



Darwin Plus: Overseas Territories Environment and Climate Fund

Final Report

Important note To be completed with reference to the Reporting Guidance Notes for Project Leaders:
it is expected that this report will be a maximum of 20 pages in length, excluding annexes

Darwin 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
Project leader name	Mr Mike Haworth
Project website/Twitter/blog etc.	www.ascension-government.gov.ac/government/wastemanagement
Report author(s) and date	Mr Mike Haworth

1 Project Overview

The project was 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. See Figures 1 and 2 below.

Figure 1 - Ascension Island Location



Figure 2 - Waste Burning in Progress



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.

2 Project Stakeholders/Partners

Formal Partnerships

The project has one formal partnership with the UK based Waste and Resource Action Programme (WRAP). WRAP was established in 2000 with funding from UK Government, the devolved administrations and the European Union. It works with businesses, individuals and communities by helping them reduce waste, develop sustainable products and use resources in an efficient way. Since 2004, WRAP has developed the "Recycle Now", "Love Food, Hate Waste" and "Love your Clothes" initiatives and has secured voluntary agreements with businesses for the reducing waste. WRAP is currently a registered charity in the UK.

WRAP were appointed to the project in December 2016 under an Institute of Civil Engineers (ICE) professional services form of contract. They were appointed to provide services for the delivery of the Darwin DPLUS047 project activities. This is summarised in Table 1 below:

Table 1 - Summary of WRAP Services

WRAP Services	DPLUS047 Project Activities
1) Waste Compositional Analysis ("Waste Wheel") <ul style="list-style-type: none"> a. Review of AIG waste sorting method statement for Waste Wheel analysis 	1.3, 4.1
2) Waste Treatment Techniques Review (WTTR) <ul style="list-style-type: none"> a. Preparation of WTTR Report based on outputs to Waste Wheel analysis 	1.3, 3.1, 3.2, 3.4, 3.4, 3.5
3) South Atlantic Overseas Territories (SAOT) Workshop <ul style="list-style-type: none"> a. Prepare workshop agenda and materials b. Lead the SAOT workshop c. Prepare minutes and document actions from the workshop 	1.3, 2.1, 2.2, 2.4
4) Feasibility Report <ul style="list-style-type: none"> a. Prepare a report based on the WTTR and SAOT workshop to provide recommendations for a waste treatment strategy for Ascension 	1.3, 3.1, 3.2, 3.4, 3.4, 3.5
5) Presentation at Public Meeting <ul style="list-style-type: none"> a. Preparation of presentation materials for a public meeting held on Ascension b. Presentation at the above public meeting to provide information on the waste management strategy, the benefits and how it can be achieved 	4.6
6) Communication and Education Programme <ul style="list-style-type: none"> a. Assistance and review in the preparation of the project communications plan b. Provision of a licence for "Recycle Now" c. Assistance in the development of posters, signage etc for the project d. Attendance at public meetings held on Ascension 	1.3, 4.2, 4.3, 4.4, 4.5, 4.6

Informal Project Partnerships

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 expressed an interest in the project and its outcomes for purposes of mutual benefit. However, during the information gathering stage of the project, they would not allow their waste to be sampled due to operational security, which prevented any assessment of their waste arisings to be made. In addition, they elected not to take part in any centralised waste management solution and they will continue to manage their own waste management activities.

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.

Given their directly employed workforce and the requirement to contribute financially to the new waste management strategy, it was important to ensure they were engaged with the project. On this basis, numerous meetings were held with these parties in 2016/17. This was continued in 2017/18 with the formation of a Waste Management Steering Group.

In August 2018, the strategy was presented to the EOs in a series of talks to their staff. These were followed by question and answer sessions. The proceedings of these presentations were recorded and feedback on the Q&A was provided. The outline of these presentations, the presentation slide and the feedback provided is attached at Annex 6.8. These presentations were supported by the Blue Marine Foundation, see below.

Blue Marine Foundation

The Blue Marine Foundation is a non-profit organisation dedicated to creating marine reserves and establishing sustainable models of fishing worldwide. Following discussions with them on conservation and environmental improvement projects on Ascension, they offered to provide support to the project in the form of a communications officer. This officer's role was to assist in the delivery of the communications plan and provide on island support to the project leader.

3 Project Achievements

3.1 Outputs

The project outputs, baseline condition and achievements are summarised in Table 2 below.

Table 2 - Project Outputs and Achievements vs Baseline

Output	Baseline	Indicators of Success	Output Achieved	Evidence
1. Develop and implement a strategic framework for waste management on Ascension Island	No framework or management plans for waste management site or protocols for waste recycling	<p>Project manager appointed to co-ordinate project deliverables.</p> <p>Strategic framework document produced and disseminated to all stakeholders.</p> <p>Protocols in place for handling of different waste streams</p>	<p>Project Manager appointed on 16th October 2016</p> <p>Waste Management Strategy finalised</p> <p>HWRC operational procedures and protocols in place</p> <p>Under construction HWRC site for the management of waste and recyclable materials - includes waste incinerator and scrap metal / drinks cans / car baler</p>	<p>Appointment of Mike Haworth as Waste Management Project Manager and Darwin project lead</p> <p>Waste Management Strategy document in Annex 6.1</p> <p>AIG HWRC Working Plan in Annex 6.2</p> <p>Design image and as built photo of the site shown in Section 3.2</p>
2. Training and capacity building both on island, with other OT's and with technical experts in UK.	No people on island have any technical expertise in waste management.	<p>3 staff from Ascension waste team trained.</p> <p>3-5 day workshop help on waste management on Ascension and attended by at least 1 UK expert and 2 other SAOT's as well as 3 on island stakeholders.</p>	<p>AIG staff trained in AIG HWRC Working Plan – staff now segregate and process recyclable materials</p> <p>Workshop held and attended by WRAP, Falkland Island / St Helena Representatives plus AIG, MOD and USAF. This workshop allowed sharing of good practice in each location and identified links for working in the future</p>	<p>AIG HWRC Working Plan in Annex 6.2</p> <p>Workshop content provided at Annex 6.4</p>
3. Reuse and recycle - conduct a feasibility report and action plan for post processing	No post processing plans on island - currently no waste management on island.	<p>Feasibility report and action plan produced.</p> <p>Contacts established with UK experts and</p>	<p>Feasibility report completed which confirmed the options to be implemented as part of the strategy</p> <p>WRAP experts from UK engaged and tasked advising AIG and</p>	<p>Feasibility report in Annex 6.5</p> <p>WRAP appointed under NEC Professional Services contract</p>

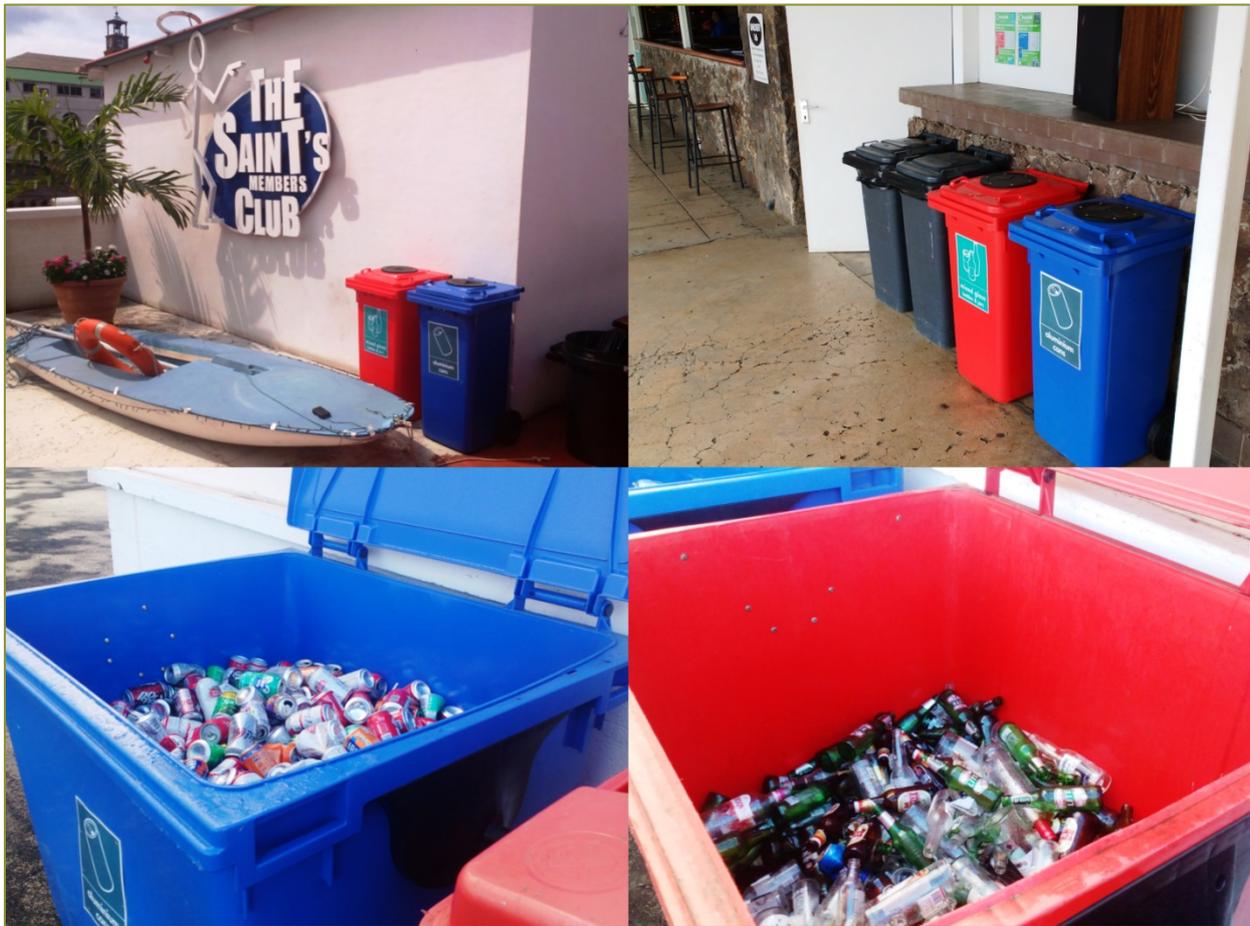
	No contacts with UK	organisations engaged	preparing reports on options for waste management and implementation	and provided reports included in the relevant Annexes
4. Waste Segregation / Recycling and Reduction - Education and action	<p>No baseline data on amount or types of waste produced</p> <p>No waste segregation occurs on island.</p> <p>No waste recycling occurs on island.</p> <p>No literature available to general public on waste reduction/recycling on Ascension.</p>	<p>Report produced on waste wheel data</p> <p>Education action plan produced</p> <p>Social media activity on project deliverables both on AIG website and articles published in the Islander newspaper on Ascension.</p>	<p>Waste Wheel report with baseline of waste types included – this provided understanding of the waste and recyclable materials arising on Ascension for the first time and provided the basis for all other follow on work, such as the feasibility study and infrastructure designs</p> <p>Communications plan prepared which provided direction on how the waste management strategy is to be communicated</p> <p>Social media updates provided via Twitter which presented the successes of the project and the Darwin Initiative’s involvement with it</p> <p>Waste management information provided on AIG Website gave a location for persons to find information on recycling activities on Ascension</p> <p>Articles published in the Islander newspaper for general circulation on island and alerted persons to successes and instructions on recycling</p>	<p>Waste wheel report included at Annex 6.3</p> <p>Communications plan included at Annex 6.6</p> <p>Twitter account: @MichaelTHaworth</p> <p>Examples shown at Annex 6.9</p> <p>AIG Website: www.ascension-government.gov.ac/government/waste-management</p> <p>Example shown in Annex 6.9</p> <p>Islander articles included at Annex 6.7</p>

3.2 Outcome

The project achieved the intended outcome. As stated in 3.1 above, the overarching Output was the preparation of a Waste Management Strategy for Ascension. This has been prepared and approved by AIG and is attached at Annex 6.1. This strategy was underpinned by an exhaustive process of information gathering, stakeholder engagement, feasibility studies, training and communications and education.

The strategy itself was implemented across the island through the provision of new bespoke bins at key locations with glass and cans being segregated at source by the clubs and the public. This implementation was carried out according to a communications plan with engagement with the public and the island organisations. See Figure 3 below.

Figure 3 - Glass and Drinks Can Collection Bins



A new waste handling facility under construction and will be complete in November 2018. This facility is the One Boat Household Waste and Recycling Centre ("HWRC") and will provide a gated fenced area of hardstanding in which to carry out waste management activities in a controlled manner.

The HWRC will enclose waste reception and sorting bays for the management of waste and recyclable materials. It will house a 250kg per hour hazardous and non-hazardous waste incinerator and a scrap metal / drinks can / car crusher. The site will also be used to collect and store other waste types prior to packaging and shipping to the UK. The facility will be the focal point for waste management operations and will lead to the closure of the One Boat Landfill for general waste tipping and burning. See Figures 4 and 5 below for the design of the site compared with the actual construction.

Figure 4 - One Boat HWRC Design Image

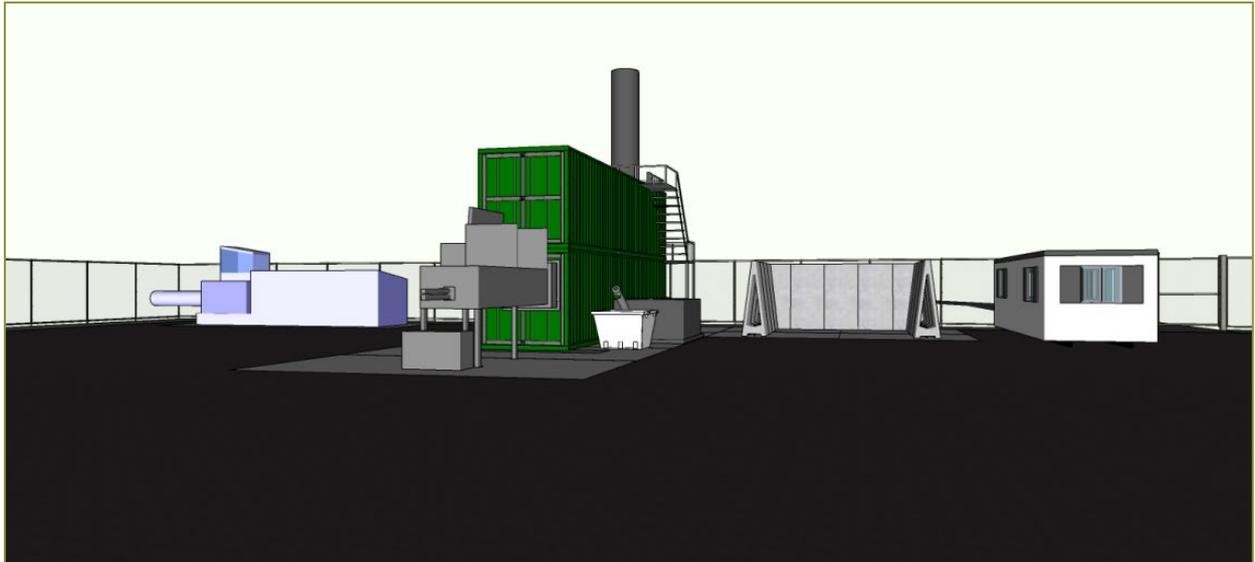


Figure 5 - One Boat HWRC in Construction Photo



3.3 Long-term strategic outcome(s)

One of the main objectives of the Ascension Island Strategic Development Plan (“SDP”) is “to repair, improve and modernise key island infrastructure (including waste)” with a specific objective in relation to waste management “to develop a new waste management facility and an associated policy to ensure efficient refuse collection and disposal systems, including for hazardous waste”.

With the construction of the HWRC and the preparation of the waste management strategy, the objectives of the SDP have been delivered.

The project has made an impact in terms of providing a modern maintainable facility which will allow the local waste management team to have a base of operations, new equipment with all the tools and spare parts required for their maintenance and upkeep; and they have received extensive training and have a timetable for doing this.

The project will significantly reduce the pollution of the terrestrial and marine environments and the surrounding environs.

The project has delivered on island capacity to manage the waste for the future and has provided a new baseline on which future improvements and new infrastructure can be built.

The project has delivered value for money via the employment of the project leader; a multidisciplinary project manager experienced in the delivery of waste management and recycling projects. The project leader has taken the island from a baseline of zero to a waste management system which could be comparable with the UK. This has been achieved through a cost to Darwin of £40,000 over 2 years which is equivalent to an hourly employment rate of £10 per hour – which represents significant value for money.

4 Sustainability and Legacy

The operation of the HWRC and the supporting strategy is most likely to endure. This infrastructure and equipment has been constructed by the local workforce on Ascension, utilising their knowledge and expertise – which includes those persons who will be manning the site once operational. Therefore, the future workforce is engaged to make this a long term success.

The operation and maintenance requirements of the site have been written up in the Working Procedure for the HWRC. This working document describes the operational routines to be carried out on the site to deliver the strategy. This document was drafted in consultation with the waste management team on Ascension to ensure their buy in.

The project staff of one person; the project leader will leave Ascension now that the project is complete.

5 Lessons learned

The main part of the project which did not work well was the development of procedures for access to the old One Boat Landfill. The site was unmanned and disorganised from many years of tipping waste. The access procedures attempted to develop habits of sorting of waste into specific bays for different waste types. Due to a lack of infrastructure and resources, the site could not be manned and had to rely on persons (either public or from island organisations) to put the right materials in the right place.

Due to the existing disorganised nature of the site and without having staff dedicated to the task there was a lack of control the waste inputs; hence this was only marginally successful. If attempting this again, I would have simply omitted this work and diverted my resources to the other more productive activities to benefit the overall outcome.

For similar waste management projects, the key message is to understand your waste quantities and composition. Extensive research into this is required and without this, the means to recommend and implement solutions (either technical or social) will be flawed.

Overall, however, the recommendation from this project is seeking the opinions and expertise of the local community and workforce through consultation, for example, what do they want? / Community benefit? / how would they do it?. If the prospective beneficiaries of the project outcomes are supportive of solutions or methods, the project outcomes are likely to endure.

5.1 Monitoring and evaluation

There have been no major changes to the project.

5.2 Actions taken in response to annual report reviews

The feedback received from the previous annual reports and the responses to the queries are summarised below.

		<i>Response</i>
1	It is also worth considering whether additional <i>formal</i> partnerships from the project outset could have facilitated earlier agreement on a viable waste management strategy.	Having formal partnerships in place could have facilitated earlier agreement, however, in order to have a formal partnership in place, there would have needed to be a greater period of time of consultation prior to the Darwin application being submitted, say circa 6

		<p>months to gain agreement on the terms of the formal partnership.</p> <p>It is not certain that the military organisations or the BBC would have formally signed up to agreements with AIG. In the case of the USAF, they do not recognise AIG as a true government on the basis of it reporting to St Helena Government and ultimately the UK Government</p>
2	<p>It is not clear what attempt, if any, was made to include USAF in the project and it would be useful to understand if the Project Leader believes closer and/or more formal engagement with USAF could have resulted in a more collaborative relationship.</p>	<p>USAF were included as informal partners in the project and were included in the Steering Group along with all the other major island users. The USAF personnel on island were engaged in the project. However, the decisions made to not allow their waste to be sampled were taken by the USAF headquarters in mainland US in Florida.</p>
3	<p>The Report mentions that AIG expects USAF and the other key employing organisations on Ascension to financially contribute to waste management. What evidence is there to suggest these organisations are agreeable to financially contribute to proposed waste management activities?</p>	<p>This is a difficult question to answer with certainty. The present situation is described in the Waste Management Strategy document, stating; <i>“At present, AIG is conducting a financial review of its budgets and until that is completed; it is not known whether the waste management strategy can be supported by existing [AIG] income.</i></p> <p><i>Should there be insufficient income to provide for the operation of the waste management strategy, AIG would anticipate seeking funds from the EOs on an annual basis in the form of a levy as per the figures provided above. The division of the levy amount would be subject to negotiation, however, in previous similar situations the levy has been split across the EOs on a per capita basis (excluding AIG).</i></p> <p><i>Should there be a need for a consultation with the EOs on the introduction of a waste levy this will be led by the Administrators office.”.</i></p>
4	<p>There appears to be a lack of certainty over when or if finance to support capital infrastructure for this project will be reallocated (the report notes £1 million had been allocated initially and there is a Medium level risk linked to this in the Risk Register). Is there a risk that AIG funding is never reallocated to support the waste management activities or is it primarily contingent on when the Airport reopens?</p>	<p>The capital funds for the project were provided by AIG through funding from the UK government Conflict, Stability and Securities Fund (CSSF) for the value of £500,000. These funds were sufficient for construction of the site. So this risk can be removed</p>

6 Darwin Identity

The Darwin identity has been prominently displayed at the front of the majority of project reports and literature. It has been included in social media messaging inclusive of the @Defra_Darwin twitter handle. Every opportunity has been made to publicise the Darwin Initiative, either verbally in meetings and presentations or in published documents.

See Annexes 6.1, 6.7 and 6.9 which present this.

7 Finance and administration

7.1 Project expenditure

Project spend (indicative) since last annual report	2018/19 Grant (£)	2018/19 Total forecast* Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others				
TOTAL				

*forecast costs provided as project completed prior to end of 2018/19 financial year

Staff employed (Name and position)	Cost (£)
Mike Haworth – Waste Management Project Manager	
TOTAL	

Consultancy – description of breakdown of costs	Other items – cost (£)
TOTAL	

Capital items – description	Capital items – cost (£)

TOTAL	

Other items – description	Other items – cost (£)
Signage for Site – Mirage Signs	
Recycling Bags – Smart Bags	
Costs for Opening Ceremony	
TOTAL	

7.2 Additional funds or in-kind contributions secured

Source of funding for project lifetime	Total (£)
Blue Marine Foundation – provision of communications officer for 4 months (Estimated figure as actual costs for support not provided)	
TOTAL	

Source of funding for additional work after project lifetime	Total (£)
TOTAL	

7.3 Value for Money

See the commentary at Section 3.3. To reiterate this point, the island now has a means to significantly reduce the pollution of the island through the use of the new HWRC and to stop open burning of waste and accumulation hazardous waste materials. In addition, processes are in place to collect drinks cans and glass to prevent them entering the environment. As long as the site and working procedures are sustained by AIG, the money provided for this project represents a relatively small investment for a very high long term benefit to the environments and people on Ascension.

Annex 1 – The project had no logframe

Project's original (or most recently approved) logframe (if your project has a logframe), including indicators, means of verification and assumptions. N.B. Insert your full logframe. If your logframe has changed since your application and was approved by a Change Request the newest approved version should be inserted here, otherwise insert the logframe from your application. If your application's logframe is presented in a different format in your application, please transpose into the below template. Please feel free to contact Darwin-Projects@ltsi.co.uk if you have any questions regarding this.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact:			
Outcome:			
Outputs:	1.1	1.1	
1. Add more outputs as necessary	1.2	1.2	
	1.3 etc.	1.3	
2.	2.1	2.1	
	2.2	2.2	
3.	3.1	3.1	
Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)			

Annex 2 – The project had no logframe

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Impact: Insert agreed project Impact statement		Report on any contribution towards positive impact on biodiversity or positive changes in the conditions of human communities associated with biodiversity e.g. steps towards sustainable use or equitable sharing of costs or benefits
Outcome Insert agreed project Outcome statement	Insert agreed Outcome level indicators	Report on progress towards achieving the project purpose, i.e. the sum of the outputs and assumptions
Output 1. Insert agreed Outputs with Activities relevant to that output in lines below	Insert agreed output level indicators)	Report general progress and appropriateness of indicators, and reference where evidence is provided e.g. <i>Evidence provided in section 3.2 of report and Annex X</i>
Activity 1.1 Insert activities relevant to this out put		Report completed or progress on activities that contribute toward achieving this Output
Activity 1.2. Etc.		
Output 2. Insert agreed Output	Insert agreed Output level indicators	Report general progress and appropriateness of indicator
Activity 2.1.		
Activity 2.2. Etc.		
Output 3. Etc.		

Annex 3 Standard Measures

Code	Description	Totals (plus additional detail as required)
Training Measures		
1	Number of (i) students from the UKOTs; and (ii) other students to receive training (including PhD, masters and other training and receiving a qualification or certificate)	
2	Number of (i) people in UKOTs; and (ii) other people receiving other forms of long-term (>1yr) training not leading to formal qualification	
3a	Number of (i) people in UKOTs; and (ii) other people receiving other forms of short-term education/training (i.e. not categories 1-5 above)	
3b	Number of training weeks (i) in UKOTs; (ii) outside UKOTs not leading to formal qualification	
4	Number of types of training materials produced. Were these materials made available for use by UKOTs?	
5	Number of UKOT citizens who have increased capacity to manage natural resources as a result of the project	
Research Measures		
9	Number of species/habitat management plans/ strategies (or action plans) produced for/by Governments, public authorities or other implementing agencies in the UKOTs	
10	Number of formal documents produced to assist work in UKOTs related to species identification, classification and recording.	
11a	Number of papers published or accepted for publication in peer reviewed journals written by (i) UKOT authors; and (ii) other authors	
11b	Number of papers published or accepted for publication elsewhere written by (i) UKOT authors; and (ii) other authors	
12b	Number of computer-based databases enhanced (containing species/genetic information). Were these databases made available for use by UKOTs?	
13a	Number of species reference collections established. Were these collections handed over to UKOTs?	

Code	Description	Totals (plus additional detail as required)
13b	Number of species reference collections enhanced. Were these collections handed over to UKOTs?	
Dissemination Measures		
14a	Number of conferences/seminars/workshops/stakeholder meetings organised to present/disseminate findings from UKOT's Darwin project work	
14b	Number of conferences/seminars/workshops/stakeholder meetings attended at which findings from the Darwin Plus project work will be presented/ disseminated	
Physical Measures		
20	Estimated value (£s) of physical assets handed over to UKOT(s)	
21	Number of permanent educational/training/research facilities or organisation established in UKOTs	
22	Number of permanent field plots established in UKOTs	
23	Value of resources raised from other sources (e.g., in addition to Darwin funding) for project work	£15,000

Annex 4 Publications

Provide full details of all publications and material that can be publicly accessed, e.g. title, name of publisher, contact details. Mark (*) all publications and other material that you have included with this report

Type *	Detail	Nationality of lead author	Nationality of institution of lead author	Gender of lead author	Publishers	Available from
(e.g. journals, manual, CDs)	(title, author, year)				(name, city)	(e.g. weblink, contact address, annex etc)

Annex 5 Darwin Contacts

Ref No	DPLUS047
Project Title	REDUCE, REUSE, RECYCLE – A WASTE MANAGEMENT STRATEGY FOR ASCENSION
Project Leader Details	
Name	MIKE HAWORTH
Role within Darwin Project	PROJECT LEADER
Address	
Phone	
Fax/Skype	
Email	
Partner 1	
Name	JULIA BRAGG
Organisation	WRAP
Role within Darwin Project	PROJECT MANAGER – WRAP
Address	
Fax/Skype	
Email	
Partner 2 etc.	
Name	
Organisation	
Role within Darwin Project	
Address	
Fax/Skype	
Email	

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	✓
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	✓
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number.	
Have you involved your partners in preparation of the report and named the main contributors	✓
Have you completed the Project Expenditure table fully?	✓
Do not include claim forms or other communications with this report.	