ABERDEEN CITY COUNCIL

COMMITTEE Communities, Housing and Infrastructure

DATE 17 May 2016

DIRECTOR Pete Leonard

TITLE OF REPORT Fraserburgh & Peterhead to Aberdeen

Strategic Transport Study

REPORT NUMBER CHI/16/059

CHECKLIST COMPLETED Yes

PURPOSE OF REPORT

This report advises Members of the findings of the Fraserburgh & Peterhead to Aberdeen Strategic Transport Study - Part 1 Appraisal Report, which has been developed by Nestrans with input from Aberdeen City Council, Aberdeenshire Council and Transport Scotland, and, and considers appropriate option packages for taking forward to a Part 2 Appraisal.

2. RECOMMENDATION(S)

It is recommended that Members:

- i) Note the contents of this report, and
- ii) Agree the findings of the Fraserburgh & Peterhead to Aberdeen Strategic Transport Study Part 1 Appraisal Report, and
- iii) Agree that officers respond to Nestrans advising that this Council agrees that, subject to ongoing discussions with Transport Scotland and the Bus and Train operators, the two identified 'Road & Bus' and 'Rail & Bus' option packages are taken forward for a more detailed assessment in a STAG Part 2, and that this Council agrees that those elements of the packages that contain bus measures will provide some journey time and reliability benefits for bus passengers, and
- iv) Instruct officers to continue to update this Committee via the bulletin on this project.

3. FINANCIAL IMPLICATIONS

- 3.1 The study to date has been funded by Nestrans and Transport Scotland and a budget for the Part 2 Appraisal has been approved as part of the 2016/17 Nestrans programme.
- 3.2 Any future financial implications for Aberdeen City Council will be included in future reports as new information becomes available.

4. OTHER IMPLICATIONS

4.1 No other implications.

5. BACKGROUND/MAIN ISSUES

- 5.1 The Regional Transport Strategy (RTS) Refresh produced by Nestrans (The North East Scotland Transport Partnership) contains a commitment to carry out an all-modes study of the Fraserburgh and Peterhead to Aberdeen corridor.
- 5.2 Nestrans commissioned the Fraserburgh and Peterhead to Aberdeen Strategic Transport Study, the purpose of which is to identify and examine the options for improving strategic transport connections between Fraserburgh, Peterhead, and Aberdeen including incorporating the Energetica Corridor. Members have been kept up to date on progress via the Strategic and Local Transport Projects Update Bulletin.
- 5.3 The study is being undertaken in line with the Scottish Transport Appraisal Guidance (STAG) with the Pre-Appraisal stage of the study reported in and available at the following link:
 - <u>Fraserburgh & Peterhead to Aberdeen Strategic Transport Study Pre-Appraisal Report</u> (SIAS, PBA & Energised Environments, SIAS Ref. 77316, October 2015.
- 5.4 The seven options recommended from the Pre-Appraisal stage to be taken forward for Part 1 Appraisal are available in the full STAG Pre-appraisal report and are listed below. The options include three road based options, and four public transport (2 No. bus and 2 No. rail) based options.
 - 1/ Road Dualling
 - 2/ Over-taking Lanes
 - 3/ Safety Improvements
 - 4/ New direct and Increased Express Bus Services
 - 5/ New direct and Increased Express Bus Services and Bus Priority Infrastructure
 - 6/ Rail Line to Peterhead and Fraserburgh (via Ellon)
 - 7/ Rail Line to Ellon Only

- 5.5 During the option generation process a range of 'complementary measures' were also identified. These measures were options that in themselves were not felt to meet the aims of the study, but would support the seven recommended options for Part 1 Appraisal in achieving the study aims.
- 5.6 The next stage in the STAG process, the STAG Part 2 Appraisal, requires a more detailed appraisal of options taken forward from Part 1. A Summary of the key findings of the STAG Part 1 document is included as Appendix A to this report. The STAG Part 1 report and supplementary documents can be found on the Nestrans website at the following link:

Fraserburgh & Peterhead to Aberdeen Strategic Transport Study

- 77527 Fraserburgh & Peterhead to Aberdeen Strategic Transport Study - Part 1 Appraisal Report
- Appendices
- 5.7 Taking cognisance of the key advantages and disadvantages of each of the 7 options, there is evidence to suggest that mixing and matching elements from different options would provide more favourable options over any individual option on its own.
- 5.8 The STAG Part 1 report sets out the possibilities for option 'packaging' based around a 'Road & Bus' based option and a 'Rail & Bus' based option. Key information on the packages can be found in Appendix A and full details can be found in the Full STAG Part 1 report, with the main elements of each package comprising the following, with specific comments highlighted in bold text on measures within Aberdeen City:

Road & Bus Package

Road dualling on the A90(T) between Ellon and the Toll of Birness (from Option 1)

Junction improvements at the Toll of Birness (from Option 1 and 2)

Overtaking lanes (from Option 2) on appropriate sections of the route between Fraserburgh/Peterhead and Toll of Birness.

Safety improvements (from Option 3) on appropriate sections of the route between Fraserburgh/Peterhead and Toll of Birness.

Bypass of Mintlaw

Bus priority infrastructure and Park & Ride improvements (from Option 5) including:

• New sections of dedicated bus lanes on the approaches to junctions on the A90(T) to allow buses to bypass queues - Consideration can be given to new sections of bus lanes on this corridor within the City and leading to the City Centre where appropriate. Additional

sections of bus lane would improve journey times and reliability of services.

- Extending operating hours for bus priority lanes between Aberdeen City centre and Ellon on the A956 and A90(T) Operation times can be reviewed for sections of bus lane within the City. This has the potential to increase reliability of services for extended periods throughout the day.
- Development of a Park & Ride Strategy for the study corridor including expansion of existing Park & Ride sites and new mini Park & Ride sites at Mintlaw, Peterhead and Fraserburgh. Note that the existing Park and Ride site at the Bridge of Don site is planned to be expanded to 1000 spaces as part of the redevelopment of the AECC site.
- Express and direct services (from Option 4 & 5) from the Park & Ride sites (as well as the existing Ellon and the Bridge of Don sites) to the main trip attractors in the Aberdeen conurbation, such as: Dyce, Aberdeen Royal Infirmary, Aberdeen Airport, Robert Gordon University etc. This would provide greater flexibility and choice of direct service destinations within the City and would make public transport more attractive as a travel choice.

Rail & Bus Package

Introduction of heavy rail service, via Dyce:

Between Dyce and Ellon on the existing alignment of the Formartine & Buchan Way (from Option 6) - The rail based option from Dyce to Ellon could provide some accessibility benefits, although consideration would have to be given as to what alternative proposal can be provided for the Formartine & Buchan Way which is a popular long distance active travel route.

Potential future introduction of heavy rail service, between Ellon and Peterhead on a new rail alignment (from Option 7)

Potential future introduction of heavy rail service between Ellon and Fraserburgh (branch line) or between Peterhead and Fraserburgh (continuation of Peterhead line) (from Option 7)

Bus priority infrastructure and Park & Ride improvements (from Option 5) including:

- New sections of dedicated bus lanes on the approaches to junctions on the A90(T) to allow buses to bypass queues Consideration can be given to new sections of bus lanes on this corridor within the City and leading to the City Centre where appropriate. Additional sections of bus lane would improve journey times and reliability of services.
- Extending operating hours for bus priority lanes between Aberdeen City centre and Ellon on the A956 and A90(T) Operation times can be reviewed for sections of bus lane within the City. This has the potential to increase reliability of services for extended periods throughout the day.

- Development of a Park & Ride Strategy for the study corridor including new mini Park & Ride sites at Mintlaw, Peterhead and Fraserburgh which would service the Ellon Park & Ride site and enable connections between the railway and bus network
- Express and direct services (from Option 4 & 5) from the mini Park & Ride sites (as well as the existing Ellon and the Bridge of Don sites) to the main trip attractors in the Aberdeen conurbation such as Dyce, Westhill, Altens/Tullos, Aberdeen Royal Infirmary, Robert Gordon Univeristy etc. This would provide greater flexibility and choice of direct service destinations within the City and would make public transport more attractive as a travel choice.
- 5.8 The packages of options identified in Section 5.8 above have been identified as likely to produce anoptimum proposal and are considered suitable for taking forward to a Part 2 Appraisal.
- 5.9 The Nestrans Board recommended at its meeting on 19 April 2016 to:
 - Note the contents of this report and the progress in developing the Study on the corridor between Aberdeen and Peterhead/ Fraserburgh;
 - 2. Agree to further work being undertaken to further develop the "hybrid" packages of potential measures as outlined above;
 - 3. Refer the consultants report to the constituent local authorities seeking their input and views on the key findings and proposed further development of the study;
 - 4. Agree that officers seek the views of the Councils Public Transport Units and the Bus Operators for consideration;
 - 5. Instruct officers to report back to a future meeting with the additional information detailed in the report;
- 5.10 In line with recommendations 3. and 4. from the Nestrans Board, Officers from Aberdeen City Councils Transportation Team and Public Transport Unit have reviewed the findings of the study and agree that the two identified option packages would improve strategic transport connections for this corridor, particularly the bus based elements which would provide some journey time and reliability benefits for bus passengers within the City, and therefore, should be taken forward for a more detailed assessment in a STAG Part 2 assessment.
- 5.11 Implication for the city at this stage of the assessment are the improvement of bus journey times and bus reliability within Aberdeen City which along with the introduction of express services and direct services would make public transport a more attractive option for journeys to and the city to the north. The rail based option from Dyce to Ellon could provide some accessibility benefits. Re-opening of the Formartine and Buchan railway line would mean consideration would have to be given as to what alternative proposal can be provided for this popular long distance active travel route.
- 5.12 The recommendations contained within this report relate only to progressing the packages for further assessment.

6. IMPACT

6.1 Improving Customer Experience:

The customer experience will be enhanced by the improvement of strategic transport connections between Fraserburgh, Peterhead, and Aberdeen including the Energetica Corridor. This includes focusing on all modes of transport including rail, bus, road, and active travel connections.

6.2 Improving Staff Experience:

Improvement along this key transport corridor will provide more reliable journey times, therefore providing more consistent arrival times and increasing staff confidence about their overall journey along this route.

6.3 Improving our use of Resources:

Resources required to implement any measures identified will form part of the continuing work in identifying key transport improvements along this corridor. The study will provide a level of justification for the appropriate use of resources to enable the successful delivery of the transport network improvements which will benefit citizens and business across the Region. This project involves partnership working which is key to efficient resource use for successful project development.

6.4 Corporate:

The improvement of strategic transport connections between Fraserburgh, Peterhead, and Aberdeen links to the Community Plan vision of creating a *sustainable City with an integrated transport system that is accessible to all.*

The study also seeks to meet the vision, aims, outcomes and objectives referred to in the LTS to contribute to the delivery of the Smarter Mobility aims of Aberdeen – The Smarter City: We will develop, maintain and promote road, rail, ferry and air links from the city to the UK and the rest of the world. We will encourage cycling and walking, and We will provide and promote a sustainable transport system, including cycling, which reduces our carbon emissions.

The contents of this report assist in the delivery of actions identified in the Single Outcome Agreement (SOA) 2013, in particular the Multi-lateral Priority – Integrated Transport (Aberdeen is easy to access and move around in).

The contents of this will assist delivery of the 5 year Corporate Business Plan, in particular the Community, Housing & Infrastructure Directorate's aims to *Protect and enhance our high-quality, natural and*

built environment and Support the delivery of a fully integrated transport network.

6.5 Public:

The contents of this report are likely to be of public and media interest as it relates to a key strategic corridor in the north east, which is a significant transport link for the City and Region. An Equalities Impact Assessment has been undertaken for the Regional Transport Strategy. A Privacy Impact Statement is not required for this report.

MANAGEMENT OF RISK

7.1 Future funding beyond the Part 2 Appraisal stage is uncertain but consideration will have to be given to funding sources to continue beyond the appraisal stage to detailed design and delivery of any approved option.

8. BACKGROUND PAPERS

77316 Fraserburgh & Peterhead to Aberdeen Strategic Transport Study Pre-Appraisal Report

77527 Fraserburgh & Peterhead to Aberdeen Strategic Transport Study - Part 1 Appraisal Report

77527 Fraserburgh & Peterhead to Aberdeen Strategic Transport Study - Part 1 Appraisal Report – Appendix

9. REPORT AUTHOR DETAILS

Ken Neil Senior Engineer – Transport Strategy and Programmes kenn@aberdeencity.gov.uk 01224 522618

Appendix A – Summary of Key Findings







Fraserburgh & Peterhead to Aberdeen Strategic Transport Study Key Messages

Study Scope

Purpose:

- To identify and examine the (multi-modal) options for improving strategic transport connectivity between Fraserburgh, Peterhead and Aberdeen
- The study looks to 2035 and considers connectivity issues post implementation of the Aberdeen Western Peripheral Route, Balmedie to Tipperty dualling, Third Don Crossing and other committed transport schemes

Study Area:

- Covers the area from central Aberdeen to Peterhead and Fraserburgh incorporating Dyce, Ellon and Mintlaw
- A90(T) and A952 considered the strategic road network
- Buchan Link bus services operated by Stagecoach cover the principal bus network
- Closest rail stations at Dyce and Aberdeen
- Principal active travel route along the Formartine & Buchan Way route between Dyce-Newmachar-Ellon-Maud, and then branching Maud-Mintlaw-Peterhead and Maud-Strichen-Fraserburgh

Structure:

• The study has been undertaken in line with the Scottish Transport Appraisal Guidance, initially covering the Pre-Appraisal and Part 1 Appraisal stages

Problems & Opportunities

Problems and Opportunities for the study identified through wide ranging data analysis covering the economy and all transport modes and a full engagement programme covering: businesses, elected officials, community and public, transport operators and providers, NHS, College and Universities, environmental organisations and others.

Appreciation of the economic and social context of the study and a clearer understanding of why and for whom transport improvements needed:

 Clear north-south divide in the study area with a lower economic rate, educational attainment and recent lower growth in northern areas when compared to regional figures

- Clear economic rationale underpinning need for transport improvement given the dominance of primary industries in the area: Oil & Gas, Fishing and Farming. These industries are relatively transport intensive, with a heavy reliance on the movement of goods, principally by road. Current road delay impacts on businesses in the area with stock depreciation, inefficiencies and higher business costs
- Business investment in the Energetica area felt to be constrained by existing transport connectivity
- Accident data (2009 2013) highlights entire A90(T) route between Aberdeen and Fraserburgh with higher than expected proportion of 'serious' accidents than expected on similar road. Three locations identified with higher than expected proportion of fatal accidents. Southern section of A952 between Mintlaw and the Toll of Birness highlighted with higher than expected proportion of fatal accidents, with the Toll of Birness junction suffering from four accidents classed as 'serious' within 100m of the junction. Police Scotland, and Scotland Fire and Rescue suggest accidents caused by; driver frustration at lack of over-taking opportunity, young and inexperienced drivers; and older drivers who rely on the car for travel due to rural nature of their residence with limited public transport alternatives that suit their needs
- Unpredictable nature of delay caused by accidents on business operations noted by business community. Road journey time unpredictability also an issue for bus operators
- Many local people living in Fraserburgh and Peterhead employed in the towns. Important to provide transport connectivity that encourages the retention of local employment opportunities and support the regeneration priority for Peterhead and Fraserburgh
- Population projections for the region alongside aspirations of Aberdeen and Aberdeenshire Local Development Plans will impact on transport network. The AWPR will provide improved journey times by road south of Ellon, but predictions show travel times north of Ellon will increase to above existing journey times by 2023
- Existing travel time by bus not competitive with the car, with lack of direct services meaning interchange in Aberdeen often required.
- No connectivity by rail from Fraserburgh, Peterhead, Ellon etc.
- Distances involved in accessing Aberdeen means active travel not a viable option
- Those without access to a car are disadvantaged in accessing the region's employment opportunities, and retail and health facilities in Aberdeen
- Strong support from Business community for road improvements but limited support for rail given the 'just in time' nature of business operations and size of loads being transported
- Strong support from public for both road and rail improvements

• Support from public for bus improvements – but not to same extent as support for road and rail improvements

Transport Problems consolidated into three key problems:

- Traffic speeds significantly below posted speed limits and unreliable and unpredictable journey times on strategic road links, namely the A90(T) and A952
- Road safety risk on the A90(T) and A952
- Limited travel mode choice

Key Opportunities identified include:

- Supporting both employment and housing land development including supporting and promoting the Energetica project
- Supporting the growth aspiration of local businesses and encouraging inward investment
- Increasing the accessibility of local and regional employment opportunities, and regional health, education and social services
- Supporting the regeneration of Fraserburgh and Peterhead
- Reducing feelings of peripherality and an image of remoteness

Study Objectives

Six study Transport Planning Objectives (TPOs) set which reflect the problems and opportunities:

- 1. Reduce journey time between North-East Communities and the Aberdeen conurbation
- 2. Increase journey reliability and predictability between North-East Communities and the Aberdeen conurbation
- 3. Reduce accidents on the A90(T) and A952
- 4. Increase strategic travel choice between North-East Communities and the Aberdeen conurbation
- 5. Increase direct public transport connectivity between North-East Communities and the main trip attractors within the Aberdeen conurbation
- 6. Increase mode share for non-car based modes between North-East communities and the Aberdeen conurbation

Options for Appraisal

A range of options (around 130 options) developed. Option sifted and developed, and seven options taken forward for appraisal:

- Option 1 Road: Dualling and junction improvements: A90(T) to Peterhead & A952/A90(T) to Fraserburgh
- Option 2 Road: Overtaking lanes & junction improvements on the A90(T) and A952

- Option 3 Road: Safety improvements on the A90(T) and A952
- Option 4: Bus: Bus service improvements (new direct and express services)
- Option 5: Bus: Option 4 plus bus priority measures and Park & Ride strategy
- **Option 6:** Rail: Phased reinstatement on Formartine & Buchan Way including examining options for light rail or tram
- Option 7: Rail: Phased implementation of a new railway alignment (closely following the A90(T) and A952), via the Bridge of Don, including examining options for light rail or tram

Option Appraisal

- Seven options appraised against TPOs, the five STAG criteria (Environment, Economy, Safety, Accessibility & Social Inclusion, and Integration), Feasibility, Affordability and Public Acceptability
- Four public events undertaken, in Bridge of Don, Ellon, Peterhead and Fraserburgh to gather views on the options
- Public event material made available on Nestrans website and public survey undertaken to gauge opinion on the options with the survey advertised through social media channels

Key Appraisal Points:

- Option 7 (a new railway on a new alignment via Bridge of Don), Option 6 (reintroduction of rail route on Formartine & Buchan Way) and Option 1 (dualling) are anticipated to have the greatest environmental impact given the major construction works required and increased noise and air pollution close to railway/road alignment
- The rail alignment proposed in Option 7, via the Bridge of Don, would require significant engineering works to enable a route into Aberdeen rail station from the north
- All options expected to bring safety improvement with the greatest improvements if a road option were implemented. Safety benefits for bus and rail options would be dependent on any mode shift that could be achieved to sustainable transport – expected to be greater for rail than bus
- Tram/light rail implementation (as opposed to heavy rail) would be a suitable option for accessing the City Centre from Dyce or potentially Ellon, however, it would not be suitable for longer distances such as to Fraserburgh or Peterhead which could only realistically be served by heavy rail
- Heavy rail expected to bring greater journey time benefits compared to tram/light rail, given the lower top speeds achievable by tram/light rail and likely additional stops within the Aberdeen urban area – journey times could potentially be up to twice as long by tram to Ellon compared to heavy rail

- Comparison of predicted 2023 journey times by road (which take account of future transport schemes and development) against predicted 2023 journey times with road and rail options shows:
 - Road dualling could provide over 10 minutes of journey time saving between Fraserburgh and Aberdeen and up to 8 minutes journey time saving between Peterhead and Aberdeen (dependent on time of day and direction of travel)
 - Overtaking lanes could provide around 30seconds of journey time saving between Toll of Birness and Fraserburgh, and Toll of Birness and Peterhead (although this does not take account of potential further journey time saving on single carriageway sections due to the overtaking of slower moving vehicles on overtaking lanes)
 - Journey times by rail that are:
 - Slower than predicted road journey times northbound in the morning
 - Quicker than predicted road journey times northbound in the evening with rail providing a journey time saving of over 15 minutes to Ellon, Peterhead and Fraserburgh (dependant on alignment)
 - Quicker than predicted road journey times southbound to Aberdeen from Ellon in the morning, but slower from Peterhead and Fraserburgh if the alignment uses the Formartine & Buchan Way. Rail is predicted to be quicker from Peterhead and Fraserburgh if a new alignment via Bridge of Don were implemented (operating as a branch line from Ellon)
 - Slower than predicted road journey times southbound in the evening
- Comparison of predicted 2023 road and rail option journey times shows:
 - Journey time by road, if roads dualled, always quicker than rail northbound in the morning
 - O Journey time by rail generally quicker than road (if dualled) northbound in the evening (due to anticipated future outbound road traffic from Aberdeen). Two exceptions are: from Aberdeen to Peterhead on a rail alignment on the Formartine & Buchan Way due to the circuitous route via Maud, and from Aberdeen to Fraserburgh if a new rail line via Peterhead were implemented.
 - Journey time by road, if roads dualled, quicker than rail southbound in morning and evening peaks with the exception of in the morning between Ellon and Aberdeen
- Bus options with new direct services estimated to provide journey time saving compared to existing travel time, as an example around 50 minutes journey time saving to Dyce from both Fraserburgh and Peterhead

- The rail and bus options provide the greatest opportunity to integrate transport modes including with walking and cycling. Limited integration opportunities with road options
- All options would provide improved accessibility but the bus and rail public transport based options provide the greatest opportunity to improve overall accessibility, especially in terms of social inclusion for those without access to a car
- Road dualling and rail options have potential to cost over £1billion in capital costs
- Bus based options would be the lowest cost options
- Rail options have the potential to provide annual revenue costs greater than operating costs – but further work required to firm up on assumptions and analysis
- Anticipated high public acceptability for road options given strong business desire for road improvement, and from public feedback from the Pre-Appraisal engagement programme, Public Events and on-lien survey, as well as local support for the Why Stop at Ellon? Campaign
- Limited business desire for rail or bus option implementation given limited impact on business operations
- While there is public support for bus improvements there is stronger public
 desire for road and rail improvements. If a bus only option were progressed, it
 would be likely be met with some disappointment that a more major
 intervention were not advanced. Bus options also unlikely to provide any
 significant economic benefit to businesses.

Option Packaging:

- Recognition that mixing and matching elements from different options would provide more favourable options over any individual option on its own.
- Two option 'packages' developed:

o Package 1: Road & Bus

o Package 2: Rail & Bus

Package 1: Road & Bus

- Dualling Ellon to Toll of Birness could be justified on the grounds of traffic volumes with journey time savings (in 2023) of around 01:30 minutes (£50 -£112.5 million)
- Junction improvement at Toll of Birness to tackle accident location as well as provide journey time benefits (Approx. £50million)
- Over-taking lanes on A90(T) and A952 to reduce accidents and provide journey time savings (Approx. £50million)

- Targeted safety improvements on A90(T) and A952 to reduce high than expected accident rate on the roads, and bypass of Mintlaw on A952 to support impact of traffic growth on A952 due to anticipated future development (Approximately £40-£50million)
- Bus priority infrastructure and Park & Ride improvements to capitalise on road improvement measures and encourage modal shift (Approximately £30million)
- New direct and express services from the Park & Ride sites to the main trip attractors in the Aberdeen conurbation, such as: Dyce, Aberdeen Royal Infirmary, Aberdeen Airport, Robert Gordon University etc. – to reduce public transport journey times and encourage modal shift (Approximately £12million)

Package 2: Bus and Rail

- Introduction of heavy rail service between Dyce and Ellon on the existing alignment of the Formartine & Buchan Way (£130 £260million)
- Bus priority infrastructure and Park & Ride improvements to capitalise on road improvement measures and encourage modal shift (Approximately £30million)
- New direct and express services from the Park & Ride sites to the main trip attractors in the Aberdeen conurbation, such as: Dyce, Aberdeen Royal Infirmary, Aberdeen Airport, Robert Gordon University etc. – to reduce public transport journey times and encourage modal shift (Approximately £12million)
- This option would enable:
 - Potential future introduction of heavy rail service, between Ellon and Peterhead on a new rail alignment
 - Potential future introduction of heavy rail service between Ellon and Fraserburgh (branch line) on a new rail alignment, or between Peterhead and Fraserburgh (continuation of Peterhead line) on a new rail alignment