

## **SPECIAL THEME**

### **Innovation in Scottish Transport**



**WHAT'S INSIDE:**  
Smartcard Schemes  
Single outcome agreements  
and funding transport  
Transport appraisal

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On 24 April the annual Scottish Transport Applications and Research Conference will debate the latest developments at the Glasgow Royal Concert Hall. This year STR once again summarises the papers to be presented on 24th April Opening presentations will be from Stewart Stevenson MSP, Minister for Transport, Infrastructure and Climate Change, and Professor Phil Goodwin from the University of the West of England.

## The Scottish Transport Studies Group (STSG)

STR is the newsletter of the Scottish Transport Studies Group (STSG) and is largely funded from STSG membership subscriptions. STSG was formed in 1984 and now has corporate and individual members from transport operators, industry, national government, local government, universities, and consultants.

The aims of STSG are "to stimulate interest in, and awareness of, the transport function and its importance for the Scottish economy and society; to encourage contacts between operators, public bodies, users, academia and other organisations and individuals with interests in transport in a Scottish context; to issue publications and organise conferences and seminars related to transport policy and research". STSG is a charity registered in Scotland number SCO14720.

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### Who decides what goes in STR?

Firstly the members of STSG - We rely on STSG members and others telling us about interesting studies they have completed or knowledge they have. To keep subscriptions low we need members to invest time to share their knowledge. STSG has some funds to commission some analysis and reporting but the editorial work is undertaken voluntarily.

Secondly the Editor Derek Halden, assisted by the STSG Committee tries to fit the contributions into 16 pages and create a readable document.

If you can contribute to STR please e-mail [editor@stsg.org](mailto:editor@stsg.org)

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## Open-Specification Smartcard Schemes benefit Transport Networks

*Jeremy Acklam – Business Development Director, thetrainline.com*

ITSO (originally the Integrated Transport Smartcard Organisation, but now just ITSO) is a specification for how smartcards and systems all need to communicate with each other to make a larger (eg country-wide, multi-operator) scheme work. **ITSO is going from strength to strength** in the UK since it was instigated by transport operators with the support of Government. It is an "open specification" which means that the details of how to encode data to smartcards and how readers need to communicate with other readers, is public information available to any equipment supplier, operator or Government authority. The specification is available to be used in any other country in the world – several have already created derived versions.

**Each party must be a member** of the open-specification organisation (ITSO Ltd in the UK) to be able to issue and manage ITSO smart media and products in a working ITSO environment and they must also be signed up to standard operating agreements (i.e. they need to be a 'Licensed ITSO Member'). This is necessary to ensure that all members of the open-specification organisation agree ways to transfer data between themselves (their components will be built by different companies) and to agree changes to the specification in the long term going forward.

**One of the interesting side-effects** of an open smartcard ticketing specification, is the impact that an open specification has on supplier and transport operator behaviour. ITSO implementations in the UK will push forward market-oriented behaviour much sooner than some people expected. For instance, a transport operator implementing smartcard ticketing using an open specification has the 'new' space to themselves for only a short while. As soon as the next geographically local implementation goes live, the first implementation is obliged to accept smartcards from the second implementation (because they are both the same open specification). If both are operating in the same transport mode, there will then be pressure to ensure that fares available through one set of smartcard ticket media are also available through the other. This process will continue with each new implementation until market forces begin rapidly to dominate the choice of smart ticketing media that the customer makes. This is similar to the mature markets for financial-services cards, where all suppliers participate in the open EMV specification, but differentiate to attract customers, not on the basis of the core specification, but on the basis of customer value as represented by the customer media itself.

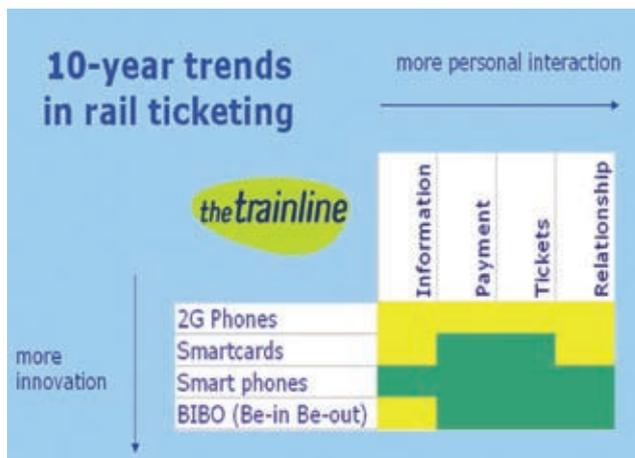
**Differentiation of ticketing media on the basis of customer value** will cause some consternation at the transport operator level initially, because the perceived loss of control over ticketing media may be palpable. After all, transport networks have controlled ticket fulfilment media for over two centuries. In practice control of ticketing media by transport operators doesn't actually matter because the purpose of a transport operator is to generally to carry as many people as possible profitably and the payment/ticketing media is merely a way of achieving that, irrespective of how those tickets are sold or on who's media they are placed. In particularly competitive transport industries such as air, there is the added angle of customer brand loyalty which may shape how ticketing media is offered, but in most land

transport networks, retail loyalty is not usually high on the agenda. The consequence of the differentiation of ticketing media on the basis of customer value is that smartcard ticketing will lead to a disenfranchisement of the transport operator at the ticket retailing and fulfilment levels. This in itself is actually likely to be beneficial to transport operators because retailers (either independent or as subsidiaries of transport operators) who depend on selling tickets for their income, are much more likely to invest in achieving this and promoting ticket sales to a wider audience, which is to the benefit of customers and transport operators alike.

**Key to driving the transport industry forward over the next 10 years** is not so much ticket price (which is under the control of the operators) but ticket fulfilment media, the ubiquitous paper ticket. The challenge is that the paper ticket has to be delivered into the customer's hand – either in person, by post or via a collection machine, all adding cost and complexity. Replacing the paper ticket and the processes that go with it are therefore at the heart of trends in transport ticketing worldwide, designed to reduce industry costs over time and enhance customer service and experience. This is why, ultimately, transport operators will embrace an open market of smart-based fulfilment media provided to the customer by non-transport companies.

The long-term target for transport operators is to have be-in, be-out automated ticketing where the customer does not need to touch a card or show a ticket in the traditional sense. A lot more innovation is needed in remote device reading and fraud management before this will become feasible. Consequently, the next 10 years will see a mixture of bar code (phone & home printing) and smartcard technologies used increasingly for transport ticketing worldwide. Using Contactless media in the UK from 2008 and Smartcard (NFC) phones from 2010, information, payment, ticketing and relationship-building services will be progressively delivered, creating an open market and maybe in 20+ years' time we will be saying farewell to paper tickets on transport – after more than 200 years. That would indeed be an interesting consequence of open specification smart media.

*"retailers are much more likely to invest in promoting ticket sales to a wider audience"*



# Adults' travel by bicycle – results from the Scottish Household Survey Travel Diary

*A note by Julie-Ann Goodlet-Rowley in the Scottish Government Transport Statistics branch*

This note uses the data collected by the Scottish Household Survey (SHS) Travel Diary from 1999 to 2006 to analyse the characteristics of people who stated that they had travelled by bike on the previous day.

## 1. Gender, age and distance travelled differences

Men account for around 70 per cent of all journeys by bicycle and are more likely to cycle over 15 km but the majority of cycle journeys were less than 2km.

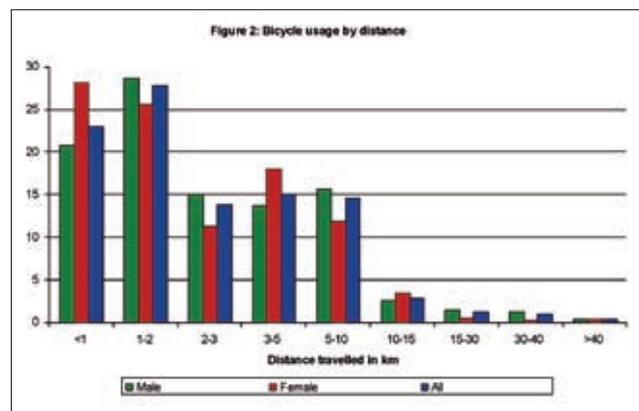
Figure 1 shows the distribution of all bicycle journeys with age band for each gender. However, the *proportion* of all journeys in the Travel Diary by bicycle is relatively small, only 1 per cent and is age independent. When the number of respondents in each age band was analysed it was found that there were almost identical numbers of cyclists aged 20–39 as all other age bands grouped together. This meant that there were more journeys by cyclists aged 20–39, causing the peak in the distribution in Figure 1.

Men account for the majority of all bicycle journeys in the Travel Diary (70 per cent). This peaks for the over 60s, where around 83 per cent of all journeys reported are by men. This is consistent with figure 1, which shows that women over 60 account for only 5 per cent of all female journeys, just under half the male proportion.

Although the proportion of men and women travelling by bicycle varies with age, the underlying *distance travelled* distributions are similar. In general, 51 per cent of all journeys were less than 2 km, 44 per cent of journeys were between 2–10 km and there were very few journeys reported over 10km.

Men were more likely to cycle distances greater than 15 km, with only 11 per cent of journeys greater than 15 km by women. The reader should note that in the SHS travel diary the distance travelled is calculated from the direct-line distance between the journeys' starting point and the respondents' destination, it does not take into account the route the respondent took or journeys under ¼ of a mile.

In small accessible towns, the number of journeys was split almost equally between the genders with 46 per cent of all journeys by women. In small remote towns, this is not the case with four-fifths of all journeys made by men.



As might be expected, there is a clear pattern of distance travelled by age. In the 20–59 age bands just under half (48 per cent) of journeys by bike were less than 2 km. This rises to around 56 per cent for 60–69 and 79 per cent for those over 70. The exception to this pattern is the youngest age group - 16–19 year olds - where around two-thirds of all journeys reported were less than 2 km. Across all age groups, there were very few journeys reported over 10km.

Retired respondents reported 62 per cent of journeys were less than 2 km, which is broadly consistent with the findings above.

Respondents who live in small remote towns reported the largest proportion of all journeys under 2 km (81 per cent), which is almost double the proportion in large urban populations and accessible rural locations (41 and 45 per cent, respectively).

## 2. Purpose of cycle journeys

Around 43 per cent of all cycle journeys reported were for commuting purposes and the majority of journeys by the full-time employed were for commuting purposes.

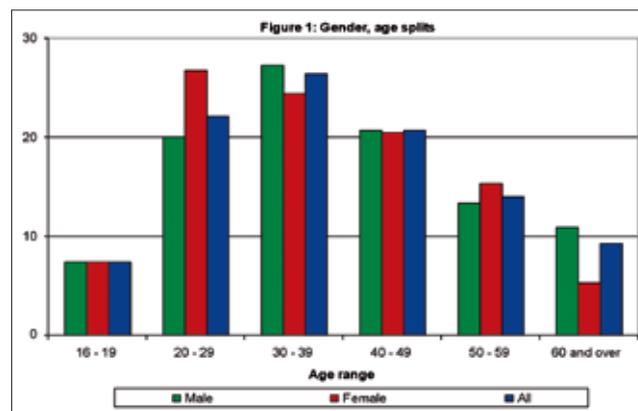
Table 1 shows that 43 per cent of all journeys recorded were for commuting purposes, much larger than for any other purpose given in the Travel Diary.

As expected the largest number of commuting journeys recorded were for those in the age ranges 30–39, with half of all journeys reported for commuting. This only dropped slightly for the age bands 40–49 and 50–59 (47 and 48 per cent, respectively). Unsurprisingly the age band 16–19 had the least number of commuting journeys recorded and the largest number of journeys recorded for education.

The majority of journeys by the full-time employed were for commuting purposes (60 per cent). Of all journeys reported for commuting purposes, 48 per cent were less than 2 km.

## 3. Breakdown by usual transport mode to work or education

The majority of respondents who had cycled in the previous day, also used cycling as their main method of travel to work or education.



## Refreshing Transport Appraisal Guidance

Decisions taken today about our transport infrastructure will determine how we travel for the next 60 years. STSG is holding a seminar on 12 March hosted at Buchanan House in Glasgow by Transport Scotland. The seminar will include presentations by the team who are revising STAG and will widen understanding of why STAG needs to change and how the new approaches will work. Attendance is free for STSG members contact STSG at [admin@stsg.org](mailto:admin@stsg.org).

Although STAG has made a step change to improve transport appraisal it still has many failings. Experience shows that appraisals are often inconsistent both internally and between schemes. The social and environmental impacts are described without a clear context, and with highly variable levels of detail. There is also little scrutiny of the appraisal process.

The Campaign for Better Transport claim that the main problems with transport appraisal are that: it includes fuel duty revenue, puts a monetary value on some things that can't be monetised, greatly exaggerates the time-savings a new project would bring, and values some people less than others.

Although walking, cycling and travel plans are important for dealing with transport problems, there are very few examples of 'smarter travel

measures' being worked up within STAG assessments. For example, more people working from home should give increased working time an economic value, but this is not reflected in the appraisal.

The STAG process therefore needs further improvement. In particular, the economic efficiency appraisal uses travel time and fuel duty appraisals in ways that can be contrary to stated policy aims. Car drivers during their working day are deemed to be of higher value (to national GDP) than bus passengers because they are assessed to be higher-earning people. If a car driver switched to the bus, the economic efficiency and cost to government appraisals would view that negatively because their time would be considered as being of lower value and there would be a loss of fuel duty. This double effect makes it very hard for a switch to public transport to score well, despite its desirability if wider economic factors are included and from a social and environmental point of view.

It is important to ensure that STAG appraisals are used to underpin future investment decisions and that the methods have the flexibility and accuracy to build trust and support. Ensuring the current glitches are resolved in the STAG refresh is therefore essential.

To analyse the individuals concerned, instead of the journeys made, only one record per cyclist was analysed by combining the Travel Diary with the main questions asked of the household. This reduced the sample size by around 46 per cent, for further information see Section 5.

In general, male respondents who cycled on the previous day, for any purpose, were more likely to use cycling as their main mode of transport to work or education (69 per cent), compared to women (55 per cent). Conversely, men were less likely to use a car/van as their main mode of transport to work or education (16 per cent), compared to women (25 per cent). The number of men and women who usually walked to work but who had cycled on the previous day did not differ significantly from each other (9 and 11 per cent, respectively).

The majority of respondents who had travelled to work by bicycle in the previous day usually travelled to work by bicycle (91 per cent of men, 80 per cent of women). Interestingly 10 per cent of women who had cycled on the previous day usually drove to work, which was just over three times higher than men (3 per cent). Unfortunately, the Travel Diary does not contain information on why people had chosen to cycle on the previous day, e.g. weather conditions, health reasons, car broken down.

As the respondents' age increased, the fraction of commuting as a driver of a car/van increased and there were no reported commuting journeys as passengers between the ages 40–59. However, as the number of respondents was very small, the findings should be taken with caution.

### 4. Breakdown by number of people in the household, household type and urban/rural.

**Large households do not make many journeys by bicycle and the majority of respondents live in urban locations.**

Around half of all journeys reported were from small households (1–2 people; 51 per cent), with 40 per cent from medium sized households

Table 1: Breakdown by purpose of journey

REASON	BREAKDOWN
Commuting	43%
Pleasure	19%
Visiting friends/relatives	9%
Shopping	9%
Other, incl. hospital visits and education	20%

(3–4 people). Households larger than four members (which include small children) had few reported journeys by bicycle on the previous day. There was very little difference between the genders.

Around 40 per cent of all respondents live in a flat/maisonette, around 17 per cent live in a terrace house, 22 per cent live in a semi-detached house and 22 per cent live in a detached house. Unsurprisingly, two-thirds of all respondents in large urban areas, in the Travel Diary, live in a flat/maisonette, much higher than in any other area, including smaller urban areas.

Of all respondents who had travelled by bicycle on the previous day, the majority live in urban areas, (73 per cent), much higher than in towns or rural locations (13 per cent and 15 per cent, respectively).

### 5. Background and further information

The Scottish Household Survey (SHS) started in February 1999. Its principal purpose is to collect information in its main areas, one of which is Transport, but other topics are covered, such as household composition, housing and amenities, overcrowding and sharing in housing, employment or unemployment, income, assets and savings, credit and debt, health, disabilities and care, and other topics. Further information about the SHS can be found at [www.scotland.gov.uk/shs](http://www.scotland.gov.uk/shs). Enquiries should be made to the SHS Project Manager, tel: 0131 224 8420, fax: 0131 244 7573, e-mail: [shs@scotland.gsi.gov.uk](mailto:shs@scotland.gsi.gov.uk)

# Implications for Regional Transport Partnerships of the Scottish Budget and Local Government Concordat

*Ben Kerfoot, Nestrans*

The Spending Review and Scottish Budget heralded big changes for the funding of local government, with significant implications for Regional Transport Partnerships (RTPs) as they enter their third full year of operation.

The Concordat agreed by the Government and Cosla strikes a new relationship between central and local government. It provides much more flexibility for councils by virtually abolishing ring fencing but at the same time binds councils in to achieving the Government's objectives through Single Outcome Agreements.

This new performance regime consists of a single national purpose – increasing sustainable economic growth – supported by 5 strategic objectives, 15 national outcomes and 45 indicators. While there is not a specific objective or outcome for transport, of the 15 national outcomes, transport can be seen as contributing directly to 7 of them and indirectly to 2 of them, emphasising its role as an enabler.

New Single Outcome Agreements will set local outcomes and priorities in the context of this national framework. These will be developed by councils with input from Community Planning partners (including RTPs). The Government has said that there needs to be a clear “line of sight” between local and national outcomes.

The most direct implication of these changes for Regional Transport Partnerships is the loss of direct grant for capital projects, which amounts to £34 million this year. With the exception of SPT, who retain direct funding, the other RTPs will see funding for regional transport projects channelled to local authorities through their block grant. As this funding will not be ring fenced, it will be up to councils to decide whether to invest this funding in transport, and if so, if it is best to transfer this money to RTPs to deliver transport projects across their areas. Gaining agreement to this is going to be a challenge, particularly for the larger partnerships, however it is also an opportunity to strengthen joint working between councils and RTPs.



*Nestrans is investing in the re-opening of Laurencekirk Station in partnership with Transport Scotland and Aberdeenshire Council*

Should RTPs not receive any funding from councils for regional projects, then it will seriously limit their capacity to deliver their Regional Transport Strategies, which have the buy-in of constituent councils and stakeholders. It would also mean that the efficiencies gained through managing capital budgets on a regional scale would be lost.

The other significant change arising from the spending review was the decision not to provide funding to RTPs for the Demand Responsive Transport initiative, currently £10.5 million. The previous Government had planned to transfer this funding – for rural bus services, demand responsive and community transport – to RTPs. However it will now form part of the block grant to local authorities and again, won't be ring fenced. While this decision reflects the wishes of Cosla

to encourage local accountability, there is concern from the community transport sector at the loss of a dedicated funding stream and may mean that those key services lose out to other priorities.

The outcome of the spending review came as big surprise to RTPs and is effectively a reversal of the approach taken by the previous Government, who favoured channelling funding direct to RTPs. Following some initial confusion about the detail of the proposals, RTPs and Cosla have acknowledged the need to make this work: demonstrating how RTPs add value, demonstrating how we can help

meet many of the national outcomes, strengthening partnership working with councils and Cosla as part of local government family.

In north east Scotland, this approach has been endorsed by Nestrans and the two councils, who have a successful track record of joint working. At its meeting in December 2007, the Board agreed to write to the Chief Executives of both Councils requesting that they provide Nestrans with the capital funding for regional transport that is coming to them as part of the block grant. This would give Nestrans a capital budget of around £3 million – the same as the current year.

We have also written formally to both councils seeking involvement in the development of Single Outcome Agreements. Discussions at transport officers level already underway.

Nestrans is embracing change and is determined to show to the Government that we will make these arrangements work; demonstrating how we can contribute to increasing sustainable economic growth and the national outcomes, through implementing our regional transport strategy and the local transport strategies of our partner authorities.

## Way Ahead for RTPs

At a national level the Chairs of the 7 RTPs and the leadership of Cosla met with Cabinet Secretary John Swinney and Transport Minister Stewart Stevenson in December to discuss the role of RTPs in the new arrangements. Cosla was very supportive of the role of RTPs at this meeting, which was appreciated by RTPs and welcomed by the Ministers. The role of RTPs was confirmed in a letter from Mr Swinney in early January 2008, however this also asked partnerships to revisit their regional transport strategies to ensure they had more of a strategic

*It will be important to ensure that the enabling role of transport is reflected in Single Outcome Agreements*

## Scottish Cycle Project Spending and the Spending Review

*Dave du Feu, Spokes, The Lothian Cycle Campaign*

Increased cycle use across Scotland for utility and leisure can play a vital role in three of the biggest challenges faced by the Scottish Government - climate change emissions, obesity and congestion. These challenges are reflected in the government's National Outcomes, Indicators and Targets, to which the new local authority Single Outcome Agreements are required to contribute. For example, the Outcome that "*We live longer, healthier lives*" and the Target to "*Increase the proportion of journeys made to work by public or active transport*" Additionally, increased cycle use and improved local accessibility are potentially extremely valuable given growing uncertainty over future oil supply and price.

The experience of several European countries in recent years and decades shows that significant increases in cycle use are achievable through deliberate government policy and expenditure.

For 11 years Spokes has surveyed cycle and transport expenditure in Scotland. The most recent survey puts annual cycle project expenditure at around £18m relative to a total transport budget of over £1700m. Expenditure on cycling is therefore approximately 1% of total transport spending and represents a lower proportion of expenditure than the proportion of *existing* journeys to work made by bicycle.

For several years the biggest single source of cycle project expenditure was the Public Transport Fund, due to extensive cycle facilities integrated into certain big public transport schemes. When PTF was abolished the government cycle funding fell but capital funding for Regional Transport Partnerships brought a recent major boost to cycle spending. The main sources of cycle project expenditure in 2006/07 were:

- £7.8m Scottish government funding managed by Sustrans and mainly spent with local authorities

- £3.3m allocated by Regional Transport Partnerships to cycle projects, mainly via local authorities
- £2.7m from the Cycling Walking and Safer Streets fund (of the national £8.87m CWSS budget)
- £1.6m government funding to Cycling Scotland
- Local authorities allocating around £1m from their own capital, and raising a further £1m+ from external sources, such as developers.

### The Impact of the Spending Review

The exact implications are still far from clear, but there will be growing pressure on the cycling budget. The Scottish Government funding managed by Sustrans and Cycling Scotland will almost certainly fall from £9.4m given that the total budget that will be funding these programmes of £11m is to be shared with other high value competing programmes such as promoting new transport fuels, and sustainable towns initiatives.

The £3.3m from RTPs is likely to be reduced. With most cycling being predominantly local there will be a strong case for these budgets to be managed by the authorities themselves. CWSS remains ring-fenced at least for one year but the future beyond that is still being decided.

Local authorities will receive higher general capital funding to balance the end of ring-fenced and specific funding such as that to RTPs and Sustrans. However, if local authority funding priorities are similar to those before the RTPs were established it is likely that the total spend available to local authorities for cycling will reduce.

There are also likely to be reduced staff budgets for those planning active travel such as school travel co-ordinators (STCs) – for example in

Edinburgh, STCs will not be retained so with less capability to plan improvements there will be less pressure for delivery budgets.

There are also opportunities to increase funding. Budgets for cross-departmental and cross-agency cooperation could perhaps provide funding via health or climate change budgets. However local authorities are finding the intensive staff commitment of cross-sector working beyond capacity of existing staff so the contribution to cycling is likely to be small.

### Future options

For both practitioners and lobbyists, it is essential to take full advantage of what opportunities do exist under the new arrangements – for example, emphasising the value of cycling in terms of achieving the government's outcomes, and targets, and seeking multi-agency working.

Spokes will continue to seize political opportunities to lobby for increased investment. For small and medium cycle projects the continuation and expansion of the CWSS fund would help and for larger projects a new £20m+ annual fund is proposed open to bids from councils, partnerships, or bodies such as Sustrans and rail operators.

Adopting these proposals would raise expenditure on cycling substantially possibly up to the level of cycle mode share for commuting journeys. If Scotland wants to realise the wider benefits of cycling to active travel, improved health and reduced emissions then further significant investment is needed with at least a five fold increase to reach the level of some other EU countries.

*A fuller version of this article can be found at [www.spokes.org.uk](http://www.spokes.org.uk).*

focus, prior to seeking any formal Ministerial approval. The Government have asked that the detail on projects be contained in separate delivery plans.

In moving forward a key test will be whether RTPs are successful in retaining capital budgets, funded by their constituent councils. An important vehicle for achieving this will be the Single Outcome Agreements, which the Government has encouraged RTPs to work closely with councils to develop. It will be important to ensure that the enabling role of transport is reflected in these agreements.

The new framework, while giving rise to some challenges, also presents opportunities for strengthened joint working between RTPs and councils, between the different RTPs and between RTPs and Cosla. Yet there remains a question mark over the longer term nature of RTPs in terms of funding and increased functions, which the previous Government had been keen to encourage. The focus now is on making the new arrangements work, demonstrating the added value that RTPs bring and ensuring delivery of regional and local transport priorities to achieve the wider outcomes we and the Government want to see happen.

## News Update

*Tom Hart provides a review of recent Scottish Transport news*

### FINANCE

The Scottish Budget for the next three years was agreed in February and includes provision for substantial rises in trunk road and rail investment and in ferry support and additional funding for Bus service operators grant. Investment under direct Scottish Government control is reduced compared to previous proposals, ending ringfencing of most Local Authority funds for transport.

In a concordat with COSLA, government has agreed that each Local Authority should reach a Single Outcome Agreement in place of ringfencing.

The Accounts Commission has reported that there is a need for Councils to improve the way they are managed. Improved information and effective performance measures are needed to assist decision-taking on priorities in tightened budgets.

### AVIATION

Bmi is to close its Inverness-Heathrow service in March.

Ryanair has announced new routes from Edinburgh to Alicante, Bremen, Frankfurt, Marseille and Pisa from March but baggage charges on all Ryanair services have been increased.

easyJet is opening new routes from Edinburgh to Nice and from Glasgow to Faro starting in April.

Loganair is to become a franchise operator for flybe, rather than British Airways.

Subject to EU approval, the air discount scheme offering concessions for air travel for people living in remoter parts of Scotland is to continue until 2011.

Disputes continue to affect Argyll and Bute Council plans for upgrading Connel Airport at Oban and airstrips on Coll and Colonsay. Costs are well above original estimates and air ambulance cover has been withdrawn from Oban after 5pm following disagreements between the Council and the former airport operator.

### PORTS & SHIPPING

Transport Minister Stewart Stevenson has

announced a new economic appraisal of reopening the Campbeltown-Ballycastle ferry route. Western Ferries is in a £1.5m dispute with the tax authorities on its ability to opt for tonnage tax rather than more costly corporation tax.

Caledonian MacBrayne has expressed concern that Argyll and Bute Council is frustrating ferry terminal upgrades at Oban, Port Askaig, Bruichladdich and Rothesay. The new £6.5m ro-ro ferry terminal at Dunoon remains unused.

Stagecoach has expressed concern that political factors are delaying decisions on proposed grant aid of £3.3m to supplement its planned £10m investment in a Kirkcaldy-Leith hovercraft service.

A feasibility study for British Waterways Scotland has concluded that an £80m leisure canal from the Clyde to Loch Lomond could have significant impacts on area regeneration and property development.

### RAIL

National Express has taken over the Scotland-London East Coast passenger service franchise. The franchise runs to 2015 and all NatExpress services now stop at Haymarket as well as Waverley.

Proposals are being discussed about stopping some Glasgow Queen St-Edinburgh services at Edinburgh Park.

Over the next three years, overcrowding on rail services should ease as ScotRail receives 38 new electric sets and 8 diesel sets transferred from other areas. More will follow as the Scottish rail electrification programme expands.

Finance Minister John Swinney expects the Gogar Interchange in west Edinburgh to open by 2011 with best Glasgow-Edinburgh times also cut to 37 minutes.

Passenger rail services to Alloa are expected to start in May with the onward freight line to Longannet also becoming available.

Ian Coucher, Chief Executive of Network Rail, is seeking a start to serious planning for three 200mph high-speed rail routes in Britain. UK Transport Minister Tom Harris has said that high-speed rail spending will be considered after 2012, including gains for Anglo-Scottish services.

Following complaints from Virgin, First ScotRail and freight operators to Network Rail about delays in completing West Coast Main Line and Glasgow-Paisley improvements over the Christmas/New Year period, Network Rail plans a shift from total week-end or holiday period closures to greater use of pre-prepared modules. This should reduce most periods of closure to 8 hours and increase single-track operation when multiple track is being renewed

Lockerbie station is now accessible for wheelchairs after a £1.4m investment in a footbridge and lifts.

### BUS, TRAM & TAXI

The Competition Commission has rejected a First Group application to be released from its 1997 agreement not to increase bus fares above inflation in and around Glasgow and Edinburgh. The Commission has provisionally concluded that, though market competition had risen since 1997, this was not to such an extent as to justify an end to fare-capping. First has been asked to make a further application taking account of the context of higher average earnings, increased fuel costs and the case for relaxed fare-capping on routes shown to be running at a loss.

Following a Competition Commission ruling, Scottish Citylink (35% owned by Stagecoach) has sold some services to Parks of Hamilton.

To cut costs, the National Galleries of Scotland has withdrawn its seven year old free shuttle bus services between galleries in Edinburgh.

Glasgow City Council has restricted free school bus travel to children living more than 3 miles, rather than 2 miles, from school.

With support from West Lothian and Edinburgh Councils, First has taken over the E&M Horsburgh South Queensferry-Livingston service in order to maintain a half-hourly service and access to St Johns Hospital. Nordi Travel has also introduced a Monday to Friday service from Livingston via St John Hospital and Edinburgh Western General Hospital to Ocean Terminal in Leith.

An extended southbound bus lane is being provided on the southbound approach to the Forth Road Bridge.

First Glasgow has introduced a circular express bus service giving a quarter-hourly frequency between the city centre and the new Silverburn shopping mall.

From Edinburgh Airport, Lothian Buses and city taxis face increased competition from a fixed fare onward travel taxi service linking the airport with an enlarged area of central Edinburgh.

SPT has approved further study of the case for upgrading the Argyll Line to serve both as a regional railway and urban metro between the SECC/Partick area and a new Parkhead station at Celtic Park. These new services could help the area to be a focal transport node for the 2014 Commonwealth Games and one of the largest regeneration zones in Glasgow. Capital costs have been placed in the £60m to £210m range depending on the scheme adopted. Conversion and extension of inner South Side rail routes to light rail or tram is also under study for possible completion between 2015 and 2025.

Extended hours and potential 24 hour operation of the SPT Circle Subway is being considered, with track renewals tackled by one-way night operation of the Subway.

Tramworks in Edinburgh are now involving a five-month closure of Shandwick Place and bus diversions from Princes St to George St.

Renfrewshire Council has faced objections to a proposed 5p rise in minimum taxi fares to £1.85 plus a 1p rise to 21p for every 365yards. Traffic Commissioner Joan Aitken has ruled that a new minimum fare of £2 plus 20p for every 365 yards would be more practical.

DfT has introduced new guidelines for the party limousines with more than 8 seats, but some operators are seeking statutory regulation.

## ROADS & PARKING

The Scottish Government has agreed a £455m fixed price contract for completion of the urban M74 project by 2011. Some £200m has already been spent on this scheme.

Tolls on the Forth and Tay Road Bridges were abolished on 11 February.

Finance Secretary John Swinney has announced government support for a new cable-stayed toll-free bridge and related approaches west of the existing Forth Road Bridge with completion expected by 2016, and costs in the £3.2 to £4.2bn

range. There has been debate about whether the bridge could be financed through a Scottish Futures Trust. Even if a Trust proves feasible, this would involve recurrent claims on the transport budget for at least 30 years. Supporters of a Forth Tunnel have questioned why the tunnel costs have been estimated at £4.5bn which appears high in relation to other comparable schemes.

A report to FETA by Faber Maunsell has placed costs of cable repair or strengthening on the existing Forth bridge in the £90 to £120m range. It is now hoped that HGVs will be able to continue to use the existing bridge until a replacement is available.

Health Secretary Nicola Sturgeon has issued guidance on hospital parking charges.

Major defects have led to indefinite closure of the new £20m Squinty (Clyde Arc) Bridge in Glasgow.

Concern has been expressed at a growing backlog of road maintenance problems. In Edinburgh, it is claimed that poor road maintenance is leading to £3m a year being paid out in compensation. Local groups have complained at further delays in a £4.15m scheme to move Lower Granton Road North in phase with a traffic rise of 145% due to waterfront development.

Opening of this year's 'T in the Park' at Balado has been brought forward a day in order to ease the severe road congestion which arose in 2007.

ASDA is to introduce £60 fines for ineligible drivers who use spaces reserved for disabled people and parents with young children.

## WALKING & CYCLING

Cyclists and walkers in Scotland will enjoy their share of the Sustrans win in the £50m People's Lottery Giveaway. Four of the 79 projects in the Sustrans bid are in Scotland. They include completing the walk/cycle links over the M8 in Anderston in Glasgow, a £2m walk/cycle bridge over the Tay linking Perth with Scone, extra paths and cycleways in Dumfries and links between Strathclyde Country Park and Chatelherault Country Park in Lanarkshire. Greener Leith has launched a campaign for a Leith-Portobello cycle path.

Police and publicans are working together to improve street and neighbourhood safety in the west end of Glasgow. The new zone is similar to the 'Nite Zone' in central Glasgow.

The Scottish Government has approved plans for a foot and cycle bridge across the Clyde linking Tradeston with the Glasgow Broomielaw.

The former Peebles-Innerleithen railway is to be a cycle/footway

## FREIGHT

EWSS has called for more study of the disadvantages, as well as the gains, from any approval of longer and heavier HGVs. Such vehicles could encourage shifts from rail freight to lorries. A study report on these by Heriot Watt University is being undertaken.

Freight Transport Association claims that skill shortages are forcing up the pay of lorry drivers faster than inflation, in addition to higher fuel costs. Exemption is being sought from the planned fuel duty increase in the spring.

## PLANNING & PROPERTY

The Scottish Government has published a draft revision of the National Planning Framework with comments sought by 15 April. Though making provision for connectivity and local community requirements, the NPF favours a more sustainable land use and transport framework ensuring less need for movement and encouraging shifts to public transport and active travel (walking and cycling). The Framework includes expanded road capacity across the Forth, and rail investment on core rail routes for both passengers and freight. Shipping growth is endorsed with particular emphasis on port projects at Grangemouth, Rosyth and Scapa Flow. Expansion of overseas aviation is planned but at a lower rate than in recent years.

With growing population and employment needs, Highland Council has released details of a £3bn plan to accommodate an extra 30,000 trips on the Inverness-Nairn corridor. Infrastructure costs will be in the region of £326m with an emphasis on A96 dualling. A station on the Inverness-Nairn line is planned for the development zone around Inverness Airport and improved bus services are expected.

Glasgow Southern General is to become a 1000 bed hospital with expansion phased over 10 years and linked to public transport improvements.

Though a greenbelt site, approval is expected for a major housing development at West Craigs in Edinburgh close to the planned Gogar rail/tram interchange.

## Integrating Planning for Travel Demand with Development Planning

*William Smith, WSP Group, Andrew MacIver, SIAS Limited, Jackie McAllister and Hugh Gillies, Transport Scotland*

A key question facing practitioners is how transport appraisal and modelling can help to inform land use allocation and development decisions. This is key to delivering the Scottish Government's objectives and commitments to sustainable economic growth,

an integrated sustainable transport system, successful regeneration and achieving climate change targets.

National guidance for Transport Scotland is showing how good transport appraisal and

modelling of the Development Planning and Management process is needed consistent with the current significant change with the Planning System. The guidance will have far reaching implications for all transport and land use practitioners in Scotland.

### Do Improvements in Modelling Traveller Responses Distort the Economic Assessment?

*Stephen Cragg, SIAS Ltd and Dr Andy Park, Transport Scotland*

It has long been demonstrated that there has been a strong correlation between transport and the economy. More recently, there has been much debate on decoupling the relationship between transport and the economy such that economic growth can continue without commensurate increases in the travel of goods and people.

Traditionally, transport economics has used the impact on factors such as travel time, vehicle operating costs and fares i.e. the generalised cost of travel as a "proxy" for economic benefit. Changes in the generalised cost of travel feed through the three factor markets to impact on productivity and hence economic growth. Whilst some of the gaps between these initial impacts and the final economic effect are being filled (such as agglomeration benefits), the approach still essentially relies on assumptions about how the factor markets behave when faced with changes in (travel) costs.

This paper considers whether the improvements in replicating traveller responses in transport models are sufficient to capture the impacts on the factor markets or whether there are distortions in the economic impacts.



## Accessibility, Land-Use Planning and Rail: An International Case Study of the Long-Term Impacts

*Kristin Olson, Faber Maunsell*



In Scotland and abroad, urban rail projects are both trendy and controversial. They are constructed for a variety of over-lapping reasons: to catalyse economic and land use development, to promote modal shift to public transport and reduce vehicle emissions, to reduce congestion, and in some cases, they are argued to mitigate social exclusion. At the same time, the enormous expense of these projects can bring into question the extent to which forecast benefits would be actualized in the medium- to long-term.

This paper examines the evidence based particularly on a case study of Vancouver. Rail investment triggers economic and land use development, improves accessibility, and increases public transport mode share. The paper provides lessons for the Scottish transport context to ensure that future analysis techniques and tools maximise the benefit of new rail infrastructure.

## Strategic Planning in Strathclyde with SITLUM land-use transportation model in

*Paul Emmerson and Dr Andrew Ash, TRL and Jim Dunlop, Strathclyde Partnership for Transport*

An interactive land-use and transportation model - was developed by combining TRL's Strategic Transport Model (STM) with the DELTA land-use model, developed by the David Simmonds Consultancy. The result was SITLUM: the Strathclyde Integrated Transport and Land-Use Model.

The model has been used to develop SPT's Regional Transport Strategy (RTS) in which land use/transportation interactions were modelled for various scheme options. This allowed SPT to evaluate schemes against the authority's core objectives, particularly those for modal shift, transport integration and emissions reductions.

Major changes were made to the model to ensure greater compatibility with national guidance and the modelling philosophy behind the Transport Model for Scotland (TMfS). The paper also describes the continuing development of, SITLUM to be able to assess large numbers of potential park & ride and station parking sites.

## Methodology for Prioritising Walking and Cycling Schemes

*Cathy Kay, Halcrow Group Ltd*

With limited budgets, no transport authority is currently able to deliver all of the walking and cycling projects that are needed to create attractive walking and cycling networks that could lead to modal shift. Current systems of prioritising schemes can be based on a subjective assessments including pressure from local activists and political preferences.

To address this problem a methodology has been developed to assess where best to apply available funding to increase active travel and potentially, to increase the numbers of people choosing to walk or cycle. The methodology is capable of identifying, comparing and analysing potential schemes within a settlement to ensure 'value for money' and helps to plan high quality infrastructure, promotion and information.

Using the methodology it is possible to:

- Identify potential key walking and cycling routes
- Assess existing walking and cycling infrastructure
- Use a scoring system to assess the potential use of a route
- Incorporate information from a wide range of local sources
- Include subjective issues such as perception of safety
- Relate decision making to wider planning issues such as development control and Core Path Networks
- Choose routes based on community access to trip generators and attractors

The outputs of such assessment are clear cycling and walking network plans for the settlements. This then helps to assemble funding, for example securing planning gain for local authorities when development takes place.

## Streets and spaces that make you want to walk and cycle

*Kate Gifford and Pete Zanzottera, Steer Davies Gleave*



Delivering higher levels of walking and cycling is becoming increasingly important, especially within urban areas. Recent policy emphasis on sustainable development and encouraging walking and cycling provides added impetus for local authorities to spend more time and money planning for pedestrians and cyclists. The Manual for Streets has been part of this recent policy shift as it provides a new emphasis on designing streets and public spaces with the needs of the local community in mind.

There are four critical measures that bring more cyclists onto the network – safe routes, secure storage, information (inc publicity) and training. The safe routes have to cater for a range of abilities, go where people want to go, and tackle the pinch points. These routes also have to link into a differentiated network that links schools workplaces as well as leisure and retail destinations.

The provision of walking facilities needs to take into account where people want to walk to; in particular where desire lines are located (especially for providing crossing facilities.) Walkers also need good quality information and easy ways to interchange with public transport and other modes. Real connectivity makes an area more permeable to walkers than any other mode.

## Application of the Manual for Streets in a World Heritage City

*Richard Llewellyn, Halcrow Group Ltd and Phil Noble, City of Edinburgh Council*

The design of new urban streets is on the brink of a revolution. Forty years of the traditional, motor traffic orientated approach to design has resulted in neighbourhoods which are often indistinct in character and practically inaccessible by all modes except the car. In recognition of this, new design guidance such as the Department for Transport's Manual for Streets is paving the way for local authorities to literally rewrite the rule book; to provide accessible – and interesting – places to live.

Development itself is also changing. Environmental considerations and changing demographics now mean that unconstrained, low density greenfield development is becoming less relevant. Instead, higher density, brownfield development is more commonplace. The location of such developments often means that car-focussed infrastructure simply cannot be sustained. Indeed, in the context of neighbourhoods in which people wish to live in, such infrastructure is inappropriate and detracts from the sense of place which is desired.

In light of the need for increased focus on higher density brownfield development and the new UK design guidance, the City of Edinburgh Council has chosen to revise its Movement and Development guidelines, and to do so in a way which maximises their contribution to creating sustainable urban development. Revision of the guidelines was not a simple task. There are tensions between traffic engineers, transport policy officers and planners. On top of these issues, road safety and the needs of vulnerable users also needs to be reconciled.

Edinburgh is seeking an innovative street management framework, which sets out to balance the motor traffic movement and place functions of streets within the city. This paper describes the rewriting of Edinburgh's guidelines, including the consultation process adopted, use of best practice from elsewhere and the challenge of adopting the principles of the Manual for Streets in a Scottish, World Heritage Site context.

## Freight Transport – The poor relation?

*Gavin Scott, Freight Transport Association*

Goods vehicles are less than 2% of total vehicle population. Great advances in efficiency and reduction of emissions but freight transport is often given lower priority. There appears to be no evidence to show why buses are inherently more safe so are allowed to travel at higher speeds.

This paper asks how we decide on priorities for road space and suggests that unless higher priority is given to freight vehicles there will be severe consequences for the economy.



## Rural Road accidents – a question of speed?

*Emma Collins, TNS System Three and Stephen Stradling, Transport Research Institute – Napier University*

Over half of road accidents in which people are killed or seriously injured happen on rural roads and numbers of such accidents are reducing at a lower rate than those occurring in built-up areas. This paper describes results from a large scale survey commissioned by the Scottish Government as part of a research programme into rural road safety.

Over 1,000 car drivers, from a representative sample of the driving population in Scotland, were interviewed. From a subset of questions relating to speed, three groups of drivers were identified based on the varying extents to which they speed on different roads. Around 8 in 10 Scottish drivers said they occasionally do 35mph in a 30mph limit but no more – this group was termed ‘compliers’. Half said they sometimes drive at 40mph in a 30mph limit, 70mph on 60mph rural roads, and 80mph on 70mph dual carriageways but not more – this group was termed ‘exceeders’. Only around 1 in 7 Scottish drivers had driven at 50mph in a 30mph limit within the last 3 months, and a fifth had done 80mph on the rural road and 90mph on the dual carriageway – this group was termed ‘excessives’.

Comparisons were made between straight and bendy roads, good and bad weather, and day and night time. Investigation of the absolute speeds of different groups of drivers and their speed adjustments in response to different conditions revealed which types drivers whose speeding behaviour may present most risk.

## TRAVEL IN RURAL AREAS

### Orkney’s passenger transport initiatives to support sustainable tourism

*Adele du Feu, Orkney Islands Council*

Tourism inputs around £27m each year into Orkney’s economy, and with around six times more visitors each year than there are residents there is considerable demand for visitor transport. In order to reduce the carbon emissions from car trips around the isles, Orkney Islands Council (OIC) has developed a basket of initiatives to assist tourists and locals to access the isles’ attractions in the most sustainable way possible, as part of a commitment to the County’s heritage, Orkney’s future and the global environment.

The implementation of Orkney’s passenger transport information strategy will ensure public transport information is up to date and readily available in a variety of formats for all travellers. Multi journey ticketing initiatives have also been developed and currently travellers make use of explorer tickets for ferries and integrated ticketing is available for travel between the Scottish Mainland and destinations across Orkney; a

ticket can be purchased from any rail station in the UK for travel via Aberdeen or Thurso/Scrabster to Orkney.

A new pocket sized integrated passenger transport timetable has been introduced with positive feedback from the public, and OIC’s new initiatives stem from this. A family of public transport information leaflets has been developed to provide information on specific routes, as well as recommended days out by multi-modal public transport opportunities. The leaflets and an online resource suggests an itinerary which serves as a self guided package tour providing public transport timings, visitor attractions, and things to see and do en route. An integrated bus and ferry ticket will be available for these days out in Summer 2008. This paper will show how sustainable transport can be developed to meet tourists’ needs, whilst protecting the natural heritage which attracts visitors to Orkney in the first place.

### Rural Transport to Employment services

*Ursula Cooper, T2E, Prof John D Nelson and Dr Steve Wright, University of Aberdeen, James M Cooper, Napier University*

Although access to employment is treated as a generic issue in policy, transport gaps are a specific and personal. Employment issues therefore often fail to deliver at the local scale. The differences between the generic and the specific, and a natural concentration on larger, rather than individual solutions, have led to a gap between needs identified on the micro-scale and solutions applied from a regional or council scale.

The Transport to Employment service (T2E), operated within the Highlands of Scotland, is designed to meet individual needs with improved access for local communities and individuals. The cost and effectiveness of T2E is compared with other similar access to work schemes (e.g. wheels to work, other DRT or minibus-based schemes), and with the costs of more traditional transport services. It is identified that, significant benefits may be achieved by the use of focused DRT in preference to more traditional responses to increasing access for rural communities.

## Traffic Signals: Innovation and Reality

*Andrew McNab, Renfrewshire Council*



This paper explains the process of installing state of the art traffic signals at two simple t-junctions in the village of Bridge of Weir, the less than satisfactory outcome and the steps the Council took to resolve congestion problems. Renfrewshire Council set an aim to enhance Bridge of Weir centre by reducing traffic speeds and improving pedestrian facilities. However the council found this to be a very sensitive and emotive issue. Two linked traffic signal installations were intended to address a particularly difficult pedestrian crossing

problem and assist traffic emerging from side roads onto the main road through the village. However the traffic signals performed poorly and the paper explains how the technical problems were resolved, explaining why the initial design 'got it wrong' and the significance of this for the community.

## One – Ticket: The Triumphs, Perils and Pitfalls of the Development of a Multi-Modal Ticketing Scheme

*Stuart Lockhart, tie ltd and David Scotney, Atkins Transport Planning*

Many local authorities and public transport operators would like to gain the benefits of integrated ticketing; but view with trepidation the requirements of the Transport (Scotland) Act 2001 and the 'Guidelines' under the Competition Act 1998. A partnership of national and local authorities and public transport operators has developed an integrated public transport ticket scheme for South East Scotland over the last 8 years. This has not been an easy or fast process, it has not been 100% successful in all its steps or overall objectives, but it has been achieved with pragmatism and considerable learning during the process.

The ONE-TICKET scheme was developed from concept to reality by a partnership involving SESTRAN and all the major public transport operators in the area. Initial finance was provided by the Scottish Executive and a jointly owned company, ONE-TICKET Ltd, was set up to manage the scheme.

The development of the project included work on: pricing policy, inclusion of rail, zoning, marketing, agents, tickets, legal questions, company structure, finance, surveys, staffing, trade-marks, service delivery, and many other topics related to public transport delivery. One of the most important benefits of the scheme is that a defined public transport network now exists across South East Scotland, instead of a set of routes.

The integrated ticketing scheme in place covers bus and rail and is a major stepping stone, providing scope for future development. As a result the foundations are in place for the development of new integrated public transport schemes across the area, offering strong alternatives to the private car.



## Intelligent Cooperative Transport Systems – Working Together

*Richard Harris, WSP Group*

Advanced driver assistance (ADA), cooperative vehicle highways systems (CVHS), and vehicle infrastructure integration (VII) developments are gathering pace around the world. To accelerate the pace of adoption of these technologies more interested stakeholders are needed working as part of a forum for information exchange to identify benefits and to develop business cases.

CVHS/VII is a concept where individual vehicles communicate to exchange information, with roadside infrastructure and/or with and between other individual vehicles. This enables potentially greater safety and improved efficiency through the reduction of incidents, increase in capacity and better integration of the vehicle and the roadside operations.

CVHS applications will break new ground by altering the way roads operate. Looking at the broader policy setting within which decisions might be made about CVHS, we need to start from today's policies. Policies will no doubt change and CVHS applications will influence the development of that changed policy framework. The following policy issues are likely to be particularly challenging:

- Setting a framework of responsibility for systems not wholly controlled by the driver;
- Gaining the confidence of the public for the use of CVHS derived information that will be essential for the effective management of the network;
- The cost of systems both to the user and the infrastructure provider;
- The route to implementation of more visionary systems;
- Deciding on the approach to world-wide manufacturing industry to achieve compatibility, finding the balance between mandating and allowing market forces to drive development;
- Enforcement of vehicle standards and the use of CVHS by competent vehicles and drivers;
- The shift to a controlled system and the implications for achieving safety that is the equivalent of a public transport system; and
- Delivering an operational network quickly enough to promote take-up of technology.

## Strategic Transport Planning in Scotland – Is there such a thing?

*Laurence Kenney, SIAS Limited*

The establishment of Transport Scotland accompanied by the devolution of rail powers and the publication of the National Transport Strategy (NTS) provide an exciting opportunity and framework for planning longer term strategic transport investment. The Strategic Transport Projects Review (STPR) will consider the interventions required in the national strategic transport network between 2012 and 2022 that will make a significant contribution towards the NTS and the Government's five Strategic Objectives. But is the STPR unique and will it make a difference?

Many major studies have taken place over the last two decades, by central government. Common themes to emerge are:

- The continuing importance of transport to economic growth
- The influence of the changing political landscape
- There has been an increasing emphasis on environmental issues
- Increasing widening of stakeholder involvement
- The continuing shift from cost benefit analysis to multi-criteria appraisal
- The different roles of single mode assessment compared with multi-modal studies.

## Glasgow 2014 Transport Strategy

*George Vincent, Glasgow City Council*

Glasgow was successful in its bid to host the Commonwealth Games in 2014, the development and delivery of the Bid was an example of inter agency working across all levels of Government and the private sector. As part of the Bid process a draft Transport Plan was developed to demonstrate how to move people around the City. The paper describes how the joint working amongst partners is being managed through the Plan. As part of the Bid process a draft Transport Plan was developed to demonstrate how to move people around the City. The paper describes how the joint working amongst partners is being managed through the Plan.

## Making Sense of the Big Issues – Climate Change and Peak Oil

*Scott Leitham and Stephen Canning, MVA Consultancy*

Transport issues are today more political, high profile, and in the public domain than they have ever been. At the heart of this are the two major issues affecting the way in which transport will develop in the coming years – climate change and peak oil. Clouding the picture is that fact that both of these areas are often subject to conflicting claims by individuals and organisations.

Of the two issues, there is a greater consensus regarding climate change. The UK and Scottish Government have clear positions regarding climate change, emissions targets, and, in particular, transport's role in meeting these targets. The issue of peak oil and its implications are rather less clear cut. Peak oil is defined as the point at which oil production peaks. In the face of increasing demand for oil, in particular from rapidly developing economies and population growth, prices will rise dramatically after the peak has been reached. Dramatically increased fuel prices would have a major impact on both national economies and individuals' travel choices.

The paper seeks to present a balanced perspective and context to aid understanding of these crucial areas.

## Examining the wider context of rail-air competition between Scotland and England and Wales

*Ross Clark, Transport Scotland*

There is a growing interest in Scotland for promoting the use of rail in journeys to the rest of Great Britain which are otherwise undertaken by air. This interest is both because of the desire to promote rail as an environmentally friendly mode of transport, and because of separate ongoing interest in a high-speed rail system. The last dozen years have seen substantial growth in the cross-border market, because of a strong economy; but rail passenger loads have been static or declining, even as air passenger loads have grown strongly. The paper provides an analysis of the trends and changes in the cross-border market since 1994/95, and in particular emphasises the effects of the decrease after 2001 in airfares, whilst long-distance rail fares kept climbing.

After several years of growth, demand within the cross-border market has now levelled out, with some individual markets segments actually in decline. Against those trends, there has been substantial growth in demand to markets outwith the United Kingdom, reflecting a substantial change in market preferences. The promotion of rail services is made problematic if the markets in which rail is competitive, are themselves not growing or even in decline. Market trends can 'ruin good (policy) intentions'.

## Road Equivalent Tariff

*Paul McCartney, Halcrow Group Ltd*

Scottish Government is looking at the potential impacts of introducing a Road Equivalent Tariff (RET) fares system for passengers, cars and commercial vehicles travelling on subsidised ferry systems in Scotland directly supported by Central Government i.e. the CalMac and NorthLink ferry networks. The Road Equivalent Tariff is based on a system whereby those vehicle users travelling on a ferry should pay a tariff which costs no more than travelling the same distance by road.

There are a range of approaches to fare setting for public services ferries in other countries. The research concentrated on Denmark, Sweden, Norway, Spain, Ireland, Germany, Canada and New Zealand. RET fare systems could be applied to all categories of passenger and vehicular traffic in the context of ferry fares for the Clyde and Hebrides and Northern Isles routes. There are broad impacts of these changes including: social and economic impacts, affordability issues for the Scottish Government, and capacity constraints on the networks (vessels and supporting infrastructure). Recommendations have been made to the Scottish Government on the design and implementation of a pilot study applying an RET fare system on one or more of the routes connecting the Scottish mainland to the Western Isles.

## Upper Forth Crossing at Kincardine: Meeting the environmental challenge

*Steven Brown, Transport Scotland and Helen Bradley, Jacobs*

One of the biggest challenges facing the construction industry is the need to construct essential infrastructure whilst protecting the environment for future generations. This paper describes how the environmental sensitivities of the Forth Estuary have shaped almost every aspect of the scheme including route selection, bridge design, construction methods and programme.

The salt marsh and mud flats along the banks of the estuary at Kincardine form part of the Firth of Forth Special Protection Area (SPA)/Site of Special Scientific Interest (SSSI)/Ramsar Site. They are of international importance as feeding and roosting grounds for several species of migratory and overwintering birds. The need to minimise impact on the SPA/SSSI/Ramsar site was recognised from the outset and the scheme currently under construction features: a route alignment to avoid sensitive locations, bridge spans rather than road embankment over the mud flats, and a construction period to minimise disturbance to birds.

## Moving lizards and snakes from the path of new roads and improvements

*Warren Cresswell, Jackie Hay, Mike Head and Rhiannon  
Whitworth, Cresswell Associates*

Whilst some reptile species are widespread and relatively common across much of Scotland and northern England, others constitute local nature conservation priorities. This paper presents a framework within which reptile colonies or populations, or habitat features used by reptiles can be 'valued'.

Translocation and displacement measures are now carried out routinely, although research to monitor the success of such measures has been limited. Translocation is often the only mitigation option available, particularly where reptiles have colonised road verges that are bordered by less suitable habitats, and are threatened by on-line widening projects. Reptile translocations include: receptor site selection, capture methods and effort, releasing reptiles and monitoring the success of the translocation. The research covers research and practice from 2006 and 2007 associated with the A74 upgrading.

## Web Surveys and CO<sub>2</sub> footprints

*Euan Hamilton-Rigg, Colin Buchanan*

Estimating an organisation's annual CO<sub>2</sub> footprint has the potential to form an important part of their Travel Plan. Colin Buchanan was recently commissioned by the University of Edinburgh to design, manage and analyse staff and student travel surveys. The use of web-based travel surveys to provide an estimate of the CO<sub>2</sub> footprint of the respondents' travel to work is a novel approach to help encourage shared understanding of travel choices.

A unique CO<sub>2</sub> footprint was calculated for each respondent after completing the comprehensive web-survey. Suggestions were then made as to how this footprint could change were they to change the way they travelled. This served to both inform the respondent of their current impact on the environment and provide realistic options for reducing this impact.

The CO<sub>2</sub> footprints of individual respondents were then used to estimate an annual CO<sub>2</sub> footprint for the University as a whole. Alongside continued monitoring of staff travel behaviour, this has significantly enhanced our client's understanding of their overall impact caused by travel.

## The Role of the European Commission in Reducing Greenhouse Emissions from Trucks and Buses

*Jonathan James, Faber Maunsell*

The European Commission, recognised the absence of European wide policy action to tackle emissions from trucks and buses. In December 2006 the EU commissioned a consortium led by Faber Maunsell to research, verify and then recommend ways in which the European Commission could intervene.

The wide ranging research has covered actions including: Propulsion Technology; Equipment & Systems; Performance Management; Developing Skills; and Fuel Saving. The potential measures within the competence of the EU have been identified as: Regulation, Incentive, Information Campaign, Directive and Funding Research and Development.

## Measure, Monitor, Minimise: Energising Transport for Climate Change

*Debbie Ross JMP Consulting*

The Climate Change Bill requires companies to measure carbon emissions including from staff and freight transport and set in place measures to monitor and reduce emissions. This paper presents recent examples where JMP have helped businesses reduce their carbon footprint.



## Innovation in Scottish Transport

The Scottish Transport Applications and Research (STAR) Conference has become one of the main annual events for staying up to date with the latest best practice. This year STR once again summarises the papers to be presented on 24th April at the Glasgow Royal Concert Hall. Opening presentations will be from Stewart Stevenson MSP, Minister for Transport, Infrastructure and Climate Change, and Professor Phil Goodwin from the University of the West of England. For further details about booking or attendance contact Ian Chatfield or Helen Marshall at PTRC, Phone: 020 7348 1970, Email: helenm@ptrc-training.co.uk..

### IMPROVING THE RAILWAYS

#### The Railways Mean Business: Attracting Business Travellers from Air to Rail

*Jolin Warren, TRANSform Scotland*

The high volume of business travel between Glasgow/Edinburgh and London is largely carried out by air instead of rail. This is of concern as air travel produces far greater greenhouse gas emissions than rail travel. In other countries with similar distances between major cities, rail accounts for a majority of the market, and so a modal shift from air to rail for business travellers on the Glasgow/Edinburgh routes appears possible.

Research was therefore undertaken to evaluate the business case for travelling by rail instead of air between Glasgow/Edinburgh and London. By analysing rail's competitiveness with air for business travel, messages are highlighted to emphasise rail's advantages to the business community and the improvements that could make rail more competitive.

The research found that rail offers clear and significant advantages to maximise productivity, rather than considering the narrow aim of minimising travel time. Rail was also found to compete well on issues such as punctuality, comfort, and stress. Improvements to help rail compete include ticketing, travel policies, fare structures, and communications.

#### Edinburgh Waverley Redevelopment: Simulating the Future

*Paul Rawlins, Corus Railway Infrastructure Services and Julian Heathcote, Transport Scotland*

The £150M remodelling of the western approaches to Edinburgh Waverley station has just been completed. The engineering work was the first of several major projects in Scotland using an operational modelling approach using a scale computer model of the existing layout, with future developments being overlaid onto this. The modelling work undertaken gave confidence that the layout would allow an altered service to operate during construction, and that the full train service could operate within acceptable performance levels.

Sensitivity testing, such as the effect of removing individual services, was a key part of the modelling and close contact between all the affected stakeholders allowed last minute alterations to the programme. The success of the total Waverley project means that modelling will be an integral part of future projects. The results of the modelling appear sufficiently accurate to determine the traffic level the proposed layout would be able to support.

### BUS TRAVEL

#### Concessionary bus fares reimbursement in Scotland: is the Scottish Government paying too much?

*Tom Rye, Transport Research Institute, Napier University*

The concessionary fares scheme for elderly and disabled people reimburses bus operators for carrying concessionary passengers. In 2005/06, locally negotiated concessionary reimbursement was £90 million; in 2006/07, this rose to £159 million when national government took over reimbursement using a single, simple, national formula. The scheme in 2005/06 permitted free concessionary travel within existing scheme boundaries (local authorities, or groups of them), whilst the scheme since 2006/07 permits nationwide travel.

The reimbursement formula on which the Scottish reimbursement formula is based was developed from a 2003 formula used in Wales. The research also compares this with evidence from studies of concessionary fares in England. Using National Travel Survey data, relationships have then been derived that show the number of people who would have travelled by bus in the absence of the scheme. If these derived relationships are used to ensure that Scottish bus operators should be "no better and no worse off" as a result of carrying concessionary passengers, then a rather different estimate of what should be reimbursed emerges.

#### Development and Applications of New Bus Route Mapping

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Improved mapping information for bus travel has potential to make bus travel more attractive. The research investigated the potential of the 'Stop-Specific' Bus Map (SSBM). Many people have difficulties with general map reading tasks and a SSBM is designed to simplify map information to only show routes that call at an individual stop. Tests compare the behaviour of people using SSBMs versus 'traditional' information media. The research discusses why people understand some maps and not others, and discusses the potential for wider introduction of SSBMs to improve bus patronage.