Sustainable travel advice

BE SUSTAINABLE

Travel is an integral part of working in both academia and support groups. This guidance offers advice on how to choose the most carbon efficient travel mode and promotes non-travel solutions that help save time and costs.

In response to the Climate Change (Scotland) Act 2009 as well as other significant drivers, the University of Edinburgh has developed a Climate Strategy. The University is required to comply with the Public Bodies' Duties, under Section 44 of the Act which states that public bodies must contribute to climate change mitigation, adaptation and must act sustainably. University Court committed to CO2e emission reduction from business travel along with other carbon commitments.

For the 2013/14 academic year business CO_2 travel emissions were 9,609tCO_2e representing 9% of the total University of Edinburgh CO_2 emissions. Being smarter about the way we travel can help reduce our environmental impact whilst maintaining the value of outside contact and connections.

Travelling more sustainably might have a bigger environmental impact than other things you can do in your work.

1 What you can do

The Travel hierarchy illustration (fig. 1) gives an overview of the carbon efficiency of different modes of transport. Overall, from an environmental perspective, it is best not to travel at all. Where travel is unavoidable, and too far to walk or cycle, public transport should be the first choice. When driving is the only practical option, the car should ideally be full. Flying domestically is a last resort.

It is estimated that almost half of environmental impacts of aviation come from non-CO2 related aspects (radiative forcing). These include emissions of nitrous oxides and water vapour emitted at high altitude.[1]

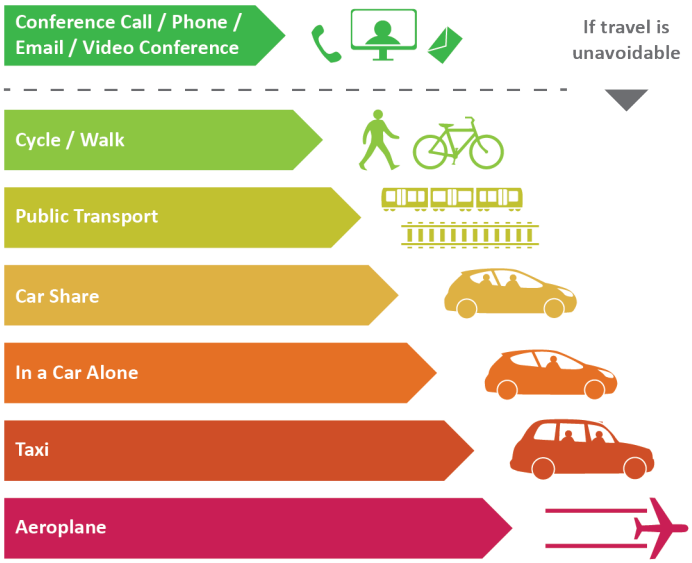


Fig. 1: Travel hierarchy

1 Defra Carbon Factors 2015

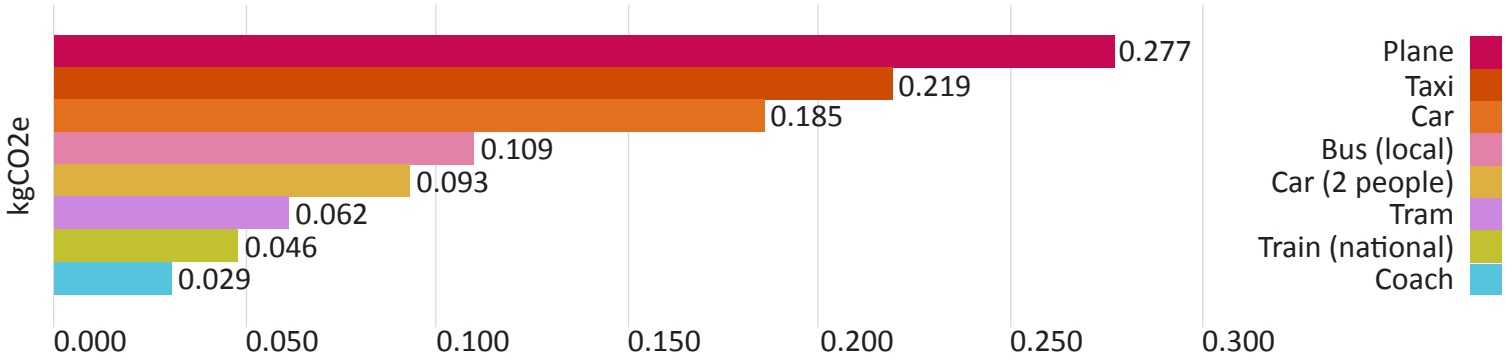


Fig. 2: CO_2e (kg) emissions per passenger km. Source: Defra

2 Non-Travel Options

The most efficient way to reduce emissions from business travel is by not travelling at all. This decreases financial costs through avoiding costs and improving staff productivity and environmental costs by minimising CO_2 emissions. If the journey can be avoided through a video conference, local computer video software, telephone conference or telephone call then this should be the first choice. The University has three main video-conferencing suites:

- www.ed.ac.uk/information-services/computing/comms-and-collab/videoconferencing
- www.ed.ac.uk/corporate-services/staff/staff-meetings
- www.lts.mvm.ed.ac.uk/itservis

The suites can be booked through an online platform and support is offered on the University website[2]. In addition to the Information Services managed suites, there are others on every campus. Ask your local colleagues for details.

Skype is another excellent desktop option for colleagues. Calls to other Skype users are free which make it a cost effective option when deciding on the best methods.

There is also a range of other digital collaborative tools available at the University. Contact Information Services who will be able to advise you what software is best for you, based on your requirements.

3 Reducing your travel needs

When travelling cannot be avoided, try to decrease its volume, for example by:

- **Bundling up meetings** – try to arrange more meetings into one journey and consider staying overnight if it all meetings cannot happen on the same day.
- **Checking if any colleagues are attending events in the same country** and could represent your interests.

2 More information about video-conferencing can be found at: www.edin.ac/1xpBLLz

4 Low Carbon Options

One of the biggest potential ways to reduce emissions is through converting domestic air travel to more sustainable transport modes. This is because there are often realistic alternatives for domestic air travel, with rail being a popular substitute. Domestic air travel is responsible for about 1000 tonnes of CO_2e, representing around 1% of total University emissions.

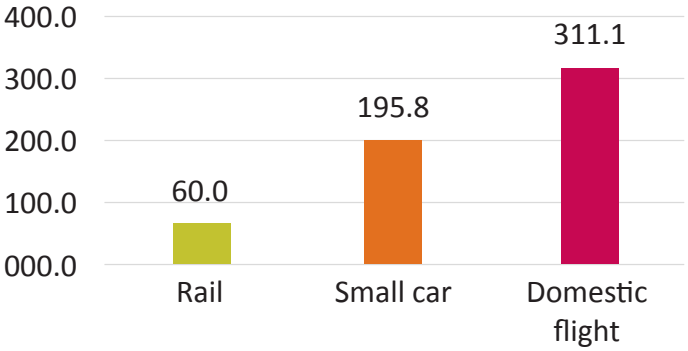


Fig. 3: Return journey Edinburgh - London est. $kgCO_2e$

In 2013/14 the average costs of University travel to three top domestic flight destinations were lower for rail than for planes, especially after including the whole cost of travel, e.g. transfer to and from airports.

The carbon difference between train and plane journey to London in one return journey is more than: taking the bus to work and back home, drinking 2 large coffees, talking for 20 minutes on your mobile, leaving the light in your office on, sending 20 emails a day, **every working day for a year.**

Travelling more sustainably might have a bigger impact than other things you can do in your work.

Rail is encouraged due to its extensive network around the UK and low carbon intensity per passenger km. It is also a flexible mode of transport offering space and facilities to aid working while travelling therefore making best use of time.

Fig. 4 shows that, taking the total journey cost into account, planes were on average less cost effective in 2013/14.

Try asking the organiser if meeting can take place later to accommodate your itinerary/travel needs

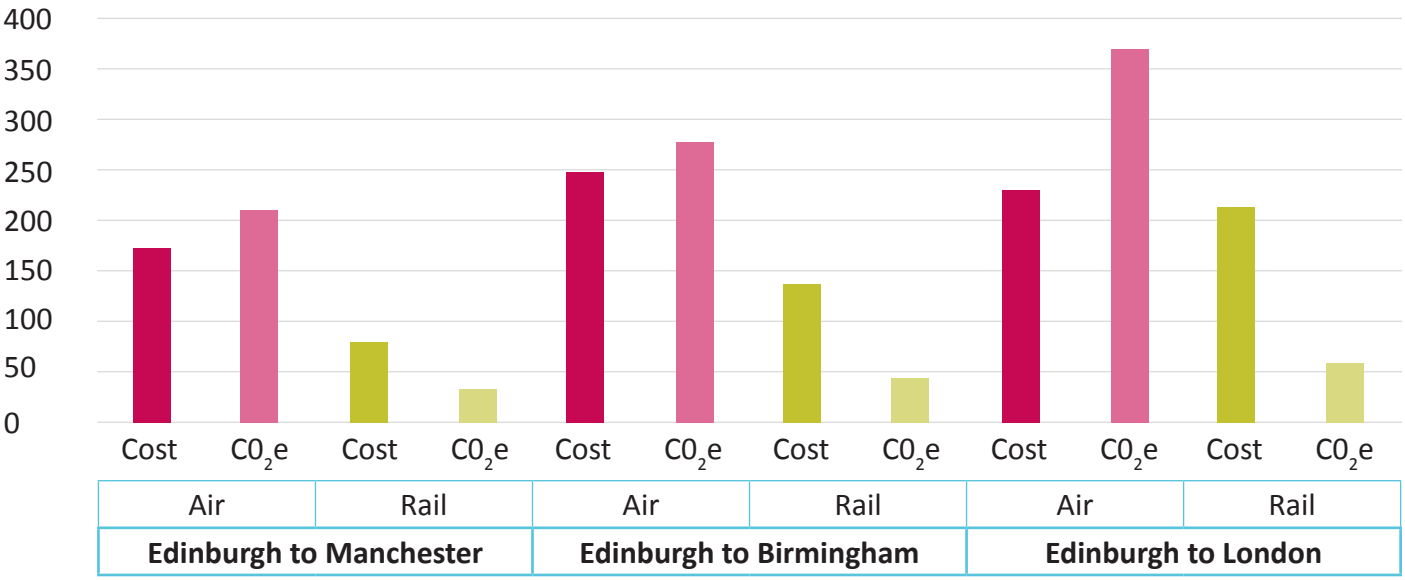
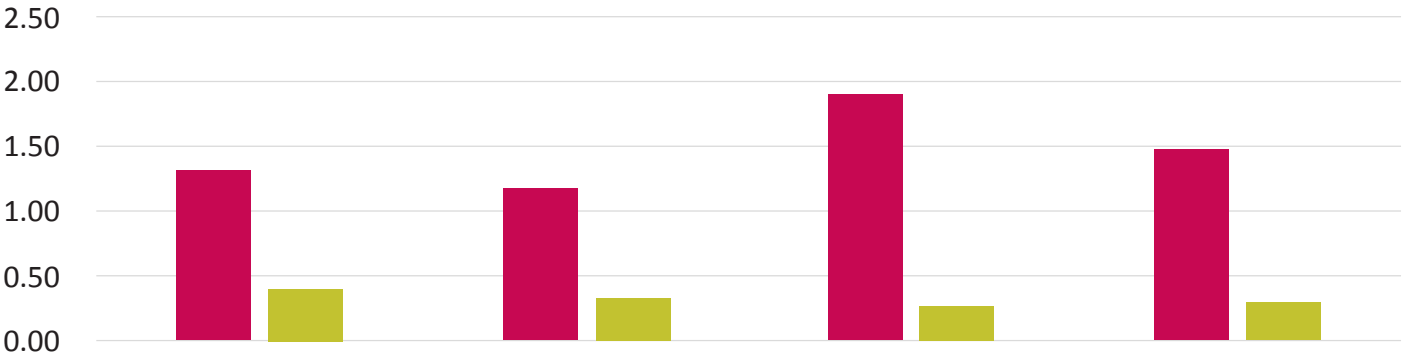


Fig. 4: Average total journey costs and emissions to top domestic flight destinations. Source: UoE travel data.



	Edinburgh to Manchester	Edinburgh to Birmingham	Edinburgh to London	Average
Air	1.32	1.18	1.91	1.48
Rail	0.41	0.32	0.28	0.30

Fig. 4: Average CO_2e emission per £ spent by destination and mode of transport. This chart compares average of how much carbon is emitted per each £ spent when using train or plane. Source: UoE data

The emissions associated with air travel are much higher, fig. 4 provides a normalised overview of carbon efficiency of both forms of transport. On average, each pound spend on a domestic air journey has almost five times as much CO_2 associated with it as a journey to the same destination by rail. Not only were flights more expensive on average, but every plane journey was also much more carbon intensive.

Finally, the class in which you travel also has an impact on carbon emissions from your journey, due to the additional space that seats in higher classes take. The table below provides an overview of Defra's estimation of increased emissions in aviation.

Increase in emissions by class of air travel	
Short haul (Europe + neighbours)	
Economy class	
Business class	+33%
Long haul (other continents)	
Economy class	
Premium economy class	+37%
Business class	+66%
First class	+75%

Table: Increase in emissions by class of air travel.

Sustainable travel advice

Chris Litwiniuk, Alexandra Kuklinski

October 2015

More information is available at
www.ed.ac.uk/sustainability/travel

This publication can be made available in alternative formats on request.

The University of Edinburgh
Department for Social Responsibility and Sustainability,
9 Hope Park Square,
Edinburgh EH8 9NP
T: +44 (0)131 651 5588
E: sustainability.department@ed.ac.uk