

# Darwin Plus: Overseas Territories Environment and Climate Fund Annual Report

**Important note** *To be completed with reference to the Reporting Guidance Notes for Project Leaders:  
it is expected that this report will be about 10 pages in length, excluding annexes*

**Submission Deadline: 30<sup>th</sup> April 2017**

## Darwin Plus Project Information

Project reference	DPLUS047
Project title	Reduce, reuse, recycle – developing a waste management strategy for Ascension
Territory(ies)	Ascension Island
Contract holder institution	Ascension Island Government (AIG)
Partner institutions	Waste and Resource Action Programme (WRAP)
Grant value	£99,993
Start/end date of project	01/04/2016 to 25/10/2018
Reporting period (e.g., Apr 2016-Mar 2017) and number (e.g., AR 1,2)	Apr 2016 to Mar 2017 AR1
Project leader name	Mike Haworth
Project website/blog/Twitter	Not to date
Report author(s) and date	Mike Haworth 30 <sup>th</sup> April 2017

### 1. Project overview

The project is taking place on Ascension Island which is located just below the equator in the South Atlantic, approximately 1,600km west of the African continent. Ascension Island has a high conservation status with globally unique habitats of both terrestrial and marine flora and fauna.

The island is part of the British Overseas Territory of St Helena, Ascension and Tristan da Cunha. The Ascension Island Government (AIG) is led by a resident Administrator, who reports to HM Governor on St Helena. AIG is a major employer and is responsible for providing infrastructure and services to the island, its populace and organisations. The island has an Island Council which is an elected body of local individuals who represent the populace to both AIG and the UK Foreign and Commonwealth Office (FCO).

The vast majority of the island's population is employed by five organisations; the major employing organisations (EOs). In addition to conducting their activities, these organisations also contribute to some running of the island services and infrastructure. Also the four organisations listed below provide financial support to AIG in the form of an annual levy.

- Ministry of Defence (MOD) – who use Ascension as a refuelling and logistical “airbridge” to support the Falkland Islands
- BBC – who maintain a relay antenna to broadcast the world service to Africa (their resident contractor in Ascension is Babcock International)
- Sure South Atlantic (SA) – a telecommunications company who provide local and international communications services from Ascension
- Composite Signals Organisation (CSO)

The fifth organisation is the United States Air Force (USAF) who conducts tracking of low earth orbit objects, principally rockets and missiles from the mainland United States. They work within an area leased from the UK government and whilst they are effectively autonomous and self-sufficient, they have expressed an interest in the project and its outcomes for purposes of mutual benefit.

The project is to develop a waste management strategy for Ascension and implement that strategy. The island currently has no waste management strategy or policy in place and this is having a detrimental effect on the environments present. There is little or no segregation of waste into recyclable materials and no containment of waste that is deposited. The majority of the waste arising on Ascension is disposed to ground and / or mass burnt at a tip in a location called One Boat.

The lack of strategy or amenities to manage the waste results in emissions that pollutes the terrestrial environments and likely pollutes the marine environments. The mass burning of waste results in a smoke cloud that travels in excess of kilometre downwind and is likely producing harmful combustion by-products that contaminate the surrounding environs. The soot stain on the landscape from the waste burning is visible from space.

The proposed strategy will be based around the principles of “reduce, reuse and recycle” for the management of waste generated. It will seek to reduce the risk to the environment to recognised acceptable levels through reduction in the waste arising, reuse of the materials where this is appropriate and recycling of the remaining fraction by correct treatment of the waste materials.

The implementation of the waste management strategy will reduce pollution of the island environments and will ensure long term sustainable treatment of the recyclable and waste materials.

Whilst the project duration is from April 2016 to October 2018, the employment of the project lead was not completed until October 2016 and hence the content of this report reflects the circa 6 months since that time.

## **2. Project stakeholders/partners**

Since the beginning of the project, work has been carried out to identify the key stakeholders and their potential contribution to the project. The key stakeholders identified are as follows:

- i) Major Employing Organisations
- ii) Island Council
- iii) Members of the Public

As the majority of the waste generated on the island comes from the direct undertakings of the organisations or through the domestic activities of their personnel, AIG expects them to provide financially to the implementation of this project.

The main stakeholder strategy is to initially focus on the engagement of the EOs as they are the main financial contributors and have a large population through their workforce. The engagement of the Island Council and the public is to follow once the project objectives is agreed with the EOs.

The progress made with the engagement of these stakeholders is described below.

### **EO Stakeholder Engagement**

To date the following stakeholder engagement activities have taken place

- i) Initial meetings held with the island heads of the EOs in October and November 2016 to present the basis and aims of the projects and to understand their needs and motivations.
- ii) Follow up individual meetings were held with the EOs in February 2017. This was to present an update to the work carried out, providing estimated costs for capital and operational costs for a notional strategy. The slides of the presentation given at these

meetings are attached at Annex 3. Using the feedback from these presentations an assessment was made of each of the EOs in terms of their current engagement level. Table 1 summarises this assessment.

Table 1 – Engagement Levels of the EOs in February 2017.

	MOD	Babcock	Sure SA	CSO	USAF
Engagement Level	Disengaged to Neutral	Neutral	Neutral	Neutral to Supportive	Neutral to Supportive

The disengaged and neutral engagement assessment above was due to the expectation of increases in the EOs financial contribution to Ascension to fund the project in the long term. This represented a challenge to the success of the project. Without long term funding in part provided by the EOs, the waste strategy will not be sustainable.

In order to move the discussion away from a view of just cost, the presentation of the project aims were emphasised as environmental improvement based on fair and proportionate costings based on shared use. These were summarised as a set of principles on which the project would be based. These “Project Principles” were presented in a briefing paper issued to the EOs prior to a roundtable meeting in March 2017. This briefing paper is attached at Annex 4.

- iii) A roundtable meeting was held with all EOs in March 2017. The aims of the meeting were as follows:
  - a. To build on the previous consultations and to allow a joint forum of discussion with all the EOs plus the Foreign and Commonwealth Office (FCO).
  - b. To seek agreement on the Project Principles.
  - c. To detail the setting up of a steering group for the waste project and invite all EOs to become members.
  - d. To outline a consultation paper for which the EOs requirements would be detailed in writing by them.

The outcomes of the meeting were positive on all aims and represented an overall engagement level shift from disengaged to neutral, to neutral to supportive for all parties. The minutes of the meeting are presented at Annex 5.

### The Island Council and Public Stakeholders

The Island Council has been updated throughout the project and their members have been taken on a tour of the existing waste site and a report was presented to an Island Council meeting in March. This report is attached at Annex 6. The response from the council members on the work to date and that presentation is provided below:

**“12. Waste:** *I would like to commend Mike Haworth and his team for a brilliant job done so far. We have come a long way but still have a long way to go. We will get there – after all who would have thought St Helena would get there..... but then again we don’t qualify for Grant in Aid from the UK!”*

For the wider public, this communication was in the form of an article published in the island’s newspaper; “The Islander”. The Islander is sold weekly in all shops and is the main source of information for the population about news and events on Ascension. In the reporting period two articles have been published and these are presented at Annex 6. The purpose of this was to inform the public about the project to date and to assist in addressing safety concerns about the current island practice.

### **3. Project Progress**

#### **3.1 Progress in carrying out project Activities**

The progress since commencement has focused on information gathering, identifying the key stakeholders and defining the amounts and composition of waste generated on Ascension. This is summarised in the points below:

- Initial consultations held with island stakeholders
- Review of current island practice
- Contractual engagement of UK consultants Waste and Resource Action Programme (WRAP)
- Ongoing assessments of existing island waste infrastructure
- First order estimates of Ascension waste quantities and composition
- Initial estimates of implementation and operational costs (based on assumed infrastructure and processing technologies)
- Waste composition and quantities assessments commenced for “waste wheel” baseline

The specific activities for the project programme to which the above relate are described below.

##### **Activity 1.1 – Appointment of a Project Manager**

The Project Manager was appointed and flew out to Ascension Island in October 2017. This appointment had been delayed through a longer than anticipated recruitment period, followed by a 3 month notice period served by the individual appointed. This has extended the planned timetable and hence delivery of objectives by approximately 29 weeks. This change to the project timescale was noted in the approved Change Request dated 27th October 2016.

##### **Activity 1.3 - Liaison with technical experts, feedback on draft framework incorporated**

The appointment of WRAP was made following a review of their brief in relation to the aims of the project. The project brief was confirmed with WRAP and they were appointed in December 2016 under an Institute of Civil Engineers (ICE) contract form.

##### **Activity 2.1 - Agree scope and content for training workshop, develop materials, complete logistical arrangements and invitations**

Contacts have been made with waste management representatives on other South Atlantic Overseas Territories (SAOTs) – St Helena and the Falkland Islands. The principle of benefit through partnership across the SAOTs has been recognised.

The scope and content for the training and collaboration workshops has been agreed with WRAP and the prospective attendees from the waste teams on St Helena and the Falkland Islands. This scope was included WRAP’s contract and an extract of which is attached at Annex 7.

The timings of the workshops were due to take place at the end of May coupled with a public presentation. However this has been set back 6 weeks to accommodate a planned visit to hospital for surgery by one of the SAOT representatives. It will now take place in mid-July 2017. This delay to the workshop was reviewed and no impact on the overall programme is expected.

It should be noted that the recent changes to Ascension’s travel arrangements (discussed in detail at Section 7 below) may make appearance in person for all attendees not possible - so teleconference may need to be substituted.

##### **Activity 2.3 - Training of on island staff in waste management techniques and collaboration with other OT's, including information and expertise sharing**

Training has been provided to the on island staff for the waste sorting and also to provide a wider appreciation of the project and for greater knowledge of waste and recycling material types. The waste sorting is required to establish the waste wheel, and the training focused on the importance of the activity to the project and to the safety requirements. See Activity 4.1.

The training presentation and signed procedures and risk assessments forms for the training are attached at Annex 8.

For the other OT's, ahead of the proposed workshop, the initial discussions with St Helena identified their experience in developing small island waste management strategies and highlighting waste glass as a potential area for synergy between the islands. The representative from St Helena has provided documentation used in the development of their waste management strategy to date.

Greater collaboration will be identified as part of the SAOT workshop and as the project progresses further training will be provided to the island staff. It is anticipated, that once the appropriate recycling technologies have been identified and procured, training will be provided in the management and use of this equipment.

### **Activity 3.2 - Liaison and data gathering with AIG and technical experts**

See Activity 4.1 below.

### **Activity 3.3 - Desk based research on options for post processing**

As part of the process of engagement of AIG and the EOs, the order of magnitude of the likely costs for the implementation was required to be known. The understanding the scale of the project is a key factor in the process of early engagement with the EOs.

In order to do this, research was carried out on the waste records available and through visual estimates of quantities, such as the weekly capacity of the waste truck and materials deposited in the One Boat tip. These estimates were used to understand a potential waste treatment process and from this; capital estimates of costs were produced. The operational costs for the process were estimated on the basis of power requirements, manpower and consumables on an annual basis.

Given that these estimates were prepared in advance of the detailed feasibility studies to be carried out and that they are based on numerous assumptions, they will have a range of at least +/- 30%.

These estimates were prepared in Jan 2017 and presented in a consultation report to the Administrator and the AIG directorate. The report is attached at Annex 9. The outcome of the report was that for adoption of a waste management strategy that accords with a UK standard of treatment the whole life capital cost will have an upper limit of the order of £3 million and annual operating cost of circa £400,000.

This information was presented to the EOs in the presentation noted Section 2. and presented at Annex 3.

### **Activity 4.1 – Establish waste wheel to determine baseline for current waste disposal (at start of project) and continue throughout the life of the project to determine if successful reduction in main waste of recyclable items. Report of waste wheel data produced**

A site on Ascension was identified to carry out the waste sorting activities required to derive a baseline waste wheel for Ascension. This site was organised and set up with the following equipment:

- Industrial scales were procured and shipped over from the UK
- Sorting tables and bins set up
- Personal protective equipment identified in the risk assessments shipped from UK and provided to staff
- Fencing and signage erected
- Welfare and washing facilities in place

Figures 1 to 6 show the activities of the waste sorting.

Figure 1 – Waste Sorting Location



Figure 2 – Waste Sorting Location



Figure 3 – Waste Reception



Figure 4 – Waste Sorting



Figure 5 – Waste Sorting



Figure 6 – Sorted Wastes

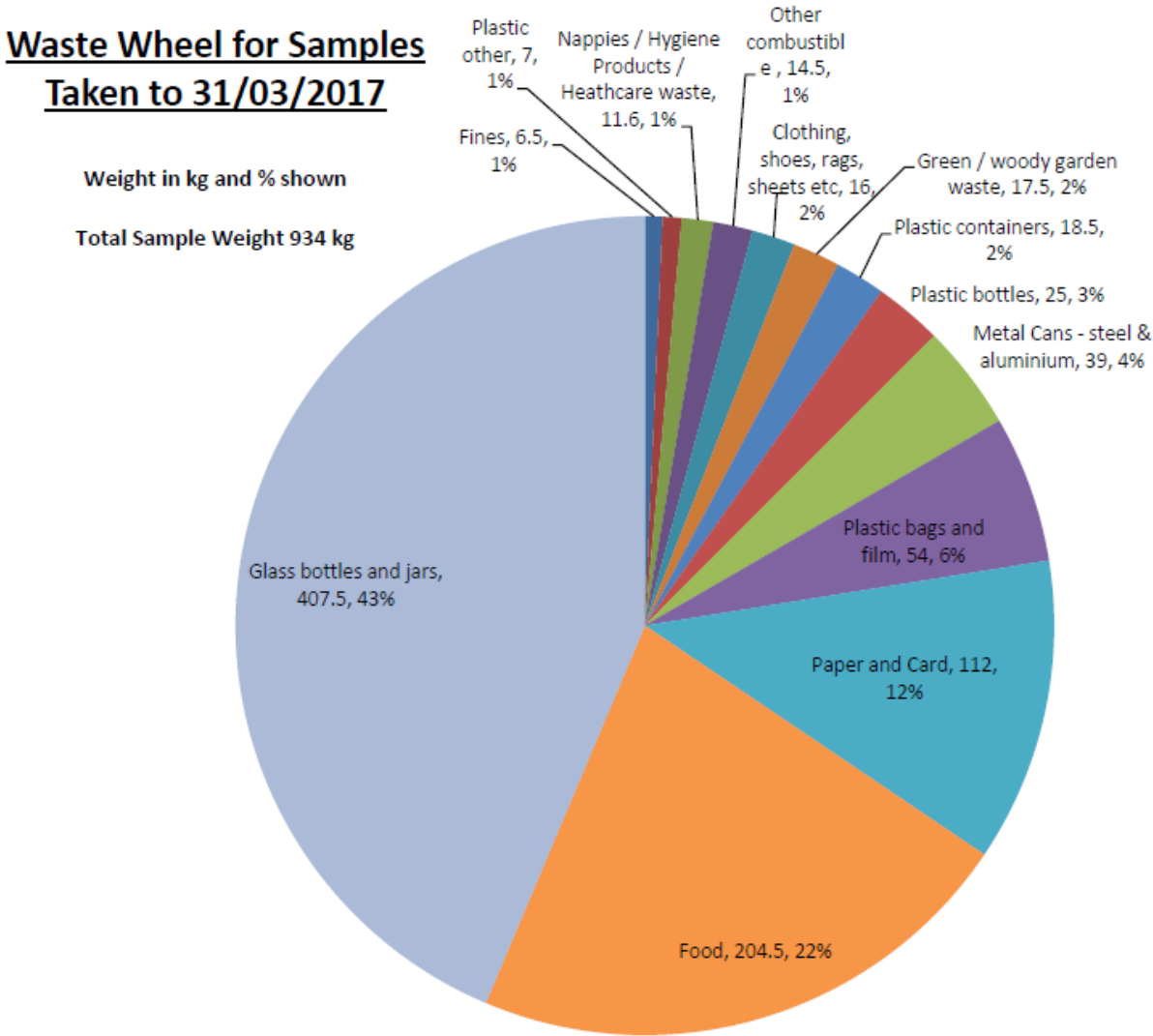


To the end of March 2017, the waste sorting had separated 939 kg of waste into various categories. The results from these are represented in the waste wheel pie chart presented in Figure 7 below.



Though outside the timescales for this report, the reader is informed that the waste wheel data has been produced and issued to WRAP to carry out the technical review of options for post processing, see activities 3.2 and 3.3.

Figure 7 – Waste Wheel for samples taken to 31/03/2017



### 3.2 Progress towards project Outputs

The project has made good progress towards the project outputs and is on track to achieve them by the project close. The following paragraphs summarise the progress towards these outputs.

#### Output 1 – Develop and implement a strategic framework for waste management on Ascension Island

The baseline condition is to produce the strategic framework or waste management plan by project close in Aug 2018. The project remains on track to achieve this.

Since the appointment of the project manager in October, the project has been defined in terms of the overall brief and the basis for the strategic framework has been communicated to AIG and the stakeholders in the consultation documents presented in this report.

Key to the strategic framework is the collection of the baseline information to allow feasibility assessments to be made on the most appropriate treatment methods for Ascension. This information has been provided for the initial feasibility studies by WRAP and these will be used

in the SAOT workshops in July. This will assist in linking those Ascension specific methods with those on the other islands to understand where synergies for mutual benefit exist.

### **Output 2 – Training and capacity building both on island, with other OT's and with technical experts in the UK**

The baseline timings to complete the workshop with the other OTs was the end of May 2017. Given the planned medical leave by one of the waste managers from the other OTs, the workshop has been put back to July 2017. The first public talks to be held on Ascension were also timed to coincide with the workshops so that the other OT representatives and the experts from WRAP can take part in those. Therefore, these public talks have also been delayed to July.

The assessment on the timing change of the workshop indicates that it will have no material effect on the programme or delivery of the Output.

On island training has already been completed with respect to the waste sorting activities and overall waste and recycling knowledge. This and the carrying out of those activities is an excellent introduction to the waste management team on what waste arises on Ascension and the possible means to recycle materials.

### **Output 3 - Reuse and Recycling - conduct a feasibility report and action plan for post processing**

The baseline timings to complete the feasibility report were July 2017. At the outset of the project, an assessment of the baseline programme was made and this assessment concluded that the feasibility report could not be completed without the SAOT workshops having been resolved.

The SAOT workshops will outline initial options for linkages across the OTs, but the representatives will need to raise the proposals locally in their OTs for agreement. They will then report the outcomes to these proposals as part of the post workshop review and follow up.

Therefore the completion of the feasibility reports was moved to Oct 2017 to allow sufficient time for this process to conclude. The variance in the timings of the feasibility report do not affect the overall Outcome to the project noted as Output 1 and reflect a realistic appraisal of what is required to achieve it.

The baseline information on the waste composition and quantity is being collected and has been provided to WRAP for them to start the feasibility report. This information has been provided such that the revised timing for production of the report can be achieved by Oct 2017.

### **Output 4 - Waste Segregation / Recycling and Reduction - Education of the Public**

The two aspects to this output are described below:

#### **Waste Segregation / Recycling and Reduction**

The baseline timings for the waste sorting and segregation were that the activity was to start from the beginning of the project in October 2016 and run throughout the life of the project.

To initiate that activity, planning was required to identify a suitable location on Ascension where this could be carried out. Then the protocols and risk assessments were prepared focussing on the safe means of conducting the waste sorting and subsequent analysis.

This work was undertaken from October into November in terms of the planning. The procurement was undertaken in December and January to allow the start of the waste sorting by the first week in February 2017. The materials were ordered from the UK and shipped. Some of the essential personal protective equipment (PPE) was to be shipped airfreight via the MOD flight to Ascension. However, towards the middle of January we were notified that the MOD was no longer accepting civilian freight on their flight due to a shipping backlog. This required the diversion of this PPE to the marine shipping route which took an additional 4 weeks.

This delay added 6 weeks to the commencement of waste sorting and caused WRAP to reallocate their project resource away from this project and as a result once the sorting was underway and the results provided, they could not immediately start their assessment. As a result, the preparation of their initial feasibility findings was delayed by 8 weeks from mid-March

to mid-May. The implications for the production of the final feasibility report noted as Output 3 are not impacted, but this delay has caused an underspend of £2,280 in financial year 2016/17 for the consultancy costs.

Notwithstanding the above, the waste wheel data is currently being collected and this has been provided to WRAP our UK experts, the complete achievement of this part of the Output is expected within the timeframe of the project.

### **Education of the Public**

The baseline for the communication plan is June 2017. The content of the communication plan will outline the proposals for all users' education, such as the public and the EOs on Ascension and the use of social media.

This plan is to be prepared following the feedback from WRAP on the initial waste wheel results which will provide indications of the options available such that those options can be included. The feedback from WRAP is due in May and as such the preparation of the communications plan will "dovetail" with that ready for the completion in June.

As discussed in Section 2, articles have been published in the Islander newspaper and these are attached at Annex 6.

Given the points noted above, Output 4 will be achieved in the project by its close.

### **3.3 Progress towards the project Outcome**

As discussed at Section 3.2, the overall project Outcome is described by Output 1 - Develop and implement a strategic framework for waste management on Ascension Island.

The project is on target to achieve this outcome. Whilst there have been changes to some of the individual output's timings, the overall programme has not been adversely affected. The programme attached at Appendix 10 demonstrates this.

### **3.4 Project support to environmental and/or climate outcomes in the UKOTs**

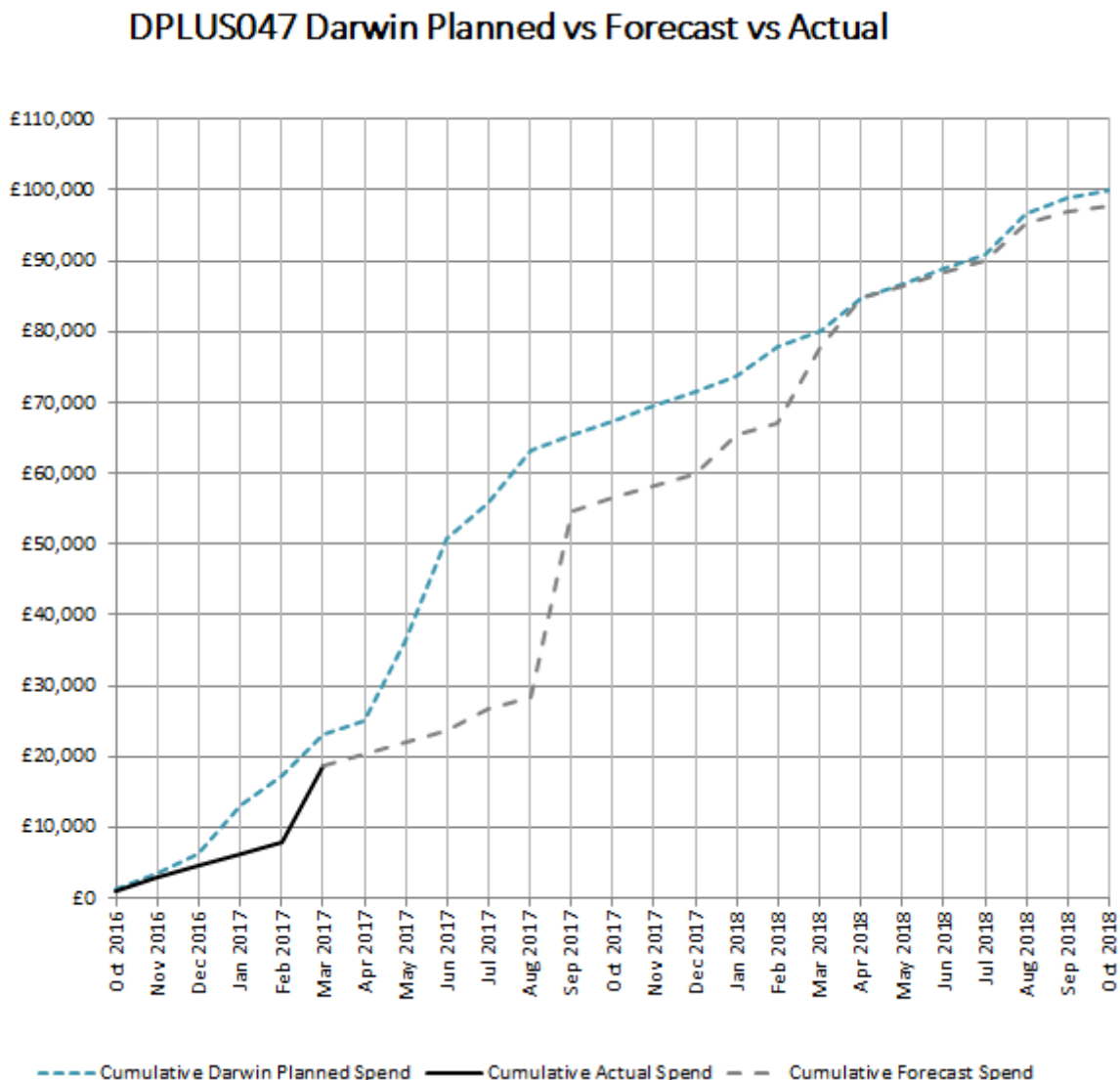
As evidenced in the above sections, the progress made since October has laid the foundations to deliver the proposed Outcome for the project. This will in turn deliver substantial improvements to the way that waste materials are managed on Ascension, reducing the current risk that is posed to its environments.

## **4. Monitoring and evaluation**

In terms of general project management, the methods to monitor and evaluate are through the project indicators of cost and time and what activities have been achieved for these.

For project costs, there are month by month measurements of forecast and actual expenditure and how this compares to that planned at inception. Figure 9 shows the output "S-Curve" for the actual and forecast spend when compared with the planned spends in October 2016.

Figure 8 – “S-Curve” of Actual and Forecast Spend compared with that Planned in October 2016



For project time, this is managed through a programme which is run through software called Microsoft Project. This software enables comparisons with the baseline programme and the actual and forecast programme at a glance. A copy of the programme to date is provided at Annex 10.

For both of the above, it can be seen that activities have been carried out to date will enable the project Outcome to be achieved during the time of the project for the Darwin funds provided.

## 5. Lessons learnt

The positive aspects of the project have been the knowledge, experience and commitment of the waste management team on Ascension. Their support has been invaluable in shaping the project to date. There is great value and expediency to the wrought from local “knowhow”, which can often yield the most efficient approach or identify an alternative option where the original is not feasible.

The less positive point to note is based on the remoteness of Ascension. Despite having a dedicated freight route and good communications, these cannot always be relied upon. As described in Section 3.2, where changes to the supply route had to be made, this put activities in delay. There have been other instances of materials simply not being included in a shipment

through error. When this occurs, there are generally no alternative supplies that can be sought quickly.

Where project activities are reliant on incoming shipments, planning to realistic timescales is required – which includes the time taken to offload the shipment and locate them in the goods received. For shipping project critical items, allocation of resources in either additional people or time to carry out an amount of “micromanagement” of the shipper may be required to ensure that the item(s) have a high priority and evidence of its inclusion in a particular shipment is provided.

## **6. Actions taken in response to previous reviews (if applicable)**

This is the first annual report and hence no comments are included here.

## **7. Other comments on progress not covered elsewhere**

There is one major risk that has arisen very recently. Ascension is serviced by air via the Airport and Wideawake runway. We have been informed that the runway surface has deteriorated such that MOD flights from the UK for passengers are no longer taking place. The runway is unlikely to be repaired in the duration of this project. At present the only confirmed route to Ascension for passengers is via a flight to South Africa to meet a connecting passenger ship; the RMS St Helena in Cape Town. This journey takes c12 days each way.

There are discussions taking place between FCO and MOD regarding the charter of a replacement flight with a smaller plane which could land on the unaffected part of the runway, but it is not clear when these will be resolved and what the outcome will be.

If the only access to Ascension is via the RMS, then short visits to the island by supporting experts or suppliers will not be possible. This may also limit procurement with suppliers potentially unwilling to provide services to Ascension given the increased remoteness now that the flight is no longer available.

## **8. Sustainability and legacy**

The profile of the project is growing on Ascension. The majority of the work in the first 6 months was information gathering, understanding the stakeholders and planning, which has not generated visible change. However, there will be changes on the ground in the next 6 months which will be seen and will need the population to take part. For example by June;

- We will be conducting separate glass collections which will require segregation of these materials by households and businesses.
- The One Boat waste site will be closed off to the public and recycling bins will be placed in a segregated area at the front of the site for their use.

Whilst these are small changes, the promotion of these activities through a consultation and instruction period will raise the project profile further.

The exit strategy has not changed, the approach will be to build upon the training carried out through the implementation of the waste management strategy and infrastructure through a process of phased handover and project close out.

For the waste management team, this will include the preparation of operational documents and manuals that will detail how the process of waste management – from collections, operation of recycling infrastructure to the administration. For AIG and the island as a whole, this will be effecting the changes to legislation that will be required to underpin the new strategy in the long term.

## **9. Darwin identity**

The Darwin identity has been promoted on all literature, reports and presentations. The presentation style and colour scheme of all literature has been designed to replicate the Darwin website. This is evidenced in the reports and presentations attached in the Annexes of this report.

The Darwin Initiative funding has been prominently stated as being the reason for the existence of this project wherever possible either in written or verbal forms. This will continue throughout the life of the project.

## 10. Project Expenditure

Table 2 Project expenditure during the reporting period (1 April 2016 – 31 March 2017)

Project spend (indicative) in this financial year	2016/17 D+ Grant (£)	2016/17 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Consultancy costs				The delay discussed at section 3.2 describes this variance
Overhead Costs				
Travel and subsistence				This variance is described below
Operating Costs				
Capital items				
Others (Please specify)				
<b>TOTAL</b>	£23,042	£18,525	-20%	

### Variations

The majority of the allocation of travel and subsistence was made to allow a visit to Ascension by technical expertise in 2016/17. During the progression of the project over this period, such a visit was not required and as such the funds were not required. Therefore these funds can be excluded and represent a saving to the grant of £2,237.

A change request has been raised for the above variances and has been submitted to Darwin with the requesting to carry over the £2,280 of Consultancy Costs underspend from 2016/17 into 2017/18.

**Annex 3 – Project Engagement Presentations**

**Annex 4 – EO Engagement Briefing Note**



**Annex 5 – EO Waste Meeting Minutes**

**Annex 6 – Island Council Report and “Islander” Articles**

**Annex 7 – Scope for SAOT Workshops**

**Annex 8 – Waste Sorting Training Documents**

**Annex 9 – AIG Consultation Document**

**Annex 10 – Project Programme**