

TAYSIDE AND CENTRAL SCOTLAND TRANSPORT PARTNERSHIP**23 JUNE 2009****TAY ESTUARY RAIL STUDY****JOINT REPORT BY TREASURER AND DIRECTOR**

This report informs the Partnership of the outcome of the Tay Estuary Rail Study and asks the Partnership to endorse the conclusions for formal submission to Transport Scotland. The report also seeks authority for officers to engage with the rail industry and partner Councils on further development of the Tay Estuary Rail Study proposals. The report also seeks endorsement of further development by consultants.

1 RECOMMENDATIONS**1.1 That the Partnership :-**

- (i) endorses the conclusions of the Tay Estuary Rail Study as outlined in the report;
- (ii) approves the formal submission of the study to Transport Scotland;
- (iii) seeks authority for officers to engage with partner Councils, Transport Scotland and rail industry organisations to take forward the conclusions of the study;
- (iv) endorses the appointment of Steer Davies Gleave to undertake further development work as described within the report at a cost of £9,250; and
- (v) notes the completion of rail station travel habit and car parking surveys.

2 BACKGROUND

- 2.1 At the meeting on 29 April 2008 the Partnership approved an indicative RTS Implementation Programme utilising £405,000 from a total Scottish Government Grant of £615,000 for core and non-core Revenue expenditure (Report RTP/08/09 refers). This included a budget allowance of £120,000 for the Tay Estuary Rail Study.
- 2.2 At its meeting on 9 December 2008 the Partnership approved the award of a contract to consultants Steer Davies Gleave to undertake a STAG type appraisal and develop a business case for an additional hourly “semi-fast” service between Arbroath – Dundee – Perth – Stirling – Glasgow, with potential additional stations, at a cost of £94,500 (Report RTP/08/33 refers).
- 2.3 At the meeting of 10 March 2009 the Partnership approved the appointment of SiAS Limited to procure, manage, analyse and report on a programme of station car parking and passenger travel behaviour surveys at all stations within the TACTRAN region.

3 DISCUSSION

Scope/Description of the Study

- 3.1 The overall scope of the study was to undertake a STAG type appraisal and develop the business case for possible enhancement options to provide an hourly stopping rail service on the Arbroath to Glasgow rail corridor, with potential for additional stations at locations such as West Dundee, Blackford and Greenloaning. In addition a new Park and Ride Station at Bannockburn was to be considered.
- 3.2 In order to take this forward a Steering Group was formed consisting of representatives from TACTRAN, Transport Scotland, Network Rail, Transport Scotland, First Scotrail as well as consultants Steer Davies Gleave. In addition to the Steering Group, the partner Council's Transportation Officers Liaison Group was kept informed of developments and presentations and consultation took place at three stages with the TACTRAN Regional Rail Forum members.
- 3.3 The study followed a Scottish Transport Appraisal Guidance (STAG) type process with the agreement from Transport Scotland that it should consider rail options only. The process followed was to develop objectives for the study; undertake a sifting process to remove any options that did not meet the objectives or were technically not feasible; carry out an outline appraisal that determined which options would be taken forward for detailed appraisal. Following the detailed appraisal a recommendation for the preferred option to be taken forward for further development has been made. A copy of the TERS Appraisal Report will be available for inspection at the Members area of the TACTRAN website (<http://www.tactran.gov.uk/members/index.html>) and a presentation will be given by Steer Davies Gleave at the Partnership meeting.
- 3.4 The study recognised the constraints that exist within Scotland's capital funding environment and that outwith four STPR projects (Forth Bridge Crossing Replacement, Edinburgh Glasgow Improvement Programme (EGIP), Highland Mainline, Aberdeen to Inverness rail improvements) funding from central Government is likely to be restricted until 2016 as a minimum and also that Local Authority funding is similarly constrained. The study therefore considered a phased approach for incremental implementation of a rail service and considered options for the short (2011-2016), medium (2016 post EGIP) and long term (beyond 2017), looking to introduce service enhancements as soon as possible.
- 3.5 The study also recognised that there was an opportunity for synergy with STPR projects, in particular Project 23 Rail Improvements between Aberdeen and the Central Belt, which looks to implement an express service between Aberdeen and Glasgow, with fewer intermediate stops and complemented by a semi fast stopping service. The recommendations of this study could help inform the complementary semi-fast service.
- 3.6 The following planning objectives were set for the study:
 - Ensure that rail provides and supports economic growth by connecting key business and employment sectors where possible;

- Improve the efficiency, reliability and integration of rail services in the Tay Estuary study area specifically where this will benefit key business and employment sectors;
- Increase accessibility to key service destinations in the TACTRAN area (e.g. employment, health, and education sites) and to/from key external destinations by rail without compromising wider inter-regional rail connectivity;
- Contribute to national greenhouse gas emission reduction through rail-based interventions where possible;
- Contribute to the management of air quality in the TACTRAN area, particularly the AQMA's across the Dundee City Council area and Perth;
- Maintain or improve real and perceived levels of safety and personal security on the rail network;
- Ensure that rail is fully integrated with relevant land-use and planning projects; and
- Ensure the rail network is integrated with the wider public transport network.

3.7 The three main outcomes of the study can be classified under three headings of Rail Service Options; Stations – New and Enhanced; and Stopping Patterns

Rail Service Options

3.8 There were two main considerations for this part of the work – what can be fitted into the timetable without materially worsening existing rail services and how well the options meet the TERS objectives.

3.9 A large number of service options were considered and through the appraisal process the following preferred options emerged:

Short Term (2011 – 2016)

Two main options for the short term were:

- an hourly service between Glasgow and Perth with a two hourly extension to Arbroath.
- an hourly service between Glasgow and Perth with a separate hourly Perth to Arbroath service.

3.10 Both options demonstrate very positive Benefit Cost Ratios (BCR). The two hourly extension has a BCR of 3.1 while the hourly shuttle service between Perth and Arbroath has a BCR of 2.7. However, the Perth/Arbroath shuttle service has a number of operational advantages, including:

- less risk of impacting on the performance of other services
- better level of service across the morning and evening peak travel period
- no potential for conflict with Highland Mainline
- has potential to provide a number of direct through services to Glasgow per day.

3.11 Therefore, the **preferred option** in the short term is an **hourly service between Glasgow and Perth with a separate hourly Perth to Arbroath**

service. The recommended timescale for introduction is hourly Glasgow – Perth in December 2010, with the separate hourly service being introduced in December 2011.

Medium Term (2016 post EGIP)

- 3.12 The ScotRail timetable is due to be recast either in 2014 when re-franchising takes place or 2016 when rail electrification between Glasgow and Edinburgh is introduced through the EGIP project.
- 3.13 Therefore, the medium term **preferred option** is an **hourly Glasgow to Arbroath service** and would be dependent upon the timetable recast and is recommended to replace the short term measures sometime from 2016 onwards.

Long Term (beyond 2017)

- 3.14 The **preferred option** for the long term would be an **hourly Glasgow – Aberdeen all station service**. However, this requires major infrastructure enhancement to the single track stretch of rail at Usan (South of Montrose) to be upgraded to two track. The estimated cost of this work is in excess of £100m.

Stations – New and Enhanced

- 3.15 A number of new stations were identified and given consideration during the study, including Bannockburn, Dunblane North, Greenloaning, Blackford and Dundee West. Other existing stations that could be enhanced were identified as Gleneagles and Invergowrie.

Bannockburn

- 3.16 Three station locations were considered at Bannockburn. Site 1 adjacent to Pike Road, Site 2 accessed from A91 Stirling by-pass and Sites 3 located at the original Bannockburn Station with access from the A91.
- 3.17 The study identified that there is likely to be conflict between the Edinburgh to Glasgow Rail Improvements Programme (EGIP) as the currently stand. However, as timetabling work for EGIP is ongoing, it is recommended that the work undertaken in TERS regarding Bannockburn Station is forwarded to Transport Scotland to help inform their EGIP work.

Dunblane North

- 3.18 Options for a station located close to the junction of the A9/M9, north of Dunblane were considered as a possible Park and Ride interchange. However, this was rejected as it did not perform strongly against objectives, required a large financial outlay as it would act as the extremity of the EGIP electrification project (£16m including optimism bias), had less demand in comparison to other sites, had flood protection issues and consequently high construction risk.

Greenloaning

- 3.19 A site close to the original station at Greenloaning was given consideration at a cost of £5m including optimism bias for providing a new station. However, there were a number of issues that led to it not being recommended for taking forward, including poor fit with objectives; modification of track layout would be required; limited scope for a car park; restricted access from the main road; and low passenger demand.

Blackford/Enhanced Gleneagles

- 3.20 Two sites were considered at Blackford, with the preferred location being at the site of the original station. The cost of providing a new station at this location is estimated at £4.5m including 44% optimism bias.
- 3.21 Gleneagles Station is currently constrained by poor road access and poor perception of safety and security. The cost of enhancing Gleneagles to a suitable standard, including road links, is estimated at £3.8m including 44% optimism bias.
- 3.22 Economically, the enhancement of Gleneagles and a new station at Blackford give a poor return individually. This is due to the relatively low catchment in the area and the fact that a station already exists at Gleneagles. The study concludes that it would not be practicable to close Gleneagles due to its historical significance and the fact it provides a twice daily stop for Inverness - London services, which could not be accommodated at Blackford without further increasing the costs. The catchment area for either station in isolation is estimated to generate only 35,000 to 40,000 passengers per year.
- 3.23 Stopping ScotRail services at both Gleneagles and Blackford would incur journey time disbenefits for other passengers on the service. These would become significant in monetary value when Glasgow - Inverness services are increased in frequency (through the Highland Main Line project). Stopping all ScotRail services at Blackford and only using Gleneagles for the intercity services results in a net increase in operating cost for the rail network which is not offset by the slight increase in patronage which may be generated.
- 3.24 At the present time, Gleneagles only receives a limited rail service. Provision of an hourly service to the current facility will in its own right make a significant improvement to rail accessibility for the local communities. Furthermore some of the suggested enhancements have to be delivered by the rail industry at some point. Funding is in place to undertake such works at all stations but it will take considerable time to reach lower patronage stations such as Gleneagles. Enhancement of Gleneagles also aligns with the planned improvements to the A9 trunk road as it would allow closure of the existing access from the A9.
- 3.25 Accordingly the study concludes that, following introduction of an hourly ScotRail service at Gleneagles in the short term, efforts to focus on realising the opportunities to improve access and facilities for an enhanced Gleneagles Station will be better served than on providing a new station at Blackford, having regard to the Ryder Cup at Gleneagles in 2014.

Dundee West/Invergowrie

- 3.26 Invergowrie station has very limited facilities, has two-car length platforms and in addition has limited scope for enhancement due to lack of land for expansion of the station. In the short term if Invergowrie is to be used it will require upgrading of lighting, Customer Information Service, CCTV and Help Point and improved waiting facilities, in addition to extending the platforms to accommodate a three car unit. The cost of this is estimated at £800,000 including optimism bias. In the longer term an alternative will need to be sought.
- 3.27 A location on the north side of Riverside Avenue, Dundee, 700m east of the existing Invergowrie Station has been identified as a suitable location for a Dundee West Station. The cost of providing this station is £5.3m including optimism Bias.
- 3.28 Dundee West Station has good bus links and walk in catchment and it is expected would generate 120,000 passenger journeys per year, as it serves both residential and employment use.
- 3.29 Accordingly the study recommends upgrading Invergowrie in the short term and relocating Invergowrie Station at Dundee West in the longer term.

Stopping Patterns

- 3.30 The optimum stopping pattern has been determined through fit against the objectives as well as three implementability criteria:
- Revenue generated must be greater than journey time disbenefits of an additional stop
 - The stop must be accommodated without impacting negatively on performance of other services
 - Does the stop require additional resources to be implemented e.g. additional rolling stock
- 3.31 Using these criteria the operational capacity and opportunities were considered in sections:

Glasgow – Dunblane

- 3.32 Two intermediate stops can be accommodated in this section of the route and Stirling and Dunblane stations have been identified as offering the greatest fit with objectives and meet the implementability criteria.

Dunblane – Perth

- 3.33 The implementability criteria determined that one stop can be accommodated in this section and Gleneagles (eventually an Enhanced Gleneagles) has been identified as the preferred stop.

Perth – Arbroath

3.34 In addition to Perth, Dundee and Arbroath, the implementability criteria identified that 4 intermediate stops can be accommodated – one west of Dundee and three east of Dundee. To the west this will initially be Invergowrie Station, but could become Dundee West in time. To the east of Dundee the stations with the largest catchment and the most predicted usage are: Broughty Ferry, Monifieth and Carnoustie.

3.35 Therefore overall the proposed stopping pattern is:

- Glasgow – Perth service will also stop at Stirling – Dunblane – Gleaneagles (Enhanced Gleaneagles).
- The Perth – Arbroath service will also stop at Invergowrie (Dundee West) – Dundee – Broughty Ferry – Monifieth – Carnoustie.

Preferred Option

3.36 A summary of the preferred option is given below:

Short Term

3.37 December 2010 – introduce hourly Glasgow – Perth service calling at Stirling and Dunblane and Gleaneagles.

3.38 December 2011 – service expanded by adding an additional hourly Perth – Arbroath service calling at Invergowrie, Dundee, Broughty Ferry, Monifieth and Carnoustie.

Medium/Long Term

3.39 2016 post EGIP – separated services replaced by an hourly Glasgow – Arbroath if resources and capacity at Glasgow Queen Street allows.

3.40 Beyond 2017 – Glasgow – Aberdeen “all stations” service to provide the connectivity that will allow the express services to be speeded up by removing some intermediate stops.

Stations/Infrastructure

3.41 In terms of stations, Invergowrie requires a maximum of £800,000 to upgrade it to a suitable minimum standard to permit 3 car trains to stop at it, but in time (post 2017) it is proposed to relocate Invergowrie to Dundee West at an estimated cost of £5.3m.

3.42 An enhanced Gleaneagles Station is proposed and this should be undertaken incrementally to avoid patronage being constrained. Total cost estimated at £3.78m

3.43 The only other infrastructure cost is a CCTV tail light camera at Arbroath Station which is required to ensure train services are able to turn back efficiently and safely. The cost of providing this is estimated at £240,000 including 44% optimism bias.

Projected Operating Costs

- 3.44 The operating cost of the short term proposals is £2.6m per annum with an estimated revenue generation of £1.3m, requiring a potential subsidy of up to £1.3m per annum. However, it is believed that the revenue generated is an under estimate and more robust figures should be sought.
- 3.45 The preferred option as outlined above will provide services that:
- Improve accessibility to rail transport for a significant portion of the population in the TACTRAN area.
 - Fit well in helping the Government meet its objectives for transport, as well as meeting the planning objectives of the study.
 - Provide a good Cost Benefit ratio of 1.8 for all stages and 2.7 for short term phases.
 - Require relatively low capital investment and focus on making more efficient use of resources currently available.
 - Provide the ability to accommodate latent demand for rail use on the corridor.
- 3.46 Implementation of the short term measures alone is predicted to increase patronage on the Stirling to Arbroath corridor by 7% (4.62m journeys, increasing to 4.94m journeys)

Rail Station Origin and Destination Surveys

- 3.47 TACTRAN commissioned SiAS Limited to procure, supervise and analyse travel habit and car parking surveys at all 22 stations in the TACTRAN area. The surveys were undertaken in early March 2009 and the results have now been reported. A copy of the Survey Report is available at the Members area of the TACTRAN website <http://www.tactran.gov.uk/members/index.html> .
- 3.48 These survey results are already being used to help inform Network Rail's Car Parking Strategy for stations in the TACTRAN area. Another use for the Surveys will be to provide more robust analysis of patronage demand forecast generation of the TERS proposals.

Next Steps

- 3.49 The preferred option in the Short Term as outlined above is dependent on Rolling Stock being available. It is known that there is limited stock likely to become available in the short term and that there are a number of projects, including TERS, competing for a limited pool of rolling stock. It is therefore important that there is early further engagement with Transport Scotland to promote TERS requirements.
- 3.50 Therefore a parallel approach is required:
- 3.51 Firstly, the Partnership is asked to endorse the conclusions of the Tay Estuary Rail Study and approve official submission to Transport Scotland commending further development of the work. This will be considered by Transport Scotland during the summer and it is hoped that a report on their consideration is reported to the Partnerships next meeting.

- 3.52 Secondly, consultants Steer Davies Gleave have been commissioned to undertake further works aimed at providing a more robust analysis of both capital and revenue costs.
- 3.53 It is believed at present the estimate of the revenue generated is conservative and the results of the rail station travel habit and car parking surveys may assist in determining a lower subsidy requirement. In addition, further consultation with Network Rail and First ScotRail may be able to identify lower cost capital solutions for the short term Invergowrie Station proposals and the CCTV tail light camera at Arbroath. The cost of this further work is £9,250 and the partnership is asked to endorse this commission.

4 CONSULTATIONS

- 4.1 The report has been prepared in consultation with the Chief Officers Liaison Group.
- 4.2 Throughout the study process the Steering Group comprising (in addition to TACTRAN officers) Transport Scotland, Network Rail and First Scotrail representatives, has provided valuable assistance and further consultation has been undertaken with the Transport Officers Liaison Group and with the TACTRAN Rail Forum.

5 RESOURCE IMPLICATIONS

- 5.1 The funding of £94,500 for the Tay Estuary Rail Study contract and £31,500 for the Rail Station travel habit and car parking surveys has been met from within the 2008/09 RTS Implementation revenue budget.
- 5.2 The funding of £9,250 for further development work by Steer Davies Gleave, aimed at providing a more robust analyses of capital and revenue costs is proposed to be met from within the 2009/10 RTS Revenue Programme.

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NOTE

Background papers, as defined by Section 50D of the Local Government (Scotland) Act 1973 (and not containing confidential or exempt information) were relied on to a material extent in preparing this Report:

Report to Partnership RTP/08/09, Revenue Budget 2007/08 and 2008/09, 28 April 2008

Report to Partnership RTP/08/33, Revenue Budget 2008/09 Progress Report, 9 December 2008

Report to Partnership, 2008/09 Revenue Budget Monitoring, 10 March 2009