator changed from Number (deprecated) to No. of unique visits and decreased at the end of the project from 11400 to 7720 to reflect the actual data for 2016-2020. It is likely that the number of unique visits will decrease for the 5 years beyond with the less intensive updates of the website. Hence, only 2800 extra visits were added on top of the end of the project with a total of 10520 unique visits for 5 years beyond.

11.2. Other tools for reaching/raising awareness of the general public

- The indicator for Number of discrete Project Reports drafted at the end of the project increased from 5 to 9 based on the actual data. The following reports were produced: SPA assessment (A1), long-term management report (A2), three forage fish reports (A3), Rockabill visual tracking report (D1), International Action Plan (E4), Layman Report (E4), After-LIFE report (F3). Beyond 5 years value is 12.
- Number of different publications made (Journal/conference). Four scientific papers were published. The indicator decreased from 5 to 4 based on the actual data. The following scientific papers were published: demography study (A4), visual/ GPS tracking at the Skerries (D1), visual tracking at Rockabill (D1) and geolocator study (D1). Beyond 5 years value is 6.
- The indicator for number of articles in printed media increased from 25 at the end of the project to 143, and also includes online articles from traditional media and magazine articles. Beyond 5 years value is 160.
- The indicator for other distinct media products increased from 25 at the end of the project to 142 as follows: 84 blogs, 13 newsletters, 1 podcast, 11 radio features, 7 TV features and 10 videos, 6 leaflets, 5 infographics and 5 postcards. Beyond 5 years value is 180.
- The indicator for number of hotline/ information centres was removed as it was not planned as part of the project.
- The indicator for number of events at the end of the project increased from 20 to 327 as per actual data. Beyond 5 years value is 350.
- The indicator for number of different displayed information (posters, information boards) decreased from 50 at the end of the project to 16 as per actual data: 5 site specific signs, 7 interpretation boards, 3 roller-banners, 1 conference poster. The indicator for the 5 years beyond decreased from 24 to 5. Beyond 5 years value is 20.

11.3. Surveys carried out regarding awareness of the environmental/climate problem addressed (only mandatory for information and awareness projects)

- The indicator increased from 500 individuals surveyed to 509 as per actual data.

12.1 Networking (mandatory)

- Professionals – experts in the field. The value for the 5 years beyond increased from 100 to 130.

13. Jobs

- The indicator increased from 8 jobs generated by the project to 13.

14.1. Running cost/operating costs during the project and expected in case of continuation/replication/transfer after the project period

- Beginning estimate includes annual warden salaries, supervision and reserve budget for other expenditure. The indicator for the 5 year beyond increased from 2,750,000 EUR to 377,045 EUR as it incorporated the value from the beginning of the project.

7 Comments on the financial report

The expenditure summary tables within this introductory section show the Project expenditure in Euro incurred over the duration of the Project from 1st October 2015 to 31st December 2020. The original end date of the Project was 30th September 2020, however, due to the COVID-19 pandemic and other circumstances, a request to extend the Project end date to 31st December 2020 was submitted on 4th June 2020 and was kindly authorised by the Commission on 14th July 2020. The Financial Claim Forms following this introduction give a fully itemised account of this expenditure. The submission of this Claim constitutes a request for the final EU LIFE Grant payment, for which the Project is now eligible.

Conversion of expenditure

All Project expenditure for RSPB and NWWT has been incurred in GBP. The expenditure itemised within this Claim has been converted to Euro in accordance with Article 23.4 of the Common Provisions. Thus, the GBP / EUR exchange rate applied by the European Central Bank on the date that the expense was incurred. However, the expenditure for BWI has been incurred in EUR and thus, EUR / EUR exchange rate has been applied. For exchange rates used by RSPB and NWWT, please refer to Annex 71.

However, for both RSPB and NWWT any EUR receipts are reported in the EUR amount and using an exchange rate of 1.000. The reason is because on a previous LIFE project (LIFE07 NAT/P/000649 - Safe Islands for Seabirds), it was shown that on some EUR receipts where we converted from national currency back into EUR, the EUR amount converted was higher than the actual receipt value and therefore we had to correct this at audit. We have since taken this stance to avoid this happening again. For BWI we refer to Article II 23.4 of the General Conditions of the Grant Agreement any receipts in a currency other than Euro shall convert costs incurred in another currency into Euro according to their usual accounting practices.

VAT recovery

The RSPB recovers around 90-97% of the VAT paid to HM Revenue and Customs (HMRC) each year. The actual amount of non-recoverable VAT varies from year to year, as the table below shows. RSPB have chosen to report on the unrecoverable element of VAT for certain suppliers, where a purchase order has been raised and where applicable.

Financial Year	Recoverable VAT	Non-recoverable VAT
15/16	92.60%	7.40%
16/17	90.37%	9.63%
17/18	90.08%	9.92%
18/19	94.66%	5.34%
19/20	94.81%	5.19%
20/21	96.96%	4.04%

We are unable to provide a single bespoke letter from HMRC verifying the actual amounts of non-recoverable VAT. We thank the Commission therefore, for having previously accepted (for other LIFE projects), the alternative documentation to verify our reimbursable VAT position. The same paperwork is provided in Annex 72, containing confirmation of the annual VAT recovery rate by our Senior Tax Officer.

8 NWWT cannot reclaim VAT under this Project. They can only reclaim VAT on expenditure related to grazing and forestry, as explained in the letter in Annex 73.

9 BWI, as a charity, cannot reclaim VAT. BWI Retail and Services is a separate entity and may reclaim VAT. The Office of the Revenue Commissioners have confirmed the charitable status of BWI and the auditor has confirmed that VAT cannot be reclaimed by BWI for all Project spend. The letter from the Revenue Commissioners was sent at the MR.

COVID-19 – Financial support

During 2020, the world was hit by the COVID-19 pandemic. This led to governments trying to shore up their economies by assisting employers, whose operations had been severely affected by COVID-19, to retain their employees, rather than terminating their employment.

In the UK, the furlough system was launched. This was where the UK Government paid 80% of employees' salary, for those who were affected by the COVID-19 restrictions. This percentage decreased during 2020 and remained in place until the end of September 2021. If staff were placed onto the furlough scheme, they were not allowed to work. For both RSPB and NWWT, the option of furloughing staff was not selected for all staff members, however, this did mean that no new staff could be employed, and those staff who could continue to work had to work from home. Strict travel restrictions were also imposed.

In Ireland, their government system was similar to the UK, where they would cover a percentage of the employees' salary, but they would also reduce the PRSI (Pay Related Social Insurance) for the employer. However, unlike the UK, there were no restrictions on whether the employee could still work. This meant that businesses were able to claim the assistance, but where possible, the employee could also continue to work. The scheme ran from April until the end of August 2020 and was only applicable to those staff who were on the payroll as of 29 February 2020. Like in the UK, travel restrictions were also imposed, although in mid-April and May the Irish government lifted restrictions for areas of conservation that were deemed a necessity. After August 2020, BWI also made the decision to implement a cost-saving measure across the organisation. From the 28 September 2020, staff were requested to move to either a 3 or 4-day working week, as well as a reduction in pay for all full-time staff. This was meant to be a temporary measure, however for this Project it continued until the end. This will be mentioned further in the Personnel costs section below.

Letters received

On 30th July 2020, we participated in a virtual monitoring mission with Karen Lunan. During this meeting some financial issues were raised and mentioned in the letter sent via email on 20th November 2020. We were asked to address these in the Final Report.

Financial Issues:

1. The timesheet collected for Mark Morris (NWWT) for the month of May 2019 showed excessive numbers of hours. Please check that the reported hours are correct and/or justify the excessive hours in the Final Report.

- This will be answered in the Personnel section below.

2. The hours reported in the timesheets submitted for Stephen Newton (October-December 2019) do not correspond to the hours reported in the financial statement. Please correct these to reflect the actual time spent on the project.

- This will be answered in the Personnel section below.

On 5th-7th June 2019, we welcomed David Pistulka, to review the Statement of Expenditure for all beneficiaries. A few observations were made, and we were asked to update and provide a conclusion in the Final Report.

Financial Issues:

General

6. In the Final Report, please provide replies to Questions 19 (note this should be 21), 23 and 24

- These will be answered in the External Assistance and Consumables sections below within their categories below

7. BWI, despite the fact the general accounts of the company are held in EUR, the financial statements provided at the last monitoring visit contained several cost items in GBP.

- These have now been amended in accordance with the General Conditions within the Grant Agreement.

8. All beneficiaries: It was noted that not all information had been completed in the financial reporting template, or the cells had been completed incorrectly. Also, that the % of time allocation to the Project should be filled in only in cases where the employee is specifically assigned to the Project on a fixed percentage of time.

- Regarding the incomplete data, this was rectified during the Project, but we do understand that we need to explain any blanks and will ensure that this is completed for other projects. Regarding the percentage, this was a misunderstanding and we have now rectified the issue.

Please note further comments will be made in the different category sections below.

7.1 Summary of Costs Incurred

PROJECT COSTS INCURRED				
	Cost category	Budget according to the grant agreement in €*	Costs incurred within the reporting period in €	%**
1.	Personnel	1,821,727	1,703,095	93%
2.	Travel and subsistence	179,309	87,648	49%
3.	External assistance	348,582	861,208	247%
4.	Durables goods: total non-depreciated cost			
	- *Infrastructure sub-tot.*	81,152	42,199	52%
	- *Equipment sub-tot.*	129,280	126,169	98%
	- *Prototype sub-tot.*			
5.	Consumables	316,376	205,574	65%
6.	Other costs	141,351	80,205	57%
7.	Overheads	211,243	217,427	103%
	TOTAL	**3,229,020**	**3,323,525**	**103%**

The table above shows that up to 31 December 2020, a total of **€3,323,525** was incurred on the Project, equating to 103% of the total Project budget. The overspend was unavoidable and can attributed to the following factor:
RSPB – there has been a significant overspend under the External Assistance category, which is mainly due to the restoration of the Blue Circle Island at Larne Lough. Please refer to the RSPB letter sent to EASME on 25th September 2018. The first tender revealed just one offer, but this was ineligible due to the lack of a marine construction certification. The second tender revealed just one offer, although this was eligible, the price quoted was very high. Even though the scope of work was then reduced, the work still cost significantly more than was originally budgeted. Therefore, savings were found in the Personnel, Travel, Consumables and Other Costs categories to accommodate this overspend.

Personnel (93%)
Personnel spend for the Project is under what was budgeted, even though we mentioned at the Mid-term Report (MR) that we were slightly overspent at that point in time. At the time, this was mainly due to the disproportionally high spending on preparatory actions in the first two years of the Project. Additionally, there was unforeseen work by Adam Seward and Rosie Miles. We also mentioned that some roles have increased, others have reduced, or been contracted instead of employed. At the time of the MR, the full costs of the Blue Circle Island restoration at Larne Lough were also not fully known. As mentioned in the letter to EASME on 25th September 2018, savings were to be made from the Personnel budget. These would come from the budget allocated to Skerries Wardens, Coquet Seasonal Warden and Coquet Seasonal Warden (Species Protection) as well as other staff members, (e.g. Seabird Island

Restoration Officer and Principal Conservation Scientist) as they would move from the LIFE contribution into Match funding.

There have been many challenges in 2020, that have been caused by the COVID-19 pandemic. This also had an impact on the Personnel costs for each beneficiary for this Project. As mentioned in the comments above, each country was trying to shore up their economy by assisting employers, whose operations had been severely affected by COVID-19, to retain their employees rather than terminating their employment. Not only were there the challenges regarding the different Government schemes, but also restrictions to everyday life. This included the requirement of space for people, travel was not allowed and the manta of working from home where possible was applied. This would of course impact the wardens that were working on the sites relating to the Project.

Coquet: Operated as normal. Although, the Seasonal warden (Species Protection) was not employed, and the night shifts to protect the eggs from collectors were distributed across the core team and volunteers. Coquet Island could operate due to the importance of the roseate tern colony.

Solent and Southampton: The Seasonal Warden post was offered to an individual prior to COVID-19, but it was revoked before the start date. Although we were able to engage the warden later in the season, this was on an External Assistance contract.

The Skerries: No residential wardening was allowed and only a few trips were carried out to check the colony by the core and local staff. This is a remote island and would have required regular provision of food and water from land. The risk of covid transmission was too high.

Ynys Feurig: No residential wardening was allowed, but some vegetation management and fox patrols in low tide were still performed by the core and local staff.

Larne Lough: There were some restrictions in early April to early May. However, the wardening was resumed in mid-May, but restricted by NIEA (statutory agency) only to the monitoring of the single pair of roseate terns.

Cemlyn: The Seasonal Warden post was offered to an individual prior to COVID-19, but it was revoked before the start date. Although we were able to engage the warden later in the season on a part-time basis, this was also on an External Assistance contract. The rest of the work was split between the core staff.

Rockabill: There were some restrictions in early April to early May. However, the wardens resumed work in mid-May. Rockabill could operate due to the importance of the roseate tern colony.
Dalkey: There were restrictions for Dalkey. Unfortunately, they were unable to obtain special permission from NPWS, however, the wardens resumed work in mid-May.

For the personnel in the UK furlough scheme, the element that was paid by the UK Government has been removed. This means that only the percentage paid by the employer has been reported, their total hours have also been amended. For RSPB and North Wales Wildlife Trust (NWWT), the impact of this was relatively small, as the UK Government gave the go ahead for some sites to be operational. Unfortunately, due to its remoteness, the Skerries was the main casualty, as no staff could be residential.

For the staff at BirdWatch Ireland (BWI), the Irish Government assistance was different to the UK - please see above. We have used the same method and have removed all costs that were paid by the Irish Government, however, as the government allowed the staff to carry on working, we have also taken the decision to percentage their hours as well as otherwise, the calculation of total hours available would cause issues with the hours worked. The other issue was that the Irish Government subsidy was only available for April through to August 2020. Therefore, BWI had to make the decision to ask its staff to reduce their hours and move to either a 3- or 4-day working week. To reflect the lowered hours, their salary would also be reduced by 20-40%. This has meant that they had to be reported as part-time from October 2020 until the end of the Project.

As mentioned in the MR, RSPB had a salary and role profile re-alignment, which came into effect in April 2016. All roles within the RSPB and the related salary bands were standardised and compared to other similar organisations, to provide a fair, transparent, and consistent pay structure. As a result, most salaries were amended. As an upgrade to this, in January 2020, RSPB introduced a new five year pay roadmap, which would commence in April 2020. The new approach to salary would consider a more suitable external benchmark for individual pay bands and adjustment of the pay bands to reflect market movement. The job evaluation system that was introduced in 2016, helped provide a much-improved parity between levels of pay for different roles in the organisation. In the MR it was mentioned that we would not include the 2016- and 2017-day rate variances for RSPB staff. We have that exact scenario for 2020, however we have included variances for the Project. We do emphasise that both the salary review in 2016 and 2020, and the government schemes for COVID-19, will impact the results.

As mentioned, we have underspent in this category, but we needed to ensure that there were savings for the Blue Circle Island Restoration Project. There have been challenges this year, and the savings made were there, but due to the new pay roadmap for RSPB the savings were not made where we originally stated they would be. We did reallocate the budget to ensure that the positions stated above were allocated against match funding. There were also savings made from the COVID-19 government subsidies and their restrictions.

Unforeseen personnel spend since MR

RSPB - Michael Babcock – one of the most important aspects of the Project was the development of best practice guidance, in support of replicability of the Project, but unfortunately the development of the package was not budgeted for, and the project staff did not have capacity and required knowledge to compile the guidance. It was decided to recruit a Project Officer for a 4-month contract to complete the task. The best practice guidance package can be found here: www.roseatetern.org/guidance

RSPB/NWWT – Wardens – as mentioned above, due the COVID-19 pandemic, there were severe restrictions on travel and meetings, which required a drastically different approach to site management compared to previous years. The Warden had to live close enough to the site, so that monitoring, fox patrols etc. could be carried out, and any travel or meeting people was kept to a minimum. For some sites, authorisation to go to the site came quite late into the season and so these staff had been contracted via a Service Agreement instead of being employed directly by the beneficiary.

In response to letters

Thank you for accepting the costs of the following as included and explained in the PR:

- Alison Giacomelli, South East Conservation Officer.
- Nigel Butcher, Senior Technical Officer.
- The Tern Warden for Larne Lough being contracted instead of employed.
- Frances Cattanach, Director of the NWWT. Frances' time overseeing the Project should have been included at the application stage. She also undertook the financial reporting for the Project until the Finance Officer was available (October 2016).
- Wesley Smith, Site Manager - Langstone and Chichester Harbours. Wesley helped Tim Callaway as Area Manager for Hampshire and Isle of Wight. He provided a lot of advice and assistance for Matthew Brown's post at Solent.
- Sheila Brook, Administrator (Ynys Feurig). Whilst an Ynys Feurig Reserves Assistant was budgeted, this did not originally include financial and administration work in the area, which Sheila provided.
- Hilary Brooker-Carey, Assistant Administrator (Coquet). Hilary provided similar administrative support to Sheila, but for Coquet and worked on the Coquet Operations Manual. She was employed from September 2017 to February 2018.
- Peter Harper, Area Manager – Northern Ireland. He was the main point of contact for organising wardening contracts, traps, etc.
- Caroline McKeon, Field Worker/warden. Employed by BWI to focus on gull scaring and disturbance monitoring (estimated cost €8-10,000). This person concentrated on the improvement of tern nest survival in the northern sections of Rockabill. The budget came from the budget for upgrading the wardening structure at Rockabill (see Infrastructure section).
- Rosie Miles – additional 6-month post from April to complete a best practice guide and gather information about common tern colonies in target areas for the strategy. Also, to organise review meetings in these target areas with NE and other stakeholders.

On 30th July 2020, we participated in a virtual monitoring mission with Karen Lunan. During this meeting some financial observations were raised, and we were asked to update and provide a conclusion in the Final Report.

1. The timesheet collected for Mark Morris (NWWT) for the month of May 2019 showed excessive numbers of hours.

- The hours recorded are actual hours spent on monitoring the colony. Whilst the hours may seem excessive, they can be explained by the fact that the wardens, Mark included, are based on site at Cemlyn. As such, with the nature of the role, normally 9-5 hours are not followed, and it is easy to accrue time simply by observing the tern colony and recording various aspects of its ecology. For example, apart from the daily routine, the wardens often undertook night watch for otter predation. However, they were taking regular breaks during the day on a rota basis to comply with the working hours regulations. The recorded hours do not affect the amount claimed, as the daily rate reported has been reduced.

2. The hours reported in the timesheets submitted for Stephen Newton (October-December 2019) do not correspond to the hours reported in the financial statement.

- Apologies for the error in entering the times for Stephen Newton into the Statement of Expenditure (SoE). These have been reviewed and have been amended accordingly. Prior to the submission of the SoE for BirdWatch Ireland, all Personnel information including timesheet data was double checked.

On 5th-7th June 2019, we welcomed David Pistulka, to review the Statement of Expenditure for all beneficiaries. A few observations were made, and we were asked to update and provide a conclusion in the Final Report.

9. All beneficiaries declared 1720 hours or a proportional part in case of lower involvement for several employees.

- Where the staff member has a full 12 month set of timesheets from a staff member, we have adjusted the hours from 1,720 to the actual hours worked in the year (i.e., we have added up the "total hours worked (including overtime)" figure for each timesheet for January through to December). However, we do not have a corporate time recording system and therefore do not have a way of recording the total hours worked in the year. However, we have endeavoured to ensure that the use of 1720 is kept to a minimum.

10. RSPB: It was observed that annual personnel costs resulting from the salary slips do not match with reported figures. For verification purposes please provide salary slips and calculation tables of Daniel Piec, Leigh Lock, Chris Lane and Joe Hrastelj for 2019 with the Final Report.
11. BWI: Please submit timesheets for Stephen Newton (2018,2019) for verification purposes with the Final Report
12. NWWT: Please attach salary slips of Chris Wynne for 2019 with the Final Report.

- Please find the above requests under Annex 81

13. RSPB: Adam Seward who has greatly exceeded the budgeted days for the Conservation Scientist under actions A4 and D1. In previous reports, two contract extensions were requested up to 30 June 2017. Timesheet submitted indicates he worked to 31 March 2018. Please provide justification with your Final Report for the higher than foreseen days for the work undertaken.

- There were two requests for extensions of Adam Seward's contract first till 31.03.2017 and then till 30.06.2017. However, the sheer amount of data for the period of 1996-2016 meant that it took several months to just collate and clean the data for analyses. A single model had to be run for a week using powerful computers and this process had to be repeated several times. Moreover, Dr Seward was also engaged in the analyses of GPS/ boat tracking data on Arctic terns at the Skerries, which also resulted in a published scientific paper (more in D1). Due to limited availability of RSPB's scientists, it was decided that engaging Dr Seward to develop the Arctic tern manuscript was the only way to complete the analyses. However, it resulted in a further extension of his contract till 31.03.2018. Following the submission of the demography paper, the editors sent their comments after Dr Seward's departure from the RSPB and the edition of the manuscript required additional calculations. To this

end, we issued an external contract for Dr Seward for £2,000, which also included the finishing of a manuscript for the Arctic tern GPS/ boat tracking from the Skerries (D1). The first two extensions were acknowledged by EASME (Ref. Ares (2018)1345820 - 12/03/2018; Ref. Ares (2019)1604412 - 11/03/2019), pending evaluation of the final budget and outcomes. Dr Seward's work resulted in two scientific papers in respectable peer-reviewed journals, which added value to the originally planned assignment

Travel (49%)

The Travel and Subsistence category is underspent for this Project. There were issues that have been mentioned previously in the PR, where boat travel to Frida and Inchmickery had ceased, as it had been deemed that working there was not feasible. Also, originally the boat travel was budgeted under both the Travel and External Assistance categories, depending on whether it was assumed that regular boat travel was available for public use (under Travel) or chartering of vessels was required (under External Assistance). Boat costs have mainly only been allocated under External Assistance as boat chartering was the only way to travel to most of the islands.

Travel was one of the categories that have been impacted by the COVID-19 restrictions. All governments applied travel restrictions from March 2020, to limit or stop people travelling and meeting to contain the spread of the virus. This meant that certain activities had to be revised and digital solutions had to be put in place. It meant that any meetings and of course the End of Project conference was held remotely and in a digital format. This meant that the travel budgeted for these events was no longer required. As restrictions were placed on people meeting together, this meant that journeys made were restricted to private car journeys and hence personal mileage incurred by individuals from March 2020.

Thank you for accepting the Skerries boat as explained in the PR as well as the trip to Ghana to meet CAW as explained in the MR.

External Assistance (247%)

There have been some significant challenges to the External Assistance budget category. We mentioned in the MR that spend was on track, but at the time of the MR the full costs of the Blue Circle Island Restoration at Larne Lough were not fully known. There were a few challenges around this element of the Project, as mentioned in our letter dated 25th September 2018. After the lengthy process in obtaining all the right planning applications, marine construction licences and associated habitat regulation assessments and surveys.

The first tender went out but only a single offer was received, unfortunately this offer could not be accepted. This meant that the work had to go out for tender again. Then second offer was received and acceptable, however, it was more than 453,800 Euros over budget. This meant that we had to reduce the scope, reducing overall costs to 544,000 Euros, which still meant being over budget by 352,000 Euros. Now that all of costs have been received, the actual final cost is 446,660 Euros, an overspend of 296,660 Euros. The RSPB was able to offset some of this through receiving a £75,000 grant from Tarmac. However, this still meant that around 210,000 Euros needed to be found, by making savings within the Project as mentioned in the letter and to also increase the RSPB's own contribution.

Another issue, as mentioned in the Final Technical Report, was the shingle bar at Cemlyn Bay not being feasible, as it would require removal of the eastern public parking located on top of the bar even though this would have restored the natural movement of the shingle and strengthened the bar. This would have meant that the traffic would increase to the western parking side, which is nearer to the colony and thus increasing tern disturbance. However, it

was identified that the restoration of the main tern island was required as it had suffered severely from erosion. Following EASME mission in 2019 it was agreed that the restoration of the tern island adequately compensated for the lack of shingle bar repairs.
The proposed installation of a zip line at Rockabill was not built in the end, although we did commission the development of the design. Unfortunately, due to the COVID-19 restrictions timing was no longer viable and it played a big factor in full installation not taking place. However, the National Parks & Wildlife Service (relevant statuary agency) confirmed that once all the safety checks are in place, they will consent and pay for the zip-line.

Unforeseen external assistance spends since MR

Seasonal Wardens for Solent and Cemlyn – in March 2020, the COVID-19 pandemic started, and all governments placed restrictions on travel. Those staff who could, worked from home. This meant that all businesses, as well as conservation sites, closed their doors for a period. Towards the middle of May there was a shift, and some businesses could operate, but under certain conditions. This meant that some of the conservation sites could reopen but all staff had to adhere to the other strict restrictions that were in place. As this was in the middle of May, this was well into the breeding season and due to furlough rules, we were unable to employ staff at that time. However, we did need to fulfil our obligations under the grant and the only way to fulfil was to employ via an external contract. Therefore, 2 seasonal wardens were externally contracted. Please may we ask that the costs for Mark Appleton – Seasonal Warden @ Solent and Southampton, Dawn Wilde – Seasonal warden at Cemlyn be considered eligible.

Otter fence at Coquet and Larne Lough – this was a fundamental, emergency purchase, which occurred on Coquet and Larne Lough (Blue Circle Island). On Coquet we had a semi residential otter which was predating puffins and we needed to build the fence to protect the only roseate tern colony in the UK. On Blue Circle, we had already planned some expenditure for what we thought was mink predation (traps, ammunition), but it turned out to be an otter. The only way to protect the colony for both Coquet and Larne Lough was to build a fence, as otters are a protected species. Although these costs were not in the budget, please may we ask that these costs are also considered eligible.

EASME formal response to the Midterm Report – 12 March 2018 Ref. Ares (2018)1345820 response

RSPB: *You reported costs for Virtual Reality project, please describe how the value for money principle was secured in relation to the costs in question and provide appropriate documentation (e.g., market research, etc.) at the Final Report stage.*

- The Virtual Reality Experience was developed for Coquet Island, which allowed hundreds of people to virtually visit the island and experience the seabird spectacle in 360-degree aspect. Coquet Island is a sanctuary, and no physical access is allowed.
- The VR Project for Coquet was developed in two stages:

  Stage 1: Simple 360-degree film experience of "being" in the middle of the colony. This system required only a mobile phone and basic headset. The cost of developing the 360-degree film was £1,000 in addition to the cost of the phone and headset. This was originally associated with the Baltic Gallery exhibition. During the considerations about upgrading the experience, we did obtain an alternative quote for only the development of the 360-experience movie from the RSPB's own film unit, and this was

approximately £3,000. We were informed by the unit that an external consultant would cost around £5,000.

Stage 2: Development of the VR ecosystem (museum), where the user can go for a journey from the jetty to the lighthouse through several information stations including incorporating the 360-degree experience. The cost of developing the VR ecosystem and recording 360-degree videos was £3,750 plus associated equipment (upgraded headset and high-performance laptop).

This is a much more interactive and educational solution. Given that only the development of the 360-degree video and postproduction would cost between £3,000 and £5,000 – the cost of the whole VR Experience should be considered really cost effective and impossible to achieve in the competitive market. We were able to achieve these prices by working in collaboration with Edinburgh Napier University, using their 3D camera rack and post-graduate students (Yonderly Productions), who created the VR ecosystem.

- The VR Experience has been used at numerous talks and events, including Birdfair, Scottish Parliament, RSPB Members Weekend, major visitor centre in Bempton RSPB reserve and other locations. In total, it has been used during 19 events and meetings, where over 1,250 people were exposed to the experience. In 2019, there was a further 346 people who were exposed to this experience. Due to the COVID-19 pandemic, we were not able to use this during 2020. It is one of the first VR experiences used in nature conservation and a very innovative and effective way of bringing people closer to experience a seabird colony.

Thank you for accepting the costs of the following as included and explained in the MR:

- We mentioned in the MR that although we were on track with spend, there was a slight overspend resulting in the need to charter boats. Originally the boat travel was budgeted under Travel and External Assistance, depending on whether it was assumed that regular boat travel was available for public use (under Travel) or requiring a chartered vessel (under External Assistance). The location of Coquet, Skerries and Rockabill meant that we could not use public transport and only chartered boats were the most viable option. This meant that these costs would now be attributed to External Assistance.
- Chris Knowles, Forth Island Tern Warden. This post was budgeted under Personnel but was instead contracted because the person needed would be required for variable numbers of hours throughout the year, which would be impractical if they were employed.
- Boat charter for the Skerries, Forth Islands and viewing Project sites during the networking visit to France. These trips were budgeted under Travel, but boats had to be chartered specifically for the Project due to availability. Eight people were involved in the trip. This is more than was anticipated, as to benefit the long-term strategy both the Solent team (Charlotte Belcher and Matt Brown) and Project Management team (Paul Morrison - Coquet, Steve Newton - Rockabill/ Dalkey, Tony Murray - Lady's Island Lake, Leigh Lock, Daniel Piec and Chantal Macleod-Nolan) attended. This helped secure coherence of the management across the whole metapopulation. Lady's Island Lake (second largest colony of roseate terns) is not part of any hard conservation actions

planned as part of the Project. However, we could still influence the management of the site through networking and exchange of knowledge. Tony Murray sat on the Technical Group and was part of all networking activities/ workshops. The relationship was also important for BWI as NPWS is the environmental government agency for Ireland and they work with them on various aspects of running Rockabill. NPWS is fundamental for the implementation of the long-term recovery strategy.

- Construction of a new hide at Larne (and associated materials under Consumables) to enable observation of the colony for longer periods without disturbance when on island.
- We budgeted for gull scarers for the Forth Islands under Consumables, but this included the development and production of these which has been separated out into External Assistance. Six gull scarers were produced for Coquet (1); Ynys Feurig (1); the Skerries (1); Cemlyn Bay (1); and Rockabill (2).
- Annual life raft hire for Coquet. This is a health and safety requirement for the boat certification with the Maritime and Coastguard Agency (MCA). The purchased RIB came without the life raft, and it was necessary to hire one on an annual basis.
- Course costs for Daniel Piec for 'Good practice stakeholder participation with a focus on the environment' in December 2017. This course has been identified as part of the role development within the Project, especially in relation to multi-stakeholder projects such as restoration of Blue Circle Island, Solent and Southampton and the Forth Islands and the partnership approach for the implementation of long-term management options. Also, a Wildlife Aware Course for Stephen Newton (BWI).
- Predator workshop in Bangor to allow networking of various people to discuss and share knowledge on predator management (November 2017). Some of the costs for this workshop may occur in other categories as well (e.g., External Assistance and Consumables).

Thank you for accepting the costs of the following as included and explained in the PR:

- Design costs for project logo.
- Translation of various promotional materials and the project website into Welsh, as advised moved to Other Costs.
- Fabrication/ design of the new/modified Coquet hide, including signage.
- Baltic event (including leaflets, space hire, video etc).
- Courses and training including for powerboats, sustainable use of dredging course and a RSPB Reserves Conference.
- Boat rental for Solent and Southampton Water SPA.
- Car and room hire for Coquet Island staff liaison and other staff meetings.
- Management of the restoration of Long Craig island and the installation of rafts in Port Edgar by the Scottish Wildlife Trust and Port Edgar Marina respectively.
- Artist to produce 6 drawings of roseate terns for postcards, roller banners etc.
- Predator control on Ynys Feurig.
- Production of 3 artificial platforms on lower laying cheniers at Solent and Southampton.
- Educational activities around Larne Lough.

Infrastructure (52%)

At the MR stage we mentioned that the main costs for this category were for a portable water supply on Skerries and the upgrading of the wardening infrastructure at Rockabill. The water supply system was still under discussion, as well as an application of a similar system to

Skerries on Coquet being considered. The Rockabill lease was also under threat of being transferred from Trinity House to the National Parks Wildlife Service, in which case they would take these works forward.
At the final stage, costs have come in under budget. It was decided that the portable system on Coquet would not be the same set up as that of Skerries. The system on Coquet would be more like a boat water system, this meant that these costs would come in under Consumables. Whilst the portable water system on Skerries would have to bespoke, the final cost for this came in under budget.
The other big cost in this category was the upgrading of the wardening infrastructure at Rockabill. There was prolonged uncertainty about the responsibilities for maintaining the warden facilities, which was subject to the lease agreement between Irish Lights and the NPWS. In 2019 this was resolved, and a new long-term lease was agreed. The wardens gained access to the light keepers' quarters, which were larger and in a better condition. All minor refurbishment needs to the lighthouse quarters were to be covered by the NPWS as part of the lease agreement. The diesel-powered generator also required servicing, together with replacing the water pipes for the provision of water for the toilets and showering system. This was undertaken by Irish Lights servicemen, as they knew the system. This generated savings in the LIFE budget, which meant that we were able to focus on the larger repairs. The Project focused on the outdoor shed, which was for the storage of nest boxes and a small back-up generator. These costs would have been split between Infrastructure, Equipment and Consumables dependant on cost and classification of what is an asset. As mentioned within the Technical Administrative part of the Final Report, RSPB agreed with BWI to cover these costs as originally these were the responsibility of BWI.

Equipment (98%)
As confirmed in our MR we were on track for spend in this category, given that most of the equipment was required early in the Project. Some items that were on the budget originally were transferred to Consumables as they were not registered or recorded in the RSPB or Associated Beneficiary's asset register (or any other equipment lists) due to their value. Examples of this include computer equipment that was originally logged as Equipment; however, these are classified as Consumable items.
The static caravan onsite at Ynys Feurig was not replaced until quite late in the Project. This was due to the existing caravan being a good condition throughout most of the Project. During the final years, the condition deteriorated, so a replacement caravan was purchased.
Supply of replacement and upgrade surveillance system. The surveillance system (CCTV cameras) is an integral part of the protection against egg collectors and people trying to land on the island in places not visible from the jetty or when wardens are not near the colony. During the COVID-19 pandemic and government restrictions, the wardens were not always available to be near the colony. The system needed to upgrade so that the colony could always be protected. This was originally budgeted under External Assistance and Consumables, however due to the cost of the item this is now classified as Equipment and not a Consumable.
Tripod/Telescope for Coquet was originally budgeted under Consumable, however due to the cost of the item this is classified as Equipment and not a Consumable.

Thank you for accepting the costs of the following as included and explained in the MR:

- Tern raft for NWWT.
- Construction of the hide at Ynys Feurig.

Thank you for accepting the costs of the following as included and explained in the PR:

- Aerolaser for gull control.
- New boat for Coquet Island.
- Desalination unit for Coquet Island (the associated steel frame is under Consumables).

Consumables (65%)
Consumables was also one of the three categories that have been impacted by the COVID-19 restrictions. This meant that certain activities had to be revised and digital solutions had to be put in place. Any meetings, and of course the End of Project conference, were held remotely and in a digital format. As a result, the venue hire, refreshments and any materials linked to the End of Project Conference were no longer required.
As mentioned in the Final Technical Report the budget for breakwater habitat and the shingle island at Solent and Southampton were split in between External Assistance and Consumables. However, these expenses came in solely under External Assistance as the cost was combined. We were unable to split out the invoices as we have done before as the quote was combined.
Also mentioned in the previous PR and the MR, there were issues behind GPS/Geolocators tags. It was felt that the technology and attachment techniques needed to be tested on other, more abundant species. In 2016 we mentioned that there was a pilot study involving tagging 10 Arctic terns on the Skerries. This was combined with ECON Ecological Consultants who had developed a visual boat tracking system. This pilot study resulted in the RSPB being in favour of using boat tracking instead of GPS tags. It was found that there was a temporal decline in chick feeding rates and so some of the costs allocated to GPS tags were now moved to External Assistance, for the hire of boats to enable visual tracking of terns. In 2018, there was an opportunity to work in collaboration with University College Cork, who has been successful in obtaining research fellowship funding. However, the University withdraw from the Project and it was best to continue using the visual boat tracking method.
Another impact to this category is that some items that were in the budget originally were transferred to Equipment, as they were required to be registered or recorded in the RSPB or Associated Beneficiary's asset register (or any other equipment lists) due to their value. Examples of this include Telescope/tripod that was originally logged as Consumables, however some of these are classed as an asset due to their value.

Unforeseen Consumables spend since MR

Otter fencing: On Coquet we had a semi residential otter which was predating puffins and so we needed to build the fence to protect the only roseate tern colony in the UK. On Blue Circle, we had already some expenditure planned for what we thought was mink predation (traps, ammunition), but it turned out to be an otter. The only way to protect the colony for both Coquet and Larne Lough was to build a fence, as otters are a protected species.
Solar panels were purchased for Rockabill: to provide an independent source of electricity in the warden quarters of the lighthouse. This powers surveillance and water purification systems, and the appliances, providing a 24-hour access to electricity. We did not receive an agreement from Trinity House to source the electricity from their solar panels, as this would cause a hazard for the operation of their system. Although these costs were not in the budget, we do ask that they are considered eligible.

Thank you for accepting the costs of the following as included and explained in the MR:

- 8 tern rafts for the lagoons at Solent and Southampton SPA as described in the technical section of the PR.

- Smaller items/accessories for the new boat for Coquet, as mentioned under the Equipment category in the PR (including anchor, safety rails, fittings etc).
- Costs associated with the boat rental for Solent & Southampton SPA as mentioned under External Assistance in the PR (including fuel, lifejackets, an anchor, replacement key and repair work under External Assistance). This was due to damage caused during our use of the vessel and does not include general maintenance.
- Travel kits for European travel (networking visits).
- Mobile hide for Solent and Southampton SPA.
- ArcGIS and virus protection for the computer that was budgeted for Stephen Newton (BWI). Also costs for configuring the computer which are under External Assistance.
- Paper for printing of Coquet leaflets that was budgeted under Other Costs.
- Containers and consumables required in relation to the transport of birds for analysis as mentioned in the PR under Other Costs.
- Clothing and personal protection equipment for Cemlyn wardens. This was budgeted for Coquet, Ynys Feurig and Skerries, but mistakenly not for Cemlyn.
- Consumables associated with wardening activities and predator management at Cemlyn, for example phone handset, nails etc for nest boxes, specimen posts, access management consumables, animal deterrents and spotlight batteries.
- Solar arrays for Coquet and associated parts (as mentioned under Equipment in the PR)
- Supplies (fresh food and water) for the BWI wardens, visitors & volunteers. There is no refrigeration on Rockabill island and so fresh supplies have to be delivered.
- Drone for monitoring of the chenier recharge (movement of the deposited material) required by NE and also for bird monitoring next year on Solent.

Thank you for accepting the costs of the following as included and explained in the PR:

- Refreshments for meetings.
- Agrilaser handheld laser pens for gull predator control at Skerries and Rockabill.
- Baltic event materials.
- Nest boxes for Skerries, Ynys Feurig and Larne.
- Decoys, tape playback equipment, speakers and solar panels for use at Skerries.
- Larsen Traps for predator control at Ynys Feurig.
- Trial cameras for the monitoring of predation at Solent and Southampton.
- Observation hides and associated materials for Rockabill and Dalkey. There are two hides at Rockabill to cover a larger proportion of the colony with ring reading. This therefore provides better estimations of survival, juvenile recruitment, and immigration/immigration parameters for our understanding of metapopulation dynamics.
- Consumables associated with predator management.
- Habitat management trials required to combat vigorous vegetation on the Skerries, Coquet and Larne Lough.
- As described in the PR under the Equipment category description, we would like to upgrade the welfare facilities on Coquet. As these costs are incurred, we have applied them to the most appropriate spend category.

EASME formal response to the Midterm Report – 12 March 2018 Ref. Ares (2018)1345820 response
23. RSPB, BWI; You reported the costs for Fuel for generator under seq. 31,12,16,19,33,39 and 44 (RSPB) and 38 (BWI). However, these costs were removed from the proposed budget at the revision stage. Please remove all the related costs at Final Report Stage.

These costs have been removed from both RSPB and BWI.

24. RSPB; You have reported costs related to laptops, printers, laptop/computer accessories and phone and hotspot charges. Please be reminded to report computers and laptops in the correct cost category and in case the number of devices exceeds the foreseen number in your Grant Agreement, you should explain the reason for this deviation. Also, please note that the costs for computers or laptops intended for the administration of the Project, printers, computer accessories and phone and hotspot charges should be covered by Overheads.

- Laptops/computers were originally budgeted in Equipment. However, as mentioned in the PR and MR, the classification of Equipment is the requirement to be registered or recorded in the RSPB's or Associated Beneficiary's asset register (or any other equipment lists) depending on their value. For RSPB anything under £2,500 for a single item is classed as a Consumable item, whereas anything over £2,500 is classed as a piece of Equipment and required to be entered as an asset. As per the budget, we have now only reported 3 laptops, the 4th laptop is for the VR Experience as mentioned in the External Assistance category. The purchased laptops were used as part of the site operation at the Skerries and Solent to computerise data, communicate with mainland, analyse images, write reports etc., and a laptop for the Cemlyn wardens. The final laptop was for the Project Manager, whilst another laptop purchased has since been removed, as we deemed this to be an overhead expense.

- The reported costs for the mobile hotspots are only applicable to the islands of Skerries and Ynys Feurig and are in budget, as these are required for Health and Safety protocol. However, in 2018 these costs were reviewed, and it was felt that a cheaper and far better option was to purchase SIM cards with a pre-paid element for both calls and data.

Other Costs (57%)
We mentioned in the MR that we did not anticipate a significant underspend on this category. However, we could not predict the global COVID-19 pandemic. As mentioned previously, we could not hold an End of Project conference as the government restrictions stopped us from travelling and meeting each other. This meant that the conference was held remotely, so there was no longer a requirement for accommodation and venue hire. The pandemic would also impact on office rent for the staff at Solent and Southampton as we were asked to work from home where possible. Then finally it would impact on the audit costs for the Project, as RSPB, NWWT and BWI all had the instruction to work from home where possible. As a consequence, the completion of the audit was significantly delayed.

Thank you for accepting the costs of the following as included and explained in the MR:
- Project management software to aid the project manager in creating the project website.

Thank you for accepting the costs of the following as included and explained in the PR:
- Ringing licenses from the British Trust of Ornithology.
- Baltic event which included printing of the project logo on flags, panels etc.

- Boat equipment storage and mooring fees for Coquet Island.
- Postage/courier costs specifically related to aspects of the Project e.g., crates for birds for analysis (i.e. not standard postage costs).
- Pin-badges, t-shirts and mugs.

Overheads are an indirect cost and have been calculated as per the General Conditions at 7% of direct project costs.

7.2 Accounting system

The RSPB uses the financial software package OPENAccounts to record Project expenditure and income. The Project has been designated as a Society Major Project (SMP) within the RSPB budgeting system. It is identified by the code 2RO-. This has the advantage of separating the budget for NEW project income/spend into a single dedicated cost centre, rather than splitting the budget between a number of cost centres which would increase complexity. In this sense, all LIFE Project income and all expenditure directly funded from the LIFE income, is budgeted within, and paid from this SMP. Being an SMP, the RSPB accounting system generates monthly management reports comparing actual spend against the SMP budget that are sent to the Project Manager and other senior managers. Note that EXISTING project spend (essentially the RSPB's contribution to the project) remains budgeted within various other RSPB cost centres. This avoids the disruption and potential for errors of temporarily moving these costs to a dedicated Project cost centre.

A project code – 2RO-G-LIFE – has been raised for the Project. When Project expenditure is incurred (regardless of which cost centre is used) this project code is appended to the transaction details and stored on the RSPB accounting system. Each month, transaction listings are sent out by RSPB Finance to the Project Manager, Project Development and Support Unit (PDSU) staff, and other senior staff based on these project codes, allowing us to monitor Project spend monthly. This transaction listing is also used to fill in the Project Statement of Expenditure (SoE) regularly.

The RSPB accounting system does not have the ability to split non-full-time Personnel costs by project code, thus the Project is reliant on the collation of timesheets to justify how an individual's time has been allocated to the Project. The RSPB utilises a standard LIFE Timesheet for all its LIFE projects, which is available on the RSPB Intranet page and is also saved on the Society-wide computer directory. The timesheet is based upon the model timesheet LIFE supply on its website, but there are separate rows for each of our current LIFE projects. This method makes it easier to ensure that we are not double funding by charging the same hour of an individual's time to more than one LIFE project. Timesheets are sent to PDSU on a regular basis and are entered onto the SoE as well as a separate timesheet monitoring sheet as soon as possible after they are received. We have also created a central folder on the Society-wide computer directory where all LIFE timesheets being filled out by RSPB staff can be stored. This helps people know exactly where their timesheets are kept, allows others to check if timesheets are being filled in promptly, and gives PDSU access for monitoring time/spend against action codes (via a separate tab).

The RSPB Finance Department uses a paperless finance system whereby all invoices are sent directly to our central Finance department and scanned as soon as they are received. These scans are stored as image files on the computerised finance system (called eBis) and can be retrieved by anyone logging onto the finance system. Electronic invoices are also being received more often as this type of invoicing becomes more common. As paper invoices are not retained for any length of time, this makes it difficult to ensure the Project reference is marked on each invoice before the original is archived. We are trying to ensure references are included by the supplier wherever possible. Please note that for timesheets it is essential that

paper records are kept - time will not be claimed unless there is a paper timesheet on file. This is one type of cost that will not go "paperless" at this time.
Where Project staff are not working 100% on the Project and where we do not have a full (12 month) set of timesheets for a calendar year, we use the standardised annual productive hours of 1,720 hours/year.
NWWT also use a project code to assign, and monitor spend associated with the Project. Their code for this project is 209. Excel spreadsheets are used to monitor spend against budget in conjunction with the monitoring of overall Project spend against budget done by the RSPB. NWWT use Sage 50 Accounts for their finance recording. For NWWT staff time, staff record start and finish times for each task completed. An internal sheet they use then calculates the minutes worked as a percentage of an hour and this is input into the LIFE timesheet.
BWI use the accounting package Great Plains Dynamics, a Microsoft product. Each project has a cost centre, which in the case of this Project is 50025 (now 55025 since GP was upgraded in 2019). All income and costs related to this Project are coded using this code. Project costs are monitored by the Dr Stephen Newton and Dr Anita Donaghy, with an overview provided by the Office Manager Annette Lambkin (following the resignation of Olivia Crowe, the Head of Conservation and Science). Overall financial control is provided by Andrew Bonehill, Group Accountant, and the CEO Nicholas Williams.

7.3 Partnership arrangements

Partnership Agreements with both Associated Beneficiaries have been signed and initial, and mid-term where applicable, transfers of project funds made (in Euros). Both Associated Beneficiaries fill in the Statement of Expenditure (SoE) on a quarterly basis and submit them to the Project Manager and PDSU. Copy financial paperwork is emailed at the same time as the financial report for checking, use at the time of the Project audit and eventual storage. The RSPB collates this information into the Consolidated Statement of Expenditure.

7.4 Certificate on the financial statement

Auditor's report/declaration
As the maximum contribution to the Project exceeds €300 000, an audit has been undertaken to verify the final Statement of Expenditure and Income (cf. Art II.23.2 of the General Provisions). The details of the auditor we used are as follows:

Martin Williams
George Hay Chartered Accountants
Brigham House
High Street
Biggleswade
Bedfordshire, SG18 0LD
Phone: +44 (1767) 315010
Email: info@georgehay.co.uk
Web: www.georgehay.co.uk

George Hay Chartered Accountants is registered to carry on audit work by the Institute of Chartered Accountants in England and Wales (registration number 5354055).
The RSPB will lead the audit for both ourselves and the two Associated Beneficiaries.

7.5 Estimation of person-days used per action

Action type	Budgeted person-days	Estimated % of person-days spent
Action A: Preparatory actions	655	107%
Action B: Purchase/lease of land and/or compensation payment for payment rights		
Action C : Concrete conservation actions	9,963	91%
Action D: Monitoring and impact assessment	918	74%
Action E: Communication and Dissemination of results	666	87%
Action F: Project management (and progress)	1517	118%
TOTAL	13,719	98%

We mentioned in the MR that we would be on track for the number of days spent on the Project compared to that budgeted. The significant over allocation of hours to the A actions is mainly due to the unexpected work of Rosie Miles and Adam Seward, as explained in the PR. Under the F actions, report writing/production has taken more time than expected

8 List of Annexes (all electronic)

- D/S – **D**eliverable/ **S**upplementary information. Deliverables in bold.

Annex	**Action**	**D/S**	**Description**
Annex 0	F1	S	Annex to the RSPB-BWI Partnership Agreement
Annex 1	A1	S	Update on SPA condition and planning context
Annex 2	**A2**	**D**	**Technical report on long-term offshore and coastal management opportunities**
Annex 3	A2	S	Tern Colony Register
Annex 4	A3	S	PowerPoint presentation and agendas for diet seminars
Annex 5	**A4**	**D**	**The paper "Metapopulation dynamics of roseate terns: Sources, sinks and implications for conservation management decisions" by A. Seward et al.**
Annex 5a	A4	S	MS Access Demograghy Database
Annex 6	**A5**	**D**	**Communication Plan – 2018**
Annex 6a	**A5**	**D**	**Communication Plan – 2019**
Annex 6b	**A5**	**D**	**Communication Plan – 2020 under Covid**
Annex 7	F1	S	Complete list of project staff
Annex 8	C1	S	Coquet Operational Manual
Annex 8a	C1	S	Coquet Annual Report 2018
Annex 8b	C1	S	Coquet Annual Report 2019
Annex 8c	C1	S	Coquet Annual Report 2020
Annex 9	C1	S	Solent breeding season report 2018
Annex 9a	C1	S	Solent breeding season report 2019
Annex 9b	C1	S	Solent breeding season report 2020
Annex 10	C1	S	Solent Fox Control Report 2018
Annex 10a	C1	S	Solent Fox Control Report 2019
Annex 11	C1	S	Drone monitoring trial report
Annex 12	**C1**	**D**	**Skerries water purification design**
Annex 13	C1	S	Skerries annual reports 2018
Annex 13a	C1	S	Skerries annual reports 2019
Annex 13b	C1	S	Skerries annual reports 2020
Annex 14	C1	S	Ynys Feurig annual report 2018
Annex 14a	C1	S	Ynys Feurig annual report 2019
Annex 14b	C1	S	Ynys Feurig annual report 2020
Annex 15	C1	S	Cemlyn community engagement report 2018
Annex 15a	C1	S	Cemlyn community engagement report 2019
Anenx 15b	C1	S	Cemlyn community engagement note on 2020 activities under Covid
Annex 15c	C1	S	Cemlyn annual report 2018
Annex 15d	C1	S	Cemlyn annual report 2019
Annex 15e	C1	S	Cemlyn annual report 2020
Annex 16	C1	S	Larne Lough breeding season report 2018

Annex 16a	C2	S	Larne Lough breeding season report 2019
Annex 16b	C3	S	Larne Lough breeding season report 2020
Annex 17	C1	S	Forth Islands Tern Network meeting minutes
Annex 18	C1	S	Forth Island breeding season report 2018
Annex 18a	C1	S	Forth Island breeding season report 2019
Annex 18b	C1	S	Forth Island breeding season report 2020
Annex 19	C2	S	Rockabill annual report 2018
Annex 19a	C2	S	Rockabill annual report 2019
Annex 19b	C2	S	Rockabill annual report 2020
Annex 20	C2	S	Rockabill Manual
Annex 20a	C2	S	Rockabill Manual Appendices
Annex 21	C2	S	Dalkey annual report 2018
Annex 21a	C2	S	Dalkey annual report 2019
Annex 21b	C2	S	Dalkey annual report 2020
Annex 22	C3	S	Larne Lough Principal Designer Certificate 2018
Annex 22a	C3	S	Larne Lough Principal Designer Certificate 2020
Annex 23	**C4**	**D**	**Summary report on statutory body engagement**
Annex 24	**C5**	**D**	**Final report on tern trapping issue in Ghana**
Annex 25	**D1**	**D**	**Monitoring summary report for 2017**
Annex 25a	**D1**	**D**	**Monitoring summary report for 2018**
Annex 26	**D1**	**D**	**Summary report on monitoring and ringing/ tagging findings**
Annex 27	**D1**	**D**	**Arctic tern GPS/ boat tracking Seward et al. 2020 Ibis paper**
Annex 28	**D1**	**D**	**Visual tracking of roseate tern from Rockabill Perrow et al. 2019 BB paper**
Annex 29	**D1**	**D**	**Rockabill visual tracking area utilisation and sample sizes Final Report**
Annex 30	**D1**	**D**	**Geolocator study Redfern et al. 2010 Ibis paper**
Annex 31	**D2**	**D**	**Summary report on impacts on awareness and attitudes**
Annex 32	**E1**	**D**	**Cemlyn interpetation and no access signs**
Annex 33	**E1**	**D**	**Cemlyn leaflet**
Annex 34	**E1**	**D**	**The Skerries - site signage**
Annex 35	**E1**	**D**	**The Skerries – interpretation board – South Stack reserve**
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Annex 37	**E1**	**D**	**Solent – interpretation board**
Annex 38	**E1**	**D**	**Solent – site leaflet**
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Annex 40	**E1**	**D**	**Coquet leaflet**
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Annex 47a	**E1**	**D**	**Project leaflet (Welsh)**
Annex 48	**E1**	**D**	**Migration infographic**
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Annex 50a	E2	S	Project website and Coquet life streaming link statistics 2019-2020
Annex 51	E3	S	Report from networking trip to Azores
Annex 52	E3	S	Report from biosecurity and rapid response training
Annex 53	E3	S	Irish Sea Network meeting agenda and report
Annex 54	E3	S	Norfolk Beach Nesting Bird Workshop agenda and report
Annex 55	E3	S	North Atlantic Roseate Tern Webinar agenda
Annex 55a	E3	S	North Atlantic Roseate Tern Webinar - Day 1 Recording
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Annex 56a	E3	S	International Roseate Tern Newsletters for 2018
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