Climate change and sustainable transport

Transport emissions have increased by 38.8% since 1990 while all other sectors have seen a decreasing trend. Are current policies likely to reverse this trend, or are we fighting a losing battle?

The sustainable transport challenge

Reducing greenhouse gas emissions (GHGE) is at the core of the sustainable transport drive, providing one of the biggest challenges to policy makers everywhere. On the one hand, an increased demand for transport has always been seen as indicative of economic growth, on the other, transport is our biggest polluter. A balance must be found whereby the movement of people and goods remains uninhibited allowing the economy to grow, while emissions are actively reduced.

Transport in Northern Ireland

Due to widespread closures of our railway lines between 1950 and 1970, Northern Ireland is now almost completely reliant on our road network for all our transport needs. Road Transport accounted for 89% of transports Green House Gas Emissions (GHGE) in 2008; cars represent the most significant source of CO₂ emissions from the road transport sector, contributing approximately 54% of the CO₂ from transport in 2008, While HGVs contributed 36%.

Modal Shift

The Northern Ireland Travel Survey shows that between 2005 and 2008, 81.5% of all private journeys were made by car. This survey goes on to show that the average journeys made by people to work (8.5 miles), to visit friends (7.8 miles), to carry out personal business (4.6 miles), and to go shopping (4.6 miles) could not conveniently be made by walking and therefore would require access to either a car or some form of public transport, but for those who have the choice, the car seems to be the preference.

Since 2005, the DRD Travelwise initiative has engaged with businesses, schools and commuters to promote and encourage sustainable modes of travel as alternatives to the private car. It focuses on promotional events, such as bike week and walk to school week, while www.carshareni.com provides commuters with a platform to meet people making a similar journey. Based on data in the travel survey these soft initiatives, while welcome, have not achieved a critical mass to make a significant impact.

Sustainable vs. Economic Development

Sustainable development has always been at odds with economic development and nowhere is this more evident than transport. Government spending plans are based on the theory that return-on-investment from roads is greater than from public transport. The ten-year investment strategy (2008/09-2017/18) envisages £725m being spent on public transport – including new vehicles and the Belfast rapid transit scheme – though this is dwarfed by the £3.1bn earmarked for roads.

Current thinking is that road construction opposes the values of sustainable transport. New roads frequently result in higher levels of travel demand and increase congestion within towns and cities. In Northern Ireland traffic congestion has already reached unprecedented levels, costing the economy over £250m per annum.
Opportunities

The Regional Transportation Strategy (RTS, 2002) promised a modern and efficient transport infrastructure; and Belfast’s Metro service is an exemplar of how improved infrastructure can achieve modal shift. However, plans for a Bus Rapid Transit system (BRT), first announced in 2008 are moving slowly. While the Transport Reform Bill, which included legislation to enable BRT, was passed in the Assembly in February 2011, the draft budget did not provide funds to roll the project out but rather allocated funds for continued planning.

This shows that while sustainability is embedded within policy, to date the outcomes have been firmly in favour of the private car and unless something drastic changes in people’s behaviour, or something is done to change it, emissions in Northern Ireland are only heading in one direction.

It is positive that the revised RTS recognises these shortcomings. It proposes a change in direction for transportation in NI through three high level aims: to support the growth of the economy; to enhance quality of life for all; and to reduce the environmental impact of transport.

Freight transport

Although cars are the biggest contributors of GHG, the most significant increase in road transport emissions in recent years has been in relation to the movement of freight (LGV and HGV) accounting for 70% of the total increase in carbon emissions from road transport (DRD, 2009). This has prompted the Chartered Institute of Logistics and Transport to admit that specific targets to reduce energy consumption and emissions from the road freight sector are now needed.

Figure 1. Total Road Traffic Vehicle km and GHG emissions from Different Vehicle Types: NI, 1990 – 2008

The freight industry has been looking at the use of double-deck trailers and other flexible trailer designs to increase capacity and cut emissions, while the Department for Transport released proposals to allow an increase in the total length of articulated Lorries. The Department estimates that this move could cut carbon emissions by around one hundred thousand tonnes each year.
Regarding freight modal shift, road transport is much more polluting than rail per tonne-km of goods transported and therefore a shift towards greater use of rail in freight transport is desirable. Inadequate infrastructure prevents this modal shift taking place.