Fraserburgh & Peterhead to Aberdeen Strategic Transport Study

Nestrans, Aberdeenshire Council, and Aberdeen City Council

Pre-Appraisal Report

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FRASERBURGH & PETERHEAD TO ABERDEEN STRATEGIC TRANSPORT STUDY

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EXECUTIVE SUMMARY

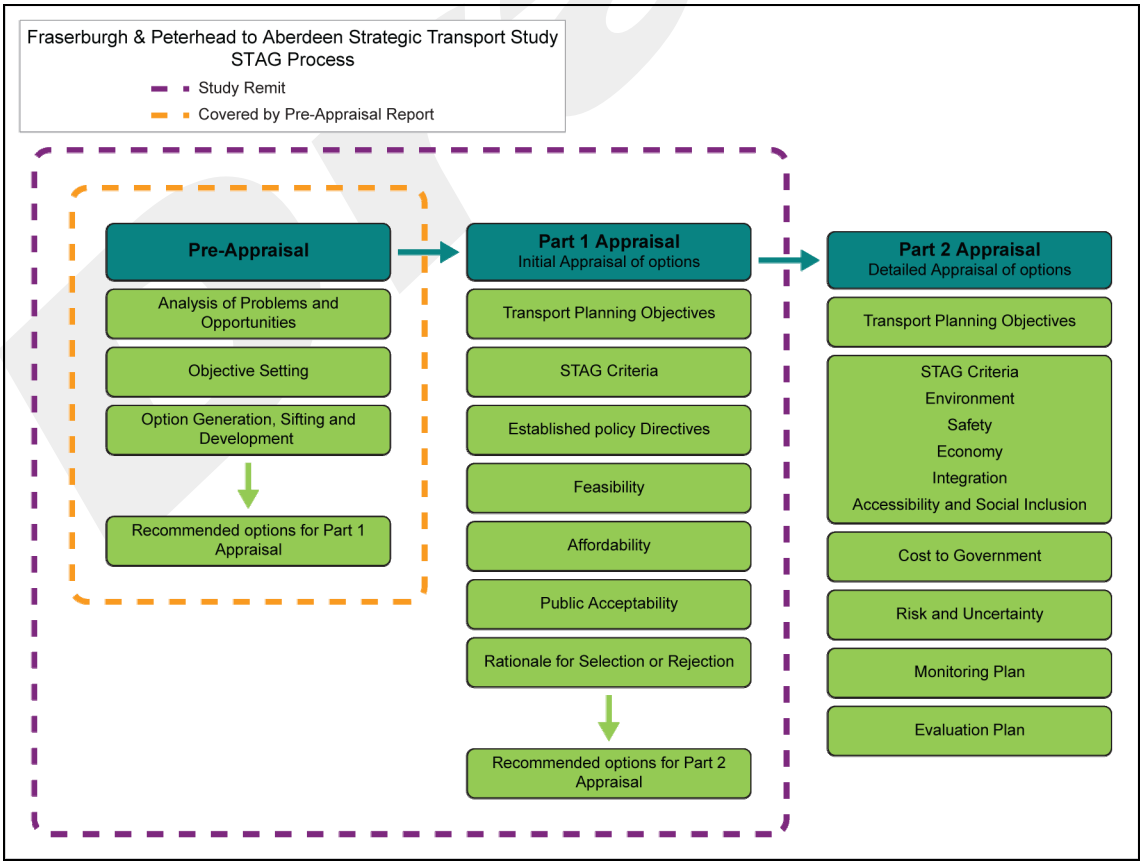
Introduction

Nestrans (The North East Scotland Transport Partnership) Regional Transport Strategy (RTS) Refresh was approved by Scottish Ministers in 2014. The RTS vision is for "A transport system for the north east of Scotland which enables a more economically competitive, sustainable and socially inclusive society".

There was strong support during consultation on the RTS Refresh to examine the costs and benefits of re-opening the Formartine & Buchan railway line. In response to this, the RTS Refresh contains a commitment to carry out an all modes study of the corridor from Fraserburgh and Peterhead to Aberdeen.

The all modes study, subsequently commissioned and titled the Fraserburgh & Peterhead to Aberdeen Strategic Transport Study, is being led by the Client Group of Nestrans, Aberdeen City Council, Aberdeenshire Council, and Transport Scotland and being undertaken by the collaborative consultant team of SIAS, Peter Brett Associates, and Energised Environments, with the purpose *to identify and examine the options for improving strategic transport connections between Fraserburgh, Peterhead and Aberdeen including incorporating the Energetica Corridor*.

The study follows the Scottish Transport Appraisal Guidance (STAG) and covers the Pre-Appraisal and Part 1 Appraisal stages of STAG, as follows. This Report details the Pre-Appraisal stage, including the analysis of problems and opportunities, objective setting, option generation, sifting, development, and subsequent outcomes and recommendations.



STAG Process

Problems and Opportunities

To inform the identification of problems, opportunities, issues, and constraints for the study a wide ranging engagement programme was undertaken (a full account of which is provided in Appendix A), ensuring that the knowledge, ideas, experiences, and aspirations of stakeholders are understood and taken cognisance of. Additionally, the analysis of a wealth of background data has provided the context for the study from a policy perspective, and an economic, social, and transport context, with consideration of all modes of transport, and is presented in the Baseline Report (*Fraserburgh & Peterhead to Aberdeen Strategic Transport Study - Baseline Report, SIAS, Peter Brett Associates, and Energised Environments, SIAS Ref. 77075, June 2015)*. The background data analysis supports the identification of problems, underpinning, and evidencing the real, perceived, and sometimes anecdotal problems identified through the programme of engagement. It is important to note that while a full appreciation of the current problems on the transport network is fundamental to the study, understanding potential future transport problems and, importantly, the potential opportunities, has been a key focus throughout.

Both the engagement and baseline work provided an appreciation of the economic and social context of the study area allowing for a clearer understanding of why and for whom transport improvements are needed. The work highlighted the dominance of the primary industries in the area with a heavy reliance on the movement of goods, and the over-riding sentiment and belief amongst stakeholders that current transport links do not fully support these industries and that the growth aspirations of the Energetica project and local businesses are being constrained by the current transport network.

There is a clear north-south divide in the study area, with a lower economic rate, educational attainment, and recent lower growth in the northern sections when compared to the regional figures, highlighting the inequalities gap between the study area and the wider affluent Aberdeenshire region.

The population projections for the region alongside the aspirations of Aberdeenshire's Local Development plan in the area, as well as Aberdeen City's allocations in their Plan for north Aberdeen, will impact further on the transport network. The future ability to efficiently move people and goods is paramount in order to anchor local businesses and employment opportunities in the area - enabling wider access to regional health and social facilities, and reducing the inequalities gap.

Consolidation of the findings from the engagement programme and the background data analysis enabled summarising of the identified problems and opportunities into structured categories, reflecting the various elements of the transport network, the different travel modes and the nature of the problems. A full list of the problems, opportunities, issues, and constraints identified is provided in the main body of this Report, however, through the categorising of the transport network problems, three clear themes emerged:

- 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

The summarising and categorisation of the problems, and in many cases, associated opportunities, led to an understanding of the *impact* of the problems. During the process it became clear that the impacts were both economic and social in nature. In turn, it has become evident that improvements to transport provision could have a profound effect on the economic ambitions of the area and the social and economic disadvantages experienced by the far north east of the country.

The three key problem themes are discussed below, with reference to the key supporting evidence and the impacts from the economic and social perspective. A more in-depth discussion on these can be found in the main body of the Report.

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Problem Theme 1:
Traffic speeds significantly below posted speed limits and unreliable, and unpredictable journey times on strategic road routes

From both data analysis, and the abundance of comments received during the engagement process, it became clear that traffic speeds significantly below posted speed limits and unreliable, and unpredictable journey times are a key problem in the study area.

Tom-Tom journey time data from 2012, highlights the average speeds as significantly below posted speed limits on the road routes between Aberdeen and Fraserburgh, on the A90(T) and A952, and Aberdeen and Peterhead, on the A90(T).

On the A90(T) north of Aberdeen, while the sign-posted speed limited is often 60mph, and the distance weighted 'average' speed limit is never below 56mph, average traffic speeds never exceed 50pmh between 07:00 – 19:00 in either direction. Similar speeds are observed on the A90(T) and A952(T) route between Aberdeen and Fraserburgh, again, well below the signposted speed limits.

The lower speeds, in part, will be due to the level of freight traffic on the routes (up to 12% of average daily traffic on the A90(T) between the Toll of Birness and Peterhead, and around 7% of average daily traffic on the A952) for which the speed limit on single carriageway routes is 40mph, however, the single carriageway nature of the route with a lack of overtaking opportunity means platooning is common-place and many vehicles are obligated to travel well below the signposted limit.

It is important to recognise that the proportion of traffic on the route attributable to goods vehicles can vary during the day. Analysis of the available data, with suitable vehicle disaggregation, from the Scottish Roads Traffic Database from March and September 2014, shows on the A90(T) that the proportion of heavy goods vehicles can reach as high as 16% of all northbound traffic at Blackdog between 09:00 – 11:00. In addition, the proportion of goods vehicles (both light and heavy goods vehicles) is over 14% of all traffic southbound at St. Fergus between 08:00 – 15:00, and over 15% of all traffic southbound at Balmedie between 11:00 – 17:00. (Note that due to the classification of goods vehicles at a number of these sites, it has not been possible to split out heavy and lights goods vehicles). Furthermore, data relating to the A90(T)/A982 roundabout to the south of Peterhead shows 17% of all traffic heading southbound 09:00 – 10:00 is attributable to heavy goods vehicles.

Due to be completed in late 2017, the Aberdeen Western Peripheral Route (AWPR), incorporating the Balmedie to Tipperty dualling, will improve journey times for the southern section of the route between Aberdeen and Ellon, but no further major road improvements north of Ellon are programmed.

Aberdeenshire Council's Local Development Plan allocates over 9,000 houses and over 100ha of employment/mixed use land in the study area by 2030, focused on a strategic growth corridor around the A90(T). Aberdeen City Council's Local Development Plan has allocations for over 12,500 houses and 85ha of employment land in north Aberdeen, the build-out of which will further impact on the road network encompassing the approach route from the study area.

Outputs from the Aberdeen Sub-Area Model (ASAM) for 2010, 2023 and 2033, which includes allowance for the two Plan allocations and takes cognisance of the full range of committed transport infrastructure improvements in the region, shows predicted increases in traffic on the A90(T) north of Aberdeen, by 2033 of:

- Around 50%, both northbound and southbound between Ellon and Peterhead
- Around 50%, both northbound and southbound, on the A952 south of Mintlaw, and around 40% north of Mintlaw
- Over 90%, both northbound and southbound at Blackdog

Corresponding analysis of journey times from ASAM shows while overall journey times between Fraserburgh, Peterhead, and Aberdeen are predicted to decrease, this is all due to a reduction in journey time south of Ellon, and journey times north of Ellon, on both the A90(T) and A952 are predicted to increase (by up to 33% between Ellon and the Toll of Birness between 2010 and 2033).

Analysis of the current flow on the A90(T) between Tipperty and the Toll of Birness, undertaken in accordance with the *Design Manual for Road and Bridges* (*DMRB*) guidance, indicates the flow on the road is in excess of that recommended for a single carriageway. *DMRB* recommends a maximum flow of 13,000 Annual Average Daily Traffic (AADT) on a single carriageway (S2) route. The flow on the A90(T) just north of Tipperty is close to 14,000. AADT traffic data was unavailable between Ellon and the Toll of Birness. Combined AADT flows from the A90(T) south of Peterhead and the A952 north of the Toll of Birness are approximately 12,300. Data would be required to determine the flow between Ellon and the Toll of Birness more accurately but is likely to be very close to 13,000, with the maximum easily breached if traffic levels increase.

With limited suitable alternative parallel strategic roads placing a heavy reliance on the A90(T) and A952 as key access routes between Aberdeen, Peterhead, and Fraserburgh, engagement highlighted further issues surrounding journey time, reliability, and predictability; which can have a profound impact on business and commercial operations. While no day-to-day journey time variability analysis has been possible from the available data to support this, a range of comments made during engagement from various industries and the public highlights the impact. Of particular focus was the impact of journey time unpredictability on operations and the financial cost to business of a requirement to build additional time into both staff and goods movements. A key requirement during the more detailed appraisal stage of this study would be obtaining more comprehensive data relating to day-to-day journey time variability for different road users. This would enable a fuller understanding of the economic and social impacts of journey time unreliability and unpredictability on different road users for whom uncertainty and delay will have different impacts based on the relative distance being travelled and trip purpose and the value of any goods being transported.

Economically, compared to the Scottish average, the study area has a higher concentration of employment in the primary industries, driven by the oil & gas, fishing, and farming sectors. These industries are relatively transport intensive, requiring goods to be moved from one place to another and the port of Peterhead is both a key freight attractor (as part of the oil & gas industry supply chain) and freight generator (as part of the fishing industry). Similarly, Fraserburgh Harbour is a key generator of freight due to the fishing industry.

Engagement highlighted the impact of traffic speeds significantly below posted speed limits, unreliable and unpredictable journey times on businesses in general, but with specific comments made in relation to the movement of goods in the key oil & gas and fishing industries. For the fishing industry, where stock can depreciate in value quickly (up to 50% depreciation a day), the movement of product is particularly time critical with delays impacting heavily on businesses in this highly competitive market. For the oil & gas supply and subsea industries, where vessels only have limited time at berth in the harbours, 'slack' must be built into freight movements, leading to inefficiencies and higher costs. The potential to collect data relating to the volume and value of goods being transported should be a key consideration during the more detailed appraisal stage of this study and would allow for a more in-depth understanding of the economic impacts.

Engagement with Peterhead Port Authority and Fraserburgh Harbour Commissioners highlighted a belief that the strategic road routes between Fraserburgh, Peterhead, and Aberdeen do not support the efficient movement of goods. Both harbours have redevelopment plans including a £47million investment at Peterhead to develop a fully integrated fishing hub with a 50% increase in market floor space and deepening of the inner harbours, potentially attracting processing operations currently located in Aberdeen, and in turn putting additional burden on the road network for product distribution. In addition, the introduction of new EU Landing Obligations will likely increase the volume of fish requiring transportation from both harbours. A reduction in journey time between the harbours and Aberdeen, with improved journey time reliability and predictability has the potential to increase inward investment and use of the ports, supporting these development plans.

Fraserburgh is recognised as the most fisheries dependant community in Scotland, with around 40% of those employed in the town working directly or indirectly in the industry. Similarly, with many local people employed in both Fraserburgh and Peterhead, providing the transport links to support the large industries within the towns and retaining the employment opportunities, is key to each town's vitality and supports the regeneration priority for Peterhead, Fraserburgh and the costal region between them, as identified in the Strategic Development Plan. If these employment opportunities were to be reduced or lost, the geographical location of the towns and the economic draw of Aberdeen would likely lead to an increased need for commuting longer distances, or may ultimately lead to out-migration from the towns.

The unpredictability of journey times on the strategic road network, while being noted by a number of key industries, is of specific importance to the bus industry, where obligations to meet Traffic Commissioner statutory targets, surrounding punctuality, and reliability, is paramount. The main bus operators in the area both cited the need to provide slack time in timetables to allow for the element of unpredictability and enable the targets to be met, leading to occasions where buses are required to wait at stops for long periods to ensure timetables are adhered to. This is particularly unattractive to passengers and detracts from the use of this more sustainable means of travel.

Figures reflecting commuting between Fraserburgh, Peterhead and Aberdeen, have dipped slightly between 2001 and 2011 but are still around 13% from Fraserburgh and 15% from Peterhead, however, issues surrounding labour supply and attracting employees has been a key problem noted during engagement, with a feeling that opportunities in the study area are 'on the wrong side of Aberdeen' requiring too long a commute time from many parts of Aberdeenshire, and further afield.

Indeed attracting employees for existing business and also attracting new business investment in the area, by ensuring transport network reliability and efficiency that can draw on a wider skills base is a key opportunity identified for the study, and is of particular relevance for the Energetica Corridor.

Socially, the impact of traffic speeds significantly below posted speed limits, unreliable and unpredictable journey times was identified by 95% of respondents to the study's Public Survey as impacting on their everyday activities with nearly 90% of respondents saying they started journeys earlier or later to avoid delay, nearly 60% citing road delay in making them late for work or education purposes and nearly 20% citing feelings of isolation.

Increased accessibility to the region's main retail and health facilities in Aberdeen and also increased job opportunities, in higher paid vocations, is a key opportunity for the study. While it is accepted that the unemployment rate in the study area is lower than the Scottish average, it should be acknowledged that the unemployment rate in both Fraserburgh and Peterhead is notably higher than the regional average and there is an opportunity to reduce this gap.

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Problem Theme 2:
Road safety risk on the A90(T) and A952

Accident data from 2009 – 2013, as presented in the Baseline Report, highlights the entire A90(T) route between Aberdeen and Fraserburgh as having a higher than expected proportion of serious accidents than would be expected on a road of similar nature. In addition, three locations were identified as having a higher than expected proportion of fatal accidents; to the south of Fraserburgh; to the south of Peterhead; and between Blackdog and the Bridge of Don. Additionally, the southern section of the A952 between Mintlaw and the Toll of Birness was also highlighted with a higher than expected proportion of fatal accidents.

The accident data also illustrated increases in pedestrian and cyclist accidents in the study area between 2009 and 2013 with accident rates above the regional average and Nestrans targets, potentially reducing the attractiveness of active travel modes as a mode of transport.

Discussion with both Police Scotland and Scotland Fire and Rescue suggests that accidents in the area are caused by a number of factors including; driver frustration at lack of over-taking opportunity, young and inexperienced drivers; and older drivers who rely on the car for travel due to the rural nature of their residence with limited public transport alternatives that suit their needs. The Public Survey, and other avenues of engagement, highlighted perceptions that accidents are caused by; the mix of both strategic and local traffic; slow moving agricultural and heavy goods vehicles; and the number of farm and side road access points onto the A90(T) with a lack of dedicated right hand turn lanes, which all cause delay to traffic leading to driver frustration and dangerous overtaking manoeuvres. Poor road markings, and poor visibility were also noted as leading to accidents. In particular, difficulties at the Toll of Birness, for southbound traffic turning right from the A952 onto the A90(T) southbound carriageway, were noted.

This second key theme was also identified during the Scottish Transport Projects Review which considered “Online Trunk Road improvements on the A90(T) north of Aberdeen” as one of 136 interventions examined during Initial Appraisal. The justification for the intervention was on safety grounds (and the fatal accident rate between Aberdeen and Fraserburgh being significantly higher than the national rate was noted). The intervention was retained in the final Summary of Draft Interventions, as part of Intervention 5 “Route Management on other Road Corridors”, which covers “a series of initiatives to implement road-based improvements with a combination of network optimisation through route management and targeted investment in relatively local interventions”. It should be noted that Transport Scotland is currently examining the A90(T) route north of Aberdeen to prepare a Road Accident Reduction Plan (RARP), but with safety measures to be implemented relating only to signage, road markings, and other minor improvement measures.

A large number of those consulted as part of this study’s engagement programme highlighted accidents as a key problem. Of those who responded to the Public Survey, 35% noted the level of accidents and road safety as a significant problem, with the Toll of Birness junction (A90(T)/A952 junction) as a key location for accident concern and a perceived accident black-spot. Accident analysis from 2009 to 2013 highlights four accidents (recorded as ‘serious’) within 100m of the Toll of Birness junction. In addition, engagement also highlighted road safety as a key concern for oil and gas companies who place a significant emphasis on Health & Safety.

Economically, the delay accidents cause, and the longer alternative routes of lower standard that are required to be taken when key routes are blocked means any incident can lead to significant journey time implications with impacts as noted in Problem Theme 1.

Accidents themselves also come at an economic and social cost, including: loss of output due to injury; ambulance costs, and costs of hospital treatment; the human cost of casualties including the grief and suffering to the casualty, relatives, and friends; intrinsic loss of enjoyment of life in the case of fatalities; damage to vehicle and property; and police and insurance administration cost. Transport Scotland figures put the cost of a fatal road accident on the trunk road network at £2.07m.

Reducing road accidents has the potential to reduce this cost and social impact to society.

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Problem Theme 3:
Limited travel mode choice

The third identified key problem, of limited travel mode choice reflects the identification of limited mode choice in the study area in order to facilitate the efficient movement of people and goods.

Car ownership levels in Fraserburgh and Peterhead, which can provide an important measure of overall affluence in an area and can be an indicator of likely public transport demand, are similar to the Scottish average but lower than the average across the region. Given the distance of both towns from Aberdeen, where many regional facilities are located, this is an important consideration when understanding the issues faced by residents in the study area, where limited travel mode choice, especially in the more rural areas, can increase feelings of peripherality and isolation.

With the only access to the railway network being at the stations of Dyce or Aberdeen at the south of the study area, public transport travel choice for those without a car (and those *with* access to a car), is limited to bus services. *Buchan Link* bus services operate between Fraserburgh, Peterhead, Ellon, and Aberdeen, with a travel time of 90mins between Fraserburgh and Aberdeen, and 75min between Peterhead and Aberdeen, equating to average travel speeds of around or less than 30mph. These journey times, which cannot compete with equivalent car journey times of just over an hour from Fraserburgh, and just under an hour from Peterhead, mean those reliant on public transport have significantly reduced accessibility to key regional services and job opportunities.

All bus services on the *Buchan Link* routes, and most other services which 'hub' in Aberdeen, are radial in nature, routeing into the centre of Aberdeen, with a deficit of orbital services. Public transport access to locations outwith the city centre, to the many business parks on the periphery of the city, including Dyce, and to the main Aberdeen Royal Infirmary hospital and other healthcare facilities, all require interchange with the inherent additional travel time. While some 'express' services do operate on the routes, journey time savings are in the region of 5 – 15min and are limited (only one express service a day from Peterhead and six from Fraserburgh). A key issue amongst those out of employment and looking for work, as well as those wishing to access educational facilities, is access to bus services. This is especially the case in rural areas, and particularly for young people. It should also be noted that with an ageing population, there is an ever increasing reliance on public transport to access local and regional facilities.

The Aberdeen City Centre Masterplan, the plans for which were approved unanimously by City Councillors in June 2015, contains a Public Realm Strategy which includes schemes to remove car traffic from a number of city centre routes, including Guild Street and Union Street. Access by private vehicle, and the way people consider movements to, from and within the city centre will require a step-change, with an increased reliance on public transport. While there is clearly an opportunity to improve the travel mode choice for those without a private car, the outcomes of this strategic transport study provide an opportunity to support the implementation of the Masterplan and improve and increase public transport connections and attract and encourage those who do not currently use public transport. The recent *Barriers to Bus Use* study undertaken by the Aberdeen and Grampian Chamber of Commerce, notes quicker journey times, more express services and more direct routes as key influencing factors that would encourage non-bus users to use the bus in the future.

The social benefits that occur through increased travel mode choice are clear, in providing improved accessibility for all, which helps to reduce inequality and feelings of peripherality.

Economically, the key opportunity of increased travel mode choice is the widening skills base for employment, helping to attract workers to those industries where recruitment is challenging, and enabling business investment where the catchment to a skilled work force is widened, supporting the Energetica Corridor in its aims as well as the growth aspiration of existing businesses.

Improved public transport choices with good integration between transports modes encourages people out of their cars and has the benefit of freeing up road space enabling a more efficient road network.

There are further opportunities in the tourism industry, where increased travel mode choice has the opportunity to provide tourists with a greater range of travel choices, reducing perceptions of peripherality surrounding the area and encouraging increased visitor numbers, with the economic benefits to the area that brings.

Issues and Constraints

A number of key issues were identified during the engagement and baseline data gathering process. The most prominent of these is the uncertainty of the impact of the Aberdeen Western Peripheral Route in opening up the area to investment and development, and subsequently the pace of build out of the Local Development Plans and the impact this may have on the future transport network. The current uncertainty in the oil & gas industry and its impact on the economy, as well as the potential negative impacts that improved transport connections may have on the viability of Peterhead and Fraserburgh retail businesses if Aberdeen were made more accessible were also noted.

Constraints identified during the engagement and baseline data gathering process mainly related to physical environmental constraints including; built heritage; sensitive water courses; designated conservation areas; and sites of biodiversity and cultural heritage.

Further constraints which may limit the type of options considered included the need to contribute to the Climate Change Scotland Act which may constrain certain road based options. Capacity and contractual issues surrounding the development of any rail based option and limitations of the use of the railway network for freight due to the size and time critical nature of goods requiring movement were also noted. For any potential bus improvements, the key constraint identified was the need to be able to ultimately operate services on a commercial basis.

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Objectives

Transport Planning Objectives for the study have been developed to reflect the problems and opportunities identified as well as the relevant wider economic, transport and land use planning policy directives, strategies, and plans. A full explanation of how these transport planning objectives for the study support the wider study context and established policy is provided in the main body and appendices of this Report. The following table clearly shows how the Transport Planning Objectives relate to the identified problems.

Problem Theme		Objective	
1	Traffic speeds significantly below posted speed limits and unreliable and unpredictable journey times	1	Reduce journey times between North-East communities and the Aberdeen conurbation
		2	Increase journey time reliability and predictability between North-East communities and the Aberdeen conurbation
2	Road safety risk on the A90(T) and A952	3	Reduce accidents on the A90(T) and A952
3	Limited travel mode choice	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

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Option Development, Generation and Sifting

In total, 128 individual options were developed through the engagement process, and through Study Team and Client Group discussions.

During engagement, the general desire of businesses was for road improvements, which were felt could significantly benefit business operations and the economic competitiveness of the area. Business engagement further suggested there were inherent issues with the utilisation of any potential rail implementation for the movement of freight, due to the time critical nature of operations, the size of goods handled, the potential lack of economic density in the area and the overall required culture change. It was, however, noted that a rail line would benefit communities, potentially opening up job opportunities to a larger, more diverse workforce, particularly the young.

The results of the Public Survey showed a general desire for the establishment of a rail line in the area, with 1379 of the 2172 survey respondents ranking the establishment of a new rail line as either their first or second choice of transport improvement in the area most likely to benefit them. This was followed closely by a desire for road improvements, with 1,292 of the 2,172 survey respondents ranking road improvements as either their first or second choice of transport improvement. As previously discussed, road safety was also highlighted as a key issue. Aligning with the desire for road improvements the 'Why Stop at Ellon?' campaign has gained public support and is aimed at the dualling of the A90(T) from Ellon to Peterhead.

The 128 options were divided into three categories:

- **Category A**: Within the remit of the study (70 options)
- **Category B**: Complementary measures – options that in themselves were not considered to meet the aims of the study, but would support other options in achieving the study aims (43 options)
- **Category C**: Outwith the remit of the study (15 options)

In order to work with a more manageable number of options, the Category A options were then combined where the options were similar and fell within what could be considered a single option for appraisal. After the consolidation, 23 options remained in Category A.

A high level appraisal exercise was undertaken, first within the Study Team and then with the Client Group, to sift the remaining Category A options, and produce a final option list for appraisal at STAG Part 1.

The seven options on the recommended list for Part 1 appraisal are described as follows. Further details of the 23 'pre-sifting' Category A options, as well as the Category B and C options, can be found in the main body of the Report. It should be noted that it is assumed that an appropriate selection of the Category B 'complementary measures' would be implemented alongside the seven options listed, and would specifically include packages of high quality active travel measures to integrate with other modes of transport.

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No.	Option	
1	Road	Phased road dualling north of Ellon, with junction improvements, including consideration of: • A90(T) Ellon to Toll of Birness • A90(T) Toll of Birness to Peterhead • A952 and A90(T) Toll of Birness to Fraserburgh
2	Road	Overtaking lanes and junction improvements, including consideration of: • A90(T) from Ellon to Peterhead • A952 and A90(T) Toll of Birness to Fraserburgh
3	Road	Safety improvements on: • A90(T) from Ellon to Peterhead • A952 and A90(T) Toll of Birness to Fraserburgh
4	Bus	Bus service improvements including consideration of: • New direct bus linkages between the study area and key employment, health, and social facilities in the Aberdeen conurbation • Increased express services between the study area and key employment, health, and social facilities in the Aberdeen conurbation
5	Bus	Bus service improvements (as Option 4) accompanied by priority infrastructure and Park & Ride improvements considering: • New sections of dedicated bus lanes • Extending operating hours for bus priority lanes • Development of a Park & Ride Strategy for the study corridor
6	Rail	Phased reinstatement on existing railway alignments, via Dyce, including examining options for light rail or tram from: • Dyce to Ellon • Ellon to Maud/Peterhead • Maud to Fraserburgh
7	Rail	Phased implementation of a new railway alignment, via the Bridge of Don, including examining options for light rail or tram from: • Aberdeen to Ellon • Ellon to Peterhead • Ellon to Fraserburgh

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1 INTRODUCTION

Nestrans (The North East Scotland Transport Partnership) Regional Transport Strategy (RTS) Refresh was approved by Scottish Ministers in 2014. The RTS vision is for "A transport system for the north east of Scotland which enables a more economically competitive, sustainable and socially inclusive society".

There was strong support during consultation on the RTS Refresh to examine the costs and benefits of re-opening the Formartine & Buchan railway line. In response to this, the RTS Refresh contains a commitment to carry out an all modes study of the corridor from Fraserburgh and Peterhead to Aberdeen.

In collaboration, SIAS Limited (SIAS), Peter Brett Associates, and Energised Environments (the Consultant Team) were appointed by Nestrans to undertake the Fraserburgh and Peterhead to Aberdeen Strategic Transport Study.

Nestrans is the key client contact for the study, but the Client Group for the study consists of Nestrans, Aberdeenshire Council, Aberdeen City Council, and Transport Scotland.

The study is being undertaken in line with the Scottish Transport Appraisal Guidance (STAG). This Report details the Pre-Appraisal stage of the STAG process and includes:

- An introduction to the study, its purpose and study area
- Analysis of the Problems and Opportunities for the study area
- Objective setting
- Option Generation, Sifting and Development

1.1 Purpose of the study

The purpose of the study is ***to identify and examine the options for improving strategic transport connections between Fraserburgh, Peterhead, and Aberdeen including incorporating the Energetica Corridor***. The study examines all modes of transport including rail, bus, road, and active travel connections. It should be noted that Dyce is contained within the study area and is recognised as a key driver of the local economy with a wealth of business and industrial parks, and Aberdeen Airport close by. Strategic transport connections between Fraserburgh, Peterhead, and the Dyce area also form part of this study.

The Energetica project is a flagship project of Aberdeen City and Shire Economic Future (ACSEF), with a 25 year vision to create an exemplar low carbon, sustainable development corridor that will attract energy organisations and individuals to a natural and built coastal environment. It is an integral part of Aberdeen City and Shire's work to strengthen its position as a global energy hub with the potential to create significant new investment and employment, while creating an attractive and sustainable place to live and work.

This study is being taken forward in the context of the RTS and the objectives of the Energetica project, as well as the Strategic and Local Development Plans and Local Transport Strategies of Aberdeen City and Aberdeenshire Councils. In line with the RTS, the study has a 2035 time horizon.

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The study area is shown in Figure 1.1, with the key existing transport links shown in Figure 1.2. Given the 2035 time horizon for the study, future committed transport schemes in the area which could impact on future travel behaviour and will form part of the reference case against which any options are appraised, are shown in Figure 1.3.

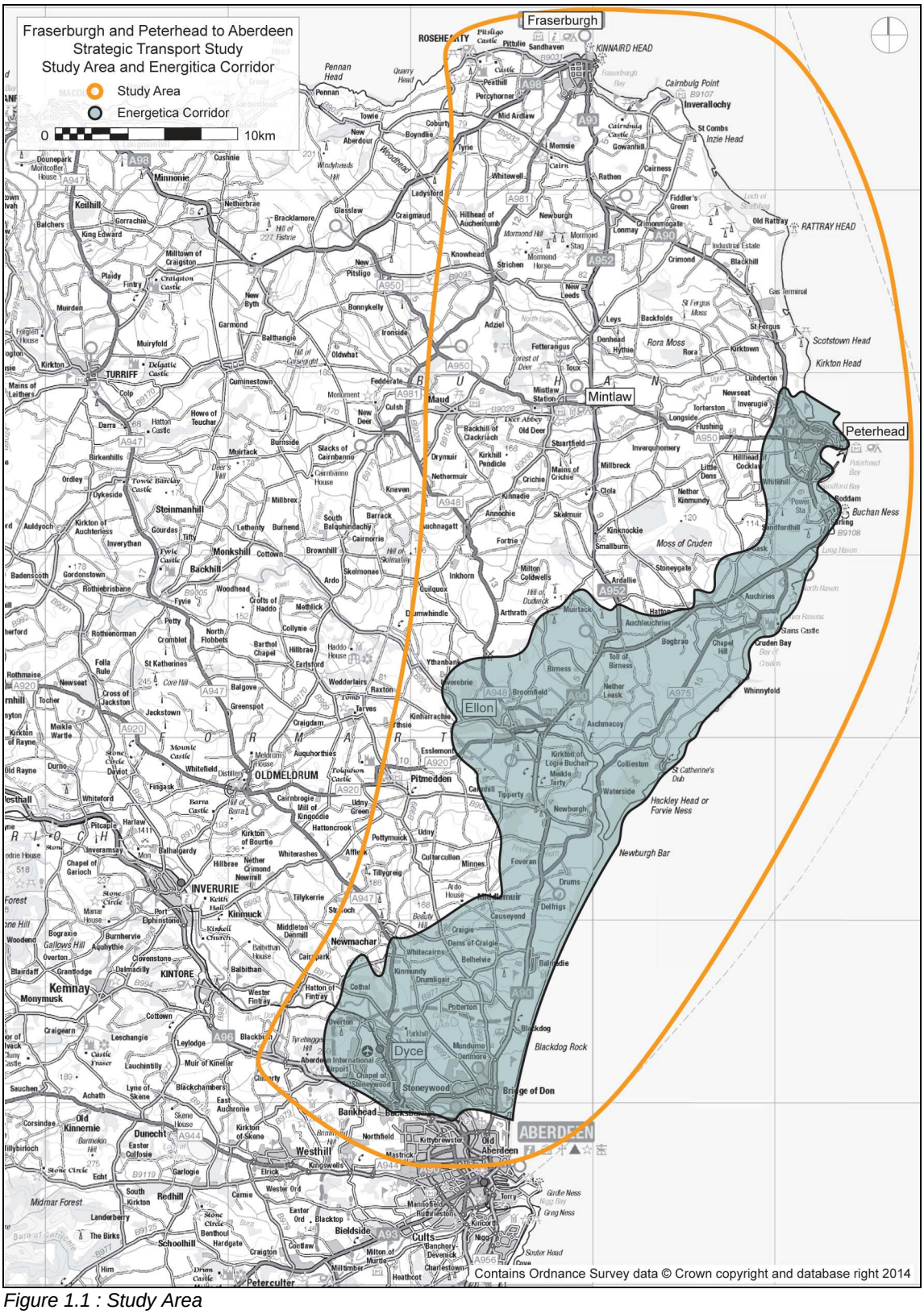

Figure 1.1 : Study Area

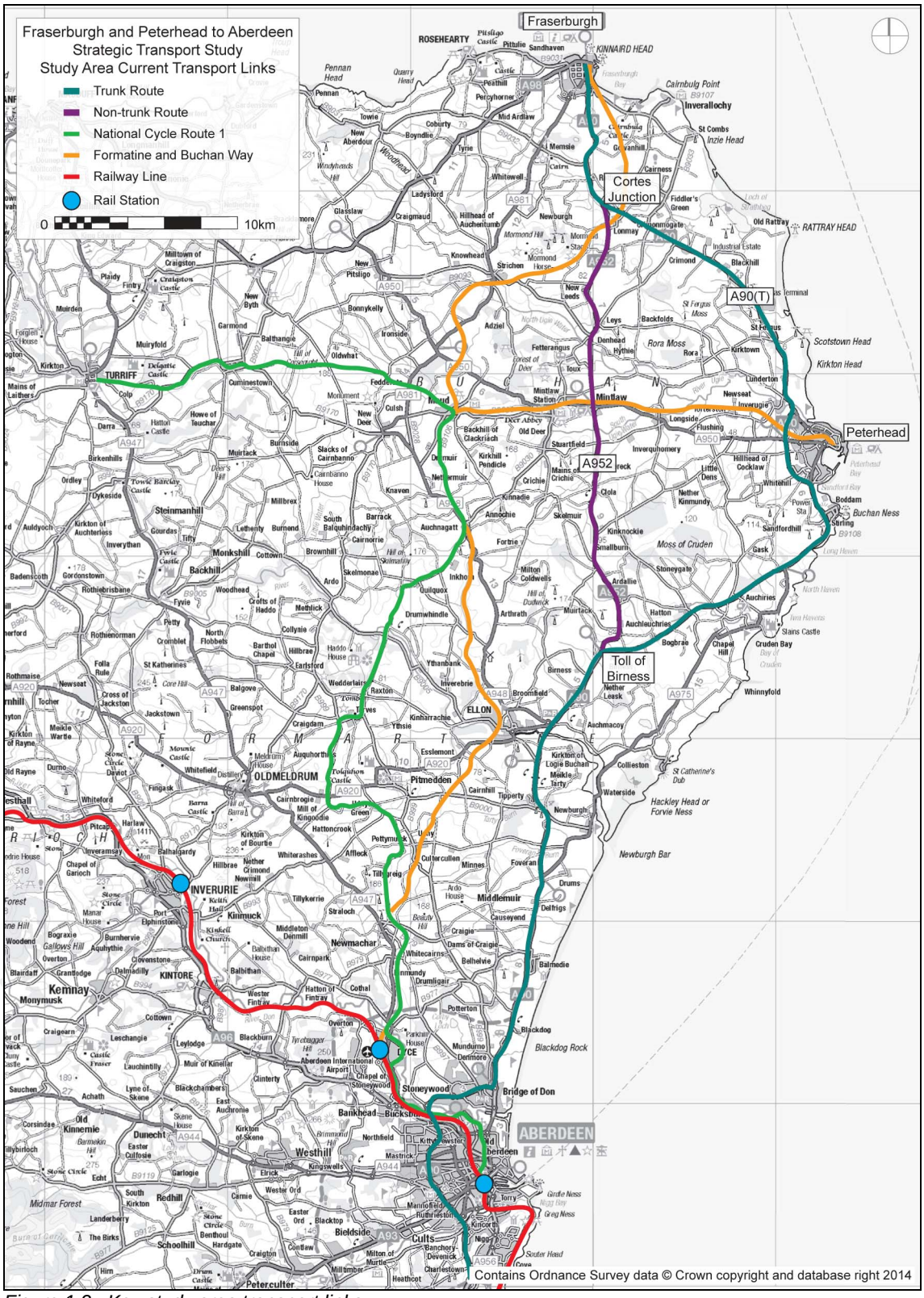

Figure 1.2 : Key study area transport links

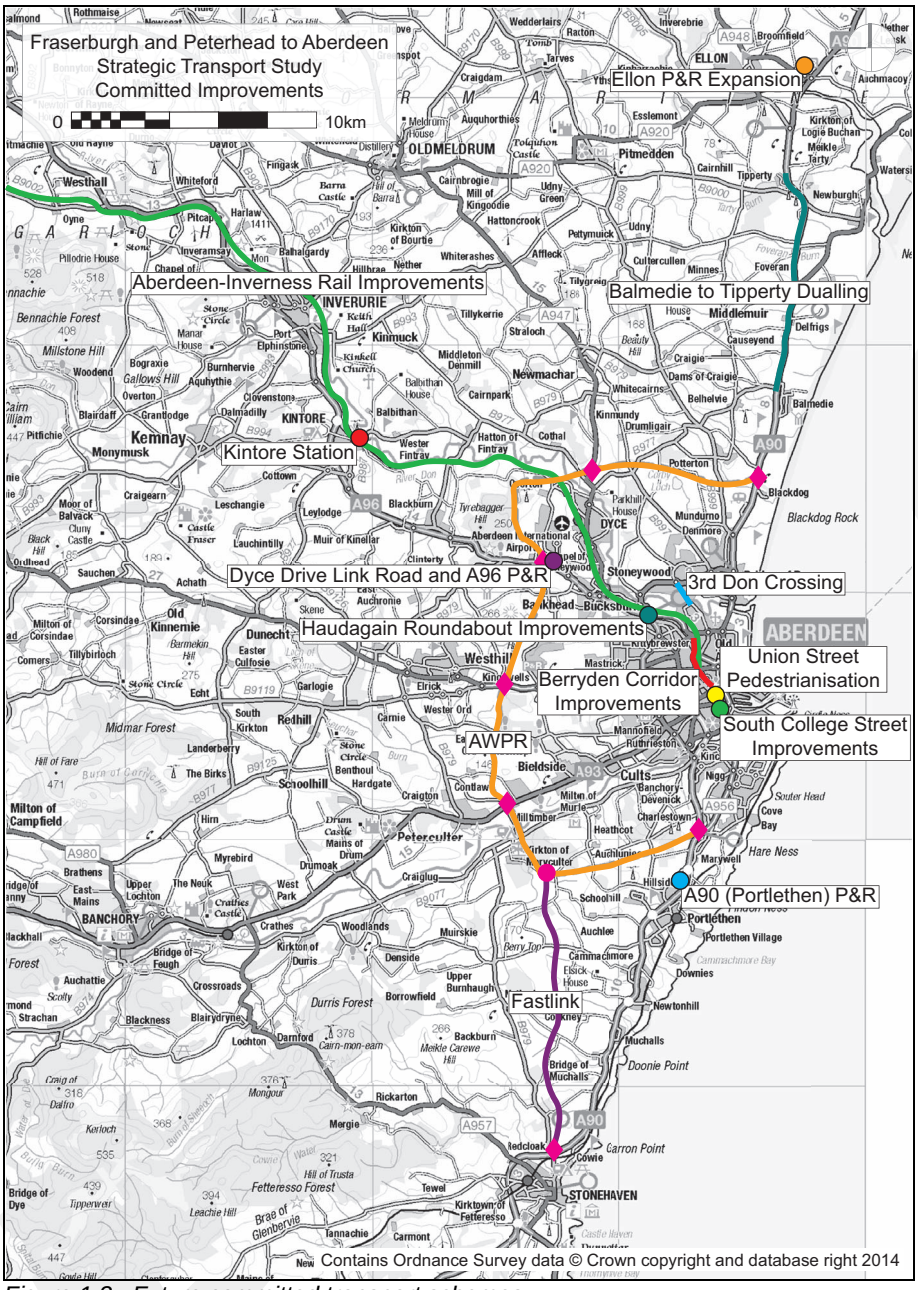

Figure 1.3 : Future committed transport schemes

2 ANALYSIS OF PROBLEMS AND OPPORTUNITIES

2.1 Introduction

The identification of actual and perceived problems and opportunities provide the rational for the study. It is important for problems and opportunities to be considered in the wider context, and that consideration is also given to issues and constraints relevant to the study.

Problems, Opportunities, Issues and Constraints, as defined by the STAG guidance, are:

- **Problems:**
  Existing and future problems within the transport system,
  e.g. unreliable journey times
- **Opportunities:**
  Chances to improve the current situation by making changes to the transport system, e.g. improve journey times
- **Issues:**
  Uncertainties that the study may not be in a position to resolve, but must work in the context of, e.g. impact of LDP
- **Constraints:**
  The bounds within which the study is being undertaken, e.g. available funding

Throughout the identification of problems, opportunities, issues and constraints, the evidence base that supports the recognition of a particular problem, issue or constraint and the justification for opportunities has been presented. This enables the different elements to be understood in more detail and demonstrates that they are real and not just perceived.

It has been important during the identification of problems and opportunities to establish:

- Who/what are strategic transport improvements needed for
- Why these improvements are needed
- Why should investment in the strategic transport network be made here

The answers to these questions are key to understanding the potential benefits of any transport network improvements. To clearly establish the answer to these questions and to fully inform the identification of problems, opportunities, issues and constraints for the study, two key study elements have been undertaken:

- A wide ranging engagement programme (a full account of which is provided in Appendix A, ensuring that the knowledge, ideas, experiences, and aspirations of stakeholders are understood and taken cognisance of.
- The analysis of a wealth of background data which has provided the context for the study from a policy perspective, and an economic, social and transport context, with consideration of all modes of transport, and is presented in the Baseline Report, (*Fraserburgh & Peterhead to Aberdeen Strategic Transport Study - Baseline Report, SIAS, Peter Brett Associates & Energised Environments, SIAS Ref. 77075, June 2015)*. The background data analysis supports the identification of problems, underpinning and evidencing the real, perceived, and sometimes anecdotal problems identified through the programme of engagement. The Baseline Report should therefore be referred to for further information where noted in this report.

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It is important to note that while a full appreciation of the current problems on the transport network is fundamental to the study, understanding potential future transport problems and importantly, the potential opportunities, has been a key focus throughout.

2.2 Problems and Opportunities

Understanding the economic and social context of the study area has allowed for a clearer understanding of why and for whom transport improvements are needed, and before the key transport problems and opportunities are presented it is prudent to examine this context.

The study area has a relatively small population and low population density, with Peterhead (pop. 18,500), Fraserburgh (pop. 12,500), and Ellon (pop. 10,000) the largest settlements with Peterhead the largest settlement in Aberdeenshire.

The study area is an important centre for energy, agriculture and fishing, the key economic drivers in the area, as reflected in Aberdeenshire's Economic Development Strategy (2011 – 2016), the objectives of which, amongst others include; anchoring the oil & gas sector in the North-East, ensuring Aberdeenshire is a location of choice for renewable energy and developing and promoting a more sustainable fisheries industry.

Despite the recent decline in the manufacturing and primary industries at the national level, the study area has shown growth in these areas. These primary industries are relatively transport intensive, with a high dependence on the movement of goods, predominantly undertaken by road. Peterhead Port and Fraserburgh Harbour are key freight generators and attractors in this regard, and rely on transport connections to enable the efficient movement of supplies and goods between the ports and the wider surrounding Aberdeen and Aberdeenshire area, and between the ports and distribution hubs in Aberdeen, the Central Belt, the wider UK and further afield.

Reflecting the dominance of these primary industries, there is a clear north-south divide in the study area in terms of occupations; the southern sections dominated by occupations associated with Aberdeen City, with the northern area focused on skilled trade occupations. While there has been overall employment growth in the study area between 2009 and 2013, this has lagged behind the wider performance of the Aberdeen City and Aberdeenshire area, with growth driven predominantly by growth in the south, immediately north of Aberdeen. The study area, and in particular the north of the area, may therefore not have fully shared in the growth experienced in the North-East in recent years.

Transport connections have a role to play in anchoring existing business to the area and attracting further inward investment. Supporting existing businesses and their growth aspirations has a key role in retaining current employment opportunities in the study area, and specifically in Fraserburgh and Peterhead. Comments received during the engagement programme indicate a general business sentiment that current transport links do not support the nature of present business operations and that if deciding again, due to the perceived poor connections, some businesses would choose a location south of Aberdeen.

Data analysed has shown a lower economic activity rate in the northern sections of the study area, particularly in Fraserburgh and the rural north and while unemployment in the North-East of Scotland is exceptionally low, unemployment in the northern sections of the study area is notably higher than the regional average. Transport infrastructure linking Fraserburgh, Peterhead, and Aberdeen can limit unemployed people, as well as young people, in these areas from accessing employment in the Aberdeen and Dyce areas as well as educational opportunities in Aberdeen.

While Fraserburgh and Peterhead have quite insular labour markets, around 12% of those employed in Fraserburgh and 15% of those employed in Peterhead commute to Aberdeen for work, placing a reliance on transport connections to the city for employment purposes. It should be noted that the recent announcement of the potential downsizing of a major seafood employment base in Fraserburgh[1] will likely result in the loss of local jobs, placing a potentially higher reliance on transport connections to and from the town for employment purposes.

Peterhead and Fraserburgh have higher proportions of residents with lower educational qualifications, compared to the regional and Scottish figures, likely due to the prevalence of primary sector employment. In addition, compared to the regional averages, the towns have lower levels of both home and car ownership, and while house prices have been increasing over the last decade, average house prices in both towns are still low compared to the regional average. In general, the overall affluence commonly associated with Aberdeenshire living, is not prevalent in the towns, reflected in the Scottish Indices of Multiple Deprivation with pockets of deprivation highlighted in both Peterhead and Fraserburgh. This is also recognised in the region's Strategic Development Plan which highlights Fraserburgh, Peterhead and the costal region between as a regeneration priority. Transport has a part to play in supporting the regeneration of the area and reducing the inequalities gap between the area and the rest of Aberdeenshire.

Looking to the future, recent uncertainty in the oil & gas sector is now a key challenge for the region going forward. However, the Aberdeen City & Shire Economic Future (ACSEF) Energetica project, one of the key economic drivers in the study area, presents a significant economic opportunity. The Energetica project, launched in 2008 and marketed as Aberdeen's Sustainable Energy Corridor, seeks to create a global hub for the energy sector extending from Aberdeen to Peterhead, building on the existing energy focus and skills in the area, and attracting new investment. Key opportunities relate to the renewables and decommissioning sectors including the current Carbon Capture and Storage, and Hywind projects. The pace of investment has been slow, in part due to the global recession in 2007/8, but investment interest is lately increasing. While the Aberdeen Western Peripheral Route (AWPR) is seen by investors as a 'game-changer', and it is difficult to predict the level of interest post-implementation, potential investors have cited transport connectivity to and from the corridor as an issue, which is relevant for the movement of goods, for attracting employees, and for providing wider access to a skilled workforce from which to draw. There is, however, a feeling amongst potential investors that Ellon is the northern boundary for investment. Improved transport connections north of here could reduce this perception of peripherality and be an enabler of inward investment.

Other economic opportunities exist through the redevelopment plans for both Fraserburgh and Peterhead harbours, the expansion of Trump International Golf Links at Balmedie and local business growth aspirations, reflected in the positive growth outlook of respondents to the Business Survey undertaken for the study.

The Aberdeen City and Shire region is expected to be the fastest growing in Scotland over the next 20 years, placing additional burden on the transport network for economic and social purposes. The region's Strategic Development Plan has allowed for more generous land-use allocations in the strategic growth corridor around the A90(T) north of Aberdeen, reflecting the aspirations and focus on the Energetica corridor. Improved transport links and connectivity will be needed to support this, enticing people to both live and work in the study area, and transport has its part to play in 'unlocking' the housing market north of Aberdeen and in the marketability of new homes.

[1] BBC News, 23 September 2015: http://www.bbc.co.uk/news/uk-scotland-north-east-orkney-shetland-34336576

A number of future transport proposals are already planned for the region, the most notable of which, the Aberdeen Western Peripheral Route incorporating the Balmedie to Tipperty dualling, which is already under construction. While the planned improvements will undoubtedly improve transport connections both between and beyond Aberdeen from the study area, the ambitious allocations in the Local Development Plans of Aberdeenshire and Aberdeen will place an additional future burden on the transport network. Uncertainties around the likely pace of development and its impact will persist, including concern that current congestion issues around the Bridge of Don may be 'transferred north' when the Balmedie to Tipperty dualling is completed.

There is an opportunity that this study can aid in supporting future transport demand by developing transport connections that enable an efficient transport network that makes walking, cycling and public transport more attractive. The Aberdeen City Centre Masterplan will be a key consideration in this regard, with the pedestrianisation of major routes in the centre reducing car access and necessitating a step-change in people's travel choices to, from and within the city.

Taking into account this economic and social context for the study, the consolidation of the findings from the engagement programme and wide-spread background data analysis have enabled the summarising of the identified problems and opportunities into structured categories, reflecting the various elements of the transport network, the different travel modes and the nature of the problems.

The examination of the full list of problems and opportunities identified and subsequent categorising of the transport network problems, led to the emergence of three clear themes:

- 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

The summarising and categorisation of the problems, and in many cases, associated opportunities, led to an understanding of the *impact* of the problems. During the process it became clear that the impacts were both economic and social in nature. In turn, it has become evident that improvements to transport provision could have a substantial positive impact on the economic ambitions of the area and the social and economic disadvantages experienced by local people and businesses.

The three key problem themes are discussed below, with reference to the key supporting evidence and the impacts from the economic and social perspective. A more detailed examination of the problems is provided in Appendix B, which references the relevant data in the Baseline Report. Appendix C contains a full list of the opportunities identified, many of which are discussed here.

2.2.1 Problem Theme 1: Traffic speeds significantly below posted speed limits and unreliable, and unpredictable journey times on strategic road routes

From data analysis, and the abundance of comments received during the engagement process, it became clear that traffic speeds significantly below posted speed limits and unreliable and unpredictable journey times are a key problem in the study area.

The mix of local and strategic traffic, agricultural vehicles, the high volume of slower moving heavy goods vehicles and subsequent platooning causes low speeds and delay on the A90(T) and A952 routes between Aberdeen, Peterhead and Fraserburgh, not just on the approach to Aberdeen but throughout the length of the route.

Evidence

Tom-Tom journey time data from 2012, presented in the Baseline Report, highlights average speeds on the A90(T) and A952 routes between Aberdeen, Peterhead and Fraserburgh significantly below posted speed limits. Additional data for the A96(T) and A947 linking the A96(T) to Dyce, shows slow speeds and very variable journey times between Haudagain Roundabout and Dyce dependent on the time of travel.

On the A90(T) north of Aberdeen, while the sign-posted speed limited is often 60mph, and the distance weighted 'average' speed limit is never below 56mph, average traffic speeds never exceed 50pmh between 07:00 – 19:00 in either direction. Similar speeds are observed on the A90(T) and A952(T) route between Aberdeen and Fraserburgh, again, well below the signposted speed limits. Average journey times between the hours of 07:00 – 19:00 vary from 45-50 minutes from Fraserburgh to Bridge of Don for the 37 mile trip, and between 31 – 38 minutes from Peterhead to Bridge of Don for the 30 mile trip.

The lower speeds, in part, will be due to the level of freight traffic on the routes (up to 13% of average daily traffic on the A90(T) between the Toll of Birness and Peterhead, and around 7% of average daily traffic on the A952, as shown in the Baseline Report) for which the speed limit on single carriageway routes is 40mph. However, the single carriageway nature of the route with a lack of overtaking opportunity means platooning is common-place and many vehicles are obligated to travel well below the signposted limit. It is important to recognise that the proportion of traffic on the route attributable to goods vehicles can vary during the day. Analysis of the available data, with suitable vehicle disaggregation, from the Scottish Roads Traffic Database (SRTDb) from March and September 2014, shows on the A90(T):

- Over 16% of all traffic northbound at Blackdog between 09:00 – 11:00 is attributable to heavy goods vehicles
- Over 20% of all traffic northbound at Balmedie and St. Fergus between 10:00 – 12:00 is attributable to heavy and light goods vehicles
- Over 15% of all traffic southbound at Balmedie between 11:00 – 17:00 is attributable to heavy and light goods vehicles
- Over 14% of all traffic southbound at St Fergus between 08:00 – 15:00 is attributable to heavy and light goods vehicles, with the proportion reaching to 17% between 10:00 – 11:00

In addition, data collected by Aberdeenshire Council in October 2013 shows 17% of all traffic heading southbound on the A90(T) just south of Peterhead between 09:00 – 10:00 is attributable to heavy goods vehicles (15% between 08:00 – 09:00).

Note that due to the classification of goods vehicles at a number of the SRTDb sites, it has not been possible to split out heavy and lights goods vehicles. A key requirement during the more detailed appraisal stage of this study would be obtaining more comprehensive data relating to the proportion and profile of heavy goods freight traffic on the A90(T) and A952.

Due to be completed in late 2017, the Aberdeen Western Peripheral Route (AWPR), incorporating the Balmedie to Tipperty dualling, will improve journey times for the southern section of the A90(T) route between Aberdeen and Ellon, but no further major road improvements north of Ellon are programmed. While the AWPR and Balmedie to Tipperty dualling will undoubtedly bring journey time benefits, the perception gained through public and business engagement is that these road improvements may not resolve all current road issues and there is a local concern that current congestion issues on the road network on the approach to Aberdeen will simply be moved further north.

Aberdeenshire Council's Local Development Plan allocates over 9,000 houses and over 100ha of employment/mixed use land in the study area to 2030, focused on a strategic growth corridor around the A90(T) with large employment and housing allocations at Blackdog, Balmedie, Ellon, and Peterhead. Further large housing allocations have been made for Mintlaw and Fraserburgh. Aberdeen City Council's Plan has allocations for over 12,500 houses and 85ha of employment land in north Aberdeen. Nearly 17,000 units of the combined Aberdeen City and Aberdeenshire housing allocation is within or south of Ellon. While it is recognised that the Balmedie to Tipperty dualling will help support this allocation, the anticipated employment and housing build-out will impact on the road network encompassing the main approach route to Aberdeen from the study area with future traffic projections highlighting current transport conditions back to present day levels by 2030.

Outputs from the Aberdeen Sub-Area Model (ASAM) for 2010, 2023, and 2033, which includes allowance for the two Plan allocations and takes cognisance of the full range of committed infrastructure improvements in the region including the AWPR and Balmedie to Tipperty dualling (as detailed in the Baseline Report), shows predicted increases in traffic on the A90(T) north of Aberdeen, from 2010 to 2033 of:

- Around 50%, both northbound and southbound between Ellon and Peterhead
- Around 50%, both northbound and southbound, on the A952 south of Mintlaw, and around 40% north of Mintlaw
- Over 90%, both northbound and southbound at Blackdog

Corresponding analysis of journey times from ASAM shows that despite the inclusion of the AWPR and Balmedie to Tipperty dualling schemes, southbound journey times between Fraserburgh, Peterhead and Aberdeen are predicted to remain similar to those of 2010 (with northbound time reducing by around 90 seconds over the full route). While overall the journey time remains consistent there are, however, reductions in journey time south of Ellon, but journey times north of Ellon, on both the A90(T) and A952 are predicted to increase and off-set any journey time benefit of the committed schemes further south. This very limited change in future travel time on the route between Fraserburgh, Peterhead and Aberdeen suggest the issues presently experienced on the route will persist north of Ellon. The AWPR scheme will bring benefit to longer distance journeys but for commuters, freight, and other business trips from Peterhead and Fraserburgh to many parts of Aberdeen City, for whom the AWPR may not be utilised, there will be no discernable journey time benefits and potentially an increase in frustration north of Ellon where journey times increase.

Analysis of the current flow on the A90(T) between Tipperty and the Toll of Birness, undertaken in accordance with the *Design Manual for Road and Bridges (DMRB)* guidance[2], indicates the flow on the road is in excess of that recommended for a single carriageway. *DMRB* recommends a maximum flow of 13,000 Annual Average Daily Traffic (AADT) on a single carriageway (S2) route. The flow on the A90(T) just north of Tipperty is close to 14,000. AADT traffic data was unavailable between Ellon and the Toll of Birness. Combined AADT flows from the A90(T) south of Peterhead and the A952 north of the Toll of Birness are approximately 12,300. Data would be required to determine the flow between Ellon and the Toll of Birness more accurately but is likely to be very close to 13,000, with the maximum easily breached if traffic levels increase.

With the limited suitable alternative parallel strategic roads placing a heavy reliance on the A90(T) and A952 as key access routes between Aberdeen, Peterhead, and Fraserburgh, engagement highlighted further issues surrounding journey time reliability and predictability which can have a significant impact on business and commercial operations. While no day-to-day journey time variability analysis has been possible from the available data to support this, a range of comments made during engagement from various industries and the public highlights the impact. Of particular focus was the impact of journey time unpredictability on operations and the financial cost to business of a requirement to build additional time into staff and goods movements. A key requirement during the more detailed appraisal stage of this study would be obtaining more comprehensive data relating to day-to-day journey time variability for different road users. This would enable a fuller understanding of the economic and social impacts of journey time unreliability and unpredictability on different road users for whom uncertainty and delay will have different impacts based on the relative distance being travelled, trip purpose and the value of any goods being transported.

Economic & Social Impacts and Opportunities

A lack of suitable alternative parallel strategic roads places a heavy reliance on the A90(T) and A952 as key access routes between Aberdeen and Fraserburgh and Peterhead, and traffic speeds significantly below posted speed limits, and unreliable, and unpredictable journey times have both economic and social impacts.

As discussed previously, compared to the Scottish average, the study area has a higher concentration of employment in the primary industries, driven by the oil & gas, fishing and farming sectors. These industries are relatively transport intensive, requiring goods to be moved from one place to another and the port of Peterhead is a key freight attractor (as part of the oil & gas industry supply chain) and freight generator (as part of the fishing industry and associated processing activities). Similarly, Fraserburgh Harbour is a key generator of freight due to the fishing industry with the port also providing services to the oil and gas industry and the commercial and offshore renewables sector.

Engagement highlighted the impact of slower than desired traffic speeds, and unreliable and unpredictable journey times on businesses in general, but with specific comments made in relation to the movement of goods in the key oil & gas and fishing industries.

[2] http://www.standardsforhighways.co.uk/dmrb/vol5/section1/ta4697.pdf

For the fishing industry, where stock can depreciate in value quickly (up to 50% depreciation a day), the movement of products is particularly time critical with delays impacting heavily on businesses in this highly competitive market. With limited alternatives, the distribution of goods from the harbours is undertaken predominantly by road, with fish products departing to Aberdeenshire, Aberdeen, the Central Belt, Grimsby, Birmingham, London (amongst others) and further afield. The introduction of new EU Landing Obligations will likely increase the volume of fish requiring transportation from both harbours, adding additional freight traffic to the route.

Engagement with Peterhead Port Authority and Fraserburgh Harbour Commissioners highlighted a belief that the strategic road routes between Fraserburgh, Peterhead, and Aberdeen do not support the efficient movement of goods to and from the harbours, and also between them. Peterhead Port Authority noted that the poor journey time reliability on the A90(T) creates a perception that Peterhead is peripheral and it was their view that this can be a detractor from using the port.

Peterhead and Fraserburgh harbours have redevelopment plans. The redevelopment plans for Peterhead include a £47million investment at the harbour to develop a fully integrated fishing hub with a 50% increase in market floor space and deepening of the inner harbours, potentially attracting processing operations currently located in Aberdeen, putting additional burden on the road network for product distribution. The redevelopment of Fraserburgh harbour includes an £8million investment in the deepening of the north harbour basin driven by the harbour's Off-shore Wind Operation and Maintenance Proposition. A reduction in journey time between the harbours and Aberdeen, with improved journey time reliability and predictability has the potential to increase inward investment and use of the ports, supporting the successful delivery of the redevelopment plans. The subsidiary effect of increased investment is the potential increased employment opportunities that brings, enabling people to live and work locally, supporting the regeneration priorities for the area as identified in the region's Strategic Development Plan.

Fraserburgh is recognised as the most fisheries dependant community in Scotland, with around 40% of those employed in the town working directly or indirectly in the industry. Similarly, with many local people employed in Fraserburgh and Peterhead, providing the transport links to support the large industries within the towns and retaining the employment opportunities, is essential to each town's vitality and supports the regeneration priority for the area. If these employment opportunities were to be reduced or lost, the geographical location of the towns and the economic draw of Aberdeen would likely lead to an increased need for commuting longer distances, or may ultimately lead to potential out-migration from the towns. As discussed previously, it should be noted that a key seafood business in Fraserburgh, has very recently announced the loss of a major contract, the consequence of which is downsizing of the company's Fraserburgh base with the resultant loss of local jobs[3]. While the impact of this on the local community is not yet clear, reducing journey times between Fraserburgh and Aberdeen, and improving the reliability of travel would benefit those out of work and seeking employment further afield. Indeed 53% of respondents to the Public Survey cited current road network problems reduced their access to employment opportunities.

[3] BBC News, 23 September 2015: http://www.bbc.co.uk/news/uk-scotland-north-east-orkney-shetland-34336576

For the oil & gas supply and subsea industries, where vessels only have limited costly time at berth in the harbours, 'slack' must be built into freight movements, leading to inefficiencies and higher costs. Oil & gas related goods shipped through Peterhead to offshore installations tend to be supplied from industrial estates on the west and south of Aberdeen. Information gained through engagement suggests a typical articulated goods vehicle costs £30 pounds an hour and quayside personnel around £350 an hour, highlighting the not insignificant cost of delays and late arrival at the quayside. Improving the reliability of travel would clearly benefit businesses, helping to reduce costly economic inefficiencies and limit product depreciation. The potential to collect data relating to the volume and value of goods being transported should be a key consideration during the more detailed appraisal stage of this study and would allow for a more in-depth understanding of the economic impacts.

The unpredictability of journey times on the strategic road network, while being noted by a number of key industries, is of specific importance to the bus industry, where obligations to meet Traffic Commissioner statutory targets surrounding punctuality and reliability, is paramount. The main bus operators in the area both cited the need to provide slack time in timetables to allow for this unpredictability and enable the targets to be met, leading to occasions where buses are required to wait at stops for long periods to ensure timetables are adhered to. This is particularly unattractive to passengers and detracts from the use of this more sustainable means of travel. Additionally, the bus operators pointed out that more reliable and predictable journey times, with a reduced need for bus 'idling' at stops could potentially reduce the number of buses required on certain routes, allowing the freed assets to be utilised elsewhere and increasing service frequency on other routes.

Figures reflecting commuting between Fraserburgh, Peterhead and Aberdeen/Dyce, have dipped slightly between 2001 and 2011, but are still around 13% from Fraserburgh and 15% from Peterhead, however, issues surrounding labour supply and attracting employees has been a key problem noted during engagement with reference made to a shortage of skilled labour and recruitment issues noted for the NHS, Aberdeen University, Peterhead Prison, Aberdeen Airport, and the Council. There is a feeling that opportunities in the study area are 'on the wrong side of Aberdeen' requiring too long a commute time from many parts of Aberdeenshire, and further afield.

Indeed attracting employees for existing business and also attracting new business investment in the area, by ensuring transport network reliability and efficiency enabling business to draw on a wider skills base is a key opportunity identified for the study, and is of particular relevance for the Energetica Corridor.

The Energetica project launched in 2008 and marketed as Aberdeen's Sustainable Energy Corridor, is the flagship project of Aberdeen City and Shire Economic Future and seeks to create a global hub for the energy sector extending from Aberdeen to Peterhead, building on the existing energy focus and skills in the area, and attracting new investment. The pace of investment has been slow, in part due to the global recession in 2007/8, but investment interest is lately increasing. While the AWPR is seen by investors as a 'game-changer', it is potentially difficult to predict the level of investment interest post-implementation. Potential investors have cited transport connectivity, to and from the corridor (of which the A90(T) forms a key part) as an issue, which is relevant for the movement of goods and for attracting employees.

At Peterhead, the Energetica project's 'North-East hub', plans for Carbon Capture and Storage, the European Offshore Wind Deployment Centre, the Statoil Hywind Project Decommissioning, the new Peterhead South Business Park, as well as local business growth aspirations will all put additional strain on the transport network, specifically during their development and for ongoing operations thereafter. Perceptions of poor connectivity amongst investors could undermine the credibility of the Energetica Corridor, reduce the economic potential of the area and ultimately constrain the housing market which is firmly allied to it. Providing improved journey times on the key strategic routes has real capacity to support the Energetica project, bringing both economic and social benefits to the study area.

The impact of lower than desired traffic speeds, and unreliable and unpredictable journey times was identified by 95% of respondents to the study's Public Survey as impacting on their everyday activities with nearly 90% of respondents saying they started journeys earlier or later to avoid delay, nearly 60% citing road delay in making them late for work or education purposes and nearly 20% citing feelings of isolation.

Increased accessibility to the region's main retail and health facilities in Aberdeen and also increased job opportunities, in higher paid vocations, is a key opportunity for the study. While it is accepted that the unemployment rate in the study area is lower than the Scottish average, it should be acknowledged that the unemployment rate in both Fraserburgh and Peterhead is notably higher than the regional average and there is an opportunity to reduce this inequalities gap.

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2.2.2 Problem Theme 2: Road safety risk on the A90(T) and A952

Safety on the A90(T) and A952 was highlighted as a key problem during the baseline data analysis and engagement programme.

Evidence

Accident data from 2009 – 2013, as presented in the Baseline Report, highlights the entire A90(T) route between Aberdeen and Fraserburgh as having a higher than expected proportion of serious accidents than would be expected on a road of similar nature. In addition, three locations were identified as having a higher than expected proportion of fatal accidents; to the south of Fraserburgh; to the south of Peterhead; and between Blackdog and the Bridge of Don. Additionally, the southern section of the A952 between Mintlaw and the Toll of Birness was also highlighted with a higher than expected proportion of fatal accidents.

The accident data also illustrated pedestrian and cyclist accidents rates in the study area between 2009 and 2013 are above the regional average and Nestrans targets, potentially reducing the attractiveness of active travel modes as a mode of transport.

Discussion with Police Scotland and Scotland Fire and Rescue suggests that accidents in the area are caused by a number of factors including;

- Driver frustration at slow speeds and lack of over-taking opportunity
- Young and inexperienced drivers
- Older drivers who rely on the car for travel due to the rural nature of their residence with limited public transport alternatives that suit their needs

The Public Survey, and other avenues of engagement, highlighted perceptions that accidents are caused by; the mix of strategic and local traffic; slow moving agricultural and heavy goods vehicles; and the number of farm and side road access points onto the A90(T) with a lack of dedicated right hand turn lanes, which all cause delay to traffic leading to driver frustration and dangerous overtaking manoeuvres. Poor road markings and poor visibility were also noted as leading to accidents. In particular, difficulties at the Toll of Birness, for southbound traffic turning right from the A952 onto the A90(T) southbound carriageway, were noted. Accident analysis from 2009 to 2013 highlights four accidents (recorded as ‘serious’) within 100m of the Toll of Birness junction.

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This second key theme was also identified during the Scottish Transport Projects Review, which sets out the Scottish Government's 29 transport investment priorities over the period to 2032 through identifying the transport interventions that most effectively contribute towards the Government's Purpose of increasing sustainable economic growth. "Online Trunk Road improvements on the A90(T) north of Aberdeen" was one of 136 interventions examined during the Review's Initial Appraisal stage. The justification for the intervention was on safety grounds (and the fatal accident rate between Aberdeen and Fraserburgh being significantly higher than the national rate was noted). The intervention was retained in the final Summary of Draft Interventions, as part of Intervention 5 "Route Management on other Road Corridors", which covers "a series of initiatives to implement road-based improvements with a combination of network optimisation through route management and targeted investment in relatively local interventions". It should be noted that Transport Scotland is currently examining the A90(T) route north of Aberdeen to prepare a Road Accident Reduction Plan (RARP) to identify any future actions required. It is noted that the assessment was not triggered by accident rates on the route but due to the cyclical nature of trunk road assessments.

A large number of those consulted as part of this study's engagement programme highlighted accidents as a key problem. Of respondents to the Public Survey, 35% noted the level of accidents and road safety as a significant problem, with the Toll of Birness junction (A90(T)/A952 junction) as a key location for accident concern and a perceived accident black-spot.

Comments in relation to road safety on the A90(T) and A952 were also made by nearly all stakeholders contacted, and was highlighted to be a specific concern for oil and gas companies who place a significant emphasis on Health & Safety. Accidents were seen as a key factor in increasing delay on the strategic road network and adding to overall journey unreliability and unpredictability impacts, as discussed in Problem Theme 1.

Economic & Social Impacts and Opportunities

Economically, the delay accidents cause, and the longer alternative routes of lower standard that are required to be taken when key routes are blocked, means any incident can lead to significant journey time implications with economic impacts as noted in Problem Theme 1. There is an opportunity to reduce this impact on business and support the opportunities as discussed in Problem Theme 1.

Accidents themselves also come at an economic and social cost, including:

- Loss of output due to injury
- Ambulance costs and costs of hospital treatment
- The human cost of casualties including the grief and suffering to the casualty, relatives and friends (including the burden of injury, physiological impacts, potential job loss, impacts of prosecution as a result of an accident etc.), as well as the intrinsic loss of enjoyment of life in the case of fatalities
- Damage to vehicle and property
- Police and insurance administration cost

Transport Scotland's *Reported Road Casualties Scotland 2013, Table 10* (http://www.transportscotland.gov.uk/statistics/j340611-20.htm), puts the cost of a trunk road accident (for 2012 at 2013 prices) at:

- £2.07m for a fatal accident on the trunk road
- £265,589 for a serious injury accident
- £25,764 for a slight injury accident

Reducing road accidents has the potential to reduce this cost and the social impact to society.

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2.2.3 Problem Theme 3: Limited travel mode choice

The third identified key problem reflects the identification of limited travel choice in the study area.

Evidence

Car ownership levels in Fraserburgh and Peterhead, which provide an important measure of overall affluence in an area and can be an indicator of likely public transport demand, are (as shown in the Baseline Report) similar to the Scottish average but lower than the average across the Aberdeen and Aberdeenshire region. Given the distance of both towns from Aberdeen, where many regional facilities are located, this is an important consideration when understanding the issues faced by local residents, where limited travel mode choice can increase feelings of peripherality and isolation.

With the only access to the railway network being at the stations of Dyce and Aberdeen, both at the south of the study area, public transport travel choice for those without a car (and for those *with* access to a car who would use additional modes if they were available), is limited to bus services.

Buchan Link bus services (details of which are presented in the Baseline Report) operate between Fraserburgh, Peterhead, Ellon and Aberdeen, with a travel time of 90min between Fraserburgh and Aberdeen, and 75min between Peterhead and Aberdeen, equating to average travel speeds of around or less than 30mph. These journey times, which cannot compete with equivalent travel times by car of just over an hour from Fraserburgh, and just under an hour from Peterhead, mean those reliant on public transport have significantly reduced accessibility to key regional services and job opportunities.

All bus services on the *Buchan Link* routes, and most other services which 'hub' in Aberdeen, are radial in nature, routeing into the centre of Aberdeen, with a deficit of orbital services providing direct links to desired destinations. Public transport access to locations outwith the city centre, to the many business parks on the periphery of the city, including Dyce, and to the main Aberdeen Royal Infirmary hospital and other healthcare facilities, all require interchange in Aberdeen City Centre with the inherent additional travel time. While some 'express' services do operate on the routes, journey time savings are in the region of 5 – 15min and are limited (only one express service a day from Peterhead and six from Fraserburgh).

The Public Survey undertaken as part of the engagement programme, as well as a survey carried as part of the Aberdeen & Grampian Chamber of Commerce *Barriers to Bus Use* study highlighted that very limited direct and express services were key problems with the current bus network. The Public Survey highlighted 62% of non-bus users identified long journey times to be a key reason for not using the bus with 70% of current bus users citing long journey times as the most significant problem for bus travel. In addition, the *Barriers to Bus Use* study showed that 74% of non-bus users would be likely or extremely likely to use the bus if an express service were available and 78% would be more likely if more direct routes were available.

Engagement indicated a key issue amongst those out of employment and looking for work is access to bus services. The public survey highlighted this with 31% of respondents citing that problems with the current bus network reduced their access to employment. In addition, access to public transport services is a key issue for those wishing to access educational facilities. This is especially the case in rural areas, and particularly for young people. Comments made during engagement suggested that a major barrier to enticing people to move to Fraserburgh and Peterhead was the limited access to further and higher education facilities. Additionally, comments made by North-East College highlighted their current provision of dedicated bus services for students providing access to the campus in the morning and placing a significant drain on college resources, which may increase further as a consequence of the college's £23million expansion plans. It should also be noted that with an ageing population, there is an ever increasing reliance on public transport to access local and regional facilities.

The study area is still reliant on Aberdeen for many NHS out-patient and in-patient services, and the ability of patients and visitors to access the hospital, especially for early morning services is a problem, especially for those reliant on public transport.

Comments made during engagement by those in the tourism industry suggest the current public transport network can constraint visitors to the area, restricting the potential day trip market from Aberdeen and with limited available travel options placing the car as the dominant travel mode used by visitors.

It should also be noted that house prices in Aberdeen are pushing the commuter belt further and further out of the city. This is placing an ever increasing reliance on the transport network for commuting purposes by road and public transport, potentially reducing capacity in the transport network. This can subsequently impact on travel choice between the study area and Aberdeen due to both road congestion and over-crowding on public transport services close to Aberdeen City centre, as noted during the engagement programme.

Economic & Social Impacts and Opportunities

The social benefits that occur through increased travel mode choice are clear, in providing increased travel choice for all, which helps to reduce inequality and feelings of peripherality. There is a clear opportunity when seeking to improve mode choice to consider effective and efficient integration between travel modes, ensuring an emphasis on sustainable travel options with the potential to encourage mode shift away from the car with the health and environmental benefits that can bring.

There are opportunities to; build on the recently launched Grasshopper ticket, covering bus travel in Aberdeen City and Aberdeenshire; capitalise on the continuing growth at Ellon Park & Ride site; turn around the decline in patronage of the Bridge of Don Park & Ride site capitalising on the planned additional spaces when the Aberdeen Exhibition and Conference Centre relocates; and ultimately support the delivery of the Aberdeen City Centre Masterplan.

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The Aberdeen City Centre Masterplan, the plans for which were approved unanimously by City Councillors in June 2015, contains a Public Realm Strategy which includes schemes to remove car traffic from a number of city centre routes, including Guild Street and Union Street. Access by private vehicle, and the way people consider movements to, from and within the city centre will require a step-change, with an increased reliance on public transport. While there is clearly an opportunity to improve the mode choice of those without a private car, the outcomes of this study provide an opportunity to support the implementation of the Masterplan and improve and increase public transport connections, attracting and encouraging those who do not currently use it. As previously stated, the recent *Barriers to Bus Use* study, undertaken by the Aberdeen and Grampian Chamber of Commerce, notes quicker journey times, more express services and more direct routes, as key influencing factors that would encourage non-bus users to use the bus in the future.

Economically, the key opportunity of increased mode choice is access to a widened skills base for employment, helping to attract workers to those industries where recruitment is challenging, and enabling business investment where the catchment to a skilled work force is widened, supporting the Energetica Corridor in its aims as well as the growth aspiration of existing businesses. Improved public transport choices with efficient integration between transport modes, which encourages people out of their cars also has the benefit of freeing up road space enabling a more efficient road network, on which local business relies.

There are further opportunities in the tourism industry, where increased mode choice has the opportunity to provide tourists with a greater range of travel choices, reducing perceptions of peripherality surrounding the area and encouraging increased visitor numbers, with the economic benefits to the area that this brings. The potential benefits of simply being ‘on the rail map’ should not be underestimated.

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2.3 Issues

Issues are defined as uncertainties that the study may not be in a position to resolve, but must work in the context of.

A number of key issues that could affect the future direction of the study were identified during the engagement and baseline data gathering process and include:

- Uncertainty in the level and pace of build out of the Local Development Plans
- Uncertainty in the pace of population growth in the area
- Uncertainty in the Oil & Gas industry and the impact on the economy of the region
- The potential impact on investment in the area when the AWPR becomes operational
- The extent of the success of the Energetica project and the impact on the transport network and also on detracting from potential investment further north of the corridor (i.e. north of Peterhead)
- Uncertainty in the extent to which the renewables and decommissioning industries will take-off
- Uncertainty of how existing business growth aspiration may impact on the transport network
- The extent to which improved transport connections may negatively influence the business in towns
- Uncertainty in how Aberdeen Harbour development may impact on Fraserburgh and Peterhead Ports
- Uncertainty around the level of benefits that can be 'locked in' post AWPR implementation
- The impact of an ageing population with a likely heavier reliance on the transport network
- Uncertainty in the potential impacts of transport interventions to the bus industry, specifically if a railway line were introduced which subsequently led to reduced demand for bus services, and the potential withdrawal of services if no longer commercially viable.

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2.4 Constraints

Constraints identified during the engagement and baseline data gathering process mainly reflected physical environmental constraints but also considered potential constraints relating to travel modes that need to be taken cognisance of during option development.

Physical constraints:

- Oil & Gas infrastructure around Peterhead and St. Fergus.
- Built heritage. There is a huge legacy of built heritage in the northern communities with lots of listed buildings, e.g. Boddam conservation area.
- Locations of Peat across Aberdeenshire including at St Fergus.
- The coastal areas are designated either SSSI or Local Nature Conservation Areas. The area near Hackley Head is a particularly sensitive location.
- Sensitive watercourses and catchments within the study area.
- Flood risk may be a significant constraint dependant on the options for appraisal.
- The network of national and locally designated sites for biodiversity and cultural heritage.
- Candidate Noise Management Areas in Aberdeen may constrain the types of option that could be developed.
- The former Formartine & Buchan railway active travel route could act as a constraint in any option development.

Mode Specific Constraints:

- Road:
  - The Climate Change Scotland Act which may constrain certain road based options which lead to an increase in vehicular emissions
- Bus:
  - Any changes to existing services or new services ultimately need to be able to operate on a commercial basis
- Rail:
  - Capacity issues between Dyce and Aberdeen
  - Contractual issues with the current rail franchise
  - The culture change that would be required for freight to utilise any new rail network
  - The nature of goods transported in the area mean that few are suitable for transfer to rail freight

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3 OBJECTIVE SETTING

3.1 Introduction

This section sets out the Transport Planning Objectives (TPOs) for the study.

The TPOs express the outcomes sought for the study and describe how the identified key problems can be alleviated (without indicating any potential solution). The objectives will form the basis for appraisal of the options at STAG Part 1 Appraisal (and subsequently, with refinement, during the more detailed STAG Part 2 Appraisal).

The development of the Transport Planning Objectives has been informed by:

- Consideration of the key problems and opportunities identified as discussed in Section 2
- The wider established transport, land use planning and economic policy context as presented in the Baseline Report, and discussed further here
- Discussions during the stakeholder engagement programme
- Discussion with the Client Group

The objectives have been developed with SMART principles in mind, such that they are:

- **Specific:**
  It will say in precise terms what is sought
- **Measurable:**
  There will exist means to establish to stakeholders' satisfaction whether or note the objective has been achieved
- **Attainable:**
  There is a general agreement that the objectives set can be reached
- **Relevant:**
  The objective is a sensible indicator or proxy for the change which is sought
- **Timed:**
  The objective will be associated with an agreed future point by which it will have been met.

3.2 Objective Setting Policy Hierarchy

The TPOs set for the study, while reflecting the identified problems, also support the range of established national, regional and local policy directives, plans and strategies.

Figure 3.1 shows the key transport, planning and economic policy, strategy and plan hierarchy under which the study is positioned, and to which the study objectives are aligned.

Details of the key aims and objectives for each of the noted policy directives, plans and strategies in Figure 3.1 are discussed in Appendix D. A more in-depth discussion on these documents can be found in the Baseline Report.

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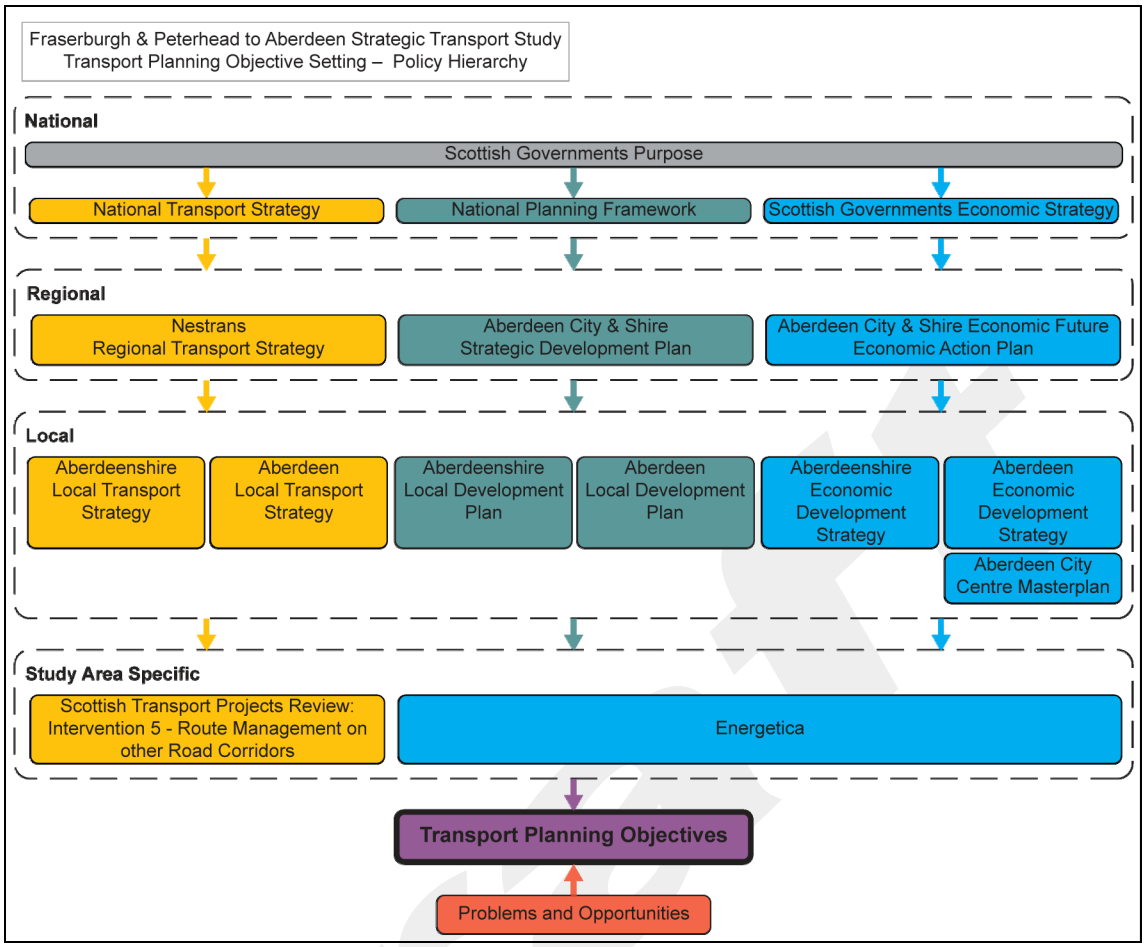

Figure 3.1 : Objective Setting Policy Hierarchy

3.3 Transport Planning Objectives

Taking cognisance of the policy context and the key problems identified during the study, six TPOs have been set and are:

1. Reduce journey times between North-East communities and the Aberdeen conurbation
2. Increase journey time 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

Table 3.1 shows how the objectives support the alleviation of the key problems identified, while Table D.1 to Table D.6 in Appendix D show how the objectives additionally support the aims and objectives of the key national, regional, local and study area specific transport, planning and economic policies, strategies and plans, a summary of which is provided here.

The TPOs concerning reducing journey times and increasing journey time reliability and predictability clearly support the National Transport Strategy's strategic goal for *improved journey times and connections* while also supporting the Regional Transport Strategy *Economy* objective, specifically *to reduce the impacts of peripherality*.

Reducing journey times and increasing journey time reliability and predictability has clear economic benefit which supports; the Scottish Governments Economic Strategy to *increase competitiveness*; the aim of Aberdeen City & Shire Economic Future's Economic Action Plan to *achieve annual economic growth of 2.5%*; Aberdeenshire's Economic Development Plan's objectives to *anchor the oil & gas sector to the North-East, ensure Aberdeenshire as a location of choice for renewable energy* and *promote Aberdeen City and Shire as a key tourism destination in Scotland;* and support the Energetica Projects priorities to *consolidate and grow the region's position as one of the world's major energy centres, attract new high value investment and people to the region* and *grow international trade for indigenous business.* These TPOs also support the National Planning Framework's vision of 'a *connected place'* as well as supporting the Aberdeenshire Local Development Plan aim to i*ncrease and diversify the economy.*

The TPOs relating to increasing strategic travel choice, direct public transport connections and increased mode share for non-car based modes support; the strategic goals of the National Transport Strategy for *reduced emissions* and *improved quality, accessibility and affordability*; the Regional Transport Strategy objectives relating to the environment and *reducing the effect of transport on climate,* as well as supporting the objective relating to *Accessibility, Safety and Social Inclusion,* specifically *enhancing choice of transport;* the Scottish Government Economic Strategy's aim to tackle inequality with specific regard *to promoting inclusive growth and creating opportunity through a fair and inclusive jobs market*; the National Planning Framework in its vision to create *a low carbon place;* the Aberdeen Local Transport Strategy objectives for *a cleaner, greener transport system, an integrated, accessible & socially inclusive transport system* and *a transport system that facilitates healthy and sustainable living*; the Aberdeenshire Local Development Plan's objectives *to take on the challenges of climate change;* and support the Aberdeen Strategic Infrastructure Plan in its objective for *better local transport,* and specifically for *improved cross-city connections.*

The TPO relating to reducing accidents specifically supports the Scottish Transport Projects Review objective *to promote continuing reduction in accident rates and severity rates across the strategic transport network,* as well as the Regional Transport Strategy's *Accessibility, Safety and Social Inclusion* sub-objective *to reduce the number and severity of traffic related casualties.*

Table 3.1 : Transport Planning Objectives vs. Key Problems Identified

	Transport Planning Objectives						
	Reduce journey times…	Increase journey time reliability and predictability…	Reduce accidents on the A90(T) and A952…	Increase strategic travel choice …	Increase direct public transport connectivity ……	Increase mode share for non-car based modes …	
Key Problems	1	2	3	4	5	6	**Specific Comments**
Traffic speeds significantly below posted speed limits, and unreliable and unpredictable journey times on strategic road links	✓	✓	✓	✓	✓		Increasing strategic travel choice and direct public transport connections has the ability to encourage modal shift, reducing traffic on strategic roads and hence reducing journey times and increasing journey time reliability and predictability.
Road safety risk on the A90(T) and A952		✓	✓				Reducing accidents on strategic routes would subsequently increase journey time realiability and predictability.
Limited travel mode choice				✓	✓	✓	

4 OPTION GENERATION, SIFTING, AND DEVELOPMENT

4.1 Introduction

The purpose of option generation, sifting and development is to derive a range of interventions to meet the Transport Planning Objectives and alleviate the problems and/or address the opportunities identified for the study.

It is important that the option generation process:

- Should be an unconstrained exercise, where any option can be considered relating to traffic and transport
- Develops options which meet the objectives by providing solutions to the identified problems

This section contains:

- Details of the options developed as part of the study
- Details of the option sifting process
- Details of the rationale for rejection of options at the option sifting stage
- Details of the final options recommended to take forward for appraisal at STAG Part 1
- Details of further 'complementary measures'
- Details of options rejected from the process (before sifting) due to being deemed out of the remit of the study

4.2 Option Development

In total, 128 individual options were developed through the engagement process and through Study Team and Client Group discussions. The options related to all modes of transport and covered:

- Road (33)
- Bus (38)
- Rail (14)
- Active Travel (18)
- Freight (6)
- Ports/Water (9)
- Air (5)
- Environment (4)
- Digital Connectivity (1)

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The options were divided into three categories:

- **Category A**: Within the remit of the study (70 options)
- **Category B**: Complementary measures – options that in themselves were not felt to meet the aim of the study, but would support other options in achieving the study aim (43 options)
- **Category C**: Outwith the remit of the study (15 options)

In order to work with a more manageable number of options, the Category A options were then combined into final options for sifting where the options were similar and fell within what could be considered a single option for appraisal, i.e. dualling the A90(T) from Ellon to Toll of Birness, dualling the A90(T) from Ellon to Peterhead and dualling the A90(T) from Ellon to Fraserburgh were all subsumed into a single option 'Phased dualling of the A90(T)'.

After the consolidation, 23 options remained in Category A.

4.3 Option Sifting

A very high level appraisal exercise was then undertaken in order to sift the Category A options.

Two criteria were used:

1. The STAG criteria (Economy, Safety, Social Accessibility & Inclusion, Integration, and Environment)
2. The developed Transport Planning Objectives (TPOs) for the study

The sifting was undertaken in two phases, firstly within the Study Team, and then at a workshop with the Client Group. The high level appraisal of the options against the two criteria is shown in Table 4.1 to Table 4.5.

The rational for the rejection of those options not considered suitable for consideration at STAG Part 1 is presented in Table 4.6.

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Table 4.1 : Option Sifting (Table 1 of 5)

				STAG criteria					Transport Planning Objectives						
Mode		**No.**	**Option Description**	**Ec.**	**Sa.**	**So. Ac. & Inc.**	**Int.**	**Env.**	**Reduce journey times**	**Increase journey time reliability & predictability**	**Reduce accidents**	**Increase strategic travel chocie**	**Increase direct public transport connectivity**	**Increase mode share for non-car modes**	**Select/ Reject?**
Road	**A90(T)**	1	Phased dualling of A90(T) • from Ellon to Toll of Birness • from Toll of Birness to Peterhead	✓	✓	×	×	✓×	✓	✓	✓	×	×	×	✓
		2	WS2+1 sections	✓	✓	×	×	✓×	✓	✓	✓	×	×	×	✓
		3	Junction improvement at Toll of Birness	✓	✓	×	×	✓×	✓	✓	✓	×	×	×	✓
		4	Junction improvement at Cortes Junction	✓	✓	×	×	×	×	×	✓	×	×	×	×
		5	Junction improvements at Ellon	✓	✓	×	×	×	×	×	✓	×	×	×	✓
		6	Bypasses of St. Fergus, Crimond, etc.	✓	✓	×	×	✓×	✓	✓	✓	×	×	×	×
		7	Minor road improvements including: • Provision for right turners off the A90(T) and B roads used by commuters • Lay-bys to allow slow moving vehicles to pull in and allow over-taking • Improved road markings	✓	✓	×	×	✓×	✓	✓	✓	×	×	×	✓
		8	Dedicated HGV lanes	✓	✓	×	×	✓×	✓	✓	✓	×	×	×	×

Table 4.2 : Option Sifting (Table 2 of 5)

Mode		No.	Option Description	STAG criteria					Transport Planning Objectives						Select/ Reject?
				Ec.	Sa.	So. Ac. & Inc.	Int.	Env.	Reduce journey times	Increase journey time reliability	Reduce accidents	Increase strategic travel chocie	Increase direct public transport connectivity	Increase mode share for non-car modes	
Road	**A952**	9	Dual from Toll of Birness to Cortes including: • a potential bypass of Mintlaw	✓	✓	×	×	✓×	✓	✓	✓	×	×	×	✓
		10	WS2+1 sections	✓	✓	×	×	✓×	✓	✓	✓	×	×	×	✓
	A975	11	Improvements to the route including: • Providing opportunities for over-taking	×	✓	×	×	✓×	✓	✓	✓	×	×	×	×
Bus	**New Services**	12	New direct bus links from key settlements to key and new development/employment sites including: • major employment hubs (including Dyce and Aberdeen business parks) • Aberdeen Royal Infirmary • the Universities • Aberdeen Airport	✓	×	✓	×	✓	✓	×	×	✓	✓	✓	✓

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Table 4.3 : Option Sifting (Table 3 of 5)

				STAG criteria					Transport Planning Objectives						
Mode		**No.**	**Option Description**	**Ec.**	**Sa.**	**So. Ac. & Inc.**	**Int.**	**Env.**	**Reduce journey times**	**Increase journey time reliability**	**Reduce accidents**	**Increase strategic travel chocie**	**Increase direct public transport connectivity**	**Increase mode share for non-car modes**	**Select/ Reject?**
Bus	**Enhanced services**	13	Bus Priority Measures including: • Providing dedicated lanes/routes for buses (potentially sections of guided bus way) • Peak hour bus priority on A90(T) north of Bridge of Don – southbound in AM, northbound in PM • Extended operating hours for bus priority lanes on A90(T)/A956 into/out of Aberdeen centre from Bridge of Don	×	×	✓	×	✓	✓	✓	×	×	✓	✓	✓
		14	Increase frequency of Buchan Link services including: • More services at weekends and evenings/nights • Increased number of express services	×	×	✓	×	✓	✓	×	×	✓	✓	✓	✓
		15	Improve rural public transport in order to improve access to the tourism product	✓	×	✓	×	✓	×	×	×	✓	✓	✓	×

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Table 4.4 : Option Sifting (Table 4 of 5)

				STAG criteria					Transport Planning Objectives						
Mode		**No.**	**Option Description**	**Ec.**	**Sa.**	**So. Ac. & Inc.**	**Int.**	**Env.**	**Reduce journey times**	**Increase journey time reliability**	**Reduce accidents**	**Increase strategic travel chocie**	**Increase direct public transport connectivity**	**Increase mode share for non-car modes**	**Select/ Reject?**
Bus	**Park & Ride**	16	Development of a Park & Ride Strategy for the corridor including consideration of mini Park & Ride hubs	×	×	✓	✓	✓	×	×	×	✓	✓	✓	✓
Rail	**Former Railway Line**	17	Phased reinstatement of the former Formartine & Buchan Railway and stations (including examining options for light rail or tram) from: • Dyce to Ellon • Ellon to Maud/Peterhead • Maud to Fraserburgh	×	×	✓	×	✓	×	✓	×	✓	✓	✓	✓
	New Railway line	18	Phased implementation of a new rail line serving key communities from Dyce to Peterhead and Fraserburgh (including examining options for light rail or tram) and considering: • Link to airport • Link to Aberdeen Harbour • Link to new ACEE site • Reinstate the Ellon to Cruden Bay line	×	×	✓	×	✓	×	✓	×	✓	✓	✓	✓

Table 4.5 : Option Sifting (Table 5 of 5)

				STAG criteria					Transport Planning Objectives						
Mode		**No.**	**Option Description**	**Ec.**	**Sa.**	**So. Ac. & Inc.**	**Int.**	**Env.**	**Reduce journey times**	**Increase journey time reliability**	**Reduce accidents**	**Increase strategic travel chocie**	**Increase direct public transport connectivity**	**Increase mode share for non-car modes**	**Select/ Reject?**
Ports		19	Examine potential for hovercraft from Peterhead to Aberdeen	×	×	✓	×	✓	×	×	×	✓	×	✓	×
		20	Provide ferry from Fraserburgh to Peterhead	×	×	✓	×	✓	×	×	×	✓	×	✓	×
Freight		21	Examine the potential of transporting freight from Peterhead to Aberdeen by sea	✓	✓	×	×	×	✓	✓	✓	✓	×	✓	×
		22	Rail freight hubs: • Link Raith's Farm (Dyce) as a rail freight hub • Freight terminal near Dyce airport	×	×	×	✓	✓	×	×	×	✓	×	✓	×
Active Travel	**New cycleway**	23	Segregated cycleway in study corridor linking key communities	×	✓	✓	✓	✓	×	×	✓	✓	×	✓	✓

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Table 4.6 : Rationale for rejection of options during sifting

Mode		No.	Option Description	Rationale for rejection
Road	A90(T)	4	Junction improvement at Cortes Junction	It was felt that the option would not provide benefits against the majority of the Transport Planning objectives and was therefore not progressed.
		6	Bypasses of St. Fergus, Crimond, etc.	These bypasses were not felt to be on the key connecting road network between either Peterhead and Aberdeen, or Fraserburgh and Aberdeen. It was deemed that the option would not provide strategic benefit and was therefore not progressed.
		8	Dedicated HGV lanes	Due to the potential legislative issues surrounding the potential introduction of dedicated HGV lanes (they are not currently in place anywhere in the country), this option was not progressed.
	A975	11	Improvements to the route including: • Providing opportunities for over-taking	The A975 was not deemed a strategic route and it was felt this option would not supply sufficient benefit when appraised again the two sets of criteria. It was therefore not progressed.
Bus	Enhanced services	15	Improve rural public transport in order to improve access to the tourism product	This option did not appraise well against the Transport Planning Objectives and was therefore not progressed.
Ports		19	Examine potential for hovercraft from Peterhead to Aberdeen	This option did not appraise well against the Transport Planning Objectives and was therefore not progressed.
		20	Provide ferry from Fraserburgh to Peterhead	This option did not appraise well against the Transport Planning Objectives and was therefore not progressed.
Freight		21	Examine the potential of transporting freight from Peterhead to Aberdeen by sea	While the option appraised well against the Transport Planning objectives, the feeling amongst the Client Group was that if this were cost beneficial it would already be being undertaken. The option was therefore not progressed.
		22	Rail freight hubs: • Link Raith's Farm (Dyce) as a rail freight hub • Freight terminal near Dyce airport	This option did not appraise well as Transport Planning Objectives and was therefore not progressed.

From the sifting process, 14 options remained. In order reduce the number of options to a more manageable number for Part 1 Appraisal the remaining options were consolidated into 7 final options for further appraisal, as presented in Table 4.7.

Note that during this consolidation, it was decided that given the strategic nature of the study and the minimal number of strategic trips likely to undertaken by active travel modes, the option relating to active travel (Option 23) was re-worded as 'Packages of high quality active travel measures to integrate with other modes of transport'. The option was subsequently removed from the final option list as it was deemed to be covered by the range of active travel measures contained within the Category B complementary measures list (discussed further in Section 4.4), and assumed to be implemented alongside each of the seven recommended options for appraisal.

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Table 4.7 : Recommended options for Part 1 Appraisal

Mode	Final Option No.	Option Description	Consolidated options
Road	1	Phased road dualling north of Ellon, with junction improvements, including consideration of: • A90(T) Ellon to Toll of Birness • A90(T) Toll of Birness to Peterhead • A952 and A90(T) Toll of Birness to Fraserburgh	1, 9
	2	Overtaking lanes and junction improvements, including consideration of: • A90(T) from Ellon to Peterhead • A952 and A90(T) Toll of Birness to Fraserburgh	2, 3 , 7, 10
	3	Safety improvements on: • A90(T) from Ellon to Peterhead • A952 and A90(T) Toll of Birness to Fraserburgh	7
Bus	4	Bus service improvements including consideration of: • New direct bus linkages between the study area and key employment, health and social facilities in the Aberdeen conurbation • Increased express services between the study area and key employment, health and social facilities in the Aberdeen	12, 14
	5	Bus service improvements (as Option 4) accompanied by priority infrastructure and Park and Ride improvements considering: • New sections of dedicated bus lanes • Extending operating hours for bus priority lanes • Development of a Park & Ride Strategy for the study corridor	12, 13, 16
Rail	6	Phased reinstatement on existing railway alignments, via Dyce, including examining options for light rail or tram from: • Dyce to Ellon • Ellon to Maud/Peterhead • Maud to Fraserburgh	17
	7	Phased implementation of a new railway alignment, via the Bridge of Don, including examining options for light rail or tram from: • Aberdeen to Ellon • Ellon to Peterhead • Ellon to Fraserburgh	18

4.4 Complementary Measures

Options identified as ‘complementary measures’ (Category B options), were options that in themselves were not felt to meet the aim of the study, but would support the seven recommended options for Part 1 Appraisal (as listed in Table B.2) in achieving the study aim. These complementary measures were consolidated from 43 measures down to 25 measures, where similarly themed measures were packaged together. The list of complementary measures is shown in Table 4.8 and Table 4.9.

For appraisal, it will be assumed that a sub-set of these measures would be implemented alongside each of the seven remaining Category A options. The package of high quality active travel measures contained in the list in Table 4.9 will be assumed to form part of the complementary measures subset in each case.

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Table 4.8 : Complementary Measures (Table 1 of 2)

Complementary Measures	Option Description
Road	Install average speed cameras to combat accident issues
	Signage strategy to bring people north - brown signage for tourists highlighting key attractions e.g. gateway to castle trail, coastal trail etc.
	Provide real time information on roads to highlight to drivers were key congestion issues are
	Investigate increasing the speed limit for HGVs to 50mph (similar to the A9 trials) – in order to resolve driver frustration/safety issues
	Implement further electric vehicle charging points
	Expand Co-Wheels Car Club into study area
	Incentivise car sharing
	Encourage further flexible working hours/ smarter working to reduce the need to travel and improve IT links outwith Aberdeen to ensure mobile and flexible working are effective
	Introduce a congestion charge in Aberdeen City Centre
Bus	Support the purchase of a new coach fleet which offers wide seat pitches, plug points, wifi etc.
	Implement a region-wide quality bus partnerships
	Enhanced real time information - integrated with smart phones and bus stops
	Introduce low carbon/hydrogen buses
	Reduce the cost of bus services/subsidise bus fares, making them equivalent with benchmark comparators.
	Develop a fully integrated ticketing system, expanded to cover rail in the long-
	Develop a revised P&R Strategy / marketing for using P&R, which could include encouraging local P&R use through pricing – e.g. offering reduced pricing to encourage residents not to drive to southern P&Rs.
	Enhancement of airport bus timed to meet with trains at Dyce.
Rail	Electrification of railway line
Freight	Investigate opening up shipping routes between north east and other countries. Would mean freight is not required to travel long distances by road and instead is shipped directly out of the area.

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Table 4.9 : Complementary Measures (Table 2 of 2)

Complementary Measures	Option Description
Active Travel	Investment in a package of high quality active travel measures with a view to encouraging 'whole journey' sustainable travel including (but not limited to): • Surfacing sections of the Formartine & Buchan Way to encourage commuter travel • Improving cycle links into Aberdeen from commuting distance radii • Provide cycle routes from Foveran to Dyce and Newmachar to Dyce (not just into City) • Provide off road cycle routes along B-class roads - ensure appropriate interaction with junctions • Develop off-road cycle paths to Dyce Industrial Estate • Provide cycle racks and safe crossing locations • Ensure cycle routes to link into Park and Ride sites and cycle racks at sites • Ensure cycle and walking routes to link into Fraserburgh, Peterhead & Ellon bus terminuses • Improved integration between Public Transport and cycle e.g. bikes on buses/trains • Sustrans Ibike Officer for Aberdeenshire Council to further encourage cycling • Improve Coastal Path including completion of the coastal footpath south from Peterhead
	Travel Plans for major businesses to encourage greater sustainable travel
	Off road access for horse riders - with careful consideration about measures which are put in place to deter vehicular access that can often be a barrier to horse riding
Environmental	Encourage growth in the number of hydrogen powered vehicles via introduction of hydrogen powered buses, greenways and refuelling infrastructure
	Consider green connection to Ellon e.g. hydrogen lane
	Develop an electric vehicle network map/app

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4.5 Options considered to be outwith study remit

A number of options, suggested during the engagement process, are deemed to be outwith the remit of this study. These are listed in Table 4.10. While these measures are not directly implementable as part of this study, cognisance of these measures could be undertaken in other related studies.

Table 4.10 : Options considered outwith study remit

Outwith Remit of Study	Option Description
Rail	Increase urban train stations between Dyce and Aberdeen (e.g. Kittybrewster, Woodside, Bucksburn)
Ports	Provide funding to expand breakwaters at key ports effectively weather proofing ports
	Expand Peterhead Port to facilitate renewable energy/wind turbines
	Aberdeen Harbour Expansion – aim to future proof against market trends
	Improve the number of pontoons for private sailings
	Provision of additional multi-user berths at Peterhead capable of accommodating their diving support vessels.
Canals	Reopen canal to Inverurie
Freight	Assistance to support attracting lorry drivers –assistance/funding to encourage young people to come into the industry.
Active Travel	Cycle route connecting Union Street, Hoburn Street and King Street
Tourism	Develop a Marine Tourism Strategy for the North East to include improving the number of pontoons for private sailings. There is an opportunity to build niche tourism market for surfing/watersports but to do so have to improve transport network to get people to the area
Air	Secure additional carriers to provide route security and competition (particularly on London routes).
	Examine potential of an additional air facility at Longside (WW1 airstrip)
	Encourage further route development from Aberdeen Airport.
	Improve road connectivity between Aberdeen and Aberdeen Airport
Digital Connectivity	Improvements to digital connectivity is to support the SME market

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A ENGAGEMENT

A.1 Overview

This Appendix provides an account of the Pre-Appraisal engagement programme. The purpose of the engagement programme was to consult directly with the key stakeholders and seek their views on all relevant problems, issues, and opportunities within the study area which are related to transport. It was also critically important to consider the economic situation and the extent to which transport infrastructure is potentially acting as a constraining factor on economic development and social accessibility in the area. The engagement programme, which took place between March and June 2015, is shown in Figure A.1.

A.2 Engagement Approach

The agreed engagement programme was an extensive exercise to engage with all relevant stakeholders. The programme was delivered through a combination of workshops, face-to-face meetings, telephone in-depth consultations, and written and email correspondence.

Meetings and telephone calls were loosely structured around a pre-prepared topic guide, although meetings were allowed to take their own course and often reflected the specific remit of a given stakeholder.

In keeping with best practice, the initial stage of each engagement was based on the problems, issues, opportunities and constraints within the local economy and the transport system. Rather than starting with a discussion of a pre-conceived solution, we attempted to draw out the main issues in the area and understand the extent to which transport and infrastructure more generally is potentially constraining economic development or otherwise, while also establishing the any social problems in terms of accessibility and mobility surrounding the transport network.

A number of stakeholders were asked to contribute responses via email. Stakeholders were provided with a short background to the study and a number of framed questions. They were also given the opportunity to take part in a telephone consultation should they wish to discuss any issues in greater depth.

The following sections summarise the key points from the consultations grouped by category. What is reported here are views as presented by the stakeholders. Where possible, we have tried to evidence these points using secondary data but, as is always the case with such engagement, there will be an element of anecdote and opinion.

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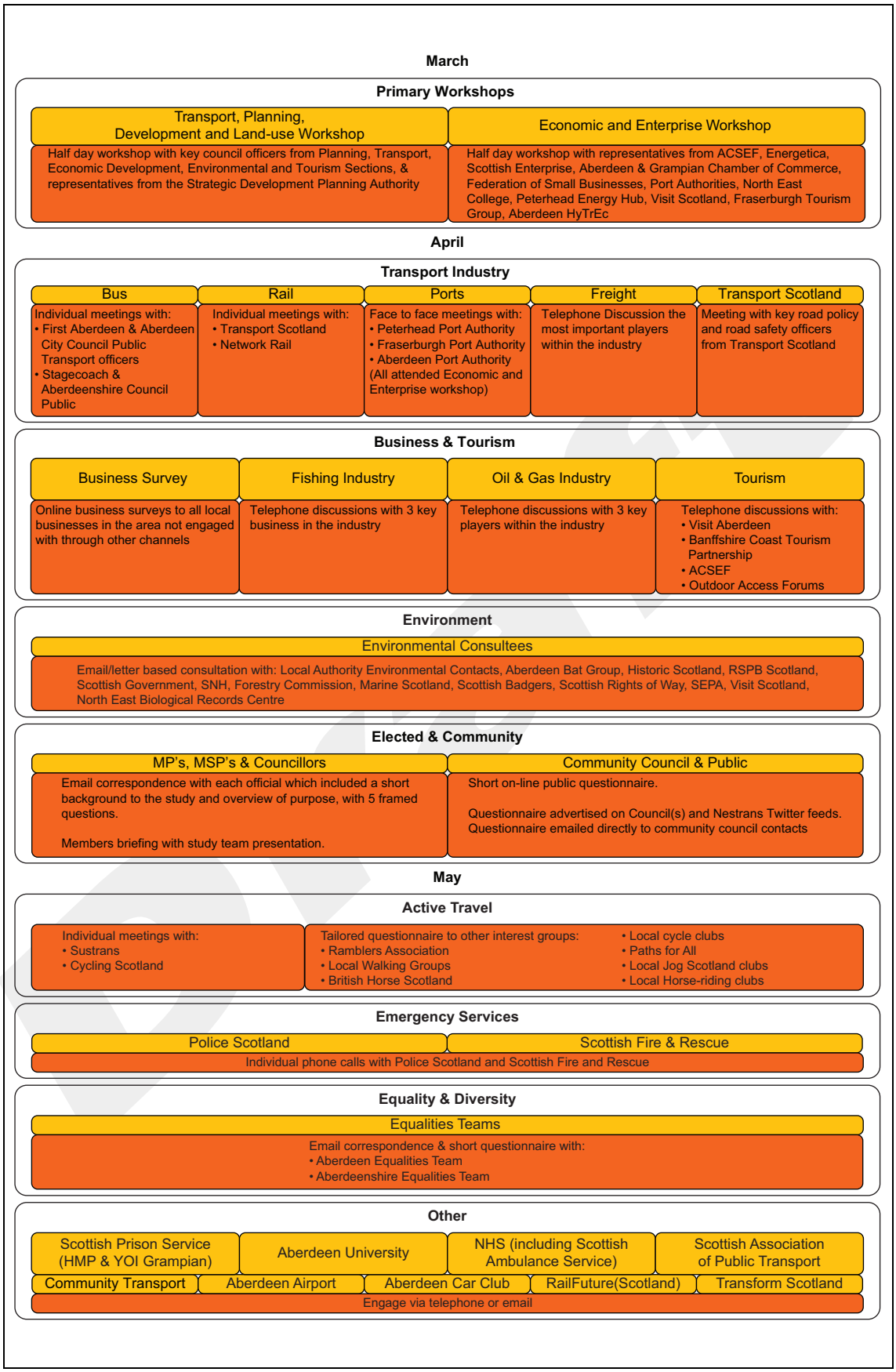

Figure A.1 : Engagement Programme

A.3 Transport & Land-use Planning, and Economic & Enterprise Workshops

Two initial workshops were held in March 2015, to allow for an overall appreciation of the problems, opportunities, issues and constraints for the study area, before the more focused, individual engagement was undertaken. These workshops were:

- Transport & Land Use Workshop
- Economic & Enterprise Workshop

The Transport and Land-use Workshop was held on Monday 30 March in Aberdeenshire Council Offices. A wide range of individuals from Aberdeen City Council and Aberdeenshire Council's Transport, Planning and Environmental teams attended alongside representatives from the Strategic Development Planning Authority, the three Aberdeenshire Area Manager Offices (Banff & Buchan, Buchan and Formartine) and the AWPR Management Team. The workshop also included representation from Aberdeen City Council's Economic Development team and Aberdeen City and Shire Economic Future (ACSEF) who were unable to make the Economic & Enterprise workshop on the 31 March.

The Economic & Enterprise Workshop was held on Tuesday 31 March at the Buchan Braes Hotel just south of Peterhead in Boddam. Attendees included representatives from Fraserburgh, Peterhead and Aberdeen Harbours, the Federation of Small Businesses and Chamber of Commerce, Peterhead Energy Hub, Visit Scotland, Fraserburgh Tourism Group, Energetica, North-East College, Aberdeen HyTrEc, three local businesses and representatives from both Aberdeen City Council and Aberdeenshire Council's Economic Development teams, and Aberdeenshire Council's Tourism Executives.

The attendees were provided with a presentation on the background of the study and the future development and transport proposals in the area. The workshops then included a number of small group sessions in which individual groups were tasked with identifying transport problems, issues, opportunities and constraints and potential transport options as well as a workshop wide discussion on potential objectives for the study.

The following details the main findings from the workshops.

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A.3.1 Problems

Economic

A number of economic problems were identified which are seen to be at least partly derived from issues within the transport system.

It was noted that there has been a growth in population in both Fraserburgh and Peterhead in recent years driven by in-migration, particularly amongst the eastern European community. The in-migrants typically fill jobs in the local fish processing industries, but it was noted that this demographic typically does not have access to a car which, combined with the cost of bus-based commuting, is limiting employment opportunities further afield (i.e. Aberdeen). Stakeholders also explained that Fraserburgh and Peterhead have traditionally had quite insular labour markets, caused largely by the historic dominance of fishing. The extent to which the transport system can unlock opportunities within the labour market through increased commuting should be explored as part of the study.

A number of participants noted that highly skilled labour is limited in the northern towns because of a 'brain drain' to larger centres and difficulties attracting professionals. A number of reasons were given for this including the perception that Peterhead and Fraserburgh are peripheral; a perceived lack of vibrancy in the towns; and limited education facilities. In addition, it was noted that house prices in Fraserburgh have increased significantly and that this is both making it more difficult to attract people and further encouraging out-migration.

It was pointed out by planners that poor transport connectivity to the north of Aberdeen has constrained residential and commercial land-use development as well as commuting, creating effective 'trade barriers' in the north. The AWPR and Third Don Crossing are expected to address this issue in the short-term but there remains concern about the likelihood of these issues recurring in years to come.

Participants also noted that there has been a recent migration of firms from the Dyce area to Westhill as it is seen to be difficult to recruit from the south of the city. In addition, it was noted that the Council, NHS and others have had difficulty attracting workers into the area, partly because of high house prices and partly because of poor connectivity (which may be causing constrained development and pushing house prices up).

Comments from stakeholders generally suggested that the study should enhance access to Aberdeen but at the same time incentivise investment in Fraserburgh, Peterhead, and other settlements. However, concerns were also raised that improving the transport links to Aberdeen could result in businesses, labour and investment being drawn away from the towns towards the city. This is an important point as previous evidence suggests that there is a gravity effect with transport schemes where bigger towns and cities draw in labour and investment (e.g. retail or the centralisation of services) from less populous areas. This is not a bad thing in its own right as commuting in particular may stimulate the local economy of the periphery, but it is important to be clear about the intended/desired directionality of impacts and how we account for this within our objective setting.

In terms of wider infrastructure issues, water and electricity supply as well as broadband and 4G connectivity were all identified as issues. Participants noted that digital connectivity is poor in the area and while superfast broadband is planned, ultrafast broadband remains some way off. It was noted that the poor connectivity is impacting the Small to Medium-sized Enterprise (SME) market.

Road

The main transport problem identified by all groups was the long and unreliable journey times on the A90(T) between Fraserburgh/Peterhead, and Aberdeen and the A90(T) south. A combination of the mix of local & strategic traffic; agricultural vehicles; platooning as a result of slower moving HGVs; and limited overtaking opportunities mean that the performance of the A90(T) is seen to be poor.

Road safety was also highlighted as a key issue. Participants identified the Toll of Birness and the Cortes junctions as accident hotspots but also noted the high rate of accidents along the route itself, particularly between Fraserburgh and the Cortes junction. It was noted that drivers become frustrated as a result of being stuck behind slower moving vehicles and that this causes accidents along the route. Given the single carriageway nature of the road and the long and lower standard of alternative route options participants noted that accidents can have significant impacts on journey times. Both the A952 and the A975 were considered to be quieter than the A90(T), however, comments were also made about road speeds and high accident rates on these routes.

Long journey times and journey time reliability in Aberdeen were also highlighted as an issue. A number of participants specifically highlighted that accessibility to Aberdeen Airport/Dyce is poor as a result of the large volumes of traffic in this area (with some noting that the new Aberdeen Exhibition and Conference Centre (AECC) may further increase traffic levels). While participants recognised that the AWPR would undoubtedly have an impact on traffic in Aberdeen, there was a degree of uncertainty as to the likely benefits. A number of participants highlighted that the AWPR may serve only to move the problem further north. In addition, a number of stakeholders highlighted that the significant levels of development proposed north of Aberdeen will negate a great deal of the predicted benefits of the AWPR.

It was pointed out that poor road connectivity in particular may act to detract inward investment into the study area and undermine the credibility of the Energetica corridor. This was seen to be a key problem in emerging industries such as renewables, carbon capture, decommissioning, etc. Participants also highlighted that poor road infrastructure can lead to increased costs within the freight industry. It was explained that the A90(T) is a key (and often the only) route for freight and the poor reliability leads to a reduction in overall supply chain efficiency, making it difficult to operate ‘just-in-time’ delivery systems. In addition, participants noted that delays can also impact driver hours necessitating additional stops; lead to reductions in income where produce is time sensitive (e.g. transporting fresh fish) and result in animal welfare issues where live produce is being transported.

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Bus

As a result of the limited rail network, bus travel is the only public transport option for many within the study area. A number of barriers to bus use were identified including long and unreliable journey times; high stop frequency; few direct services (other than to Aberdeen); poor radial routes around the city; high ticket prices (which are generally not considered to be cost effective compared to private car use); very few express services and limited Wi-Fi availability.

Bus connections to places other than Aberdeen were felt to be poor as a result of the focus towards the city and the need to interchange at Aberdeen. In particular participants highlighted that there is very little direct connectivity to Dyce (a key employment hub in the study area). A number also commented that connections between Dyce Rail Station and the Airport were poor with many people travelling by taxi.

Access to bus services in rural areas was identified as an issue, with one participant noting that it is very difficult for some people in rural locations to get to work and that this is one of the key issues raised amongst those looking for employment. Comments were also made about the lack of direct point-to-point commuter services in the north, with services taking circuitous routes and making numerous stops.

Representatives from North East College noted that transport access to their sites is problematic, with students finding it difficult to get to college and transfer between campus sites. It was noted that the Fraserburgh campus currently contract 10 buses to transport between 400 – 500 students into college in the morning which is a significant drain on college resources.

Bus frequency and the length of the operating day for services north of Ellon was also seen to constrain opportunities for travelling by public transport, with bus start and end times not meeting the requirements for some of the larger businesses. In addition, one stakeholder noted that Dyce based companies have highlighted that the frequency of bus services drops-off considerably after 18:30 in the evening.

The cost of commuting by bus from settlements in the north to Aberdeen is seen to be prohibitively expensive. This is driven by low population density and a small absolute commuter market. Inter-operator and inter-modal integration is also currently seen to be poor, although the Grasshopper ticket is seen as an opportunity in this regard.

Journey time reliability getting into and out of Aberdeen was identified as a problem, with some suggestion that bus lanes/bus priority is inadequate. One participant noted that buses experience difficulty getting into and out of lanes and one noted that despite there being good bus priority measures on Ellon Road bus services were still unreliable. Union Street Bus Interchange was also felt to be very busy, with some suggesting that a new bus station is needed.

Peak hour capacity was also raised as an issue. Participants noted that many services leaving Aberdeen are full and that people are left behind but that many users only travel as far as the Bridge of Don, demonstrating a conflict between local and strategic traffic.

In terms of Park & Ride (P&R), the Ellon Site was felt to work relatively well but the Bridge of Don site was felt to be not as well used. The issue of the directionality of impacts with regard to P&R was also raised with some participants noting that they could act to take shoppers, business and/or employees away from Peterhead.

Rail

The lack of rail links within the study area was felt to be a constraint in terms of commuting, land-use development and tourism. There was a feeling among many participants that investment in the rail infrastructure in the area was behind that of elsewhere, with a number noting that Peterhead will be the largest Scottish town without a rail station following the completion of the Borders Railway.

Rail capacity between Dyce and Aberdeen was also identified as an issue although it was noted that Transport Scotland are currently investigating how to double track the line between Inverurie and Aberdeen which may impact this (although this could also reduce gauge capacity for freight).

The rail line to the south of Aberdeen was felt to be poor with participants noting that it does not have local stations that serve the main industrial areas.

Freight

As discussed, the importance of the A90(T) as a freight route and the additional costs incurred as a result of delays on the route were highlighted.

A number of participants suggested that the study area was a high cost freight location as there were limited prospects for backloads given the lack of economic density. One stakeholder explained that the area to the north of Aberdeen is often designated as being in the 'Highlands & Islands' which generally suffer from higher freight costs. There was some suggestion that this resulted in difficulties attracting retail companies to the area.

Participants noted that it is difficult to transport freight by rail because of the restrictions in terms of rolling stock/rail gauges and therefore if a new rail line was to be developed the case would have to be made based on commuter travel rather than industry.

Comments were also made about the limited amount of HGV parking, poor accessibility to the industrial estates around Dyce and capacity issues at Aberdeen Harbour (both in terms of the number of vessels which can be berthed and traffic movements in/out and around the harbour).

There were also comments about the manoeuvrability of larger HGVs (>15m), with participants noting that there can be issues in and around Aberdeen due to the gradient of the roads and junction geometries.

Active Travel

Cycle connections in Aberdeen were felt to be poor. A number of groups suggested that the surface of the Formartine and Buchan Way could be improved in order to accommodate the mix of users (including pedestrians, cyclists, and horses). Participants also highlighted that there have been issues with motorised scooters using the trail and that this should be considered wherever improvements are made. One group felt that there were not a sufficient number of cycle lockers at P&R locations and that the ability to take bikes on Stagecoach buses should be further promoted.

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Environment

Air quality and traffic related noise pollution were identified as problems on King Street. One group also discussed the lack of compatibility between the location of electric charging points and the key transport routes.

A.3.2 Opportunities

It was felt that the Energetica Corridor presented significant opportunities for the area, with participants highlighting a number of potential growth areas including decommissioning, carbon capture and storage (particularly at Peterhead); and offshore renewables.

It was noted that both Ellon and Fraserburgh have been made Integrated Travel Towns by Aberdeenshire council with the first workshop to develop plans in this regard scheduled for May 2015. Participants explained that the council is looking to develop a walking and cycling network within a 5 mile radius of each town, with aspirations at this stage including links between Ellon and Newburgh, and Ellon and the Formartine and Buchan Way.

Comments were also made about the opportunities to encourage cycling in the northern corridor as a result of the development of the Third Don Crossing and the potential of providing cycling facilities on the southern section of the A90(T) when the route is de-trunked.

There were also felt to be opportunities to further encourage car sharing in the study area with one participant noting that annual car occupancy surveys on key routes undertaken by Aberdeenshire Council indicate there are currently higher occupancy levels on roads between Fraserburgh (just below 2.0) than those in other locations such as Westhill (just above 1.0).

There were also discussions around opportunities to promote and expand the tourism industry (of which Golf tourism was highlighted as a key sector). It was felt that there would be opportunities to develop the day trip market from Aberdeen to Aberdeenshire if connectivity was improved. In addition, comments were made about developing the cruise tourism market, although it was noted that this would be limited by the distance/transport connections between the ports and key tourist destinations.

The recent announcement that Aberdeenshire has been awarded funding as part of the Conservation Area Regeneration Scheme (CARS) for the regeneration of Fraserburgh's town centre was also highlighted as an opportunity.

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A.3.3 Issues

A number of uncertainties which could influence the study were highlighted, including the future impact of the committed transport improvements including the AWPR; the future trajectory of the oil and gas industry and decommissioning activities. The extent to which the renewables sector and carbon capture and storage will develop, the key hubs in this regard, and the level of transport demand they are likely to generate were noted. There is also uncertainty over the evolution of the housing market in response to land values/ transport improvements.

There was some discussion on the allocated residential and employment land across the study area and the extent to which this is likely to be built out and the consequent impact on the transport network. Some participants commented that the build out rates in Aberdeen are slow and others noted that the build out rates decline as you travel north through the study area. One participant noted that the picture in terms of future development at Mintlaw was very optimistic with the town being in a good location between Peterhead and Aberdeen and one allocated site having already come forward. Questions were also raised as to whether there is capacity within the construction industry to achieve the build out rates required.

While it was felt that the AWPR will relieve some of the congestion problems within Aberdeen, respondents noted that any increase in development will create further demands on the transport network which will need to be mitigated. A number of participants noted that the new exhibition centre will attract more and bigger events which could increase problems on the road network in this area.

A.3.4 Constraints

A number of environmental/planning constraints were identified which would have to be considered in the context of infrastructure development including the location of SSSI sites, Local Nature Conservation Areas, AQMAs, areas of peat bog (e.g. St Fergus), the location of explosive stores and the large number of listed buildings/heritage sites. Participants also noted that Aberdeen Airport is a very constrained site, with expansion plans restricted by the green belt, trunk road and areas of residential development.

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A.3.5 Objectives

A small amount of time at both workshops was spent discussing the potential objectives of the study. Participants in the Transport & Land Use Workshop raised the following points:

- Ensure onward connectivity to markets
- Support the development of tourism
- Improve quality of life
- Reduce journey times and improving journey time reliability
- Improve travel choice
- Improve connectivity between rural areas and town centres

Participants in the Economics & Enterprise Workshop suggested the following:

- Supporting businesses and economic growth
- Reducing feelings of peripherality
- Improve quality of life
- Support population retention
- Improve travel choice
- Improve the attractiveness of public transport and other non-car based modes

A.3.6 Potential Transport Options

Various options were suggested. These are discussed under the headings that follow.

Economic

Suggested improvements included:

- Improving broadband connectivity
- Reducing the need to travel through the encouragement of flexible working/ smarter working

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Road

All of the groups suggested making improvements to the A90(T) in order to resolve the issues with journey time reliability and safety. Suggested improvements included:

- Developing a Route Action Plan
- Dualling the whole route between Balmedie and Fraserburgh
- Dualling sections of the route only (including Balmedie to the Toll of Birness or Balmeddie to Peterhead)
- Targeted sections of 2+1 (with specific sections mentioned including the Toll of Birness to Peterhead and Hatton and Cruden Bay)
- Development of a bypass at St Fergus
- Improving provision for right turners on the A90(T) as well as other B-class roads used by commuters (including the B999 and B977).
- Redesigning the Toll of Birness and Cortes junctions, including examining options for roundabouts and/or grade separation in order to improve safety and alleviate congestion/delays
- Improving junctions at Ellon including examining options for more lanes at the roundabout, grade separation, and a bridge/bypass
- Improving the A952 including:
  - Dualling the complete route
  - Making incremental improvements to the alignment to improve visibility
  - Providing targeted stretches of 2+1
  - Providing a bypass at Mintlaw
- Improving access to Inverurie by straightening the route between Old Meldrum and Ellon
- Improving the A975 as an alternative commuter route (with one group suggesting the provision of additional overtaking areas and another proposing that this road be made an express route for buses only)
- Incentivising car sharing
- Installing real time information to inform motorists of traffic hotspots.

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Bus

A number of improvements were proposed in terms of bus travel and included:

- Providing new bus routes/interchange points so that users would not have to travel into Union Square for destinations outside of the city. Suggestions for new interchanges included Ellon, Parkhill and the Exhibition Centre. In terms of bus routes participants emphasised that new routes should connect key settlements and major employment hubs (such as Aberdeen Royal Infirmary, the universities and Aberdeen Airport), with a number of groups specifically highlighting the important role of Dyce and the need to improve public transport connections to the town.
- Exploring P&R options:
  - Developing a revised P&R Strategy/marketing for P&R
  - Examining options for P&R at Fraserburgh/Peterhead
  - Opening a new P&R site at Mintlaw, Blackdog, Inverurie or Newmachar
  - Encouraging local P&R use through pricing (e.g. offer reduced pricing to prevent residents driving to southern P&Rs)
  - Improving cycle storage at P&R sites.
  - Closing the P&R site at the Bridge of Don and moving it north of the A90(T) Parkway
- Improving bus priority/providing segregated bus lanes on key routes into Aberdeen (including on the A90(T) and A956).
- Following the introduction of the AWPR, the section of the A90(T) which is to be de-trunked should be made a public transport only route.
- Improving the overall quality of bus services (e.g. cleaner buses, making Wi-Fi available, etc.)
- Implement region wide bus quality partnership
- Provide support for the purchase of a new coach fleet to make longer journeys more comfortable.
- Develop a real time information system for Aberdeenshire (which should be smart phone compatible)
- Introduce low carbon/hydrogen buses
- Expand community transport provision and/or funding.
- Develop a fully integrated ticketing system to enable use across bus operators and potentially rail in the longer term
- Subsidise bus fares to make them equivalent to benchmark comparators
- Provide subsidised tickets specifically for those trying to bet back into employment.

In addition the following were noted as bus ‘alternatives’:

- Provide commuter hovercraft services between Peterhead and the Bridge of Don P&R/Aberdeen
- Provide a ferry service from Fraserburgh to Peterhead

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Rail

All of the groups suggested making improvements to the rail system. Options included:

- Restoring the previous Formartine and Buchan rail line
- Providing a new direct link from Ellon to Peterhead and Fraserburgh
- Providing a rail link or light rail link between Dyce and Ellon, with links to Ellon P&R (suggested stops on this route included Ellon, Newmacher, and Udny)
- Providing a new suburban light railway to the relocated AECC
- Providing a rail link between Ellon and Cruden Bay
- Providing a rail link between Ellon and the A90(T) corridor
- Providing a radial light rail/tram route around Aberdeen city
- Providing a rail link to Aberdeen Port.
- Improving connections between Dyce Railway Station and Aberdeen Airport with one suggesting that the bus service could be improved and three groups proposing providing a tunnel between the two hubs
- Increasing the level of parking at key stations including Dyce and Inverurie.
- Providing more commuter stops within Aberdeen City
- Enhancing the Aberdeen to Dundee service

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Active Travel

A number of suggestions for new active travel routes were made including:

- Developing a walking/cycling link between Ellon and Newburgh
- An off-road cycle path to Dyce Industrial Estate
- An off-road cycle paths to the Bridge of Don
- A segregated cycleway on the A90(T)
- Completing the coastal footpath south from Peterhead
- Providing off road cycle routes along B-roads.
- Enhancing the Formartine and Buchan Way for leisure travel (via improving junction interactions and maintenance) and commuter travel (through improving surfaces)
- Extension of the Formartine & Buchan Way from Dyce to Aberdeen to improve access into the city centre
- Improving integration between public transport and cycling to enable longer distance sustainable journeys including:
    - Investing in walking and cycling links to bus termini in Fraserburgh, Peterhead, and Ellon
    - Allowing bikes on trains/buses and improving the promotion of the availability of this service
    - Providing more cycle lockers at P&R locations
    - Encouraging park and cycle at Bridge of Don and Blackdog
- Developing an active travel strategy complete with an implementation, branding, and marketing plan
- Fully integrating walking and cycling facilities into consents for new developments
- Developing Travel Plans for major businesses.

Freight

Suggested improvements for freight included:

- Developing a freight terminal near Dyce airport
- Providing freight only road routes
- Investigating the potential of developing shipping routes between the north-east and other countries so that freight can be shipped directly by sea rather than road

Ports

Suggested port improvements included:

- Expanding breakwaters to ensure weather proofing
- Developing cruise tourism at Peterhead

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Air Travel

Suggested improvements to air travel included:

- Encouraging further route development
- Developing an air link between Aberdeen and Houston
- Securing additional carriers to provide route security and competition (particularly on London routes)
- Developing Longside Airport

Environment

Many of the potential options suggested in the above categories would provide environmental benefit. Additionally, participants suggested:

- Providing more electric charging points (including at P&R sites)
- Developing an electric vehicle application for mobile phones showing their location

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A.4 Energetica

Members of the consultant team met with the Energetica Business Development Manager on 3 June 2015, to understand the aims and objectives of the project, and the current outlook surrounding potential investment, whether transport connections were impacting on investment and how the transport network could be improved to support the project.

The following was noted:

- Energetica was a 'slow-burner' for the first few years post inception (in 2008), but lately investment interest has been increasing and there is a more positive outlook.
- It is key to anchor companies to the area, and not just their North Sea operations.
- In light of the focus of the Energetica project, additional land was allocated in the Aberdeenshire Local Development Plan to the Strategic Growth Corridor north of Aberdeen. This allocation is dependant on the delivery of the AWPR, incorporating the Balmedie to Tipperty dualling.
- The AWPR is felt to be a real game changer for the corridor. But there is a feeling that Ellon is the boundary for investment. The perceived distance further north and limited transport connections are issues cited by potential investors.
- Land values in Peterhead are vastly lower than those in say, Westhill. An approximate value of an acre in Peterhead is £100,000. The equivalent in Westhill in £500,000.
- There is much economic activity at present in Peterhead:
    - Carbon Capture & Storage project (the development of which could necessitate an additional 50 HGV movements a day to during construction, so generate a number of C02 tankers to the site). Support from the council is being sought for planning approval, with the project to be developed through 2017/18/19. This a world first project.
    - Hywind demonstration project
    - Emerging decommissioning industry
    - Statoil are looking for a new base in Peterhead
    - New Peterhead southern commercial park due to open
    - Local business growth aspirations
    - 24 hour access to the harbour
    - Approx. 100 house builds a year
- Peterhead and Fraserburgh have very settled workforces
- Both Brewdog and Powerjacks relocated south from Fraserburgh to Ellon in recent years. This gave them access to a bigger labour pool and the space to expand. However, they are now experiencing a greater staff turnover.
- Improving connections to allow business access to the wider skilled labour pool is key to attracting investment in the area. Need to push the travel to work boundary for the area wider. Access to a wider skills base is key for the success of Research & Development and Innovative businesses – the type of emerging businesses Energetica is seeking to attract. Improved transport connections to the area are key to this.

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- House building will follow business investment – the business investment needs to come first.
- Peterhead could become more attractive to oil & gas and decommissioning investment if transport links are improved. Peterhead Port can be seen as more accessible than Aberdeen Harbour in terms of moving large bits of kit.
- There is a need to consolidate the fishing industry.

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A.5 Bus Industry

Face to face consultations were undertaken with:

- **Aberdeenshire Council Public Transport Unit**
  A meeting with Aberdeenshire Council's public transport officers was held on 24 April 2015 and subsequently attended a meeting with Stagecoach.
- **Aberdeen Council Public Transport Unit**
  A member of Aberdeen City Council's Public Transport Unit attended the Transport and Planning Workshop, so it was agreed that the views of the Council were sufficiently understood and that a further one-to-one consultation would not be necessary, however, a council Public Transport Officer attended the meeting with First Group (as follows).
- **Stagecoach**
  A meeting with Stagecoach representatives and a member of Aberdeenshire Council's Public Transport Unit was held on 14 May 2015.
- **First Group**
  A meeting with a representative from First Group and a member of Aberdeen City Council's Public Transport Unit was held on 24 April 2015.

Congestion within Aberdeen City was identified as a key issue by both Stagecoach and First Group. Stagecoach noted that in the AM peak there is a queue of traffic from Tipperty to enter Aberdeen and this adds significantly to journey time and reliability. First Group noted there were high levels of through traffic and insufficient bus priority within the city which impacts journey time reliability. Both bus operators identified a number of pinch points in the city, namely:

- Haudagain Roundabout
- Kittybrewster (located at the end of Berryden Road)
- King Street/Ellon Road

In addition, Stagecoach and Aberdeenshire Council noted that buses are often delayed when leaving Union Street Bus Station and that there are high levels of congestion around Dyce, particularly at peak times.

Stagecoach did not consider congestion to be an issue in the Shire towns and it was felt that traffic on the section between the Toll of Birness, Fraserburgh and Peterhead was reasonably free flowing. It was noted however that there is a high accident rate on this section.

Aberdeenshire Council highlighted that there had previously been an issue with city passengers using Aberdeenshire services, demonstrating a conflict between local and strategic traffic. However, they noted that Stagecoach had introduced a number of limited stop services in an effort to combat this.

The predictability of traffic levels was also highlighted as an issue by both operators. It was noted that traffic levels and timings change on a daily basis and this makes it difficult to develop reliable timetables. It was felt that the more flexible working hours and the range of different industries in Aberdeen coupled with normal issues on the network contribute to unreliable traffic patterns.

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In terms of Park & Ride (P&R), Ellon was said to be performing well, with year-on-year increases in patronage and plans to expand. Stagecoach explained that their services from Ellon run every 10min and patronage levels are high, with some services running at 95% capacity. The Kingswells site was felt to be less successful although Stagecoach was optimistic that patronage would increase following the introduction of the AWPR and the Dyce Drive link road.

First Group serve the Bridge of Don and Kingswells sites, with the former busier than the latter, however, while described as Park & Ride, First cautioned that current services from the sites are not as frequent as those serving other Park & Ride locations.

Aberdeenshire Council explained that they are planning to develop a number of mini Park & Ride hubs including at Newmachar. These will consist of 25 – 30 spaces and are intended to serve rural areas which are not walkable distance to a bus route.

It was acknowledged that there is a perception that ticket costs are higher in Aberdeen and Aberdeenshire compared to other locations in Scotland. This was attributed to the high cost of labour within the region. In terms of integrated ticketing the Grasshopper ticket has now been extended to cover the whole of Aberdeen and Aberdeenshire. First Group explained that PlusBus is also operational in Aberdeen City and that Abellio had discussed developing integrated door-to-door travel options. Stagecoach also offers smart ticketing, and are planning to introduce Smart Xtra which will allow users to buy annual tickets on a monthly basis.

Real Time Information (RTI) is currently provided across the First network and the company will be looking to renew this in the near future. Stagecoach was due to launch RTI across north Scotland in May 2015 with screens set to be fitted at all interchanges.

Stagecoach is aware that there is political interest in re-opening of a rail connection between Aberdeen, Fraserburgh, and Peterhead. Stagecoach believe that bus based solutions, such as bus only lanes or improved bus priority, will offer similar benefits for less capital expenditure.

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A.6 Rail

The consultant team attended a meeting with **Transport Scotland Rail Policy Team** and **Network Rail**.

A.6.1 Open Discussion: Key Topics

Transport Scotland stated that the topic of rail in the north-east was not currently on the radar and under consideration within their current programme. It was mentioned that NESTRANS had carried out a report in early 2013, however, no official response or request was then subsequently presented to Transport Scotland.

The Scottish Stations Investment Fund was mentioned and that most mainland local authorities had current aspirations to attain a station through this fund, a process which requires a thoroughly developed STAG appraisal.

At this time Network Rail advised that they are not currently investigating any additional infrastructure and instead their priority is looking at ways to improve or enhance current infrastructure upon which to deliver aspirations and aims. Only in special circumstances do they look out with the current existing network to construct new infrastructure in order to achieve a large benefit such as journey time savings, which they would receive in the form of a remit from Transport Scotland to look at implementing into their infrastructure.

Under such circumstances Transport Scotland look at certain measures to quantify the potential benefits of such infrastructure investment such as; Connectivity, Journey Opportunities, Journey Times, and cost implications, mainly in the form of subsidies. It was noted that such a scheme is highly political and all areas must be looked at and benefits measured both socially and economically. The primary viewpoint would be to investigate if such benefits could be gained from the current timetable and potential to make any enhancements before looking at a more significant venture.

If a rail option was deemed to be a sensible solution under STAG then Network Rail mentioned that the key factor in investigating the matter further would be to examine how such an infrastructure change would link into the current network as well as impacts on current deliverables under Control Period 5 (Network Rail delivery period covering April 2014 – March 2019) due for delivery by 2019. These current schemes include; Improvements between Aberdeen and Inverurie (30min services), Aberdeen to Inverness Phase 2 and also a programme of improvements linking Aberdeen with the central belt.

It was also noted that during such option sifting, particular importance should be applied to understanding the complexities of each option and with particular reference to technical aspects of each option/design and also the predicted usability in terms of both patronage and freight of each option. Attention would also focus on the Governance for Railway Investment Projects (GRIP), and understanding the construction development package, such as time factors, phasing, delivery, land acquisition (previously where necessary Network Rail used Transport to Work Act).

Wider benefits and constraints are also important in terms of justifications. Investigative work should be undertaken to understand how rail extensions would fit in with the current network and answer questions as to capacity, time tabling, pinch points and available units. These questions will have an effect on the wider network and not be limited to the proposed study area. Likewise, benefits on the network should also be considered. Improvements may lead to improved services on the current network in terms of frequency and capacity.

At the end of this phase of the discussion it was stated that every option is open as long as what is being proposed is fully justified, however, TS stressed the importance of a proportional investigation. Elements should be layered appropriately to ensure work is not undertaken on a scheme which may not pass beyond initial appraisal.

A.6.2 Alignment and Route

There are considerable implications and factors associated with route alignment such as bridges and other structures, land ownership, land use, restrictions and if looking at the historic route, what can be achieved using the existing solum and how would that fit into the projects aspirations. Such as can it only handle single track and what would the implications of this be to the aspirations?

Overall alignment is determined by what the problem is that has been identified and what the intended solutions to this problem are. Possible routes do not need to follow the historic route.

Phasing was deemed very controversial as it was noted that interest groups may choose to interpret this as preferential treatment for areas which are granted rail interventions. This was of particular importance for this area as it was identified that the further north the route extends, the benefits decrease while costs increase, so phasing tends to limit the overall project. For instance, it was highlighted that if a phase was to extend the line from Aberdeen to Ellon, it may prove difficult to justify expanding the route further north, so the likelihood of the project halting at this point.

NR noted that the Borders Rail website provides information on construction costs, track lengths, and constraints which had to be overcome to build the line. This information may be useful as a proxy for high level cost information.

It was mooted that it would be beneficial to investigate any potential for the route to be used for both passenger and freight movements as any investment in the infrastructure would need to be justified and limitations could be imposed on the infrastructure in terms of use depending on the track laid.

It was also noted that several freight terminals are already in existence in Aberdeenshire, with a variety of freight currently being transported by rail. The main limitation behind rail freight is the availability of viable commercial goods and bringing parties together to make use of any such freight service.

There are no current concerns over security of the freight business in the area as no data is published about freight paths and running times/patterns.

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A.6.3 Business Planning

Network Rail note that rail options can take varying degrees of time for development depending on the style of infrastructure and the desired service on such infrastructure. Transport Scotland noted that any change in the current timetable and existing network realistically takes 18 months to come into action.

In terms of the franchise and provision of service, Transport Scotland highlighted the fact that time is the crucial factor and depending on estimates for these proposed changes it may fall within the current franchise contract or with a future franchise contract. Under such circumstances, if within the current franchise, there would need to be a variation to the contract as this would be out with the current scope of the contract. If in time for a new franchise this would be written into the brief/scope of the franchise. Importantly, there are mechanisms in place to allow alterations to specifications.

Transport Scotland advise that rolling stock also plays an important part in any proposed option. As such they recommend that current rolling stock provision should be investigated to ascertain if there is available stock to use for the option. If suitable rolling stock is not available, a full costing exercise will have to be undertaken to establish what type of rolling stock would be necessary to achieve the objectives and aims of the service. Transport Scotland has recently purchased new rolling stock and ScotRail has also invested in current rolling stock, bypassing the need for ROSCOs. It was noted that as more line becomes electrified, there will be a greater availability of diesel engines that could be used on new routes. Transport Scotland and Network Rail note that if the appraisal suggests rail is a sensible option worth considering, it would be extremely beneficial to have a discussion between all parties including TS, NR, and ScotRail to establish the opportunities and limitations of the existing rolling stock within the network.

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A.7 Ports

Telephone consultations were held with the following:

- **Fraserburgh Harbour Commissioners (FHC)**
  With the Harbour Superintendent, Harbour Master, and Harbour Clerk
- **Peterhead Port Authority (PPA)**
  With the Chief Financial Officer

The Chief Executive of **Aberdeen Harbour Board** attended the Economic and Enterprise Workshop on the 31 March and felt that a further consultation would not be necessary.

A.7.1 Fraserburgh Harbour

A.7.2 Overview

Fraserburgh is principally a whitefish and nephrop port and offers a regionally important ship repair facility, offering both a drydock and shiplift. The harbour is also a key generator of economic activity in the local area, with the fishing industry supporting ancillary activities in fish processing, canning, engineering and haulage amongst other industries.

Much of the fish is taken out of Fraserburgh by lorry for processing in Aberdeen, the Central belt and Grimsby. Live crabs are taken to Birmingham and London amongst other locations. Some goods, particularly prawns, are processed in Fraserburgh. There is a considerable amount of product trans-shipped between Peterhead and Fraserburgh (and vice versa). Fish also come into the Fraserburgh processing facilities from other proximate landing centres, including Buckie, Macduff, the west coast, and the Northern Isles. The outbound and inbound movements occur on a daily basis, with much of the traffic passing through the study area, particularly on the A90(T) and A952. Fraserburgh Harbour therefore gives rise to a significant amount of HGV traffic. The Commissioners explained that adding value in a highly competitive market requires efficient transport links which are not currently believed to be in place in north-east Scotland.

The challenging conditions in the fishing industry over a number of years have led to an appetite for diversification of core activities. Of particular interest are opportunities in the operation and maintenance (O and M) of offshore renewable devices. Fraserburgh Harbour Commissioners (FHC) anticipate that Fraserburgh could be a major O and M base for vessels supporting the offshore renewables industry due to the availability of deep water and adjacent industrial ground for onshore development. It was explained that Fraserburgh's proximity to offshore renewable locations means that it is attractive from a cost point of view. In addition, the port has a number of other plus points including the ship repair facility and strong local stakeholder support. The town already has a mini-hub supporting the renewables industry and has reasonable access to the Aberdeen supply chain. However, the key issue is seen to be getting both people and goods into the town on the existing transport network. This is perceived to be the main negative issue cited by potential investors.

A.7.3 Transport Problems

FHC explained that poor transport connections constrain the Energetica Corridor overall and believe that they also present Fraserburgh with something of a comparative disadvantage vis-a-vis Peterhead.

The key transport issue identified by FHC is that the A90(T) and A952 are seen as wholly inappropriate for supporting the largest whitefish and nephrop ports in Scotland (Fraserburgh and Peterhead). The main issues raised are:

- Poor journey time reliability due to platooning (an important issue in the fishing industry where the value of the product diminishes rapidly and where there are often processing/distribution time slots which need to be hit).
- Peak hour congestion, particularly in and around Aberdeen.
- These issues also impact on personal business, such as the slack time which has to be built in for hospital appointments at Aberdeen Royal Infirmary. This reduces the attractiveness of Fraserburgh as a place to live).
- There are no real alternative options to the private car, with public transport being infrequent and expensive.
- A poor safety record.

FHC explained that there is a feeling in Fraserburgh that the town is improving economically due to the endeavours of local people, but there is seen to be a local infrastructure deficit which will constrain this growth. The FHC cited Brewdog as a good example of an innovative start-up company which relocated to Ellon. Added to this, FHC explained that they feel settlements in the north of the Energetica corridor are losing out to areas to the south and west of Aberdeen, which are better connected.

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A.8 Peterhead Port

A.8.1 Overview

Peterhead Port is the UK's largest white and pelagic fish port and leading base for servicing the offshore oil and gas industry.

Pelagic traffic is principally concentrated around peak months in January and September, with intermittent landings in other months. Peterhead Port Authority (PPA) handled around 125,000 tonnes of pelagic fish in 2014. The product is landed at the port and is processed by local firms Denholm Seafoods Ltd, Lunar Freezing and Cold Storage and Northbay. It is then frozen and exported by road, mostly to Rotterdam for consolidation and onward shipment (to the Far East and Eastern Europe) and to continental Europe. While landings are highly concentrated in a defined period, the onward distribution is more evenly spread across the year. In addition, when cold storage areas are full to capacity, there is an element of temporary trans-shipment to other cold store holding areas. The pelagic industry therefore gives rise to a significant concentration of long-distance HGV traffic.

White fish which passes through the local fish market, is processed locally and moved onward by HGV. The majority of the stock is moved to England (including Billingsgate Fish Market) and through the Channel Ports into Western Europe. PPA emphasised the time sensitive nature of whitefish stocks, explaining that the fish transports typically leave Peterhead around 12pm and cannot be delayed by more than one hour if they are to make their onward connections. This is a key point – whitefish stocks typically decline in value by 50% for each day that they are late, so even small delays can prove to be extremely costly.

Peterhead also handles a range of agricultural projects for export, including grain, fertiliser and rape seed. The agricultural products are typically moved to the port from locations within the study area, although they can be sourced from as far south as Montrose. Strategic transport connections linking the north and south of Aberdeen are therefore of considerable importance.

Finally, Peterhead handles a significant volume of oil and gas traffic. The port handles around 2,600 visits per annum with the main focus being on supply and subsea vessels. PPA explained that ASCO is best placed to provide commentary on the logistics of serving the port and we have spoken separately with them as part of the consultation. Nonetheless, they did explain that the A90(T) around and to the north of Aberdeen can lead to significant delays, particularly during periods of bad weather and when there are accidents on the road. With regards to the subsea sector, PPA explained that the majority of the smaller pieces of subsea kit are sourced from Aberdeen and will thus face the same issues as supply-based traffic.

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A.8.2 Future Developments

PPA explained that Peterhead's focus will be on continuing to develop and consolidate existing activities and exploring new commercial opportunities which come forward.

In terms of the fishing industry, PPA explained that they would anticipate modest growth in the fishing industry so long as stocks remain balanced. Oil and gas will continue to be a key element of the port's portfolio going forward, although it is acknowledged that there will be a gradual change in focus to subsea and piece-small decommissioning. The ship out of marine renewables and ongoing maintenance is also an opportunity for the port, while PPA is also handling inbound land-based turbines.

PPA is in the process of finalising an investment programme of £47 million to create a whitefish market. As well as providing additional capacity in this sector, the investment will free up berth capacity at the site of the current fish market and add 30,000m^2 of laydown space, creating a new energy base equivalent in scale to the ASCO South Base. The work is anticipated to be completed by late 2016/early 2017.

In the longer-term, the port is considering further development of its ship repair facilities, concentrated around the modern ship-lift. Beyond this, the port is considering investing in a carbon capture project, shipping in liquid from Rotterdam to St Fergus and then pumping it out into the North Sea. The project is not tied to the Peterhead Power Station carbon capture project but would benefit from it in terms of an increased concentration of activity.

It was noted that the strategy for this study should consider options for alleviating capacity constraints at Peterhead Port. The port handled 12 million tonnes of traffic in 2014 and is experiencing increased demand from the recent increase in rates at Aberdeen.

A.8.3 Transport Problems

PPA noted that there are two local issues that impact on the movement of large subsea pieces:

- The junction of Kirk Street and Charlotte Street involves a tight turn for HGVs – PPA believe realigning the junction would be valuable
- Access to Smith Quay from South Road – addressing this would require a new access road but it is acknowledged that this would be technically challenging

The Authority explained that improvements to the A90(T) would be welcomed, with poor journey time reliability and high accident rates seen as a detractor from using the port and a constraint on developments at key sites such as Ellon. It was noted that anecdotal evidence suggests that the A90(T) creates a perception that Peterhead is peripheral.

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A.9 Freight

Telephone consultations were undertaken with the following:

- **ARR Craib**
- **ASCO**
- **Colin Lawson Transport Ltd**
- **Harbour Haulage**

A number of other organisations were contacted but declined to participate within the exercise.

ASCO and Colin Lawson Transport Ltd work within the oil and gas sector, ARR Craib's business is split almost 50/50 between traditional industry (i.e. FMCG, building trade, chemicals, etc.) and the oil and gas sector and Harbour Haulage specialises in the transport of fish products.

In terms of location, Colin Lawson Transport Ltd is based in Aberdeen and work in a number of ports across the region including Peterhead, Montrose, Dundee, and Invergordon; ARR Craib have bases in Aberdeen, Cumbernauld, and Eaglescliffe with the primary movement in the study area being between Aberdeen and Peterhead (port to port); ASCO are based in Aberdeen and Peterhead with the main route in the study area being the A90(T) between Peterhead and Aberdeen but also south of the city; and Harbour Haulage is based in Peterhead with their main traffic movements being between Peterhead and Tullos.

The A90(T) between Peterhead and Aberdeen is therefore a key route used by each of the companies. The frequency of travel to Fraserburgh is far lower. Only ARR Craib stated that they transport material to Fraserburgh on a regular basis with volumes being far below those transported to Peterhead. ARR Craib, ASCO and Colin Lawson all identified the single carriageway nature of the A90(T) between Peterhead and Aberdeen as a key problem. HGVs on the route are restricted to travelling at 40mph and respondents explained that this results in driver frustration and leads to accidents and delays.

Congestion within Aberdeen was also highlighted as an issue by ARR Craib, ASCO and Colin Lawson, with Harbour Haulage identifying this as the key problem. The following congestion hotspots were identified:

- Haudagain Roundabout:
  A major congestion hotspot.
- Beach Boulevard Roundabout:
  A problem for heavy commercial vehicles going to the harbour. It was noted that there are frequent accidents/near missed on the roundabout.
- Market Street:
  Congestion in part because of the presence of the shopping centre.
- King Street :
  Particularly congested during peak hours.
- Dyce:
  Access to Dyce difficult at peak times because of congestion levels.

A number of the respondents noted that congestion adds to their business costs, with the result that additional slack or resources are required. While it was felt that the AWPR would result in improvements respondents generally felt that it would not resolve all of the issues. For example, ARR Craib noted that congestion around the Tullos area and the industrial estates around the docks and Wellington Road are unlikely to be impacted by the AWPR.

Colin Lawson Transport felt that the planned expansion of Aberdeen Port was urgently needed while ARR Craib voiced concerns about the business case for such developments given the low oil prices and questioned how the development would link into the existing road network, with Wellington Road identified as a key issue.

There was agreement amongst the respondents that there is limited potential for rail freight in the corridor. It was explained that rail is not well suited to the transport of goods over shorter distances, with more interchanges required and timescales generally being longer than the equivalent journey by road. In addition, it was noted much of the freight moved locally is unsuitable for rail because of rail gauge restrictions.

In terms of future development, ARR Craib did not feel that carbon capture and storage or renewables would generate business for the company. It was explained that while these industries will generate an initial flurry of activity (e.g. in terms of wind energy there will be a need to transport materials during construction) the infrastructure demands once established will be minimal.

ASCO made similar comments. The company is due to start a project in early 2016, which involves the transport of modules by road to the carbon capture and storage base in Peterhead, however, the project which is likely to last 2.5 – 3 years is a one-off rather than a regular contract, with ASCO explaining that once modules are in place, the carbon produced will be transported offshore by pipeline and there will be very limited maintenance and therefore transport required.

ASCO explained that they have not been involved in the transport aspect of renewables work in part this is because the company's fleet is set up to service the oil and gas sector. It was noted however that turbines tend to be dislodged at ports closest to their final destination and therefore the road infrastructure does not have an immediate impact. ASCO does see potential in terms of decommissioning which they described as a long-term market, however, it was noted that heavier equipment will likely go to Invergordon or Nigg and a large amount will go to Norway.

Access to HGV drivers and some skilled workers (e.g. crane drivers) was identified as a problem by a number of the companies. The shortage in the number of HGV drivers is a national issue, but is perhaps more pronounced in Aberdeen and Aberdeenshire because of the abstraction into the oil industry. The cost of living and high house prices in the north-east was also felt to be a constraining factor, making it more difficult to attract drivers from other areas. The shortage of land in Aberdeen was also identified as a constraint on business growth by Colin Lawson, with the high land values making it difficult for the company to purchase land required for their expansion.

A.10 Transport Scotland, Road Policy & Road Safety Officers

A meeting with key officers from **Transport Scotland** including the appraisal team and road safety officers was held on 19 May 2015. The key points raised in this meeting are summarised as follows:

- Transport Scotland are keen for the Study Team to identify (with quantifiable evidence where possible) what the problems are across the area.
- In a similar vein, Transport Scotland note that it is very important to establish who it is that the study is trying to solve problems for, i.e. are interventions required for business, commuters, tourism or anyone else.
- Transport Scotland noted that it was important for the study to include journey time analysis where possible within the work. While perceptions and accounts from stakeholders are useful, Transport Scotland encourage evidence to be sought where possible. In response, the Study Team noted they would discuss possible journey time data with Stagecoach. Journey time surveys may be required to be undertaken as evidence.
- Transport Scotland believes that Dyce is the biggest issue in the study area, due to access issues, Aberdeen Airport and extensive committed development around it. Similarly, they have concerns that significant growth has been planned for and is continuing to be planned for across Aberdeenshire but in particular the areas north of Aberdeen. Transport Scotland have concerns if the AWPR and surrounding network will be able to cope with the scale of development.
- During further discussions around proposed developments, Transport Scotland note that if there are issues on the A90(T) which are caused by new developments, these developments themselves should be paying for mitigation measures on the A90(T).
- While there was a recognition that population and patronage levels may not be large enough to justify new rail infrastructure, Transport Scotland were keen that the rationale behind the Borders rail line is considered to understand if a similar rationale could be applied in the study area, suggesting issues of peripherally and social inclusion are important.
- Transport Scotland suggests that it may be important to consider problems and issues against the sustainable transport hierarchy perspective to ensure that solutions are fully compliant with national policies.
- Transport Scotland note that the A90(T) north of Aberdeen is an area of immediate concern in terms of accident reduction. TS have a rolling programme of route action plans. Transport Scotland are currently preparing a Route Accident Reduction Plan (RARP) this financial year – with implementation in 2016. TS advise that this may recommend remedial measures which could include improving standards of the road, improving signage, lining, pedestrian/cycle provision and programmes of improvements. This would generally be a small scale investment and not normally cost more than £100k in total.
- Transport Scotland advise that there are also two planned speed limit reductions: in Fraserburgh (to be implemented w/b 25 May) and in Lonmay, which are planned for the study area.

- Transport Scotland stress that there are currently no plans to raise HGV speed limits anywhere else in Scotland. The A9 route is a UK pilot route with a very distinct road design. As such, Transport Scotland is not currently considering raising HGV limits elsewhere. Transport Scotland also advise that while new HGV speed limits on the A9 have not been in place for long, they note that 3 of 4 fatal accidents on the route since limits have been increased, have involved HGVs to some extent.
- It is important to note that Transport Scotland define accident clusters as three or more injury accidents on a 100m stretch over the period of 3 years.
- When Study Team mentioned that sections of A90(T) are operating at or beyond capacity, Transport Scotland note that they have no programme for retrospectively upgrading the road network. That is not to say that they will not consider upgrades, but they do not have a committed scheme or policy for these things.

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A.11 Business Survey

As part of the engagement programme, an online survey was developed and sent out to all businesses within the study area. A web link to the survey was sent out via email through three different business channels:

- Aberdeenshire Council Economic Development Team Business Contact List
- Energetica Business Contact List
- Federation of Small Businesses Members list

The business survey was consistent with other elements of the engagement programme in that businesses were asked about problems, issues and constraints on the transport network before any potential solutions were explored.

The survey was open for 4 weeks from Monday 20 April 2015 to Friday 22 May 2015.

In total, 97 businesses participated in the survey, with a good mix in business industry and size observed across the response sample. Just over half of the total numbers of responding businesses operate in the following sectors: Transport & storage (12%), Manufacturing (11%), Retail (11%), Professional, Scientific & Technical (9%), and Accommodation and Food Services (9%).

Sizes of responding businesses varied between micro businesses to large scale operations, broken down as follows:

- Micro business (0-9 employees): 56%
- Small business (10-49 employees): 30%
- Medium business (50-249 employees): 14%
- Large business (250+ employees): 4%

Key findings are reported below:

- 60% of respondent businesses believe turnover will increase in the near future as opposed to only 8% who believe turnover will decrease.
- Approximately 74% of the businesses that took part in the survey indicated that the physical movement of goods is ‘Very significant’ or ‘Significant’ to their business
- The A90(T) between Aberdeen and Fraserburgh was the most important route for the physical movements of goods across the study area
- Approximately 67% of the respondent businesses indicated that there are significant problems/issues with road travel in the study area that currently constrain their business activities
- Congestion and delay, and unreliable journey times were cited as the key transport issues facing businesses
- 74% of businesses indicated that the completion of the AWPR and the Balmedie to Tipperty dualling will only reduce but not resolve the road issues mentioned in the previous questions
- The majority of businesses felt that a potential new rail line in the study area will have some effect or is possible to have some effect on their business, this was mainly through giving options for staff commuting
- Respondent businesses felt that road improvements in the study area would be most likely to improve connectivity for their business needs

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A.12 Chamber of Commerce

A presentation was made to the Aberdeen and Grampian Chamber of Commerce Transport Network Group on 4 June 2015. The Study Team provided a brief overview of the project before asking targeted questions on the current transport network problems and potential future opportunities.

After the presentation, the discussion focussed on bus services in the area, with representatives from First and Stagecoach highlighting their obligations to meet the Traffic Commissioner statutory targets surrounding punctuality and reliability. The level of traffic and congestion in the area, which creates a substantial degree of journey time unreliability and issues with journey time predictability, necessitates a certain amount of 'slack' to be built into timetables to ensure that services can meet the punctuality and reliability targets. However, on quieter days, this can lead to services having to wait at stops to ensure they are not running early. Dyce was specifically noted as an issue, where it has been known for buses to have to wait at a stop for up to 20 minutes in order to ensure no early running. This is incredibly frustrating for passengers and detracts from the attractiveness of the services.

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A.13 Fishing Industry

A face to face meeting was held with **Thistle Seafoods**.

Telephone consultations were undertaken with the following:

- **Joseph Robertson Ltd**
- **Lunar Freezing Company**

A number of other organisations within the industry were contacted but declined to participate.

The primary issue raised by Lunar Freezing was the single carriageway A90(T) between Peterhead and Aberdeen. The company has sites in Fraserburgh and Peterhead and a factory in Aberdeen. The A90(T) is therefore the main route linking their operations and is frequently used by the company. It was noted that the inability to overtake slower vehicles causes driver frustration and leads to safety issues with resultant impacts on journey time reliability. Safety issues and delays were seen as particularly problematic on the sections between Aberdeen and Ellon and between Tipperty and Blackdog.

Lunar Freezing explained that the issues on the A90(T) had a consequent impact on the business, with delays on the road impacting the selling costs of time sensitive produce and sometimes leading to incidences where factory workers in Aberdeen are left idle as a result of produce not arriving on time. In addition, the company supplies a number of the large supermarket chains and can incur penalties where produce does not arrive on time.

Similar issues were raised by Thistle Seafoods who are based in Boddam. Journey time and journey delays on the road network are critical problems. Thistle Seafoods note that due to the nature of the produce, delivery times are critical with stock rapidly losing value. Significant delays can and do have an impact on the business.

In contrast to Lunar Freezing, Joseph Robertson which is based in Torry, contract out their transport requirements to local freight operators. In addition, most of their suppliers and all of their customers are based outside of the study area. The A90(T) and transport issues more broadly are therefore less of a concern for the company, however, they did note that there are high levels of congestion within Aberdeen and that the area around their site can often become gridlocked. It was felt that the AWPR would lead to some improvements and when considered in the context of an entire fleet would likely result in savings for hauliers, although it was felt to be unlikely that these savings would be passed on.

Internal traffic in Aberdeen and access to Aberdeen Airport was also raised as an issue by Lunar Freezing. While it was felt that the AWPR would likely lead to some improvements, it was noted that there are a number of industrial estates within the AWPR boundary and to access these it would still be necessary to cross the city.

Thistle Seafoods felt that while the AWPR and associated Balmedie to Tipperty dualling projects will represent real improvements, more is required, indeed it was felt that the route should be dualled to Peterhead.

Thistle Seafoods also noted safety concerns on the A90(T), both in terms of accident blackspots at the Toll of Burness and more generally on the route. Concerns are raised for both safety of their staff as well as the issue of lack of diversionary routes when accidents occur.

Access to labour was not considered to be an issue within the industry in part because of the growth in the number of employees originating from Eastern Europe in recent years, however, all three companies noted that most of their employees live locally, for example, in the case of Lunar Freezing it was explained that those who work in Aberdeen live in Aberdeen, those who work in Peterhead live in Peterhead and those who work in Fraserburgh live in Fraserburgh, with very little commuting between the sites.

Thistle Seafoods felt that a rail link would have a potential freight usage and were it available, they would consider if their goods could be transported by rail freight.

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A.14 Oil and Gas Industry

Telephone consultations were undertaken with the following:

- Shell
- Subsea 7
- ASCO

It should be noted that despite numerous attempts, a number of key industry players were unwilling to take part in the study at this stage.

A.14.1 Industrial & Transport Hubs

The transport activity of the oil & gas industry in the North-East is principally focussed on the movement of goods from industrial estates in and around Aberdeen to Aberdeen and Peterhead Harbours.

The main industrial areas are:

- Altens
- Tullos
- Dyce
- Westhill, which is also known as SURF (Subsea Umbilicals Risers and Flowlines) City given its expertise in the subsea sector
- Edzell (in Angus)
- Kintore, amongst others

The majority of traffic generated is relatively local in nature, with the industrial estates principally serving customers operating out of Aberdeen and Peterhead Harbours, however, the oil & gas supply chain concentrated in Aberdeen is one of the most developed in Europe and thus the city serves other oil & gas ports, including those in Scotland like Invergordon and Scrabster as well as English ports like Great Yarmouth and Newcastle.

There are two principal oil & gas activities in the North-East:

- Supply of offshore installations
- Subsea mobilisations

The supply sector is logistically intensive. Platform Supply Vessels (PSVs) are hired by oil and gas companies to convey all necessary goods to offshore installations – this includes everything from food to spare parts. These vessels typically work on a round-trip basis, serving one or more installations and return to port. There is, therefore, a daily stream of HGV traffic travelling from the industrial estates to the ports. The supply vessels will either be loaded directly by the oil & gas firm or, more commonly, through a sub-contracted quayside services company.

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The subsea sector is also logistically intensive but the pattern and regularity of the traffic it generates is somewhat different. Subsea vessels generally mobilise over a period of weeks (although shorter mobilisations are not uncommon) and can be at sea for extended periods. The traffic generated by such mobilisations is therefore concentrated on moving specific parts to ports for 'mobbing'. This can include wide vehicles requiring escorts. It is our understanding that mobilisations are generally undertaken directly by the subsea companies (e.g. Subsea 7 and Technip) with the logistics being provided by a haulage or quayside services company (e.g. ARR Craib or ASCO).

Aberdeen Harbour is the principal supply base for North Sea oil operations. The majority of firms supply their offshore installations through the port from industrial estates in close proximity. Aberdeen is particularly favoured by the largest firms such as BP and Total. In terms of oil & gas activity:

- Torry Quay is used for oil and gas supply base operations and tankers discharging refined oil products. The quayside operations on this common user quay i.e. not leased or specifically dedicated, are mostly carried out by Asco, who are contracted directly by the operators involved. This facility has just undergone a £35 million redevelopment offering fully serviced deep water berthing, heavy lift capabilities and extensive cargo lay down area.
- Mearns Quay is also a common user supply base for several oil and gas operators. Asco are the main quayside services provider.
- Berths on Albert Quay are dedicated, i.e. leased by BP and Total, with the quayside services currently provided by Asco.
- Waterloo Quays and Pocra Base are leased to Peterson UK Ltd who provide supply base services to several oil and gas operators.
- Telford Dock provides deep water berthing. The longest berth, Clipper Quay is the preferred berth to handle large subsea & diving support vessels. Duthies Quay facilitates the loading and discharge of oil rig mooring chains, buoys and anchors.

Subsea firms make relatively little use of Aberdeen. While subsea companies would like to make use of the port due to its supply chain proximity, the lack of deepwater berths and heavy load bearing laydown space is seen as a weakness.

Peterhead Port has a healthy trade in oil and gas related traffic. The port typically handles the second generation oil and gas companies such as Talisman, Nexen, and Apache. While BP used to operate out of Peterhead, none of the largest firms currently operate from the port. A common factor with a number of the firms operating out of Peterhead is that their fields of operation tend to be to the east and north of the port.

The majority of the oil and gas operations take place around the ASCO South Base, which was constructed and operated by the firm. Peterhead is a favoured destination for subsea vessels, accommodating around 200 such vessels per annum.

The Oil & Gas Ports Capacity Study 2014 (currently unpublished) identifies the subsea sector as being one of two key growth areas in the North Sea (the other being decommissioning). Internationalisation will also be key for the industry going forward, i.e. selling both physical products and human capital aboard, particularly in emerging deep sea exploration areas.

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A.14.2 Ports & Harbours

Aberdeen Harbour and Peterhead Port adapted rapidly to the emergence of North Sea oil in the 1970s and have coped admirably with the various surges in traffic over the years, however, the ports were never purpose built for the industry and thus a number of problems have emerged, the alleviation of which should be considered as part of this strategy.

Capacity

A shortage of capacity is currently a key issue in both Aberdeen and Peterhead (particularly the former). Aberdeen Harbour has, for a number of years, suffered from an under-provision of quayage. Vessels calling at the port only have a limited time at the berth and off-hire vessels generally have to leave the port and wait in the bay. In addition, there is evidence that Aberdeen Harbour is having to turn away non-oil & gas traffic due to capacity constraints.

Aberdeen also only has 1 – 2 berths capable of handling the larger subsea vessels, particularly anchor handlers (AHTV) and dive support vessels (DSV).

Peterhead is in a similar situation, with the ASCO South Base almost full to capacity. Recent developments at the port have added to available capacity for subsea vessels, but there remains an overall constraint in this regard.

Laydown Space

As previously indicated, the subsea sector is anticipated to expand significantly in the coming years and the North-East will need to compete with elsewhere in the UK and indeed other countries to maintain and grow its market share in this sector.

Given the scale of subsea mobilisations, there is an increasing demand for heavy load-bearing laydown space at ports. Aberdeen is currently very limited in this regard and Peterhead, despite recent improvements, requires further investment.

Aberdeen Harbour Board and Peterhead Port Authority both have well developed investment plans to improve the capability of the harbours in terms available quayage, laydown space, etc. These plans should be considered in the option generation and appraisal stage.

A.14.3 Road

There are a number of road transport problems which impact on the efficiency of the oil & gas industry in the North-East.

Congestion

As noted, the goods shipped through the ports to offshore installations tend to be supplied from industrial estates on the outskirts of Aberdeen. Congestion on the A90(T) around the city centre (and on the A90(T) north of the city, for Peterhead bound traffic) is perceived to be a key issue amongst oil & gas firms.

The effect of this impact is amplified by the capacity constraints at the ports, which means that supply vessels have limited time available at the berth. Both the supply and subsea industries are time critical and potential delays have to be factored in (leading to inefficiencies and higher costs). Companies have to build slack into delivery timetables for crucial components. In addition, if an outbound shipment for Peterhead does not leave Aberdeen-based depots before 14:30, extra costs are often incurred as a result of out-of-hours operation.

Aberdeen City Centre

A number of consultees also explained that the traffic situation in and around Aberdeen Harbour is problematic. This is particularly true for accessing berths on the north side of the harbour, where the majority of traffic has to travel on the congested Market Street (outside of the Union Square shopping centre) and then round the gyratory and narrow streets adjacent to the Harbour.

This is a difficult challenge to overcome given the location of the harbour, although the Nigg Bay harbour development would address this.

Road Safety

Oil & gas companies place a significant emphasis on all aspects of health & safety. Road safety is a part of this and oil & gas companies work to minimise road miles (one of the numerous reasons for their concentration of activity in the North-East).

Consultees suggested that the safety issues on the A90(T) north of Aberdeen are a concern, both in terms of commercial traffic and employees moving on the road (commuting to work and in the course of business). This is a key concern and a number of incidents on the road were cited by consultees.

A.14.4 Rail

Consultees explained that improved rail services would be beneficial for employee travel-to-work, particularly an enhanced connection to the airport.

It was also explained that, given the specific, time sensitive and often short-notice needs of the industry, rail freight would rarely be an attractive option, however, it was noted that rail freight which took other commercial traffic off of the A90(T) would be beneficial.

A.14.5 Airport & Air Services

Oil & gas firms make use of Aberdeen Airport to fly in a significant proportion of their employees. The consultation suggested that the level of services/destinations offered by the airport was very good for a city the size of Aberdeen, however, it was explained that the lack of an airport rail connection to Aberdeen and the dependence on the private car for accessing the site gives rise to a poor perceptions. Arriving staff often have to be met by a private transfer (generally a bus) at the expense of the oil & gas company (although this is standard and accepted practice).

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A.15 Tourism Industry

Telephone consultations were undertaken with representatives from the following:

- **Visit Aberdeen**
- **Banffshire Coast Tourism Partnership** (BCTP)
- **Aberdeen City and Shire Economic Future** (ACSEF)

It was explained that the tourism markets in Aberdeen City and Aberdeenshire are very different. While Aberdeen is dominated by mid-week business tourism, Aberdeenshire is far more leisure based. Visit Aberdeen estimate approximately 65% of visitors to the city are business travellers compared to 35% leisure with the former generally staying for shorter time periods (between 1 – 3 nights) compared to the latter (approximately 2 – 3 nights). In contrast, Aberdeenshire is dominated by leisure tourists with visitor's generally older and longer stay (approximately 3 – 4 days). The BCTP also noted the importance of day trippers for the Banffshire Coast, with the catchment for day trippers being around a 1 – 2 hour travel time and most coming from the east and west coast.

It was explained that historically the leisure market in Aberdeen has been constrained by the business market, with hotel prices higher mid-week compared to weekends, however, Visit Aberdeen has been working on repositioning the region so as to attract a greater number of leisure tourists and demand for weekend trips has recently increased. At the same time there has been a decline in the mid-week market as a result of the downturn in the oil market although occupancy rates are still higher than elsewhere in the county.

When marketing the area for leisure trips Visit Aberdeen explained that they try to position the Aberdeen and Aberdeenshire markets together as they feel this offers the most attractive leisure package. In terms of destinations outside of the city the major attractors were considered to be the Royal Deeside, the Cairngorms and the Banffshire Coast. Within the study area, Kinnaird Head Lighthouse in Fraserburgh and the east coast generally (which is particularly attractive for wildlife tourism) were described as key attractors.

The airport was felt to be a key asset and a vital link into both Aberdeen and Aberdeenshire with a large proportion of those visiting the area arriving via air. Visitors also arrive by car and rail, with the ferry from Orkney and Shetland also providing a potential route into the area for tourists. It was noted that the vast majority of those who travel from Aberdeen to destinations in Aberdeenshire do so by car because of the limited public transport options available, with air passengers often hiring vehicles at the Airport for their onward trip. Indeed, the BCTP explained that 95% of their visitors arrive by car. Car use was described as less prevalent in the city, with the majority of business visitors coming through the station or airport and travelling by taxi.

A.15.1 Transport Issues

Airport

Visit Aberdeen commented that access from the Airport to the city was poor with significant delays entering Aberdeen. It was noted that there has been an increase in the number of industrial estates around the Airport and this was felt to have added to congestion within the area. In contrast ACSEF highlighted that there is a very good bus service between the Airport and Aberdeen City Centre. Instead, they noted that access from the Airport to Peterhead was poor, with the road passing through a number of small villages.

In terms of airlines serving the Airport, both ACSEF and Visit Aberdeen stated that they would like to see an expansion in the number of routes available, with Visit Aberdeen specifically noting that they would like to see a greater number of low cost flights in order to encourage the leisure market. Both organisations noted that that the flights to/from Norway and Frankfurt had been very successful in increasing the number of visitors to the area.

Bus

Visit Aberdeen generally felt that bus services within the city were poor. While buses are busy during the rush hour they were felt to be underutilised during the day. In addition, it was noted that there is an issue with buses parking in Union Street when they are running ahead of schedule. Visit Aberdeen did not feel that buses were well used by tourists, in part because of a lack of good quality information targeted specifically towards the tourist market.

While there are bus services out of the city to destinations within the study area, these often do not serve attractions directly and are often not a feasible option where visitors are travelling to multiple destinations. Both ACSEF and Visit Aberdeen felt that the lack of bus options acted to deter visitors. For example, Visit Aberdeen noted that the Castle and Whiskey Trail is inaccessible by public transport and, by its very nature, may not be such an attractive proposition for those driving, however it was recognised that providing good bus services to tourist destinations is difficult as they may not be commercially viable. Visit Aberdeen noted that they have previously considered providing day trips by bus in partnership with East Grampian Coastal Partnership and this is something that they are looking to develop in the future. The limited public transport services from the city to more rural locations within the Shire as well as issues with rail access were also highlighted as an issue in terms of people accessing employment (as follows).

Rail

Visit Aberdeen also commented that the rail connection between Aberdeen and the central belt and rail access in the city was poor. It was noted that a very high percentage of Aberdeen's workforce is based within the industrial estates on the outskirts of the city and that the rail service does not adequately serve these areas. As a result commuters have to get the train into the city and a taxi back out.

Road

ACSEF noted that there are high levels of congestion on the A90(T) particularly during peak times, however, while a problem for commuters this was not felt to have a significant impact on the tourism market. While there are smaller numbers of tourists in the study area compared to other areas in the Shire, this was felt to be a result of the more limited tourist offer in this location rather than the road network. For example, it was explained that road access to Deeside is equally poor but the area has a high numbers of tourists. While transport investment in the corridor was felt to be beneficial for both Fraserburgh and Peterhead, it was felt that the business case for such investment would have to be made in relation to something other than tourism.

Cycle

All of the respondents noted that the popularity of cycling tourism is increasing and there is potential to improve cycle access both in the City and the Shire in order to further encourage this market. For example the BCTP explained that a large number of cyclists travel to the area from Aberdeen and that improving cycling routes could improve safety and increase the appeal of the area for this purpose. Similarly ACSEF commented that the investment in the Deeside Way had been very successful and resulted in a growth in cycle tourism which could be replicated elsewhere, however, it was noted that such a project would require significant investment in the network.

Wider Issues

A shortage of labour within the tourism sector was identified as an issue by all participants. It was noted that higher wages are available within the oil and gas sector and there is a general perception that tourism is poorly paid making it difficult to attract and retain suitably qualified staff. Poor transport access was felt to contribute to the difficulties in terms of labour supply, particularly for locations based outside of Aberdeen city centre and both Visit Aberdeen and ACSEF identified incidences where businesses were unable to get staff to their site at the time required because of a lack of public transport.

The high cost of accommodation was also felt to contribute to labour supply issues. It was noted that while leisure companies may be able to attract people to the area from the central belt with a specific salary, the cost of accommodation can be a prohibitive factor. In addition, because of the high cost of accommodation there is a natural tendency to move further away from places of employment and this leads to difficulties in terms of transport access and higher levels of congestion as people travel back into the city.

Broadband access was also identified as an issue. It was explained that broadband and 3G accessibility can be a problem in both the City and the Shire (although it is more prevalent in the latter) and that this is having an consequent impact on the ability to attract people to the area, with most visitors now expecting to be able to access broadband during their stay.

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A.16 Outdoor Access Forums

In addition to the tourism contacts discussed, emails were sent to Aberdeen Outdoor Access Forum (AOAF) and Aberdeenshire Local Outdoor Access Forum (ALOAF) with both groups raising the study at their respective meetings. A telephone consultation was then undertaken with the Chair of AOAF.

The following points were raised by AOAF:

- Dualling of the A90(T) Balmeddie to Tipperty:
  The forum believe that cycle provision should be included on this section as the route is currently not a safe cycle route.
- Formatine and Buchan Way
  The forum noted that a walking and cycling route would need to be provided if the route was going to be turned back into a railway line.
- Missing links
  The forum noted that there is a missing link between Dyce and Bucksburn. The link is Aspiration Route 6 within the Core Paths Plan.
- Train Travel
  The group noted that there is limited capacity and insufficient provision for cyclists travelling at peak times into Aberdeen, particularly on the Aberdeen to Inverness line, making it difficult for cyclists to travel by train into the city;.
- Access to the Park & Choose sites near the Airport
  The group noted that the build-up of industrial units and associated security fences in the vicinity of Aberdeen Airport has made access difficult. While it was previously possible to cycle between Kirkhill Forest and the Airport this is no longer achievable as a result of the presence of security fences.
- The A96(T)
  It is difficult to cycle into work from Kintore to Dyce.
- Bus terminus in Dyce
  It is felt that the current bus terminus in Dyce which is beside Asda could be made more of a transport hub with a greater number of buses to make it easier to get around the area.

The group also emphasised that they would like to be involved in any further workshop meetings as they feel it would be easier to represent their views in this setting.

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A.17 Environment

A.17.1 Approach

A consultation letter setting out information about the proposed study (including a briefing note and map of the study area) and seeking inputs from consultees on key environmental and sustainability issues was issued (by email) to the following stakeholders (responses received from those with an asterisk *):

- Aberdeen City Council (environmental policy, sustainable development and climate change)*
- Aberdeenshire Council (environmental planning and archaeology)*
- British Horse Society*
- District Salmon Fishery Boards for the Don, Ythan, and Ugie catchments*
- Forestry Commission Scotland*
- Historic Scotland*
- Marine Scotland*
- North East Biological Records Centre*
- RSPB Scotland*
- Scottish Badgers*
- Scottish Government
- Scottish Rights of Way Society*
- Scottish Water*
- Scottish Wildlife Trust
- Scottish Environment Protection Agency (SEPA)*
- Scottish Natural Heritage (SNH)*
- Visit Scotland

Further environment and sustainability feedback was captured from officials of the two local authorities during pre-appraisal workshops (particularly the Inception Workshop in January 2015 and the Transport and Land Use Workshop in March 2015).

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A.17.2 Key Findings

This section summarises key issues and information identified from the environmental consultations.

Natural and Cultural Heritage

Guidance on sources of information on protected areas, habitats and species was provided by SNH in their response and key baseline information for the study has been collated. RSPB Scotland provided advice on contacts for baseline data and noted the importance of the area for key wildlife including birds of conservation concern. RSPB also noted that unprotected habitats across the study area provide important habitat connectivity for wildlife and highlighted that the Formatine to Buchan Way provides a valuable habitat as well as an opportunity for people to experience nature. Consultation with Scottish Badgers has indicated badger is a key species in the area and found widely throughout the study corridor.

Workshop discussions identified the need to prevent or mitigate habitat fragmentation from the development of new urban infrastructure (such as transport schemes and housing development). The use of green bridges as a mitigation measure for major schemes such as the Aberdeen Western Peripheral Route (AWPR) was noted.

The local authorities' archaeology service and Historic Scotland drew attention to baseline cultural heritage information to inform the study but generally were not able to provide specific comments on sensitivities or issues at the pre-appraisal stage.

Land Use and Soils

Forestry Commission Scotland identified that several woodlands in the study area would soon require thinning which would generate heavy vehicle transport movements by road. The response also drew attention to the need to comply with Scottish Government policy on control of woodland removal (where developments result in the need to fell trees), the particular importance of retaining woodland close to communities and the importance of the conservation of red squirrel in the study area.

Workshop discussions identified that some areas of potentially contaminated land in Fraserburgh may be constraining regeneration.

People and Environmental Quality

Traffic related air quality and noise issues were highlighted during workshop discussions in particular in areas such as King Street, Aberdeen where there is an Air Quality Management Area (AQMA) and a Noise Management Area (NMA). Air quality was also perceived to be lower in the vicinity of St Fergus due to emissions from industry/energy generation.

The importance of non-motorised user paths and routes was highlighted by consultees including the local authorities and British Horse Society. Information on existing core paths and other routes was provided and attention was drawn to the need to maintain key walking, cycling and equestrian routes such as that provided by the line of the former Formatine and Buchan Railway. The extensive use of paths in parts of the study area for horse riding was confirmed in workshop discussion.

Further consultation was held with active travel groups by the Study Team (see Section 1.16).

Water and Flooding

SEPA identified the importance of considering flood risk from an early stage in the development of proposals and recommended that a strategic flood risk assessment (SFRA) is carried out in line with SEPA guidance. The response identifies (from the SEPA flood maps) that some parts of the study area are constrained by the presence of medium likelihood (1 in 200 year) flood extents. The response also provided details of guidance and procedures to be followed in the assessment and design of new infrastructure including for sustainable drainage, pollution prevention and effects on key wetland and peatland habitats.

Consultation responses from the District Salmon Fishery Boards emphasised the importance of adherence to river works codes of conduct to ensure infrastructure development does not adversely affect water quality.

Scottish Water provided some specific information including plans showing infrastructure and drinking water catchments in the study area (River Ugie, Berryhill Springs and River Dee) which are classed as Drinking Water Protection Areas. The importance of assessment of development on water quality and quantity was highlighted together with a standard list of precautions to protected drinking water from works in the catchment areas.

Sustainability and Climate Change

The drive to lower emissions and decarbonise Aberdeen was acknowledged in workshop discussions along with a growing network of green infrastructure, such as electric vehicles in Council fleets, more plug in/charging points and use of hydrogen powered buses in Aberdeen. In future flexible working arrangements may offer the potential to contribute to emissions reductions from journey to work travel.

There is an opportunity to promote a green transport corridor which would fit well with the Energetica initiative.

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A.18 Elected and Community

A.18.1 Written Consultation

Briefing notes were sent out to all councillors, MSPs and MPs who have an elected responsibility within the study area. All were invited to respond to five key questions, as follows:

- In your opinion, what are the key issues which currently affect travel and transport across the study area?
- Do you believe the current transport network impacts upon the business community within the study area? If so, in what way?
- Do you believe the current transport network impacts upon the general public within the study area? If so, in what way?
- What do you believe are the key locations such as towns, industrial parks, ports and harbours etc. that require access and what strategic transport connections should be improved and why?
- What interventions do you believe would help to alleviate transport issues in the study area and serve to make the north east of Scotland more prosperous in the future? Please bear in mind that there are a number of committed transport schemes such as the Aberdeen Western Peripheral Route which will be opened in the near future.
- Please provide any other general comments which you may have regarding strategic transport connections within the study area and or about the study in general.

Responses were received from the following elected officials:

- Stewart Stevenson, MSP (Banffshire & Buchan Coast)
- Gillian Owen, Councillor (Ellon & Distirct)
- Charles Buchan, Councillor (Fraserburgh & District)
- Stephen Smith, Councillor (Peterhead South & Cruden)
- Tom Malone, Councillor (Peterhead South & Cruden)
- Lenny Pirie, Councillor (Central Buchan)
- Muriel Jaffrey, Councillor (Bridge of Don)

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Key Issues noted in terms of the written consultation are as follows (It should be noted that some councillors responded to say they had responded to the Public Survey with their comments and as such their comments are not included here):

- Vital time is lost due to the volume of traffic, including commercial vehicles, as they are caught in congested traffic which has an associated cost for their employers.
  Cllr Muriel Jaffrey
- Pleased with committed transport proposals, but like many others, think dualling of the A90(T) should continue to Peterhead and eventually Fraserburgh.
  Cllr Muriel Jaffrey
- Traffic congestion and volumes on the approach to Aberdeen from areas within the study corridor lead to long journey times. This leads to negative effects on quality of life of workers.
  Cllr Charles Buchan
- High travel times mean higher pay is needed to compensate workers which can affect viability of business.
  Cllr Charles Buchan
- AWPR will not solve all problems. Consideration should also be given to a light rail system carrying passengers to the North of Aberdeenshire.
  Cllr Charles Buchan
- Believe there is a requirement for a rail link serving communities north of Aberdeen.
  Cllr Stephen Smith
- Buses into the city at peak times cannot be relied upon due to congestion on the roads. While the A90(T) is to be dualled from Balmedie to Tipperty this merely allows car users to reach the queue at Bridge of Don 10min earlier than they otherwise would. A rail hub in Ellon or Peterhead would tackle these problems.
  Cllr Stephen Smith
- Belief that while a rail link to Peterhead is extremely desirable, a Park & Rail facility, located at Ellon would be heavily used by people from Ellon, Peterhead, Fraserburgh, and Central Buchan.
  Cllr Stephen Smith
- The success of station and line re-opening programmes in recent years point to a Buchan rail link being a success.
  Cllr Stephen Smith
- Concerns that single lane traffic on the A90(T) between Peterhead and Aberdeen does not meet the demands of modern usage by both domestic and business traffic.
  Cllr Tom Malone
- Peterhead has increasingly grown as a major fishing, shipping and energy hub. The volume of HGV vehicles has always been heavy and is increasing. There has also been a growing number of local residents travelling to work by bus and car to Aberdeen. Traffic flow is adversely affected by the volumes of heavy goods vehicles using the route.
  Cllr Tom Malone
- Belief that the A90(T) is currently poorly maintained with reflective strips and white lines no longer adequately maintained. The road is, therefore, not safe, particularly in winter months, poor weather and dark nights.
  Cllr Tom Malone

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- Belief that many more private houses are currently being built and Peterhead is increasingly developing as a satellite settlement to Aberdeen City. There is a very high serious accident and fatalities rate on the A90(T) due to the inadequate road conditions. Concern that this will only worsen with increasing volumes of traffic.
  Cllr Tom Malone

- Road access to Peterhead Harbour is currently very poor. The A90(T) is the main corridor for the fishing industry, ASCO base and Peterhead Power Station, which is soon to expand to incorporate the Carbon Capture Plant. A new commercial retail park is planned for the Buchan Gateway, on the approach to Peterhead. A new electricity sub station is planned near Boddam. The North Link Wind Turbine Development is planned for offshore wind turbines off the coast of Peterhead. Peterhead is the north east hub for the Energetica vision. There is also an electricity grid link planned from Norway, that will land at Peterhead. In general, the A90(T) is presently not fit for purpose and indeed has not been for very many years. If it is not upgraded to duel carriageway, it will adversely affect the development of the aforementioned industries and negatively impact the economy and prosperity of the north-east.
  Cllr Tom Malone

- When one considers a journey time of 9 minutes from Dyce to Aberdeen city centre by rail against a varying time of 30 minutes or more by road depending on the time of day, the argument for a rail link from Buchan to the city centre (and beyond) versus the morning road commute becomes unanswerable. A rail link would have the benefit of taking traffic off the A90(T) as well as providing commuters with faster travel times to the city centre. In addition, with traffic removed from the A90(T) onto rail, there should be less congestion and, consequently, faster journey times by road as well.
  Stewart Stevenson MSP

- Clearly, a link from Dyce to Ellon would logically follow most if not all of the previous track bed. From Ellon to Peterhead, the route is less clear as, in order to make the prospect an attractive one to the public and indeed a financially viable one, one would not follow the previous from Ellon to Peterhead via Maud.
  Stewart Stevenson MSP

- In order to make re-establishment of a rail link viable, it may have to happen in stages and that Ellon may be an obvious point for the railhead. At least in the first instance. Were that to be the case, I foresee that a ‘Park & Rail’ facility at Ellon would be well-used by customers from Peterhead, Fraserburgh and Central Buchan.
  Stewart Stevenson MSP

A.18.2 Infrastructure Services Committee

Aberdeenshire Council hosted a briefing session with the Infrastructure Services Committee which included key elected officials. Key points which were raised at this briefing included:

- **Cllr Stephen Smith (Peterhead South & Cruden)** noted strong backing for a rail link (probably on a new alignment), which had previously been strongly backed by the Buchan Area Committee. He noted the need to attract skilled professionals to the area, and the benefits of improving connectivity to the area, particularly younger professionals.
- **Cllr Brian Topping (Fraserburgh & District**) queried whether or not land had been/or was being protected on the existing alignments/possible future alignments. *Study Team responded that this was an issue for later in the development, although noted that the Borders rail line did not wholly follow the previous alignment in order to overcome land ownership issues.*
- **Cllr Rob Merson (Ellon & District)** had concerns the study had caveated a comment about public being very pro-rail with reference to the manner in which the media had presented the on-line survey in newspapers. He went on to highlight both the significant media coverage of roads issues, and also a real groundswell of opinion for rail amongst the public which he indicated had been clearly expressed over a long period of time. *Study Team acknowledged this point but noted that the wording of the newspaper article suggested if the public vote for rail, a rail line will be provided.*
- **Cllr Cox (Banff & District)** asked a specific question about who from the seafood/fishing industry had been consulted, what their responses had been, and whether or not a freight distribution hub had been mentioned for Fraserburgh. *Study Team have responded to Cllr Cox noting:*
  - *Initial discussions were undertaken with Derek McDonald from Aberdeenshire Council's economic development team. He particularly elaborated to the consultants on the added value element of the processed fish, and the subsequent time critical nature of distribution of the product; as well as the impact that delays/long supply chains have in reducing the value of the product The consultants were referred to the North East Fish Processing Strategy.*
  - *Derek McDonald provided the consultants with names to invite to the initial business workshop, these included: Northbay Pelagic, Denholm Seafoods, International Fish Canners, McaDuff Shellfish, Nolan's, The Real MacKay and Young's Bluecrest . However, none of these returned the invitation, and did not attend the session.*
  - *Subsequently, discussions were held with Lunar Freezing, Joseph Robertson and Thistle Seafoods. The key outcomes from these discussions were that a better, more reliable road network allows better access to markets in the south. It can also make the difference in terms of next day delivery which adds value to a perishable product. Thistle Seafoods were very concerned about what happens to their operations if there is an accident which can shut the A90(T), and also safety for the drivers on the road itself. In the longer term, Thistle Seafoods did recognise the logistical opportunities potentially provided by rail freight, but noted that the "end to end" service would have to be there to make it work.*

- *The Study Team confirm that none of the consultees, or respondents to the business survey, mentioned the development of a freight distribution hub in and around Fraserburgh, over and above the current operational arrangements. Separately from this study, Nestrans, and the two local authorities work together on a freight strategy. If further details were available, or if particular parties are interested in this proposal, we would have interest in learning more about this.*

- **Cllr Gardiner (Peterhead North & Rattray)** supported progression of both road and rail options.
- **Cllr Nelson (North Kincardine)** made enquiries about the operational nature of a potential rail line and how it would link in with the current network and services. *The Study Team noted that the study is at a very high level stage yet and operational considerations had not yet been investigated. However the experience of previous rail re-openings were highlighted including objectives of providing links to the key destinations, as well as providing through services where possible to onward destinations.*
- **Cllr Mollinson (North Kincardine)**highlighted previous appraisals that had underestimated rail usage of new stations/lines. *The Study Team referred to recent Transport Scotland rail evaluations which had now taken this into consideration.*

A.18.3 Members Briefing

A members briefing was held to allow the Study Team to present to members and provide any answers to specific questions members may have. The briefing was attended by the following:

- Cllr R Cassie (Troup)
- Cllr C Buchan (Fraserburgh & District)
- Cllr B Topping (Fraserburgh & District)
- Cllr J Ingram (Central Buchan)
- Cllr L Pirie (Central Buchan)
- Cllr A Allan (Peterhead & Rattray)
- Cllr A Gardiner (Peterhead & Rattray)
- Cllr T Malone (Peterhead South & Cruden)
- Cllr S Pratt (Peterhead South & Cruden)
- Cllr S Smith (Peterhead South & Cruden)
- Cllr G Owen (Ellon & District)
- Elaine Brown, Aberdeenshire Council Area Manager for Formartine
- Margaret Jane Cardno, Aberdeenshire Council Area Manager for Banff & Buchan
- Rab Dickson, Nestrans
- Paul Finch, Aberdeenshire Council
- Chris Paterson, Consultant Team

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Minutes were provided from the meeting which are reproduced here:

- Rab Dickson thanked members for attending the meeting. Rab provided some project background and then handed over to Chris Paterson who provided a presentation to members on the progress of the project to date, along with emerging themes which have been raised through the baseline and engagement sections of the study.
- Paul Finch then chaired the question and answer session. The remainder of these minutes detail the specific questions from the floor and any responses from the Project Team.
- **Cllr Topping** thanked the project team for the presentation and was pleased the study was underway. He noted that residents of both Fraserburgh and Peterhead can feel 'cut off' due to the distance from Aberdeen and the poor quality transport links. Freight links were also raised, both for livestock and fish produce. Councillor Topping felt road upgrades would be the minimum improvement required, and any rail additions would be most welcome. Councillor Topping felt that while these interventions would be well used by commuters, they would also play a role in encouraging tourism to the area and could help reduce the outward drift of younger people. He enquired whether to what extent the previous alignment was currently being protected from development
- **Cllr Buchan** asked if light rail was under consideration as part of the study. He also emphasised that Fraserburgh has a low proportion of residents who work in the town.
- *Chris Paterson explained that at this stage no options had been selected for progression to the next phase however this was a multimodal study and all relevant options will be considered. He also noted that light rail had been suggested by others.*
- **Cllr Malone** believed that while the A90(T) was clearly a busy route, he was concerned that using 24hr average traffic figures would not accurately reflect traffic conditions. Councillor Malone asked for assurance that the study will reflect high use time periods and the significant levels of HGVs on the route.
- *Chris Paterson explained that as part of the evidence gathering elements of the work, we already have access to vehicle counts on routes which are broken down by time period and importantly by vehicle class. Chris noted that an analysis had been undertaken which suggested the proportion of HGVs using the route was up to 14% at particular locations, and that the study is looking at usage patterns at different times of the day.*
- **Cllr Pratt** noted he felt there was more traffic travelling north to Fraserburgh on the A952 than on the A90(T) to Peterhead.
- *Rab Dickson noted that all strategic routes were being considered as part of the study and that other measures are also being developed including measures to encourage peak-spreading.*
- **Cllr Owen** noted that she had attended a number of public meetings recently with key Transport Scotland officers. She was concerned however that Transport Scotland appeared to be unaware of increasing business activity in Peterhead, and had very little understanding of the Energetica corridor.
- *Chris Paterson noted that as part of the data gathering stage, the project team have undertaken a socio economic analysis of the area, picking up these critical business developments. The socio economic analysis will be key evidence for the project moving forward.*

- **Cllr Pirie** asked if Park & Ride sites should be expanded to both Fraserburgh and Peterhead.
- *Rab Dickson noted that Nestrans and Aberdeenshire Council have a number of Park & Ride sites across the study area, with a number of mini Park & Rides planned. There are currently no suggestions that Park & Ride sites are required at Fraserburgh or Peterhead however if there was an appetite for this it would be investigated.*
- **Cllr Gardiner** noted that existing routes within the study area were not fit for purpose. He also believes that it is important to not only attract new businesses to the area but also to ensure that the area remains attractive to businesses currently located within it. The business community believe there are real attractions to locating within Fraserburgh and Peterhead, however, the transport network can be a barrier to business development, particularly the road links. Councillor Gardiner believes this study represents a real opportunity to capitalise.
- *Chris Paterson noted that the consultant team understood the concerns of the business community and to this end we have engaged with businesses through a number of measures including; the business survey, direct engagement with key businesses and meetings with council officers responsible for the Energetica project.*
- **Cllr Smith** recognises that the business community have told us within this study that rail interventions less of a priority for the business community than road upgrades. Councillor Smith however, believes that a rail line that effectively removes a number of cars from strategic routes will help businesses as there will be less congestion on routes.
- **Cllr Smith** also noted that Aberdeen is further developing industrial areas to the north and east of the City. This development will only lead to additional transport problems.
- **Cllr Smith** also highlighted the opportunities that a rail link may bring to the area, by making it more attractive for professional people to live in the Aberdeen area, but work within the various towns in the study area.
- *Chris Paterson noted that the steering group had directed the project team that the study should not only consider current transport issues, but also planned and committed transport and land use development proposals. The study is following a similar timeline to the Regional Transport Strategy effectively ensuring that any recommendations that are made will be future proofed and based on committed developments and the future transport network.*
- **Cllr Ingram** noted that the AWPR and associated Balmedie to Tipperty dualling project would be a major improvement on the transport network, however, he believed dualling should be extended to the Toll of Birness. He also emphasised the importance of the A952 through Central Buchan and the potential for upgrading or by-passing Mintlaw.
- **Cllr Topping** noted that in response to questions of whether improved connectivity would damage the viability of Fraserburgh and Peterhead, that Inverurie has good road and rail connections and thrives.
- **Cllr Buchan** noted the long timescale which would be required to get major road and rail improvements in the area. He also noted that environmental considerations are important, and that carbon emissions will become increasingly relevant. He sought assurances that any long term proposals will be environmentally viable.

- *Chris Paterson responded that we currently have Energised Environments, a specialist team of environmental consultants on our Study Team. The environmental consultants will be involved in our appraisal of options and option selection throughout the study to ensure all environmental matters are considered.*
- Elaine Brown asked what the public drop-in sessions would entail.
- *Paul Finch noted that the format of the sessions was still to be finalised but he envisaged a session held in each of the three main towns located across the study area whereby members of the public could attend, look over our proposals and ask questions of the Study Team. Paul expected each drop-in session would be staffed by members of Nestrans, Aberdeenshire Council and the Consultant Team.*
- **Cllr Ingram** asked why the local media and press were not present at this briefing session, believing that an effective media engagement campaign would lend weight behind the goals of the study. He believed it is worth establishing good relations with the media in terms of this project.
- *Paul Finch noted that while there was no media present this evening, the media were present at Paul's earlier briefing at Aberdeenshire Council.*
- **Cllr Buchan** enquired as to the response rates of the public survey from the Fraserburgh area.
- *Chris Paterson responded that he didn't have this information to hand, but it was available and he would get back to Councillor Buchan later. Subsequently Councillor Buchanan has been informed that in order to analyse the survey the team grouped responses into key areas. The Fraserburgh area includes Rosehearty, Sandhaven, Memsie, Cairnbulf, and Inverallochy. Combined from these areas the study received 561 responses. Essentially 26% of the total response.*
- Paul Finch thanked members and closed the meeting, noting that the full Study Team would be available for any further follow up questions as required.

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A.19 Public Survey

An online survey was developed to gauge opinions from the public. The survey was open for just over three weeks between Wednesday 29 April 2015 and Friday 22 May 2015. The survey was advertised on the official project web page and through Nestrans, Aberdeen City and Aberdeenshire Councils twitter updates and in the local press.

In total, 2172 responses were received from members of the public. Peterhead and Fraserburgh along with the surrounding areas were well represented, accounting for a combined 65% of all responses to the survey. Response rates by area included:

- Peterhead/Boddam/St Fergus: 36%
- Fraserburgh/Rosehearty/Sandhaven/Memsie/Cairnbulg/Inverallochy: 29%
- Ellon: 6%
- Mintlaw/Stewartfield/Longside/Old Deer/Fetterangus: 6%
- Aberdeen City: 5%

There were numerous other smaller conurbations/areas with lower response rates. Further information is available from the Study Team upon request.

Key findings of the survey are as follows:

- Approximately 91% of respondents have access to a car in their household.
- The majority of participants in the public survey 92% travel by private vehicle within the study area, either as a driver or passenger of a car, van, etc.
- Approximately 95% of respondents indicated that there are significant problems/issues when travelling by road in the study area, that have an impact on their everyday activities.
- Congestion and delay was by far the most common issue cited. Respondents were asked to expand on this, the key theme to emerge was related to volumes of slow moving vehicles (HGVs and agricultural vehicles) on the road network in the study area, this combined with single carriageway routes and lack of passing places leads to significant journey times, driver frustration and dangerous overtaking manoeuvres.
- A90(T) – Peterhead to Ellon and A952 – Toll of Birness to Cortes Junction were considered by the majority of respondents to be the sections of the road network that would benefit most from future improvements. Indeed, when provided with open responses to areas which require intervention, Toll of Birness was the most commonly cited location.
- 33% of respondents use the bus regularly, however ‘long journey times’ were the key reason not to use the bus.

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- There was strong public support for the introduction of a rail line in the study area with road improvements a close second choice, with:
  - A total of 1,379 respondents ranking 'New rail line in study area' as either their first or second choice of transport network improvement that would be of most benefit to them with:
    - 894 respondents ranking 'New rail line in study area' as their first choice of transport network improvement
    - 485 respondents ranking 'Road Improvements' as their second choice of transport network improvement
  - A total of 1,292 respondents ranking 'Road Improvements' as either their first or second choice of transport network improvement that would be of most benefit to them with:
    - 675 respondents ranking 'Road Improvements' as their first choice of transport network improvement
    - 617 respondents ranking 'Road Improvements' as their second choice of transport network improvement

A.20 Active Travel

Face-to-face consultations were undertaken with:

- **Sustrans**
- **Cycling Scotland**

Written responses were received from the following organisations:

- British Horse Society, Scotland and Grampian offices
- Scottish Endurance Riding Club, Grampian Branch
- Association of British Riding Schools Scotland

A large number of cycling, walking, horse riding and other outdoor groups were contacted, however, most declined to participate.

A.20.1 Sustrans

Existing Active Travel Network

Sustrans provide the Community Links Programme which offers grant funding to local authorities, statutory bodies and educational institutions for the creation of cycle network infrastructure for everyday journeys. The programme is funded through the Transport Scotland Sustainable Transport team within the Scottish Government and the driver for the funding is the Cycling Action Plan (CAPs) target.

Transport Scotland have provided £20 million of funding over two years and Sustrans generally encourage local authorities to submit applications each year with the first focused on design and the second on building the infrastructure. Sustrans noted that both Aberdeen City and Aberdeenshire Council had been successful in submitting projects for funding in 2014 and 2015. The projects will increase the interest in active travel in the area.

Transport Problems

A number of transport issues were highlighted. These are summarised as follows:

- Hutcheon Street/Causeway End Roundabout:
  The NCR1 goes underneath the roundabout, however, the roundabout is a major issue as there are a large number of students living in the area using the route.
- Union Street:
  Sustrans would like to see cycle provision provided in any plans to pedestrianise Union Street.
- Wellington Road
  Air quality on this route is poor in part as a result of the large number of HGV movements using the route to access Aberdeen Harbour;.
- North Anderson Drive:
  There are a number of accidents on North Anderson Drive and very few people cycle the route. Aberdeen Cycle Forum have an aspiration to develop a link between the River Dee and Deeside Way, but there is insufficient space because of housing on either side.
- Formatine and Buchan Way:
  Sustrans would like to see a sealed surface on the F&B Way in Frserburgh. It was noted that there are ways to provide sealed surfaces but keep a more rural appearance although these are more expensive.

Sustrans is aware of public, political, and media interest in re-establishing the Formartine and Buchan Way as a rail line. Sustrans note that it would welcome such a project, as it would provide improved public transport connections for a range of Aberdeenshire communities. It was noted that a substantial investment in upgrading sections of the route have been made by a number of stakeholders (including Sustrans) and there would be an expectation that these would be reinstated as part of the project to the same (or a higher) standard. It was noted that a similar situation arose with both the Airdrie to Bathgate Rail Line and the Borders Railway and in both instances a new, parallel off road cycle path was built at the same time as the new rail line.

A.20.2 Cycling Scotland

Cycling Scotland is currently concerned about the upheaval on main routes in and around Aberdeen as the AWPR is brought on line along with key improvements, such as the associated dualling from Balmedie to Tipperty and Haudigan roundabout interventions. While works are ongoing, this will have a detrimental effect on all users and in particular cyclists.

Cycling Scotland is keen to see cycle lanes constructed alongside main routes, particularly if dualling is provided, there should be a segregated walk/cycleway at the side of any new routes.

Cycling Scotland is aware that there are numerous committed residential and other developments within the study area. The organisation are keen to ensure that cycle connectivity is designed for access to all new developments across the area including residential, work place, tourist sites and Park & Ride developments.

Cycling Scotland is aware that there are political pressures to reinstate the Buchan and Formartine rail line. At present the rail line is used as a route for active travel pursuits, such as walking, cycling and horse riding. Cycling Scotland would not object to this being returned to a rail line provided that a suitable alternative/replacement cycle route was provided on a like for like basis.

It should be noted that while Cycling Scotland do not have extensive comments at this stage, they will be available to respond to queries as and when these arise and would be happy to be consulted further as the project develops.

A.20.3 Horse Riding

The key concern raised by the horse riding organisations who provided a response was that there is very little provision for off road riding routes across the study area. As such, the Formartine and Buchan Way was described as a key resource for horse riders, indeed British Horse Society Scotland refer to it as one of Scotland's great trails. BHS Scotland, BHS Grampian, and other groups would therefore oppose removal of the route unless equal off road access was provided.

It was felt that off road access for horse riders should be made a priority for this study and note that measures which are put in place to deter vehicular access can often be a barrier to horse riding.

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A.21 Emergency Services

A.21.1 Police Scotland

Telephone discussions were undertaken with Police Scotland and Scottish Fire and Rescue.

Police Scotland representative for the Road Policing Unit (based in Mintlaw) noted:

- Commuter traffic causes most road problems. Most routes in the area are generally not busy but during commuting times, with many vehicles on network at one time, this causes problems.
- Long tailbacks are caused by slow moving vehicles and the lack of overtaking opportunities. This causes frustration and can lead to accidents.
- HGVs limited in speed also cause delay and in turn frustration.
- The A90(T) to Fraserburgh and Peterhead has quite long stretches where over-taking is limited followed by longer straights where people use these to overtake when it is not sometimes safe to do so.
- A number of junctions on the A90(T) are 'nasty' including the Cortes and Foveran junctions where there can be long delays getting out – and subsequently more risks taken.
- With the blue light on, police can usually make decent progress – their cars have the power to overtake. Having two lanes would obviously help greatly. Police can at times provide escort for ambulances which is more difficult. Ambulances do not have as much vehicle power to overtake.
- In relation to accidents:
  - Accident rates are generally high in Aberdeenshire, with Aberdeenshire having one of the highest accident rates in the country. However, statistics show things are improving and working towards national targets.
  - Accidents are caused by the rural road nature. A mix of drivers of all types are involved in accidents – young people, commuters, older people.
  - A90(T) between Peterhead and Fraserburgh particularly bad for accidents. Drivers do not always drive to the conditions of the road – they will drive at or above speed limit.
  - Drivers (especially commuters) try to make up for lost time and overtake at inappropriate locations
- More emphasis should be placed on public transport. A rail line would be ideal and would be used well.
- Bus services are generally good from the main towns but getting in to Aberdeen is the problem. Improve access to Aberdeen and also provide more direct buses to various locations in city would help promote bus transport.

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A.21.2 Scottish Fire and Rescue

The Scottish Fire and Rescue Station Managers for Buchan, and Formartine & Garioch comments included:

- The A90(T) single carriageway sections have challenging overtaking locations.
- The service can experience peak time delays in responding to call outs. Congestion and the location of congestion makes it hard to pass queueing vehicles.
- A large number of people commute relatively long distances and/or have long commute times. They may come from rural locations to Aberdeen/ Fraserburgh/ Peterhead for example. Some will constantly be looking for locations to overtake. They might know the road well but they can take risks. Interestingly, in Moray, where there are also long commutes, there are fewer accidents (anecdotal).
- Roads in the area seem to be poorly or incorrectly marked. For example, solid line for no overtaking and hatched line for overtaking. Often these seem to give drivers the 'chance' to overtake when not safe to do so.
- Aberdeen is a commuting city and many places outwith are commuting towns, villages, etc. Some commutes in the area can be very long, for example Turrif to Aberdeen. Due to the volume of traffic trying to commute by car, the road infrastructure cannot cope. There is not an adequate equivalent public transport alternative.
- Morning rush hour has expanded from 08:00 – 09:00 to, say, 07:00 – 09:30, but this has not reduced congestion, simply increased the time congestion is prevalent. It can affect the response time to incidents. For example, an incident in Aberdeen requiring appliances from Old Meldrum would suffer due to congestion with an associated increase in response time.
- Road accidents are increasing. The main causes of road accidents are:
  - Commuters, the area is quite rural meaning a large number of people have long distance commutes. If there are more people on the road for longer, the risk of having an accident increases. Tiredness, frustration, and knowledge of the route can all play a part.
  - Young or inexperienced drivers with a lack of experience means they may make mistakes or take risks
  - Older drivers, been a slight increase in accidents in this category. Older people who stay in rural locations have no choice, but to use the car as public transport services either don't exist or do not suit their needs.

Draft

A.22 Equality and Diversity

The Equalities Teams at both Aberdeenshire and Aberdeen City Council were contacted as part of the study. In the case of the former a telephone consultation was undertaken with Emma Grant, an Equalities Officer at the Council while in the case of the latter it was suggested that the study be discussed at the Disability Advisory Group (DAG) and the Older People's Advisory Group (OPAG) and comments collated.

The Aberdeenshire Equalities Team explained that transport was one of the key issues raised during the consultation for the production of Aberdeenshire's Equalities Mainstreaming Report (2013). It was explained that because of the rural nature of the Aberdeenshire it is difficult to provide regular and direct bus services and people often have to travel long distances to reach key services such as healthcare. In addition, the lack of public transport creates problems for young people who are trying to access employment or education, with buses often not running at the times required.

Aberdeen City Council DAG noted that their comments were applicable to bus and rail routes in general rather than just those within the study area. The key issues raised included:

- A lack of shelter and seating at the majority of bus stops.
- A lack of Real Time Information (RTI) displays at bus stops resulting in passengers being unsure how long they have to wait for services. This was felt to be particularly important in more rural locations where bus frequency is lower.
- Poor reliability of bus services, an additional impact of which is that paper timetables become inaccurate heightening the need for RTI.
- Timetables are considered to be misleading/difficult for those with a disability to read.
- Spaces available for wheelchair users on buses are small and difficult to manoeuvre into – drivers should be made aware of the additional time required to enter spaces.
- Wheelchair spaces on buses being used by pushchairs.
- Re-introducing the Formartine and Buchan Rail Line would improve accessibility for those who have mobility problems.
- Disabled parking near Peterhead Bus Station is at the bottom of an embankment, making it inaccessible for some disabled users and preventing them from parking their car at the station and taking the bus to their final destination.
- Lack of access to toilets in unmanned rail stations and poor accessibility as a result of stepped access/high level walkways.
- Lack of provision for bus travel in the west end of Aberdeen during the evening and from and within the Bridge of Don on Sundays.
- Poor disabled parking and access to and from Aberdeen Bus Station, Aberdeen Railway station and Union Square.

Draft

The comments received from the OPAG were as follows:

- First Group bus services are unreliable. Stagecoach services are better value and the service is better.
- Bus fares are high and a barrier to use.
- The single carriageway around Ellon is congested.
- The reinstatement of the Buchan Rail Line would take pressure off the road system between Aberdeen and Ellon.
- Buses frequently stop at Tivoli in Market Street which blocks traffic and causes delays.
- The bus route from Foresterhill Hospital no longer travels through Woodside to Seaton, meaning that interchange at the city centre is now required.
- The former No. 5 route does not operate after 19:00.
- The crematorium bus should leave from Union Street rather than Foresterhill Hospital and should be accessible.

Draft

A.23 Other

A.23.1 Scottish Prison Service

Telephone discussion was undertaken with the Operations Manager at HMP & YOI Grampian. The following was noted:

- Peterhead Prison currently has 370 inmates, but this is expected to increase over time, as the prison has capacity for 550 inmates. While almost all employees access the site using private vehicles, there is a heavy reliance on visitor access by public transport – which will increase as the number of inmate's increases. Stagecoach has altered service routes and timetables to help with access from Aberdeen, but public transport access from Banff & Buchan is still difficult.
- Delay on the road network can impact on inmate transfer and is a particular problem for court hearings where on occasion defendants have reached the court 'just-in-time' with little time to talk to legal council before the hearing (they should get 30min).

A.23.2 Community Transport

Telephone discussion was undertaken with the Manager for the Buchan Dial-a-Bus, the largest operating Community Transport scheme in the area. The majority of Buchan Dial-a-Bus services are for the elderly and/or disabled, providing a service for those who cannot easily access commercial transport. In addition, Buchan Dial-a-Bus also provides services for young people to college/university in Aberdeen but the numbers for this not as high. Services are also provided for longer distances for the elderly who may have a car but are not confident in using it over such the longer distances/

The following was noted:

- Older people cannot/will not use commercial bus services because of fear, pressure, confidence, and access issues, as well as inability and disability. The elderly require a more personal service, something that is better provided by Demand Responsive Transport.
- Younger people can't always use commercial bus services because of cost and frequency. Infrequent services can mean limited timings for college and employment resulting in being stuck or reverting to car travel where possible. This is where Demand Responsive Transport has to step in. Further subsidy is required to provide for either further Demand Responsive Transport or cheaper fares.
- Travel in and our of Aberdeen is a problem with the A90(T) not suitable for the volume of traffic.
- Infrastructure is required for the future development planned. Not only should developers pay for junction access to their developments, but they should contribute to wider network to account for increased traffic.
- Ellon is continually growing and the services and infrastructure are not there to support the growth.
- Peterhead has a huge disparity between the level of housing and the transport links.
- Bus lanes are great and should be expanded and more constructed.
- While the AWPR will improve connections, dualling to Peterhead/Fraserburgh would be ideal.

A.23.3 Aberdeen Car Club

Telephone discussion was undertaken with Aberdeen Co-Wheels Car Club. The following was noted:

- Launched in 2012, the club is currently most northerly Co-wheels Car Club. It has emerged as one of the fastest growing car clubs in the UK, overtaking Glasgow, with over 400 drivers joining in the first year. The club has gone from 11 cars in 2011, with now over 40 in 2015 and more than 1,000 members.
- It is a social enterprise helping members save money, reduce car ownership and create environmental benefit through providing on street cars to members of the public and businesses who can book out a car after joining the club.
- A variety of people use the car club, mainly in/from Aberdeen. Users can be those who do not have a car as it is too expensive or who did have a second car and have decided to replace it with car club membership.
- The club is also used by Aberdeen City Council. Cars are provided for their staff use throughout the working day. The same cars are them available to the public out with office times. Ten cars are provided to the Council.
- The club is also used by members who live outwith Aberdeen but who travel regularly to the city for work.
- Most trips undertaken in the cars are shorter trips in the local area, typically less than 20 miles. Around half of trips are corporate/business trips (mainly from Aberdeen Council).
- Co-Wheels would be keen to expand further north of Aberdeen but Aberdeenshire Council have not been particularly responsive.
- Main problems for the transport network in the area included the lack of a rail line and congestion and delay n and out of Aberdeen.
- Improvements to the transport network should include:
  - A rail service
  - More Park & Ride facilities – spread around Aberdeenshire
  - Dualling of the A90(T)

A.23.4 Aberdeen University and Robert Gordon University

A telephone consultation was undertaken with the Chair of the Strategic Business Ventures Group at **Aberdeen University**.

We were unable to obtain consultations with Robert Gordon University.

As well as his responsibilities at the University, the professor was previously Chair of the Energetica project for ACSEF and is currently Chair of NHS Grampian. He explained that congestion both in and around Aberdeen makes access by car from the north of the City unreliable. Travelling into Aberdeen City Centre and to the south and west of the City from the north is dependent on the use of the congested A90(T) (from north of the Bridge of Don and around Anderson Drive) and the busy City Centre roads. It was noted that congestion is not strictly limited to the peak periods and has an impact on personal and business travel throughout the course of the day.

Journey time reliability northbound on the A90(T) was also felt to be a problem, particularly for journeys north of Balmedie on the single carriageway section of the route. This was seen to be caused by the mix of traffic types on the road, with the high proportion of HGVs and agricultural vehicles causing platooning, an issue exacerbated by the lack of safe overtaking opportunities. Driver frustration is in turn seen to lead to unsafe overtaking.

The professor also explained that the lack of rail connectivity in the Energetica Corridor is an issue. Rail transport in and around Aberdeen was felt to be infrequent, with limited cross-city connections and few links to key hubs (the University or Hospital for example) and no links northwards.

It was also explained that bus fares are much higher than other comparable areas of Scotland, although it was noted that this view is based on anecdotal evidence rather than an informed view. On a more positive note, Professor Logan pointed out that the Aberdeen Royal Infirmary is well served by bus services, with the majority of major bus routes calling at the hospital, however, there remains a connectivity issue from the north, with residents often having to travel via Aberdeen City Centre, while also building in time for the potential impact of congestion on each leg of the journey.

The professor noted that there is anecdotal evidence to suggest that poor transport connectivity and road capacity constraints are potentially constraining land-use development north of Aberdeen. This is seen to be inhibiting housing development and sustaining above average house prices.

From an NHS Grampian perspective, the professor explained that there are 15,000 people employed across Aberdeen City and Shire and that transport issues are something that have to be worked around daily. In addition, NHS Grampian faces recruitment challenges across all grades of staff, believed to be partly driven by the high house prices and cost of living (see the above point). Indeed, the Health Board is developing a plan with the Council to build a tranche of ‘key worker affordable homes’. The extent to which a ‘market failure’ in the housing market is emerging as a result of limited transport connectivity is therefore an important issue for this study to consider.

The professor finally explained that it is important to explore in detail the case for expanding Aberdeen and Peterhead Harbours. Internationalisation and exporting both physical products and human capital will become an important growth area for the north-east in the coming decades and the expansion of harbour capacity could be one of meeting the needs of this growth sector.

Draft

A.23.5 North East College

The Deputy Principal of North East College attended the Economics and Enterprise Workshop on 31 March. A brief summary of the comments made is provided as follows:

- There are issues with providing suitable transport for students to North East College
- The college currently contracts 10 buses to get between 400 and 500 students into the campus in the morning which is a significant drain on college resources
- Since there are very few good bus services in the area many students travel by car with the result that the college carbon footprint is high
- If the college expands the number of students will increase which will take more resources
- There is a need to improve access to the college by road and bus

An email summarising the information provided at the workshop was sent to the Principal of North East College to confirm if there were any further comments, however, no further information was provided.

A.23.6 Scottish Association of Public Transport

The following written response was received from the Chairman of the Scottish Association for Transport.

The Scottish Association for Public Transport welcomes the initiation of this study by Nestrans, recognising the important potential role that better public transport can play in stimulating the economy of north-east Scotland. The study should take a holistic approach to all transport issues aiming for seven main targets:

- Support economic growth with fast and efficient public transport to Aberdeen's commercial centre
- Reduce road congestion by attracting modal shift to public transport
- Improve road safety by reducing vehicle traffic in urban areas
- Reduce illness by lowering particulate and NO2 emissions in city streets
- Cut CO2 emissions by operating low emission public transport vehicles and reducing car traffic
- Encourage active travel leading to healthier lifestyles
- Increase the attraction of Aberdeen city centre public realm with more traffic-free zones

Draft

A.23.7 NHS

Written responses were received from:

- Area Manager, Formartine Area, Turriff Hospital
- NHS Grampian Public Health Co-ordinator (Buchan Area)
- Area Support Manager at Fraserburgh Hospital
- Royal Cornhill Hospital

A number of other NHS personnel were contacted but declined to respond.

Key issues raised by the NHS include the following:

- **Traffic congestion approaching Aberdeen leading to peak time delays, particularly affecting early morning appointments**
  A common concern amongst all stakeholders but one which has serious connotations for the NHS is the level of congestion around Aberdeen in the peak hours. Delays on the approach to Aberdeen from the north will be lessened to an extent with the introduction of the AWPR and associated Balmedie to Tipperty duelling however the current situation results in long, unpredicatable journey times. NHS contacts note that this is a particular problem for out patients with early morning appointments. These outpatients will be caught in traffic congestion whether they use public or private transport. Government figures reveal that 771,421 appointments were missed across Scotland in 2012 – 13. Estimates suggest each missed appointment can cost around £100[4].
- **Public transport frequency and the requirement to interchange**
  While there are reasonable public transport frequencies between Aberdeen and the larger towns, public transport access from other parts of Aberdeenshire is sporadic which can cause access problems. This is accompanied by the lack of options to access main NHS hospitals directly without the requirement to interchange. Interchange acts as a key deterrent to using public transport and applies to both staff and patients.
- **Lack of Sunday Services**
  NHS representatives also note that First and Stagecoach operate a reduced frequency 'Sunday Service' which can make access to NHS sites problematic. This is a particular problem for visitors.

A.23.8 Aberdeen Airport

A telephone consultation was undertaken with the Commercial Director at Aberdeen Airport, on 11 May 2015.

A number of transport problems were identified during this discussion including the high levels of congestion around Dyce, particularly at peak times and a limited number of bus services from the north of the study area to the airport although it was acknowledged that these routes may not be commercially viable. In terms of congestion at Dyce it was felt that the AWPR and the Dyce Drive Link Road will contribute to resolving some of the current issues.

[4] http://civitas.org.uk/newblog/2013/08/what-can-the-nhs-do-to-reduce-missed-appointments/

Access to labour was also identified as a problem, with 2014 described as a particularly challenging year in this regard, however, as a result of the recent fall in oil prices the market has opened up and there is now a bigger pool on which to draw. It was felt that transport access to the site did contribute to labour issues. While there is a good bus service from the city centre which operates airport, employees outside of the city without access to a car may find it more difficult.

A.23.9 Rail Future

A written response was received from Rail Future Scotland. The group's main objective within the study area is to reconnect Fraserburgh and Peterhead to the national rail network. Rail Future Scotland's submission can be read as two distinct elements. The first of which provides justifications to support rail connections across the study area, while the second element is a technical discussion of what Rail Future believe to be the optimum solution. The full text has been replicated, as follows.

General Support

"In our estimation, based on rail usage and population figures from recently opened/re-opened railway stations in the last ten years, stations at Peterhead, Fraserburgh and Ellon alone would generate annual passenger numbers of over 340,000, 248,000 and 206,000 respectively some of which would be generated from suppressed demand but most of which would be from mode shift from road based transport, mainly private cars, thereby relieving pressure on the A90(T). It is well known that car users are far less likely to mode shift onto bus-based public transport than onto rail-based public transport. Re-building the rail connections would also open the opportunity to create terminal(s) for rail-based freight.

One of the stated objectives for the area is to provide a low carbon environment. Other than walking, cycling and the use of electric or hydrogen cell vehicles, by those who can afford them, the lowest carbon generating form of transport is by electric train followed by diesel powered train. Road transport accounts for a sizeable proportion of greenhouse gas production and an even higher proportion of carcinogenic gases and particulate matter generation causing problems with air quality. Aberdeen has virtually no rail based commuting which, if provided, would have a significant effect both on traffic congestion and air quality.

Apart from providing a better public transport alternative from the study area to Aberdeen City, the re-instatement of the rail connection would provide improved connections with Aberdeen Airport particularly if the proposed Bucksburn station is constructed which would also serve the recently proposed New Exhibition and Conference Centre.

The proposed rail connections would also encourage non-car-using visitors and tourists based in Aberdeen to travel further into the north-east to the benefit of traders in the area."

Technical Discussion

"Our proposals are designed to maximise the efficacy, efficiency and economy of rail transport and include:

- *doubling the rate of electrification from the Government's proposed 100 track km per annum after EGIP to 200 track km per annum and adding the Aberdeen to Inverness line to the electrification programme;*
- *capacity improvements by the provision of suitable dynamic passing loops, track doubling and line speed improvements to allow an hourly passenger service between Aberdeen and Inverness, a ½ hourly passenger service between Elgin and Inverness, a ½ hourly passenger service between Huntly and Inverurie, a ¼ hourly passenger service between Inverurie and Aberdeen plus an allowance for suitable freight services along the entire route. This would imply re-doubling much of the original twin track sections of the route namely Inverness to Dalcross and Huntly to Aberdeen and doubling the track between Elgin and Forres;*
- *meeting the target service levels detailed below [The level of service appropriate for any route depends on the type of journey being undertaken (from the daily commute to the occasional tourist excursion) by the majority of passengers using the route and the distance they are travelling. In order to attract the maximum number of car users, the service should be 'turn up and go', however this concept varies depending on the distance of the journey and the time that would be taken by other modes of transport. Research has shown that there is a relationship between the time headway between trains plus the train transit time versus the equivalent peak period car journey time. This indicates that the shorter the journey, the shorter the headway has to be. In general it has been found that the following headways on routes to major employment centres are appropriate --- journeys up to 20 miles – 15 minute headway, journeys up to 50 miles – 30 minute headway and journeys over 50 miles – 60 minute headway; and*
- *the provision of modern signalling throughout the core network [much of our network is still controlled by old manual semaphore signalling and even more with signalling which does not allow the tighter headways which are required in several stretches of line to improve the frequency of services, to introduce new services or to efficiently recover from disruption/ perturbation] before the end of control period 6 (i.e. by 2024).*

Of particular note in the Aberdeen City and Shire area is that 5 of our list of the top fifty stations on the current network we have determined to be justified in Scotland fall within this area [Bucksburn (a station here is far closer to the main terminal of Aberdeen Airport than Dyce and is in fact close enough (1.6km) for a people-mover system, such as ULTra {as installed at Heathrow from terminal 5 to the business car park (3.9km)}, to be constructed connecting the station to the terminal), Persley, Kittybrewster, Cove and Newtonhill] with Kintore being listed in our further forty-four stations worthy of consideration (although our estimate of patronage is significantly less that the five stations listed above). Also that one of our list of 24 short feeder lines that should be re-opened is the former 8km line from Inverurie to Old Meldrum where not only the local area would be served but also Park & Ride serving the Banff and Turriff areas. Amongst our longer term desires are the re-opening of the 30km line from Aberdeen to Banchory and the 23km line from Dyce to Ellon where again not only the local area would be served but also Park & Ride serving the Fraserburgh and Peterhead areas. Ultimately the 42km line from Ellon to Fraserburgh and the line to Peterhead would be re-opened/constructed (while the former 21km route from Maud to Peterhead would be acceptable, a new 30km direct route from Ellon via Cruden Bay would probably be more desirable being 10km shorter and result in a 10 min shorter journey time).

Initially the track capacity improvements, the new stations and the short feeder line will allow half-hourly services from Huntly and from Old Meldrum to interleave at Inverurie thus providing the requisite all station 15-minute headway commuter service from Inverurie crossing Aberdeen to Stonehaven (Aberdeen Crossrail). We estimate such a Crossrail service would carry at least 1,000,000 new passenger trips per annum. Unless all trains from Dundee to Aberdeen were to call at Laurencekirk to provide the requisite half-hourly service to Aberdeen as specified by the aforementioned target service levels, every second Crossrail service would continue from Stonehaven to Laurencekirk.

The lines carrying the Crossrail service could be advantageously electrified in advance of the remainder of the lines from Dundee and Inverness thus minimising operational costs of running the service. It should be noted that the Crossrail services will obviate the need for the intercity services to call at stations between Huntly and Aberdeen (other than at Buckhaven for the Airport) or between Stonehaven and Aberdeen, in each case reducing the intercity journey times.

In the longer term, the re-openings of the Aberdeen to Banchory and the Dyce to Ellon lines will allow a 15 minute headway service from Ellon to Banchory (a second Crossrail service). We estimate that this service would add a further 850,000 new passenger trips per annum.

The ultimate re-opening of lines from Ellon to Fraserburgh and Peterhead with the 15 min service from Banchory to Ellon alternately extending to Fraserburgh and to Peterhead will provide a half-hourly service to both. These service extensions are estimated to add at least a further 500,000 new passengers per annum. As the majority of these passengers will be travelling far greater distances than passengers on the initial Crossrail line, thus paying higher fares, the revenue per passenger-mile should be similar to the remainder of the Aberdeen Crossrail services.

Additionally the possibility of new freight services is improved by the lines re-opening to the two ports."

A.23.10 Transform Scotland

A written response was received from Transform Scotland. Transform Scotland believe that investment should be made in the public transport network including investigating the use of both conventional and heavy rail across the study area. The response has been replicated, as follows:

"It is important to understand that such a study must take a long term view on strategic transport connections. Indeed the Energetica Corridor is said to be a 25 year vision and seeks to be an exemplar low carbon sustainable development corridor.

Any future transport connections should therefore be based on sustainable transport solutions. As Scotland's 3rd city Aberdeen is currently not well served by public transport and in particular rail transport compares very badly with comparable cities and city regions. The study should ask what is the government's and region's aspiration for transport connections in the 21st century? Across Europe comparable regions are investing heavily in both light and heavy rail infrastructure to enable sustainable travel and easy access to city centres.

It is our view that this should drive thinking as to how best to connect the study areas. It is fortunate that the former Buchan rail corridor is largely intact and therefore presents an excellent opportunity to develop the rail network serving Aberdeen. Indeed the former Deeside route should also become part of the thinking as how best to connect the city centre to the city region. Cross city rail routes should be developed with both light and heavy rail options being considered. Tram-train technology is well established in Europe and may allow the city centre to be accessed by rail.

It appears to us that the alternative for the region is to follow a US model of sprawling development which is principally car dominated. This most certainly does not fit within an ambition to create an exemplar low carbon development.

A well developed rail network can form the backbone to a sustainable transport network of public and active travel."

Draft

B PROBLEMS

Table B.1: Key Problem Theme 1, Evidence & Impacts (Table 1 of 8)

Problem	Evidence	Impacts
Traffic speeds significantly below posted speed limits, and unreliable and unpredictable journey times on strategic road routes: A90(T) & A952	Mix of local and strategic traffic, agricultural vehicles, high volume of slower moving HGVs and subsequent platooning causes low speeds and delay on the A90(T) route between Aberdeen and Fraserburgh, not just on the approach to Aberdeen but throughout the length of the route. **Journey Time and Speed Data (Tom-Tom) for A90(T)** *(See Baseline Report: Section 4.3)* Data shows average speeds well below the posted speed limit on **A90(T):** 07:00 – 19:00 (Approx. Average Speeds *Approx. Average Speed Limit*): • Toll of Birness to Peterhead (NB): 44-48mph, *56mph* • Peterhead to Toll of Birness (SB): 44-49mph, *56mph* • Peterhead to Cortes (NB): 41-44mph, *56mph* • Cortes to Peterhead (SB): 42-47mph, *56mph* • Cortes to Fraserburgh(NB): 38-47mph, *60mph* • Fraserburgh to Cortes (SB): 41-46mph, *60mph* 07:00 – 19:00 Average Journey times: • Fraserburgh to Aberdeen: 45 - 50mins (dependant on time of day), 37 miles • Peterhead to Aberdeen: 31 - 38mins (dependant on time of day), 30 miles	**<u>Economic Impacts:</u>** Slow, unreliable and unpredictable journey times on the A90(T) may: • Detract from inward investment into the area. Transport connections have been cited by potentials investors in the area as a problem. New business needs to draw on a skilled workforce and journey time issues which reduce the travel to work catchment are a deterrent to the success of new business. • Undermine the credibility of Energetica • Constrain the housing market north of Aberdeen • Detract from the attractiveness of use of Peterhead Port and Fraserburgh Harbour • Hold back development and the growth aspirations of the Strategic Development Plan and Aberdeenshire Local Development Plan • Persuade local businesses to relocate away from Fraserburgh and Peterhead due to lack of advantageous business operating conditions • Constrain the day-trip tourism market from Aberdeen

Table B.2 : Key Problem Theme 1, Evidence & Impacts (Table 2 of 8)

Problem	Evidence	Impacts
…Continued from previous table **Traffic speeds significantly below posted speed limits, and unreliable and unpredictable journey times on strategic road routes: A90(T) & A952**	*…Continued from previous table* ***Journey Time and Speed Data*** (Tom-Tom) for A952 *(See Baseline Report: Section 4.3)* Data shows average speeds well below the posted speed limit **on A952**: 07:00 – 19:00 (Approx. Average Speeds *Approx. Average Speed Limit*): • Toll of Birness Mintlaw (NB): 47-50mph, *58mph* • Mintlaw to Crotes (NB): 45-49mph*, 57mph* • Cortes to Mintlaw (SB): 46-51mph*, 57mph* • Mintlaw to Toll of Birness (SB): 46-49mph, *58mph* 07:00 – 19:00 Average Journey times: • Toll of Birness to Cortes: 19 - 21mins (dependant on time of day), 16 miles • Cortes to Toll of Birness: 19 - 22mins (dependant on time of day), 16 miles	*…Continued from previous table* A90(T) and A952 are key, and often the only, routes for **freight** but: slow, unreliable and unpredictable journey times on the routes can: • Lead to a reduction in overall supply chain efficiency and difficulty in operating 'just-in-time' delivery systems and penalty clauses can then be invoked, which can lead to bad feeling with clients and increase overall transportation costs • 'Slack' required in journey times adds to business costs. • Impact (as part of cumulative delay over a potentially longer trip) on the legally allowed driver hours under the Working Time Directive requirements and can necessitate additional stops, impacting on business costs and production with workers left idle as a result of late supplies • Reduce in income where produce is time sensitive (e.g. transporting fresh fish). Fish lorries typically leave Peterhead around 12pm and cannot be delayed by more than one hour if they are to make their onward connections. Whitefish stocks typically decline in value by 50% for each day that they are late, so even small delays can prove to be extremely costly. • Create animal welfare issues (as part of cumulative delay over a potentially longer trip) when live produce is bring transported • Significantly affect cross region journeys by adding delay and uncertainty to longer distance trips

Table B.3 : Key Problem Theme 1, Evidence & Impacts (Table 3 of 8)

Problem	Evidence	Impacts
…Continued from previous table **Traffic speeds significantly below posted speed limits, and unreliable and unpredictable journey times on strategic road routes: A90(T) & A952**	*…Continued from previous table* **Journey Time and Speed Data (Tom-Tom) for A96 and A947** *(See Baseline Report: Section 4.3)* Data shows average speeds well below the posted speed limit **on A96(T)/A90(T) at Haudagain Rdbt to A947/Riverview Drive north of Dyce:** 07:00 – 19:00 (Approx. Average Speeds *Approx. Average Speed Limit*): • A96(T)/A90(T) to A947/Riverside Drive (NB): 21-27mph, *33mph* • A947/Riverside Drive to A96(T)/A90(T) to (SB): 14-23mph*, 33mph* 07:00 – 19:00 Average Journey times can vary dramatically during the day: • A96(T)/A90(T) to A947/Riverside Drive (NB): 9 - 22mins (dependant on time of day), 4 miles • A947/Riverside Drive to A96(T)/A90(T) to (SB): 11 - 27mins (dependant on time of day), 4 miles	*…Continued from previous table* • Lead to inefficiencies and higher costs to businesses in the supply and subsea industries which are time critical. Companies have to build slack into delivery timetables for crucial components. Additionally, extra costs can be incurred for 'out of hour's operation'. • Vessels at the Ports only have limited time at the berth. Delays on the road network can impact on this with slack time required to account for potential delay • 67% of respondents to **Business Survey** said that there are significant problems with road travel in the study area that constrains there business activities *(Business Survey, See Appendix A).* • **Business Survey** *(See Appendix A)* showed top three impacts to business of delay on the road network • Increased staff time/costs for business travel • Increased vehicle operating costs • Missed appointments/delivery slots • 59% of respondents to **Public Survey** (*See Appendix A)* cited road network problems made them late for work or education Perception of an expansion of the morning rush hour from 08:00 – 09:00 to 07:30– 09:00, but this has not reduced congestion, just increased the time over which congestion occurs.

Table B.4: Key Problem Theme 1, Evidence & Impacts (Table 4 of 8)

Problem	Evidence	Impacts
…Continued from previous table **Traffic speeds significantly below posted speed limits, and unreliable and unpredictable journey times on strategic road routes: A90(T) & A952**	*…Continued from previous table* **Journey time and queue data at A90(T)/A956/Aberdeen Parkway *junction*** *(See Baseline Report: Section 4.3):* Journey time and queue data on A90(T) approach to Parkway @ Bridge of Don shows over 1km queue southbound in AM peak, and 500m northbound (on Ellon Road) in PM peak. AWPR should help resolve this but LDP build out will reduce the benefits (*Cumulative Transport Assessment, 2010, Source: http://www.nestrans.org.uk/local-development-plan-cumulative-impact-assessment.html*)	*…Continued from previous table* Slow, unreliable and unpredictable journey times can make it difficult for **bus operators** to meet Traffic Commissioner statutory targets surrounding punctuality and reliability. The level of traffic and congestion in the area, which creates a substantial degree of journey time unreliability and issues with journey time predictability, necessitates a certain amount of 'slack' to be built into timetables to ensure that services can meet the punctuality and reliability targets. However, on quieter days, this can lead to services having to wait at stops to ensure they are not running early. This can be incredibly frustrating for passengers and **detracts from the attractiveness of using the bus.**
	Heavy Goods Vehicle Volumes and proportions on the A90(T) and A952: *(See Baseline Report: Section 5.6):* Proportion of average daily HGV traffic on A90(T) (*Source: DfT*): • at Balmedie: 7% • just south of Toll of Birness (A90(T)/A952): 11% • just south of Toll of Birness (A90(T)/A952): 13% Profile of HGV traffic over the day (*Source: SRTDb and Aberdeenshire Council traffic data*) shows HGV traffic is: • 16% of all traffic northbound (at Blackdog) between 09:00-11:00. • 17% of traffic southbound (just south of Peterhead) between 09:00-10:00 Profile of HGV/LGV traffic over the day shows HGV/LGV traffic is: • 20% of all traffic northbound (at Balmedie) between 10:00-12:00 • Over 15% of all traffic southbound (at Balmedie) between 11:00-15:00 • Over 20% of all traffic northbound (at St. Fergus) between 09:00-11:00 • Over 14% of all traffic southbound (at St. Fergus) between 08:00-14:00	

Table B.5 : Key Problem Theme 1, Evidence & Impacts (Table 5 of 8)

Problem	Evidence	Impacts
…Continued from previous table **Traffic speeds significantly below posted speed limits, and unreliable and unpredictable journey times on strategic road routes: A90(T) & A952**	*…Continued from previous table* **Volume of traffic greater than that recommended for a single carriageway north of Ellon** *(See Baseline Report: Section 4.2)* • Analysis of traffic flows shows that, in accordance with *DMRB* 5.1 TA 46/97, the flow on the route between Tipperty and the A952 (Toll of Birness) is in excess of that recommended for a single carriageway road. DMRB recommends a maximum flow of 13,000 Annual Average Daily Traffic (AADT) on a single carriageway (S2) route. The flow on the A90(T) just north of Tipperty is close to 14,000. AADT traffic data was unavailable between Ellon and the Toll of Birness. Combined AADT flows from the A90(T) and A952 north of the Toll of Birness are approximately 12,300. Data would be required to determine the flow between Ellon and the Toll of Birness more accurately but is likely to be very close to 13,000. **From Engagement** *(See Appendix A)*: **Business Survey** Most significant road network problems stated were: • 30% citing congestion and delay as problem • 14% citing unreliable journey times • 13% citing queueing at key junctions **Public Survey** Most significant road network problems stated were: • Volume of slow moving traffic (HGV and agricultural) • Lack of passing places leading to driver frustration and dangerous over-taking.	*…Continued from previous table* **Social Impacts:** Slow, unreliable and unpredictable journey times: • Reduce the 'travel to work' catchment, reducing the accessibility of employment opportunities. • Impacts on personal business, with slack time having to be built in for hospital appointments in Aberdeen. This can have a subsequent impact on business when staff require time to attend appointments. • Can reduce the attractiveness of Fraserburgh & Peterhead as places to live. • Journey time unreliability that results in missed NHS appointments has a significant cost to the public purse. The area is reliant on Aberdeen for many out-patient and in-patient services • Can lead people to feel 'cut-off' from Aberdeen

Table B.6 : Key Problem Theme 1, Evidence & Impacts (Table 6 of 8)

Problem	Evidence	Impacts
…Continued from previous table **Traffic speeds significantly below posted speed limits, and unreliable and unpredictable journey times on strategic road routes: A90(T) & A952**	*…Continued from previous table* **Business Survey** *(See Appendix A)* Most significant road network problems stated were: • 30% citing congestion and delay as problem • 14% citing unreliable journey times • 13% citing queueing at key junctions **Public Survey** *(See Appendix A)* Most significant road network problems stated were: •Volume of slow moving traffic (HGV and agricultural) • Lack of passing places leading to driver frustration & dangerous over-taking. **Further range of comments relating to journey times made by/at:** • Inception Workshop • Transport & Land-use Workshop • Economic & Enterprise Workshop • Aberdeenshire Council Economic Development Team • First • Stagecoach • ARR Craib • ASCO • ACSEF • Fraserburgh Harbour Commissioners • Peterhead Port Authority • Colin Lawson Transport • Scottish Fire & Rescue and Police Scotland • Formartine Area Manager, NHS • HMP Grampian Prison, Peterhead • Local Councillors	*…Continued from previous table* From the **Public Survey** *(see Appendix A):* • 29% of non-bus users cited journey time reliability as the reason for not using bus • 40% of current bus users cited journey time reliability as significant problem. • 68% of current bus users noted additional time was required for commuting purposes Road network problems impact on everyday activities with responses to the **Public Survey** *(see Appendix A)* showing: • 95% of respondents said significant problems on the road network impacted on their everyday activities • 89% of respondents needed to start their journey earlier or later • 19% said it lead to feelings of isolation Congestion and delay impacts on Fire & Rescue call out with difficultly passing queued vehicles on routes (Scottish Fire & Rescue) Frustration at lack of speed can result in accidents (see Problem Theme 2)

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Table B.7: Key Problem Theme 1, Evidence & Impacts (Table 7 of 8)

Problem	Evidence	Impacts

…Continued from previous table
 	
Traffic speeds significantly below posted speed limits, and unreliable and unpredictable journey times on strategic road routes: A90(T) & A952
	…Continued from previous table
	
	Impact of Local Development Plan, Cumulative Transport Assessment (2010) (*http://www.nestrans.org.uk/local-development-plan-cumulative-impact-assessment.html*)
	
	Future Year Traffic Flow Forecasts *(See Baseline Report: Section 4.4)*
	
	Outputs from Aberdeen Sub-Area Model (ASAM): **AADT** (2010 vs. 2023, *2023 vs. 2033*) show large increase in traffic on the A90(T) and A952 routes:
	
	• A90(T) between Ellon & Toll of Birness:
	  • All Vehicles Northbound: 38%, *7%*
	  • All Vehicles Southbound: 46%, *8%*
	
	• A90(T) between Toll of Birness & A975 (South of Peterhead):
	  • All Vehicles Northbound: 37%, *8%*
	  • All Vehicles Southbound: 45%, *8%*
	
	• A90(T) between Peterhead and Cortes:
	  • All Vehicles Northbound: 23%, *18%*
	  • All Vehicles Southbound: 22%, *17%*
	
	• A90(T) between Cortes and Fraserburgh:
	  • All Vehicles Northbound: 22*%, 9%*
	  • All Vehicles Southbound: 24%, *9%*
		…Continued from previous table
		
		Morning rush hour has expanded from 8am-9am to say 7am-9.30am but this hasn't reduced congestion, simply increased the time congestion is prevalent. It can affect the response time to incidents. *(Scottish Fire & Rescue)*

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Table B.8: Key Problem Theme 1, Evidence & Impacts (Table 8 of 8)

Problem	Evidence	Impacts

…Continued from previous table
 	
Traffic speeds significantly below posted speed limits, and unreliable and unpredictable journey times on strategic road routes: A90(T) & A952
	…Continued from previous table
	
	• A952(T) between Toll of Birness & Mintlaw):
	  • All Vehicles Northbound: 39*%, 6%*
	  • All Vehicles Southbound: 47%, *8%*
	
	Large increase in HGV traffic also (2010 to 2033):
	• A90(T): between 20-41% increase (41% just south of Peterhead)
	• A952: 28% -33% increase	

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Table B.9: Key Problem Theme 2, Evidence & Impacts (Table 1 of 5)

Problem	Evidence	Impacts
Road safety risk on the A90(T) and A952	**Accidents on A90(T) and A952** between Aberdeen and Fraserburgh (See Baseline Report: Section 4.5): The A90(T) and A952 have a higher than expected proportion of serious and fatal accidents on the route (2009 – 2014). In particular, a greater number of fatal accidents are recorded than would be expected (based on NESA figures for roads with similar characteristics) : A90: • Between Fraserburgh and the A952 (Cortes junction) • Between Peterhead (south) and A90(T)/A975 junction • Between Blackdog and Bridge of Don A952: • Between Mintlaw and Toll of Birness (A90/A952 southbound) Accident analysis from 2009 - 2013 (no Aberdeenshire data available for 2014) highlights 4 accidents (recorded as 'serious') within 100m of Toll of Birness (A90(T)/A952) junction. **Type of accidents on A90(T)** *(See Baseline Report Section 4.5):* Analysis of the proportion of single vehicle accidents, which could potentially highlight issues with driver behaviours rather than vehicle interactions or road standard showed that single vehicle accidents accounted for: • 40% of fatal accidents between Fraserburgh and the A952 • 70% of fatal accidents on the Peterhead Bypass	**Economic Impacts** Lack of alternative routes means accidents can cause significant congestion on the A90(T) and A952, increasing journey times and leading to greater journey time unreliability and predictability. Economic impacts are as those discussed for **Problem Theme 1**: **Slow, unreliable and unpredictable journey times on strategic road routes: A90(T) & A952** Additionally, accidents themselves come at an economic cost including: • Loss of output due to injury • Ambulance costs and costs of hospital treatment • Damage to vehicle and property • Police and insurance administration cost Transport Scotland's *Reported Road Casualties Scotland 2013, Table 10 (http://www.transportscotland.gov.uk/statistics/j340611-20.html)*, puts the cost of a trunk road accident (for 2012 at 2013 prices) at: • £2.07m for a fatal accident on the trunk road • £265,589 for a serious injury accident • £25,764 for a slight injury accident

Table B.10: Key Problem Theme 2, Evidence & Impacts (Table 2 of 5)

Problem	Evidence	Impacts
…Continued from previous table **Road safety risk on the A90(T) and A952**	*…Continued from previous table* **Cause of Accidents** *Police Scotland and Scottish Fire and Rescue (See Appendix A):* • Driver frustration at lack of over-taking opportunity. • Young and inexperienced drivers • Older drivers who rely on the car for travel due to the rural nature of their residence with a lack of public transport alternatives that suit their needs. **Further commentary from** *Police Scotland and Scottish Fire and Rescue (See Appendix A):* A90(T) between Peterhead and Fraserburgh particularly bad for accidents. Drivers don't always drive to the conditions of the road. *(Police Scotland)* The A90(T) single carriageway sections have challenging overtaking locations *(Scottish Fire and Rescue)* A number of junctions on the A90(T) are 'nasty' including the Cortes and Foveran junctions where there can be long delays getting out – and subsequently more risks taken. *(Police Scotland)*	*…Continued from previous table* • Safety issues and delays are particularly problematic on the sections between Aberdeen and Ellon, and particularly between Tipperty and Blackdog. The issue has a consequent impact on business, with delays on the road leading to delays in production and incidences where factory workers in Aberdeen are left idol as a result of produce not arriving *(Lunar Freezing)*

Table B.11: Key Problem Theme 2, Evidence & Impacts (Table 3 of 5)

Problem	Evidence	Impacts
…Continued from previous table **Road safety risk on the A90(T) and A952**	*…Continued from previous table* A large number of people commute relatively long distances and/or have long commute times. They may come from rural locations to Aberdeen/Fraserburgh/Peterhead for example. Some will constantly be looking for locations to overtake. *(Scottish Fire & Rescue)* Roads in the area seem to be poorly or incorrectly marked. For example, solid line for no overtaking and hatched line for overtaking. Often these seem to give drivers the 'chance' to overtake when not safe to do so. *(Scottish Fire & Rescue)* • Reasonable affluence in the area means younger inexperienced drivers have access to powerful vehicles which they then use, taking overtaking risks *(Transport & Land-use Workshop and Scottish Fire and Rescue)*	*…Continued from previous table* **<u>Social impacts:</u>** Lack of alternative routes means accidents can cause significant congestion on the A90(T) and A952, increasing journey times and leading to greater journey time unreliability and predictability. Social impacts are as those discussed for **Problem Theme 1**: **Slow, unreliable and unpredictable journey times on strategic road routes: A90(T) & A952)** Additionally, accidents come at a human cost of casualties including: • Grief and suffering to the casualty, relatives and friends including: • the burden of injury • physiological impacts • potential job loss • impacts of prosecution as a result of an accident • intrinsic loss of enjoyment of life in the case of fatalities

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Table B.12: Key Problem Theme 2, Evidence & Impacts (Table 4 of 5)

Problem	Evidence	Impacts
…Continued from previous table **Road safety risk on the A90(T) and A952**	*…Continued from previous table* **Further comments relating to safety concerns made during engagement by** *(See Appendix A):* Comments made at/by: • Inception Workshop • Transport and Land-use Workshop • Economic & Enterprise Workshop • Oil & Gas industry engagement • ASCO • Lunar Freezing • Subsea 7 • Fraserburgh Harbour Commissioners • Peterhead Port Authority • Stagecoach • Colin Lawson Transport • University of Aberdeen • Scottish Fire and Rescue & Police Scotland • Local Councillors **Specific Comments:** Oil & Gas companies place significant emphasis on Health & Safety. Companies work to minimise road miles. Safety issues on A90(T) north of Aberdeen a key concern, for both commercial traffic & employee movements. The number of accident incidents on the road was cited as a key concern. *(Oil & Gas industry engagement)*	*…Continued from previous table*

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Table B.13: Key Problem Theme 2, Evidence & Impacts (Table 5 of 5)

Problem	Evidence	Impacts
…Continued from previous table **Road safety risk on the A90(T) and A952**	*…Continued from previous table* **Public Survey** *(See Appendix A)* • Toll of Birness highlighted as a perceived accident 'black-spot'– range of comments received indicating concerns that the junction is poorly lit, suffers from fog and poor visibility, and is very unsafe due to driver behaviour, e.g. frustration at delay in pulling out (when heading south from A952 onto A90(T) causing risking manoeuvres. Accident analysis from 2009 to 2013 highlights four accidents (recorded as 'serious') within 100m of the Toll of Birness junction. • 35% of respondents noted accidents and safety concerns as a significant problem on the study area road network - the 2nd highest ranked problem (after congestion and delay) **Business Survey** • 9% of respondents noted accidents and safety concerns as a significant problem on the study area road network.	*…Continued from previous table*

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Table B.14: Key Problem Theme 3, Evidence & Impacts (Table 1 of 6)

Problem	Evidence	Impacts
Limited travel mode choice	**Car Ownership** *(See Baseline Report: Section 3.2.10):* Low levels of car ownership in Peterhead (70%) and Fraserburgh (68%) compared to study area average of 73% and rest of Aberdeen and Aberdeenshire average of 81% indicates those without a car are disadvantage compared to others in the region.	**<u>Economic Impacts:</u>** **Business:** Lack of access to public transport can limit the workforce catchment for businesses, hindering existing business growth aspirations and increasing perceptions of peripherality amongst potential investors. **Tourism:** • Lack of available options means car travel is the dominant travel mode for visitors • The problem of peripherality for the Banff Coast means there are issues with getting people to visit. • Lack of available options means car travel is the dominant travel mode for visitors
	Bus Journey Times: *(See Baseline Report, Section 6):* *Comparison of bus and car travel times show bus travel times far longer than equivalent journey by car:* • Fraserburgh to Aberdeen (41 miles): 90 minute bus, 65 minute by car • Peterhead to Aberdeen (31 miles): 75 minute bus, 60 minute by car • Fraserburgh to Dyce (40 miles): 115 – 150 minute bus, 60 minute (no direct bus service) • Peterhead to Dyce (31 miles): 115 – 130 minute bus, 50 minute (no direct bus service) • Ellon to: Dyce, Peterhead, and Fraserburgh approx. 30 minutes slower by bus than car. • Public transport times from Peterhead to Fraserburgh are 50% longer by bus than car	

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Table B.15: Key Problem Theme 3, Evidence & Impacts (Table 2 of 6)

Problem	Evidence	Impacts
…Continued from previous table **Limited travel mode choice**	*…Continued from previous table* ***Aberdeen & Grampian Chamber of Commerce Reducing the Barriers to Bus Use Report*** *(See Baseline Report: Section 6.5) shows* • 82% of current non-bus users would be likely or extremely likely to use the bus if their journey was quicker. **Public Survey** *(See Appendix A)* showed: • 62% of non-bus users identify long journey times to be the reason for not using the bus • 33% of respondents use the bus regularly but long journey times were cited as the main reason not to use the bus • 70% of current bus users said long journey times most significant problem for bus travel	*…Continued from previous table* **<u>Social Impacts:</u>** **Access to Employment and Education** • One of the key issues amongst those out of employment and looking for work is that access to bus services in rural areas makes it very difficult for people to get to work and education, especially for young people (*Aberdeenshire Equalities Team)* • It can be difficult to get people into work if relying on the bus – shifts can be earlier/later/etc. and the sector employs a lot of young people who may not have access to a car (*ACSEF)* • 68% of current bus users noted additional time was required for commuting purposes *(Public Survey)* • North East College in Fraserburgh contract 10 buses to get between 400 & 500 students to campus in morning. Very few good bus services in the area so many students travel by car. The college needs to be able to effectively cater to students and transfer, especially if the college expands. Current provision of transport for students is a significant drain on college resources. *(North East College)*
	Limited 'express' bus services (*See Baseline Report: Section 6.1***)** Only a limited number of express bus services meaning journey times can be long due to high stop frequency and circuitous routes • Fraserburgh to Aberdeen: 34 services a day – only 6 express service • Peterhead to Aberdeen: 38 services a day – only 1 express service • Ellon to Aberdeen: 79 services a day – 16 express service	

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Table B.16: Key Problem Theme 3, Evidence & Impacts (Table 3 of 6)

Problem	Evidence	Impacts
…Continued from previous table **Limited travel mode choice**	*…Continued from previous table* ***Aberdeen & Grampian Chamber of Commerce Reducing the Barriers to Bus Use Report*** *(See Baseline Section 6.5)* shows: • 74% of non-bus users would be likely or extremely likely to use the bus if there was an express service available **Public Survey** (*See Appendix A*) shows: • 37% of current bus users state that an express service would be an improvement that would most positively impact on them	*…Continued from previous table* **Access to Health services:** The study area is reliant on Aberdeen for many out patient services and inpatient services, but public transport connections do not provide ease of access. • In order to get to Aberdeen Royal Infirmary, people need to take two buses and transfer in Aberdeen. This can be difficult for some of our patients (*NHS Area Manager, Formartine)* • Sunday services to Aberdeen Royal Infirmary are more limited and can cause problems if visiting relatives.(*NHS Area Manager, Formartine* **Peripherality:** • Limited travel choice can lead to feelings of isolation • Limited travel choice can increase perceptions of peripherality
	Lack of direct public transport services Connectivity using public transport to places outside of Aberdeen City centre from the study area requires interchange in Aberdeen centre. This adds significantly to journey times. In general, a lack of cross-city and orbital routes. All Buchan Link bus services route into Aberdeen city centre. Destinations elsewhere require interchange *(See Baseline Report Table 6.7)* including to: • Aberdeen Royal Infirmary • Robert Gordon University • Dyce • Airport **Public Survey** (*See Appendix A*) shows: • 27% of respondents (highest ranked destination) indicated Dyce as a difficult location to connect to by bus	

Table B.17: Key Problem Theme 3, Evidence & Impacts (Table 4 of 6)

Problem	Evidence	Impacts
…Continued from previous table **Limited travel mode choice**	*…Continued from previous table* ***Aberdeen & Grampian Chamber of Commerce Reducing the Barriers to Bus Use Report*** *(See Baseline Section 6.5)* shows: • 78% of current non-bus users would be likely or extremely likely to use the bus if there were more direct routes available – making journey times quicker **Public Survey** (*See Appendix A*) shows: • 39% of current bus users believe more direct services would have the most positive impact on the bus network • 32% of non-bus users state lack of a direct service is the main reason for not travelling by bus **From Engagement with bus operators** (*See Appendix A*)**:** • Providing orbital services is a while away as it is not commercially successful *(First Group)* • Not sufficient demand at the moment for cross-city routes but if demand increased a service could be provided *(Stagecoach)*	*…Continued from previous table*
	Bus Fares Bus Fares are higher in the area than in other parts of Scotland. **Nestrans monitoring (2011) report**: • Indicator 32 shows cost of a monthly (or 4 weekly) bus ticket in Aberdeen is higher than in Dundee, Edinburgh, or Glasgow • 23% increase in fare since 2008.	

Table B.18: Key Problem Theme 3, Evidence & Impacts (Table 5 of 6)

Problem	Evidence	Impacts
…Continued from previous table **Limited travel mode choice**	*…Continued from previous table* ***Aberdeen & Grampian Chamber of Commerce Reducing the Barriers to Bus Use Report*** *(See Baseline Section 6.5)* shows: • 59% of non-bus users surveyed state that cheaper fares would be likely or highly likely to make them use the bus in the future **Public Survey** *(See Appendix A) showed:* • 53% of non-bus users state high fares as the reason for not travelling by bus • 65% of respondents who are current bus users cited high fares as a significant problem. **From Engagement with bus operators** *(See Appendix A)***:** • Comments made by First Group who note that the higher price of tickets is as a result of the high cost of labour within the region.	*…Continued from previous table*
	Public Transport Journey Time Reliability Poor **reliability** of bus services due to network delays creates issues with reliable timetabling and makes the bus a less attractive option. **Public Survey** *(See Appendix A)* showed: • 29% of non-bus users cited journey time reliability as the reason for not using bus • 40% of current bus users cited journey time reliability as significant problem. • 68% of current bus users noted additional time was required for commuting purposes	

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Table B.19: Key Problem Theme 3, Evidence & Impacts (Table 6 of 6)

Problem	Evidence	Impacts
…Continued from previous table **Limited travel mode choice**	*…Continued from previous table* **Reliance on Public Transport:** There will be an increasing reliance on public transport services in the future due to the following: **Increased Commuting Needs** As the commuter belt is pushed further and further out from the centre of Aberdeen. This will result in more people commuting - increasing the number of people on the roads/reliant on public transport and requiring travel connections to reach the city centre. **Aberdeen Masterplan Impacts** The pedestrianisation of Aberdeen's Union Street under the Aberdeen City Centre Masterplan is likely to place a greater reliance on public transport to access the city centre. *http://www.aberdeencity.gov.uk/council_government/shaping_aberdeen/City_Centre_Masterplan.asp* **Ageing Population** There will be an ever increasing reliance on public transport by an increasingly elderly population. The population of the Aberdeen city region has been growing for a number of years and is expected to grow by 35,000 to around 500,000 by 2035. The over-65s age group is predicted to grow at the fastest rate (*Aberdeen City & Shire Strategic Development Plan*)	*…Continued from previous table*

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C OPPORTUNITIES

Table C.1: Opportunities, Economic & Social (Table 1 of 2)

Opportunities – Economic & Social	
Economic	Support and enable both housing and employment land development in the study area
	Increase the marketability of housing in the study area
	Support growth aspirations of current businesses in the area.
	Support the predicted growth in the fishing sector in the coming years including: • a need to 'add value' (i.e. turn into ready meals etc.) before transporting onwards – • likely increased fishing hauls due to new Landing Obligation legislation – estimate 30% more fish to process and transport.
	Ensure the anchoring of Oil & Gas in the region
	Support the promotion and expansion of the tourism industry: • Day trippers/weekenders from Aberdeen as a result of improved connectivity • Develop cruise tourism use of Aberdeen Harbour and potentially Peterhead Port as 'Ports of Call' • Golf Tourism • Increase and attract significant events to boost visitor numbers
	Attract new businesses to the study area
	Capitalise on and support emerging industries – especially renewables.
	Support potential for Aberdeen Airport expansion (including the development of new routes) and predicted growth in freight transport through the airport (50% growth by 2040), through improved accessibility
	Capitalise on the Scottish Enterprise study on Scottish Port Capacity which identified additional capacity at Fraserburgh Harbour and support the development of the Harbour including: • Supporting the development of the harbour in becoming an OMS Port for off-shore renewables • Support potential positive displacement of business from Peterhead harbour to Fraserburgh harbour
	Promote and expand industry in Peterhead as a result of cheaper land compared to Aberdeen
	Support the planned expansion of existing businesses in Peterhead
	Capitalise on the Scottish Government prioritising of Peterhead as Scotland's fishing port including: • Supporting the £47m redevelopment of Peterhead Harbour
	Promote the Energetica Corridor through enhanced connectivity making the area more attractive to potential investors and widening the potential labour market for skilled workers to support businesses

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Table C.2: Opportunities, Economic & Social (Table 2 of 2)

Opportunities – Economic & Social	
Economic	Support the desires of local businesses in the Energetica corridor to grow – particularly in Peterhead.
	Facilitate business growth which then drives the housing market and helps realise the vision of the Local Development Plan allocations in the A90(T) (N) Strategic Growth Corridor, providing the necessary transport connections to support the expected increase in population.
	Support the extension of Aberdeen Harbour (into Nigg Bay) and strengthen links between the Aberdeen, Peterhead and Fraserburgh harbours.
	Capitalise on Aberdeen Port as a key site in the National Renewables Infrastructure Plan (NRIP)
	Increase opportunities for those resident in the study area to access employment in the study area, within Aberdeen/Dyce and further afield
	Support local businesses to remain in the study area and encourage people to work in Fraserburgh, Peterhead and Ellon to reduce labour supply issues and the need for commuting
	Encourage additional visitors to the study area, to bring additional patronage to local businesses in the towns
Social	Enable increased access to range of regional education and social services in Aberdeen
	Enable increased accessibility to health services in Aberdeen
	Support the regeneration of Fraserburgh and Peterhead including: • Supporting the regeneration of Fraserburgh through the Conservation Area Regeneration Scheme (CARS) award to Aberdeenshire Council of £1.2million – spread over five years – to regenerate Fraserburgh's town centre.
	Reduce feelings of peripherality amongst the local population

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Table C.3: Opportunities, Transport (Table 1 of 2)

Opportunities – Transport	
Road	Reduce delay to reduce journey times, increase journey reliability and reduce journey predictability for businesses and freight, commuter and trips made for social purposes.
	Improve safety by reducing accidents and reduce the economic and social cost of accidents
	Improve safety by reducing accidents
	Encourage the use of hydrogen vehicles and electric vehicles by both public transport operators and the public
	Capitalise on higher than average vehicle occupancy rates on key routes to further promote and increase car sharing
	Expand Aberdeen Car Club Co-Wheels to north of Aberdeen – Ellon, Peterhead and Fraserburgh.
	Improve integration with other transport modes
	Reduce car use through improved public transport connections, availability and attractiveness - in particular to support the Aberdeen Masterplan and Union Street pedestrianisation, which will reduce car access to Aberdeen City Centre.
Public Transport	Increase travel choice
	Improve overall transport mode choice
	Provide improved public transport accessibility to educational facilities – such as North-East College campus in Fraserburgh.
	Lower fares, especially for young
	Increase employment opportunities and choice through the provision of improved services and frequencies, including orbital services to help reduce the requirement to interchange
	Ticketing: • Support the roll-out of the integrated Grasshopper ticketing scheme for buses Aberdeen City & Shire wide (First & Stagecoach) • Investigate Integrated bus-rail ticketing
	Improved road-bus-rail integration
	Support the expansion of Ellon P&R site and the development of other mini P&R sites intended to serve rural areas which are not walk-able distance to a bus route.
	Improve routes by placing interchange points in key locations such as Park & Ride sites
	Ensure Park & Ride sites and tie in with new network improvements

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Table C.4: Opportunities, Transport (Table 2 of 2)

Opportunities – Transport	
Public Transport	Reduce the impact of bus emission by encouraging the take up of low emission vehicles
	Provide better public transport connections to enable housing development in the study area and ensure greener travel options are in place
	Encourage greater use of the bus by: • Reducing journey times and increasing journey time reliability • Investigating the potential for increased bus frequency, express services and new direct routes • Promoting the installation of Real Time Information for the Aberdeenshire Council area • Promoting available bus facilities including Wi-fi and bike storage • Capitalising on potential increased demand for bus services once the Aberdeen City Centre Masterplan limits car access to Aberdeen centre.
	Encourage mode shift away from the car.
	Opportunity to reduce road accidents by reducing car trips through mode shift to public transport
	Support the Aberdeen City Centre Masterplan
	Reduce inequality in accessibility to regional services and facilities
Active Travel	Capitalise on Peterhead as a Cycle Demonstration Town
	Capitalise on Ellon & Fraserburgh being made Integrated Travel Towns with plans to develop walking and cycling links
	Increase the use of the Formartine & Buchan Way by cyclers and walkers for commuting – particularly in the south of the study area
	Increase the use of the Formartine & Buchan Way by tourists
	Capitalise on planned cycleway improvements in Aberdeen
	Capitalise on available funding for Cycle Hubs – potentially at Dyce
	Further develop Park and Choose Sites to increase the offering for active travel opportunities

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Table C.5: Opportunities, Environment

Opportunities – Environment	
Environment	Reduce vehicular emissions through encouragement of the increased use of low emission vehicles (buses) and electric vehicles (cars)
	Promotion of green transport corridor to fit with Energetica's 'renewables' image
	Increase mode share by sustainable transport
	Support the Aberdeen City Air Quality Action Plan

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D IDENTIFICATION OF TRANSPORT PLANNING OBJECTIVES SUPPORT TO NATIONAL, REGIONAL, AND LOCAL POLICES, PLANS, AND STRATEGIES

This Appendix describes the range of national, regional and local Policies, Plans, and Strategies which this study and its objectives should seek to support. A more in-depth discussion of these policies can be found in the Baseline Report. Sections D.1 and D.2 describe the policies, plans, and strategies. Table D.1 to Table D.6 show how the Transport Planning objectives for the study support these policies, plans, and strategies.

D.1 National Policies, Plans, and Strategies

The **Scottish Governments Purpose** is "To focus Government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth".

Underpinning this Purpose are five Strategic Objectives to create a Scotland that is:

- Wealthier and Fairer:
  Enable businesses and people to increase their wealth and more people to share fairly in that wealth.
- Safer and Stronger:
  Help local communities to flourish, becoming stronger, safer place to live, offering improved opportunities and a better quality of life.
- Smarter:
  Expand opportunities for Scots to succeed from nurture through to life long learning ensuring higher and more widely shared achievements.
- Greener:
  Improve Scotland's natural and built environment and the sustainable use and enjoyment of it.
- Healthier:
  Help people to sustain and improve their health, especially in disadvantaged communities, ensuring better, local, and faster access to health care.

Scotland's National Transport Strategy focuses three strategic outcomes:

- Improved journey times and connections:
  Making it quicker, easier and more reliable for passengers to travel between our towns and cities and across our global markets
- Reduced emissions:
  Making sure that Scotland takes a lead in the future of sustainable transport
- Improved quality, accessibility, and affordability:
  Ensuring everyone across Scotland has high quality public transport choices.

Scotland's National Planning Framework sets the context for development planning in Scotland and provides a framework for the spatial development of Scotland as a whole.

It sets out the Government's development priorities over the next 20 – 30 years and identifies national developments which support the development strategy.

The Plan's vision is for a Scotland which is a:

- Successful, sustainable place
- Low carbon place
- Natural, resilient place
- Connected place.

It should be noted that in the study area for the vision of a 'low carbon place' for following infrastructure is noted:

- Peterhead listed as a site in the National Renewables Infrastructure Plan
- Peterhead Energy Hub (Areas of Coordinated Action)
- Carbon Capture and Storage (at Peterhead) listed in National Developments

Additionally Peterhead is listed as a key port under the 'connected place' vision.

The **Scottish Governments Economic Strategy** focuses on two mutually supportive goals:

- Increasing competitiveness
- Tackling inequality

The strategy contains four priorities:

- Investing in our people and our infrastructure in a sustainable way
- Fostering a culture of innovation and research and development
- Promoting inclusive growth and creating opportunity through a fair and inclusive jobs market and regional cohesion
- Promoting Scotland on the international stage to boost our trade and investment, influence and networks.

All three national strategies and the Scottish Government's Purpose support the Climate (Scotland) Act, which creates the statutory framework for greenhouse gas emissions reductions in Scotland by setting an interim 42 per cent reduction target for 2020, with the power for this to be varied based on expert advice, and an 80 per cent reduction target for 2050.

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D.2 Regional Policies, Plans, and Strategies

Nestrans **Regional Transport Strategy** vision is "A transport system for the north east of Scotland which enables a more economically competitive, sustainable and socially inclusive society". The strategy has four key objectives:

- Economy: To enhance and exploit the north-east's competitive economic advantages, and reduce the impacts on peripherality including:
  - To make the movement of goods and people within the north east and to/from the area more efficient and reliable
  - To improve the range and quality of transport to/from the north-east to key business destinations
  - To improve connectivity within the north east, particularly between residential and employment areas
- Accessibility, Safety & Social Inclusion: To enhance choice, accessibility and safety of transport for all in the north east, particularly for disadvantages and vulnerable members of society and those living in areas where transport options are limited including:
  - To enhance travel opportunities and achieve sustained cost and quality advantages for public transport relative to the car
  - To reduce the number and severity of traffic related casualties and improve personal safety and security for all users of transport
  - To achieve increased use of active travel and improve air quality as part of wider strategies to improve the health of north east residents
- Environment: To conserve and enhance the north-east's natural and built environment and heritage and reduce the effects of transport on climate, noise, and air quality including:
  - To reduce the proportion of journeys made by cars and especially single occupant cars
  - To reduce the environmental impacts of transport, in line with national targets
  - To reduce growth in vehicle kilometres travelled
- Spatial Planning: To support transport integration and a strong, vibrant and dynamic city centre and town centres across the north east including:
  - To improve connectivity to and within Aberdeen City and Aberdeenshire towns, especially by public transport, walking and cycling
  - To encourage integration of transport and spatial planning and improve connections between transport modes and services
  - To enhance public transport opportunities and reduce barriers to use across the north east, especially rural areas
  - To ensure that all new developments and transport infrastructure improvements give consideration to and make provisions for pedestrians and cyclists as an integral part of the design process.

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The Regional Transport Strategy supports **Aberdeen and Aberdeenshire's Strategic Development Plan,** the vision for which is that *"Aberdeen City and Shire will be an even more attractive, prosperous and sustainable European city region and an excellent place to live, visit and do business."*

The Plan has two main aims:

- Provide a strong framework for investment decisions which help grow and diversify the regional economy, supported by promoting the need to use resources more efficiently and effectively
- Take on the urgent challenges of sustainable development and climate change

Four further aims support the main aims, of which one is very relevant to transport:

- Make the most efficient use of the transport network, reducing the need for people to travel and making sure that walking, cycling and public transport are attractive choices

The Plan has six objectives relating to:

- Economic Growth
- Sustainable Development and Climate Change
- Population Growth
- Quality of the Environment
- Sustainable Mixed Communities
- Accessibility

The key regional economic strategy is **Aberdeen City and Shire Economic Future's (ACSEF) Economic Action Plan,** the key aim of which is to achieve an annual economic growth rate of 2.5%, with Energetica the key project.

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D.3 Local Policies, Plans, and Strategies

Aberdeen and Aberdeenshire's Local Transport Strategy's align themselves with the Regional Transport Strategy.

Aberdeenshire's Local Transport Strategy seeks to maximise existing resources through encouraging citizens to:

- Travel less
- Travel more actively
- Travel more effectively.

The strategy's objectives are to:

- Promote Sustainable Economic Growth:
  Maximise the effectiveness of the transport network, services, and facilities
- Promote Social Inclusion and Accessibility:
  Improve connections within and between communities, increasing accessibility of the transport network
- Protect the Environment:
  Remove barriers to active and sustainable travel helping to improve health and reduce emissions
- Improve Safety:
  Enhance the safety of all users of the transport network
- Improve Integration:
  Develop and improve integration between all forms of transport and improve connectivity within and beyond Aberdeenshire

Aberdeen's Local Transport Strategy vision is *for "A sustainable transport system that is fit for the 21st Century, accessible to all, supports a vibrant economy and minimises the impact on our environment."*

The outcomes sought for the strategy are that by 2020 Aberdeen's transport system should have:

- Increased modal share for public transport and active travel
- Reduced the need to travel and reducing dependence on the private car
- Improved journey time reliability for all modes
- Improved road safety within the City
- Improved air quality and the environment
- Improved accessibility to transport for all
- Promoted a higher quality of life.

Both Aberdeen and Aberdeenshire's Local Development Plans were put out to public consultation in March 2015. The vision and objectives stated here reflect the Proposed Plans and not those currently adopted.

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Aberdeenshire's Proposed Local Development Plan has six objectives:

- To promote sustainable mixed communities with the highest standards of design
- To take on the challenges of sustainable development and cliamet change
- To promote and improve assets and resources
- To increase and diversify the economy
- To promote the creation of green networks within and between settlements
- To make efficient use of the transport network, reduce the need to travel and promote walking, cycling and public transport

Aberdeen's Proposed Local Development Plan's vision is:

By 2035 Aberdeen City and Shire will be an even more attractive, prosperous and sustainable European city region and an excellent place to live, visit and do business. We will be recognised for:

Our enterprise and inventiveness, particularly in the knowledge economy and in high-value markets;

- *the unique qualities of our environment; and*
- *our high quality of life.*

We will have acted confidently and taken the courageous decisions necessary to further develop a robust and resilient economy, and to lead the way towards development being sustainable, including dealing with climate change and creating a more inclusive society.

Aberdeenshire Economic Development Strategy has six main objectives to**:**

- Anchor the Oil & Gas sector to the North-East
- Ensure Aberdeenshire as a location of choice for Renewable Energy businesses, contributing to a low carbon economy
- Support local communities in becoming more self sufficient and sustainable through community renewable energy schemes
- Ensure Aberdeenshire is recognised as a major contributor to a Scotland known as the "Land of Food & Drink"
- Promote Aberdeen City and Shire as a key tourism destination in Scotland
- Develop and promote a more sustainable fisheries industry

A specific objective within the **Aberdeen Strategic Infrastructure Plan** relates to *Better Local Transport* and includes:

- Improve access to the airport
- Reduce congestion and journey times
- Improve cross-city connections

The **Aberdeen City Centre Masterplan** vision is *Energising the city centre to deliver prosperity and better quality of life for all*

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D.3.1 Study Area Specific Policies, Plans, and Strategies

The **Scottish Transport Projects Review (STPR)** focuses on interventions which contribute to the three Key Strategic Outcomes identified in the National Transport Strategy, with national objectives set under each of the Key Strategic Outcomes.

Of particular note for this study is Intervention 5 in the draft investment summary which is *Route Management on other Road Corridors* and lists Aberdeen and North-East Scotland (A90) as one of a number of rotes for implementation of "a series of initiatives to implement road-based improvements with a combination of network optimisation through route management and targeted investment in relatively local interventions". The inclusion of the A90 north of Aberdeen (which falls entirely within the study area) in the list derives from its appraisal at the Initial Appraisal stage of the project, when it was justified for inclusion of safety grounds. The STPR objective relating to safety is, therefore, appropriate to consider here and falls under the National Transport Strategy's Improved Quality, Accessibility and Affordability strategic outcome. With the STPR sub-objective being *to promote continuing reduction in accidents rate and severity across the strategic transport network; recognising the need to continue the work of the Strategic Road Safety Plan through the STPR period.*

The **Energetica** project is ACSEF's flagship project and is contained entirely within the study area, the key priorities of which are:

- To help consolidate and grow the region's position as one of the world's major energy centres and the energy capital of Europe
- To attract new high value investment and people to the region
- To grow international trade for indigenous business
- To create a location that seeks to maximise both quality of development and quality of life

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Table D.1 Transport Planning Objectives vs. National Policies, Strategies, and Plans

		Transport Planning Objectives						
		Reduce journey times…	Increase journey time reliability and predictability…	Reduce accidents on the A90(T) and A952…	Increase strategic travel choice …	Increase direct public transport connectivity ……	Increase mode share for non-car based modes …	
National Policy, Plans & Strategies		1	2	3	4	5	6	**Specific Comments**
National Transport Strategy	Improved journey times and connections	✓	✓	✓	✓	✓		The Transport Planning Objectives relating to reducing journey times and increase journey time reliability and predictability clearly support the National Transport Strategy's strategic outcome for improved journey times and connection. The Transport Planning Objectives relating to increased strategic travel choice and direct public transport connectivity, while reducing emissions if modal shift were achieved, would significantly support the National Transport Strategy's third strategic outcome which seeks to ensure everyone across Scotland has access to high quality public transport choices.
	Reduced emissions				✓	✓	✓	
	Improved quality, accessibility and affordability				✓	✓		
National Planning Framework	A successful, sustainable place				✓	✓	✓	TPOs relating to increased strategic travel choice, direct public transport connectivity & journey times support the Carbon Capture & Storage project (as identified as a National Renewable Infrastructure Project in the Plan) by providing the necessary links to attract employees from a wide area increasing the skills base on which to draw.
	A low carbon place				✓	✓	✓	
	A natural, resilient place							
	A connected place	✓	✓	✓	✓	✓		
Scottish Gov. Economic Strategy	Increasing competitiveness	✓	✓	✓				TPOs relating to increased strategic travel choice and direct public transport connectivity support the Economic Strategy's priority for *promoting inclusive growth and creating opportunity through a fair and inclusive jobs market and regional cohesion* , with issues of inequality due to peripherality an issue for the study area.
	Tackling inequality				✓	✓	✓	

Table D.2 Transport Planning Objectives vs. Regional Policies, Strategies, and Plans

		Transport Planning Objectives						
		Reduce journey times...	Increase journey time reliability and predictability...	Reduce accidents on the A90(T) and A952...	Increase strategic travel choice ...	Increase direct public transport connectivity	Increase mode share for non-car based modes ...	
Regional Policy, Plans & Strategies		1	2	3	4	5	6	**Specific Comments**
Regional Transport Strategy	Economy	✓	✓	✓	✓	✓		It is clear from the problems identified that improvements to transport connectivity would have a profound impact on the economy in the study area. The TPOs support the RTS Economy objective and specifically " make the movement of goods and people within the north east and to/from the area more efficient and reliable", " improve the range and quality of transport to/from the north-east to key business destinations" and " improve connectivity within the north east, particularly between residential and employment areas"
	Accessibility, Safety and Social Inclusion			✓	✓	✓		
	Environment				✓	✓	✓	
	Spatial Planning				✓	✓	✓	
Aberdeen City & Shire Strategic Development Plan	Economic Growth	✓	✓	✓				This study highlights how vital transport is to the successful delivery of the Strategic Development Plan with transport a key enabler in attracting investment to the area, which then has the potential to help unlock the housing market, enticing people to live and work in the area.
	Sustainable Development and Climate Change				✓	✓	✓	
	Population Growth	✓	✓	✓	✓	✓		
	Quality of the Environment				✓	✓	✓	
	Sustainable Mixed Communities				✓	✓		
	Accessibility				✓	✓		
Aberdeen City & Shire Economic Future - Economic Action Plan	Achieve an annual economic growth rate of 2.5%	✓	✓	✓				The TPOs support the Action Plan in its specific actions to deliver the city centre improvements, deliver the Energetica Masterplan (Including the off-shore wind deployment centre, the Peterhead industry park, Peterhead Energy Hub, and Carbon Capture & Storage projects.
	Increase quality of life			✓	✓	✓	✓	

Table D.3 Transport Planning Objectives vs. Local Policies, Strategies, and Plans (Table 1 of 3)

		Transport Planning Objectives						
		Reduce journey times…	Increase journey time reliability and predictability…	Reduce accidents on the A90(T) and A952…	Increase strategic travel choice …	Increase direct public transport connectivity ……	Increase mode share for non-car based modes …	
Local Policy, Plans & Strategies		1	2	3	4	5	6	**Specific Comments**
Aberdeenshire Local Transport Strategy	A transport system that enables the efficient movement of people & goods	✓	✓	✓	✓	✓		
	A safe and more secure transport system			✓	✓	✓	✓	
	A cleaner, greener transport system				✓	✓	✓	
	An integrated, accessible & socially inclusive transport system				✓	✓		
	A transport system that facilitates healthy and sustainable living				✓	✓	✓	
Aberdeen Local Transport Strategy	Increased modal share for public transport & active travel				✓	✓	✓	
	Reduced need to travel and reduced dependence on the private car				✓	✓	✓	
	Improved journey time reliability for all modes		✓					
	Improved road safety within the City			✓				
	Improved air quality and the environment				✓	✓	✓	
	Improved accessibility to transport for all				✓	✓	✓	
	Promote a higher quality of life				✓	✓		

Table D.4 Transport Planning Objectives vs. Local Policies, Strategies, and Plans (Table 2 of 3)

		Transport Planning Objectives						
		Reduce journey times...	Increase journey time reliability and predictability...	Reduce accidents on the A90(T) and A952...	Increase strategic travel choice ...	Increase direct public transport connectivity	Increase mode share for non-car based modes ...	
Local Policy, Plans & Strategies		1	2	3	4	5	6	**Specific Comments**
Aberdeenshire Local Develoment Plan	To promote sustainable mixed communities							The outcomes sought for the study through the TPOs set, fully support the ambitions of the Aberdeenshire's Local Development in providing improved transport links in the study area which encourage investment in the area (including in the areas prioritised as regeneration areas) which in turn can help unlock the housing market.
	To take on the challenges of climate change				✓	✓	✓	
	To protect and improve assets and resources							
	To increase and diversify the economy	✓	✓	✓	✓	✓		
	To promote the creation of green networks						✓	
	To make efficient use of the transport network				✓	✓	✓	
Aberdeen Local Development Plan	*By 2035 Aberdeen City and Shire will be an even more attractive, prosperous and sustainable European city region and an excellent place to live, visit and do business.*				✓	✓	✓	The TPOs relating to increasing strategic travel choice, increase direct public transport connectivity and increased mode share for non-car based modes support Aberdeen's vision to be sustainable and specifically support the Aberdeen City Centre Masterplan, in terms the impact of reduced access to the city's 'core' and the need for modal shift to public transport.

Table D.5 Transport Planning Objectives vs. Local Policies, Strategies, and Plans (Table 3 of 3)

		Transport Planning Objectives						
		Reduce journey times...	Increase journey time reliability and predictability...	Reduce accidents on the A90(T) and A952...	Increase strategic travel choice ...	Increase direct public transport connectivity	Increase mode share for non-car based modes ...	
Local Policy, Plans & Strategies		1	2	3	4	5	6	**Specific Comments**
Aberdeenshire Economic Development Strategy	Anchor the Oil & Gas sector to the North-East	✓	✓	✓				The TPOs relating to journey times, reducing accidents and increaisng travel choice fully support the economic strategy's aims to anchor the oil and gas indusrty to the North-East and ensure Aberdenshire as a location of choice for the Renewable Energy businesses.
	Ensure Aberdeenshire as a location of choice for Renewable Energy businesses	✓	✓	✓	✓			
	Support local communities in becoming more self sufficient and sustainable							
	Ensure Aberdeenshire is recognised as a major contributor to a Scotland known as the "Land of Food & Drink"							
	Promote Aberdeen City and Shire as a key tourism destination in Scotland	✓	✓	✓	✓	✓		
	Develop and promote a more sustainable fisheries industry				✓			
Aberdeen Strategic Infrastrucutre Plan	Better Local Transport: - Improve access to the airport - Reduce congestion and journey times - Improve cross-city connections				✓	✓	✓	The TPOs relating to increasing strategic travel choice, increase direct public transport connectivity and increased mode share for non-car based modes support the delivery of Aberdeen's Infrastrucutre Plan and specifically support the Aberdeen City Centre Masterplan, in terms the impact of reduced access to the city's 'core' and the need for modal shoft to public transport.
Aberdeen City Centre Masterplan	Vision: Energising the city centre to deliver prosperity and better quality of life for all				✓	✓	✓	

Table D.6 Transport Planning Objectives vs. Study Area Specific Policies, Strategies, and Plans

		Transport Planning Objectives						
		Reduce journey times...	Increase journey time reliability and predictability...	Reduce accidents on the A90(T) and A952...	Increase strategic travel choice ...	Increase direct public transport connectivity	Increase mode share for non-car based modes ...	
Study Area Specific Policy, Plans & Strategies		1	2	3	4	5	6	**Specific Comments**
Scottish Transport Projects Review: Intervention 5 - Route Management on other Road Corridors	To promote continuing reduction in accident rates and severity rates across the strategic transport network.			✓				The inclusion of the A90(T) north of Aberdeen in STPR's Summary of Draft Investments *Intervention 5: Route Management on other Road Corridor'* was justified on safety grounds. Intervention 5 considers a range of safety related & asset management interventions to support the ongoing need to maintain and safely operate the trunk road network. The TPO relating to reudicng accidents clearly supports the STPR objective *to promote continuing reduction in accident rates and severity rates across the strategic transport network.*
ACSEF's Energetica Project	To help consolidate and grow the region's position as one of the world's major energy centres	✓	✓	✓	✓	✓		The TPOs support Energetica's priorities to attract buiness to ther region, grow local business and specifically help support the Energy indusrty.
	To attract new high value investment and people to the region	✓	✓	✓	✓	✓		
	To grow international trade for indigenous business	✓	✓	✓	✓	✓		
	To create a location that seeks to maximise both quality of development & quality of life				✓	✓		