









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	DPLUS050
Project title	Waste to Warmth – cardboard into insulation boards and fuel bricks
Territory(ies)	St Helena Island
Contract holder Institution	SHAPE
Partner institutions	SHG, Safeguarding, EMD, DALCO
Grant value	£99.650
Start/end date of project	April 2016 – March 2018
Project leader name	Tracey Belgrove (nee Stroud)
Project website/Twitter/blog etc.	
Report author(s) and date	April 2018

Note: Please remove the blue guidance notes **from all sections** before submission.

1 Project Overview

SHAPE has established a successful recycling facility and currently produces products from paper and cardboard. The aim of the project is to fulfil our obligation and make significant contribution to reduce paper and cardboard going into the landfill. This project will continue to contribute to the delivery of the 10 year Environmental Management Plan. This project was to assist the lifespan of the Landfill on island. It was identified that if we did not change our habits we only had 8 years left of the landfill, however with changes like this project we could increase that lifespan for 20 years or more. Increasingly more homes are seeing the benefit of heating by using the paper fuel bricks rather than depleting the Forest. The project also supports the vision of a vibrant economy, providing opportunities for all, especially the disabled. It continues economic growth through production of locally produced niche products. SHAPE is the only organization on island providing social awareness and work for the disabled and vulnerable to enable them to lead independent lives. This project achieves technical experience through the use of efficient and appropriate technology, skilled staff and dedicated trainees. The outcomes of the project will benefit the livelihoods of the local people and the assist with improving and

maintaining environmental conditions through better management of solid waste. This waste is collected via a robust supply chain network and then processed into various products.



SHAPE is based between Half Tree Hollow and St Pauls, in an area called Donkey Plain.

2 Project Stakeholders/Partners

St Helena Government provides core funding for SHAPE to operate as a Social Enterprise for us to employ skilled workers as well as disabled and vulnerable people. This funding creates employment for staff and fully supports work of SHAPE in operating St Helena's first paper and cardboard recycling Centre. SHG have assisted financially but also supplies us with shredded paper and purchases recycled bins for all their Directorates from SHAPE.

The Safe Guarding Directorate works in Partnership with SHAPE through a Service Level Agreement to deliver a fully comprehensive support programme to meet the needs of the disabled and vulnerable members of the community. Safe Guarding are very supportive of the environmentally focused work being done at SHAPE.

EMD provides advice and support for effective environmental monitoring purposes. We have a positive working relationship with all the divisions within the Directorate. EMD assists us with information regarding the landfill monitoring as well as shred all our cardboard in order for us to break down into pulp and make products. EMD and SHAPE also work very closely when there are community projects or presentations to educate the public about waste on island.

SHAPE work closely with EMD when they do Waste Prevention Campaigns throughout the year. SHAPE assists with crafting life like size craft props for the Campaign.

We have a few private construction companies like the Mantis Group, Dalco and Amerdale that use our insulation Boards for works done. This is not as frequent as we would like however, it is definitely a positive step towards bigger projects once things get better on island in the Construction Industry. At the moment the island is experiencing a dip in the construction sector due to no funding, this has affected Employment on island as well as SHAPE with insulation Boards.

3 Project Achievements

3.1 Outputs

This project has allowed SHAPE to continue to reduce the amount of paper and card going into the landfill - it has enabled us to give work experience to more young adults with disabilities and help them live more independent lives. With the financial aid of getting equipment and setting up more areas within the Recycling Centre we have been able to produce a number of different products that will assist with SHAPE being sustainable as we have a very strong brand on St Helena Island and supported by the Community. Instead of having an area at the Centre to just show case items—we have been able to secure a little shop in the Market in the middle of Jamestown where it is easier for the Community and Tourists to purchase our products.

Output1: 100% of the three largest merchant's waste cardboard diverted from the landfill site

- SHAPE have been able to communicate with merchants on island as well as private
 household's to have their cardboard and paper delivered at the Recycling Centre
 storage unit or to have it collected by SHAPE. Thus far we do collection around the
 island twice a week and have individuals deliver throughout the week.
- The Building works at the Recycling Centre has been completed by a local contractor and we now have a drying room, extra working space and a Storage Room.
- Our heaters, racks etc arrived from the UK and is set up in the relevant areas.

Output2. 100% of the St Helena's Government's Waste cardboard and paper diverted from the landfill site.

• SHAPE has a formal agreement with EMD (SHG) that there is a recycled storage section at the landfill for paper and cardboard. The agreement includes that once a week the Landfill manager has the paper and cardboard shredded for SHAPE where we collect from site every Friday morning, ready for the hydropulp machine on Monday's. Thus far this has worked and in the coming months we are hoping to increase the collection to twice a week as we start to increase our pulp making from 1.5tonnes a week to 2 tonnes a week. The Community either drop their paper cardboard at the Recycling Centre or contact SHAPE is they have huge amounts to include them in our weekly collection.

Output3: Employment Opportunities for 3 additional staff, thus creating placement for additional six disabled clients

• We had secured place for 3 staff members at the Recycling Centre, they were all responsible for different facets on the business to maintain the smooth running of the centre as well as to increase revenue for SHAPE. Currently we are short staffed as employees move on to other employment. Shortly we will be advertising to fill the positions so that we can maintain our momentum with new products such as our furniture line, sales of the fuel bricks and insulation boards all play a huge factor in this. Safeguarding and SHAPE will be meeting regarding new trainees for work experience.

Output4. Produce Insulation boards from recycled cardboard

We continue to make the insulation boards from recycled paper and cardboard. We
have a storage room currently, building up stock. We have interest in our insulation
boards however with the lack of funds for the Construction Sector we can notice a dip
in the market. We use the boards for our new furniture line in the interim to maintain
our aim of sustainability..

Output5. Increase production of fuel bricks

• We continue to do the fire bricks manually due to the fact that we have had numerous issues with the brick machine purchased, we had assistance from Basil Read construction company and the Engineer from Connect St Helena to help but unfortunately no-one has been able to confirm what the issue is with the machine. In the meantime we are still using the hand press so that we continue to increase our stock. We are currently selling our bricks from the Market shop, Recycling Centre, Privately owned Shops as well as stock piling for the winter months and our busiest time for fire brick orders.

Output6. Increase amounts of paper and cardboard pulped

 We continue to monitor progress of the project, and a total of 1.5tonnes of dry paper and card has been processed per week thus far. We are hoping to increase this to 2 tonnes in the near future once we have sorted out the brick machine. (We weigh this by working out that each batch of pulp produced in the Hollander beater uses 2KG of paper which equates to a 45 litre bucket filled with paper.)

Output7. A marketing campaign to promote new product lines

We have a basic Marketing Plan and are looking forward to working on it more so that
as we learn and grow we are able to see areas that we can expand on. The Market shop
has been one of the ideas from the Marketing Plan and thankfully a unit became
available.

3.2 Outcome

Output 1:

Three of the largest merchants waste cardboard diverted from the Landfill site: The fact of having an increase in the amount of waste paper and cardboard being able to be processed means more pulp can be made and then placed into the community as reusable products. It also reduces the need for the EMD service to collect this to then be transported to the landfill site cutting down on their expenses as well. This also raises awareness within the business community of sorting waste as the cardboard would normally have been disposed of with normal waste however by sorting to give to SHAPE this process has to be done. The cardboard is then transported by SHAPE to the landfill to be processed for production, enhancing the working relationship between EMD, SHAPE and the business/local community and initiating a waste sorting process. All paper and cardboard waste would go to the landfill site before this process was initiated.

Output 2:

The new works at SHAPE been completed resulting in a drying room, a work space as well as a storage room mean that employees and trainees can now make and store products safely and effectively in the space provided. Previously the recycling centre space could only safely and effectively house large equipment and work areas. The additional space now allows more storage of products as production and demand increases. The drying room will allow quicker and effective drying area for the products which is needed as this will result in less time accumulated for drying products, meaning more products being produced, dried and then moved to storage or quicker to the consumer.

Output3:

Employment opportunities for additional staff, thus creating space for 6 additional disabled clients: The additional staff meant that with increased production within the recycling centre, this can now be done so at a more effective rate as everyone has a role within the different processes, as well as having responsibilities for trainees that are tasked and designated within those processes as well. We will be advertising the positions that are now open in the near future so that we can maintain our working environment. The plans for additional trainees constitutes the principle of SHAPE and enabling more disabled persons to come and learn new skills and to be in a functioning workplace that is adapted to their needs. This helps both Safe Guarding in meeting their targets and SHAPE meets this with increased production and service provided to disabled persons.

Output 4:

<u>Produce insulation boards from recycled cardboard:</u> With the production of the recycled boards that were trialled by Various construction businesses on island, we have continued research into these products and the developing construction methods on island. St Helena construction businesses and SHG are looking toward more greener and sustainable building materials instead of the normal mortar and block, along with alternative methods could come the need for insulation, which when developed to meet the building standards SHAPES insulation boards could be marketed and sold on a wider scale. However, at the moment the Construction businesses on island are struggling and most projects are not happening due to the lack of funding. We are hoping in the new Financial Year there has been monies allocated

for this sector so that people are not laid off from work, the economy does not struggle and that we(SHAPE) can maintain our working relationship with these businesses for our Insulation Boards.

Output 5:

<u>Increase production of fuel bricks:</u> With the unexpected issues in the setup of the hydraulic brick machine, we have still maintained a weekly production of fuel bricks but manually. Due to the dry/hot weather before the construction of the drying room, the production rate was increased to maximise the stock as the drying time was limited, this has resulted in a good stock for the winter season which will be marketed in the local outlets. The increased production and increased number of trainees means that the system in place for brick production will now continue annually with the added drying room decreasing the need to be weather dependent.

Output 6:

Increase amounts of paper and cardboard pulped: The amount of paper and cardboard that has been pulped has been increased due to the increased human resources and increased production of fuel bricks, with the ongoing marketing strategy to develop SHAPE recycled products this will mean a need for even more pulp to be processed. The new product line is furniture made from large paper pulp board, each piece of furniture use between four to five boards. The paper pulp boards use a large amount of paper pulp therefore an increase in the amount of pulp produced each week will have to be significant to cater for at least 10 boards per week to be made as well as the other products to continue increased production.

Output 7:

A marketing campaign to promote new product lines:

Within the current marketing plan it outlines having the marketing be catered for the products as they are made and having identified the market for them. This will continue as new products are being made and production increases as well as expanding the outlets for overall products. Social media is also a way we plan to increase our use of for immediate marketing and customer and base. We have a new website as well which outlines all information that could help a consumer decide in supporting SHAPE's good cause.

www.shapecharity.com

Pictures below: One of the Litter Campaigns with EMD and SHAPE. Cigarettes made from Paper Pulp.





3.3 Long-term strategic outcome(s)

SHAPE's contribution to the environmental outcome for ST Helena is that of decreasing the amount of paper and cardboard that goes into the landfill. Until 2016, SHAPE collected approx 8 % of a combination of SHG and private sector businesses paper waste, because of awareness created through marketing, product sales and the partnership with EMD, this in turn has resulted in an increase to approx 20% of SHG and the private sector. The increased paper has resulted in the increased paper pulp production and products, one of which being the fuel bricks, sales of fuel bricks from April 2017 – April 18 has also increased with the wider distribution via shops and media such as Facebook, Website and the Shop in the Market etc. The increase in sales of fuel bricks also contributes to other environmental issues such as decreasing the use of fossil fuels like charcoal for cooking or heating or destroying the islands diminishing supply of trees for wood. This has been found through customer reviews, that the bricks are being used as a cost effective way to provide heat within households whether for cooking or heating purposes. With the increasing cost of living on St Helena the demand for alternative fuel sources are expected to increase therefore we are anticipating an increase in our marketing, sales and distribution of fuel bricks. In terms of the projects progress it has maintained and covered the targets set within the initial project start up. We do not have an exit strategy as SHAPE would like to become a sustainable recycling centre to continue the project through to the post Darwin funded phase. It is likely that plans would incorporate working partnerships with Safe Guarding and SHG departments to ensure a continued workforce and placement of disabled persons for the continuation of the recycling project.

4 Sustainability and Legacy

The recycling project has been working towards raising awareness of recycling materials on island and within the communities. The aim of building a legacy to ensure that this is continued and spread throughout the islands community has been by a range of activities such as accepting school groups into the centre for hands on experience of making products, or helping in the processes this having been after being exposed to a tour of the premises and being told the aim of recycling and the benefits etc. This is also reinforced through the geography lessons on global warming effects that are being taught as a part of the education curriculum, and from their visits encouraged teachers to now introduce recycling initiatives within the schools by way of art projects and paper recycling. Once again the partnership with SHG has enabled SHAPE to participate in a few global events such as World thinking day celebrating by the guiding association on island, Waste Awareness Campaigns etc. this enabled SHAPE to showcase their project aims and products to the islands guiding association, this was covered by local Television media and publicised which in turn resulted in orders for products and visits as well as creating an even wider awareness of the project aims amongst locals. With the increase of orders due to having a SHOP more centrally, with more campaigns happening with EMD about Recycling, Littering etc – we are sure we can maintain this project/initiative. However, we will need to continue with our marketing and sales if we hope to maintain the number of staff. We are constantly researching new ideas for products and projects – and hope to be able to secure future funding for our environmental initiatives. The project has contributed towards making significant contributions to reduce paper and cardboard waste going into the Landfill.

5 Lessons learned

SHAPE has established outstanding efforts in its procurement of machinery. The size of machinery being used at the Paper and Card Recycling Centre is relatively large with mechanical challenges that have involved a wider community effort in setting up. People outside of SHAPE with skills and expertise have given time to help with ensuring our equipment meets required functioning standards. This is at times challenging due to the fact the volunteered help of people with certain expertise could only assist when they have free time. We continue to request assistance for skilled help when someone with technical knowledge arrives on island. The time frame that we envisioned was at times not realistic as we did not take into account that machines breaking and that getting the parts on island with the right people to assist with repairs, were not always on schedule or available. SHAPE has been able to accommodate more trainees due to the Recycling Centre having the right equipment and machinery as well as the centre being disabled friendly. This assists them in navigating and operating the equipment whilst making the paper pulp to produce products, but due to their disabilities they were not always able to achieve completion of products in a timely manner. We hired able bodied people to assist with increasing our production line and this has cost a bit more money, however it assists with our production and timeframe which we have been able to take on more orders and do different products to sell.

5.1 Monitoring and evaluation

Monitoring the progress and production of the project has always been monitored by recording the amounts of paper pulp produced on a weekly basis, recording of production of products and sales. These are kept on file for quarterly reports and for reference to check sales patterns or distinguishing customer base.

Project targets are always within these records to measure and compare on a weekly/monthly basis the amounts expected.

Larger scale measurements ie reduction paper waste into the landfill are measured by EMD,SHG and as a stakeholder within their immediate goal terms they also inform us on request or interim reports on their progress in their projected goals as well.

5.2 Actions taken in response to annual report reviews

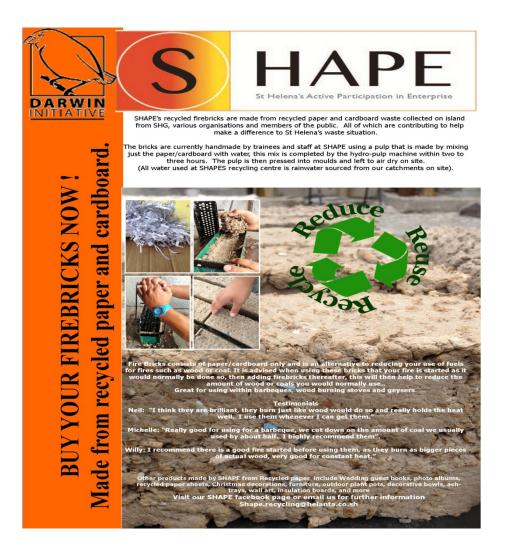
Yes. We have explained the construction sector situation on island and why our sales of insulation boards are slow, even though we now use the boards to make furniture to assist with sales. Our constant research for new products to make from our paper and cardboard pulp has helped us to always think ahead and evolve so that we are able to become sustainable. Even though this is a work in progress and without the assistance of the Darwin funding after this project we will do all that we can to increase our works and sales and make sure we continue with this initiative on island.

6 Darwin Identity

SHAPE is a locally known organisation which currently does a lot of media interviews, advertising through local and social media's during which time a brief breakdown of the recycling centres background of Darwin funding is always given. In all situations of advertising and pricing ads hardcopy or digital the Darwin logo is always present. The most recent been our new Volunteer Scheme and Taking the Plunge event. We do commonwealth event days where the islands Government environmental groups are present along with visitors being shown the relation between Darwin and SHAPEs more greener and environmentally friendly initiative.

The Darwin Project funding is also explained to school groups and visitors when at SHAPES recycling centre. The school groups have also incorporated the recycling initiative within the schools projects as a result of this enabling more young people and their families to become more environmentally aware.





7 Finance and administration

7.1 Project expenditure

Complete the expenditure table below, providing a breakdown of salaries, capital items and explanations of 'Other' costs. If the budget was changed since the project started, please clarify the main differences. **Explain in full** any significant variation in expenditure where this is +/- 10% of the approved budget lines.

Project spend (indicative) since last annual report	2017/18 Grant (£)	2017/18 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others				
TOTAL				

Staff employed (Name and position)	Cost (£)
Tracey Stroud Project Management	
Wilhelmina Fowler Assistant Trainer	
Cheryl Knipe Assistant Trainer	
Julie George Assistant Trainer (with some responsibilities during Supervisor's maternity)	
Karen Cooper Assistant Trainer	
TOTAL	

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

Capital items – description	Capital items – cost (£)
TOTAL	

Other items – description	Other items – cost (£)
Showroom/Shop	
Internet for Research (Annual)	
Cartridges for Printer	
SHAPE Website Designer	
TOTAL	

7.2 Additional funds or in-kind contributions secured

Please confirm the additional funds raised for this project. This will include funds indicated at application stage as confirmed or unconfirmed, as well as additional funds raised during the project lifetime. Please include all funds relevant to running the project as well as levered funds

for additional work after the project ends. NB: the total of both these sections is the figure required for Annex 3, Q23.

Were any additional in-kind contributions secured during the project?

Source of funding for project lifetime	Total (£)
TOTAL	

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

7.3 Value for Money

SHAPE has ensured that the project and business is efficient, effective and economical. We continually look for the best value for money by sourcing the best materials / machinery at the best price. We are always looking for ways to make our service and products more efficiently and effective. We achieve value for money by the volunteers that so kindly assist us with their time and skills. We cut electric costs by allowing our products to dry naturally in the sun. We cut on our water cost by catching rain water in your water containers that have been installed. We continue to also grow within our company and maintain our green initiative where we can.

Annex 1 Project's original (or most recently approved) logframe (<u>if your project has a logframe</u>), 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 Stage 2 logframe. 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:			ı
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 Report of progress and achievements against final project logframe for the life of the project (<u>if your project has a logframe</u>)

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)			
Trainin	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)	Tracey Stroud – Belgrove: Postgrad in Business Management			
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)	Tracey, Willy, Karen and Cheryl: Health & Safety Level 2 Safeguarding of abused Adults. Customer Service Managing Challenging Behaviour			
3b	Number of training weeks (i) in UKOTs; (ii) outside UKOTs not leading to formal qualification	Wanaging Challenging Benavious			
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				
Resear	ch 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				
_	16	D+ Final report with notes – March 2017			

Code	Description	Totals (plus additional detail as required)
	established. Were these collections handed over to UKOTs?	
13b	Number of species reference collections enhanced. Were these collections handed over to UKOTs?	
Dissem	ination 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	
Physic	al 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	

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

Annex 5 Darwin Contacts

To assist us with future evaluation work and feedback on your report, please provide details for the main project contacts below. Please add new sections to the table if you are able to provide contact information for more people than there are sections below.

Ref No	DPLUS050		
Project Title	Waste to Warmth – cardboard into insulation boards and fuel bricks		
Project Leader Details			
Name	Tracey Stroud - Belgrove		
Role within Darwin Project	Project Manager		
Address			
Phone			
Fax/Skype			
Email			
Partner 1			
Name	Mike Durnford		
Organisation	St Helena Government		
Role within Darwin Project	Environmental		
Address			
Fax/Skype			
Email			
Partner 2 etc.			
Name	Paul Bridgewater		
Organisation	Safeguarding		
Role within Darwin Project	Disabilities		
Address			
Fax/Skype			
Email			