



Department  
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## 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 April**

### Darwin Plus Project Information

Project Ref Number	DPLUS019
Project Title	<i>Socioeconomic aspects of turtle conservation in the Cayman Islands</i>
Territory(ies)	Cayman Islands
Contract Holder Institution	Cayman Islands Department of Environment (DoE)
Partner Institutions	University of Exeter
Grant Value	£149,904
Start/end date of project	1 April 2014 to 31 March 2016
Reporting period (e.g., Apr 2015-Mar 2016) and number (e.g., AR 1,2)	April 2014 to March 2015, AR 1
Project Leader	Janice Blumenthal
Project website	<a href="http://www.doe.ky/marine/turtles/darwin">http://www.doe.ky/marine/turtles/darwin</a>
Report author and date	Janice Blumenthal, Ana Nuno, Gina Ebanks-Petrie, Timothy Austin, Brendan Godley, Annette Broderick 30 April 2015

## 1. Project Overview

The three Cayman Islands (Grand Cayman, Cayman Brac, and Little Cayman) are situated in the Caribbean Sea, approximately 240 kilometres south of Cuba and 270 kilometres northwest of Jamaica (Fig. 1).



**Fig. 1.** Map of study area (the three Cayman Islands) and surrounding countries.

The Cayman Islands gained their original name “Las Tortugas” (the turtles) from Christopher Columbus. In 1503, during his fourth voyage to the West Indies, Columbus’ expedition recorded passing “*two very small low islands full of turtles (as was all the sea thereabout, so that it seemed to be full of little rocks).*” This marked the beginning of a period of exploitation by visiting ships: to provision their Caribbean expeditions, early explorers hunted turtles in levels such that Cayman Islands nesting populations were nearly extirpated by the early 1800s.

Immense economic and social change has come very rapidly for the Cayman Islands: they were undiscovered until Columbus’ expedition in the 1500s, remained unsettled until the 1700s, and for hundreds of years stayed nearly unchanged – such that in the 1950s they came to the attention of the outside world as the “islands time forgot”. It was not until the 1960s that an unprecedented tourism and financial boom began, with rapidly expanding human population and development bringing attendant threats to biodiversity and complicating management of natural resources.

Scheduled air service to Grand Cayman began in 1948 and cruise ships first visited in the late 1960s, initiating the tourism boom: visitor numbers grew from 3,440 in 1966 to more than 1.8 million in 2010 (288,300 by air and 1,597,800 by sea). In addition to a growing tourism product, by the 1970s the Cayman Islands had become a major centre for international finance. Through immigration, the population of the islands has expanded rapidly, tripling between the 1960s and 1980s (from 8,511 in 1960 to 25,900 in 1988) and more than doubling again (to 54,878) by 2010 – a population which now includes more than 100 nationalities.

Throughout the history of the Cayman Islands, turtles have played an important role in the economy and culture: the turtle is a national emblem, enshrined in the flag and currency, and turtle meat is considered by some to be the Cayman Islands’ ‘National Dish’. In 1968, a

commercial captive breeding operation, the Cayman Turtle Farm, was established to provide turtle meat for consumption, reduce demand on wild stocks, and replenish the wild nesting population through the release of hatchling and yearling turtles. The Farm is now owned by the Cayman Islands Government and legal protection for the remnant wild turtle nesting population – prohibiting take of turtle eggs and nesting females – was instituted in 1978 and amended to add further protections in 1985 and 2008.

However, illegal take of turtles threatens nesting population survival and within the multicultural population of the Cayman Islands, production of turtle meat by the Cayman Turtle Farm (as well as the importance and current prevalence of turtle consumption) is extremely controversial. The Farm has also recently been subject to an international campaign to end turtle farming by the NGO World Animal Protection (WAP). This campaign has focused primarily on animal welfare issues, however, from a species management perspective, arguments have been made that over time, demand for turtle meat has begun to die out and the Farm is now creating demand in international tourists, maintaining or stimulating demand among Caymanians, and potentially driving a black market for wild turtle products by creating market opportunities for turtle meat obtained through opportunistic or specialised illegal take. Alternatively, the Farm and the Cayman Islands Government have argued that the Farm is both enhancing wild stocks through releases and reducing illegal take of wild turtles by providing a legal source of meat.

The aim of the “*Socioeconomic aspects of turtle conservation in the Cayman Islands*” project is thus to provide robust scientific data on the role of the Cayman Turtle Farm in wild turtle conservation – a priority which has been identified by all stakeholders. The project, granted to the Cayman Islands Department of Environment (DoE), aims to allow determination of cultural importance, current prevalence, and socioeconomics of turtle consumption through a comprehensive national socioeconomic survey. Interviews with households, high school students, international tourists, and restaurants (conducted during the first year of the project) have been used to establish the cultural and age effects in the consumption of turtle meat and the influence of price and availability of farmed turtle meat, preference for farmed or wild product, demand, willingness to pay, and environmental awareness in incentivising or reducing take of wild turtles.

DoE marine turtle monitoring programmes began in 1998, when Drs Annette Broderick and Brendan Godley from the Marine Turtle Research Group (now at University of Exeter) assisted DoE staff in establishing the Cayman Islands Marine Turtle Research Programme. Since then, their involvement in the Cayman Islands has further developed marine turtle research – leading to the request by DoE for them to contribute to the current project.

To determine Cayman Islands marine turtle population size (and thus assess vulnerability to illegal take) and to identify farm-released turtles nesting in the wild, a comprehensive night survey was carried out in the first year of the project (summer 2014) and will be continued in the second year of the project. Turtle nesting in the Cayman Islands has increased in recent years (from less than 30 nests in 1998 to more than 300 nests in 2014). However, illegal take may threaten population survival and the number of females in the nesting population is unknown as each turtle can lay more than one nest per season. Between 1980 and 2012, 31,184 turtles were released from the Cayman Turtle Farm, approximately 80% of these marked with tags or living tags (the latter of which are lifelong marks on the shell). Thus, some turtles released from the Farm can be identified through tags documented during night surveys carried out in this project. Additionally, tissue samples have been collected from farm turtles, nesting females and hatched nests for genetic analysis to further refine estimates of farm contribution to wild stocks.

By using both socioeconomic and biological methods, our aim is to conserve a national cultural icon by: 1) assessing the role of the Cayman Turtle Farm in supply and demand for turtle meat, 2) assessing illegal take and how this may be influenced by supply and demand, 3) establishing management targets to reduce illegal take, and 4) evaluating the contribution of the farm to wild stocks. Resulting knowledge will be incorporated into a marine turtle Species Action Plan under the Cayman Islands National Conservation Law 2013, providing for evidence-based management of marine turtle populations.

## 2. Project Progress

### 2.1 Progress in carrying out project activities

Excellent progress has been made on all aspects of the project and all activities are on schedule toward achieving the planned outcomes.

#### Output 1

**1.1 Socioeconomic assessment of the cultural value and drivers of turtle meat consumption and the prevalence of illegal take (Key milestones: methods training workshop June 2014, >100 interviews completed by November 2014, analysis completed March 2015).** Following in-depth interviews with stakeholders, a socioeconomic survey tool was developed and piloted. Methods training workshops on the administration of the surveys were organised for 12 field enumerators (10 in Grand Cayman and 2 in Cayman Brac and Little Cayman) in August and September 2014. Participants were split into three workshops, each session taking approximately 2-3 hours. Measure of effectiveness: enumerators trained during the workshops completed a large number of surveys (around 60 questionnaires each) with a low non-response rate. For household socioeconomic surveys (conducted from September to November 2014), we approached 597 individuals, of which 37 refused to participate (non-response rate = 6.2%).

Our total sample was 560 households, exceeding the initial deliverable of 100 interviews in order to allow a more rigorous quantitative analysis. Additional surveys of 174 high school students (to further explore age effects), 117 international cruise ship tourists, 87 stay-over international tourists and 28 restaurants (to further investigate demand) were also successfully completed by March 2015 and preliminary data analysis is complete. Evidence: completed surveys (archived at the DoE and digital database), seminar presentation by Ana Nuno entitled "*Saving turtles and eating them too? A multidisciplinary analysis of conflicts over farming of endangered species*", presented at the School of Anthropology and Conservation, University of Kent, UK, on the 11<sup>th</sup> of March 2015.

**1.2 Presentation of socioeconomic results so Government and the Cayman Turtle Farm have valid information on the role of turtle meat production in increasing or decreasing pressures on wild stocks (Key milestone: presentation of policy paper to CI Government Sep 2015).** Data collection and analysis is on schedule to allow completion in September 2015.

**1.3 A collaborative approach is developed to protect nesting female turtles (Key milestones: Workshop for DoE, Police, Tourism, and Customs Oct 2015).** Data collection and analysis is on schedule to allow completion in October 2015.

**1.4 Members of the public are aware of the need to reduce illegal take of marine turtles (Key milestones: educational materials produced and distributed, press releases, public consultation and recruitment of volunteers May 2014 and May 2015).** Educational talks and field events were conducted in local schools and for community groups, press releases were issued (resulting in local newspaper, radio, and television coverage) and educational materials were distributed to beachfront property owners and residents and to 30 beachfront hotels. Additionally, 25 in-depth stakeholder interviews were conducted to explore perceptions relating to the Cayman Turtle Farm and illegal take and 72 volunteers were recruited to assist with fieldwork (36 in Grand Cayman, 16 in Little Cayman, and 20 in Cayman Brac). Evidence: press releases, stakeholder interviews (archived in a digital database), educational materials (for copies, see the project webpage, <http://www.doe.ky/marine/turtles/darwin>).

**1.5 Management and Evaluation: (Steering group meetings April, July, October 2014; January, April, July, October 2015).** To initiate the project, discussions and interviews for the post of Darwin Project Officer were held in April 2014 (via Skype). A one week steering committee workshop was held in June 2014 after recruitment of the Project Officer (topics covered: review of project aims, milestones, and deadlines, delineation of key tasks, discussion of socioeconomic and biological project components and their integration, discussion of project dissemination and outreach, discussion of how outputs will be used for management), along with presentations to various stakeholder groups (Cayman Turtle Farm, FCO representatives,

Minister of Environment, and Department of Environment's Research, Operations, Administration, and Enforcement Staff). Steering group meetings were held via Skype in October 2014 (to discuss fieldwork progress) and January 2015 (to discuss progress on the analysis of socioeconomic survey data).

## Output 2

**2.1 Quantification of marine turtle nesting population size and the farm contribution to assess vulnerability to illegal take (Key milestones: recruitment of interns for turtle nesting night survey fieldwork May 2014, May 2015, completion of two night survey field seasons 2014 and 2015).** Four interns for nesting beach monitoring, tagging, and genetic sample collection were recruited in May and began fieldwork at the beginning of the green turtle nesting season in June. The 2014 field season is now complete with 135 green turtle nests located and marked to enable collection of genetic samples and 21 nesting female green turtles tagged and photodocumented to identify Cayman Turtle Farm "living tags". Evidence: database of nesting and tagging data, genetic samples archived at DoE and sent to University of Barcelona for analysis.

**2.2 Completion of genetic analysis of >500 samples (January 2016).** Tissue samples have been collected from 21 nesting female green turtles and 135 green turtle nests. Cayman Islands CITES export permits and UK CITES import permits were obtained and shipment of samples took place in November 2014. Additionally, 254 samples from the Cayman Turtle Farm were collected and are due to be shipped in May 2015. Analysis of samples at University of Barcelona is underway and collection of additional samples will take place in the second field season.

**2.3 Management and evaluation (Steering group meetings April, July, October 2014; January, April, July, October 2015).** See above: steering group meetings were held in April, June, and October 2014 and January 2015.

## 2.2 Project support to environmental and/or climate outcomes in the UKOT's

This project will contribute to species conservation: facilitating recovery of Cayman Islands marine turtles.

Under the new Cayman Islands National Conservation Law, all protected (Schedule 1) species require a Species Action Plan. Socioeconomic and biological results from this project will be used to design a marine turtle Species Action Plan, with the aim of reducing illegal take and other critical threats to wild populations. After a period of public consultation and amendments, the resulting plan will become legally binding under the National Conservation Law.

This project is a priority identified in the Darwin-funded Cayman Islands National Biodiversity Action Plan and will also contribute to priorities identified in the Environment Charter and help the Cayman Islands and UK meet obligations under multi-lateral environmental agreements (CBD, CITES, CMS). It will also assist in meeting Aichi targets, particularly A4 implementing plans for sustainable production and consumption, B7 managing aquaculture sustainably, C12 preventing extinction of threatened species, and E18 respecting the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity.

## 2.3 Progress towards project outputs

Output ( <i>what will be achieved e.g. capacity building, action plan produced, alien species controlled</i> )	Indicators of success ( <i>how we will know if its been achieved e.g. number of people trained/ trees planted</i> )	Status before project/baseline data ( <i>what is the situation before the project starts?</i> )	Source of information ( <i>where will you obtain the information to demonstrate if the indicator has been achieved?</i> )
1. Reduced incentive for illegal take of marine turtles	Generation of an evidence-based management plan to inform economic policy, enforcement, and awareness	Current processes operating in absence of robust evidence base. This will allow a SMART target 50% reduction to be set.	Management plan document, associated press releases and media outputs. <b>Progress:</b> we are currently in the data collection and analysis phase, having completed socioeconomic surveys and the first season of night nesting beach monitoring fieldwork. This has laid a solid foundation for the next phase of the project (presenting results and setting targets).
2. Assessment of wild nesting population vulnerability and contribution of the Cayman Turtle Farm	Accurate estimate of population size and Cayman Turtle Farm contribution in 2 seasons (2014 and 2015)	DoE has lacked the capacity for comprehensive night monitoring and genetic analysis	Database of tagged turtles; results of genetic analysis (>500 samples) by the end of the project). <b>Progress:</b> In 2014, we tagged 21 turtles and collected genetic samples from all tagged females and from 135 wild nests. We anticipate collecting additional samples in 2015. Additionally 254 samples were collected from the Cayman Turtle Farm. Data from the second field season and results of genetic analysis are needed prior to making estimates of nesting population size and Cayman Turtle Farm contribution. Socioeconomic surveys explored the current prevalence of illegal take along with possible management strategies, also contributing to this output.

## 2.4 Progress towards the project outcome

Illegal take is a critical threat to marine turtles in the Cayman Islands. However, current management is conducted in the absence of scientific data on socioeconomics of turtle meat sales and the contribution of the Farm to wild stocks.

In the first year of the Darwin Initiative Project, we have focused our efforts on determining current levels of illegal take (through sensitive questioning techniques in the socioeconomic survey and documentation of known incidents). In the second year of the project, we will work toward further detection and prevention efforts and setting targets for the reduction of illegal take.

The overall outcome of the project – conserving a national cultural icon, Cayman Islands marine turtles, by reducing illegal take – will be achieved by producing and implementing an evidence-based management plan, aimed at reducing incentives for illegal take and the ease with which wild meat can be assimilated into local markets.

We are on schedule in collecting socioeconomic and biological information to complete the management plan prior to the conclusion of the project: results will be incorporated into a marine turtle Species Action Plan under the National Conservation Law to translate research results into management actions.

## 2.5 Monitoring of risks

Risks identified in the application stage were:

*Staff turn-over:* as planned, in order to maximise institutional memory, all relevant staff in the Cayman Islands (including senior staff) have participated in training and fieldwork to ensure that skills and knowledge have been transferred in depth. This would minimise the effects of staff turnover should it occur in the second year of the project.

*Ambitious aims:* while this is an ambitious project (a complex socioeconomic survey involving multiple stakeholders) we have been able to over-achieve on project outputs to date, building a solid foundation from which to achieve the project outcomes.

*Operating costs in the Cayman Islands could be prohibitive:* as the Department of Environment (lead partner) operates in the Cayman Islands we were able to accurately budget for operating costs (on target for the first year). Thus far, our assumptions regarding operating costs have held true.

*Natural disaster:* we cannot rule out the possible impact of a hurricane in the second year of the project. However, progress made to date would reduce the impacts of a natural disaster should one occur during the remainder of the project. Additionally the Cayman Islands government and DoE have demonstrated their ability to rapidly recover and rebound from natural disasters – resuming normal operations and initiating the successful Darwin Initiative project 'In Ivan's Wake' only months after the impact of a devastating Category 5 hurricane.

## 3. Project Stakeholders

Engagement and support from all stakeholders has been an essential consideration during all stages of this project, particularly during the planning and implementation of the research survey tools, so that trust and uptake of scientific information produced in the project is enhanced. For example, before designing and undertaking national socioeconomic surveys, in-depth interviews with 25 key stakeholders, ranging from retired seamen and restaurant owners to animal welfare advocates and policy makers, were undertaken to identify key variables that should be investigated and to promote discussion about the survey tool. These interviews were followed by an iterative process in which a research tool was produced and feedback was obtained from several stakeholders to make sure there was agreement about content and relevance, while keeping it a neutral and scientific survey developed by experts.

The stakeholder groups below were particularly involved as follows:

*Caymanian public:* targeted stakeholder interviews, household surveys, school surveys, and restaurant surveys have been used to establish the opinions of the Cayman Islands public – key stakeholders due to heritage of turtle consumption and investment in Cayman Islands turtle conservation.

*Cayman Islands Department of Environment:* the Cayman Islands Department of Environment is the lead partner on this project and is the agency responsible for the monitoring and management of natural resources in the Cayman Islands. Prior to the initiation of the “*Socioeconomic aspects of turtle conservation in the Cayman Islands*” project, the DoE conducted an internal analysis to determine vital management questions to be answered. These questions were discussed with the UK partner and the Darwin Project Officer in order to ensure collection of information of maximum relevance to the on-the-ground conservation of marine turtles in the Cayman Islands.

*Cayman Turtle Farm:* a productive partnership was established with the Cayman Turtle Farm, beginning with a meeting with project partners (DoE, University of Exeter) at the initiation of the project. Cooperation from the Cayman Turtle Farm has allowed access to meat sales data (from receipt books), collection of genetic samples from breeding turtles, and access to data on tagging of released turtles. The Farm is eager to receive results from the project for management purposes.

*Cayman Islands Government:* data collected during the project will be used to create a Species Action Plan for marine turtles, facilitating successful evidence based management by the Cayman Islands Government.

*Volunteers:* volunteers were used extensively through the project. Volunteer appreciation events (to update volunteers on project progress and thank them for their contributions) were held in November 2014 on all three islands (funded by DoE).

*HM Governor’s Office in the Cayman Islands, Cayman Islands Tourism Association, Cayman Islands Customs, and Royal Cayman Islands Police Service:* we are on track to hold workshops and present results to these groups in October 2015.

*Marine Turtle Specialist Group:* the Marine Turtle Specialist Group will be informed through the publication of peer reviewed research results.

#### **4. Monitoring and evaluation**

Monitoring is through team meetings (of DoE staff and volunteers) held weekly during active fieldwork seasons, regular email contact between DoE staff and the UK partner, and steering group meetings, held quarterly (via Skype). Additionally, the Darwin Project Officer spent 50% of the first year of the project based in the Cayman Islands, facilitating communication among the partners.

A number of key indicators show the progress of the project: these include the appointment of key staff, training events, completion of field seasons (with associated metrics such as number of turtles tagged and number of samples collected), shipment of samples and progress of genetic analysis, workshops, generation of the evidence-based management plan, and production of materials for public education. All of these are clearly described (with goals and deadlines) in an implementation timetable, which has allowed us to assess how the project is progressing.

The project has involved an initial 12 month period of intensive data collection and analysis, with presentation of results to stakeholders, public outreach (including press releases), and incorporation of evidence based recommendations into the Cayman Islands legal framework scheduled to take place in the next reporting period.

Results from the project will be incorporated in a marine turtle Species Action Plan, ensuring that knowledge gained during the course of the project contributes to the project outcome.



## **5. Lessons learnt**

The Department of Environment has a very small research staff, without socioeconomic expertise and with broad responsibilities for national biodiversity research and management. The ability of the DoE to obtain relevant socioeconomic data for management has been revolutionised by recruitment of a Darwin Project Officer (post-doctoral social scientist) with expertise in management of exploited species under conditions of uncertainty and in specialised questioning techniques and other socioeconomic survey methods for obtaining reliable information on illegal take.

The Project Officer was based in the Cayman Islands for 6 months during the first year of the project, allowing her to gain an in-depth knowledge of local management issues during the design phase of the project. Before designing the socioeconomic survey, she conducted interviews with stakeholders (DoE, Cayman Turtle Farm, turtle consumers, seamen, international NGOs, etc.) and conducted a full pilot study. This allowed the socioeconomic survey design to be refined in order to ensure that management objectives were met.

To develop local capacity, DoE staff took part in the process of developing the research tool and local enumerators (who had been trained in general survey administration by the Cayman Islands Economics and Statistics Unit) were recruited and trained to administer the household questionnaires. As the enumerators were currently unemployed, this made a contribution to local livelihoods, increased local capacity to carry out socioeconomic surveys dealing with natural resource management, and allowed a large number of surveys to be completed.

Biological monitoring was conducted efficiently by a team of four interns with the assistance of community volunteers. Enthusiasm of volunteers was built through public events (e.g. public excavation of turtle nests, volunteer meetings, and appreciation events).

Further experience for Cayman Islands Government personnel will be gained in translating research results into informed environmental decision making through development of the marine turtle Species Action Plan – providing a case study for other UKOTs attempting to use socioeconomic science in species protection.

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

This is the first annual report for the project.

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

The project was expanded during the pilot phase to include formal stakeholder analysis and key informant interviews, surveys of 597 households, and additional surveys of restaurant owners/managers, international tourists, and high school students (totalling 991 respondents). This will allow a much more comprehensive, quantitative assessment from the various stakeholders (compared to the goal of 100 interviews included in the application). Additionally, data was entered from 132 Cayman Turtle Farm receipt books (by DoE interns) in order to allow an analysis of trends in meat sales over time. The project was also expanded to include work in the Sister Islands (Little Cayman and Cayman Brac) as it was recognised that results are likely to vary by district.

## **8. Sustainability**

Since the project application was submitted, new legislation (the National Conservation Law 2013) was enacted which provides a framework for species conservation and requires Species Action Plans to be developed for all protected (Schedule 1) species.

Data from this Darwin Initiative Project will be used to create a robust marine turtle Species Action Plan, engaging stakeholders and allowing decisions on marine turtle management to be based on sound science. This will allow the project legacy of evidence based environmental management to be sustained.

Volunteers will be encouraged to continue their involvement with DoE marine turtle fieldwork and the project will also improve Cayman Islands Government capacity: experience gained by DoE and Economics and Statistics Unit staff will set the stage for future socioeconomic work on natural resources.

## **9. Darwin Identity**

Press releases issued under the project acknowledged the Darwin Initiative and the Darwin logo was used in educational materials. The Darwin Initiative is also introduced and explained during school and public talks, research seminars, and events (such as fieldtrips for school children and demonstrations of field methods for beachfront property owners).

The Darwin Initiative was recognised as supporting a clear and cohesive project with social science and biological components: funding socioeconomic surveys, night nesting beach monitoring, and genetic analysis all targeted at evaluating the role of the Cayman Turtle Farm in wild turtle conservation and reducing illegal take.

The Cayman Islands public is likely to be familiar with the Darwin Initiative due to other high profile projects taking place here (e.g. biodiversity mapping, marine parks, keystone predators).

## 10. Project Expenditure

Table 1 Project expenditure during the reporting period (1 April 2014 – 31 March 2015)

Project spend (indicative) in this financial year	2014/15 Grant (£)	2014/15 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				Staff costs were under budget as the Project Officer began after the planned start date. We have compensated for this short delay: no deliverables are behind schedule.
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				Completion of additional surveys (991 rather than the 100 originally budgeted) was funded by the reduction in staff costs. 'Total actual Darwin costs' represents spending of Darwin funds – a £236 overspend was funded by DoE.
Capital items				
Others (Please specify)				We underspent on 'other costs' in Quarter 4 to compensate for an unfavourable exchange rate when compared to the budget. This underspend was small in actual dollar terms (£400) and all deliverables were achieved.
<b>TOTAL</b>	<b>77,943</b>	<b>77,943</b>		

Note: the majority of the project's expenses are incurred in Cayman Islands Dollars, the value of which is pegged to the US Dollar. During the first year of the project, the US Dollar weakened against the British Pound resulting in certain actual costs being higher than the budgeted costs. As a result of the weakening dollar, the project overspent by £236. The DoE funded this overspend. This explains why the Total Grant and Total Actual Costs amounts (shown above) are the same.

## Checklist for submission

	Check
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> putting the project number in the Subject line.	Yes
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> about the best way to deliver the report, putting the project number in the Subject line.	N/A
<b>Have you included means of verification?</b> You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	Yes (see project webpage)
<b>Do you have hard copies of material you want to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number.	No
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	