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Freight Transport in Scotland – ICI Committee Inquiry

www.scottish.parliament.uk/parliamentarybusiness/CurrentCommittees/84148.aspx

As requested by the Convener, Spokes is providing this submission on the actual and potential role of cargo bikes in freight delivery in Scotland. Our organisation does not have specialist knowledge of this topic, but we have used internet research and liaised with others mentioned below to draw up the paper.

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1. The potential of Cargo Bikes

A great deal of information about cargo bikes is available on the internet, and images of the many different types can be found by googling *cargo bike images*. They are widely used for local delivery and personal transport of objects in parts of Europe, although not widely in the UK.

Cargo bikes can be either general-purpose or designed for special purposes. An example of the latter, which often attracts interest, and shows the versatility of the cargo bike, is the bike used by Nordisk Cryobank^a, with its sophisticated cooling system, to delivery sperm to Copenhagen clinics! A database of cargo bike suppliers^b is available at *Cyclelogistics*.

Many articles about the advantages of cargo bikes can be found on the internet, for example by googling *cargo bike advantages*. Two extensive reports are *Potential to Shift Goods Transport from Cars to Bicycles in European Cities*^c and *Final Public Report*^d by *Cyclelogistics*^e. The latter report estimates that **half of all motorised goods-delivery trips in European Cities** could be replaced by bikes of various sorts.

The positives are strongest for deliveries and personal transport within towns and cities, and include...

- ◆ **Speed of delivery** – the bike can often bypass congestion, particularly where cycle lanes, cycle routes and shared spaces are available, as is increasingly common in urban areas.
- ◆ **Predictable delivery times** – predictability is vital for business delivery, and with its congestion-busting ability the cargo bike can give a greater assurance of guaranteed delivery times
- ◆ **Parking problems & parking tickets** – these problems are largely eliminated with a cargo bike
- ◆ **Economic benefit (1)** – faster and predictable delivery times are an important economic benefit
- ◆ **Economic benefit (2)** – cargo bikes are far cheaper to purchase, maintain, license and drive than motor vehicles

- ◆ **Congestion** reduced – by replacing motor vehicles with bikes, occupied roads space is reduced
- ◆ **Pollution** – largely eliminated
- ◆ **Noise** – largely eliminated
- ◆ **Road danger** – largely eliminated
- ◆ **Pavement use minimised** – a cargo bike parks at the door, whereas van or lorry delivery often requires goods to be barrowed along busy pavements

An attempt at quantifying the economic benefits of cargo bikes usage can be found in this article^f from LowTech magazine. It states...

Cargo transport in cities is extremely inefficient. As it currently stands, almost 100 percent of it is done by motorised vehicles, ranging from personal cars to commercial delivery vans and trucks (lorries). However, these heavy vehicles often transport very light goods. The average payload transported in European cities weighs less than 100 kg (220 lbs) and has a volume of less than 1m³. Of the 1,900 vans and trucks that enter the city of Breda in the Netherlands each day, less than 10 percent of the cargo being delivered requires a van or truck and 40 percent of deliveries involve just one box.

This means that a large share of the cargo being moved in and out of cities could be transported by cargo cycles. Fast, two-wheeled cargo cycles have a load capacity of up to 180 kg (396 lbs), while slower vehicles with three or four wheels can easily take 250 kg (550 lbs). Using a tandem configuration and/or an electric power assistance can help raise the load capacity even further, to about half a ton. Cargo volume ranges from at least 0.25 m³ for bicycles to more than 1.5 m³ for larger tricycles and quadricycles.

Freight traffic takes up a large portion of total daytime road transport in cities, often as high as 50 percent in large cities, and up to 90 percent in very large cities such as London and Paris. The 'last mile' is currently regarded as one of the most expensive, least efficient and most polluting sections of the entire logistics chain. This is because traffic congestion makes the driving cycle very irregular, leading to a very high fuel consumption and a loss of time.

2. Some current examples in Scotland

We list two delivery companies using cargo bikes in Scotland; two small organisations currently purchasing cargo-bikes for specific roles, and two cargo bike suppliers in Scotland.

2.1 b-Spokes, Edinburgh ... www.b-spokes.com

B-Spokes describes their aim thus...

“b-spokes deliveries is a unique and innovative city courier and delivery service using specially designed delivery bikes to move your goods, packages and documentation across Edinburgh’s crowded streets, faster and cheaper than by motor vehicles. We are ‘last mile’ delivery specialists, acting for a range of blue chip customers, assisting in their logistics supply chain.”

B-Spokes was taken on by international delivery firm DHL over Christmas, for 'last mile' deliveries, and the arrangement worked so well that they now have a permanent contract with DHL. Martin Dunlop, DHL Edinburgh Service Centre Manager, said...

“We at DHL looked at b-spokes to help enhance not only the environmental credentials for the business but to combine this with greater productivity in our busy congested city centre routes and found them to be the perfect solution. This partnership was further enhanced over the busy peak period for the business with b-spokes becoming the number 1 supplier for DHL within Edinburgh’s City Centre for both the B2B and the ever expanding B2C market with fantastic results. “

DHL found that delivery times were 25% faster as well as 5% cheaper. It was reported by b-Spokes to Edinburgh Council Transport Forum^g that DHL in Holland had replaced 10% of their motor delivery fleet with cargo bikes, saving £10k a year for each van taken off the road.

2.2 Outspoken Delivery, Glasgow ... www.outspokendelivery.co.uk

Outspoken Delivery is a local courier firm in Glasgow, originally established in Cambridge in 2005 and recently a major participant^{hi} in the above-mentioned EU Cyclelogistics project and report. They say...

“We move everything from super-urgent small documents to large multiple consignments using a range of bicycles that can carry up to 250kg. We deliver to central Glasgow covering post code areas G1, G2, G3 and G4 and work with businesses and organisations offering a zero emissions solution to your logistics needs.”

They have the following vision for logistics in city centres...

The past 25 years have seen huge increases in the use of motorised vehicles for the movement of people and goods. But with rampant congestion, spiralling fuel costs, harmful emissions, and an environment dominated by high levels of noise pollution, can this trend continue?

Conventional wisdom holds that the best way for deliveries to enter a city is for vans and lorries to operate out of large hubs, often many miles from a city, delivering everything from 0.5kg packages to large pallets. The problem with this is that a lorry is designed to take large pallets but is incredibly inefficient at taking small items which often constitute the majority of the load.

By using a combination of freight bicycles and electric vans for the ‘last mile’ delivery, we have a model for city centres that will give Council bosses something to cheer about – a less polluted, less congested and more liveable city. The model is based on using micro hubs on the edge of town where packages come in from larger hubs further away. These packages are sorted by size and location and then the ‘last mile’ is delivered using the appropriate bicycle/electric vehicle.

2.3 Giffnock Climate Change project www.biggreenfeet.co.uk/projects/waste-bikes

This is a new project just awarded £54k from the Climate Challenge Fund, and included here to show the potential for innovative cargo-bike projects even in smaller communities than a major city, and to show how they can be fostered by grant availability. As the project has just been awarded funding it is too soon to report on how the cargo bike side of the project performs.

Giffnock Recycling Bike and Food Waste Reduction is a project of local Community Interest Company **Big Green Feet**^j in partnership with **Giffnock Business Improvement District**^k. The project will collect food waste from local shops, restaurants and cafes by cargo bike instead of lorry and transport it to a new anaerobic digester where it will be converted into compost. The project is also intended to raise community awareness of food waste through Giffnock Business Improvement District events and a marketing programme developed with local shops and restaurants.

2.4 Edinburgh Festival of Cycling www.edfoc.org.uk

EdFoC, now increasingly established as a permanent fixture of Edinburgh's Festivals, is purchasing a cargo bike for festival-related deliveries. Outside the Cycling Festival period it will also be available for hire to other organisations.

2.5 Local cargo-bike specialist suppliers

Edinburgh - **Laid-Back Bikes** www.laid-back-bikes.scot

Glasgow - **Kinetics Bikes** www.kinetics-online.co.uk

3. What the Scottish Government could do to promote use of cargo bikes

- ◆ Prepare materials showing the value of cargo bikes for urban deliveries (and other purposes), together with contacts for local suppliers, and promote these to local authorities and business channels.
- ◆ Ensure continuation of interest-free low carbon transport loans¹ via the Energy Saving Trust and emphasise their availability for cargo-bikes, not just for the usual electric lorries and vans
- ◆ Set up well-monitored demonstration projects, both large and small scale
- ◆ Run a competition for small businesses and community organisations, to say how they would use a cargo bike, with say 20 (or more) cargo bikes as prizes
- ◆ Encourage councils to have stricter controls on city-centre delivery arrangements, for example not permitting motor vehicles over a certain size; reducing loading time periods; setting up zones where delivery is only allowed by cargo bike or small electric van; instituting congestion charges
- ◆ Include discussion of local freight delivery by bicycle in all Scottish Government papers, forums, debates, etc on freight delivery

4. ICI Questions: www.scottish.parliament.uk/parliamentarybusiness/CurrentCommittees/84194.aspx

- ◆ *How can Scotland's rail, road, air and sea freight routes to the rest of the UK, to Europe and worldwide be improved?*

Freight delivery **within urban areas** is a vital issue not addressed in the above question, with congestion being a major economic negative. The cargo bike can make a huge contribution, as outlined in (1) above.

- ◆ *How can the Scottish Government structure its freight grant schemes to support the switch of freight to more sustainable modes of transport?*

Small allocations should be available for innovative schemes within local areas. £1m split between cargo bike projects in many towns might be far more cost-effective than £1m spent on a major road-based freight-delivery scheme.

- ◆ *Are there any European Union initiatives which could provide further opportunities for Scottish freight transport?*

Several cargo bike projects are being funded by the EU, as described in a report^m by the European Cycling Federation. These include the *Cyclelogistics* project already referenced above.

- ◆ *How can the freight industry make a contribution to greenhouse gas emissions reduction?*

By pro-actively learning of the potential of bike deliveries for local distribution, encouraged by government, and by running pilot projects. This could be in conjunction with existing local cargo-bike delivery services or by internal projects.

a Sperm-delivery cargo-bike – see picture on page 3 of Spokes Bulletin 121 http://www.spokes.org.uk/wp-content/uploads/2009/09/p.all_4.pdf

b Database of cargobike suppliers <http://www.cyclelogistics.eu/index.php?id=30>

c *Cyclelogistics* 2014 report http://one.cyclelogistics.eu/docs/119/D7_1_CycleLogistics_Baseline_Study.pdf

d *Cyclelogistics* http://cyclelogistics.eu/docs/111/D6_9_FPR_Cyclelogistics_print_single_pages_final.pdf

e *Cyclelogistics* website <http://www.cyclelogistics.eu/>

f <http://www.lowtechmagazine.com/2012/09/jobs-of-the-future-cargo-cyclist.html>

g CEC Transport Forum minutes, sections 4 and 9

http://www.edinburgh.gov.uk/downloads/file/5299/minute_transport_forum_30_january_2015

h <http://www.cyclelogistics.eu/index.php?id=13>

i <http://www.outspokendelivery.co.uk/glasgow/about-us/cyclelogistics>

j Big Green Feet community interest compnay, Giffnock <http://www.biggreenfeet.co.uk/>

k Giffnock BID <http://www.giffnockvillage.com/>

l <http://www.energysavingtrust.org.uk/scotland/businesses/transport/funding-and-support>

m http://www.ecf.com/press_release/eu-powers-the-cargo-bike-revolution