

# S cottish transport review

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## **WHAT'S INSIDE:**

**The Future of  
Scotland's Rail Services**

**Social Marketing**

**Electric Vehicles**

## Editorial

The STR postbag has had many short e-mails and good thoughts about the ScotRail 2014 franchise consultation, so the articles in STR53 are intended to pull these together to stimulate debate. Tom Hart looks at the main themes from the consultation, and highlights that without more detail, the questions are difficult to answer. We are fortunate in Scotland to have one of the most reliable and best performing rail networks in the UK but the challenges are enormous. Rail finances do not look that sustainable with a growing gap between what customers are willing to pay as fares, and what the taxpayer can afford as subsidy. With a nod to the road equivalent tariff adopted on the ferries, one of the ideas in the rail consultation would be for fares to be more equivalent to road travel costs. However, unlike for ferries, this would mean huge increases in fares in rural areas and large reductions for urban travel. A strategy like this would close down much of Scotland's rural railway as Geoff Riddington highlighted in an STSG Occasional paper more than a decade ago. Therefore Graham Currie's practical demonstration in Melbourne of how to raise rail revenue by managing demand, shows that smarter choices are increasingly essential in congested networks.

Caley McDowall also shows how smarter choices are being used to help travellers compare between modes. In all of these new areas there is a need for greater clarity about leadership and Sam Gardner shows that government, campaign groups, and industry all need to lead on different parts of the electric vehicle revolution. However, engagement between sectors is not always collaborative, with adversarial practices holding back change. Therefore looking at how the current social values in Scottish society have been shaped by the debates of the past must be right, as Bill Cantley encourages us to do. If we are to move forward, we must understand why some things happen and others don't.

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Derek Halden of DHC summarises his November 2011 presentation to the Institute of Highways and Transportation in Edinburgh suggesting that transport delivery depends mainly on strong networks and public engagement.

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Caley McDowall of JMP describes work in Dundee to give households money off car fuel through changing behaviour.

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The committee of the Scottish Transport Studies Group agrees the editorial direction for STR but we rely on active practitioners wanting to share what they are doing in order to disseminate interesting practice. Please send the editor Derek Halden [editor@stsg.org](mailto:editor@stsg.org) articles about interesting projects or research.

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## Smarter Tickets to Tackle Overcrowding and Increase Profits

*Graham Currie, Monash University, Australia*

Ridership on Scotrail services has increased by over 25% over the last 6 years. But with success a growing crowding problem has emerged. Edinburgh-Glasgow rail services are the most crowded Scotrail services reaching occupancy levels of 130% above seating while Motherwell – Cumbernauld services reach 120%.

A major barrier to addressing rail crowding is the high cost and length of time needed to implement solutions. By definition the peak is when all the fleet is in operation so new rolling stock needs to be purchased. This costs many millions and takes several years to procure. Where rail lines run frequently they can reach a point where running additional trains is not feasible. Building new lines can address this constraint but costs Billions and can take up to a decade to implement. The commuter rail crush is an expensive and difficult issue to address and has become an endemic problem for growing cities worldwide.

A very new and original solution to the rail commuter crush problem has been introduced in Melbourne, Australia with some impressive initial results. The solution is a demand management measure aimed at encouraging morning peak commuters to travel earlier thus acting to flatten and reduce peak of the peak demand. Called the 'early bird' ticket, the solution involves offering free fares for commuters who complete travel by rail before 7:00a.m.

The idea of shifting peak demand is not new, but most theory and practice has focussed on offering bigger peak/off peak fare differentials with a focus on mainly inter-peak discounts rather than the pre-peak. This is despite much evidence that free fares are a greater incentive to change travel behaviour than discounts. Research by Passenger Focus has also shown that commuters have a greater capacity to shift their

lifestyles for earlier pre-peak commuter travel than post peak. However this research also suggested that it may take time for commuters to adjust lifestyles to enable pre-peak travel. It also suggested that cold dark winter mornings might make pre-peak travel less attractive. Research at the Public Transport Research Group at Monash University has been monitoring the impacts of the Melbourne early bird program and has recently been presented at the European Transport Conference in Glasgow.

The Melbourne Early Bird ticket was introduced in March 2008 on all rail urban services after a short trial on two lines. Like Scottish cities, Melbourne's rail ridership had been surging with a 43% growth in the 5 years to 2009. Peak overloading of trains had become a major and growing problem.

The Early Bird ticket was introduced overnight and is a free multi-trip ticket which enables access to trains and is valid as long as trips are completed before 7:00a.m. If trains are

delayed station staff will permit exit using the tickets at station exit gates. On average some 9,000 passenger use the ticket each day. A survey established that 23% of ticket users had shifted the time of their commute from the peak with an average time shift of 42 mins (ranged between 5 and 120 minutes). Time shifting was more common for longer distance commuters.

Longer term monitoring of the program found much evidence supporting the Passenger Focus research finding that it can take time for commuters to adjust lifestyles to pre-peak commuting. The share of early bird ticket usage continued to rise over the first 2 years of the program but has levelled off more recently. Research has shown no evidence of a winter dark morning reduction in early bird ticket usage.

*"The Melbourne early bird ticket is an example of a free fare scheme which is financially profitable"*



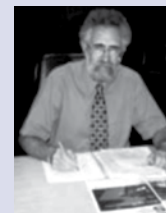
Standing loads on Melbourne's overcrowded trains



Melbourne trains; too crowded to board

## A Proud History

*Thanks to Tom Hart from Derek Halden, STR Editor*



Since Issue 1 of Scottish Transport Review, Tom Hart has rigorously documented the Scottish transport debate in the news pages, but Issue 53 marks Tom's retirement from this role. The news pages will continue, but Tom's tireless ability to uncover the stories over the last 14 years that others may have missed has helped us all.

I hope that Tom will continue to submit articles to STR. Tom continues to be very active in public transport campaigning and we have an article on his personal views of the current government rail consultation in STR53.

If Tom and others had not had the vision to found STSG in 1984 then there can be little doubt that many of the practical improvements that have been achieved in Scottish transport over the last 27 years would not have been possible. It has been the ability of professionals from all perspectives within transport to network within STSG that has helped to enable success. Tom now leaves a proud legacy in STSG publications for the benefit of future generations.



## Some Perspectives on the RAIL 2014 Consultation

**Tom Hart, Vice President of the Scottish Association for Public Transport and co-founder of STSG**

The RAIL 2014 consultation puts present rail support at around £700m a year with some £300m of this going to support ScotRail services and the remainder to track maintenance and enhancement. RAIL 2014 envisages cuts in operating support in the period to 2019 with reforms derived from savings in the procurement of track maintenance and enhancement without damage to overall service quality. The consultation invites views on specifications for 2014 bidding. It outlines possibilities for RTP, local authority and other third party involvement.

Network length and the number of stations is expected to remain stable overall with scope for closure of a some low usage stations, some relocations and opening of new stations. Franchising suggestions include a separate franchise for Anglo-Scottish sleeper services (presently with £21m a year support but daily usage under 600 passengers) and variants of an Edinburgh-Glasgow or Scottish inter-city 'economic' franchise plus a 'social' franchise for other services but with unified management. There is a favoured specification of a driver on every train plus at least one other staff member. Bus-rail and ferry-rail co-ordination is mentioned but with little amplification. Airport access is not considered.

The idea of higher peak-fares but more innovative off-peak reductions is floated together with removal of present fare anomalies and more attention to improved interchange. Enhancement priority is given to the Edinburgh Glasgow electrification (EGIP) plus Inverness-Perth and Inverness-Aberdeen improvements.

*"More detail is promised in further statements in 2012 yet it would have been helpful to have some of this background to inform the current consultation"*

Scottish Household Survey data shows rail performing well ahead of buses and cars in increasing market share with a large rise in people becoming rail users even though car ownership has been rising. RAIL 2014 does not appear to place rail in its future context and revised forecasts are needed for total passenger movement and mode share to 2020 and 2030 based on realistic assumptions about Scotland's economy and society.

One suggestion is that the present target of having no passenger stand for more than 10 minutes should be changed to a longer period (15 minutes) in association with increased incentives or penalties to reduce overcrowding and disruption on longer-distance trains at off-peak periods and weekends.

RAIL 2014 avoids detail on how recurrent costs might be cut and the rail proposals in the Scottish Transport Projects Review do not fit well with current financial realities. More detail is promised in further statements in 2012 yet it would have been helpful to have some of this background to inform the current consultation.

The concept that it is possible to separate specifications for the 'economic' and 'social' railway is questionable. All services (except niche operations) could be required to have standard fares no higher than the marginal costs of single occupant car use (including city parking costs). A more substantial change would be to tackle head on the RAIL 2014 assumption that shorter-distance urban rail services are an inconvenience in Glasgow with overcrowding from a few stations near to city centres removed by a combination of higher fares, closures and shifts to improved city bus routes. This is contrary to the normal practice in most other cities of expanding Metro or Metro tram services with more stops and higher capacity, easy entry stock (without the space loss and higher costs of toilets) and delivering cuts in city car and bus use with related benefits for the city economy and quality of life.

There is an equivalent need to deliver better value through improved integration of rail with tram and bus systems. Operational cost savings and higher revenue, along with revisions of the trunk road programme, could help ensure prudent borrowing and other means of financing a City Transport Strategy as a key element in Scotland's Transport Future. The 2014 rail franchise debate could lead to future opportunities for separate franchises for complementary Metro-type services and quality bus partnerships.

However Melbourne has relatively mild winters compared to Scotland so winter effects may still be important in northern European contexts.

So is the early bird ticket a success? Well the scheme had a direct financial loss in fares collected of \$Aust 6M p.a. (about Euro 4.6M p.a.). Most passengers using the ticket had a 'windfall gain' since only 23% of ticket holders had actually shifted from the peak. Nevertheless rail crowding had been reduced. It is estimated that the scheme reduced the need for additional peak trains by the equivalent of between 2.5 and 5 trains. Since Melbourne is actively purchasing rolling stock to address the problem this is a saving in capital expenditure of between \$Aust 50M to \$100M (Euro 38M to 78M) and in annual operating costs of about a \$Aust 1M (Euro 0.8M) per set saved. Using a standard financial evaluation of the scheme over a 30 year period suggests the scheme is either just recovering its costs or making a profit of around 100%. Growth in ticket usage suggests its financial performance is improving over time.

*"If we want to address overcrowding quickly there is no easier and quicker approach"*

So the early bird ticket scheme appears at first glance to be an amazing financial and planning success. It is easy and quick to implement and while there are 'windfall gains' for those travelling before the peak, it is acting to cost effectively reduce commuter crowding. The Melbourne early bird ticket is an example of a free fare scheme which is financially profitable; surely one of the most unlikely outcomes in the history of public transport planning.

However success depends much on how the benefits and costs of the scheme are viewed. For example officials from New York City were consulted as part of the research to see how they would view the scheme. New York has had endemic overcrowding on their subways, including much crush loading, for over a decade and is investing in new subway lines to address

The Early Bird Multi-Trip Ticket - Its Free but you have to complete the trip before 7:00a.m.



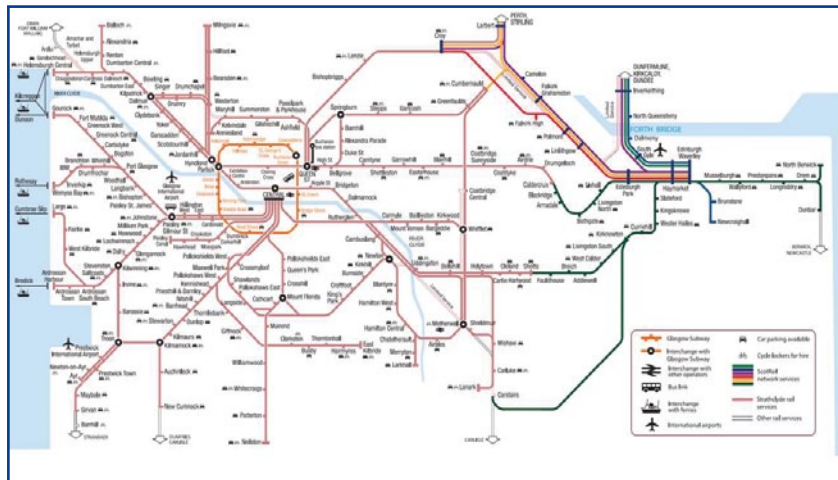
## An Ambitious Consultation

Consultations on policies and strategies are most successfully undertaken as a calibration of proposals to help inform the development of a particular policy and to help government to choose between proposals. Investment in rail in Scotland accounts for more than £700m annually so changes in how this budget is spent will always be contentious.

Transport Scotland have bundled together critical questions about rail policy with controversial suggestions such as the continuation of sleeper services and station closures. This makes this a very wide ranging consultation and one that is sure to attract many responses.

The 40 questions deal with most of the complex issues which railway planners have been struggling with for years. It is a sobering reflection that Beeching was the last time that such fundamental questions were asked about the railway. It is questionable whether Salmond, Neil or Brown will want to be remembered in quite the same way as Beeching, hero to some and villain to others, but answers need to be found.

Although the consultation asks 40 separate questions, the real difficulty is how to trade different priorities. For example "what is an acceptable limit for standing times on rail services?" begs the response "it depends". Most people are familiar with travel on rail services like London underground where train design assumes that many people will be standing for long periods. If the choice is between losing rail services altogether or



achieving targets to reduce standing, then most people would probably accept the need to stand more often in peak periods.

*"Transport Scotland has taken a lot on board to correctly gauge these difficult trade offs based on the responses to such a general consultation"*

It is usually very specific questions like this that are most useful to ask at consultation stage. Transport Scotland has taken a lot

on board to correctly gauge these difficult trade offs based on the responses to such a general consultation. There are many very specific questions about management and procurement which will allow professionals to highlight concerns and suggest solutions. The question about what should be the length of future franchises, and what factors lead to this view, will enable the industry to highlight the pros and cons of different procurement approaches.

On the basis that everyone might want to have their say in the future of Scotland's rail services, this consultation offers a welcome opportunity for anyone to have their say on any aspect of rail planning and operation. Responses need to be submitted by 20 February 2012.

overcrowding. From their perspective any savings in rolling stock would be incurred by Federal authorities who provide capital funding. Hence the operator would incur direct financial loss and would potentially have less trains to address future capacity issues. While they can see benefits in reducing crowding they would be paying for it in lost revenue. Only the Federal Government would be making a saving not State authorities.

Even in Melbourne the scheme has not acted to stop overcrowding. The research estimates peak average loads increased by 7% after the ticket was introduced however this growth was far less than would otherwise have been expected if the program had not been implemented. The problem here is that ridership growth has outstripped reductions in peak travel resulting from the early bird ticket. The scheme has reduced overcrowding not stopped it.

So are programs like this a good idea? From one perspective we actually have no choice; if we want to address overcrowding quickly there is no easier and quicker approach. From another, where deferring new rolling stock purchase is important, the scheme makes much economic sense. Certainly there is much value in exploring ways to induce travel behaviour change where infrastructure solutions are more commonly considered. To tackle overcrowding we need to think outside the box of infrastructure and operational solutions.

*Graham directs the World Transit Research clearinghouse ([www.worldtransitresearch.info](http://www.worldtransitresearch.info)). His paper 'Design and Impact of a Scheme to Spread Peak Rail Demand Using Pre-Peak Free Fares' was delivered at the European Transport Conference in Glasgow in October 2011 and is summarised will be available for download at <http://www.etcproceedings.org/conference>*



An overloaded train in Melbourne where ridership has grown by 43% in 5 years



## Putting Electric Cars on Scotland Roads

*Sam Gardner WWF Scotland*

If Scotland is to achieve its legally binding climate targets, electric cars, powered by renewables, will be an essential part of sustainable transport system<sup>1</sup>. This vision is echoed in the Scottish Government's climate change action plan<sup>2</sup> which commits to establishing a mature market for low carbon cars by 2020 and electric vehicle charging points in Scottish cities. However, while there is a strong consensus about the important role EVs will have to play, the challenge we face in making the leap to an electric future remains significant. In 2011 only 0.08% of the entire UK car fleet was an electric car, by 2020 at the very least 10% of Scotland's cars will need to be electric if we are to hit those climate targets<sup>3</sup>. The challenge is far, far greater if we fail to curb the growth in car kms and don't return to the levels of 2000. In this respect alone the recently published Scottish Government Infrastructure plan<sup>4</sup> is a very worrying document as it seems committed to locking Scotland into an increase in the distances we drive.

In late November WWF Scotland launched its second report on EVs, Powering Ahead: how to put electric cars on Scotland's roads<sup>5</sup>. This short report summarises a more detailed analysis commissioned from Atkins Consultants by WWF. The report was produced to identify

and promote the many possible measures that could be rolled out across Scotland to support an increase in the number of EVs.

The analysis is based on an assessment of the barriers to greater EV use, in total 14 barriers of varying importance are described in the full report. Barriers to EV uptake can be viewed as those limiting demand from consumers and those relating to supply in terms of the availability of vehicles and supporting infrastructure.

*"By 2020 at the very least 10% of Scotland's cars will need to be electric"*

Not surprisingly these barriers are of varying scale and importance and demand different levels of government response. Based on a literature review and stakeholder consultation, Atkins ranked the barriers according to their significance and to allow the identification of effective policy solutions. Three barriers emerged as being highly significant. These were high purchase cost, limited range and lack of sufficient charging infrastructure. Other

significant barriers related to uncertainty regarding resale value and limited supply of vehicles.

If Scotland is to hit its climate targets, it needs to act now to address these barriers. The Central Scotland 'Plugged in Places' pilot is an important test bed for EV charging and the existing support for public sector procurement is welcome but, on their own, these initiatives fall well short of providing the policy framework needed to really accelerate EV uptake at the rate we must see. Car manufacturers are already carefully targeting the roll out of EVs to those countries and cities that have taken the steps needed to support the shift to this new transport technology. For instance, in the US, Ford has identified the 25 most electric-vehicle-ready cities and is now working with them to deliver its Focus electric car and other models<sup>6</sup>. By putting in place the policy opportunities described in the report, Scotland could address some of the key barriers to electric cars, build its own electric vehicle industry and attract investment from global players in the emerging electric vehicles sector. The imperative of tackling climate change and complying with the Climate Change Act leaves no time for delay in taking these steps to an electric transport future.



The analysis by Atkins concludes there are a various ways in which both national and local government can work now to increase the number of EVs in Scotland. From the almost 40 policy options reviewed by Atkins, the following 16 policy opportunities offer the most effective ways to increase the uptake of EVs. For a full description of these measures and a comprehensive review of many other options available to the Scottish Government, please see the full Atkins report to WWF<sup>7</sup>.

It is clear that there is much that we could and should do if the electric revolution is to take place and electric cars are to become common place on Scotland's roads.

#### Endnotes

- 1 See WWF Energy Report [http://wwf.panda.org/what\\_we\\_do/footprint/climate\\_carbon\\_energy/energy\\_solutions/renewable\\_energy/sustainable\\_energy\\_report/](http://wwf.panda.org/what_we_do/footprint/climate_carbon_energy/energy_solutions/renewable_energy/sustainable_energy_report/) and work by the <http://www.theccc.org.uk/sectors/surface-transport/electric-cars>
- 2 <http://scotland.gov.uk/Publications/2011/03/21114235/0>
- 3 See [http://assets.wwf.org.uk/downloads/evs\\_report\\_web2.pdf](http://assets.wwf.org.uk/downloads/evs_report_web2.pdf)
- 4 See <http://www.scotland.gov.uk/Resource/Doc/364225/0123778.pdf>
- 5 See [http://assets.wwf.org.uk/downloads/powering\\_ahead\\_web.pdf](http://assets.wwf.org.uk/downloads/powering_ahead_web.pdf) for the full report
- 6 See <http://green.autoblog.com/2011/04/21/ford-25-most-electric-vehicle-ready-cities/>
- 7 [http://assets.wwf.org.uk/downloads/electric\\_vehicles\\_driving\\_the\\_change.pdf](http://assets.wwf.org.uk/downloads/electric_vehicles_driving_the_change.pdf)
- 8 See <http://www.dft.gov.uk/publications/plug-in-vehicle-infrastructure-strategy>

No.	Measure to increase the uptake of electric cars.
1	Publish a high profile <b>EV Strategy and Action Plan for Scotland</b> , setting out a clear vision supported by targets for 2015, 2020 and 2030. This should be supported by an <b>EV Infrastructure Strategy for Scotland</b> , for the provision and roll out of appropriate recharging infrastructure, and describing how drivers will use the infrastructure.
2	Work with relevant stakeholders in Scotland, the rest of the UK, and across Europe, to <b>set technical standards, specifications and regulations for implementing recharging infrastructure</b> .
3	Commission a <b>review of market models for recharging infrastructure</b> in Scotland and implement the recommendations of the review. This would involve taking in to account the UK Plug-In Infrastructure Strategy <sup>8</sup> , working with energy providers, electricity retailers, EV manufacturers, private infrastructure providers and the public sector, to ensure consistent and appropriate pricing and payment approaches.
4	Scottish Government and local authorities provide <b>funding for publicly accessible recharging points</b> .
5	Encourage manufacturers to offer <b>alternative ownership models</b> to consumers in Scotland by promoting Scotland as an attractive market for manufacturers, and engaging with manufacturers to understand and influence their decisions about where to focus their sales strategy. Scottish Government or other public sector bodies work with manufacturers to 'trial' alternative ownership models amongst employees or as part of the vehicle procurement process, and publicise benefits.
6	Scottish Government provides a <b>£10,000 subsidy*</b> for the first 25,000 EVs sold in Scotland (as recommended by the UK CCC), to 'kickstart' early uptake of EVs, <b>£5,000</b> for the second 25,000 EVs in Scotland, and reducing for subsequent 25,000 EV milestones.  <i>*£5,000 assumed to come from the UK Plug-In Grant for the first EVs in Scotland</i>
7	Scottish Government introduces a <b>scrappage scheme</b> to encourage consumers to purchase EVs, with subsidies reducing as EV uptake increases.
8	Scottish Government provides <b>grants for purchasing second hand EVs</b> from specified dealers with subsidies reducing as EV uptake increases.
9	National and local government work together to <b>incentivise businesses to install recharging points</b> . These measures would be most effective if linked to exemption from a Workplace Parking Levy.
10	Publish <b>advice for residents on home recharging and guidance for electricians on the type of facilities needed</b> (including issues to be considered in communal parking areas). Local authorities to disseminate information.
11	Publish <b>national planning guidance</b> on the provision of recharging bays and infrastructure as part of a parking strategy which supports wider sustainable transport objectives.
12	Update <b>building regulations</b> to set out minimum requirements regarding the provision of electrical infrastructure and recharging points in all new buildings.
13	Set up a <b>Working Group</b> co-chaired by the Transport and Energy Ministers of stakeholders from the energy and transport sectors and including consumer groups, tasked with addressing the <b>electricity generation and distribution requirements for EVs</b> .
14	Local authorities work with existing <b>car club</b> operators to introduce EVs into fleets and introduce EV-based car clubs in other cities.
15	Scottish Government, local authorities and other public sector organisations support an earlier than average switch to low carbon emissions vehicles for public sector fleet vehicles (cars and vans) through <b>procurement policies</b> (e.g. extending funding for the Low Carbon Vehicle Procurement Support Scheme); and a 2020 target for 100% of public sector fleets to be electric, where appropriate.
16	Scottish Government should lobby the EU to tighten the EU target for the emissions-intensity of new cars and vans produced by manufacturers.

## Are Electric Vehicles 'Powering Ahead?'

*Nigel Holmes, Scottish Hydrogen and Fuel Cell Association*

WWF Scotland's new report 'Powering ahead: how to put electric cars on Scotland's roads' was launched in Edinburgh on 1<sup>st</sup> December 2011. This report sets out opportunities for government and industry to support the major uptake of electric vehicles in Scotland and how to set Scotland on the road to an electric future. It builds on the previous WWF report 'Scotland's Watt Car?' from May 2010 which identified the need for 300,000 electric vehicles in Scotland by 2020 to help deliver climate emission targets. WWF Scotland argue that one of the key next steps would be for the Scottish Government to publish a high profile 'Electric Vehicle Strategy and Action Plan for Scotland'.

At the launch Gordon McGregor of the Energy and Environment Director for ScottishPower, highlighted the need for clear information to potential consumers but Rebecca Trengove, from battery manufacturer Axion spoke about some of the operational cost savings that are possible with electric vehicles with a recent pilot in Dundee demonstrating a fuel saving of about £1,500 per vehicle. Donald Pow of Allied Electric identified that there are only 2,500 electric vehicles in the UK out of 28 million vehicles and consumers dislike change, fear of new technology, and the high up-front costs for electric vehicles. However Scotland is in a strong position with its developing renewable energy sector.

Responding to the new WWF report, Transport Minister Keith Brown MSP restated the Scottish Government's commitment to achieving almost total decarbonisation of road transportation by

2050. He agreed that more electric vehicles were needed on the roads, but that there are still significant barriers to be overcome including the crucial 'range anxiety' question. He also made the point that decarbonisation of transport was not just about electric vehicles, and that additional measures such as more walking and cycling as well as better public transport and car sharing need to be part of the mix. To illustrate the public sector leading by example he highlighted that over £8m has already been invested in the past two years to support public bodies in switching to electric vehicles, and this has delivered over 300 electric and other low carbon emissions vehicles in Scotland along with charging infrastructure.

*"There are only 2,500 electric vehicles in the UK out of 28 million vehicles and consumers dislike change. However Scotland is in a strong position with its developing renewable energy sector"*

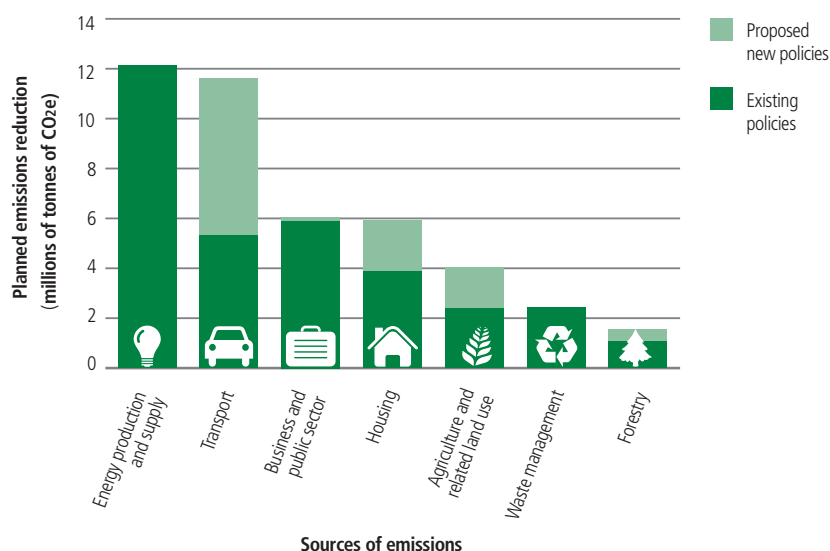
On leadership, the Minister highlighted the budget challenges, and how different delivery models and alternative sources of funding will need to be explored. The Scottish Government



will have a key role in shaping strategic direction for transport. Vehicle manufacture was important and the highly successful Enviro300 hybrid bus by Alexander Dennis showed how the development of low carbon and alternatively fuelled vehicles can be an important part of the Scottish economy. Scottish Enterprise is supporting inward investment and large scale transformational projects, and there is much more to do in this area.

### Planned emissions reductions by 2020

Success in reducing emissions depends on progress in the energy and transport sectors.



Up-front cost are the main barriers for private individuals, but concerns for commercial and fleet operators are the uncertainty over the end-of-lease resale value and specifically that of battery lifetime or replacement costs. Are electric vehicles the most cost-effective way to deliver Scotland's 2020 targets? The recent publication of an Audit Scotland 'Reducing Scottish Greenhouse Gas Emissions' report highlights the scale of the challenge and potential costs. With the exception of transport, emissions from all Scottish sources of greenhouse gases decreased between 1990 and 2009. Emissions from transport rose by 3.7 per cent. However in the coming years transport is the sector being expected to deliver the greatest proportion of savings from new policies.

- 1 WWF Scotland 'Powering Ahead' report : <http://www.wwfscotland.org.uk/evs>
- 2 WWF Scotland's Watt Car? Report : [http://assets.wwf.org.uk/downloads/evs\\_report\\_web2.pdf](http://assets.wwf.org.uk/downloads/evs_report_web2.pdf)
- 3 Audit Scotland 'Reducing Scottish Greenhouse Gas Emissions' : [http://www.audit-scotland.gov.uk/docs/central/2011/nr\\_111208\\_greenhouse\\_gases.pdf](http://www.audit-scotland.gov.uk/docs/central/2011/nr_111208_greenhouse_gases.pdf)

## Scottish Transport in the News

Tom Hart summarises what the papers say about Scottish Transport

### AVIATION

BAA has put Edinburgh Airport up for sale, apparently due to hopes that this profitable airport will ensure a higher price than a Glasgow sale and relieve immediate financial pressures on BAA. Some business leaders see some gains in competition with Glasgow but fear new owners will concentrate on international expansion within the total slots available. The owners of Prestwick are also considering a sale.

Airport owners and airlines have attacked rises in Air Passenger Duty as a threat to economic growth. A Herald editorial found this argument unconvincing, arguing that air travel is lightly taxed with APD having little impact on passenger numbers while encouraging more Scots to holiday at home. It concluded *'Is slashing APD really compatible with having the toughest climate change targets in the world?'*

Scottish Government Strategy Secretary Bruce Crawford has called for investigation of using the threatened RAF Leuchars airport for civil flights.

With signs of recovery in domestic air travel, BA is expanding flights between Glasgow and Heathrow from January. Eastern Airways has introduced direct flights from Glasgow to Stavanger with Jet2 adding direct flights from Glasgow to Rome next March. From nil in 2010, Jet2 now operates flights to 14 destinations from Glasgow.

Ryanair has discontinued flights from Aberdeen to Dublin.

Despite a merger with US rival United Airlines, Continental has committed to continue direct flights from Edinburgh to Newark.

Air travel is beginning to show a stronger return to growth though entirely in overseas trips apart from some revival in Glasgow-London trips. Latest data shows 2.1% passenger growth at Scotland's three largest airports in October. Both Glasgow and Aberdeen have had their 10<sup>th</sup> consecutive month of growth though Edinburgh, formerly the frontrunner, slipped to 1.8% growth (with growth over the year still at 8%)

### FERRIES & SHIPPING

Business and politicians are collaborating to increase freight on the Roysth-Zeebrugge route, fearing that owners DFDS may transfer traffic to their Newcastle-Amsterdam route.

After a 20 year break, Kirkcaldy harbour has reopened for commercial traffic. A £820,000 Transport Scotland Freight Facility Grant has secured a shift of Tilbury grain traffic from lorry to sea.

Stena relocated its Stranraer-Belfast service to the new £200m Port Ryan on 21 November. Trip times to Belfast have been cut from 3 hours to 2 hours 15 minutes. Two Superfast ferries with a higher passenger and vehicle capacity replaced the former 3 ships. Due to shifts from air to ferry, Stena expects a 4% rise in passenger numbers in 2012. Bus links will be provided to Ayr with through services also going to other parts of Scotland.

Islanders have been angered by the Scottish Government decision not to extend the RET subsidy scheme beyond the Western Isles. This trial schemes will continue to 2014 but at a reduced cost and with consideration of a roll-out to include Argyll and Clyde.

Ferguson Shipbuilders at Port Glasgow has gained the contract for two innovative hybrid diesel/battery electric ferries likely to be used on the short crossings to Raasay and Gigha.

Local politicians and users are unhappy with the reliability and comfort of the passenger-only ferries now used on the Gourock-Dunoon route. Western Ferries is to build two new ferries for its service to Cowal.

Kintyre Express report satisfactory results from the fast 12 seat passenger ferry introduced between Campbeltown and Ballycastle. Another fast ferry has been ordered and the route will operate on seven days a week in July/August 2012.

Jacobite Cruises on Loch Ness report rising usage. Under Freda Newton, business has quadrupled since 2002 and an additional catamaran, the Jacobite Warrior, will permit expanded services in 2012, including some winter services.

### RAIL

Consultation has started on successor arrangements for the ScotRail franchise and on the Initial Rail Industry Plan for Scotland for the period 2014-19. There is support for the proposed extension of electrification to include more lines around Glasgow and in the Central Belt with post 2020 extensions to Perth, into Fife and on to Aberdeen. Some new

electric stock and cascades from England will expand capacity on both electric and diesel routes. There is a firm proposal for a £200m Inverness-Aberdeen upgrade plus some work on the Inverness-Perth main line. A need is seen to review service patterns where present trains have low loadings (including Stranraer but also some unspecified services around Glasgow) along with a review of lightly used stations and halts. The proposals include electrification of the short existing line between Bellgrove and Shields Road in Glasgow. Kintore and a station at Inverness Airport are identified as strong candidates for opening. Overall, continued growth in rail passenger usage and in freight is anticipated.

The House of Commons Transport Committee has endorsed the principle of a high-speed rail route extending to central Scotland but with greater involvement of the Scottish Government in preliminary work and construction from the north as well as the south. Other conclusions cover a final preferred alignment, the need for high-speed rail to have better links with regional strategies and clarity on continued investment in the classic rail network.

Virgin has increased capacity on Edinburgh-Birmingham trains with capacity between Glasgow and London also due to rise next year. New electric trains have been ordered for use on a through electric route from Glasgow/Edinburgh to Manchester open by December, 2013.

Attempts to secure alternative bids for the construction and maintenance of the Edinburgh-Borders rail route have failed. The line will now be financed via Network Rail borrowing supported by annual payments from the Scottish Government.

ScotRail is providing additional Glasgow-Dundee and Inverness-Central Belt services from December plus a rise in trains calling at Broughty Ferry. A revised Ayr-Stranraer service will also operate following the shift of ferry traffic to Port Ryan. From September, longer trains have eased capacity problems on the Argyle Line from Lanarkshire, Milngavie and Helensburgh into Glasgow.

Dunbar is to have an extra evening service from Edinburgh for a trial period from December. An MVA study for Transport Scotland has confirmed a 'marginally positive case' for a new halt at East Linton as part of improved intermediate services from Edinburgh to Dunbar and possibly Berwick.

Escalators from Waverley Station to Princes St are due to open before Christmas.

ScotRail has been praised for the cleanliness of stations and quality of staff but criticised for decreased reliability, the condition of toilets and standards at ticket offices.

Work has started on a £9m upgrade of Dalarnock station on the Argyle line in time for the 2014 Commonwealth Games. Plans for handling traffic when various events coincide seem to be lacking while week-end travel is often hit hard by maintenance work on track and signalling. More late-night trains at Edinburgh Festival times are being sought.

Controversial Network Rail plans for a £12m road underpass replacing the Kirknewton level crossing have been replaced by extra barriers and a high-tech sensor at the crossing. ScotRail is spending £2m to reduce the risks of delays and cancellations during severe winter weather.

Plans for a unified Scottish Police may include those parts of the British Transport Police presently in Scotland.

Network Rail has been condemned for poor points maintenance causing the Virgin train derailment at Grayrigg in Cumbria. Worn points also led to the minor derailment which caused major service disruption on the west approach to Waverley station in July.

## BUS, TRAM & TAXI

The prolonged Competition Commission Inquiry into the local bus industry is expected in January.

A provisional report has identified measures to promote greater competition while at the same time developing a partnership approach to ticketing and information. Further measures are proposed to cut predatory practices, including avoidance of such practices where they could undermine the position of publicly-owned operators. The report also notes that actual decisions in Scotland and Wales will be a matter for the respective governments.

A DfT report 'Green Light for Light Rail' has found that the Edinburgh tram route is costing 4 times more per mile than for schemes elsewhere in the UK despite the UK also having higher costs on average than new systems in Europe. Provided these issues are addressed through improved procurement and regulatory change, the report favours further expansion of light rail in British cities since costs are significantly lower than for local heavy rail services.

Amid a deluge of press comment and public outcry, the Scottish Government has stepped in to rescue the Edinburgh tram project and ensure completion of a route from the airport to St Andrew's Square rather than the city council vote in favour of Haymarket. Responsibility for the project now rests with Turner and Townsend working in close conjunction with Transport Scotland and the City of Edinburgh. Completion is expected by summer 2014. The tie organisation, originally responsible for tram delivery, has been dissolved. There will be a public inquiry into the disastrous handling of tram procurement and the humiliation suffered by the city but Scottish Government wishes to delay this until more progress has been made on tram completion.

Plans for Subway modernisation in Glasgow continue to progress but are raising union fears over the staff cuts and safety dangers arising from new working practices and driverless train operation.

A £40m deal with the Scottish Government has enabled detailed work to start on the planned Bus Fastlink from the city centre to SECC open by 2014 and an extension to the Southern General Hospital, Braehead and Renfrew by 2015.

*"The Edinburgh tram route is costing 4 times more per mile than for schemes elsewhere in the UK"*

SPT aims to introduce the first Statutory Quality Bus Partnership in Glasgow early next year. High frequency, high quality services with bus priorities and low boarding times are planned on core local routes into the centre.

Edinburgh City Council is to expand the Hermiston bus park and ride from 450 to 1025 spaces.

Both Edinburgh and Glasgow have introduced some hybrid buses as part of a drive to cut emissions and improve air quality. Costs are partly covered from the Scottish Green Bus Fund. Lothian has ordered 15 hybrid buses with a further 33 going to Stagecoach and First Glasgow.

Scottish Citylink, the Stagecoach/ComfortDelGro/West Coach Motors joint venture, is investing £4m in 23 new coaches for Scottish inter-city trips. Glasgow-Campbeltown services will rise from 3 to 5 per day. Higher-quality Citylink services from the

Central Belt to Aberdeen and Inverness have been attracting both former car users and rail users.

Stagecoach Megabus has introduced 24 bunk beds on Glasgow-London overnight services on a trial basis. Buses will also have 24 seats. Fares range from £1 to £40. ScotRail anticipates little impact on their more spacious sleeper services with fares as low as £19 and serving Edinburgh, Aberdeen, Inverness and Fort William as well as Glasgow.

The ScotRail franchise consultation has invited views on major cuts in Anglo-Scottish sleeper services with high operating costs.

Surveys for SPT have shown that the most deprived urban areas have suffered the largest reduction in population within easy reach of buses running at least quarter hourly. The percentage within easy reach had fallen from 60% in 2009 to 45% in 2011. Residents in semi-rural areas within easy reach of at least an hourly bus service had also fallen from 48% to 42%.

## ROADS & PARKING

The Scottish Road Maintenance Review has accepted the need for improved maintenance, especially on local authority roads. The intention is to cover the costs of this through better procurement and shared services.

At the UK level, the RAC has again stressed the need for more direct forms of road charging provided that proceeds are used for road improvement and congestion reduction.

John Gooday, Scottish Roadworks Commissioner, is facing increasing complaints of inaction to ensure a satisfactory quality of road repairs after utility works and higher targets for quick completion of work. Very little use has been made of his powers.

DfT has authorised a pilot trial of longer lorries as a means of cutting freight costs. Impacts on safety and rail freight will be assessed before final decisions.

Shortly before his move to Defence, Transport Secretary Philip Hammond urge the economic benefits of raising maximum motorway speeds to 80mph while also lowering speeds on residential roads.

The Forth Crossing team has high expectations than costs of this major project will be kept under control through close collaboration with the main contractor and the prospect of falling inflation from 2012. Preliminary works on the M90 north of the present bridge will start in 2012.

Judges have agreed that the costs of RoadSense chairman William Walton in appealing against the Aberdeen Bypass should be met.

Phase 1 of the A96 Mosstodloch-Fochabers Bypass has opened. Local Nationalist MSP Kenneth Gibson has given an assurance that the A737 trunk road Dalry Bypass will be built in the 2012-22 road programme but not before completion of the Forth Crossing.

Scottish Government has announced that more than 170,000 timber lorry trips will be taken off Scottish roads over the next ten years. The Strategic Timber Transport Scheme, set up in 2006, will be used to support 38 projects taking traffic away from sensitive rural roads and villages by new gravel roads, minor upgrades and diversions to roads more suited to heavy lorries. Timber movement by sea will also expand. Existing schemes have included upgrade of the B880 String Road in Arran. Some schemes will also help wind turbine developers.

The urban M74 has reduced daily traffic on the M73/M8 between Uddingston and south of the Kingston Bridge by more than 20,000 vehicles a day with a further fall of 5,700 attributed to the impact of recession. Peak congestion has eased with a 19 minute cut in peak times between Hamilton and Glasgow Airport.

Road casualties in Scotland fell to a record low in 2010. Road deaths were down 8 to 209 and serious injuries down 14% to 1964. A new concern is that smart phones now with route and disruption information may be an increasing distraction for drivers.

The 'improved' Fort William-Mallaig road, with differing design standards for different sections is also a cause for concern and has attracted rising use by motor cyclists.

Mull residents and businesses have voiced complaints about slow driving by tourists and a reluctance to use passing places to allow overtaking.

Scottish Borders Council has dropped plans to reduce speeds on the A708 and A6088 from 60 to 50mph due to complaints about enforceability and the scarring impact of additional road signs.

Advance preparations have been made for quicker responses to road problems arising from winter weather. FTA has rejected as too expensive requests from Transport Minister Keith Brown for the wider use of winter tyres by lorries.

Edinburgh City Council has launched a new website to give real time information on parking availability at both public and private sites.

Overspill on-street parking by staff at Western General Hospital in Edinburgh has led to vandalism against cars and complaints about the lack of on street parking regulations. Problems have increased since the abolition of parking charges for hospital visitors in 2009.

*"Quality conditions for pedestrians are vital if city centres are to have increasing attraction"*

In a new move to raise funds for improvements in the Pentlands, Edinburgh City Council has suggested an honesty box and £2 charge for cars visiting the four car parks in the Pentland Hills Regional Park. Public consultation found 38% against charges, 23% in favour and the remainder undecided. The operators of the Cairngorm Mountain Railway has introduced a £2 'donation' for use of the car park over the next two years with income used for environmental projects, car parks and facilities. The Mountaineering Council is seeking a transparent annual audit to make sure money raised goes towards paths and environmental management.

## WALKING & CYCLING

Cycling and walking groups have attacked the massive cut in active travel spending in the draft Scottish budget and see little prospects of hard-pressed local authorities filling the gap. They are seeking maintenance of the budget allowance at £25m a year.

Prof. Iain Docherty has attacked the very poor walking environment in many Scottish town and city centres since quality conditions for pedestrians are vital if city centres are to have increasing attraction. Glasgow's Buchanan St provided a good example but the same could not be said of Byres Road and Sauchiehall St or Union St (Aberdeen) and George St and Princes St (Edinburgh). Throughout Scotland, pavement conditions were sub-standard.

Research by Greener Journeys, a body representing big bus companies, has found that people using buses to work gain from walking an extra 300 miles a year to and from bus stops. A similar argument applies to local rail and tram trips. Extra walking also comes from additional use of public transport for shopping and leisure purposes.

Speaking at the launch of the £210,000 28 mile South Loch Ness Trail for walkers and cyclists,

Scott Armstrong, Visit Scotland's Regional Director, revealed that the number of walkers visiting the Highlands was three times greater than the combined total of those visiting for fishing, golf and cycling. Tourism now employed 14% of the Highland workforce.

Living Streets Scotland is arguing for a boost to children walking and cycling to school as an essential part of the anti-obesity campaign and improving health. However, health and safety concerns have blocked plans for children moving on to on-street cycle training.

In an expanded £540,000 scheme, a mainly on-street cycling route is to be provided from Edinburgh city centre past the original Edinburgh University campus and onwards to the King's Buildings site. 12% of work trips in this area are already by bike with potential for further growth.

Striking a contrary note, Alan Taylor writing in the Herald has called for cyclists to make a financial contribution to schemes they advocate – perhaps a £20 annual licence fee.

## ENERGY AND EMISSIONS

UK Chancellor George Osborne has sought a short-term lowering of targets for UK emission reduction with the prime focus being on reviving the economy. Fiscal and regulatory measures are also seen as needing revision to ensure cost-effective shifts to low carbon and energy conservation rather than excessive energy price hikes, rising public transport fares and the planned January rise in road fuel taxation.

Despite incentives, the take-up of electric power in the road sector remains low and is expected to remain zero in aviation and shipping. This has drawn more attention to the benefits of moderate reductions in currently stabilised levels of road vehicle use while accelerating changes to lighter-weight vehicle design, lower speeds and the more efficient use of oil-based diesel fuel in the road, aviation and shipping sectors together with progress on energy efficiency in buildings.

The University of Strathclyde is part of a UK consortium working to produce a zero emission electric Ford Focus prototype.

The Scottish Government has allocated an additional £4.2m to encourage local authorities to use electric vehicles and develop a network of charging points. The Low Carbon Vehicle Energy Partnership considers that the overall costs of electric cars will not fall below those of conventional vehicles until 2030.

## Edinburgh's Transport and Civic Amenity

*Bill Cantley, Convenor of Transport and Planning Committee, Cockburn Association*

Henry Cockburn was a promoter and circulator of ideas. The Cockburn Association was founded in 1875 to promote and encourage the maintenance and improvement of the Amenity of the City of Edinburgh and its Neighbourhood and for the protection and Preservation of the City's Landscape and Historical and Architectural Heritage.

### The first 100 years

Looking at the issues addressed by the Cockburn Association is a reminder that Edinburgh's qualities have been threatened in many ways over many years. A few landmark issues remind us that controversy over how the City develops has a long history. Preventing building on the south side of Princes Street and to the Glasgow Railway makes the point that we win some and we lose some. Trees, gardens and open spaces have been under threat since early in Cockburn's time. The Water of Leith Walkway is, in some respects, not truly completed, even today, but what we have is very much due to constant pressure from the Cockburn. The Edinburgh Airport Runway decision in the 1970s reminds us that you can win the argument but still lose the war – the Secretary of State overturned his Reporter's Finding against its construction. We nearly had the Inner Ring Road of 6-lane motorway standard proposed by the City Engineer in the 1965 Quinquennial Review of the City's Development Plan.

The creation and development of the Edinburgh New Town Conservation Committee and the Old Town Conservation and Renewal Trust and their combination as the Edinburgh World Heritage Trust and the grants they were able to give led to the successful retention and regeneration of the residential character of the City centre and its designation as a World Heritage site in 1995.

*"I believe that we are at a point of convergence in the interests of commerce and conservation"*

### The last decade

In June 1997 I forecast a Devolution-led development boom. In reviewing how events have turned out, I ask you just to notice the presence of transport issues in the story. On Green Issues I looked forward to the Millennium Link project and suggested that both the Union Canal and the Water of Leith Walkway had great potential as recreation corridors. I think we can give that one a good tick in the appropriate box.

On Economic Development I observed that Edinburgh was both fortunate and unfortunate in having never been a major manufacturing centre, with a consequent dearth of brownfield, or windfall, sites available for regeneration. On reflection today, the list actually includes ports, shipbuilding, mills, whisky bonds, confectionery, glue works, tanneries, distilleries, breweries, gasworks, railway yards, print works, paper mills and pottery and that list is not exhaustive.

On Housing, we were unconvinced that demand was for 3-bed semi-detached homes on the edge of the City in the Green Belt; it was more from an increase in household formation than from growth in population. This has been recognised and addressed and much has been achieved in the regeneration of not only Leith, but of other old parts of the town. This contributes to the creation of a compact, more walkable city and provides the critical mass that supports and needs high quality public transport.

On Transport, we have had a quiet, but significant, revolution in the quality of the city's transport services. We now have the city bus service provided, with commercial success, by our locally owned bus company; the whole fleet has been replaced by new accessible buses and it is, again in the short list for the Best UK Bus Company of the year, with much improved information at bus stops, on the web and elsewhere. A fleet of 15 new

hybrid diesel and electric buses took to the streets on the number 10 route in September. These are powered by electric motors using battery power.

We have a new rail station at Edinburgh Park, new frequent electric train services to the West via Bathgate and Airdrie and plans well advanced for an Edinburgh – Glasgow Improvements Programme, which will see electrification extended to most of the key Central Belt routes in the next couple of years. Major refurbishment of Waverley Station is in hand, including the installation of escalators on the Waverley Steps.

We still have our new tram route under construction. The debate about the potential of the South Suburban line continues interminably and genuine integration of ticketing compares poorly with our continental competitors.

We have, fortunately, built only two new roads, of modest scale, on old rail routes – the Western Approach Road and the West Granton Access Road. Building new roads in cities does not solve traffic problems – it spreads them!

On Retail and on Office accommodation, I expressed concern that Edinburgh was too readily following the trend of so many cities in allowing a drift to the periphery, which makes development difficult to serve by public transport and encourages car use. Happily, with encouragement from central government, policies are now in place, which have prioritised the revitalisation of town centres and we have had significant renewal and growth in the Exchange and Tollcross areas, Holyrood, Haymarket and the northern New Town.

There has been growth, in development and significance, of the area astride and beyond the City Bypass on the western edge of the City. The scale of transport, development and economic issues that arose from Edinburgh Park, The Gyle Centre, Hermiston Gait, The Royal Bank Headquarters, Edinburgh Airport and The Royal Highland and Agricultural Society's Showground at Ingliston led to the Government publishing the first ever location specific statement of Scottish Planning Policy in 2003. This was reviewed in 2006 and continues to be a major feature in Scottish Government thinking and planning. The impact of some of these developments on the Green Belt represents the classic dilemma, of major developers wanting to build in a Green Belt location and threatening to go abroad or elsewhere in UK if they are resisted.

### Edinburgh Today

Some of you may have read or heard tell of the two scenarios suggested in recent times as characterising Edinburgh today. The first represents the City as douce, smug, self-satisfied, largely white, ageing and with a lack of openness to new ideas; an impossible place in which to develop. The second represents Edinburgh as cosmopolitan in character, enjoying unique quality of life, being of optimal size for a city and prospering as these features and its success as a financial services and tourist Mecca attract visitors and new residents from all over Europe and beyond.

These are, of course, caricatures, but they have been circulated to stimulate thinking and to make us aware of some of the risks. Two recent projects which have affected the direction of The Cockburn Association's interest have been the decision to go ahead with an additional crossing of the Forth Estuary and the cancellation of the Edinburgh Airport Rail Link.

I shall refer only briefly to the Tram project. A disappointingly low level of public debate and engagement, the nature of the contract method chosen



and pressure to meet the demands and criticisms of too many bodies seem to me to have led to the present appalling shambles. I would just observe that the widespread predictions of social collapse have not yet proved to be well founded. The two other cities in the British Isles that have most recently adopted trams, Nottingham and Dublin, are planning the extension of their networks, as are many of the other European cities who are our competitors, because they recognize the contribution a tram service can make to modern city life.

### The Future

Edinburgh's unique strength is the quality and drama of its physical setting and environment. It is, I suggest, of approximately optimal size for a city in terms of the activities it can support and the accessibility of the surrounding hills, countryside and coastal areas make it attractive to residents, tourists and business people.

Our proximity to Glasgow and the enhanced transport links of recent years have led to recognition by the European Union of both cities as Metropolitan European Growth Areas. To have two such centres so close together is unusual for areas so far outside Europe's economic core. The Glasgow / Edinburgh metropolitan region contains 63% of Scotland's population, generates 67% of national GDP and has contributed more than 80% of the growth in Scotland's GDP over the past 5 years. It ranks among the top 30 concentrations of economic activity in the world.

The retention of a residential city centre and the historic character of the city have contributed to its

- Designation as a World Heritage Site
- Success as a shopping and tourist magnet
- Reputation for providing excellent "Quality of Life"
- Growth as Britain's second Financial Services Centre

My own aspiration for a successful city region of 1.25 to 1.5 million people based on Edinburgh would include something like the Zurich S-bahn system, but I see little sign of our developing the vision to bring about that scale of public transport enhancement. It nonetheless seems to me that such infrastructure is the fundamental platform on which our developing success must be built.

I believe that we are at a point of convergence in the interests of commerce and conservation. We have come to appreciate that our built environment heritage is a real asset. It contributes to quality of life and the feel good

factor. This attracts tourism, conferences and business activity and their success builds further success. We have also come to realise that old fashioned Scottish negativity is bad for business and bad for confidence.

You may recall the forecasts that by 2010 we would all be working for the NHS. They were concurrent with those telling us that, by the same date, we would all be HGV drivers. Lewis Mumford, the American writer, philosopher, historian, teacher and student of Patrick Geddes' work, remarked that "Trend is not Destiny".

As a European I derive some comfort from the European approach to our problems. We seem to have in place the ground rules for a strong European economy in the 21<sup>st</sup> century, with a rising quality of life. The combination of our technological skills with policies promoting resource conservation and value-added elements in goods and services points to convergence in economic objectives.

How best, then, to meet Edinburgh's Transport needs? Other cities have survived initial difficulties in reintroducing rail-based urban transport systems and I believe it is still a reasonable aspiration for Edinburgh to retain. How far it will prove to be realisable will depend on many major factors which can not readily be evaluated at this time. These range from resolution of the world-wide economic and financial crisis to the cost and practicality of energy systems for both communal and private transport. I mentioned our new small fleet of electric buses. Buses are inherently adaptable and carry low infrastructure costs. Edinburgh has come to live, more or less, with bus lanes, but many motorists still appear to regard them as not inhibiting stopping to pick up a newspaper or the like. If we are serious about public transport, as I believe we must be, then a much higher priority will have to be given to efficient clear routes and controls.

I believe that we will do best by concentrating on making the present transport systems work better than they already do. Sadly, we have little to show for 40 years of campaigning for rail based solutions within the city and it appears that economic circumstances will leave these as a pipe dream. Nonetheless, we have in place the assets, the policies and the potential to fulfil the vision that Edinburgh should seek to become "the most successful and sustainable city in Northern Europe".

What is required from us is the engagement, optimism, vigilance and determination to make it happen, which I believe to be the hallmark of the Cockburn Association.

## Killer Apps for Transport Delivery

*Derek Halden of DHC summarises his November 2011 presentation to the Institution of Highways and Transportation in Edinburgh*

There are two killer apps that determine whether or not most transport improvements succeed: networks and public engagement. It may not be immediately obvious that a large proportion of all transport delivery in Scotland in recent years has been achieved through the use of these apps. Many would think that the size of a budget, or a manifesto commitment, or new legislation have been more important, but this would disguise the fact that budgets, political commitments and legislation are all derived from public pressure, and that it is through political, social, transport and electronic networks that we communicate. We build networks through partnerships and public awareness through information and marketing.

### Networks

Some networks are instantly recognisable like the railway and motorway networks. It is no surprise that the largest investment decisions in transport have been to extend the obvious networks; the blue line into Scotland from the M74 Carlisle and Glasgow improvement, the development of a dual carriageway network to Aberdeen, and the extension of railway networks to serve towns previously not connected to national rail networks like Larkhall and Alloa. Yet the concept of extending networks, as opposed to promoting individual projects, was not even recognised in transport appraisal until the introduction of the accessibility/network coverage criterion within Scottish Transport Appraisal Guidance in 2003.

Many small isolated transport improvements have only been delivered by linking them into networks. Cycle schemes suffered particularly from being local and scattered, so John Grimshaw invented the concept of the national cycle network, and quickly attracted the £multi-million investment through Sustrans, that had until that point been lacking. Even though few people use the national cycle network for long distance trips, the concept of a common national identity is very attractive, with predictable standards and a profile that attracts political interest.

The impact of many small changes to a network is often greater than the sum of the individual parts. As the national cycle network illustrates, these effects are sometimes most important for funding, information and

marketing for small schemes. For example, installing a direction sign at a road junction has a local benefit, but it is of much greater value if signs are installed at all junctions so that users have a route to follow. Yet in widespread transport economic theory, individuals are assumed to take independent, autonomous decisions that are not directly influenced by the decisions or opinions of others.

In practice, behaviour is usually not based on rational economic principles. Even though a traveller might observe that it is cheaper and faster to travel by bus, peer acceptance may mean that they continue to drive. The impact of the social or business networks is more important than the observations about the availability of transport. However it has not always been clear who is responsible for organising networks for social, business, political and agency participation in transport delivery.

A study in Glasgow showed that the most important factor affecting mode choice of travel to work was "what will my employer think of me". Understanding how employers shape their views, and working through travel planning processes to improve access for staff, customers and markets could provide a very persuasive nudge to commuters. This can only be achieved if transport companies, agencies and employers are at the heart of business networks. The transport and logistics sectors account for more than 20% of Scotland economy (including more than 15% of all consumer spending) so delivery will only be achieved working through these networks. Transport delivery is highly influenced by these business networks as the M74 Northern Extension and Aberdeen Western Peripheral Road demonstrate.

That networks have not attracted sufficient attention is increasingly recognised. There is a detailed discussion about network theory in Sir Rod Eddington's 2006 report on transport and the economy. However this was translated into terms not easily understood by the residents of Scotland like agglomeration and connectivity. Why would we want to talk about "connectivity between houses and retail centres", when our other killer app is effective engagement with people? We know from practice that if we use the language of citizens "access to the shops" we can be much more successful.

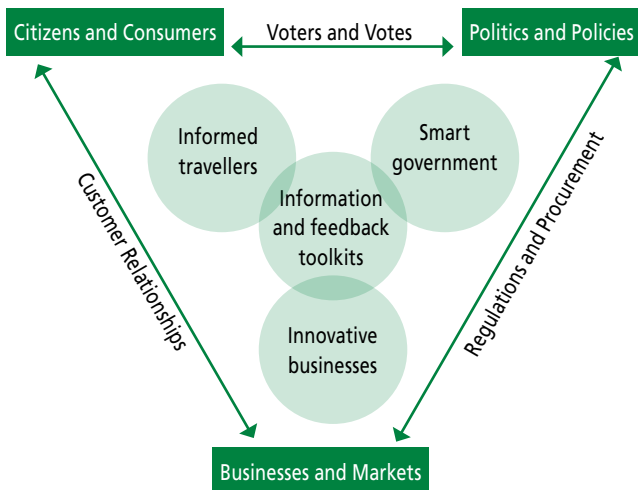
*"This can only be achieved if transport companies, agencies and employers are at the heart of business networks"*

### Public engagement

Transport attitudes are dominated by the large commercial markets that help people to get from A to B. Although it is widely recognised that new forms of partnership, innovation and accountability are needed to build a society within which broader issues can be addressed, progress with community planning and bigger society agendas has been relatively small compared to commercial marketing and delivery.

The investment required in social marketing for transport appears to be beyond what is acceptable in a democracy. This is seen in practice each time government attempts social marketing; opposition political parties criticise what they paint as a misuse of public funds to promote a particular social perspective not shared by the opposition. As a result it has become difficult to distinguish social from political need in





much transport decision making, as highlighted by the Cabinet Office in 2003 in their high profile Making the Connections review. Politicians are unable to provide the required leadership since they control less than 10% of transport spending, and are unable to secure social goals through regulation and taxation on commercial spending as they cannot gain public support without larger scale information and marketing campaigns.

A new approach is therefore needed. As recognition has grown that there is potential to market alternative travel behaviour lifestyles through the emerging trusted networks, the language of 'smarter choices' has emerged. Behavioural nudges through trusted networks, are more successful and less patronising ways to encourage change. Research into the potential for smarter choices showed that there are four main trusted networks for delivering public policy goals:

- Regeneration and investment in the places people live and work
- Building a stronger community spirit in the places people live.
- Health messages and health improvement.
- Environmental aims to protect, save, maintain and improve local places.

In order to engage more successfully with people it is necessary to use the communication tools of choice for each sector in society. Car manufacturers maintain a customer relationship dialogue with car purchasers, but in most transport public authorities and transport operators have relatively weak relationships with their customers. Customer relationships for public services are largely managed through politicians, but dynamic, responsive communications for transport delivery cannot be delivered solely through elected representatives.

Smart approaches are helping to offer more dynamic two way communications to overcome these problems. MyBus services by SPT, MySociety's Fix my Street, GoSmart campaigns, active travel planning, and products developed by DHC like HometownPlus and Loop are just a few of the many examples of successful progress towards customer relationships for social, as well as commercial, transport challenges.

Sharing value in managing and delivering customer relationship services between sectors offers the prospect for greater benefits than different sectors working alone. However people need to know who or what they are engaging with. 'Citizen smartcards' have usually proved to be too broad in coverage for people to feel real ownership and part of the brand.

*"By linking infrastructure investment with effective marketing programmes, traditional barriers to transport delivery are being overcome"*



**Networks and Marketing**

When Henry McLeish as a Fife MP and Scottish Office Transport Minister reviewed options for a new Upper Forth Crossing in 1998 it might have been expected that he would choose the option that would most directly relieve traffic problems in Fife. However he instead supported the case to plug Clackmannanshire into the trunk road network with a new bridge branded as the Clackmannanshire Bridge. Fife was already well networked and the people of Scotland could generally find it on a map which, was not the case for Clackmannanshire. The Clackmannanshire Bridge brand was confirmed shortly before opening, and it would be difficult to say whether the bridge has had greater benefits for Clackmannanshire through reduced congestion or improved marketing.

Similar combined approaches to networks and marketing are being piloted by Scottish Government to create smarter places where travellers make smarter travel choices. By linking infrastructure investment with effective marketing programmes, traditional barriers to transport delivery are being overcome. The results of the pilot programme will not be available until 2012 but interim reports already demonstrate the benefits of this sort of approach.

Looking to the future, new types of social and business networks are becoming increasingly important. Facebook, LinkedIn and Googleplus are very young companies, and it is too early to say precisely what best practice in public engagement towards transport delivery will be. However it is already clear that business, social and technology networks need to be used alongside physical networks to improve public engagement through the latest smart approaches.

*A full version of this paper was also presented to the European Transport Conference in Glasgow and is in the Conference Proceedings as: Halden D, 2011. Networks and Nudge: A Smarter Approach to Better Accessibility.*



## Social marketing in transport - Evidence for improvements to air quality

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Poor air quality is a fact of life in many Scottish towns and cities and those local authorities that have declared Air Quality Management Areas face considerable challenges in mitigating the problems of air pollution. It is widely recognised that urban air pollution is nowadays caused largely by road traffic. That air pollution is now mostly invisible creates a further challenge of gaining public support for resolving a problem that many people cannot see (in contrast with identifiable images of smog-filled cities during the industrial age).

But whilst the use of our transport system can exacerbate air quality problems, transport planners are finding new and innovative ways of being part of the solution. It is true that improvements to engine technology have made dramatic improvements in recent years and that traffic management and control systems can help to ease traffic flow and pollution at congested locations. However these approaches will not solve all transport-related air pollution problems. Much work continues to be undertaken to persuade individuals to consider alternative choices to the private car; there is a growing body of evidence of the success of social marketing approaches in influencing behaviour towards more active and sustainable modes.

Social marketing has been used to promote public policy outcomes for many years, notably in areas of health improvement and road safety. And yet it appears that some people are only now realising the opportunities that social marketing provides. For example, the Institute for Government's Mindspace report for the Cabinet Office states that behavioural approaches "can lead to low cost, low pain ways of 'nudging' citizens into new ways of acting" which are "especially relevant in a period of fiscal constraint". Moreover, the value for money is also proven. In terms of the value of different types of transport investment choices, recent research has concluded "that by far the best value for money is being gained by low budget items, namely local safety schemes, smarter choices and cycling schemes".

The underlying reasons are clear. Facilities or services cannot achieve their best outcomes if people are unaware of them or don't know how to use them. Information on desirable outcomes is similarly useless if people are uncertain about how to achieve those goals. Covering these information or perception gaps pays easy dividends.

Whilst most transport behavioural change work undertaken to date has focused primarily on encouraging change for health or carbon reduction reasons, many of the techniques used

can also contribute towards alleviating air quality issues. An example, in September 2011, Dundee City Council embarked on a major social marketing campaign, assisted by JMP Consultants, to raise awareness of sustainable and active travel modes. Funded by the Scottish Government's Local Air Quality Management grant, the campaign's objective was to change motorists' travel behaviour towards less polluting modes.

*"There is no other type of intervention that can deliver such substantial changes in a politically acceptable way"*

The campaign acknowledged the challenges of persuading motorists to try a different way of travelling for their typical journeys. Dundee's campaign sought to focus on promotion of the potential for cost saving; a key incentive to change habits for many people at the present time. It gave supportive pro-environmental messages and practical eco-driving tips, with three lead messages developed for the campaign:

- "Petrol 15% off" to promote the potential for fuel cost savings for drivers by using eco-driving techniques;
- "Petrol 30% off" to promote the cost saving of undertaking a typical urban journey by bus instead of by car; and
- "Petrol 100% off" to promote walking and cycling.

Messages were delivered through both individualised approaches (predominantly to target local people) and mass media (for people passing through the area from elsewhere). The mass media campaign included use of: billboards at relevant sites (as pictured); a four-week campaign on local radio (targeting morning and evening peak periods); events and press releases alongside paid-for articles

to receive local print media coverage; and organisation of specific events at key locations to raise awareness and provide advice.

The individualised campaign included: personalised travel planning advice to residents closest to the hotspot locations; a project website, which provided links to existing web-based resources supporting desired changes; and an intensive programme of activity within three local primary schools.

Full evaluation data is not yet available; this will need air quality monitoring data over time. However, around 13,000 car drivers per day passed the billboards, the radio station has around 32,000 regular local listeners and that nearly 100 people received personal eco-driving advice. More than 400 primary school children engaged in in-class workshop sessions and a similar number in assemblies.

The proportion of children walking to school is estimated to have increased by 11%. Feedback from pupils and staff was universally positive, in particular with the children responding well to the cost-saving potential of alternative travel choices and the start of opportunities for them to travel independently by active modes.

The campaign concluded that social marketing can form an effective component of a strategy that can have a good opportunity to reduce air pollution. Interventions will be acceptable and supported by almost all of the target population; there is no other type of intervention that can deliver such substantial changes in a politically acceptable way. Risks are few if the project is well designed and carefully executed. Crucially, projects can be implemented quickly: the benefits can start to be realised within a few months, not the years that many alternatives require.

The growing body of evidence from within the transport sector shows that social marketing can swiftly and effectively provide benefits across a range of public policy outcomes, be they environmental, social or economic.

