

TRANSITION[→] STRATHCLYDE

**Transition Strathclyde – Feasibility Study
CCF-2064
Final Report**

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Executive Summary

Background

Transition Strathclyde is a progression of action taken in 2010, originally stemming from discussion between EnviroSoc – the student environmental and ethical society - and the then staff Environmental and Social Responsibility Working Group (ESRWG). A survey conducted by EnviroSoc during Go Green Week 2011 illustrated that whilst a high proportion of staff and students expressed concern about climate change and the environment a very small percentage were actually aware of the existence of any environmental campaigns at the university. This prompted us to apply to the Climate Challenge Fund (CCF) for our current project, the Transition Strathclyde feasibility study. This project has set out to measure a baseline “lifestyle” carbon footprint for the first time at Strathclyde and develop well suited and relevant carbon cutting projects to run long term. The study has been funded for a period of 4 months and employs a team of two part time staff to carry out essential research and engagement activities. To date the project has been housed in the University of Strathclyde Students’ Association (USSA).

Aims and Outcomes

The project aims are as follows:

- Produce a baseline figure for the “lifestyle” carbon footprint of the University of Strathclyde community – both students and staff.
- To increase awareness and engagement in environmental/carbon reduction campaigns and projects.
- To outline primary data related to the breakdown of individual participants carbon footprints, in order to gain a greater depth of knowledge as to where as a community or emissions can be reduced.
- Gain a greater understanding of the wants and needs of this unique community within the grounds of this project.
- Create a clear project plan of engagement and awareness raising campaigns, containing goals and recommendations that can be submitted to the university and USSA. Outlining how they may improve energy efficiency thus increasing environmental and sustainable engagement.

Research Methodology

As a feasibility study, Transition Strathclyde set out to calculate the average “lifestyle” carbon footprint of the university community – this is the environmental impact associated with each individual’s behaviour and lifestyle choices as opposed to the emissions of university buildings and services. Although staff and student communities are notably distinct from one another in many ways, it is recognised that the lives of these individuals are inextricably linked with each other through teaching and learning activities and therefore it is the intention of the feasibility study to target both populations in the study.

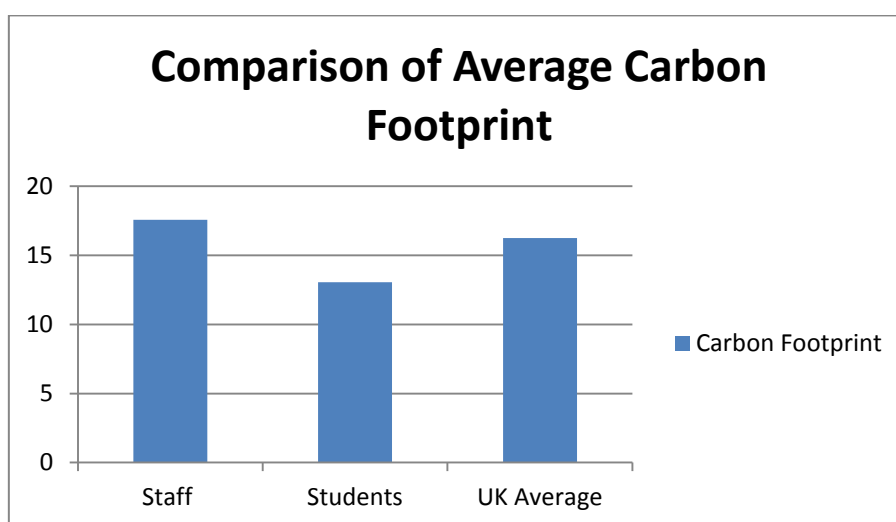
The study wrote and distributed an online survey to mirror that of the questions asked in a recommended carbon calculator REAP-petite. The calculator was able to produce a figure for the

total annual carbon emissions and breakdown of each category for both staff and students. The questionnaire also recorded environmental awareness by asking participants to gauge their current behaviours and interest in low carbon living.

Information from this survey was used to create an agenda for two focus group meetings – one for staff and another for students. Here representatives from the community were asked to provide feedback on a range of potential carbon cutting projects and time to suggest their own ideas.

Results

The study calculated a staff footprint of 17.57 tonnes of CO₂ per annum and students 13.04 tonnes CO₂ per annum, as illustrated in Figure 1.



(Figure 1: Comparison of total carbon footprint for staff and students)

These figures are accompanied by a full breakdown of different areas in the full report such as travel, shopping and diet. The results indicated staff travel and home energy are particularly large contributors to their average footprint, measuring higher than the average UK footprint. The student footprint was found to be lower than the UK average but this was to be expected due to a generally lower income. The most notable areas of emissions for students was again home energy. Taking these areas in to account the study also collected primary data directly from a small number of staff and students to give a more in depth view of emissions associated with travel and home energy.

Focus group participants discussed projects under the following categories:

Staff:

- Home energy auditing project.
- NUS Green impact Universities & Colleges.
- Sustainable Transport - bike rental and a car pooling scheme.
- Low carbon cooking and healthy eating.
- Community gardening and vegetable bag scheme.
- Office energy efficiency - equipment sharing and switch off.
- Incentivised alternate transport.

Students:

- Home energy auditing project.
- Green Dragon's Den.
- Sustainable Transport - bike rental and a car pooling scheme.
- Low carbon cooking and healthy eating.
- Community gardening and vegetable bag scheme.
- An environmental hub and permanent base to house a range of Transition projects.

A full description of these projects and relevant feedback quotes can be found in within section 3.3.6 and 3.4.5 of the main report.

Recommendations of Future Projects

From the results collected by the online survey and community focus groups two themes are proposed as key areas for the future: home and office energy efficiency and sustainable transport.

In light of these themes the study recommends five projects in particular:

- NUS Green Impact Universities & Colleges¹: a staff departmental accreditation scheme where teams earn an award to reflect efforts made in improving environmental performance.
- Home Energy Audits: Trained student auditors evaluate energy efficiency of staff and students homes and provide advice and resources on how to reduce energy bills.
- Student Switch Off²: An inter-halls energy saving competition for students.
- Cycling awareness and proficiency: Student project offering services such as cycling proficiency lessons and bike maintenance lessons.
- Journeyshare/Carpooling: An online database where staff and students can upload information of a journey they are planning to take (this could be commuting to campus every day or longer one off journeys) allowing people to fill extra spaces in their car and share the cost of the journey.

¹ Green Impact U&C: <http://www.green-impact.org.uk/green-impact-universities-and-colleges/>

² Student Switch Off: <http://www.studentswitchoff.org/>

Conclusions

The university community has shown itself to be conscious and interested in environmental issues through specific questionnaire results and good engagement with this feasibility study as a whole. The community has indicated that there should be more done on campus to address environmental issues, and that the university should be proactively seeking to promote environmental policy and measures at a more senior level that ensure departments become more sustainable according to their own needs. Furthermore environmental concerns are often deeply engrained in student welfare and can encompass such areas as fuel poverty and healthy eating.

Transition Strathclyde is a valuable tool for promoting environmental awareness and carbon reduction within the university community. Both USSA and the University of Strathclyde should continue to research its environmental impact and identify areas of interest and improvement.

1.0 INTRODUCTION

1.1 BACKGROUND AND HISTORY

Transition Strathclyde was born out of discussions initially held in 2010 between the student led environmental and ethical society “EnviroSoc³” and the then staff Environmental and Social Responsibility Working Group (ESRWG). EnviroSoc reported to the ESRWG that students (and some staff) had been enquiring about sustainability and environmental issues, asking what USSA and the University were doing to address these and questioning whether more could be done around university campus.

Envirosoc had historically been doing all they could to campaign and take action on climate change, whilst the ESRWG had also been considering these sorts of issues at the policy/strategic level, although efforts on both sides had been restricted by both budget and resource capacity. Envirosoc presented the results of Transition Edinburgh University’s (TEU) ‘Handprints & Footprints’ document⁴ which highlights the importance of tackling personal ‘lifestyle’ emissions within the University community (as these comprise 85% of total emissions). Following this, it was universally agreed that the university should begin to consider and investigate ways in which to communicate the importance of behaviour change to the whole University community, placing ‘lifestyle’ emissions as a key area of priority.

An initial survey, carried out during Go Green Week 2011 by EnviroSoc, showed that, whilst a high proportion of staff and students expressed concern about climate change and the environment, a very small percentage were actually aware of the existence of environmental campaigns at the university. Whilst some had noticed campaign posters and others were aware of the existence of a once ‘environmental champion network’, awareness of and involvement with other activities was extremely poor. Through formal and informal surveys and consultation with the university community at the time, it has been established that while many community members are concerned about the environmental performance of the university, there seems to be a gap between these values and attitudes and poor levels of engagement and activism when compared with other universities.

This prompted us to apply to the Climate Challenge Fund (CCF) for our current project, the Transition Strathclyde feasibility study. This project has set out to develop a “lifestyle” carbon footprint for the first time at Strathclyde and develop well suited and relevant carbon cutting projects to run long term. It is imperative the Strathclyde community be at the heart of any project at the university and so throughout the project significant steps were taken to ensure the needs and interests of staff and students were reflected in the design of any programmes and initiatives. A steering group was formed including the two Transition Strathclyde staff members, representatives from EnviroSoc, the University of Strathclyde Students’ Association (USSA) and the University of Strathclyde Estates services.

³ EnviroSoc <http://envirosocstrathclyde.wordpress.com/>

⁴ TEU Handprints and Footprints: <http://www.transitionedinburghuni.org.uk/files/Keynote%20summary.pdf>

1.2 UNIVERSITY COMMUNITY

For the purposes of this application, the term ‘university community’ is used herein to refer to all staff (academic and support) and students (taught and research based) who were either employed by or enrolled at the University of Strathclyde during the 2012/2013 academic year. It is acknowledged that within the community as a whole there are two distinct populations – students and staff, and these sub-populations differ with respect to rates of turnover – whilst staff populations are relatively stable (UK average recruitment and attrition rates apply), the student population is transient in nature with roughly equal numbers of new students enrolling as there are graduates leaving each year.

Although staff and student communities are notably distinct from one another in many ways, it is recognised that the lives of these individuals are inextricably linked with each other through teaching and learning activities and therefore it is the intention of the feasibility study to target both populations in order to gauge an idea of their baseline carbon footprints as well as carry out attitudinal and behavioural surveys.

In total there are 3000 staff and nearly 16,000⁵ students at the university who have recently all been relocated to a single campus in the city centre following the recent closure of Jordanhill Campus in July 2012.⁶

1.3 AIMS AND OUTCOMES

The project aims are as follows:

- Produce a baseline figure for the “lifestyle” carbon footprint of the University of Strathclyde community – both students and staff.
- To increase awareness and engagement in environmental/carbon reduction campaigns and projects.
- To outline primary data related to the breakdown of individual participants carbon footprints, in order to gain a greater depth of knowledge as to where as a community or emissions can be reduced.
- Gain a greater understanding of the wants and needs of this unique community within the needs of this project.
- Create a clear project plan of engagement and awareness raising campaigns, containing goals and recommendations that can be submitted to the university and USSA. Outlining how they may improve energy efficiency thus increasing environmental and sustainable engagement.

⁵ About Strathclyde: <http://www.strath.ac.uk/about/people/onestrathclyde/>

⁶ Single Campus Project: <http://www.strath.ac.uk/singlecampus/>

2.0 RESEARCH AND METHODOLOGY

The CCF grant for the feasibility study was awarded in March 2012 but due to imminent summer holiday and the end of academic term the decision was made to postpone the study till December 2012. The project has run for nearly 4 months in total and employed two part time interns to complete the study.

2.1 BACKGROUND RESEARCH

The initial stage of the Transition Strathclyde research involved contact with other Transition projects at Scottish Universities in order to establish links and research best practise from their successes and past and current projects.

2.2 BASELINE LIFESTLYE CARBON EMISSIONS

The University of Strathclyde has a full time Energy and Environment Manager, Dean Drobot, who is currently working to reduce scope 1 and 2 emissions at the university⁷. To date little work has been done to address Scope 3 emissions and here is where the value of Transition Strathclyde project will lie. This feasibility study is the first attempt to gauge the environmental impact of behaviour and lifestyle choices of the community.

The Greenhouse Gas (GHG) Protocol defines direct and indirect emissions as follows⁸:

- Direct GHG emissions are emissions from sources that are owned or controlled by the reporting entity.
- Indirect GHG emissions are emissions that are a consequence of the activities of the reporting entity, but occur at sources owned or controlled by another entity.

The GHG Protocol further categorises these direct and indirect emissions into three broad scopes:

- Scope 1: All direct GHG emissions. In the case of the University of Strathclyde this could be as a result of burning gas to generate heat for the buildings.
- Scope 2: Indirect GHG emissions from consumption of purchased electricity, heat or steam.
- Scope 3: Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities not covered in Scope 2, outsourced activities, waste disposal, etc. This is the area particularly relevant to Transition Strathclyde.

Establishing a baseline “lifestyle” carbon footprint in this area was approached via two methods. The first was to design and distribute a footprinting questionnaire online, in which responses were incentivised by entry to a prize draw. We utilised the REAP-Petite questionnaire, as recommended by our project advisor at Keep Scotland Beautiful⁹. This method saw a good response with 34

⁷ Sustainable Strathclyde: <http://www.strath.ac.uk/sustainablestrathclyde/>

⁸ GHG Protocol definitions: <http://www.ghgprotocol.org/calculation-tools/faq>

⁹ Keep Scotland Beautiful <http://www.keepsotlandbeautiful.org/>

students and 115 staff taking part - the results of this questionnaire are listed in section 3.0. The questionnaire also provided a useful insight into our population by the provision of demographics and the opportunity for staff and students to write about specific environmental concerns and interests they have. The questionnaire was distributed to the community through a mix of social media, staff mailing lists and leafleting.

Primary data was collected from focus group participants on the topics on home energy, waste, travel and diet. This was used to calculate average emissions relating to these areas for the community as a whole.

2.3 ENVIRONMENTAL AWARENESS

The online questionnaire also included questions to gauge the community's current interest in environmental affairs and the extent to which they currently engage in low carbon lifestyle choices.

2.4 FOCUS GROUPS

Two focus group meetings were conducted in the duration of the project. The first for students was held on Thursday Feb 28th and the second for staff held on Tuesday 12th March 2013. All participants were provided with a consent form (Appendix A) and information sheet (Appendix B) which provided information on what the research was for and how the information would be used.

2.5 PROMOTIONAL MATERIALS

The study used online tools such as Facebook and a blog page to advertise the research and generate interest. Further promotional materials including a widely distributed A5 flyer used can be found in Appendix E.

3.0 RESULTS

The research found staff to have an average carbon footprint of 17.57 tonnes CO₂e per annum and students that of 13.05 tonnes CO₂e per annum. Comparisons of these groups are shown in figure 1 next to a UK average of 16.24 tonnes per annum¹⁰.

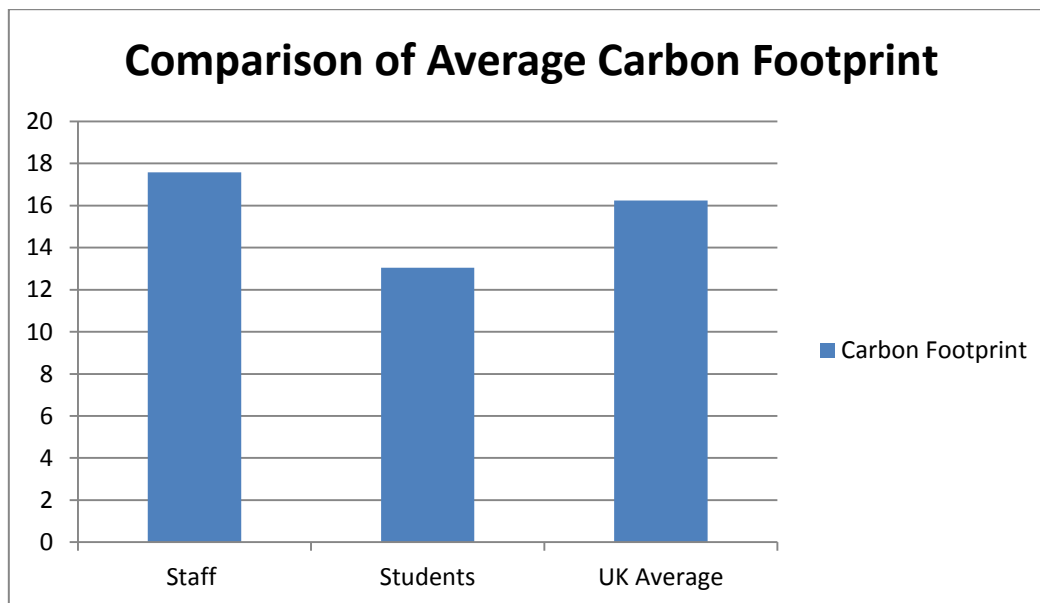


Figure 1: Comparison of total carbon footprint for staff and students

The report compliments these results with a full breakdown of each footprint and identifies particular areas of anomaly and interest. The results deal with staff and student emissions separately.

¹⁰ Reap Petite: <http://www.reap-petite.com/>

3.1 STAFF RESULTS

The following section relates to staff results.

3.1.1 DEMOGRAPHICS

Questions related to demographics in the online questionnaire were not made mandatory to allow a level of anonymity to participants

108 participants responded to question relating to which faculty they work in with the results illustrated in figure 2. The results showed a large majority, 52%, were from within the Science faculty, with 15% Engineering, 14% Professional Services, 13% Business and the smallest response from the Department of Humanities and Social Sciences with 6%.

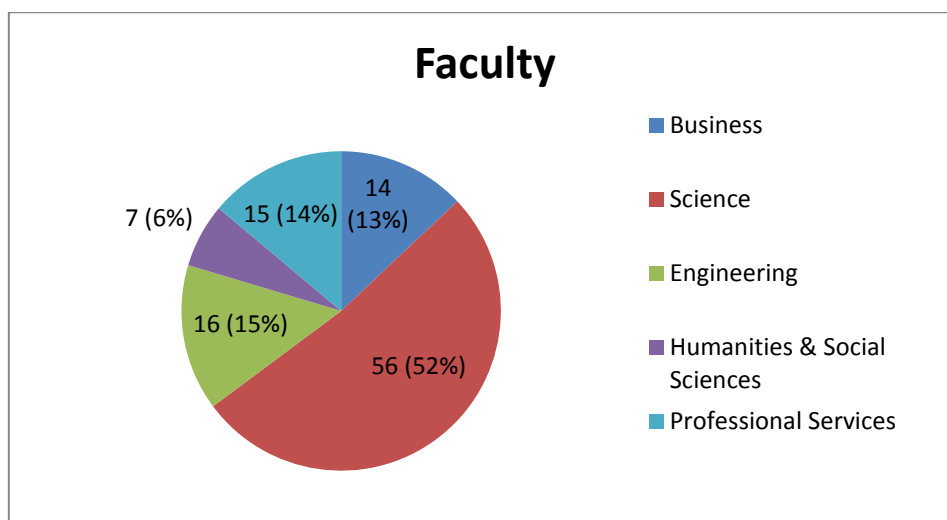


Figure 2: Staff demographics – faculty

Figure 3 illustrates the gender divide that was recorded with 56% female and 44% male. 112 staff responded to this question.

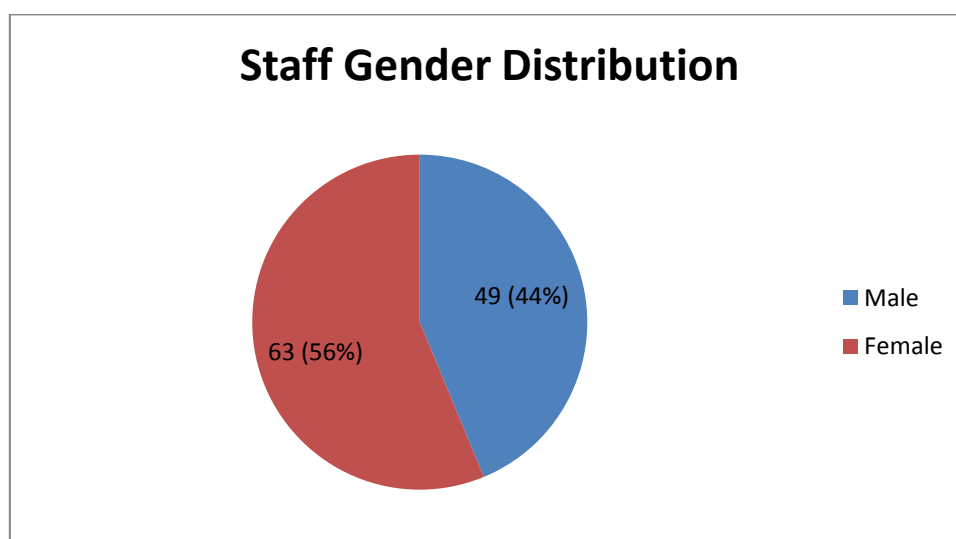


Figure 3: Staff demographics – gender

104 staff responded to question relating to age. These were grouped into ranges to allow for easier comparison and Figure 4 demonstrates the distribution.

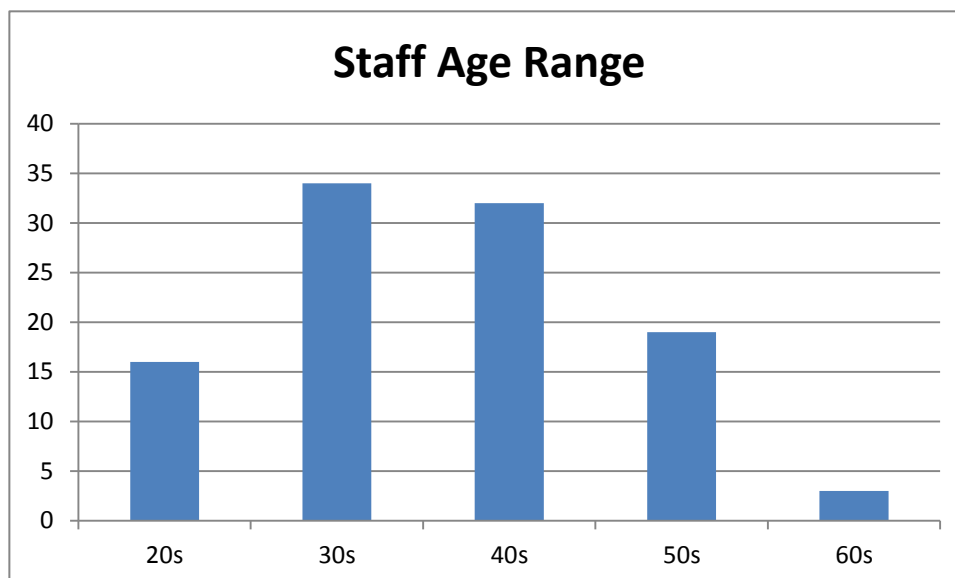


Figure 4: Staff demographics – Age

3.1.2 STAFF FOOTPRINT

The online footprinting questionnaire found an average staff carbon footprint of 17.57 tonnes CO₂e per annum. Due to an unexpectedly high staff response rate with over 100 entries, this figure was calculated by taking a random sample size of 30 to match that of the student response. Each online response had to be manually entered into a calculator by the researchers and although this decision reduced the sample size it was deemed necessary to manage time constraints.

A breakdown of this average staff carbon footprint is displayed in figure 5. The highest contributor to this figure was found to be travel which contributed 27.2% of the overall emissions. Second to this was home energy (power) at 20.83%.

The calculator used in this study calculates the impact of participant's whole household before dividing the emissions by the number of individuals in the household to allow comparisons to be made between households of differing sizes. Emissions from 'other' sources can contribute a large part of each footprint. These are emissions associated with things that are out of our control as a household - for example, the energy the council uses to light streets, support schools, collect waste etc.¹¹

¹¹REAP-Petite <http://www.reap-petite.com/>

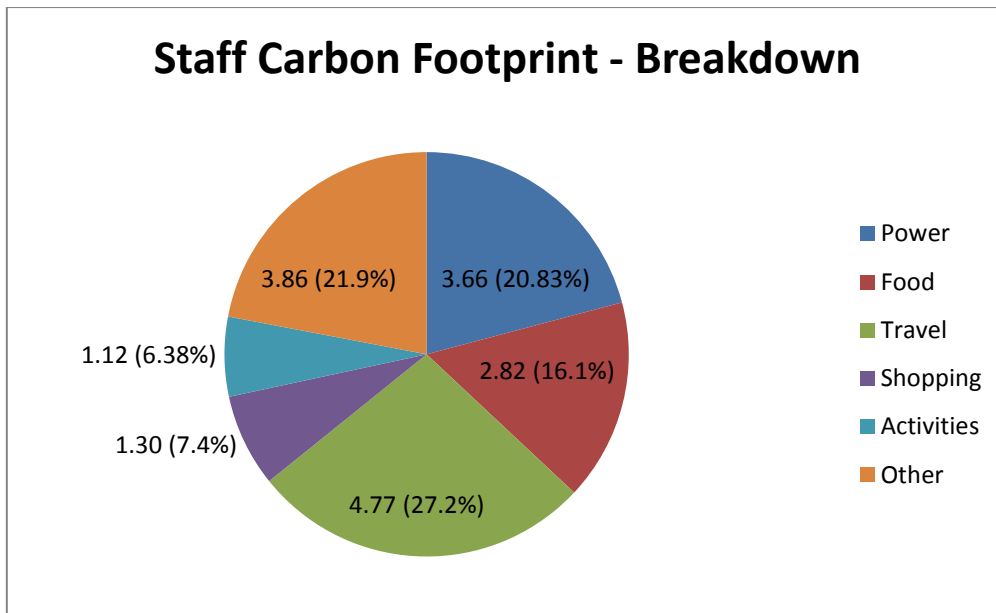


Figure 5. Staff Carbon Footprint – distribution

By comparing this to the UK average we can identify anomalies or particular areas of improvements. Figure 6 shows how Strathclyde staff members are notably above the UK average in terms of travel though it is believed a high proportion of this is due to international/long range flights. We have also recorded above average emissions associated to power consumption in the home.

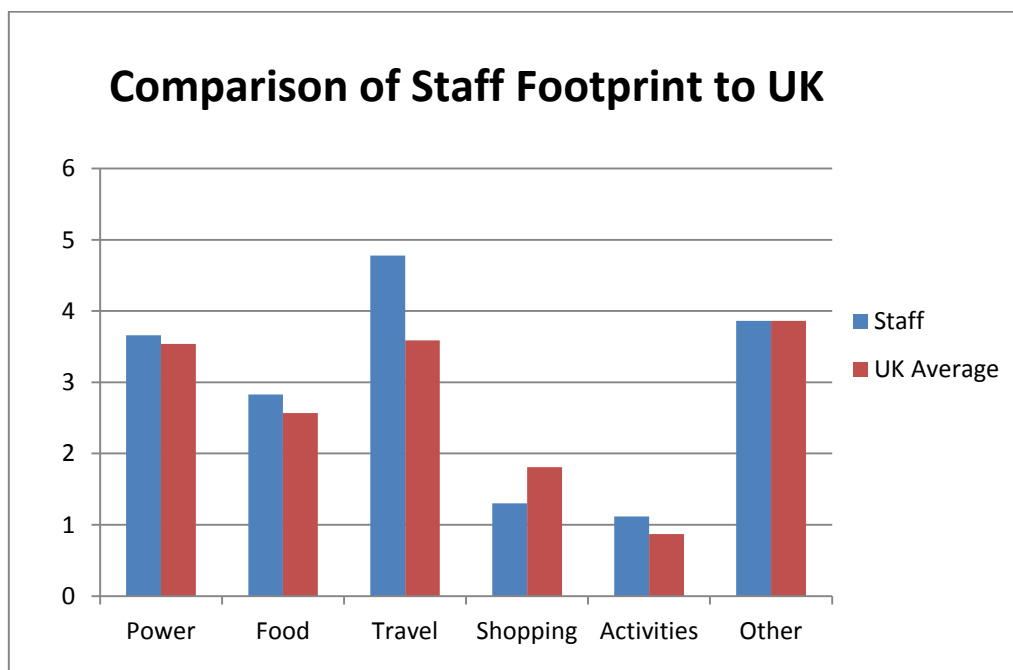


Figure 6: Staff Footprint and UK Average

3.1.3 AWARENESS

The final section of the questionnaire asked prompted participants to indicate their interest and engagement with environmental issues. Figure 7 shows responses to the question “*How interested are you in climate change and environmental issues?*”. 99 participants responded to this question with the majority, 54.4%, indicating they are “fairly interested” in the topic which demonstrates a healthy engagement with the topic.

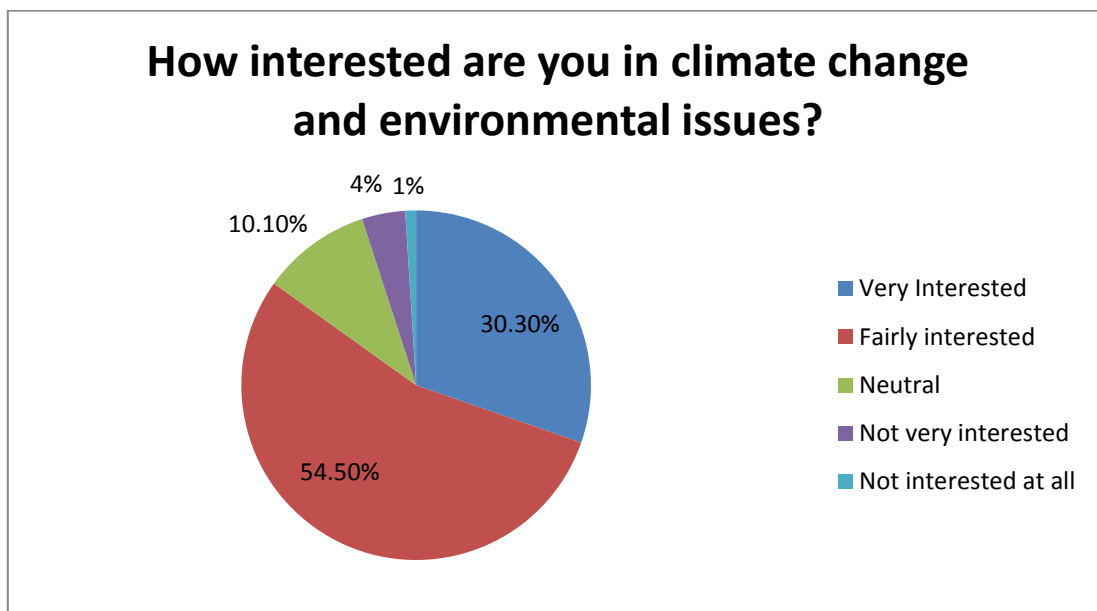


Figure 7: Staff awareness and interest in the environment

The second awareness question asked “*which one of these statements would you say best describes your current lifestyle*” to gauge the level at which Strathclyde staff members are already changing their behaviour to reduce their environmental impact. The results, shown in figure 8, indicate there is at least some level of engagement with this process. The majority here, 43.4% indicated they “*do one or two things to reduce my environmental impact*” and 40.4% “*do quite a few things to reduce my environmental impact*”. 99 participants responded to this question.

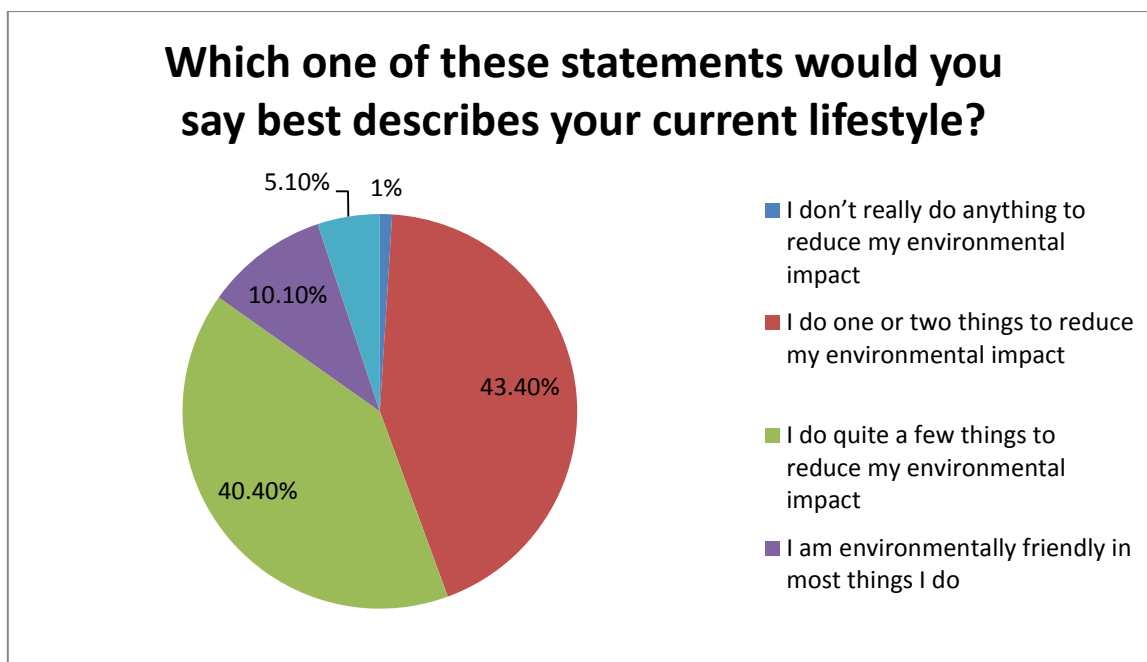


Figure 8: Staff awareness and pro-environmental behaviour

The final question in this section of research asked staff members to rate (from 1 being not important to 5 very important) how important they thought the following topics: Waste and Recycling, Environmental Awareness, Energy Efficiency, Sustainable Travel and Ethical Procurement. The results of this question are illustrated in figure 9. We found staff rated Waste and Recycling most important, followed by Energy Efficiency.

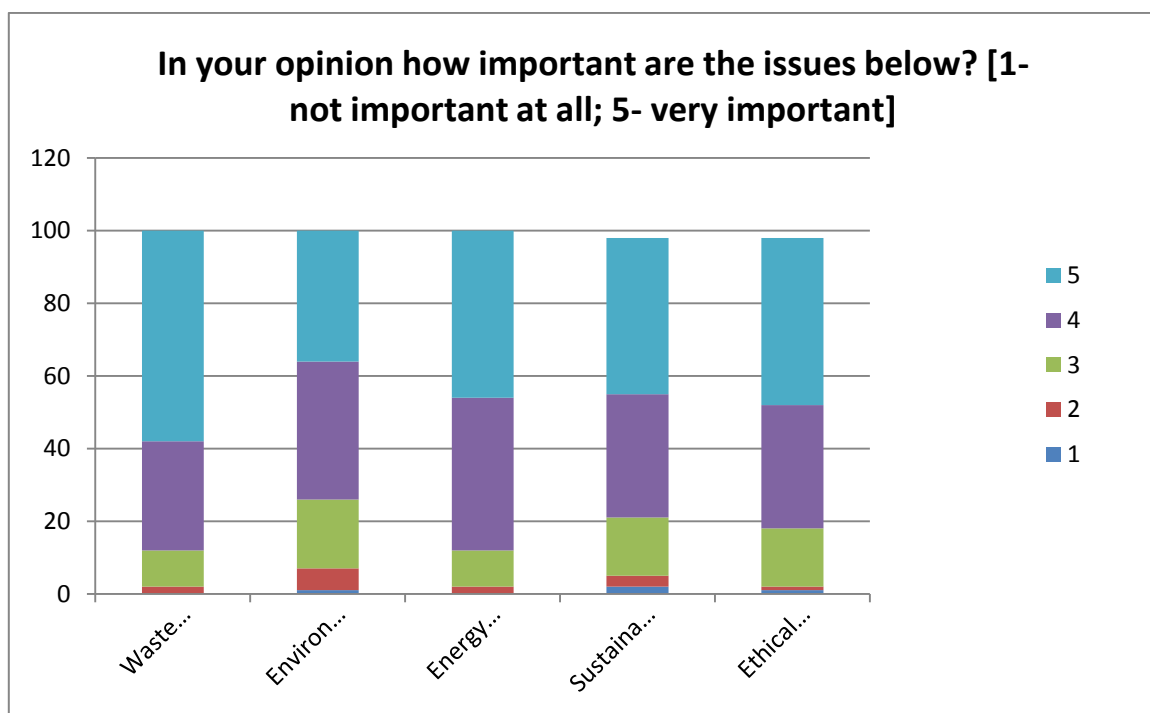


Figure 9: Staff – Rating Topics

3.1.4 ADDITIONAL COMMENTS

As part of the online questionnaire staff members were invited to leave comments on what environmental projects they would like to see at the university. Many concerns were related to things out with our control such as waste management and energy efficiency in university buildings, but to demonstrate the engagement and strength of feeling of all environmental concerns they are quoted below in their relevant category:

Recycling and waste

- *Much improved recycling*
- *I would like to see the individual paper trays in individual offices being collected for recycling.*
- *University-wide composting.*
- *More comprehensive recycling provision EVERYWHERE.*
- *greater prominence of recycling bins*
- *MORE RECYCLING BINS!*
- *RECYCLING*
- *I think Strathclyde is fairly environmentally friendly in relation to recycling.*
- *Less paper waste (i.e. fewer forms to complete/print!)*
- *Recycling waste such as aluminium foils which are generated in labs*
- *Recycling of waste plastics from labs - most users know what is "clean" enough to go into recycling or not.*
- *More recycling*
- *Recycling, plastics, glass, paper etc.*
- *More recycling points, glassware included. Reduce the waste of plastic containers in cafeterias.*
- *Proof that recycling paper/cans/glass actually happens and it doesn't just end up in the regular bins!*
- *Recycling of batteries and energy efficient light bulbs (both work and domestic)*
- *Make it more practical to recycle as not all waste is recyclable therefore removing 'normal' bins just means people put the wrong items in the recycle bins.*
- *Better recycling*
- *Greater consideration given to recycling of laboratory waste. Whilst I try to recycle or compost everything I can at home, I am aware of just how much waste, in particular plastics, is generated in biological labs. A lot of this is non-toxic/non-clinical waste that could be recycled but there is no clear policy (that I know of anyway) on what can be put in the recycling bins and what materials are recyclable. A comprehensive list dealing with this would be very helpful.*

Resource Management

- *Sharing/swapping of articles people no longer use*
- *More online options, less paper.*
- *Much more emphasis on using less printed material*
- *PAPERLESS WORKING*

- *I would also like to see more encouragement for not using paper and printing of large documents e.g. digital signatures, more and better use of technology.*

Transport

- *Cycle to work scheme*
- *Better facilities for cycling to work (showers in each building and secure bike storage).*
- *Cycle hire for staff - university provides a bike for staff to use to get to and from work, including a safe area to store it during the day and washing facilities at work for staff to clean up prior to starting work. I spend £25-45 a month on travel to and from work and would happily pay part of this to hire a bike per month.*
- *FREE TRANSPORT TO WORK FROM LOCAL AREAS*
- *I would like somewhere within the current car parking in Graham Hills to safely store my bike and also somewhere to shower. This would definitely encourage me to cycle to work more.*
- *Better facilities for cyclists*
- *Increased capacity for cycling/running to/from work (secure storage, changing/shower facilities open early & late)*
- *Less car-parking, but better connectivity e.g. to bus & train stations*
- *Challenge people to walk to work each day if they live within a 3 mile radius. This uses less carbon than a bike!*
- *One day in a year everyone should come and go back on bicycle to uni*
- *Easier car parking permits for car sharing - i.e. incentives*
- *More cycling racks/information about car park space sharing.*

Awareness/Education

- *Have a class as part of every degree's foundation year on environmental awareness. Both in the university and as a practicing engineer/scientist/social scientist etc.*
- *Improved culture of awareness of waste - paper, heating, lighting etc.*
- *Better awareness from staff & students (biggest obstacle!)*
- *Action days where students and staff pick litter in the University, on the streets around campus and in the city centre to raise awareness.*
- *Persuade the good citizens of Scotland that they need to care about their environment. They are too ill-educated to make an effort*

Biodiversity

- *More trees and grass. This is the ugliest university campus I've ever seen.*

Procurement and Catering

- *Stop all university food outlets from selling un-necessary packaging, and to only sell sustainable food.*
- *I am interested in finding out about local and sustainable food production and local green energy projects as I think that the UK needs to be more self-sufficient and equitable in the basics of food, energy and housing (including more general access to growing space for vegetable growing)*

- *Replacing vending machines with organic "home" made catering snacks and tea and coffee*
- *More fruit and salad options at canteens*
- *Continuation of Fairtrade food and drinks*

Energy Efficiency

- *Energy efficient lighting and micro generation on every building*
- *Better insulated buildings and more efficient heating*
- *Energy Efficiency: Get all rooms fitted with lights that turn off when no-one in them. Educate everyone to turn off computers at weekends, and that means monitors too. Ditto phone chargers. Get students to use the stairs instead of the lifts. Give all disabled/pregnant people and janitors/techs a key to lifts. Everyone else uses the stairs (good for heart health too).*
- *BETTER CONTROL OF HEATING IN BUILDINGS - OUR OFFICES ARE ALWAYS FAR TOO HOT*
- *Stop heating corridors and other non-work areas. Reduce lighting in car parks, reduce lighting generally!*
- *Energy efficiency measures are non-existent in Royal College where I work.*
- *Auto-off lighting*
- *Being more energy efficient- lots of times, lights computers etc. are left on in unoccupied offices.*
- *University wide automatic lighting - a lot of people leave lights on when they are not there*
- *Cutting down on heating by proper insulation, solar panels if appropriate.*
- *Fixing the ill-fitting single glazed windows in many buildings*
- *All lights in buildings set to switch off out of hours (unless someone is working there). The buildings are always lit up when I drive by in the evenings and at weekends.*
- *More efficient and less light polluting lights around campus to get rid of that orange glow. It would also improve safety when walking through campus.*
- *Turning off large printers at the wall or installing timers as they draw 40% of their power in standby mode.*
- *Lights that activate only when someone is present in the area*
- *Solar panels for hot water*
- *Improve the heating and ventilation systems. In most buildings they perform extremely poorly. Heating systems on, windows open because it's too hot etc. Thermal comfort and IAQ is often very poor. Apart from environmental impact, this can have a large impact on productivity.*
- *Improved energy efficiency in Graham Hills building, which varies between sauna and freezer all the time.*

Renewables

- *Turbines and photovoltaics installed on the many university building roofs if justified.*
- *Wind turbine*
- *Power generation (we apparently have the expertise in EEE - why not make it a VIP project!)*
- *Solar energy should be the main source of power supply to the uni*

Other

- *Everyone on to a Linux system - free software and gets us out from grip of.....[unfinished sentence]*
- *Traffic free campus*
- *I am concerned that the questionnaire implies that we can have an influence on the environment. I do believe that we should look at the efficient use of resources but do not believe that we can have an effect on the environment. I would be concerned if the University were to ignore the large geophysical influences which often have a greater influence on the climate than those which can be attributed to human activity. Previous climate concerns were with regard an ice age and this gave research support for atmospheric physics. I believe concerns with regards the efficient use of energy are legitimate but the message needs to be carefully controlled.*
- *Better use of technology to allow staff to work from home*
- *Start-up businesses coming from students and alumni gaining support and visibility*
- *Something that encourages me to be more environmentally friendly (easily) out with the university.*

3.1.5 COLLECTION OF PRIMARY DATA

Prior to the staff focus group meeting participants were asked to bring in copies of their home energy bills in order for us to collect primary data and more in depth information from the community. Participants were also asked to keep a travel diary for the duration of a week. Of the three staff who attended the focus group two were able to provide this information. Figures are calculated throughout this section using Defra/DECC 2011 Conversion Factors.¹²

3.1.5.1 HOME ENERGY

Table 1 presents data collected in relations to staff home energy use. Participant 1 resides in a 3 bedroom house with 2 residents, whilst participant 2 lives in a 2 bedroom flat with 2 residents. The study has calculated a household average of 5.85 tonnes CO₂e per annum.

Table 1: Staff Home Energy

	Utility	Annual Consumption (kWh)	Conversion Factor (kgCO ₂ e per unit)	Emissions (kgCO ₂ e)	Total Home Emissions (kgCO ₂ e)
Staff Participant 1	Gas	28254.0	0.1836	5187.40	8850.15
	Electricity	6982.0	0.5246	3662.75	
Staff Participant 2	Gas	9974.4	0.1836	1831.00	2853.45
	Electricity	1949.0	0.5246	1022.44	
				Average	5851.8

1. ¹² Defra/DECC 2011 Conversion Factors: www.carbontrust.com/media/18223/ctl153_conversion_factors.pdf

3.1.5.2 TRANSPORT

Information was collecting relating to participant’s public transport and car usage.

Public Transport

Of the two focus group participants that responded to the travel diary participant 1 uses no public transport and participant 2 indicated an unusually large train journey to due attending a conference in London. This would be an unfair representation of an average week and as such this section has been omitted from the report.

Car

Table 2 presents data collected from staff participants which shows their yearly emissions from car travel. The data collected produced an average consumption of 2.82 tonnes CO₂e per annum.

Table 2: Staff Car Emissions

	Engine Type	Km travelled (weekly)	Conversion Factor (kgCO ₂ e per unit)	Weekly Emissions (kgCO ₂ e)	Total emissions per annum (kgCO ₂ e)
Staff Participant 1	Diesel Large	193	0.3915	75.56	3929.12
Staff Participant 2	Diesel Med	69	0.2912	20.09	1688.07
	Petrol Small	45	0.2750	12.37	
				Average	2823.59

Table 3 below is a key provided to participants to categorise their car engine size.

Table 3: Car Engine Size Key

Engine Size	Category
Up to 1.4 litres	Small
1.4 to 2 litres	Medium
Over 2 litres	Large

Flights

Table 4 presents information collected and calculated in relation to flights. The results found an average of 777.12 kgCO₂e per annum. All flights were economy class.

Table 4: Staff Flights Emissions

	Duration ¹³	Frequency	Based on Average distance (km)	Conversion Factor (kgCO ₂ e per unit)	Emissions (kgCO ₂ e)	Total Emissions per annum (kgCO ₂ e)
Staff Participant 1	Domestic	2	540	0.1648	177.98	510.14
	Short Haul	2	1715	0.09684	332.16	
	Long Haul	0	5182	0.1115	0	
Staff Participant 2	Domestic	8	540	0.1648	711.94	1044.1
	Short Haul	2	1715	0.09684	332.16	
	Long Haul	0	5182	0.1115	0	
					Staff Average	777.12

3.1.6 STAFF FOCUS GROUP

On Tuesday 12th March 2013 a focus group session was held for university staff. The meeting was attended by 3 staff members comprising of academic and administrative staff, coincidentally all within the Science Faculty. Participants discussed potential environmental projects proposed by the researchers and went on to make their own suggestions of feasible projects. The focus group ran for approximately one hour and was recorded by a digital voice recorder. The agenda for this meeting can be found in Appendix C.

Home Energy Auditing

Proposal: A home energy project where students are trained up to audit the homes of fellow staff and students. The auditors would make energy efficiency recommendations, providing resources such as draft proofing and energy monitors, and give help with talking to landlords.

Key responses and quotes:

Staff 1: *“Not a chance. I can’t imagine staff would want this to happen, they like their privacy and having their work and private life divided. Also many of the energy companies will offer these home surveys, and to be realistic there is a limit as to what you can do - every year when energy prices go up you can lag your pipes and insulate your loft. Well we have done all that so what can we do now?”*

Researcher notes:

There is a strong feeling staff would not engage in this project but perhaps would if the audits were completed by Transition Staff. There may still be considerable scope for this as a student only project.

Other universities implemented: Transition Edinburgh University¹⁴, Transition University of the West of Scotland¹⁵, People & Planet¹⁶

¹³Duration based on an average of the following. Domestic: Glasgow to London = 540km. Short Haul: Glasgow to Madrid = 1715km. Long Haul: Glasgow to New York = 5182km

NUS Green Impact Universities & Colleges

Green Impact is an environmental accreditation scheme by which teams from individual university departments take steps to make their workplaces greener¹⁷. The work is incentivised by an awards programme with bronze, silver and gold status available plus special prizes awarded by NUS to those teams and individuals that excel. This is also a new scheme specific to scientific laboratories.

Key responses and quotes:

Staff 2: *"I think that's more likely [to happen]. There will be some people who are interested in this and some who are not, the same with the lab scheme. Some people don't like change."*

Staff 1: [In regards to the award scheme] *"It could incentive the ones higher up, which could impact us lower down."*

Staff 3: [In regards to departmental recycling – an aspect of GI] *"I have noticed that just by having [recycling bins] around the office people are quite happy to do it as long as it is not too much of an effort. I'm finding those bins are everywhere so you just have to kind of chuck it in. if it's easy to do people do it, so even people who don't buy into the whole green thing don't do it because it's easy. And buy into it a little bit more."*

Researcher notes:

Green Impact Universities & Colleges has run successfully at many higher education institutions. Although there is by no means a universal staff uptake many staff involved have been awarded special awards by Green Impact for their efforts. The scheme allows those staff already engaged in environmental affairs to take the lead and make changes that will benefit the university as a whole.

Other universities with the scheme: 50 Higher Education institutions across the UK¹⁸

Sustainable Transport

Proposal: Currently a 'Better Way to Work' and 'Cycle to Work' scheme is available for university staff. The researchers suggest the implementation of a cycle rental scheme on campus in addition to this which is accessible to both staff and students. Participants would pay a one off fee and a refundable security deposit for use of a bike for the full academic term.

Key responses and quotes:

Staff 2: *"I'm too scared to cycle it's too dangerous I did it when I was younger"*

¹⁴ TEU Big Green Makeover: <http://www.transitionedinburghuni.org.uk/projects/accommodation/big-green-makeover/>

¹⁵ Transition UWS Greener Homes: <http://www.sauws.org.uk/transition/content/747103/>

¹⁶ People & Planet Big Green Makeover <http://peopleandplanet.org/big-green-makeover>

¹⁷ Green Impact Universities & Colleges: <http://www.green-impact.org.uk/green-impact-universities-and-colleges/>

¹⁸ Green Impact Universities & Colleges: <http://www.green-impact.org.uk/green-impact-universities-and-colleges/>

Staff 1: *“Absolutely not, I can’t cycle. I went from crawling to walking to running to driving”*

Staff 3: *“However I occasionally cycle into to work, I live in Dennison so I will sometimes bring the bike in. However cycling doesn’t work if you have meetings.”*

Researcher notes:

There are already several schemes in place to encourage staff cycling. The Transition project should investigate these further to identify any areas we can improve on or in helping promote the initiatives.

Other universities implemented: University of Glasgow¹⁹, University of Nottingham²⁰

Journeyshare and Carpooling

Proposal: An online database where staff could upload information of a journey they are planning to take – this could be commuting to campus every day or longer one off journeys – allowing people to fill extra spaces in their car and share the cost of the journey²¹.

Key responses and quotes:

Staff 2: *“People who might like to drive might not have a space, so you might not get some uptake from that. Although people who come from further away may be keener to share the cost of petrol which is horrendous now.”*

Staff 1: *“With regards to staff parking there is an incentive for sharing”.*

Staff 2: *“I used to work out at New House which is not well served by public transport, but there were a lot of people there who did share. And if you can get a group of people that works well for them I think they’ll stick to it.”*

Staff 1: *“Previously I used to do some work out at Beatson and they clamped down this as your car had to be insured for work. I would just drive because it was so much easier, then they after they implemented that and I had to get a taxi which cost more and took longer!”*

Researcher notes:

Participants indicated they think car sharing is a very individual decision for every day commuting but there may well be a market for it. In regards to one off journeys the focus group believed staff already car share due to the expense or use public transport.

Other universities implemented: University of the West of Scotland²², University of Glasgow²³, University of Oxford²⁴

¹⁹ University of Glasgow Cycling:

<http://www.gla.ac.uk/services/estates/organisationstructure/estatesadministrationservices/travelplanning/travelmodes/cycling/>

²⁰ University of Nottingham Cycle Hire:

<http://www.nottingham.ac.uk/currentstudents/studentopportunities/cyclehire.aspx>

²¹ Journeyshare: <http://journeyshare.org/Default.asp?uxi=&cr=check>

²² Transition UWS Journeyshare: <http://www.sauws.org.uk/transition/content/747243/>

²³ University of Glasgow Journeyshare: https://www.liftshare.com/content/info_faq.asp?skin=350

Cookery and Healthy Eating project

Proposal: Staff cookery lessons and demonstrations that are centred on a healthy eating and promoting seasonal produce and local suppliers.

Key responses and quotes:

Staff 2: *"It's a possibility because people are into cooking these days."*

Staff 2: *"You want something that's quick and doesn't take too much time. A quick 15 minute demo at lunch time where you get a taste might work."* [In response on how a food project could be promoted to staff].

Staff 1: *"A few years ago they had a big healthy awareness push, with staff and wee events around campus."*

Staff 3: *"Probably emails"*. [In response to the best method of contacting staff]

Researcher notes:

Staff are very aware of how limited their time is, any free time they do have other than lunch would be spent on activities that are convenient and relatively quick. Based on feedback from other Transition projects such as Transition UWS, cookery workshops or lessons do not fare as well when marketed as environmentally friendly or low carbon cooking. Healthy and locally sourced food should be the primary message with low carbon and low waste being a desired behavioural change.

Other universities implemented: Transition University of the West of Scotland²⁵, Transition Heriot-Watt²⁶, Transition St Andrews²⁷

Community Garden/Growing Space

Proposal: An area for staff and students to grow their own vegetables and compost food waste.

Key Responses:

Staff 1: *"I think some staff would be really interested."*

Staff 2: *"If they are interested in community gardening they would be happy to do it alongside students"*

²⁴ University of Oxford:

<https://www.liftshare.com/content/default.asp?sid=2339&sid2=2327&skin=439&lang=EN&country=GB#>

²⁵ Transition UWS Sustainable Food Project: <http://www.sauws.org.uk/transition/content/863583/>

²⁶ Transition Heriot Watt Cookery: <http://www.transitionheriot-watt.org.uk/food/cooking-classes>

²⁷ Transition St Andrews Food: <http://transitionuniversityofstandrews.com/food/>

Researcher notes:

A good potential project but being a city centre campus Strathclyde is currently limited by a lack of space. There has been interest by a non-related staff member in starting a scheme like this in summer 2012 called 'Dynamic Campus' but at the time of writing no further progress had been made.

Other universities implemented: University of the West of Scotland²⁸, Aberdeen University Students' Association (AUSA)²⁹, Transition St Andrews³⁰

Vegetable Bag Scheme

Proposal: A scheme where mixed bags of seasonal and locally produced vegetables are sold to the community at cost price. This scheme was trailed by EnviroSoc with reasonable success for students in the 2011/2012 academic year.

Key responses and quotes:

Staff 2: *"If you run it for students it is worth letting staff know and getting people to sign up for a trial period to see if they like it."*

Staff 3: *"I think it works well with students as they live around campus"*

Staff 3: *"Just have it as a Strathclyde thing so it isn't segregated between staff and students. If staff think it's a student thing they may be discouraged."*

Researcher notes:

A vegetable bag scheme should be marketed along the lines of the community garden – it would do well to not segregate the staff and student groups.

Other universities implemented: Aberdeen University Students' Association³¹, Transition Edinburgh University³², Glasgow University Food Coop³³, People & Planet³⁴

Other ideas

Participants were encouraged to suggest which sustainability projects they think would engage staff at the university.

Proposal: Participants proposed that the university could negotiate a travel subsidy scheme in partnership with Scotrail, First Group and/or Glasgow City Council. Staff could get a reduced rate or interest free loan to purchase rail cards or bus passes.

Key responses and quotes:

²⁸ Transition UWS Community Garden: <http://www.sauws.org.uk/transition/content/864013/>

²⁹ AUSA Climate Change Project: <http://www.ausa.org.uk/getinvolved/climatechange/>

³⁰ Transition St. Andrews <http://transitionuniversityofstandrews.com/community-garden/>

³¹ University of Aberdeen Veg Bag Scheme: <http://www.ausa.org.uk/eatdrinkshop/vegbag/>

³² TEU Veg Bag Scheme: <http://www.transitionedinburghuni.org.uk/what-we-did/food/vegbags/>

³³ Glasgow University Food Coop: <http://guc.org.uk/food-co-op/>

³⁴ People & Planet Student Food Coop: <http://peopleandplanet.org/scoop>

Staff 3: *“I think if there was a scheme where they [Strathclyde] were in partnership with Scotrail people would use it. Right now tickets to Edinburgh are expensive, if there was a discount it would show that staff and students are actively engaged [in sustainable transport]. The problem with Glasgow is that the public transport is so rubbish.”*

Staff 2: *“The service is not good, it is only good when you’re going in at 9 and leaving at 5. After that it’s patchy which puts people off.”*

General Engagement

Researcher: *“Do you think it would put people off having staff projects ran from the Students’ Union?”*

Staff 3: *“I think it would – just because the union has that sort of image. I know it’s not far off the campus but it feels apart from the university”*

Staff 2: *“But if it’s not far off the campus then why can’t [Transition] come to us.”*

Researcher’s notes:

As USSA currently oversee the CCF bid and therefore are unlikely to want to base the project within the university itself; however events do not have to be solely held in the Union.

Common and public areas throughout the university campus may be better suited for certain purposes and should be utilised when this is the case. Staff engagement needs to be cleaner and delivered in a more professional manner.

Final points of interest

Staff also raised the issue of equipment sharing, switching equipment off at night and the abundance of electrical items staff leave plugged in unnecessarily. Transition Strathclyde would have very little effect at influencing this as policy at a departmental level and could in fact distance itself from any supporters within the university at this early stage. However issues such as energy efficiency and staff behaviour can be addressed through the Green Impact scheme previously mentioned.

3.2 STUDENT RESULTS

Students were issued an online questionnaire very similar to that of the staff one. Some questions relating to demographics were changed depending on relevance.

3.2.1 DEMOGRAPHICS

Questions related to demographics in the questionnaire were not made mandatory to allow a level of anonymity to participants.

34 Strathclyde students responded to question relating to gender. Figure 10 illustrates the results with 67% female and 32% male.

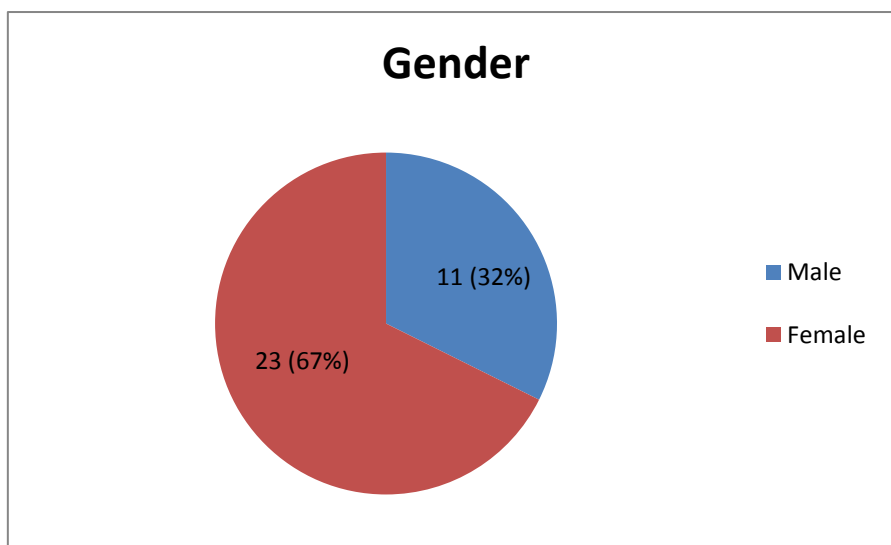


Figure 10: Student demographics – Gender

Students were asked to indicate their age, which were again grouped into ranges. Figure 11 shows the 31 responses received.

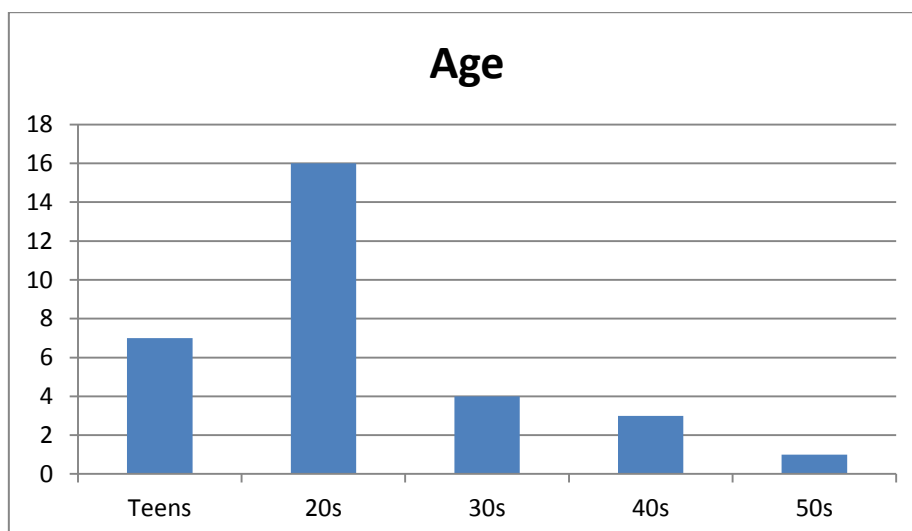


Figure 11: Student demographics – Age

Two questions were used to measure demographics relating to student enrolment. Figure 12 shows the responses by undergraduate or postgraduate enrolment and Figure 13 the distribution of full and part time enrolment (34 responses).

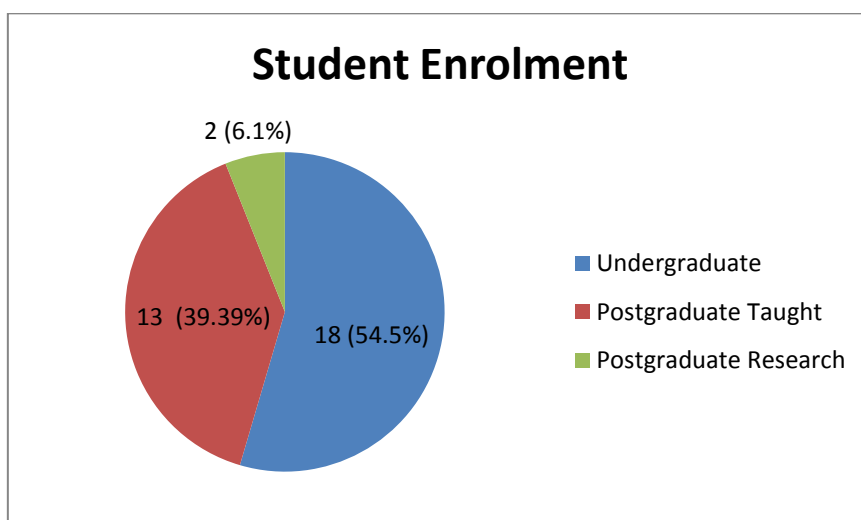


Figure 12: Student demographics – student enrolment

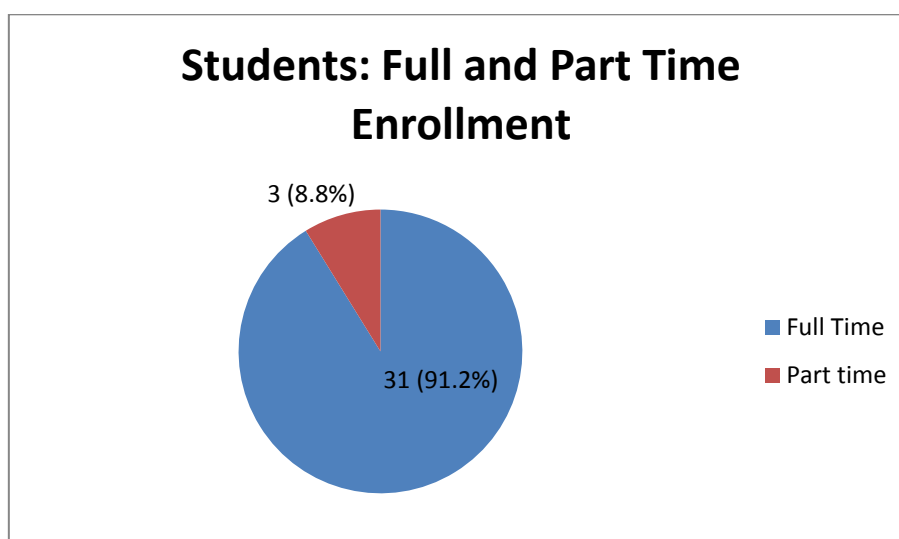


Figure 13: Student demographics – Full and part time enrolment

3.2.2 FOOTPRINT

The average student carbon footprint was calculated to be 13.05 tonnes CO₂e per annum. This was calculated from all 30 responses we received to the questionnaire. The breakdown of each segment is shown in figure 14. A high proportion of student’s emissions, 25.8% can be attributed to power consumption at home.

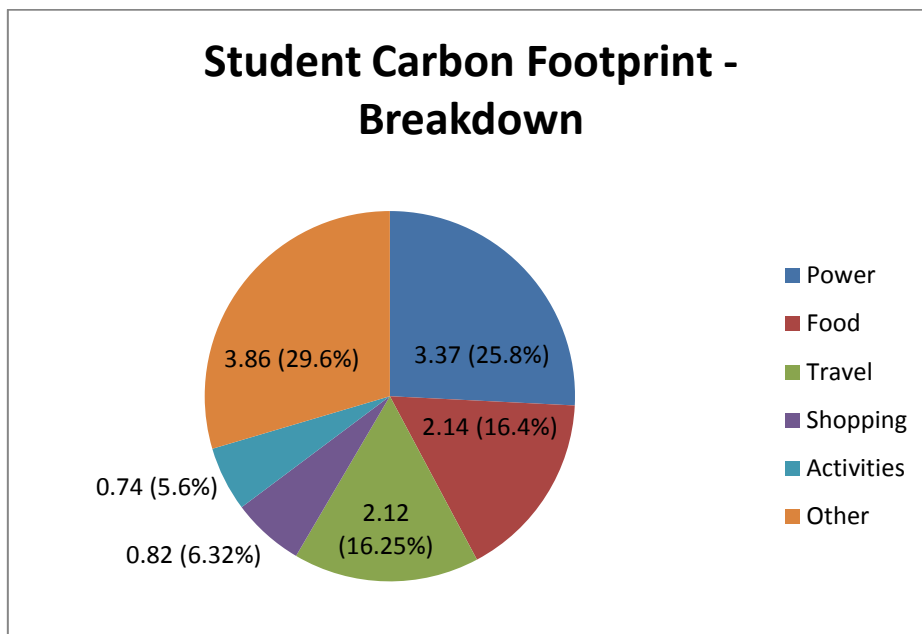


Figure 14: Average Student Carbon Footprint – Breakdown

Figure 15 shows these areas in comparison to the UK average. The results show below average consumption on every category but this was to be expected to the reduced income of students.

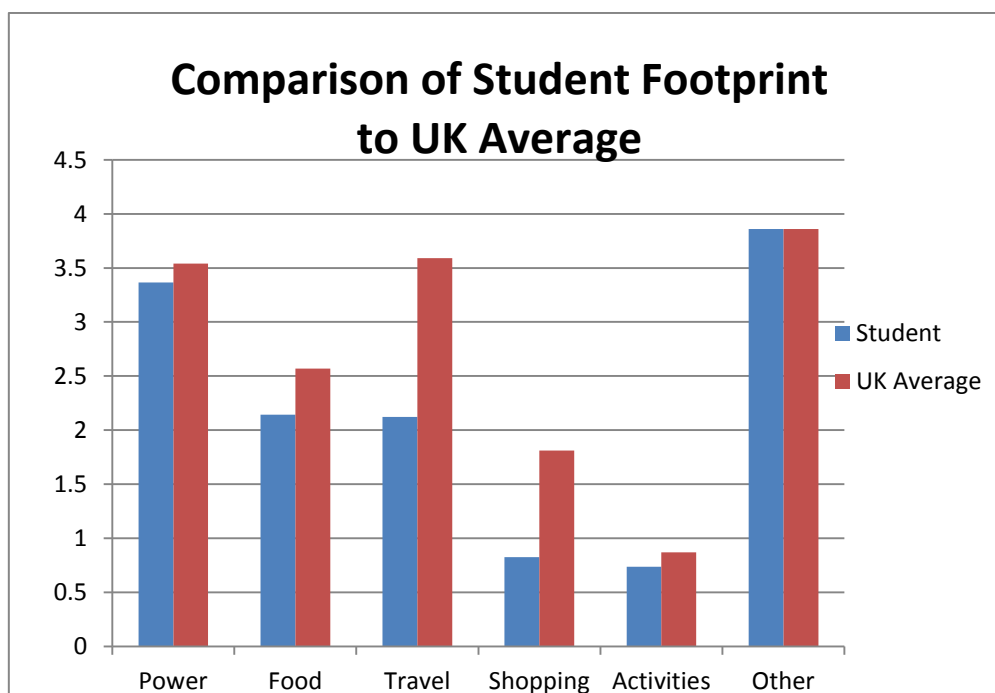


Figure 15: Student Footprint and UK Average

3.2.3 AWARENESS

As with the staff investigation, the online questionnaire also prompted student participants to indicate their awareness and previous engagement with environmental issues. Figure 16 shows responses to the question “How interested are you in climate change and environmental issues”. 36 participants responded to this question with an equal majority, 44.4%, indicating they are “fairly interested” in the topic and another 44.4% “very interested”. This is an encouraging result indicating a substantial interest in environmental issues at the university.

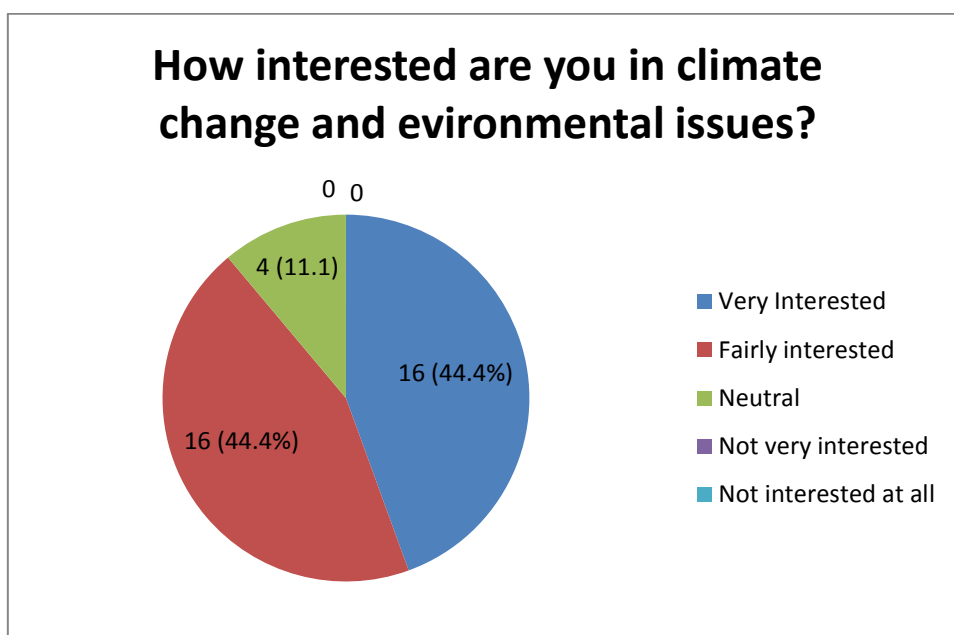


Figure 16: Student awareness and interest in the environment

The second awareness question asked “Which one of these statements would you say best describes your current lifestyle” to gauge the level at which Strathclyde students are already changing their behaviour to reduce their environmental impact. The results, shown in Figure 17, indicate there is at least some level of engagement with this process. The majority here, 41.7% indicated they “do quite a few things to reduce my environmental impact” – a higher percentage than that of the staff. 36 students responded to this question.

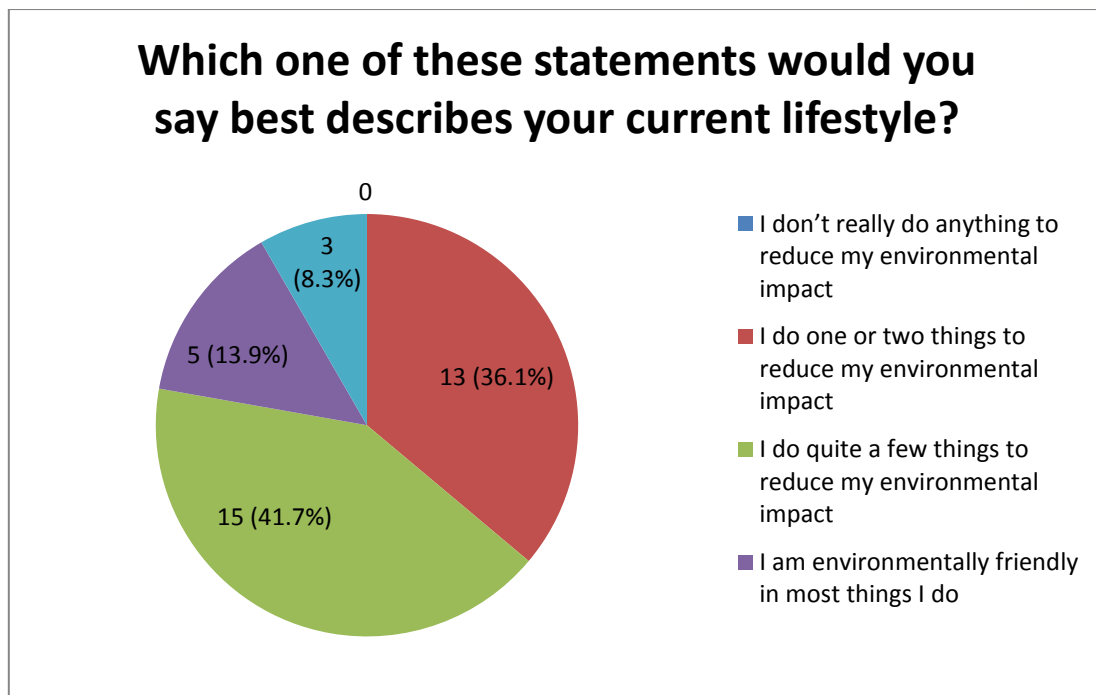


Figure 17: Student awareness and pro-environmental behaviour

The final question in this part of the research asked students to rate (from 1 being least important to 5 most important) how important they thought the following topics: Waste and Recycling, Environmental Awareness, Energy Efficiency, Sustainable Travel and Ethical Procurement. The results of this question are illustrated in figure 18. Students rated Energy Efficiency as the most important, followed by Waste and Recycling and Sustainable Transport.

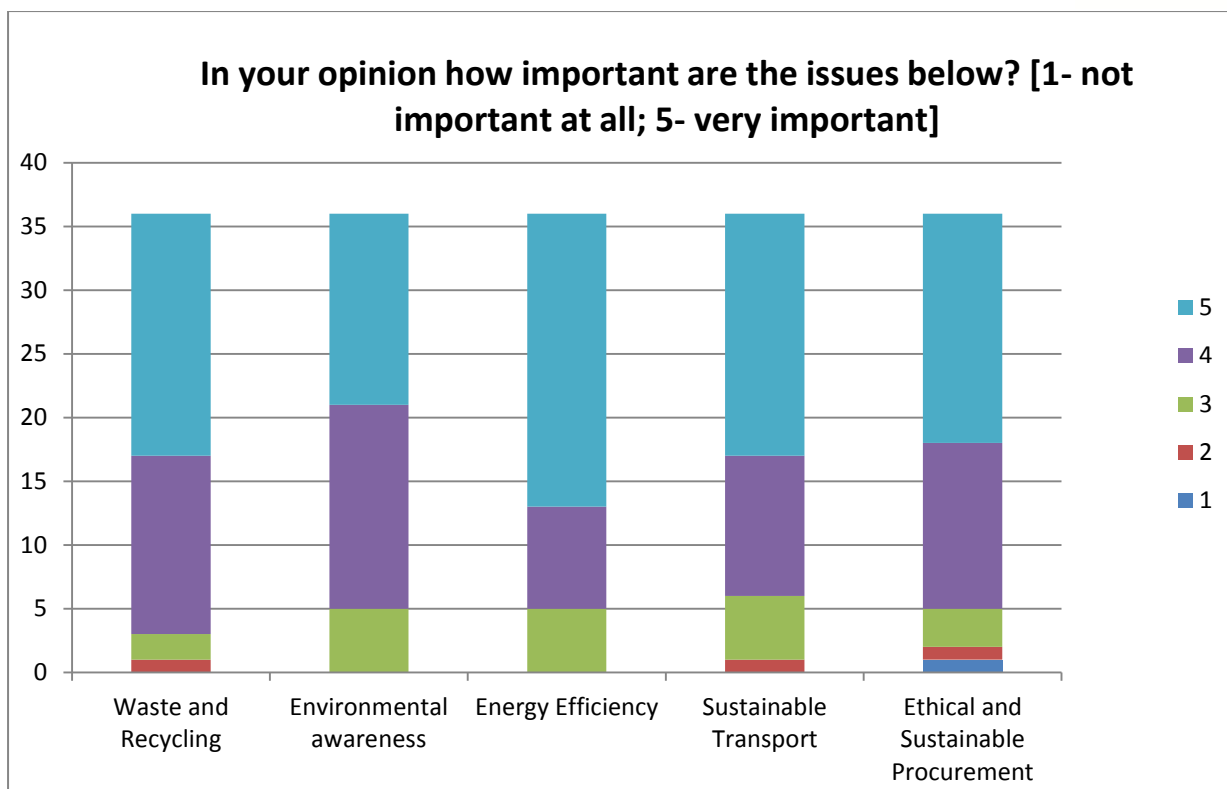


Figure 18: Students – Rating Topics

3.2.4 PRIMARY DATA COLLECTION

As with the staff research participants of the student focus group were asked to bring in copies of their home energy bills in order for us to collect primary data from the community. Participants were also asked to keep a travel diary for the duration of a week. Of the three staff who attended the focus group two were able to provide this information. Figures were again calculated using Defra/DECC 2011 Conversion Factors.³⁵

3.2.4.1 HOME ENERGY

None of our focus group participants were able to provide information on their home energy utility bills. This was to be expected as students often either live in university residences where bills are all inclusive of rent, or frequently move around and do not keep track of their gas and electricity expenditure. Instead data collected by the university's Estates Services from university owned halls of residences³⁶ was used to calculate a figure for emissions related to gas and electricity consumption. A total of 1.802 tonnes CO₂e per annum was calculated for student home energy.

³⁵ Defra/DECC 2011 Conversion Factors: www.carbontrust.com/media/18223/ctl153_conversion_factors.pdf

³⁶ Consumption figures were not available for all buildings. Calculations based on available information.

Electricity

Table 5 displays information relating to electricity consumption and its associated carbon emissions, using data collected from September 2011 to August 2012. The results show an average of 662.786 kgCO₂e per student per annum.

Table 5: Electricity emission from university owned halls of residences

Name	Number of Residents	Total kWh for 2011/2012 year	Conversion Factor	Total carbon per annum (kgCO ₂ e)	Carbon per student per annum (kgCO ₂ e)
Birkbeck Court	387	626690	0.5246	328761.574	849.5131
Chancellors Hall	148	216102	0.5246	113367.1092	765.994
Forbes Hall	107	128950	0.5246	67647.17	632.2165
Garnett Hall	124	95980	0.5246	50351.108	406.0573
James Blyth Court	304	205943	0.5246	108037.6978	355.3872
James Goold Hall	139	200076	0.5246	104959.8696	755.107
James Young Hall	66	54720	0.5246	28706.112	434.9411
Murray Hall	96	118630	0.5246	62233.298	648.2635
Thomas Campbell	157	333930	0.5246	175179.678	1115.794
Total	1528	1981021	N/A	1039243.617	5963.274
				Average	662.586

Gas

Table 6 displays information relating to gas consumption and its associated carbon emissions, again using data collected from September 2011 to August 2012. The results show an average of 1139.29 kgCO₂e per student per annum.

Table 6: Gas emission from university owned halls of residences

Name	Number of Residents	Total kWh for 2011/2012 year	Conversion Factor	Total carbon per annum (kgCO ₂ e)	Carbon per student per annum (kgCO ₂ e)
Birkbeck Court	387	2458504	0.1836	1289731.101	3332.64
Chancellors Hall	148	763262	0.1836	140134.9462	946.86
Forbes Hall	107	485438	0.1836	89126.46452	832.96
Garnett Hall	124	532711	0.1836	97805.7007	788.755
James Blyth Court	304	639060	0.1836	117331.4636	385.96
James Goold Hall	139	920255	0.1836	168958.8064	1215.53
James Young Hall	66	355088	0.1836	65194.18662	987.7907
Murray Hall	96	713251	0.1836	130952.8462	1364.092
Thomas Campbell	157	341215	0.1836	62647.12293	399.026
Total	1528	7208784	N/A	2161883	10253.61
				Average	1139.29

3.2.4.2 TRANSPORT

The study was able to collect primary data from students in relation to their travel habits.

Car

No students that attended the focus group meeting reporting using a car although online questionnaire suggests there are a proportion of students that regularly use a car.

Public Transport

Table 7 presents data collected from staff participants which shows their yearly emissions from public transport. The data collected produced an average consumption of 135.37 kgCO₂e per annum.

Table 7: Student Public Transport Emissions

	Transport mode	Weekly distance (km)	Conversion factor (kgCO ₂ e per unit)	Weekly Emissions (kgCO ₂ e)	Yearly Emissions (kgCO ₂ e)	Total emissions per annum (kgCO ₂ e)
Student Participant 1	Walking & Cycling	18	0	0	0	0
	Taxi	0	0.2121	0	0	
	Local Bus	0	0.1488	0	0	
	Coach	0	0.0306	0	0	
	National Rail	0	0.0565	0	0	
	Local Rail	0	0.0715	0	0	
	Underground	0	0.0736	0	0	
Student Participant 2	Walking & Cycling	50	0	0	0	216.65
	Taxi	0	0.2121	0	0	
	Local Bus	28	0.1488	4.17	216.65	
	Coach	0	0.0306	0	0	
	National Rail	0	0.0565	0	0	
	Local Rail	0	0.0715	0	0	
	Underground	0	0.0736	0	0	
Student Participant 3	Walking & Cycling	8	0	0	0	189.46
	Taxi	3	0.2121	0.64	33.09	
	Local Bus	0	0.1488	0	0	
	Coach	0	0.0306	0	0	
	National Rail	0	0.0565	0	0	
	Local Rail	40	0.0715	2.86	148.72	
	Underground	2	0.0736	0.15	7.65	
					Average	135.37

Flights

Table 8 presents information collected in relation to student flights. The results found an average of 747.84 kgCO₂e per annum. All flights were economy class.

Table 8: Student Flight Emissions

	Duration ³⁷	Frequency	Based on Average distance (km)	Conversion Factor (kgCO ₂ e per unit)	Emissions (kgCO ₂ e)	Total Emissions per annum (kgCO ₂ e)
Student Participant 1	Domestic	2	540	0.1648	177.98	1911.36
	Short Haul	0	1715	0.09684	0	
	Long Haul	3	5182	0.1115	1733.38	
Student Participant 2	Domestic	0	540	0.1648	0	0
	Short Haul	0	1715	0.09684	0	
	Long Haul	0	5182	0.1115	0	
Student Participant 3	Domestic	0	540	0.1648	0	332.16
	Short Haul	2	1715	0.09684	332.16	
	Long Haul	0	5182	0.1115	0	
					Average	747.84

3.2.5 STUDENT FOCUS GROUP

On Feb 28th 2013, 4 students attended a focus group session within the Students' Union - the group comprised of three undergraduate and one postgraduate student and all studying within the Engineering Faculty. The focus group ran for an hour and participants discussed their thoughts on some environmental projects proposed by the researchers before going to make their own suggestions. The agenda for this meeting can be found in Appendix D.

Home Energy Project

Proposal: A Home energy project where students are trained up to audit the homes of fellow staff and students. The auditors would make energy efficiency recommendations, providing resources such as draft proofing and energy monitors, and give help with talking to landlords.

Key responses and quotes:

Student 1: *"How would you advertise it to say that people could come to their house?...Cos I think once you got it up and running it would be ok but [launching it] might be quite difficult...but I know I would be quite happy to have someone come and reduce my energy bill...they were high over Christmas!"*

³⁷ Duration based on an average of the following. Domestic: Glasgow to London = 540km. Short Haul: Glasgow to Madrid = 1715km. Long Haul: Glasgow to New York = 5182km

Student 4: *"I think it might be popular with staff, so if we trained students to do it for staff it might be good"*

Student 1: *"It would be really easy to get figures on it to show people this is better and not just because I say so, it's written here and this is the money you'll save."*

Researcher notes:

An effective, easy to monitor project that has been run very successfully at other universities. This project was trailed at Strathclyde in academic year 2011/2012 but has stalled due to staffing and financial limitations. This project presents great opportunities for developing student skills for employment which is in line with one of the major aims of USSA. It also engages with current welfare issues such as fuel poverty.

Other universities implemented: See section 3.3.6

Green Dragon' Den

Proposal: A student competition where a monetary prize is offered to student(s) to launch a real life sustainability project/environmental social enterprise that would benefit the Strathclyde community. Students would have a designated period of time with which to design a project and help and guidance would be provided by the Transition staff.

Key responses and quotes:

Student 2: *"I like the competition aspect".*

Student 1: *"I'm sure there was a competition like this before but I can't remember what it was for. I think the business school organised it and advertised through Facebook for engineers to join them. It was a sort of joint venture and that way you were getting friends to go with friends and sorting it out themselves before coming forward".*

Student 3: *"I think it'll be something that happens much more in the business school than the engineering faculty"*

Student 1: *[Agrees] "I'm not sure that many people on my course, if you advertised it, they wouldn't enter....I know I wouldn't have from first to third year."*

Researcher notes:

Average interest by the focus group participants. The project would play to the strong Business School at Strathclyde but may work better in later years with a more established Transition project. It may be difficult to measure carbon savings as a direct result of the project.

Other universities implemented: Transition Edinburgh University, People & Planet Scotland³⁸³⁹

³⁸ People & Planet Scotland: <http://peopleandplanet.org/scotland/green-dragons-den>

³⁹ People & Planet Ideas Wiki: <http://peopleandplanet.org/transition-ideas?do=view&idea=52>

Sustainable Transport

Proposal: Implementation of a cycle rental scheme on which is accessible to both staff and students. Participants would pay a one off fee and a refundable security deposit for use of a bike for the full academic term.

Key responses and quotes:

Student 3: *“Yes. I find I’m limited a lot by that I don’t have a bike so if I could just hire a bike for a while that would be great.”*

Student 1: *“Especially because they’re really difficult to store, even over summer. That’s the main problem with bikes, students have nowhere to store them and if you’re living in tenement blocks you’ve got to carry them all the way up the stairs cos otherwise they’d just get taken in the hallways”*

Researcher notes:

Students indicated a real interest in a cycle hire scheme but due to a high start-up costs this may be something to consider in later years of the Transition Strathclyde project.

Other universities implemented: See section 3.3.6

Cycling proficiency lessons

Key responses and quotes:

Student 3: *“They would be useful, a lot of people haven’t done road cycling, or not recently”*

Student 4: *“I only started cycling in Glasgow about a year ago and at first it was really intimidating”*

Student 1: *“I’ve never done a cycling proficiency test so I wouldn’t even know. I think my school enforced it on people the years after me but I never did it. I don’t know if as many people would pay for cycling proficiency lessons though. I wouldn’t have thought so”.*

Researcher notes: Good interest from the students and would provide a great starting point for a travel initiative. Easy to implement and measure uptake.

Other universities implemented: Transition Herriot Watt⁴⁰, University of Edinburgh⁴¹

Joureyshare and Car Pooling

Proposal: An online database where staff could upload information of a journey they are planning to take – this could be commuting to campus every day or longer one off journeys – allowing people to fill extra spaces in their car and share the cost of the journey.

Key responses and quotes:

⁴⁰ Transition Heriot Watt Cycling: <http://www.transitionheriot-watt.org.uk/transport/cycling/cycletraining>

⁴¹ University of Edinburgh Cycle training: <http://www.ed.ac.uk/schools-departments/transport/cycling/training>

Student 1: *“The festival idea would be really useful. That’s something I’d definitely take part in. Definitely gigs and festivals...it would probably get used during the year as well. Last year I went to a few gigs in Dundee and Edinburgh with people and there were loads of people on the coach there that I actually recognised.”*

Student 4: *“Maybe it’s worth doing a survey to see where people actually travel, outside of uni. What events do they go to? Or conferences.”*

Student 1: *“When I was in Queens [Canadian Uni] last year I was part of an outdoors society and they used to organise so if folk were going to Montreal or Toronto over the weekend they could do lift shares all the time. I think it’s important to advertise it through a university website so people trust it and they [Queens] had a system where you needed a matric number to advertise something so you couldn’t be a total stranger who’d just added yourself into a Facebook group and advertised this lift and took people to the middle of nowhere! So I think that’s important, cos it can be quite daunting. You’d definitely need to think about the safety aspect”.*

Researcher notes:

Cheap, easy to implement and monitor usage. Would require time spent advertising for a significant uptake. Safety concerns are paramount.

Other universities implemented: Transition University of the West of Scotland⁴², Transition St. Andrews⁴³

Food and growing

Proposal: Low carbon cookery workshops, educating students on how to source and prepare locally produced and seasonal meals.

Key responses and quotes:

Student 3: *“I would be interested in that, I’m a food nut!”*

Student 1: *“I think you’d have quite a niche market for it, people who already liked cooking. I eat to eat food and fill up. I don’t care as much about what it is, and I know all my flatmates are like that as well. But I think if you found the people who were really in to it and interested in food...”*

Researcher: Do you think it being environmentally friendly cooking, would that put people off and make it more niche?

Student 3: *“I think having it in the headline would do that yeah but you should certainly mention it somewhere as a benefit”*

Student 2: *“Just advertise it as cheap student cooking.”*

Student 1: *“Yeah I’d do that, rather than specifically vegetarian”*

⁴² Transition UWS Journeyshare: <http://www.sauws.org.uk/transition/content/747243/>

⁴³ Transition St. Andrews Car Sharing: <http://transitionuniversityofstandrews.com/carsharing/>

Student 3: *“And in the list of things you can have a greater variety of foods, greater veggie foods, more healthy, greener”.*

Researcher notes:

Good interest from students but may be more suitable for later years once a Strathclyde Transition project is well established. Any food initiative should be marketed as healthy eating and cheap eating instead of low carbon.

Other universities implemented: Transition University of the West of Scotland⁴⁴, Transition University Edinburgh⁴⁵, Aberdeen University Students’ Association (AUSA)⁴⁶, Transition St. Andrews⁴⁷

Others

Student 4: *“I’m just trying to think about other kinds of workshops we could run if we had that space. We could run different workshops at different points in the week. We could have a food or a cooking one, or bike repair. Or information sessions on recycling on campus”.*

Student 3: *“Also the space would make us much more visible; it’s an actual place people can go to get information”.*

Researcher notes:

Students indicated a real interest in having a dedicated Transition space for workshops and storage. This could be separate from the union if necessary.

Researcher: Say we chose a handful of these projects. How is best to market them to Strathclyde students? Do we say this is low carbon, environmentally friendly etc. or should we step back from that and market it in other ways?

Key responses and quotes:

Students 2: *“Money saving, definitely”.*

Student 3: *“You’d mention it as a footnote that it’s green, but it’s not the main selling point”.*

Student 1: *“Especially for food [projects], cos that’s what students care about.”*

Researcher: How else could we engage students that perhaps have no previous experience of environmental projects?

Student 2: *“Could you tie in the projects with each other? So if you’ve taken part in the food workshop you won’t be charged or will get money off bike rental, something like that”.*

Student 4: *“Definitely having incentives, like getting a free voucher for some other course”.*

⁴⁴ Transition UWS Food: <http://www.sauws.org.uk/transition/content/863583/>

⁴⁵ TEU Food: <http://www.transitionedinburghuni.org.uk/what-we-did/food/>

⁴⁶ AUSA Climate Change Cookery: <http://www.ausa.org.uk/getinvolved/climatechange/cookery/>

⁴⁷ Transition St. Andrews Food: <http://transitionuniversityofstandrews.com/food/>

Student 3: *"I think having a place where it's all run from, some place very visual is important".*

Researcher notes:

When marketing the projects care should be taken not to overstate the environmental message as this may put off potential students. Discounts or incentives from taking part in other projects may increase uptake of less popular initiatives.

4.0 RECOMMENDATIONS OF FUTURE PROJECTS

It is proposed that should Transition Strathclyde continue beyond this study and that the developed projects would be best suited addressing the issues of energy efficiency and/or sustainable transport. The university community has shown the greatest interest in these topics and relevant projects are comparatively easy to implement, easy to monitor and can yield potentially high carbon savings.

4.1 ENERGY EFFICIENCY

A major contributor to all parties' lifestyle footprint is their home energy consumption. As such a project which outlines how the community can go about reducing these emissions would be highly beneficial and an excellent starting point for Transition Strathclyde.

- Student Switch Off⁴⁸: an NUS campaign where students in university owned residences are incentivised through an awards scheme and competitions to reduce their energy consumption. Home Energy Project: A trained team of student energy auditors evaluate the homes of fellow students and staff members. Presenting them with a breakdown of their home energy footprint and recommendations on how to save money and reduce the cost of their bill. This scheme could also provide help to students on talking to their landlords about making upgrades or even providing resources to do some of the changes themselves.

Future projects involving energy efficiency should plan to address at least in part the following community outcomes

- Money saving tips
- Outreach and education on the impact home energy on emissions
- Greener home energy alternatives.
- Student skills development and volunteering opportunities.

4.2 SUSTAINABLE TRANSPORT

The feasibility study has identified the following projects as particularly suitable to address low carbon transport:

- Cycling proficiency and promotion. Cycling is a desirable form of low carbon transport. It is recommended that a project promoting cycling would be best suited in engaging the student community only. The project could offer services such as cycling proficiency and bicycle maintenance classes and/or work towards increasing the availability of secure bike storage and other facilities on campus.
- Staff and Student Carpooling/Journeyshare scheme. An online database where staff and students can upload information of a journey they are planning to take (this could be commuting to campus every day or longer one off journeys) allowing people to fill extra

⁴⁸ Student Switch Off: <http://www.studentswitchoff.org/>

spaces in their car and share the cost of the journey. This could also be expanded to include cycling or walking companions to encourage further low carbon travel.

Future projects involving sustainable transport methods should plan to address at least in part the following community outcomes:

- Healthy living associated with low carbon commuting, cycling and walking.
- Road and cycle safety.
- Improved cycling infrastructure on campus.
- Community outreach, engagement and events.
- Education and community outreach to educate on the impact of transport emissions.

4.3 COMMUNITY ENGAGEMENT

For any sustainable or environmental project to be successful at the University of Strathclyde, the project leaders and steering group should take into account the following factors when developing an engagement strategy.

- Staff based at the university spends little to no time within the Students' Union. To ensure effective staff engagement campaigns and marketing must be campus wide, or staff selective.
- Students are best engaged by all current methods employed by Universities of Strathclyde's Student Association.
- Staff members have very little spare time during the day and are best engaged at lunch times or briefly after finishing work.
- The university community should be encouraged to take the lead on aspects of the Transition projects to promote a sense of ownership, geared towards the legacy created by said projects.
- It should be taken into account that even though the reduction of lifestyle emissions is the aim of this project it may not necessarily be the best primary marketing message. The reduction of lifestyle emissions is often better treated as a resultant behavioural change within the community due the collective benefits of several other messages, such as money saving or healthy living.

5.0 CONCLUSIONS

Community engagement with the Transition Strathclyde feasibility study has been very positive with nearly 150 staff and students engaging with the project through the online carbon footprinting questionnaire and focus group meetings. This response was well above what was expected and indicated the community has an already established interest in climate change and environmental affairs.

The community has indicated more should be done on campus to address environmental issues, and that at a more senior level the university should be proactively seeking to promote policy and measures that ensure departments become more sustainable and meet their own individual needs.

Discussion with focus group participants has also indicated that among the student community there is potential to increase and encourage environmental awareness to students. With the help of Estates based research and the results of this project the university as a whole should be looking to nurture cross campus projects that add to the student experience. Environmental concerns are often deeply engrained in student welfare and can encompass such areas as fuel poverty and healthy eating.

Both USSA and the University of Strathclyde should continue to research its environmental impact and identify areas of interest and continual improvement.

Appendix A: Focus Group Consent Form

CONSENT FORM

Transition Strathclyde – Focus Group

This focus group is being undertaken by Chris Forster and Shona Rawlings as part of an environmental research project at the University of Strathclyde Students' Association.

1. I confirm that I have read and understand the information sheet dated February 2013 for the study and have had the opportunity to ask questions.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my care being affected. I understand also that I can ask to have my data withdrawn from the study at any time.

3. I understand that by signing this consent form I am indicating that:-
 - a. I am aware of what my participation in the study involves, and of any potential risk; and
 - b. all my questions concerning the study have been satisfactorily answered.

4. I understand that confidentiality and anonymity are assured during and after the study has been completed.

5. I understand that data collected during the study, may be looked at by responsible individuals from the research team where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records

6. I agree to take part in the study.

Name of Participant (Print)

Date

Signature

APPENDIX B: Focus Group Information Sheet

INFORMATION SHEET

Focus Group – Transition Strathclyde

You have volunteered to participate in a focus group research session coordinated by Transition Strathclyde. Before you decide whether to take part it is important that you understand why the research is being done and what it will involve. Please take time to read the following information carefully.

Why the research is being done

Transition Strathclyde is a community based environmental project based at the University of Strathclyde and funded by the Climate Challenge Fund. In our first few months we are researching the "lifestyle" carbon footprint of staff and students at the university - this is the impact associated with each individual's behaviour and lifestyle choices rather than emissions associated with the university's buildings and services. The areas we are focusing on are transport, waste, home energy and food.

Who the study is being carried out by and for what purpose

This study is being carried out by two part-time staff members; Shona Rawlings and Chris Forster. The information we collect in this research will then be used to develop brand new carbon cutting projects in time to roll out for the new academic year in September 2013. We want the Strathclyde community to be at the heart of these projects and so we are running a focus group meeting in order to gather opinions and ideas on what will work best.

What the focus group involves

The focus group should take no longer than 2 hours but its length will depend on how much you would like to say. With your permission an audio recording will be made, but your name and details will be kept confidential. If you are not comfortable with the meeting being recorded please let us know.

The session will start by discussing the feasibility of some projects we have in mind before opening up the discussion to developing new ideas. All are welcome regardless of your previous involvement with environmental affairs.

Participation is voluntary and if you decide to take part you will be asked to sign a consent form. You can withdraw your consent at any time without having to give a reason. We may publish some research findings however responses will be anonymised so if we publish any comments from the interviews no one will be referred to by name. All data gathered from the interview will be securely stored and kept for 6 months.

Contact details

If you wish to raise any question or concerns before, during or after this study please do not hesitate to contact us using the contact details below.

Transition Strathclyde
University of Strathclyde Students' Association
90 John St
Glasgow. G1 1JH

Email: transitionstrathclyde@gmail.com

Tel: 0141 567 5000

Questions or concerns can also be addressed to Carole McGreish who is supervising the project.

Carole McGreish

Email: c.mcgreish@strath.ac.uk

Tel: 0141 567 5047

APPENDIX C: Staff Focus Group Agenda

STAFF FOCUS GROUP: AGENDA

Tuesday 12th March 2013. 5:30pm, Hills Room.

<p>Resources required:</p> <ul style="list-style-type: none"> • Catering – veggie sandwiches, tea & coffee • Dictaphone, laptop • Some results from questionnaires • Big envelope to keep energy bills etc. confidential. • Amazon vouchers 	<p>Roles:</p> <p>Researcher 1: Direct conversation, probe for more information, make sure everyone can contribute</p> <p>Researcher 2: Observe behaviour and attitudes, take note of contributions to match voices to transcript, watch time</p>
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INTRODUCTION

- Give out information sheets and consent forms – allow time for them to be read.
- Introduce ourselves and the project. Make distinction between “lifestyle” emissions and university buildings and services. What info will be used for.
- Ensure everyone is okay to make an audio recording.
- **START AUDIO RECORDING**
- Ice breaker: ask participants to state name and course
- Give interview guidelines – open discussion, don’t have to answer, make sure you do if keen

CARBON FOOTPRINTING RESEARCH

Background:

- Trying to develop a baseline footprint for lifestyle emissions of staff and students.
- This is the environmental impact associated with our behaviour and lifestyle, rather than the university buildings and services.
- These carbon projects are important for student welfare – fuel poverty, healthy eating, increasing public transport costs.
- Collection of travel diaries and energy bills
- **How did this process go?**
- Ask if participants willing to do any further recording – food waste, diet etc?

PROJECT DISCUSSION

Introduction to this section of the meeting

- Hoping to develop new projects – run by at least one dedicated staff member.
- Funding bids
- Give some questionnaire results to date
- Need information on what students want and need
- Honest opinion – don’t have to be polite!

For each point: What do they think? What would peers think? Any way to improve it?

Example 1: NUS Green Impact Universities & Colleges

Example 2: Transport

- Cycle hire scheme
- Cycling proficiency lessons
- Liftshare/Journeyshare database? This could be applied to not just commuting to university
- Other?

Example 3: Food and waste

- Cooking workshops
- Veg growing? (No space).
- Other?

APPENDIX D: Student Focus Group Agenda

STUDENT FOCUS GROUP: AGENDA

Thursday 28nd Feb 2013. 5:30pm, Hills Room.

<p>Resources required:</p> <ul style="list-style-type: none"> • Catering – veggie sandwiches, tea & coffee • Flip paper, pens, Dictaphone, laptop • Some results from questionnaires • Big envelope to keep energy bills etc confidential. • Amazon vouchers 	<p>Roles:</p> <p>Researcher 1: Direct conversation, probe for more information, make sure everyone can contribute</p> <p>Researcher 2: Observe behaviour and attitudes, take note of contributions to match voices to transcript, watch time</p>
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INTRODUCTION

- Give out information sheets and consent forms – allow time for them to be read.
- Introduce ourselves and the project. Make distinction between “lifestyle” emissions and university buildings and services. What the info will be used for.
- Ensure everyone is okay to make an audio recording.
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CARBON FOOTPRINTING RESEARCH

Background:

- Trying to develop a baseline footprint for lifestyle emissions of staff and students.
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- These carbon projects are important for student welfare – fuel poverty, healthy eating, increasing public transport costs.
- Collection of travel diaries and energy bills
- **How did this process go?**
- Ask if participants willing to do any further recording – food waste, diet etc?

PROJECT DISCUSSION

Introduction to this section of the meeting

- Hoping to develop new projects – run by at least one dedicated staff member.
- Funding bids
- Give some questionnaire results to date
- Need information on what students want and need

- Honest opinion – don't have to be polite!

For each point: What do they think? What would peers think? Any way to improve it?

Example 1: Home Energy/Big Green Makeover

- Make students' homes more energy efficient, saving money and carbon
- Audits would be volunteer run – opportunities for CV enhancement and new skills
- Staff member to coordinate
- Project could provide resources e.g. draft proofing,
- Give advice on talking to landlords

Example 2: Social Enterprise

- "Green Dragon's Den"
- Monetary prize to launch a sustainability project of benefit to Strathclyde community
- Playing to business and engineering students
- Judging panel could include academic staff or someone from industry
- Help and advice provided by Transition staff

Example 3: Transport

- Cycle hire scheme
- Cycling proficiency lessons
- Liftshare/Journeyshare database? This could be applied to not just commuting to university
- Other?

Example 4: Food and waste

- Cooking workshops
- Veg growing? (No space).
- Other? **OPEN DISCUSSION**
- What haven't we covered?
- How can we change behaviour?
- What issues are important to you?
- What could be unique to Strathclyde?

APPENDIX E: Promotional Materials

Early in the project a promotional flyer was designed to advertise the project and increase awareness on campus, as shown in figure 19. An initial print of this material consisted of 500 A5 flyers and was distributed by USSA’s PR team and at Go Green Week 2013 events.



Figure 19: Transition Strathclyde Flyer

Transition Strathclyde decided it would be in the best interests of the projects to have some consistency of branding and so had a logo created by USSA’s in-house graphics designer, shown in figure 20. Transition Strathclyde logo has been used on all promotion material to date.



Figure 20: Transition Strathclyde Logo