CILT (UK) is the UK National Council of The Chartered Institute of Logistics and Transport

The Chartered Institute of Logistics and Transport (UK)

31 August 2009

Roisin Kelly
Committee Clerk
Room 402
Parliament Buildings
Belfast
BT43XX

Dear Sir / Madam

Inquiry into Sustainable Transport - CILT(UK) NI Region Response

The Committee of the NI Region of the Chartered Institute of Logistics and Transport in the UK would like to take this opportunity to offer their support to the Committee for Regional Development as they hold their inquiry into sustainable transport.

The Chartered Institute of Logistics and Transport in the UK - CILT(UK) - is the professional body for individuals and organisations involved in all aspects of transport and logistics. It has over 19,000 members, including over 200 in Northern Ireland, and as it is not a lobbying organisation it is able to provide a considered and objective response on matters of transport policy. Through its structure of forums and regional groups it provides a network for professionals in the transport industries to debate issues and disseminate good practice. This response has been prepared by the CILT(UK)s Northern Ireland Region's Committee, which include members with experience of all modes of transport.

Yours faithfully

Dr Jonathan R. Seymour CMILT
Secretary: CILT(UK) Northern Ireland Region

The Chartered Institute of Logistics and Transport (UK)

INQUIRY INTO SUSTAINABLE TRANSPORT RESPONSE

by

THE CHARTERED INSTITUTE OF LOGISTICS AND TRANSPORT (UK) NORTHERN IRELAND REGION

a. To explore and clarify the social, environmental and economic aspects of sustainable transport;

Social aspects of sustainable transport

Effective and efficient transport provide opportunities for all people to feel included in society, widen their participation in social, economic and leisure opportunities as well as offering access to essential facilities. It is essential that a sustainable transport system can fulfil all these expectations in order to succeed.

However, in order to provide effective and efficient transport if will be necessary for the National & Regional governments to develop measures to reduce the harmful impact of private car usage and positively discriminate towards public transport.

For public transport to compete with the private car it will be necessary to invest more heavily in sustainable forms of transport such as rural buses; high frequency express bus services; urban arterial services and door-to-door accessible transport; and school transport, providing transport options for everyone in society from young to old.

Walking and cycling cannot be overlooked as essential forms of short-range travel and have a number of health benefits[1] such as:

- Strengthening the Immune system
- Muscle development
- Strengthening the skeletal system
- Preventing spinal diseases and back pains
- Improving Joint protection
- Improving Balance and equilibrium
- Decreasing Mental stress
- Increasing Oxygen and circulation
- Reducing Heart and cardiovascular diseases
- Reducing Body weight, adiposity and obesity
- Reducing Body fat and hypercholesterol
- Lowering Blood pressure
- Reducing Cancer risk
- Increasing Stamina

[1] The health benefits of cycling, http://www.cyclehelmets.org/1015.html

Environmental aspects of sustainable transport

Transport is undoubtedly one of the largest man-made contributors to global warming and climate change. The Stern Review into the economic impact of climate change has set a benchmark for climate change impacts. According to Stern 57% of emissions are from burning fossil fuels in power, transport, buildings and industry and that 14% is directly attributable to Transport.[2]

Three-quarters of these emissions are from road transport, while aviation accounts for around one eighth and rail and shipping make up the remainder. The efficiency of transport varies widely between countries, with average efficiency in the USA being around two thirds that in Europe and half that in Japan. Total CO_2 emissions from transport are expected to more than double in the period to 2050, making it the second-fastest growing sector after power and CO_2 emissions from aviation are expected to grow by over three-fold in the period to 2050, making it among the fastest growing sectors. After taking account of the additional global warming effects of aviation emissions, aviation is expected to account for 5% of the total warming effect (radiative forcing) in 2050.

The fastest growing sectors are driven by growth in demand for transport. The second fastest source of emissions is expected to be aviation, expected to rise about three-fold over the same period. Fugitive emissions are expected to increase over four-fold in the period to 2050, because of an increase in production of synfuels from gas and coal, mostly for use in the transport sector.

Stern believes that the need for action is urgent: demand for energy and transportation is growing rapidly in many developing countries, and many developed countries are also due to renew a significant proportion of capital stock. For example, the rate of growth in car ownership in China has been astronomical and India is following closely behind. The development of the Tata Nano will bring private motoring closer to the masses.

Stern believes that “there may be ‘win-win’ opportunities (for example, congestion charging may lead to a reduction in GHG emissions and also reduce journey time for motorists and bus users). But some demand-reduction measures may conflict with other policy objectives. For example, raising the cost of private transport could lead to social exclusion, especially in rural areas.

[2] Stern Review on the Economics of Climate Change, http://www.hm-treasury.gov.uk/sternreview_index.htm

Economic aspects of sustainable transport

Movement of Goods
The movement of goods by road remains of vital economic importance to Ireland and there will be an exclusive reliance on road vehicles for goods movements, due to the short distances from port to final destination and a lack of alternative infrastructure. Modern supply chain practices, such as lean manufacturing and 'Just-in Time' deliveries are dependent on efficient and fast moving freight carried by road.

Rail freight in Northern Ireland has ceased to be an option for the moving of bulk material and is unlikely to be reinstated. However, there are other options that could provide for the efficient movement of bulk goods such as short sea and coastal shipping and the potential of inland waterways, deserves examination and research by the Department of Regional Development.

A specific target to reduce energy consumption and emissions from the road freight sector is needed while at the same time enhancing our economic competitiveness. There is a consensus from the Logistics sector that more needs to be done to make the business more efficient, reduce fuel consumption and introduce more business sustainability into the marked, however more research needs to be done on the freight sector before deciding on the best approach can be established. The freight industry has a commercial imperative to improve efficiency, which has environmental benefits; and such an example is the increasing use of double-deck trailers and other flexible trailer designs.

The use of sustainable transport systems, despite a considerable initial investment in the early years, may be financially beneficial in the long run. A lower reliance on oil and greater use of carbon neutral, or locally produced sustainable energy, will lead to a more restrained energy consumption and greater energy security. Reduced car usage will also lead to less congestion and less demand for road construction

b. To identify the policies, attitudes and technologies likely to underpin a move to more sustainable transport in Northern Ireland; and

The move from a car-dependent society to a more sustainable environment will require a painful readjustment for everyone. Whilst we recognise that this will not happen overnight there are a number of measures that can be implemented or promoted that reduces the need to drive as much, in single occupancy vehicles, for example:

- Car clubs

Car sharing is being promoted by the Department for Transport and local authorities in GB as a valuable element in the sustainable transport system. Commercially operated car clubs have a role to play in that, with research claiming that every car club vehicle has the potential to replace at least five privately owned cars. Department for Transport research indicates that car clubs are likely to grow in number and size; and that they may have a useful role in delivering local transport and land-use planning objectives, particularly in urban areas with parking restraints and good public transport.

Car clubs work where there is a combination of high density housing, good public transport and congestion. These are areas where people use public transport for 90% of their trips and then use a car club vehicle for exceptional journeys. According to TfL: Car clubs can have a real impact in reducing the number of cars on the road, reducing congestion and pollution, and easing pressures on parking….The car club system works well for us because it reduces parking pressure. We also know that a lot of people have given up their cars in favour of the car club. [3]

A car club gives people the choice of a fleet of vehicles parked in their neighbourhood and gives them access to a car whenever they need it but without the high fixed costs of individual car ownership. Car club members are able to mix and match their travel, using a car when that is the best option but travelling by public transport or cycling or walking at other times. A number of commercial car clubs now operate around the country in addition to smaller, community-based social enterprise clubs. Members of a car club usually pay an annual fee of between £100 and £200 plus a charge for each mile and hour they use a car. The total annual cost for members is usually less than that of buying and running a car. Membership of a car club may also replace a second car.[4]

- Car sharing

The term 'car sharing' refers to two or more people travelling together by car for all or part of a trip. One of the people travelling is usually the owner of the vehicle and the other(s) usually make a contribution towards fuel costs. Car sharing may be formal, via an organised car share scheme, or informal, for example friends or colleagues travelling to work together. Formal schemes will match people who register with others making the same trip. Alternatively there are schemes which help people find someone to share a one-off car journey. Informal schemes operate on a more ad hoc basis between friends, family members or colleagues, but can be very effective. The best–developed schemes are targeted at the daily commute. Such schemes may operate within a single company or across a number of different employers in the same area. Car sharing can also operate for parents taking children to and from school or as one-off schemes related to specific events. Evidence of informal car-sharing can be seen at major junctions along the Truck Road network in Northern Ireland.

[3] Car clubs come in to their own, Transportation professional, Issue 12, 2006
[4] http://www.dft.gov.uk/pgr/sustainable/cars

Companies may introduce schemes and promote them to their staff, for example as part of a workplace travel plan, to address parking restrictions or help employees to reduce their travel costs. Local authorities can promote car sharing across an entire area involving many employers.[5]

- Renewable fuels

The search for alternative fuel sources has been well documented elsewhere. Needless to say the Logistics & Transport industry has supported these initiatives. Examples of the industry playing its part in developing alternative sources are Virgin Atlantic Airlines and Stagecoach investing in, and experimenting with, Biofuels. The use of alternative fuelled vehicles is not unusual in Northern Ireland with DHL operating an electric delivery truck for TK Maxx and the use of Electric vans by B9 Energy based in Millbrook.

- Bus Rapid Transit

Bus Rapid Transit (BRT) is an exciting innovation in public transport and is about developing an enhanced travel system, which is very comfortable, reliable, affordable and quick. BRT will provide passengers with a new fleet of vehicles that will have comfortable interiors and use environmentally friendly engines. High quality stops and waiting areas will be provided along with more options for purchasing tickets before you board. Passengers will also find out about when their next bus will arrive thanks to Real Time Passenger Information).

BRT is a merging of Light Rail and Guided Bus systems that allow passengers the level of service offered by a LRT service with the convenience of a cost-effective bus based package.

- An Inconvenient Truck[6]

The CILT(UK) published a report in 2009 to provide a practical guide to help freight professionals to be proactive in tackling the subject of sustainable transport and understand the benefits this can bring to their businesses. It provided useful resources in the form of practical help, support and tools, and offers a comprehensive integrated source of major academic and NGO research into sustainable transport. The report was focussed on CO2 reduction and aimed to:

- Build understanding in the industry, and help support the reduction of green house gas (GHG) emissions from vehicles, logistics and supply chains associated with freight transport, and from service vehicles.
- Offer guidance to CILT members about carbon emissions from business transport, and what they can do to reduce them. This includes a review in outline of all that is being done and achieved in this field in measuring, reporting monitoring and reducing carbon emissions from business transport, and how best to take advantage of it.
- Review government policy and initiatives being developed by organisations such as The Carbon Trust and Freight Best Practice.
- Focus on UK operational practices while considering significant elements and impacts on UK carbon emissions from abroad.

[5] http://www.dft.gov.uk/pgr/sustainable/cars
[6] http://www.ciltuk.org.uk/pages/newsarticle?2866E975-DCF7-48DD-A339-8CF6AA0582C5

Case studies

Tesco reduces carbon footprint by 10%

Tesco runs a fleet of 2,000 tractors and rigid vehicles and 4,000 trailers, delivering to approximately 1,800 stores across the UK. In 2006, Tesco set itself the challenge of reducing CO2 emissions in its distribution network by 10% during 2007, and targeted a 50% reduction by 2011. Tesco reduced the carbon footprint of its transport activities by better utilising existing assets, adopting alternatives to road transport (where CO2 levels were reduced by 2,750 tonnes per year), by making the move to multi modal transport and by reducing its road miles by over 5 million miles (saving over 7,400 tonnes of CO2). The company also reduced emissions through the use of back loading, double deck trailers, opening three new distribution centres, and using alternative fuels and technology. Overall it reduced its carbon footprint by 10.2% in 2007. Source: Freight Best Practice 2008

New truck design slashes Marks and Spencer emissions

Marks and Spencer, working with DHL, tested 'Tear Drop' trucks and trailers, and used them on garment and general trucking. Emissions savings of 840 tonnes, or 20%, were identified with increased capacity playing a significant part. DonBur the vehicle manufacturer says: "The lightweight trailer can carry up to 16% more load – equivalent to 10,560 extra pairs of knickers than a standard trailer. Its aerodynamic shape also delivers a 10% fuel saving. This shatters the longheld belief in the trucking industry that you cannot improve fuel efficiency without compromising load capacity." M&S working with Isotrak also reduced its mileage by 14% by integrating sites, fleets, deliveries and collections. Source: DonBur 2007& Isotrak 2008

Simple efficiency measures cut costs and carbon

Energizer Wilkinson, the personal care and battery manufacturer, combined two business units' products into the same trucks and local warehouses, achieving a 20% reduction in truck delivery activity, and 647,000 fewer road kilometres. This resulted in a saving of over 355,000 tonnes of CO2 emissions and €300k cost savings per year. These impressive results only required analysis of vehicle movements, loading capacity and pallet configuration. The project is a great example of how much can be achieved by using methods which are available to everyone. Source: ECR Europe Case Study 2008

Boots benefits from collaboration and optimising vehicle loads

Boots saved 75,000 miles/year and 92 tonnes of CO2 by sharing distribution with Imperial Tobacco to accommodate increased demand for high cube loads. It terms of cost and efficiency, fuel savings of 10% and 10% more load capacity were delivered by the project. The company has also done considerable work on optimising vehicle loads. It found that the number of crates and other forms of returnable distribution units had proliferated, and were causing vehicle loading inefficiencies. Boots then worked with a supplier o create a standard crate for redistribution to all stores, and has seen "some significant benefits" in savings in costs and CO2 emissions due to improved loading. Source ECR Europe Case Study 2008

Switch to sea

European logistics service provider LKW Walter, identified modal shift as a key change for a Spanish client. The client required a reduction in emissions, but had to adhere to strict loading and delivery windows. In collaboration with transport providers and a ferry company, a solution was found which reduced mileage by 1.2 million kilometers by using a short sea solution. Source ECR Europe Case Studies 2008

Other notable achievements

The London Consolidation Centre has been set up with Freight Best Practice to reduce the number and distance of construction vehicles travelling to building sites in central and inner London. It is a partnership between Bovis, Stanhope Plc, Transport for London and Wilson James Ltd. In 18 months the centre has reduced its CO2 emissions by 73%.
Morrisons has introduced cleaner Euro5 engines to 58% of its fleet to date, with a target of extending that to 80% by 2010. While this primarily affects pollution, it was part of a group of initiatives which have reduced carbon emissions by 12.8% over the past three years.
James McNaughton a major supplier of paper and board to the packaging industry reduced its paper supplier's fuel bill by £80,000 by working together.
J Sainsbury has developed an award winning green distribution centre in Northampton, which won the 'Green Award' for Sustainable Achievement at the Industrial Agents Society (IAS) awards. It has also participated in several significant ECR transport emission reduction projects.
Energy Savings Trust and The Commercial Group (Suppliers of BskyB) have developed a dynamic mapping system for van fleets, which has resulted in the van fleet driving 80,000 fewer miles.
CILT is setting up a multi stakeholder initiative to bring together industry, NGOs, academics and politicians to help create a more coherent intermediate strategy and plan for freight.

c. To make recommendations arising out of the above investigations, and report to the Assembly.

Recommendations

The Institute recognises that the Assembly finds itself in a catch-22 situation: developing a Sustainable Transportation system and maintaining an effective and efficient system that can be the catalyst for sustained economic growth.

To balance the needs of the environment, society and the economy the Assembly will need to take the lead in changing travel habits and behaviours deeply ingrained in society.

Personal Travel

This will require a reduction in car usage for short journeys and the promotion of walking and cycling for journeys under 1-2 miles. This will require the reallocation of existing facilities for walking and cycling, the widespread availability of road safety training and cycle proficiency training and the provision of cycle facilities at workplaces eg: cycle stands, lockers and showering/changing facilities. Sustrans are to be commended for the success of their Rural Safe Routes to School amongst their many initiatives and shows that value of contracting out such work to dedicated teams

This will need to be complimented by a more intensive public transport network; both in the urban areas to improve social inclusion, and to reduce social exclusion outside the conurbations. One of the key factors that can make public transport attractive is the integration of services and ticketing across modes and locations

Planning policies need to be introduced which discourage dispersed development and long commuting and that support sustainable travel, future population and employment growth will have to predominantly take place in sustainable compact urban areas or rural areas.

Inconvenient Truck Report – Conclusions relevant to NI

The finding from the CILT's research is that there are numerous ways for freight operators to identify and implement programmes to reduce carbon emissions in all areas of business transport. However, it is clear that they are not making progress fast enough. A clear set of problems and repeating themes have been identified in our discussions with academics, NGOs, the industry, and politicians. The following recommendations are therefore put forward:

- Provide more freight capacity by targeted investment in the rail network, whilst ensuring that facilities exist to handle goods efficiently on and off the train, and that service levels and costs are competitive with road.
- Ensure responsibility for integrated freight planning rests clearly with a single body in each region/local area of the country. Reduce conflict between central Government policy and local Government actions by improving coordination of Government agencies at all levels.
- Introduce a new, workable approach to road pricing and consider radical change to vehicle taxation in relation to it.
- Promote transport efficiencies and reduced CO2 emissions through collaborative action such as vehicle sharing. Competition law is currently a significant obstacle to these sorts of initiatives and its restrictions need to be eased to allow companies to act together legitimately.
- Incentivise collaboration and the reduction of empty running.

- The real costs of environmental impacts need to be realistically set against accurate estimates of the macro economic impacts on business.
- Improve coordination between Government, NGOs, academics, industry and local authorities to minimise duplication of research and investment, fill gaps, drive consensus and, crucially, provide expert operational input to Government freight strategy and plans. Opportunities exist to develop better integrated intermediate strategies for carbon reduction. A coordinated approach is the only way these opportunities can be fully realised.
- Drive CO2 emissions reductions forward by publicising, developing and implementing best practice. Recent studies, such as the DEFRA sponsored *Reducing the External Costs of the Domestic Transportation of Food* (April 2007) identify a limited number of core initiatives that best deliver reductions through:
  - Transport collaboration around sharing capacity and warehouses
  - Increasing vehicle capacity
  - Logistics system and network redesign
  - CVRS and Telematics
  - Opening up delivery restrictions on out-of-hours deliveries
  - Driver training
  - Efficiencies through lower vehicle fuel consumption, and other technologies

- Implement Cap and Trade emissions trading for the freight transport industry.
- Ensure greater support and incentives are put in place to enable and encourage companies to measure their CO2 emissions.
- Government and industry must reduce the number of environmental initiatives and focus more on the actions that will have the most significant short, medium and long term effects. Government must ensure delivery matches rhetoric and place binding targets on emissions reduction.
- Provide better education for the general public on climate change issues to ensure they understand and support initiatives to reduce emissions, even in the face of worsening economic conditions.

Many of these recommendations may be very unpopular with some of the industry, some may be unpopular with all of the industry, but they are predicated on the belief that climate change is real. The science shows that reacting successfully to climate change is the most urgent and significant challenge faced by the road freight and transport industry. Emissions need to be substantially reduced, as soon as possible.

Scotland

The Scottish government have classified sustainable transport as "about **reducing the environmental, social and economic impact** of travel by promoting and facilitating people and organisations to use more sustainable and active forms of travel." [7]

The priority for the NI Assembly is to reduce the environmental impact of travel and transport and (i) conserve energy sources; (ii) reduce air pollution and hence the impact of air quality on health; and (iii) improve general health and fitness.

As the Scottish government has stated: "Sustainable Transport is about:

- **Improving local environment and facilities** so that amenities can be reached by more sustainable and active means thus reducing the need to travel;

[7] http://www.scotland.gov.uk/Topics/Transport/sustainable-transport

- **Promoting the use of more sustainable modes** like walking, cycling, bus and trains to reduce the number of single occupancy car journeys;
- **Making more efficient use of vehicles** through car sharing, eco-driving and using the most appropriate vehicle for the particular journey; and
- Identifying future and **more sustainable vehicles and fuels** and planning for their use.
- Sustainable transport supports the Scottish Government's strategic objectives for the economy, health, the environment and communities.
- Sustainable transport also complements the Government's commitment to tackling climate change." [8]

Summary

Transport will make a meaningful contribution to Northern Ireland's commitment under proposed EU arrangement in relation to climate change and emission reductions. However, deep cuts in the transport sector are likely to be more difficult in the shorter term, but will ultimately be needed. The transport sector is still likely to remain oil-based for several decades, and efficiency gains will be important for keeping emissions down. Increasing use of biofuels will also be important. In the long term, decarbonising transport will also depend on progress in decarbonising electricity generation and on developments in hydrogen production. The main technological options currently being considered for decarbonising transport (other than the contributions of biofuels and efficiency) are hydrogen and battery-electric vehicles. Much will depend on transport systems too, including road pricing, intelligent infrastructure, public transport and urban design. Many of the most successful and important measures to reduce car usage will be the small scale schemes such as Park & Ride and Park & Share rather than the grand Flagship schemes.

The Northern Ireland Assembly must ensure that it with transport and logistics/freight policy issues in a more integrated manner and prepare a specific strategy for the freight sector. They must set targets aimed at reducing the environmental impact of freight while at the same time improving efficiency in the movement of goods and promoting economic competitiveness. The CILT(UK) recommend that the Assembly organise a forum to bring all interested parties together, including industrial development agencies and industry representative bodies, to explore in greater depth the issues relating to the movement of goods, including:

- The potential for rail freight;
- Priority freight routes allowing access to vehicles with greater load factors and capacity;
- Developing key logistics centres to transfer goods to more sustainable forms of transport for final delivery in urban areas;
- Scheduling of deliveries from the ports and in urban areas to avoid peak use of networks as far as possible;
- The incentives and disincentives needed to move to more fuel-efficient vehicles;
- The potential of Intelligent Transport Systems and Services to improve efficiency.

[8] http://www.scotland.gov.uk/Topics/Transport/sustainable-transport