

RESPONSE TO THE SCOTTISH PARLIAMENT ENVIRONMENT, CLIMATE CHANGE AND LAND REFORM COMMITTEE

Scottish Parliament Rural Affairs, Climate Change and Environment Committee: Public Bodies Progress in Meeting Climate Change Duties.

You kindly requested the University of Strathclyde to submit details of how the institution is responding to climate change and the challenges that arise as a result of this major issue. The University's response to these queries is outlined below. I hope that the information provided illustrates that the University is making good progress and more importantly is very keen to collaborate further with the Scottish Government and other stakeholders in tackling climate change issues.

1. Steps being taken to embed consideration of climate change issues strategically and at a leadership level in the organisation.

a) Strategy and Policy

The University recognises the significance of climate change as a major issue for society. As a result, the University has already embedded climate change and the reduction of carbon emissions at the very highest level within its 'University Strategic Plan 2015 to 2020', in the form of a long term carbon reduction target. The carbon target commits the institution to achieving a 25% reduction of carbon emissions by 2020 using a 2009/10 baseline.

The University Strategic Plan was developed by the Principal and Executive Team with consultation across the whole institution. The Strategy was approved at the highest level of governance, University Court, in April 2015. This plan describes our collective vision for Strathclyde as a leading international technological university inspired by its founding mission as 'the place of useful learning', that makes a positive difference to the lives of its students, to society and to the world. Ensuring that the University tackles climate change in its teaching, its research and its operations is very much part of this vision. Details may be found on the link provided: <https://www.strath.ac.uk/whystrathclyde/strategicplan/>

b) Climate Change and Carbon Management

The University is working hard to achieve its carbon reduction target and a number of projects are underway to reduce emissions, examples of which are detailed below. Progress against the target and wider sustainability efforts is reported on an annual basis via the University's Estates Committee which is the main governance route for sustainability issues that involve all of our research and teaching facilities.

Importantly, the Strategic Plan target is supported by a recently approved Climate Change and Social Responsibility Policy that brings together wider sustainability and social inclusion aspects. Estates Committee authorised this policy in October 2016.

https://www.strath.ac.uk/sustainablestrathclyde/policyguidelines/sustainability_policy/

These two strategy and policy measures and their implementation illustrate that the University understands its responsibility to tackle climate change where it can and to embed social responsibility within its strategic thinking, its governance processes and day to day activities.

2. Specific examples of how and where this has been done and where this has influenced a strategic decision.

Six examples are provided below that illustrate the nature of strategic investment being made to tackle climate change aspects across all of our teaching and research facilities.

a) Combined Heat and Power District Energy Scheme

The University has worked closely with the Scottish Funding Council in its Carbon Reduction Programme to secure £8M of funding to develop and install a gas-fired Combined Heat and Power District Energy Scheme at the John Anderson city centre campus. The scheme will generate and distribute electricity and heat to 18 research and teaching buildings in Phase 1. The total capital investment being made is £20M. The district energy scheme involves the deployment of significant infrastructure in Glasgow City Centre in the form of 4.5km of insulated steel pipework and power cabling as well as an array of heat and power generation equipment.

This exciting scheme has been designed so that it can be extended in a number of phases. In the first phase, which is currently under construction, it will reduce carbon emissions by 4,500 tonnes per annum – a significant step change in emissions. The scheme will also reduce the University's energy costs by more than £2M per annum. Phase 1 will be completed in October 2018 and plans are already underway to develop the other phases of the scheme and to also make use of more renewable technology solutions including heat pumps.



District Heating Pipework Installation underway in John Street, Glasgow.

This investment in long term infrastructure in Glasgow City centre by the University is a catalyst for decentralised energy generation and distribution in Scotland's largest city. The University's vision is to create a 'low carbon zone' around the University and the institution is keen to support heat networks in the city centre to achieve this. Discussions are ongoing with city centre stakeholders including Glasgow City Council, the Wheatley Group, Scottish Water, NHS Scotland and most recently Scotrail to explore the potential for the establishment of a city-wide heat network. A bid (unsuccessful) was made to the Scottish Government's Low Carbon Infrastructure Transition Programme (LCITP) which involved the expansion of the University district energy network to third party heat users and deployment of other low carbon technologies. The University is also actively involved as a partner in the Council's 'Ruggedised' Smart Cities Project which includes the deployment of low carbon energy and transport solutions in the city centre.

b) SALIX Energy Efficiency Investment Fund

The University has operated an energy investment fund since 2008. The fund exists to invest in technologies and solutions that reduce building energy consumption, the savings from which are reinvested back into the fund. So far, the University has implemented 28 major projects and invested £2M, releasing savings of £536K per annum and reducing CO₂ emissions by 2,325 tonnes every year. This long term commitment to energy efficient resource use and emissions reduction means that the University is recognised as being one of the leading institutions in the HE sector

in terms of its ability to bring forward and deliver successful carbon reduction projects.

c) Low Carbon Transport Solutions and Active Travel

The University has developed a Travel Plan that defines a range of initiatives and plans to tackle carbon emissions associated with travel and transport at all of its facilities in Glasgow and across the west central belt of Scotland. The University's city centre John Anderson Campus has excellent access to public transport links and 71% of staff and 87% of students use public transport or walk or cycle to the University. These relatively high numbers show that we make use of and rely on good public transport infrastructure in the city centre in order to function effectively.

https://www.strath.ac.uk/media/ps/estatesmanagement/sustainability/University_Travel_Plan_Final.pdf

In terms of our work on active travel, we are working hard to install infrastructure that facilitates different travel choices and encourages staff and students to think of alternative transport options. To achieve this, we are collaborating with all of our Local Authority partners, Transport Scotland, Cycling Scotland and the Energy Savings Trust. In 2016/17, the University added 90 new cycle parking spaces at the John Anderson Campus in an effort to encourage more cycling in the city centre. Another 80 spaces are due to open in Autumn 2017 in the shape of two dedicated internal secure cycle hubs with integrated bike maintenance facilities. We also partner with a range of social enterprises who help us run cycling initiatives like our 'led rides' scheme which introduces those who have not cycled before to guided city centre cycle routes.



Staff and students enjoying one of our 'led rides' in Glasgow.

We are also seeking to provide low carbon transport links between all of our research and teaching facilities in west central Scotland. Later this year, we will be installing 12 electric vehicle parking spaces at the John Anderson Campus in Glasgow, the Advanced Forming Research Centre at Inchinnan, and the Power Networks Demonstration Centre at Cumbernauld. In fact, the facilities at PNDC next to the M80 will include a 20 minute rapid charging station which will be accessible to the general public. In addition, thanks to our 3 Community Planning Partnerships with Glasgow City, Renfrewshire and North Lanarkshire Council, the University has also secured funding to install 5 electric vehicle pool cars at our facilities later this year.

We are liaising closely with Glasgow City Council's City Deal Team to encourage the introduction of improved city centre infrastructure in the 'Learning Quarter' that includes the streets and land around the University. Our focus is to work collaboratively with the Council to address improved access for pedestrians and cyclists to encourage low carbon transport as well as to consider how the infrastructure can better manage issues such as increased rainfall runoff and safety for staff, students and visitors.

d) Waste Resources Management

Dedicated recycling systems have been in place at the University for some years. This system is evolving into a focus on 'reuse' of materials and treating our unwanted materials as a resource with economic, environmental and social value. We have invested in our own off-site Reuse, Recycling Resource Centre (RRReC) close to the University where we store and sort furniture prior to reuse at the University or distribution to the third sector, social enterprises or other Universities. We are also in the process of creating our own bulk consolidation facilities for waste streams that have a residual value and achieve a revenue return for the University.

A good example of where we have begun to apply this 'reuse' approach is at the former Jordanhill Campus in the west end of Glasgow. More than 2,000 items of furniture have been rehomed, saving 39 tonnes of carbon in landfill avoidance and with a reuse rate of 94%. Jordanhill School, Douglas Academy, Bankhead Primary and the Duke Street Food Bank were all recipients of furniture. Also as part of this effort, several hundred items of library shelving, furniture and books were delivered to Mzuzu University in Malawi under the 'Library in a Box' scheme with the help of various University staff. The Mzuzu Library had suffered significant losses during a fire in its library so this seemed like a very fitting solution that helped reuse our former library items, effectively giving them new life.



Former Jordanhill library furniture being put to good use at Mzuzu University Library in Malawi.

e) Climate Change Adaptation

The University is developing a Climate Change Plan that will bring together our approach to tackling climate change mitigation and adaptation solutions. In terms of adaptation, the University is heavily involved in the Glasgow City Council Climate Resilience Group as well as the Climate Change Accelerator run by Sniffer and Adaptation Scotland. We have joined the Climate Ready Clyde Group and our Assistant Director of Estates (Sustainability) also sits on its Board.

f) Socio-Economic Aspects of Climate Change

The University prides itself as a socially progressive institution and we have integrated this value into our Combined Heat and Power District Energy Scheme in the form of the Strathclyde Commitment. This scheme requires the main contractor for the scheme, Vital Energi to invest in a number of apprenticeships, graduate placements and internships, local employment, community engagement and putting in place the processes to measure the socio-economic impact assessment of this major city centre infrastructure project. The aim is to make the investment benefits work for the local community and to then assess its wider impact. The details of the Strathclyde Commitment are noted in the table below:

No.	Strathclyde Commitment
1	Employ local staff within the construction team
2	Employ 4 direct apprentices and 10 sub-contractor apprentices
3	Offer 4 paid work placements for a minimum of 12 weeks
4	Offer 4 undergraduate/ graduate internships
5	Engage with local community groups in Glasgow City Centre (Community Councils)

6	Hold Technology Demonstration Days for students and staff to illustrate the nature of the works and the long term legacy
7	Utilise SMEs and local businesses for services and sub-contracts
8	Cary out a socio-economic assessment of the project during each year of the construction programme with an overall summary output.
9	65% target for local spend on project

3. The University’s views on any barriers or challenges the organisation faces in demonstrating climate change leadership and on the support the Scottish Government could provide that might assist the institution.

The information submitted above hopefully demonstrates and provides assurance that the University is responding positively to its climate change mitigation and adaptation responsibilities and is a willing collaborator with government and other stakeholders. In fact, the information submitted here is just a snapshot of the range of initiatives and investments currently being made to tackle climate change.

Major Infrastructure

Funding of major infrastructure is a focus for the University as this enables a reduction in carbon emissions as well as adaptation to climate change aspects. As illustrated above, the University already works in collaboration with Scottish Government and we are keen to explore further opportunities to help improve and add to city infrastructure. A few opportunities are noted below.

a) District Energy

With the help of the Scottish Funding Council, the University is investing in the installation of a district heating network of more than 4.5km. This infrastructure has a design life of at least 50 years. The network has been designed to enable the expansion of the network and the connection of other developments that require heat. The University has provided its heat demand data to the Scottish Government as part of the ‘Heat Mapping’ exercise. These initiatives and collaboration are all aligned with the Scottish Government’s new Climate Change Plan and its recent consultation on district heating.

What we would like to see:

The University has already submitted a bid to the LCITP programme to extend the Phase 1 district heating network to take in the City Chambers and the social housing north of the University as well as the University residences using a mix of low carbon technologies. While this bid was unsuccessful, the University and its bid partners (Glasgow City Council, Wheatley Group, Scottish Water, Doosan) remain committed to this proposal and we have asked if LCITP will invest in the development of an investment grade proposal for this bid in readiness for any further funding that might arise. The University has significant expertise in the area of low carbon energy systems and its practical procurement and deployment. The University has shown its commitment to delivering large scale infrastructure and a step change in carbon emissions. However, in developing further phases and achieving additional carbon savings, the University is mindful that it cannot do this in isolation. There needs to

be a 'joined-up' approach. This is why it has been discussing and engaging with other stakeholders. The University very much considers that this is the way forward in achieving wider carbon savings and also tackling aspects such as fuel poverty. Help with funding this vision would be very welcome.

b) Active Travel and Safe Streets

In a similar fashion, the University has facilities across the west central belt of Scotland where we rely on good transport links for staff and students. This infrastructure is generally the responsibility of the local authority or Transport Scotland. While the University is making investments in the sort of infrastructure that encourages active travel (cycle storage, showers, lockers, disabled access), it is true that we rely on our Local Authorities to also invest in major road, cyclepath and footway upgrades in order for staff and students to access alternative travel options. The University would like to see more investment in the infrastructure that supports active travel by the Scottish Government via our Local Authorities.

c) Urban Realm Investment and Climate Change Adaptation

The University is currently investing £650M over a ten year phase of campus development that will transform our city centre teaching and research buildings. One of our particularly exciting projects is the creation of a dedicated Learning and Teaching Building that will refurbish and transform the current Colville and Architecture buildings to become the main focus for students and support staff at the heart of our campus. Naturally, the University is particularly keen to work with Glasgow City Council to ensure that City Deal funding is invested in the urban realm of the 'Learning Quarter' to support this transformation and create an inspiring and innovative space in and around the John Anderson Campus. The University also considers that the City Deal programme should demonstrate climate change adaptation solutions integrated into the urban realm design as it emerges.

We hope that the above information provides sufficient detail of the University's commitment to meeting its Climate Change Duties. Further information can be provided on request regarding any of the initiatives described in this response.