Darwin Initiative: Half Year Report

(due 31 October 2013)

Project Ref No	19026
Project Title	Darwin Initiative Biodiversity Action Plan (**BAP**) for Ascension Island
Country(ies)	Ascension Island – UK Overseas Territory (**OT**)
Lead Organisation	University of Exeter (**UoE**)
Collaborator(s)	Ascension Island Government Conservation Department (**AIGCD**) Centre for Ecology and Hydrology (**CEH**) Queen Mary University of London (**QMU**) Royal Botanical Gardens, Kew (**RBG Kew**) Royal Society for the Protection of Birds (**RSPB**) University of Lund (**UoL**)
Project Leader	Dr. Annette C. Broderick and Prof. Brendan J. Godley
Report date and number (eg HYR3)	31 October 2013 HYR2
Project website	www.ascension-island.gov.ac/government/conservation/projects/bap/ www.facebook.com/AscensionIslandConservation https://twitter.com/AIGConservation

1. Outline progress over the last 6 months (April – Sept) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up).

Progress in carrying out project activities (1-4)

As we pass the half-way point of this project, we continue to progress well against our schedule on all key aspects and do not anticipate any setbacks that would jeopardise the completion of the project.

Output 1. Capacity Building

1.1 Appointment of Darwin Research Fellow

Dr Nicola Weber and Dr Sam Weber were appointed as the Darwin Research Fellows (DRF), sharing the position, at the start of the project. AIGCD experienced some reshuffling of personnel in April 2013 and Nicola took on the role of Acting Conservation Manager for the department. Following a successful completion of the 3 month appointment, she was offered the position, which she then accepted. While she is still heavily involved in this project, in particular the organisational side of things, Sam has now taken the lead role in delivering the BAP and co-ordinating the research efforts of the department in line with the priority targets that are being identified by this project.

1.2 Appointment of Darwin Trainees

The first traineeship was taken up in January 2013 by Cameron Stewart, a resident of Ascension Island who was living with his parents and keen to gain experience in practical conservation work during his gap year before going to University. Cameron successfully completed his 6 month contract in June 2013 and then continued to carry out voluntary work with the department until he left the island at the beginning of September 2013. He proved to

be an asset to the team, assisting with all aspects of our work as detailed in his articles for the Conservation Quarterly – see below for links. While Cameron's undergraduate degree course does not have an environmental sciences base, he reports that he benefited greatly from the experience and as such has joined related ecological student societies at University.

The second traineeship was taken up in June 2013 by Kenickie Andrews who came to Ascension Island from St Helena in September 2012 to work with AIGCD as a fieldworker, primarily working on trail clearing in the National Park. During this time he showed great potential and so the team was extremely pleased when he showed interest in staying for another 6 months to gain further experience. As the Darwin Trainee, Kenickie has been heavily involved in the seabird monitoring, including starting training for his BTO ringing licence and has had more responsibility for data input and analysis. Kenickie will return to St Helena at the end of his contract in December 2013 and then subsequently plans to enrol on a higher education programme in the UK. As Kenickie did not have close family on Ascension for financial support and so incurred a higher cost of living, it was decided that his salary should be increased to £500 per month (as opposed to the £250 p.m. budgeted for those living with their family) to make the traineeship a viable option. This will not affect the project budget, but will mean that one less Darwin Trainee position can be offered in future. Given the shortage of suitable candidates in previous rounds it was felt that this was an acceptable trade-off to retain a motivated resident of the South Atlantic UKOTS within AIGCD. Indeed, Kenickie has justified this decision by showing great commitment and the internship has provided a solid base on which he hopes to build a future in the biodiversity conservation profession.

The third and final traineeship is currently being advertised and it is anticipated that the successful candidate will take up the post in January 2014. To fit with the current needs of AIGCD, the first month of this position will provide the intern with expert training in the monitoring of sea turtles. Over the subsequent 4-5 months they will then coordinate the work of 3 other volunteers on a trial sea turtle intern project. Ascension Island is the second largest rookery in the South Atlantic for the green turtle and due to positive conservation actions, the population is growing rapidly. With the increasing demands of the monitoring, rescue and public awareness work associated with the sea turtle project, AIGCD are keen to recruit additional help. Subject to the trial internship scheme delivering results in 2014, the intention is to make this an annual occurrence. It is anticipated that the Darwin Trainee/ Intern Co-ordinator will gain a great deal of leadership and data collection experience from this position and we have already had 150 applications for the position in the 3 weeks that it has been advertised.

1.3 – 1.7 Training of staff and trainees in taxonomy, population monitoring, endangered plant culture techniques and GIS, including workshops.

Four out of the five planned on-island training sessions took place in the first year of the project in order to build up local capacity for successfully meeting the aims and objectives of the project. In the past 6 months, AIGCD staff have been putting into practice what they learnt in the workshops – improving the *ex-situ* plant propagation facilities, implementing improved methodology for the annual endemic plant census of the wild populations and the nesting seabirds, and developing the reference collections e.g. for invertebrate samples and a herbarium collection for flowering plants and bryophytes. Following the GIS workshop last year (and the very recent start-up of the South Atlantic GIS Centre at the South Atlantic Environment Research Institute [**SAERI**]) the existing databases were "cleaned-up" and improved for our current needs. All data collected are inputted into these and training has begun on the use of the open-source software, QGIS, for displaying and analysing these data.

All AIGCD staff members participated in a week-long workshop in June 2013 on "Managing Protected Areas in the South Atlantic". The event was organised by Falklands Conservation, but hosted on Ascension Island as a central meeting point for people from the South Atlantic OTs and the UK. AIGCD team members arranged a number of field visits and prepared case study materials for the workshop, and were heavily involved in making it a success. A lot of networking was done and connections established that will be invaluable as we progress with the planned designation and management of protected areas on Ascension (and in the SA OTs more generally).

Although not funded by this Darwin grant, two members of staff working on an OTEP funded project, both received training in May and June 2013 at the Natural History Museum, London in invertebrate and bryophyte taxonomy from Dr Howard Mendall and Prof. Jeff Duckett, respectively. The OTEP project was successfully completed in September but both staff members were given extensions to their contracts by AIG in order to enrol their expertise in the delivery of the current Darwin Project, particularly in the development of invertebrate and herbarium collections for the Island (see 2.1).

As part of the seabird tracking work that was initiated in the first year of the project, in September 2013 we were joined by Dr Pete Mayhew, RSPB Regional Reserve Manager for North Scotland, as part of his sabbatical on St Helena and Ascension. He provided further training and assistance to AIGCD in the use of tracking devices on seabirds (frigates and tropicbirds – see **2.4**) and in methods for monitoring the storm petrel population. It is anticipated that the final part of this training in vertebrate tracking (primarily seabirds and marine turtles) will take place in April 2014.

Currently, there are two training workshops planned for the coming months that will build upon the training that has already been received. In the first week of December 2013, Katie Metcalfe, a GIS consultant involved with the SAERI GIS-hub will lead a one week training course for all AIGCD staff focussing on how to display spatial data on a map in QGIS. Following this, in January 2014, a horticulturist from RBG Kew will provide a 2 week training course on-island focusing on propagation techniques for one of the Island's Critically Endangered ferns, *Ptisana purpurascens* that has proven particularly difficult to grow from spores.

Output 2. Field Research

Peer-reviewed publications resulting from activities relating to the project:

Davis, D. R. & Mendel, H. (2013) The genus *Erechthias* Meyrick of Ascension Island, including discovery of a new brachypterous species (Lepidoptera, Tineidae). *ZooKeys*, 341, 1-20.

Weber, N, Weber, S.B., Godley, B.J., Ellick, J., Witt, M. & Broderick, A.C. (2013) Telemetry as a tool for improving estimates of marine turtle abundance. *Biological Conservation*, 167, 90-96.

2.1 A full inventory of animal and plant species for Ascension Island

This target has been achieved in terms of compiling all known records into databases for the terrestrial vertebrate species, endemic and native higher plants, bryophytes (lower plants), terrestrial invertebrates, fish, marine invertebrates and algae. Additionally, with the help of a volunteer we have created a natural history library that contains a copy of all peer-reviewed journal articles and some of the grey literature detailing Ascension Island's biodiversity. Species lists for some taxa (in particular for bryophyte, invertebrate and marine species) are unlikely to be exhaustive due to incomplete sampling coverage and a lack of on-island taxonomic expertise. However, as part of this project and two others that have ran alongside it (OTEP funded: An Ecosystem Approach to Plant Conservation on Ascension Island and Darwin Initiative Scoping Award: Assessing Ascension Island's Shallow Marine Biodiversity), we have begun to address this. A large number of specimens have been collected and are currently with different specialist taxonomists - a number of the samples (in particular for the marine species) are believed to be first records of their presence at Ascension Island and a few others are believed to be endemic species (see reference above for the description of 2 new endemic moths). Herbarium cabinets and display units to house higher plant, bryophyte and invertebrate reference collections have been set up in the AIGCD building and work is on-going to fill them with specimens.

2.2 Development of ex-situ plant conservation techniques

The successful workshop led by Marcella Corcoran from the Royal Botanical Gardens, Kew in the first year of the project prompted a review of the methods and processes being used and

how they could be enhanced to further develop this important work programme. Following the workshop, Assistant Conservation Officer, Jolene Sim, introduced a new record keeping and labelling system into the endemic plant nurseries to ensure that genetic diversity is maintained (a problem in the past), which is continuing to work very well. The health of the plants is closely monitored and recorded while in the nurseries, with trials carried out e.g. varying growing media and watering regimes to determine the optimum conditions for cultivating each of the endemic plant species. Additionally, a new protocol has been implemented for their reintroduction into the wild, including individual labelling and an extended period of monitoring to evaluate how successful the propagation and reintroduction process has been.

In the past, the majority of cultivation work has taken place in outdoor shade houses, however AIGCD facilities are currently being improved through core government funding, including the development of better laboratory facilities. This has allowed greater experimentation with cultivation techniques, including the use of agar as a medium for spore germination for the endemic ferns – a technique that AIGCD staff have received training in as part of this project. As AIGCD staff members have an improved awareness and greater experience with ex-situ plant conservation techniques they are more able to identify areas and facilities that need further improvement and are currently working with AIG to secure more government funding to improve and advance their shade house facilities.

The next training session relating to this output is anticipated to take place in January 2014. It will be led by Marcella Corcoran, a conservation horticulturist from RBG Kew, with input from a micro-propagation expert and will focus on propagation techniques for one of the Island's critically endangered ferns, *Ptisana purpurascens* that have recently been developed at Kew. AIGCD staff have had limited success germinating *P. purpurascens* from spores using existing techniques, so this workshop will make a significant contribution to preservation efforts for this species.

2.3 Design of a more sustainable biodiversity monitoring strategy

Due to the considerable biodiversity on Ascension Island and the limited resources available for employing staff on an island of just 800 people, developing a sustainable programme of biodiversity monitoring will always be challenging. With this in mind, a guiding principle of the BAP agreed with stakeholders at the outset was to ensure that monitoring targets are prioritised and achievable within the existing capabilities of AIGCD. Alternatively, SAPs should include targets that can help increase capacity for monitoring in specific areas. For example, one target of the green turtle SAP (the first SAP to be created) is to develop an international internship program that can help to deliver the proposed monitoring targets without putting undue strain on existing work programmes. AIGCD have been able to deliver on this target and are currently in the process of selecting 4 suitable candidates (1 programme coordinator and 3 interns) for the 2013/14 nesting season, aided by a Darwin Project Traineeship (see 1.2). In addition, training in database design and management and enhancements to AIGCD's database management system though Darwin Project workshops and new collaborations with SAERI will also make it faster and easier to enter, catalogue and map biodiversity monitoring data in future.

2.4 A more detailed knowledge of the at-sea habitat use of key marine species in relation to fishing effort

We continue to make good progress with this target with a further 22 GPS loggers deployed on the endemic frigatebird in September 2013, 14 of which were retrieved. These data add to the expanding database on the foraging journeys of our seabirds, with tracks collected for the frigatebirds (n = 26), masked boobies (n = 41) and sooty terns (n = 9). We are also currently trialling the same loggers on red-billed tropicbirds after advice from the team on St Helena who have had a great deal of success with this. We had planned for a deployment of 10-15 remote download tags on the frigatebirds at the same time, but the system that we favour is not commercially available until 2014. We are currently liaising with the company and expect that an order for the tags will be placed in the current financial year and deployment will take place in April 2014.

Two of three satellite-linked GPS loggers were deployed in September 2013 on the critically endangered hawksbill sea turtles that reside year-round in Ascension's waters. Hawksbills do not nest on Ascension and from their sizes it appears that most individuals are sexually immature juveniles or sub-adults. However, the nesting population(s) from which they originate and their destinations after leaving Ascension remain a mystery. The data collected by these devices will allow us to build up an understanding of the movement patterns of these turtles both around Ascension Island, and potentially further afield.

Progress on relating habitat use of marine vertebrates to fishing effort has unfortunately been hindered by the resolution of available Vessel Monitoring System (VMS) data. Until now, the collation of VMS data has been handled by an external consultant contracted by St Helena Government. Unfortunately, when these data were requested by the Darwin Project team it became apparent that the resolution was too low (polling rate of once per day) for the planned spatial analyses to be carried out. However, as a result of these findings, the project team has been able to make strong recommendations to AIG to address this issue with some urgency. Senior management have adopted these recommendations with plans to manage VMS data internally within Ascension Island Government in the very near future.

2.5 Species Action Plans for 20 key species

See also **2.7**

With the template for the SAPs fully agreed on by all involved in the project, and a large amount of the training and research work for the project having been initiated, and in a number of cases completed, the next 6 months of the project will focus on populating the SAPs and having them approved by project partners and ultimately the Administrator of the Island. As soon as each SAP has been approved, it will be uploaded onto the project website. Having already initiated and met some of the priority targets identified for a number of species during training workshops and improved routine monitoring work, the DRFs have a good understanding of what can realistically be achieved on Ascension and the timelines for these targets. We anticipate that by the next reporting exercise, 50% of the SAPs will have been finalised.

2.6 Interim report on legislative change

We previously reported that the Marine Protection Ordinance, 2013 had been approved and a draft policy had been submitted to the Island Council proposing a number of improvements to the Wild Life Protection Ordinance. It was decided to combine these into one, comprehensive Ordinance covering both marine and terrestrial species and we are pleased to report that the Wildlife Protection Ordinance, 2013 was enacted on the 18th October 2013. This new Ordinance replaces the now repealed Wild Life (Protection) (Ascension) Ordinance, 1944 that was out-dated and in urgent need of modernising. For example, under the previous legislation, several common, introduced species, some of which were having negative effects on the Island's native biodiversity, were given protected status. However, with the enactment of the new Ordinance, these anomalies have been corrected and many of our rare endemic plants, fish and invertebrates (amongst others) have been afforded legal protection for the first time. Additionally, the Wildlife Protection Ordinance has an important marine conservation element, introducing powers to establish closed seasons, quotas, no-take zones and/or prohibited means for extracting marine resources, subject to the necessary research being undertaken to enable informed decision-making. The Ordinance can be downloaded from the website: www.ascension-island.gov.ac/government/conservation/projects/bap/. We are currently working with people on-island to make the public aware of this new piece of legislation and the rules within it, how it could affect them, and its importance for safeguarding the native biodiversity of Ascension Island.

As reported previously, a draft policy was prepared and submitted to the Island Council entitled 'Expanding Ascension's Protected Areas Network' which recommends the designation of 6 new protected areas under the National Protected Areas Ordinance, 2003 to include all key biodiversity sites on the island (currently there is only 1). When the DRFs presented this policy to the Council, it appeared to be well received and supported. However, the Governor dissolved the current Island Council in September 2013 and elections are currently taking place for a new

Council that should be in place in November. The Darwin Project team have been assured by the Administrator that the protected areas legislation is one of the first topics that they will consider.

Working with the Crown Counsel, the team is currently finalising a revised permit application that visiting researchers will be required to submit and have approved before they are granted an entry permit to Ascension Island. The form asks for details including, an outline of the proposed research, how its outcomes are likely to enhance environmental management on Ascension Island (in particular in relation to BAP targets), whether it involves the capture, harming or killing of a Protected Species as defined under the Wildlife Protection Ordinance and/or whether a CITES permit is also required and a commitment to providing AIGCD with access to the original datasets collected during the research. A similar permit has also recently been developed by St Helena and will work to ensure that priority environmental research is carried out that will directly benefit the Territory and leaving a lasting legacy in terms of databases and/or practical conservation actions.

2.7 Design of a BAP with associated workplan

Following consultations with stakeholders at the outset of the project a template Species Action Plan (SAP) was produced shortly afterwards and subsequently agreed upon by project partners. The draft SAP is fully integrated with the targets of MEAs that have been ratified by the UK, including the Aichi Biodiversity Targets, and proposed actions have been made SMART wherever possible (Specific, Measurable, Achievable, Realistic, Time-limited). The SAPs and also Habitat Action Plans (HAPs) are being put together by the DRFs and then sent to partners for comments and approval on the targets and the timeline given for achieving them. The project has facilitated a great deal of research to be carried out during partners' visits to the Island and so some of the targets are already well on their way to being achieved. The SAPs will then be sent to HH The Administrator to be signed off before being uploaded to the BAP website. By making the BAP a dynamic document that can be continually updated as targets are met and new targets are added, we aim to ensure that the BAP is used as the definitive guide and co-ordinating document for conservation work on Ascension Island in future. We anticipate that by the next reporting exercise, 50% of the SAPs will have been finalised.

2.8 AIG adopts BAP

All project activities continue to fully supported by senior management in AIG, so we are confident that this target will be met. This was recently demonstrated during the drawing up and enactment of the new Wildlife Protection Ordinance, which would not have been possible without the assistance given by the Crown Counsel and the Administrator. AIG fully understands the importance of having a BAP in place and the targets will be incorporated into the existing annual progress reporting and auditing mechanisms for AIGCD.

Output 3. Awareness Raising

3.1 Active engagement between school, other community groups and biodiversity professionals

The Conservation Department continues to play an active role in engaging with the school and other community groups, including running a summer school course, leading practical sessions during the school year and taking assemblies, and giving presentations to the public. A recent island-wide beach clean that engaged members of the community, including those from the military bases, was very successful with a number of beaches cleared of litter and invasive vegetation in time for the turtle nesting season.

With the recent enactment of the Wildlife Protection Ordinance, we are currently planning an awareness campaign that will engage with island residents, and also have information available for visitors, on the new protection measures to safeguard Ascension's native biodiversity. For

the first time, Ascension's near-endemic land crabs have been given legislative protection and so to make the public more aware of this and to reduce the numbers killed on the roads each year, we have had 3 traffic warning signs made that will be erected on roads that are frequently crossed by the crabs to alert people to take more caution.

3.2 Design and population of a detailed and vibrant biodiversity website

At the request of Ascension Island Government, the AIGCD website has been integrated into the new government website and can be accessed here: www.ascension-island.gov.ac/government/conservation/. The website was developed with a design company in the UK, The Communications Group, and provides up-to-date information on Ascension's flora and fauna and the projects that are being carried out by AIGCD. There are also a number of pages dedicated to the Darwin Initiative project and ultimately the BAP will be hosted here www.ascension-island.gov.ac/government/conservation/projects/bap/. As each of the species and habitat action plans are developed and approved, they will be uploaded on to this website so that they can be viewed and downloaded by any interested person.

A Facebook webpage in the name of Ascension Island Conservation Department was created in February 2013 and is the main venue for announcements, updates and photo-sharing relating both to the Darwin Initiative project and other work that the Conservation Department carries out www.facebook.com/AscensionIslandConservation. We have also established a strong presence on the social networking site Twitter (@AIGConservation).

3.3 Active media campaign throughout the project

The Facebook and Twitter accounts that were set up by AIGCD as part of the Darwin project are still proving to be very popular and an effective means of engaging a wide audience globally and disseminating news about the Darwin project, and general AIGCD activities. Recently, the conservation departments on St Helena, Tristan Da Cunha and the Falkland Islands have also joined Facebook and this has facilitated more cross-territory communication.

AIGCD prepares a weekly article for Ascension's local newspaper, The Islander, many of which relate to Darwin project activities. Our work on this project also regularly features in St Helena's newspaper and on the blog 'St Helena Online'. There are a number of articles currently in preparation for submission to peer-reviewed journals using data collected as part of this project which we anticipate will draw interest from the international media.

3.4 Production of highly accessible Darwin Newsletter

The Darwin Newsletter has been integrated into the existing AIG Conservation publication, "Conservation Quarterly", where it has been allocated a designated section with appropriate branding (Darwin logos etc.). PDFs of the newsletter can be downloaded from the internet (http://www.conservation-ascension-island.gov.ac/conservation-quarterly) and the link is also emailed to all on the AIG client database (biodiversity professionals and all other interested members of the public, island residents and visitors, who have expressed an interest in receiving the publication), and advertised on our social media sites. News of the Darwin Project both from DRFs and project partners has featured in the last seven editions of the Conservation Quarterly:

Broderick, A. & Godley, B. (2012) New Darwin Initiative Project. *Conservation Quarterly*, 37, pp. 10.

Weber, N. & Weber, S. (2012) Implementing a Darwin Initiative Biodiversity Action Plan for Ascension Island. *Conservation Quarterly*, 38, pp. 11.

Weber, N. & Weber, S. (2012) Implementing a Darwin Initiative Biodiversity Action Plan for Ascension Island 2. *Conservation Quarterly*, 39, pp. 6-8.

Weber, N. & Weber, S. (2012) Darwin Initiative Project Update - Legislation. *Conservation Quarterly*, 40*,* pp. 5-7.

Weber, N. & Weber, S. (2013) Darwin Initiative Project Update – Workshops, Bird Tracking and Grant Success. *Conservation Quarterly*, 41*,* pp. 4-6.

Corcoran, M., Thomas, V. & Williams, C. (2013) Workshop for developing ex-situ conservation collections for plants on Ascension Island. *Conservation Quarterly*, 41, pp. 7-13.

Stewart, C. (2013) Views from the Darwin Trainee. *Conservation Quarterly*, 41, pp. 14.

Oppel, S. (2013) RSPB visits Ascension Island Conservation. *Conservation Quarterly*, 41, pp. 15-16.

Weber, N. & Weber, S. (2013) Darwin Initiative Project Update – Record numbers of nesting turtles, new land crab findings and important invasive rat study. *Conservation Quarterly*, 42*,* pp. 3-7

Mills, A. (2013) Locations, Libraries and Land Crabs. *Conservation Quarterly*, 42, pp. 8-9.

Stewart, C. (2031) Views from the Darwin Trainee. *Conservation Quarterly*, 42, pp. 10.

Pressel, S. & Duckett, J. (2013) Bryological Blitz 2013. *Conservation Quarterly*, 42, pp. 14-18.

Weber, N. & Weber, S. (2013) Darwin Initiative Project Update: Enactment of the Wildlife Protection Ordinance and more. *Conservation Quarterly*, 43*,* pp. 2-6.

Output 4. Darwin Reporting

All of our reports to date have been submitted on time, which demonstrates our commitment towards meeting the projects goals and making it as successful as possible. Our report for Year 1 received a positive review, mentioning the considerable progress that the project had made on all four outcomes and its integration with AIGCD and the local and international community. We are grateful to the reviewer for taking the time to evaluate our report and for offering helpful advice. S/He did not ask for a response from us on any specific points but did give two points for consideration the first of which we address below and the second we will incorporate into our next comprehensive annual report.

Comment: It would be useful for the reader to have a complete understanding of the functioning of the project through an explanation of the roles and responsibilities of the partner institutions and an explanation of how and by whom coordination of inputs and activities is carried out.

Response: When the grant proposal was being put together, all named project partners with long standing interests and commitment to biodiversity on Ascension and other UK OTs, met to discuss the aims and objectives of the project and the expertise that they could bring to it. The team at the University of Exeter (Dr Annette Broderick and Prof. Brendan Godley) then put the proposal together in consultation with project partners, with the ultimate aim being to build capacity within AIGCD and to lay foundations for that the work to continue to move forward after completion of the project. To this end, **coordination of inputs and activities by the various partners is carried out through AIGCD by the DRFs based on Ascension Island and all aspects are overseen by project leads at the University of Exeter** via regular email and Skype contacts, written reports and annual visits to Ascension. In terms of specific project outputs, the project partners have signed contracts with the University of Exeter, committing to the following responsibilities:

Centre for Ecology and Hydrology (CEH), Dr Alan Gray: to lead on training, research and educational activities pertaining to **invertebrates and invasive plants**, including leading a training workshop on the taxonomy of these species.

Queen Mary University of London (QMU), Dr Jeff Duckett: to lead on training, research and educational activities pertaining to **lower plant species (bryophytes)**, including leading a training workshop on these species.

Royal Botanical Gardens, Kew (RBG Kew), Dr Colin Clubbe: to lead on training, research and educational activities pertaining to **higher plant species**, including leading a training workshop in endangered plant culture techniques.

Royal Society for the Protection of Birds (RSPB), Dr Steffen Oppel: to contribute to the training, research and educational activities pertaining to **bird species and invasive vertebrates**, including contributing towards a training workshop on population monitoring and vertebrate tracking.

University of Lund (UoL), Dr Susanne Akesson: contribute their expertise in novel **marine vertebrate tracking**.

2a. Give details of any notable problems or unexpected developments that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

See section 2.4 regarding fisheries effort data. This does not however affect the budget or timetable.

2b. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?

Discussed with LTS:	No
Formal change request submitted:	No
Received confirmation of change acceptance	No

3a. Do you expect to have any significant (eg more than £5,000) underspend in your budget for this year?

Yes ☐ **No** ☒

3b. If yes, and you wish to request a carry forward of funds, this should be done as soon as possible through the formal Change Request process. However, it would help Defra manage Darwin funds more efficiently if you could give an indication now of how much you expect this request might be for.

Estimated carry forward request: £

4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

No

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.

Please note: Any <u>planned</u> modifications to your project schedule/workplan or budget should <u>not</u> be discussed in this report but raised with LTS International through a Change Request.

Please send your **completed report by email** to Eilidh Young at Darwin-Projects@ltsi.co.uk . The report should be between 1-2 pages maximum. **<u>Please state your project reference number in the header of your email message eg Subject: 17-075 Darwin Half Year Report</u>**