CENTRAL SCOTLAND TRANSPORT CORRIDOR STUDIES

A Submission on Scenarios and Methods

TRANS*form* Scotland September 2001

TRANS*form* Scotland was formed in 1997 and is an alliance of 66 Scottish organisations seeking faster progress towards sustainable, integrated and socially inclusive transport incorporating substantial programmes for road traffic reduction, traffic calming and shifts to shorter trips and improved conditions for walking, cycling and the use of public transport. TRANS*form* Scotland has been a member of the Steering Group for the Central Scotland Transport Corridor Study (CSTCS) since it commenced early this year. Concluding recommendations from the Study are expected by April 2002.

SUMMARY

TRANS*form* Scotland has grave reservations about the methods and assumptions of the Central Scotland Transport Corridor Study (CSTCS) being conducted by MVA for the Scottish Executive. On present evidence, the Study reflects an outmoded 'predict and provide' approach to roads. Instead, the study should be reflecting the Scottish Executive's stated intention that it provide a powerful focus and analytical backup for deliverable and sustainable multi-modal transport and land use strategies over the next five years with some indication of possibilities to follow. The Study must be seen to tailor restricted public funds to best effect, easing congestion and improving the environment and social inclusion through an integrated range of smaller schemes rather than being skewed to a £250 million completion of the urban M74 which, in any case, could not be completed before 2008.

Given the other priorities to be met from the limited resources of the Scottish Executive, TRANS*form* Scotland considers that there must be full evaluation of the **benefits of road traffic stabilisation** and **shifts to shorter trips, walking, cycling and public transport** as part of integrated strategies for sustainable economic development in the west of Scotland with shared gains for social inclusion and the local and global environments. The CSTCS must be seen to be adopting this approach rather than projecting outmoded past trends for road traffic growth and suggesting that the scope for shifts from this position is highly marginal. This fails to fit with the actual evidence since 1995 showing an overall stabilisation of Scottish road traffic and a rise of 20% to 40% in rail passenger and freight movement. This change of trend, reinforced by stated aims in the Scottish and UK Transport White Papers of 1998, needs to be encouraged – not slowed – by the CSTCS. The Study must deliver a package of acceptable and realistic improvements in policies and programmes by 2006. On present indications, it is failing in this task.

Background

TRANS*form* Scotland is making this submission in advance of the initial consultation on specific plans for the A8/M8, A80/M80 and urban M74 corridors due at the end of this month. TRANS*form* Scotland has serious reservations about the methods applied in introductory scenarios and about the nature of these scenarios. These reservations need to be addressed as part of work about to take place on the evaluation of particular corridor interventions over the next five years and in the medium to longer term. Some particular issues on which early responses are sought from the Scottish Executive and MVA as lead consultants are listed in the Appendix but the main features of the reservations about present methods and forecasts are outlined below.

Time Period Priorities

In earlier presentations, MVA has argued that a key feature of the approach is to focus on what is deliverable within policy objectives in the next five years rather than project backwards from less certain forecasts for 15 to 20 years in the future. Medium to longer-term interventions, according to MVA, are to be influenced by the observed results for movement and modal share in the next five years. MVA also emphasised the fully multi-modal nature of the studies, including links with land use and other policies.

In contrast, the actual presentation of scenarios has concentrated on **road vehicle mile forecasts for 2020** with particular reference to expected 'do minimum' road flows at particular points between Baillieston and Newhouse, Stepps and Haggs and on both the existing M8 and proposed urban M74 in the immediate Glasgow area. At most of these points, the background scenarios suggest growth of some 50% to 70% in road vehicle flows by 2020. Yet no equivalent information is provided for **rail and bus flows** at related corridor points nor are there any forecasts for **walking and cycling**.

The omission of walking and cycling may be justifiable on the grounds of highly marginal impacts on road vehicle flows at the selected points under the 'do minimum' background scenarios but any such conclusion requires explicit evaluation. TRANS*form* Scotland, looking to stated government policies, would certainly expect cycling to rise from possibly only 1% of trips to at least 4% of flows on identified corridors within 20 years. The omission of flow data for rail and bus is more regrettable since, even under 'do minimum' conditions, recent trends suggest that a more substantial rise in the share of rail and bus in corridor movement could be achieved by 2020/21. It is also urged that, **in view of the high proportion of funds taken up by the M74 in the 'do minimum' spending programme, this road should be excluded from the 'do minimum' background scenario and flow forecasts adjusted to take account of this**.

To reflect the emphasis placed on the next five years, Background Scenario forecasts (compared to1995 and present usage by mode)are required for 2005/06. These would, of course, exclude the urban M74 since - even if funds become available – this road would not be completed until around 2008.

TRANS*form* Scotland therefore recommends that:-

a) **Multi-modal Background Scenario 'do minimum' data should be provided for 2005/06**
b) **Background 'do minimum' Scenarios to 2020/21 should show mode-divided data for passenger and freight flows** on the respective corridors with subsidiary data on related vehicles passing particular corridor points (and including stated assumptions on car-sharing, train size and shifts in lorry weights and load factors)
c) **The 'do minimum' Scenarios should exclude provision of the urban M74** (in the same way as all substantial rail schemes have been excluded)

Forecasting Methods and the Nature of Scenarios

TRANS*form* Scotland is very concerned that the background scenario road flow forecasts (showing 50% to 70% growth in road vehicle miles) are out of line with the actual evidence of overall road traffic stabilisation in Scotland since 1995 (Scottish Transport Statistics, Vol 20, 2001 p97) and much stronger growth in rail usage. There is a need to check that the model used to forecast travel demand for 2000-2020 is sufficiently robust to produce forecasts for 1995-2000 which correspond to reality. Present indications are that the model has major defects, producing excessive forecasts of road demand and stable or falling forecasts for public transport use. In terms of best value and integrated transport objectives, it is alarming that the Minute of the CSTCS Steering Group meeting on 19 June recorded that *'the model used cross-sectional data which could not be adjusted to take account of the recent growth in rail use'*. This is tantamount to saying that the model is not 'fit for purpose' and requires urgent correction, or the use of alternative techniques, to produce realistic background scenarios.

The Consultation Forum on 14 August again raised concerns about the appropriateness of the background scenario assumptions about fares, pricing and public transport service levels. It was argued that present levels of fares and road pricing at the point and time of use were not 'about right' and required correction to ensure that prices applied were in line with government objectives for integrated, sustainable and inclusive transport. It was further argued that there was scope for increases in train and bus miles with relatively minor adjustments to raise rail track capacity and improve bus reliability. An undertaking was given to revisit these issues.

Adjustment of Background Scenarios

TRANS*form* Scotland considers that there are three main factors in the present Background Scenarios producing excessive forecasts of demand for car use and pessimistic forecasts for public transport (and, by implication, for walking and cycling). These are-

- **linear relationships based on projection of trends over the past 20 years** (actual trends over the past five years have been much more favourable to public transport and TRANS*form* Scotland would argue that these more recent trends are more reliable indicators of future trends before further adjustment is made for policy changes to improve the delivery of integrated, sustainable and inclusive transport)

- **failure of model to take account of 'non-policy' factors influencing the level and distribution of demand for movement** (there is agreement with the view that, in themselves,'hearts and minds' initiatives will have little impact but, in addition to the present situation of being closer to maximum levels of car ownership (unlike 1980 to 1995), there is also evidence of spending and time preferences shifting away from car use as technology changes and incomes rise i.e. a mainly linear model is not taking adequate account of car use increasing by substantially less than rates of increase in incomes in the study area while rail use (and cycling) is rising above rates of income growth – with urban bus use beginning to move in a similar direction, reversing a long period of decline)

- **erroneous assumptions that:-**
    1) **fare levels and structures and means of road pricing are 'about right'** and closely related to government's objectives for a higher productivity, sustainable economy and social inclusion
    2) **a doubling of fuel prices and/or congestion charging in the west of Scotland is politically unacceptable**

As argued by SACTRA in 1999and in the recent University of Leeds report to DTLR, present fares and road user charges on busy corridors are substantially adrift from marginal cost principles and social inclusion objectives. Present approaches encourage, rather than discourage, congestion and fail to internalise the substantial external costs of transport. Present political views are affected by unjustified assumptions that the Scottish Executive will release funding for a 'wish list' of transport schemes without requirements to evaluate priorities and ensure significant funding from regional and local sources (including the private sector). It is more realistic to assume some increase in the real cost of fuel plus supplementary charges (and traffic management/parking policies) to ensure cuts in traffic levels and improved local and global environments. In particular, the remit to MVA must make it clear that the impacts on greenhouse gas reductions will be an integral part of multi-modal corridor objectives (including the possibility of real increases in fuel prices) in line with continuing government aspirations (as stated in the 1998 Scottish Transport White Paper) for 20% cuts in greenhouse gas emissions by 2010 with continuing cuts thereafter. So far, progress in Scotland in cutting greenhouse gas emissions has been much slower than in England with a clear need for further action (including actions within transport) to ensure sustainable development.

TRANS*form* Scotland recommends that the Background Scenarios be amended to take account of the factors listed above. In considers it likely that, in the absence of other policy changes, the cumulative impact of such factors would be forecasts confirming a near stabilisation of road traffic levels in the west of Scotland over the next 5 to 10 years (given an expected marginal fall in population and real income growth around 1.5% a year). Traffic on major roads free of frontage development could be somewhat higher due to deflection from urban roads with lower speed limits and traffic ceilings. However, flows on the A8 and A80 would be unlikely to be more than 20% above current levels and more evenly spread between peak and off-peak (rather than MVA forecasts of 50% to 70% growth by 2020). Independent analysis of such views would be welcomed and should be an integral part of remaining stages of CSTCS. <u>The views of the academic referees for CSTCS should be sought on this issue and made available to interested parties</u>.

Another flaw in the present CSTCS approach is to apply sensitivity tests to the impact of singly defined changes in background assumptions. This ignores the

synergy arising from the impact of integrated application of a range of assumptions, each tending to reduce road vehicle miles and enhance public transport use. This should be addressed through explicit evaluation of a Sustainable Transport Scenario incorporating an extensive range of policy assumptions favourable sustainable transport, road traffic reduction and cumulative cuts in greenhouse gas emissions.

A Sustainable Transport Scenario

The suggested amendments to the Background Scenarios require comparison with assessed outcomes from a Sustainable Transport Scenario reflecting the strong application of policies for sustainable transport and social inclusion over the next five years and in the longer term. The policy aims of such a scenario should include:-

- UK measures to ensure that fossil fuel use per passenger mile and tonne mile moved by surface transport is reduced by around 12% by 2011 and 25% by 2021 (higher targets could be set but are not considered realistic)
- Central Scotland measures to ensure overall cuts in road traffic levels of 10% by 2011 and 20% by 2011 (giving overall cuts in greenhouse gas emissions from surface transport of around 20% by 2011 and 35% by 2021)
- area measures to produce cuts in road speeds and in road traffic levels on frontaged streets and in other sensitive areas (with road vehicle flows falling by 15% to 85% depending on the character of local areas)
- application of land use policies and green travel plans to encourage shifts to shorter trips, car-sharing and shifts from car use to public transport, walking and cycling
- application of road user charging and tighter policies for parking in the west of Scotland with at least 75% of arising income becoming available for additional road safety measures, traffic calming, road and pavement maintenance, fares reform and improvements in the quality and range of public transport, walking and cycling networks.

This policy scenario should be evaluated in terms of the impact on sustainable economic growth and social inclusion. The TRANS*form* Scotland expectation, in line with the evidence in SACTRA's 1999 report on *Transport and the Economy* is that this scenario would perform well in relation to alternatives, including comparison with the amended Background Scenario. Arguments to this effect were contained in the 1999 report of the Scottish Forum for Transport and the Environment on *Transport Policy Options for a Sustainable Scotland, 2000-2020.*

Deliverable Priorities

Finally, TRANS*form* Scotland would re-emphasise the desirability of a greater proportion of CSTCS resources and consultation being focused **on sustainable yet business-friendly policies and programmes which can be delivered by 2006** without abstracting funds from other important priorities of the Scottish Executive. Faster and more decisive action on such deliverable programmes must co-exist with measured study of medium to longer-term options**. Work programmes and implementation should focus on 2006, not 2021.**

APPENDIX : Specific Questions relating to CSTCS Background Scenarios

(references, unless otherwise stated, are to *CSTCS Report on Scenario Building*, Sept, 2001)

Minute of 19 June Steering Group Meeting p 2 reference 10 - there is a need to explain why cross sectional data prevents an audit of Central Scotland Transport Model results against actual results for 1995-2000 – including a large rise in rail use for unexplained reasons.

1.1.1 This mentions only the Executive's five main transport objectives. Should there not also be reference to the Executive's objectives for cuts in greenhouse gas emissions and a statement of views on the implications for transport and for fiscal/land use patterns?

1.1.4 The Minister's reference was to acceptance of a strategic road link on the M74 urban corridor. Can this be confirmed along with the view that CSTCS will be giving consideration to the nature of this link within a corridor package?

2.2.9 Given earlier research and the importance of fiscal policies giving suitable signals in relation to cuts in greenhouse gas emissions, would it not be sensible to include the assumption of a shift from national VED rates to revenue neutral rises in fuel duty? (earlier research suggested that this would help to encourage shifts of longer trips (above 20 miles) to rail or water modes; the change would also strengthen incentives for fuel saving and the avoidance of marginal trips)

2.2.12-15 These sections ignore recent research (notably at Leeds University) suggesting that fares and pricing levels and structures are not 'about right'. They also fail to stress the importance of assessing the impact of integrated change in fares and road pricing.

2.2.17-31 These sections ignore the probability that political views on charging may change if desired funding cannot be obtained otherwise. Account has also to be taken of strong economic views in favour of more differentiated charging.

2.2.32-33 This 'hearts and minds' section ignores the evidence that spending and movement patterns are producing relative shifts away from car use for reasons unconnected with policy or campaigns to affect attitudes.

3.1.13 What are the results of integrated sensitivity tests involving a combination of assumptions encouraging shifts from car use to public transport plus greater use of public transport by those without direct access to cars as part of social inclusion objectives?

3.2 Why was consideration not given to a range of policy-based Background Scenarios reflecting the objectives of the Transport White Papers and related documents?

3.2.10 Conclusion that fare changes have little effect on car trips is puzzling and appears to conflict with evidence that fare offers (including significant off-peak reductions) have raised public transport usage and been accompanied by road traffic stabilisation – though commercial considerations (ignoring external costs) still foster rises in off-peak usage rather than shifts from car use at peak. Did the sensitivity tests take account of these variations within fare levels and structures and was it checked against actual outcomes since 1995?

3.2.11 Conclusion that service levels have little effect on car trips is puzzling and appears to conflict with Scottish evidence showing that improved frequency has a positive effect on usage and attracts people who might otherwise have used cars (notably in off-peak rather than peak periods, again reflecting the fact that present commercial incentives are not well aligned with the objectives of integrated transport and shifts away from car use, especially at peak periods on busy corridors). Did the sensitivity tests take account of actual outcomes since 1995?

Fuller consideration is also required of what is meant by a 'small' impact. A 1% shift from car use in any one year may appear 'small' yet be 'large' at the margin if road vehicle mile growth has itself slowed to 1% a year or less. Cumulative effect of integrated changes are likely to be larger over a period of years.

3.2.12 The justification for shifting congestion charging to the Plan stage rather than the Scenario stage is suspect since recent research has emphasised the importance of changing charging systems and the relative price of car use and public transport at the point and time of use as an important framework or scenario issue for British conurbations and inter-urban routes. Such a change is probable within the next ten years and could be a more efficient and more equitable substitute for either a doubling of fuel prices over the UK as a whole (with some rural concessions) or increased fuel prices in urban zones and along inter-urban corridors. These changes also seem politically essential to meet targets for cuts in greenhouse gas emissions

4.1.6 Fuller explanation is sought of the methods used in converting 'trip' forecasts to road flows at specific points. Also, what assumptions have been made about car occupancy rates (divided between peak and off-peak) and about lorry weights and load factors? Since the study is multi-modal, why has data not been provided for bus and rail flows at points comparable to the road vehicle points with 2000 and 2020 or 2021 comparisons? Given the emphasis on the importance of delivery over the next five years, why have scenario forecasts not been given for 2005/06?

What are the Background Scenario forecasts for estimated movement and modal share in the West of Scotland and how do these relate to the recent forecasts produced by Steer Davies Gleave? (It is expected that such forecasts would be somewhat lower for overall road vehicle miles in the west of Scotland than flows at particular points on strategic routes)

Table 4.7 Can this table be adjusted to show car driver/ passenger flows at the selected road points along with bus passenger flows and rail flows at comparable points (with supplementary material on road and rail freight)? To what extent, if any, are the road vehicle flows in the Table influenced by constraints in road supply? From the projected increase in flows, it seems that capacity constraints have not been applied except perhaps at peak periods. Could the actual position be clarified and data provided for 1995 and 2005/06 as well as 2000 and 2020? How would the figures vary given an assumption that the urban M74 was replaced by a scheme for local access and local traffic relief (rather than diversion of through traffic presently using M8 and other roads through Glasgow)? What assumptions, if any, are made about the traffic generating impact of the urban M74?

Since the urban M74 was not available in 2000, why does Table 4.7 include flows on a road which did not exist? Data is therefore requested for existing roads in Table 4.7 in 1995 and 2000 (including any assuptions on traffic constraints arising from lack of the urban M74). It is further suggested that data be included on peak period car-occupancy levels (likely to confirm that some 75% to 85% of cars at this period had single occupants, reflecting very poor use of scarce road space).

Could data be added to expected levels of congestion relative to the present position and on the costs and nature of expanded road capacity required to handle the 2020 flows shown in Table 4.7? Even with (and, indeed, because of) construction of the urban M74, Table 4.7 implies serious levels of traffic congestion on the M8 west from the Kingston Bridge, on the M8 at Townhead and on the present sections of the A8 and A80 between Baillieston and Newhouse and Muirhead and Haggs (though the TRANS*form* Scotland view is that actual traffic levels will be considerably lower, given realistic assumptions). Attention is not drawn to similar, and more likely, pressures for action to raise rail track, platform and vehicle capacity to handle expected flows. This represents an unbalanced and unsustainable approach.

4.2.4 This paragraph is not understood. It seems to argue that lower fares and improved service levels were not assumed because this would make it more difficult to justify further service improvements and/or fare changes at the Plan stage yet, for roads, there are assumptions of no increase in road charges plus provision to expand capacity so that predicted road vehicle flows can be handled. This is not an even-handed approach and distorts outcomes.

5 The assumptions about infrastructure investment in the Recommended Main Scenario need clarification. Is all infrastructure investment excluded other than what is stated in Appendix 5 (which includes a division for expected completion by 2005 and 2010)? If this is the case, how can the Main Scenario be reconciled with the road vehicle flows shown in Table 4.7 (which appears to require further road investment to handle flows expected while making no allowance for the relatively small and incremental rail investments needed to enhance capacity) An even-handed 'do minimum' approach to rail and bus flows is missing with an unjustified assumption that the urban M74 will be added to the 'do minimum' between 2006 and 2010 before evaluations have been made of the best use of restricted funding both to, and beyond, 2005/06.

Minutes of 14 August Consultation

12 Refers to Steve Williamson saying that fares policies were a possible tool for use in Plans but that it was unclear how fare changes might be introduced under current legislation. *Comment Change could be introduced in at least three ways:-*

- *by operators seeing commercial opportunities in a competitive, level playing field context (see the recent trend towards lower off-peak fares and other special offers on busy corridors) (bus innovation can also be aided through effective bus priorities and off-vehicle fares lowering costs and encouraging further cuts in fares with higher profile marketing allied to favourable land use policies)*
- *by introducing conditions on integrated fares in the present (or modified) systems for Bus Fuel Duty Rebate for local scheduled buses*
- *by introducing fares conditions in the bus quality contracts allowed under the Transport (Scotland) Act (similar contracts and franchises also allow specification of change in rail and ferry fares; ScotRail refranchising provides an imminent opportunity).*

Finance for fares restructure can also come from Scottish Executive sources (as in the current introduction of free local bus travel after the morning peak for pensioners and the disabled from 2002) and from the use of funds arising from congestion and parking charging.

Steve also referred to his views that fares and service levels had no significant effect on road traffic levels *Comment This view runs counter to an increasing weight of evidence and the views of major operators, notably in a context where overall road traffic growth is slowing irrespective of policy changes. There is need for urgent and systematic reconsideration of this issue in the context of cumulative relative change in fares and quality of public transport service relative to car use over the next five years and beyond. Crucial issue is introduction of higher prices for road use at congested periods in conjunction with fares reform and public transport service enhancement (plus support for walking and cycling).*