

Minister for Transport and Veterans

TRANSPORT SCOTLAND MEETING WITH RAILQWEST

Purpose

To inform you of the main points of the meeting between Transport Scotland officials and representatives of RailQWest on 18 December 2013 at Buchanan House.

Priority

1. Routine.

Summary of meeting

- 2. The RailQWest representatives introduced and gave a brief history of the formation of the group.
- 3. They then provided a presentation outlining their version of the Glasgow Crossrail scheme, which they propose can be completed in phases. There was no discussion at the meeting over the cost of additional stations and services suggested in future phases.
- 4. The first phase would be electrification of the City Union line (which runs from Shields Junction south of Glasgow Central to Bellgrove Junction east of High Street).
- 5. RailQWest described the benefits of electrification of this line as below:
 - Crossrail is the missing link and will bring down the travel barrier of having to move from Glasgow Central to Glasgow Queen Street.
 - Electrification of the City Union line enables connections across central Scotland
 - The route will complement existing services, not interfere with them
- 6. RailQWest also made the following points during their presentation:
 - The walk from Central to Queen Street is a barrier to onward travel
 - South West Scotland (Inverclyde and Ayrshire) has seen a 2.6% rise (compared to 4.68% rise nationally) as growth has been restricted by a lack of through services.
 - RailQWest have analysed travel to work census data by postcode using an assumption that the end destination of 75% journeys is

Glasgow city centre. They have estimated varying figures of proposed passenger journeys per year for each local authority area to and

through Glasgow:

· Scotrail have recognised the need for a through route from Ayr to Edinburgh using the Carstairs line. RailQWest estimates 80k journeys TS highlighted that the Shotts line per year on this service. electrification would give an alternative route. The Shotts line electrification was not considered in the RailQWest analysis.

140k passenger journeys using Glasgow Crossrail were estimated to serve the Airdrie to Bathgate line to Easterhouse, with 147k then

travelling on to Edinburgh.

RailQWest gave their views on several of the issues raised in Ministerial and official correspondence regarding the Glasgow Crossrail

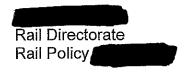
proposal.

- RailQWest highlighted the comparative costs of the Crossrail scheme with other electrification programmes - Paisley Corridor Improvements, Cumbernauld to Springburn, Rutherglen to Whifflet and Windermere branch line in Cumbria.
- 7. Following the presentations, RailQWest and TS officials discussed the next steps and general issues relating to the Glasgow Crossrail proposal. The main points arising from the discussion are below:
 - RailQWest have presented their proposals to forty-seven different groups, including community councils, councillors (predominantly in Glasgow), MSPs and council leaders.
 - RailQWest spoke to SPT three months ago. RailQWest were advised that, while SPT were disappointed not to have been approached earlier, SPT were positive about the presentation.
 - To date, RailQWest have also spoken to two of the bidders for the next Scotrail franchise.
 - RailQWest's view is that Network Rail should finance the electrification of the City Union line, as it is currently used to move empty rolling stock using a diesel locomotive hired from England. This arrangement would cease with electrification of the line, and RailQWest stated that the savings from this would finance the estimated cost of electrification.
 - The £20 million cost estimated for RailQWest is for electrification of the line, inclusive of track and signalling improvements. The cost for solely electrifying the line (without the track and signalling improvements) has been estimated by RailQWest to be c.£6 million. RailQWest advised that their costing have been verified by a rail industry expert.
 - RailQWest noted that they are part of a cross-party rail group at Parliament, as chaired by John Mason MSP and Neil Bibby MSP.

- TS officials advised RailQWest that an appraisal following STAG would be required, and shared a copy of the guidance.
- RailQWest have a meeting with Network Rail on 9 January 2014 to discuss their Glasgow Crossrail proposal. They offered to meet with TS officials again towards the end of January but advised that they intend to request a meeting with you in the New Year.

Recommendation

- 8. You are invited to:
 - Note the content of this submission
 - Note the forthcoming meeting between Network Rail and RailQWest on 9 January 2014.
 - Note the intention of RailQWest to request a further meeting with you in the New Year



19 December 2018

ANNEX A BACKGROUND ON GLASGOW CROSSRAIL PROPOSAL

Glasgow Cross-Rail

- The 2007 CrossRail scheme was rejected for further consideration under the STPR process, because it would not make best use of the rail network or integrate well with other schemes. As a stand-alone intervention it would not achieve the step change necessary to deliver significant improvements for Glasgow and the west of Scotland.
- 2. Although often cited as a reason for developing CrossRail, neither the 2007 CrossRail scheme nor the Rail QWest proposals actually link the two city centre terminals of Glasgow (Queen Street and Central) which is a widely held public expectation. Furthermore, the case for CrossRail does not take account of a number of trade-offs which include:
 - Disadvantaging many existing passengers by diverting existing services from the city centre stations to run via CrossRail
 - Increasing subsidy requirements through the addition of new services, which will be lightly loaded because they would bypass the city centre;
 - Increasing infrastructure investment at critical points elsewhere on the network to address capacity constraints;
 - Recognising that the Ayrshire -Edinburgh market (which is the biggest of the long distance flows across Glasgow) is still of an order of magnitude much smaller than flows to Glasgow city centre: and
 - Acknowledging that the City Union Line, which in having a line speed of 15 mph, is too slow to provide passenger services and, therefore, would potentially require substantial investment to strengthen its viaducts and bridges simply to raise the line speed to 45/50 mph. It would certainly require track, signal and junction upgrades.
- 3. RailQWest has canvassed support for its version of the project from several local authorities and will meet with officials from Transport Scotland on 18 December 2013 It is important to note therefore that neither the statistics quoted in the presentation nor the £20 million cost estimate have been validated. Consequently, no evidence has been produced to support the cost estimate contained in the presentation.

- 4. The latest version of the RailQWest presentation that has been made available to Transport Scotland was delivered to South Ayrshire Council and provided to Mr Brown by John Scott MSP states that CrossRail electrification of the 1.8 miles of track on the City Union line would cost £20 million. However this presentation omits:
 - The cost of track and structural upgrades as mentioned above
 - · The cost of building the new stations referred to
- An explanation of train services to be offered this would mean additional services which would be difficult to accommodate on the network and generate significant on-going operational/subsidy costs OR:
- Diversion of existing services as indicated above disadvantaging existing passengers.
- 5. Additionally, the journey time estimates set out in the presentation do not take account of the issues detailed above; neither do they take account of journey time improvements which will be delivered within the Edinburgh Glasgow Improvement Project (EGIP) nor the improvements being delivered when the Glasgow Central to Edinburgh via Shotts line is electrified.
- 6. However, you will wish to note that some of the outcomes proposed within Glasgow CrossRail have already been met through the delivery of other rail projects and initiatives. These include:
 - Additional Glasgow Central to Edinburgh via Shotts services introduced in 2009 and the new weekday service between Glasgow Central and Edinburgh calling at Motherwell, Wishaw, Carluke, Carstairs and Haymarket introduced in December 2012. These services improve connectivity from Ayrshire/Inverclyde and South Glasgow with Edinburgh without the need to change stations in Glasgow;
 - Addressing overcrowding in and around Glasgow though the provision of 38 new electric class 380 trains delivering an extra 7,500 extra passenger seats per day;
 - The implementation of the Paisley Corridor Improvements Programme which was completed earlier this year and which formed an integral part of the West of Scotland Rail Enhancements Programme. The £169 million programme delivered two new platforms at Glasgow Central which came into operation in May 2010; an additional, third railway line between Shields Junction and Arkleston Junction; new railway junctions at Arkleston and Wallneuk; a new and longer freight loop at Elderslie; upgraded signalling on the main Glasgow-Paisley line. It will also increase capacity and improve journey time and quality on one of the busiest sections of the Scottish network; and

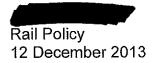
- The £12 million Paisley Canal Electrification Project, which was completed in December 2012 and improves reliability and capacity on this important commuter route.
- 7. In its Initial Industry Plan, Network Rail set out the electrification of this line, along with five other routes. The document sets out the opportunities and choices affecting the railway operating within Scotland offering proposals for consideration in the High Level Output Specification (HLOS) and Statement of Funds Available (SOFA) which were published in June 2012.
- 8. However, in its published HLOS the Scottish Government has defined its electrification output as a rolling programme of 100 km of single track per annum following EGIP, with some specific strategic outcomes. Specifically, at Paragraph 3.20:

"The Scottish Ministers require Network Rail to deliver by the end of Control Period 5 the following outputs on the basis of the Initial Industry Plan 2011 Scotland:

In support of the Scottish Ministers priorities for reduced carbon emissions, reduced energy consumption and improved accessibility, Network Rail to develop a capability in Scotland and implement a rolling programme of electrification which will cover around 100 single track kilometres per annum commencing from the completion of EGIP. Specific routes should be agreed with the Scottish Ministers in advance but is expected to include the Shotts and Whifflet routes as developed within the Control Period 4 Tier 3 project."

It was a matter for the industry to prioritise the appropriate routes for delivery in Control Period 5 (2014-2019) and electrification of the City Union Line was not included in the subsequent Industry Strategic Plans. Consequently there is no funding for the electrification of the City Union Line in the next Control Period.

9. The RailQwest group has stated that it has also met with potential bidders for the new ScotRail franchise to make their case. Those potential bidders will be aware of the major rail enhancement schemes that we will require them to take forward and deliver with Network Rail.



Sc, CEng, MICE < @btinternet.com> From: 20 December 2013 12:10 Sent: To: Cc: RailQwest Crossrail Presentation Subject: **Attachments:** Glasgow Crossrail STPR STAG.doc Gentlemen, Seasons Greetings. Further to our meeting on Wednesday, I attach our critique on the STPR review of the Crossrail project. The original STPR script is in blue with our comments in orange. This email was received from the INTERNET and scanned by the Government Secure Intranet anti-virus service supplied by Vodafone in partnership with Symantec. (CCTM Certificate Number 2009/09/0052.) In case of problems, please call your organisation's IT Helpdesk. Communications via the GSi may be automatically logged, monitored and/or recorded for legal purposes. This email has been received from an external party and has been swept for the presence of computer viruses.



Campaigning to improve West of Scotland Railways

GLASGOW CROSSRAIL

AN EXAMINATION OF TRANSPORT SCOTLAND'S CASE AGAINST THE PROJECT

Transport Scotland: Strategic Transport Projects Review Generation, Sifting and Appraisal of Interventions

Intervention Ref E3 - Construction of Glasgow Crossrail

Rationale for not recommending Description of Intervention On balance, as a 'stand alone' intervention, Glasgow Crossrail This intervention supports the objectives to address rail performs reasonably well, however, it does not make best use capacity issues in central Glasgow and increase public of the rail network or integrate well with the menu of schemes transport access to areas of economic activity.1 required to satisfy the objectives of the STPR. The Glasgow Crossrail consists of a range of infrastructure measures that could be implemented in phases over time. interventions set out in D25 (West of Scotland Strategic Rail Enhancements) [now known as STPR Project 24] offer better For the purposes of this assessment, the intervention opportunities to enhance connectivity for the heaviest rail consists of the reopening of the Glasgow City Union Line demand patterns in and around Glasgow, and could use over the Clyde to passenger trains, with two new spurs:2 elements of this intervention. The Strathbungo Link from Muirhouse to the City Union Line allowing trains from East Kilbride and The committed improvements on the rail network between Edinburgh and Glasgow also provide a 'step change' in the Kilmarnock to access the City Union Line; and connectivity of Glasgow Central to Edinburgh, resulting in • The High Street curve from the City Union Line to enhanced connections for those travelling to and from the the North Electric Line heading west at High Street. south and south west of Glasgow.3 This is likely to negate Additional services would be provided, such as Ayr to much of the potential benefit of Glasgow Crossrail.4 Edinburgh and Croy to Barrhead, with a new turnback facility at Croy. Some services that currently operate into Central High Level would be diverted to Charing Cross via Queen Street Low Level, such as East Kilbride services, with a new turnback facility at Kelvinhaugh.

Approximate Cost of Intervention - £100m - £250m5

RailOwest's view:-

- This is a very limited objective for an intervention that would have benefits across the whole of the Central Belt.
- 2 The intervention should be assessed for each phase in turn.
- Transport Scotland's enhanced connections have resulted in an Ayr-Edinburgh journey time of 2hr30min 2hr35min on current timetables for a 73 mile car journey of 1hr30min 2hr. Crossrail Phase 1 could provide a sub 2hr rail journey which would be attractive to many car drivers..
- The STPR interventions do not provide any improvements for connections between Gourock, Paisley or Ayr and Falkirk or Stirling that Crossrail Phase 1 would allow.
- These cost estimates are for the full three phases of Crossrail, the estimate for phase 1 alone is £20m-£80m including the three new stations at West Street (connection to Underground), Citizens (Gorbals) and Glasgow Cross. Electrification only is estimated as £7m plus up to £13m for any necessary junction, signalling etc works.

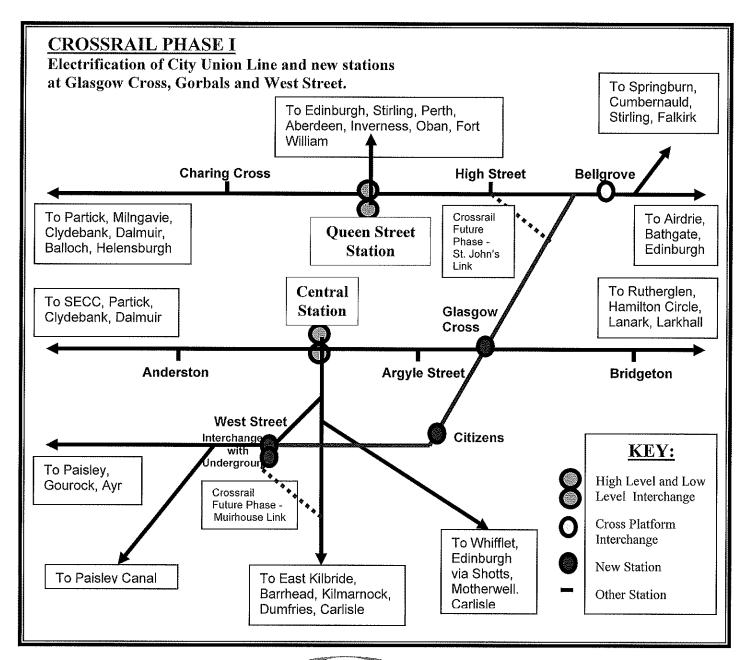
Detailed Assessment of Intervention E3 - Construction of Glasgow Crossrail

Estimated total Public Sector Funding Requirement:	Capital Costs/grant	£100m - £250m*
	Annual Revenue Support Present	Nil
	Value of Cost to Gvt	£50m - £100m
	BCR/PVB	0.75 - 1.25

^{*} The above table refers to the total of Crossrail phases 1, 2 and 3

RailQwest's Revised Assessment of Intervention E3a - Construction of Glasgow Crossrail Phase 1

Estimated total Public Sector Funding Requirement:	Capital Costs/grant	£20m - £80m*
	Annual Revenue Support Present	Nil
	Value of Cost to Gvt	£10m - £35m
	BCR/PVB	1.44 – 1.5





Campaigning to Improve West of Scotland Railways

STPR Objective A1:	To increase the public transport access to and between areas of economic activity and regeneration with minimal need for interchange.	A1: Positive – This intervention would contribute to the redevelopment of the Glasgow Cross area, Gorbals and the east end of the City Centre. Although the intervention would provide new journey opportunities, these would have limited impact across the city region. There would be improvements to connectivity from the south of Glasgow to the north west and connecting across a wider area but the intervention would not provide a direct link between Glasgow Queen Street and Glasgow Central.
STPR Objective A2:	To improve the efficiency of the M8 motorway during periods of peak demand with a focus on reducing the conflict between longer distance and local traffic, increasing the people carrying capacity and freight carrying capacity of existing road, and demand management.	A2: Slightly Positive - There would be the opportunity to serve some movements from the south to north west that may result in modal shift, but this would be limited.
STPR Objective A3:	To address rail capacity and connectivity issues in central Glasgow.	A3: Slightly Positive – The new infrastructure would allow the diversion of some existing services from Glasgow Central High Level to Glasgow Queen Street Low Level. However, it would increase the number of services on the North Electric Line through Glasgow City Centre. The level of relief that the intervention would be able to provide to Central High Level is limited and there would be no improvement for Glasgow Queen Street High Level.
STPR Objective A4:	To promote continuing reduction in accident rates and severity rates across the strategic transport network.	A4: Neutral – While the intervention provides for modal shift from car to rail, the level of impact of this intervention on accident rates would not be significant.
STPR Objective A5:	To promote journey time reductions, particularly by public transport, between the Central Belt and Aberdeen/Inverness primarily to allow business to achieve an effective working day when travelling between these centres.	A5: Neutral – This intervention would have no significant effect on journey times from the Central Belt to Aberdeen and Inverness.
STPR Objective A6:	To promote efficient and effective transport links to support the development and implementation of the proposed national development at Glasgow Airport identified in the NPF2	A6: Positive - This intervention would improve connections to Glasgow Airport from a number of locations. From Ayr, the intervention would facilitate an increase in the number of services to Paisley Gilmour Street, which would improve connections with trains from Glasgow to Glasgow Airport. From Edinburgh and Airdrie, it would provide a new direct service calling at Paisley Gilmour Street, resulting in a direct connection with services from Glasgow to Glasgow Airport.

RailQwest's view:-

- A2: Should be Positive Crossrail provides viable rail routes paralleling the motorway routes past the City Centre from the M77 and the M8(west) to the M8(east) and the M80. These new rail services will have the beneficial effect of allowing a mode shift from road to rail and removing traffic from the M8 passing the City Centre.
- A3: Should be Positive Crossrail will address connectivity issues within Glasgow by having a direct connection with the Underground at West Street and allowing passengers to travel from the southwest of the City to the east/ northeast of the City without having to



change stations thereby reducing passenger congestion at both Central and Queen Street stations. Crossrail will allow service improvements on routes to Ayr, Cumbernauld, Edinburgh, Falkirk and Gourock without further congestion at either of the terminus stations within Glasgow.

A5: Should be Slightly Positive – Crossrail will allow passengers from the southern part of the Central Belt such as Paisley, Ayr and Inverclyde to Aberdeen and Inverness without having to change stations in Glasgow. Overall journey time-savings will depend on timetable adjustments to provide appropriate connections.

Table E3.1.2 STAG Criteria

	Supporting Information:
Minor Benefit/ Minor Negative Impact	Improved services would promote modal shift from road to rail, though the overall level of impact would be limited. This would bring associated minor beneficial effects in relation to air quality, especially in light of the current air quality issues in Glasgow. However, there is the potential for impacts on several A-Listed buildings within Glasgow, however, the extent of these impacts is uncertain at this stage of the decision making process. There would also be increases in noise and vibration at some locations as a result of operating new or diverted services.
Minor Benefit	The primary impact on safety would be as a result of modal shift away from road transport, which has higher accident rates. By achieving a reduction in trips on the road network it is anticipated that road accident numbers and severity are likely to decrease. The level of impact of this would, however, be limited. Providing new and improved station facilities within regeneration areas would have a positive impact on personal security.
Moderate Benefit	Transport Economic Efficiency (TEE): This intervention would remove the need for rail passengers to change between services and City Centre stations when travelling on some routes between stations to the north and east of Glasgow (such as Airdrie and Croy) and to the south and west of the city (such as Barrhead and Ayr). This would result in significant efficiency benefits for passengers travelling between these stations. Passengers travelling from north and east or south and west of Glasgow would benefit from more frequent services into the east end of the City Centre. Wider Economic Benefits (WEBs): This intervention would provide wider economic impacts through improving public transport provision and accessibility, not just within Glasgow, but across much of the Central Belt. It would be possible to make long distance journeys such as Ayr to Edinburgh without the need to transfer between Central and Queen Street stations in Glasgow. However, the level and scope of the impact would be limited to quite specific movements and corridors. Economic Activity and Location Impacts (EALIs): Construction of new stations at West Street, in the Gorbals and at Glasgow Cross would provide these areas with direct rail connection from stations between Ayr, Edinburgh, Barrhead and Croy. It would also support key economic regeneration areas in the East End of Glasgow. Similarly, service enhancements would improve rail accessibility to Airdrie, Barrhead, Croy and Glasgow, with a beneficial impact on employment and productivity in these locations.
Minor Benefit	Transport Integration: A new station at West Street would integrate with Subway services. New stations at Glasgow Cross and Gorbals would integrate with other local transport facilities. Same station interchanges would also be possible at locations such as Queen Street Low Level and Bellgrove. The benefits to integration with other routes and modes in the city centre would be limited by the lack of connectivity to Central station and extended journey times for diverted services to access the City Centre via Queen Street Low Level. Transport and Land-Use Integration: The intervention includes the construction of a new rail station at Glasgow Cross with direct access to the regeneration area in Glasgow's East End and new rail stations in the Gorbals and at West Street. This would provide efficient rail links to support development at these sites, with benefits to transport and land-use integration. Policy Integration: This intervention would provide new rail services, removing the need for some movements to require interchange, and encourage modal shift from car to rail. There would be some benefit to health and a positive impact on congestion and emissions from reduced car use. There would be a positive impact on accessibility and social inclusion. The new stations would be fully DDA compliant, thus having a positive effect on disability access. This intervention would also support regeneration in the east of the City Centre.
	Minor Benefit Moderate Benefit



Accessibility and Social Inclusion:	Minor Benefit	Community Accessibility: The proposed new stations and services represent improvements in rail network coverage. The intervention would provide improved access to employment opportunities across the routes being served, with improved access to the regeneration area in the East End of Glasgow and improved cross-Glasgow connections to cities and towns such as Edinburgh and Barrhead. Comparative Accessibility: The intervention would provide greater accessibility for deprived and socially excluded regeneration areas around the Gorbals and East End of Glasgow.
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RailOwest's view:-

Environment: Should be <u>Benefit/Neutral</u> Improved services and cross city connections would promote modal shift not only for local movements but also for longer distance movements on the M8. This would have a beneficial effect on air quality within the City Centre Air Quality Management Area.

The effects on the few adjacent buildings will be marginal as the line is currently still in use for depot, freight and occasional steam or diesel hauled excursion services almost all of which generate more noise and vibration that the proposed electric powered services.

Safety: Should be Moderate Benefit In addition to the road safety improvements due to transfer of trips from car to rail, the reduction in pedestrian traffic between the two termini stations within Glasgow having to cross Renfield Street, which has a very poor pedestrian accident record, will further improve road safety and personal security.

Economy: Agree with above assessment.

Integration: Should be Benefit Transport Integration:- Under phase 1 there would be no loss of services to Central Station thus no change to current connectivity. The Airdrie/ Bathgate re-opening allows the proposed Ayr to Edinburgh service to operate under electric traction immediately and the full EGIP electrification will enable the proposed Ayr to Edinburgh service to route via Edinburgh Gateway thus providing a direct service from Paisley, for example, to Edinburgh Airport via the tram link, or from Falkirk to Prestwick Airport or Cumbernauld to Glasgow Airport via the bus connection from Paisley and in fact providing an almost direct connection between all three Central Scotland Airports.

Accessibility and Social Inclusion: Agree with the above assessment.

Table E3.1.3 Key Strategic Outcomes

Objective:	Assessment Summary:	Supporting Information:
Improve Journey Times and Connections:	Moderate Benefit/ Minor Negative Impact	This intervention would have a benefit in reducing cross-Glasgow journey times by reducing the need to interchange between Glasgow Central and Glasgow Queen Street for some corridors and services. It would also provide a direct rail service connection between some areas currently requiring interchange. Journey times to access the City Centre for some services would be negatively impacted by the additional time taken for trains to cross from the south side of Glasgow to Queen Street Low Level compared with accessing Central High Level.
Reduce Emissions:	Minor Benefit	This intervention is likely to promote a modal shift from road to rail thereby reducing the number of private cars on the road, and so contributing to reductions in CO₂e emissions. However, the overall impact of this would be limited.
Improve Quality, Accessibility and Affordability:	Moderate Benefit	This intervention would have a benefit in terms of improved access and quality of public transport for job seekers in socially deprived areas such as the Gorbals and provide better access to employment in the regeneration area in the East End of Glasgow. It is anticipated that the intervention would have a neutral impact on affordability.



RailOwest's view:-

Improve Journey Times and Connections: Should be Moderate Benefit/ Moderate Positive Impact –
Under phase 1 there would be no change to journey times to the City Centre on existing services, there would in fact be additional services to the east side of the City Centre which would improve overall accessibility. In addition a single, same platform, change at Bellgrove will provide direct access to the Charing Cross area and the West End.

Reduce Emissions: Should be Moderate <u>Benefit</u> – In view of the fact that longer journeys via the M8 passing the City Centre are likely to be reduced as well as local journeys and the beneficial effects within the City Centre AQMA will be greater than at other less critical locations.

Improve Quality, Accessibility and Affordability: Agree with above assessment.

Table E3.1.4 Scottish Government's Strategic Objectives

Objective:	Assessment Summary:	Supporting Information:
Safer and Stronger:	Minor Benefit	The intervention would have a minor benefit for this objective by improving the quality and journey time reliability of public transport in Glasgow thereby increasing safety through promoting the use of public transport ahead of private car use. By removing traffic from roads, it is anticipated that this measure would also contribute to reducing road accidents in line with this objective.
Smarter:	Minor Benefit	This intervention would improve access to schools, colleges and universities.
Wealthier and Fairer:	Minor Benefit	This intervention would improve journey times, service frequency and journey time reliability on some routes, sustaining and promoting economic growth in Glasgow and the West of Scotland.
Greener:	Minor Benefit	This intervention would promote modal shift to rail, with improvements in air quality and reduced CO ₂ e emissions. It would also promote the use of public transport. However, the level and scope of the impact would be limited.
Healthier:	Minor Benefit	This intervention would encourage modal shift from road vehicles to more sustainable rail trips for passenger and freight journeys. It is not likely to significantly affect trips to health services and community services.

RailQwest's view:-

Safer and Stronger: Should be Moderate Benefit – The intervention (Crossrail phase 1) would have a

moderate benefit for this objective by improving journey time reliability in Glasgow and across Central Scotland thereby promoting the use of public transport ahead of private

car use.

Smarter: Agree with above assessment.

Wealthier and Fairer: Should be Moderate Benefit – This intervention would improve journey times,

service frequency and journey time reliability on some routes, sustaining and promoting

economic growth in Glasgow, the West of Scotland and across Central Scotland.

Greener: Should be Moderate Benefit - This intervention would promote modal shift to rail, with

improvements in air quality and reduced CO2e emissions. It would also promote the use of public transport. The level and scope of the impact would be widespread across West

and Central Scotland.

Healthier: Agree with above assessment.



Table E3.1.5 lm	plementability Appraisal
Technical:	It is expected that no untried techniques would be required when implementing any aspects of this intervention. However, as the design stages progress, localised issues may arise, such as the risk of subsidence due to mining, which may require increased technical capacities to overcome. Construction of some aspects of this intervention may have an impact on operating existing services. However, much of this work could be carried out at times when the disruption would be minimised.
Operational:	Running additional rail services places extra pressure on the rail network and can increase the risk of delays. However, it is expected that these issues would be mitigated by ensuring that the works included within the intervention have sufficient capacity for the proposed service levels. No significant operational impacts are anticipated from this intervention. Diverting East Kilbride services from Central High Level to Queen Street Low Level would release some capacity at Central for additional services to Ayrshire, as proposed in D27. However, the benefits of this would be limited and further capacity would be required to allow D27 to be implemented.
Public:	Various proposals for a cross-Glasgow scheme have been placed into the public domain over a significant period of time and have received widespread support.

RailQwest's Comments:-

The benefit to cost ratio for Crossrail phase 1 is 1.44:1 based on the Ayr to Edinburgh connection alone, this is a better ratio than several of the projects included within the STPR such as the A9 dualling and EGIP both with a BCR of 0.75-1.25:1. Crossrail phase 1 is thus better value for money than several schemes within the SPTR programme.

Crossrail phase 1 will also allow STPR project 26 (Rail Enhancements between Ayrshire / Inverclyde and Glasgow) to proceed without being dependent on the as yet unrefined project 24 releasing platform capacity at Central station. By routing 2 new services per hour from Ayr via Crossrail to Edinburgh brings the Ayr line services up to the 4 trains per hour which is the 1st aim of project 26.

Routing 2 Gourock services per hour (1 new and 1 diverted) via Crossrail to Grangemouth and 1 new Wemyss Bay service per hour to Central (using the platform space released by diverting the 1 Gourock service per hour to Crossrail) thus meeting the 2nd aim of project 26.

The 3rd aim of project 26 (doubling the service to Kilmarnock) cannot be completed until project 6 phase 2 (further electrification of rail lines including East Kilbride, Kilmarnock, Paisley Canal, Whifflet, Maryhill and Shotts is underway at which time the Whifflet line service would divert from Central High Level to Central Low Level thus releasing platform space for the enhanced Kilmarnock service again without relying on project 24.

The final aim of project 26 is to rebuild the Paisley Canal to Elderslie line to relieve the Central to Gilmour Street line, however the capacity of this line has now been greatly enhanced and, as the SPTR admits, there may be difficulties in reconnecting the Paisley Canal line to Elderslie due to development blocking the route thus this aim may be dropped.

Crossrail phase 1 lays the foundations for phases 2 and 3, the Muirhouse Link to connect East Kilbride and Barrhead services to West Street for interchange with both Crossrail and Underground services and the St Johns link to provide direct services from the south Glasgow lines to High Street, Queen St, Charing Cross and the northwest lines.

RailQwest's Conclusion:-

The case for Crossrail phase 1 is overwhelming. It is a relatively low cost intervention with a benefit to cost ratio better than many of the proposals in the STPR programme. It fits well with STPR projects 6 (Further Electrification of the Strategic Rail Network), 15 (EGIP), and project 26 (Rail Enhancements between Ayrshire / Inverclyde and Glasgow).



It also postpones or potentially negates the need for some of the more expensive parts of project 24 (West of Scotland Strategic Rail Enhancements) relating to the provision of a new City Centre station to relieve congestion at Central and Queen Street Stations and beneficially affects those parts of project 8 (Strategic Park and Ride) in Ayrshire and Renfrewshire by enabling the more successful Park and Ride by rail rather than Park and Ride by bus.

Addendum:-

It should be noted that RailQwest is only currently pressing for the electrification of the City-Union line as a first phase to allow through services although we consider that the case for the provision of the three additional stations will rapidly grow.

