

Footprints and Handprints: the Edinburgh University community's climate impact and how we can begin reducing it

Footprints and Handprints brings together the collective experience of Transition Edinburgh University over its first year. Prepared by group members and staff-interns Oliver Cooper and Ric Lander, it is the first significant research output of the group and covers key concepts, the internal working arrangement of the group, an estimation of the carbon footprint of the Edinburgh University community and proposals for future action.

Climate change, according to the scientific community, is caused largely by human activity and poses a dire threat to the ability of our planet to sustain us. **Peak oil** is the peaking of oil production and the beginning of the end of a cheap, abundant oil supply. This twin threat requires ambitious solutions if it is to be overcome. With government action slow and insufficient, Edinburgh University needs to respond as a community in order to overcome these challenges. The Transition model – a framework for community action originating from Kinsale in Ireland – suggests an invigorating and exciting way in which we can create a positive and prosperous future. TEU formed in October 2009 to find a way to adapt this model to fit a University community. It was instrumental in encouraging the adoption of Transition by People & Planet UK network in March 2009 and received funding from the Climate Challenge Fund to develop the concept further at Edinburgh, over Summer 2009. TEU is now a thriving community group embedded in the University and draws great strength from being a core part of the University, the Transition movement, and the student environmental movement.

TEU has been working with **four aims**: (1) to investigate energy use and carbon emissions in our community and record achievements in reducing them; (2) to increase awareness and involvement of the 35,000-strong community in action on climate change and peak oil; (3) to take practical action to reduce energy use, cut carbon emissions, and relocalise our community; and (4) to build, publicise and transfer a set of tools to support Transition groups in similar and surrounding communities. The group believes that University staff and students must work together as a community to achieve these aims and that TEU's task is to facilitate this effort; that working collectively and non-hierarchically is the most effective way to achieve these changes; and that clear analysis, a practical approach, and a desire to educate, understand and be part of a global solution are all key themes that the group should work towards.

Over our year together as a group, TEU has developed an **open model of working** which we believe achieves our aims efficiently, empowers group members and facilitates skills development. TEU staff and community members (students and staff at the University) work together in themed working groups on areas such as travel, aiming to reduce the energy-use of travel, and residences, aiming to reduce the energy used in buildings. TEU staff and community members work together in open working spaces where possible, and come together for fortnightly plenary meetings to celebrate successes and coordinate action. The group is supported with training, materials, working spaces, and formal and informal mentoring. Much of this work has been backed up by funding from our initial Climate Challenge Fund grant. A second more ambitious bid has been submitted to the fund and we are awaiting a response. We have also relied on support from the University of Edinburgh Energy & Sustainability Office and Edinburgh University People & Planet Society.

A **carbon calculation study for the University community** was carried out over the Summer of 2009, aiming to make existing data more relevant and accessible, to highlight areas where data is currently missing and to give staff and students a general picture of where their greenhouse gas emissions occur. It addresses the institutional footprint of the University of *Edinburgh* and the

“lifestyle” footprint (emissions made at home at leisure) of its 10,000 staff and 26,000 students. It is intended to be as broad and inclusive as possible, measuring our impact from direct emissions as well as giving a picture of indirect emissions – those emitted elsewhere in order to provide us with goods and services, which is often overlooked by conventional studies. Preliminary findings suggest that the annual greenhouse gas footprint of the University community is approximately 350,000 tonnes of CO₂e emissions per year. Of this figure, only 50,000 tonnes (14%) is estimated to be directly resulting from institutional activities, with the remaining 86% attributable to staff and student lifestyles. Not including their 'institutional activities', the average community member is estimated to produce 8.3 tonnes of CO₂e emissions per year. This would comprise 2.3 tonnes CO₂e from domestic energy use, 2.2 tonnes from travel and 3.8 tonnes from goods and services – although the total is thought to be an underestimate, particularly with respect to emissions from travel activities. The study found that the University Estates and Buildings and University Accommodation Services hold useful data regarding energy use in their buildings, but found that the University lacked records for CO₂e attributable to procured goods and services.

Opportunities for action for TEU, the University, and other groups abound, including practical projects to reduce energy-use and carbon emissions, projects to broaden engagement in the transition, projects to spread the idea of Transition further afield, and proposals for further research work. Proposed projects respond to the problems highlighted by the carbon calculation study and build on schemes already running or in development include: a Green Dragons Den where inventors and entrepreneurs develop carbon-saving business ideas with the winner's being implemented; an Inter-halls Energy Saving Competition, where halls of residence compete to lower energy-use; Veggie-food days, where the carbon-saving qualities of lower-meat diets are promoted; Free-shop and share, where students and staff exchange unwanted items to reduce waste and consumption; the Big Green Makeover, where students and staff are offered supported to make homes more energy efficient; Transition TV, showcasing new and exciting transition ideas; peer-learning programmes such as Carbon Conversations, which are pre-designed courses where participants discuss emotional responses to climate change and peak oil; a green travel fair to promote low-carbon journeys and holidays; a series of high-profile speaker events in the University; and conferences engaging the city community and the wider academic community in Transition.

We also propose that **further research** is carried out to improve our picture of the community's carbon footprint and build a complete long-term plan for a green transition. The University has done some work towards recording CO₂e emissions attributable to goods and services procured and this should be commended, but bought services (flights, trains etc.), a significant contributor to the University's institutional footprint, are not yet coherently recorded. Much more work is required to give a complete picture of “lifestyle” emissions, as somewhat sweeping assumptions have been required to create estimates of emissions for domestic energy, travel and goods & services. Further research, including surveying the University population, is urgently required to establish a lifestyle greenhouse gas footprint that is more specific to the university community. Parallel to large scale quantitative studies such as these, there is a need for additional studies that provide more context to the picture of the university's ecological impact. Finally, a clear plan for the future is required, including working towards a holistic “Energy Descent Action Plan”, which gives a vision and a path for a community response to peak oil and climate change. This research can be carried out with the help of TEU staff and community members, and we also see University courses including student dissertations as excellent ways in which students can be engaged in this effort.

A full copy of the report can be obtained from <http://www.transitionedinburghuni.org.uk/>.