Aberdeen City Region Deal Strategic Transport Appraisal: Pre-Appraisal

Executive Summary
October 2020

ABERDEEN CITY REGION DEAL:
Powering Tomorrow's World

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The Aberdeen City Region

Interim Findings

BACKGROUND

1.1.1 In November 2016 Aberdeenshire Council, Aberdeen City Council and Opportunity North East successfully agreed a City Region Deal with the UK and Scottish Governments. This deal, worth £826.2 million over a 10-year period, now provides a significant delivery mechanism for initiatives to support sustainable economic growth in the region. The allocation of the funds is split between a variety of projects, one of which is a Strategic Transport Appraisal that will take a 20-year strategic view of the transport implications of the investment unlocked by the Aberdeen City Region Deal across all modes, including road and rail.

1.1.2 The Project Working Group[1] jointly commissioned a Pre-Appraisal Study to be undertaken in accordance with Scottish Transport Appraisal Guidance (STAG) in September 2017. This study forms one of the first stages of the Strategic Transport Appraisal component of the Deal.

1.1.3 This document summarises the interim findings from the **Pre-Appraisal stage**.

[1] Consisting of representatives from Transport Scotland, Department for Transport, NESTRANS, Aberdeen City and Shire Strategic Development Planning Authority, Aberdeen City Council and Aberdeenshire Council

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1.2.1 The North East of Scotland is one of the most prosperous regions in the UK and retains a high performing economy, despite having faced some challenging times in recent years, primarily due to fluctuating global oil prices. In addition to the opportunities in the oil and gas sector there has been significant investment by the private sector in other strong performing industries. The Aberdeen City Region Deal recognises the opportunity for investment in transport and digital infrastructure to support the planned economic and population growth such that the region can fully realise its economic potential.

1.2.2 Infrastructure is considered critical to the region's ambition to remain an internationally competitive business environment. The Regional Economic Strategy, upon which much of the City Region Deal agreement is based, emphasises the desire for the region to retain its overall competitiveness whilst securing a long-term economic future, and that infrastructure is essential to this. A key element for the Strategy:

> is to invest in an infrastructure that caters for the needs of a high performing international city region economy and a growing hinterland – roads with capacity to cope with the demands of business; extensive air and sea links, digital connectivity to develop competitive business, and a competitive and accessible public transport system.

1.2.3 Four key programmes were established through the Strategy to assist in achieving the vision, including:

- Investment in Infrastructure;

- Innovation;

- Inclusive Economic Growth; and

- Internationalism.

1.2.4 To act in part as a delivery mechanism for the Regional Economic Strategy, the Aberdeen City Region Deal has been designed with six key project areas at its core, towards which funding will be directed to enable the economy of the region to continue to develop and grow. These projects are:

- The Oil and Gas Technology Centre;

- Bio-Therapeutic Hub for Innovation;

- Agri-Food & Nutrition Hub for Innovation;

- Digital Infrastructure;

- Aberdeen Harbour Expansion; and

- Strategic Transport Appraisal.

STRATEGIC TRANSPORT APPRAISAL

1.3.1 The Strategic Transport Appraisal part of the City Region Deal will take a long-term view of the key transport requirements of the region. This will assist with the delivery of the key aims of the City Region Deal and in part, identify the key areas of infrastructure investment necessary to facilitate the aims and vision of the Regional Economic Strategy. It will take a 20-year strategic view (up to year 2040) across all modes including road and rail and will be based on Scottish Transport Appraisal Guidance (STAG).

Pre-Appraisal

1.3.2 This study forms part of the Pre-Appraisal stage of the Aberdeen City Region Deal Strategic Transport Appraisal. As such it is a multi-modal, objective-led, study that identifies key themes to drive the future direction of action, and develop interim Transport Planning Objectives upon which to appraise the likely effectiveness of future interventions in supporting the aspirations of the Regional Transport Strategy. Although this study has been undertaken in line with STAG principles, it differs slightly from the traditional STAG Pre-Appraisal template as it does not proceed to the option generation and sifting stage after establishing the Transport Planning Objectives.

1.3.3 The specific aims of this study were to:
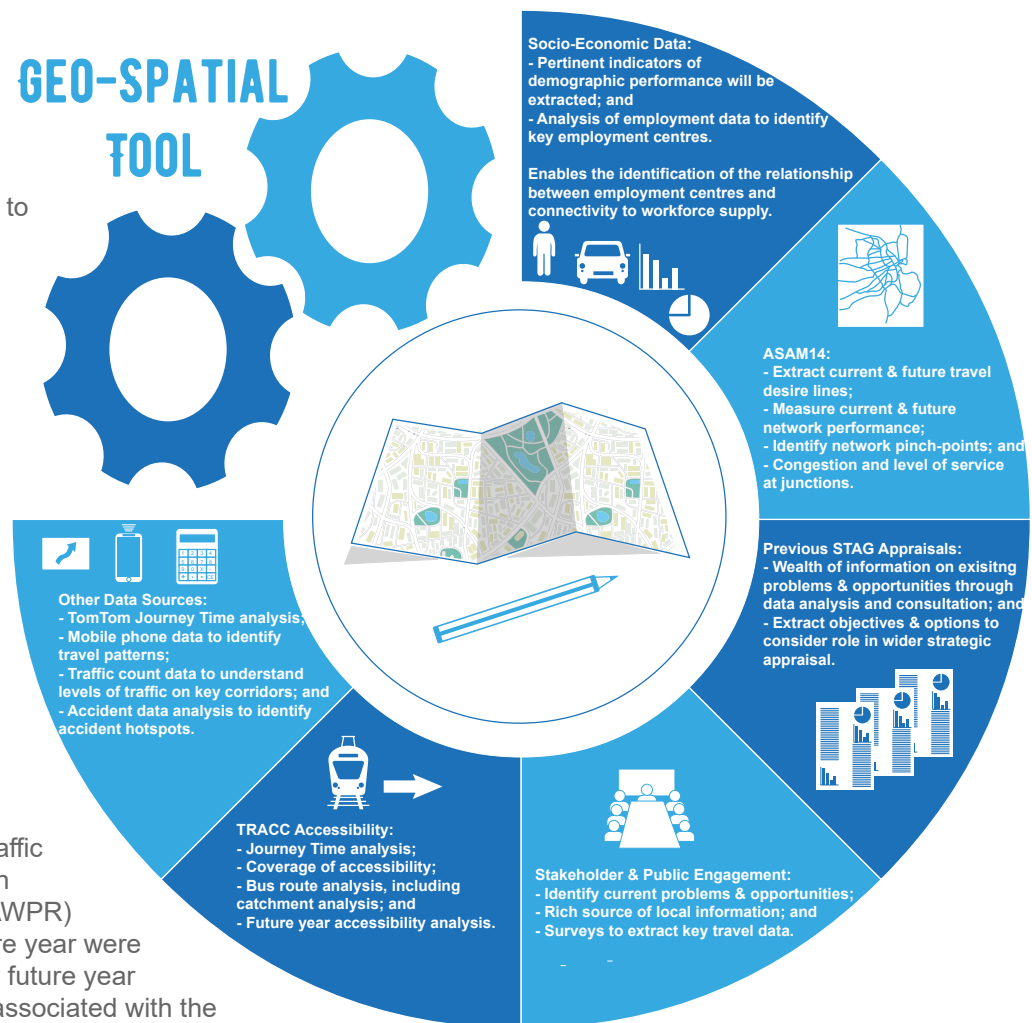
THE SPECIFIC AIMS OF THE STUDY ARE:
• Identify cross modal problems and opportunities with the Aberdeen City Region strategic transport provision;
• Identify key appraisal themes around which further appraisal work should be structured; and
• Develop Transport Planning Objectives for the Aberdeen City Region to support future appraisal work and the development of the Regional Transport Strategy.

1.3.4 An extension to the study was commissioned in October 2018, in which Jacobs was tasked with 'collating and generating options and undertaking option sifting' and to produce a final list of recommended options for consideration by the Client Team. This Option Generation and Sifting Report is an addendum to this Interim Report; and together, comprises the full Aberdeen City Region Deal Strategic Transport Appraisal: Pre-Appraisal report.

1.3.5 The study is being overseen by a Project Working Group with monthly progress meetings held to discuss progress, key issues, agree decisions and to guide the overall direction and programme of the study.

1.3.6 By following STAG principles, this study has used an evidence-based approach to identify transport problems and opportunities and from this has derived interim objectives. Participation and consultation with the public and stakeholders has been vital to the process and has provided valuable and informative input to the Pre-Appraisal process.

1.3.7 The context and evidence base that underpins this Pre-Appraisal was established through undertaking:

- Extensive stakeholder engagement via structured interviews, workshops and surveys;

- Reviews of relevant policies, strategies and previous appraisals; and

- Comprehensive data analysis.

1.3.8 The data analysis is facilitated by a multi-layered geospatial GIS tool comprising a range of demographic, economic, and traffic and transport datasets that was developed to assist in the identification, definition, verification and understanding of the transport related problems and opportunities across the Aberdeen City Region. The transport data included outputs from the Aberdeen Sub Area Model (ASAM), which is the strategic multi-modal transport model covering the Aberdeen City and Aberdeenshire region and includes cross boundary movements into the Highland, Perth and Kinross and Angus local authority areas. Model outputs representing 2017 traffic conditions, with the Aberdeen Western Peripheral Route (AWPR) operational, and a 2037 future year were analysed to identify the likely future year problems and opportunities associated with the road and public transport networks.

GEO-SPATIAL TOOL

Socio-Economic Data:
- Pertinent indicators of demographic performance will be extracted; and
- Analysis of employment data to identify key employment centres.

Enables the identification of the relationship between employment centres and connectivity to workforce supply.

ASAM14:
- Extract current & future travel desire lines;
- Measure current & future network performance;
- Identify network pinch-points; and
- Congestion and level of service at junctions.

Previous STAG Appraisals:
- Wealth of information on exisitng problems & opportunities through data analysis and consultation; and
- Extract objectives & options to consider role in wider strategic appraisal.

Stakeholder & Public Engagement:
- Identify current problems & opportunities;
- Rich source of local information; and
- Surveys to extract key travel data.

TRACC Accessibility:
- Journey Time analysis;
- Coverage of accessibility;
- Bus route analysis, including catchment analysis; and
- Future year accessibility analysis.

Other Data Sources:
- TomTom Journey Time analysis;
- Mobile phone data to identify travel patterns;
- Traffic count data to understand levels of traffic on key corridors; and
- Accident data analysis to identify accident hotspots.

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The Aberdeen City Region

Regional Context

1.4.1 The Aberdeen City Region consists of a mix of urban and rural areas in the north-east of Scotland comprising of the local authority areas of Aberdeen City (186km^2) with a population of 229,840 in 2016 and Aberdeenshire (6,313km^2) with a population of 262,190 in 2016. The landscape of the region is a varied one; at the core is the urban centre of Aberdeen City, Scotland's third largest city which provides the bulk of employment within the region. This is surrounded by the rugged coastline along the North Sea in the east, the agricultural lowlands in the heart of the region, to the mountains of the Cairngorms National Park in the west. Several larger towns located within Aberdeenshire, such as Peterhead, Fraserburgh, Inverurie, Westhill, Stonehaven and Ellon perform key roles in housing much of the region's population as well as supporting its prosperity with a wide range of businesses.

1.4.2 Historically, the physical environment of the region shaped the focus of the economy on the traditional sectors of agriculture, forestry, fishing and mining of granite. However, in the mid-1970s the discovery of significant oil reserves in the North Sea fundamentally shifted the focus of the economy to exploration and extraction of oil. This gave new impetus to the labour market, with a high number of highly-skilled and highly-paid jobs leading to a rapid increase in population. This led to the expansion of the urban footprint of Aberdeen City and the increased growth of several of the aforementioned larger towns in Aberdeenshire, a trend that continued over the following 40 years through increased housing development in and around the City and likewise growth in employment in the heart of the City and other areas, such as the airport. Investment in transport infrastructure in the Aberdeen City Region has historically struggled to keep pace with the more rapid growth in households and key employment sectors, and one of the consequences of this is a region that is more car dependent than other areas of Scotland.

1.4.3 The global nature of the oil industry has proven to be susceptible to volatile fluctuations that has impacted the region. For example, in the two-year period between 2014 and 2016, the significant decrease in oil prices to a low of $26.01, resulted in the oil industry taking action to reduce costs, which saw 150,000 oil related jobs in the UK being lost. However, through this economic turbulence, the region has demonstrated its' resilience and looks to be recovering to a stronger position through the recent efficiencies and technological advances in the oil industry, positive gains in the price of a barrel of oil to an approximate of $76.00 (May 2018 average), and support from further diversification of the economy, particularly in the food and drink, renewables and tourism sectors. If sustained, this will establish a solid foundation on which to build the future aspirations and aims of the Regional Economic Strategy.

1.4.4 The recent significant public sector investment into large scale transport infrastructure improvements are of course key components to unlock further growth. It will be important going forward that the transport system continues to match the demands of the accelerating economic growth in the region.
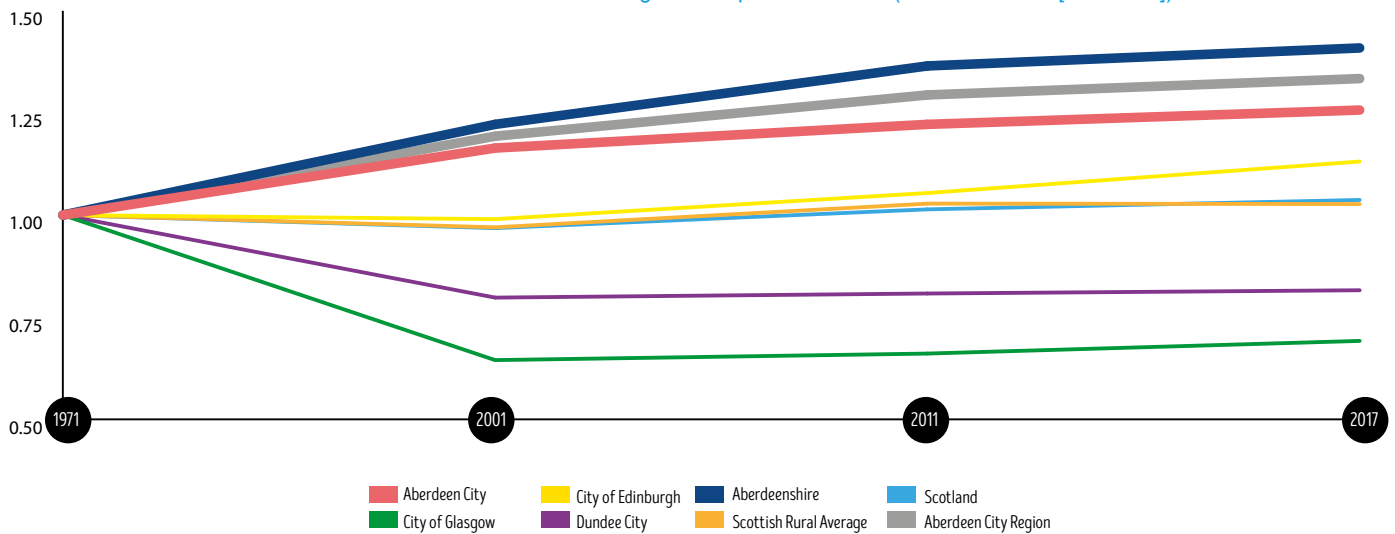
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Socio-Economic Context

1.5.1 The socio-economic profile of the Aberdeen City Region is one that reflects the rapid pace of growth in the oil and gas industry in the region.

1.5.2 The population of the region has grown significantly in the last five decades, particularly when compared to the rest of Scotland. Since 2001, the growth in two authority areas differs slightly, with Aberdeen City demonstrating a slower population growth rate at 8.5%, but more favourable economically active age characteristics of that population, while Aberdeenshire has experienced a higher population growth rate, albeit with a larger proportion of the population over 65 who are less likely to be economically active. Both local authority areas also demonstrate a high level of academic attainment and subsequent high skill level, providing the valuable employment market for businesses in the region.

Figure 1: Population Growth (indexed to 1971 [1971=100]) Source: NOMIS 2017

Legend: Aberdeen City, City of Glasgow, City of Edinburgh, Dundee City, Aberdeenshire, Scottish Rural Average, Scotland, Aberdeen City Region

1.5.3 The high quality of life within the region is evident in the lower levels of deprivation, higher house prices and proportions of homes in the highest council tax bands compared to other cities within Scotland. Both local authorities also demonstrate a significantly higher proportion of homes with access to two or more cars, and equally a lower proportion of homes with no cars available. These statistics highlight the dominance of the private car, which is covered in more detail later. Nevertheless, it is clear that within Aberdeen City that public transport and active travel networks play a key role for the 32% of households without access to a car.

- **Population growth rate (2001-2017); Aberdeen City 8%, Aberdeenshire 15.4%,** Scotland 7.1%, City of Edinburgh 14.3%, Glasgow City 7.3%, Dundee City 2.2% and SRA 5.9%**;**

- **Working Age Population (Nomis, 2017); Aberdeen City 69%, Aberdeenshire 63%,** Scotland 65%, City of Edinburgh 71%, Glasgow City 71%, Dundee City 67% and SRA 60%**; and**

- **Qualifications – level 4 and above (Census, 2011); Aberdeen City 43%, Aberdeenshire 37%,** Scotland 36%, City of Edinburgh 41%, Glasgow City 35%, Dundee City 35% and SRA 34%**.**
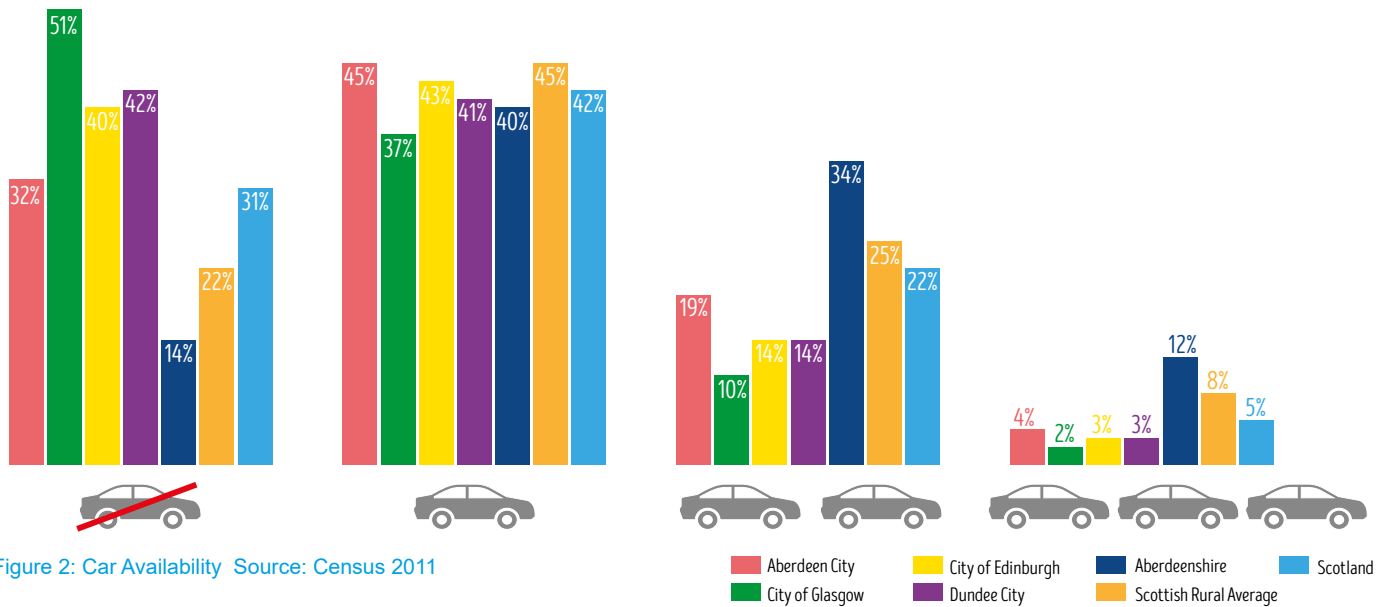
Figure 2: Car Availability Source: Census 2011

Legend:
- Aberdeen City
- City of Glasgow
- City of Edinburgh
- Dundee City
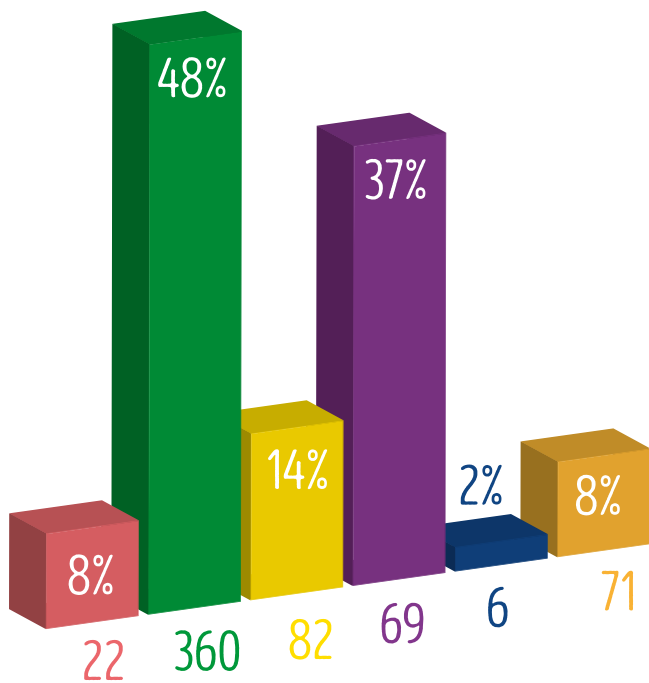- Aberdeenshire
- Scottish Rural Average
- Scotland

Figure 3: Number of zones in 20% most deprived Source: SIMD 2016

- **Number of zones within 20% most deprived in Scotland (SIMD, 2016);** Aberdeen City 22, Aberdeenshire 6, City of Edinburgh 82, Glasgow City 360, Dundee City 69 and SRA 71;

- **Average House Price 2017 (Scottish Government, 2017); Aberdeen City £210,428, Aberdeenshire £216,351,** Scotland £180,663, City of Edinburgh £262,868, Glasgow City £170,625, Dundee City £144,436 and SRA £164,734; and

- **Council Tax Bands F-H Ranges (Scottish Government, 2016); Aberdeen City 15%, Aberdeenshire 23%,** Scotland 13%, City of Edinburgh 21%, Glasgow City 7%, Dundee City 5% and SRA 12%.

1.5.4 Economic activity is high in the region, with the employment market highlighting the high-skill level and higher salary levels that have become synonymous with the oil and gas industry. In the Aberdeen City and Aberdeenshire local authority areas average weekly incomes are significantly higher than the other comparator areas within Scotland.

1.5.5 In recent years, there has been evidence of the growth in other sectors particularly in tourism and renewables within the Aberdeen City Region, and this has been further substantiated through the increasing uptake in new sites by businesses in these two sectors.

1.5.6 Since 1997 the Aberdeen City Region has also witnessed significant growth in Gross Value Added (GVA), despite a slower growth rate experienced in recent years coinciding with the drop in oil price. In

2015 the Aberdeen City Region contributed a similar amount to the Scottish economy as that of both Glasgow and Edinburgh Cities. Considering the GVA per head it is clear that Aberdeen City delivers a significantly higher contribution compared to both Glasgow and Edinburgh, demonstrating the success of the local economy.
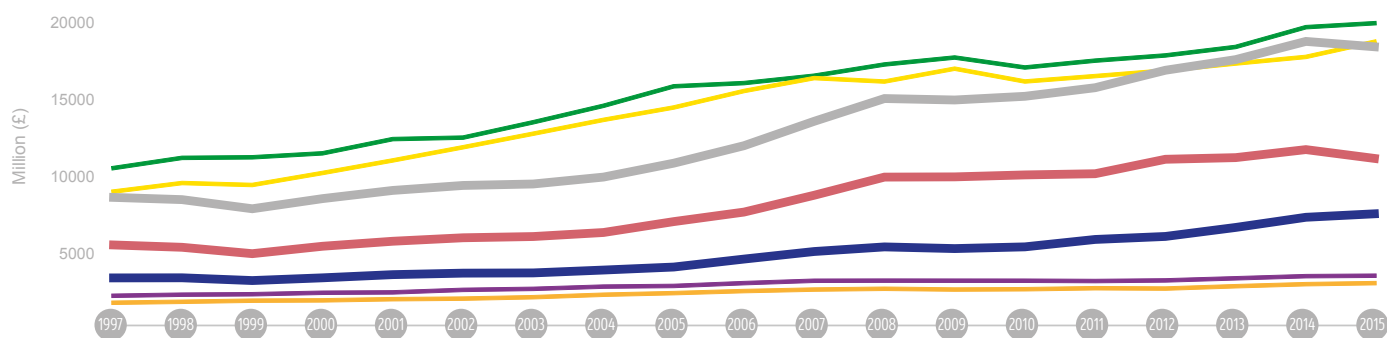
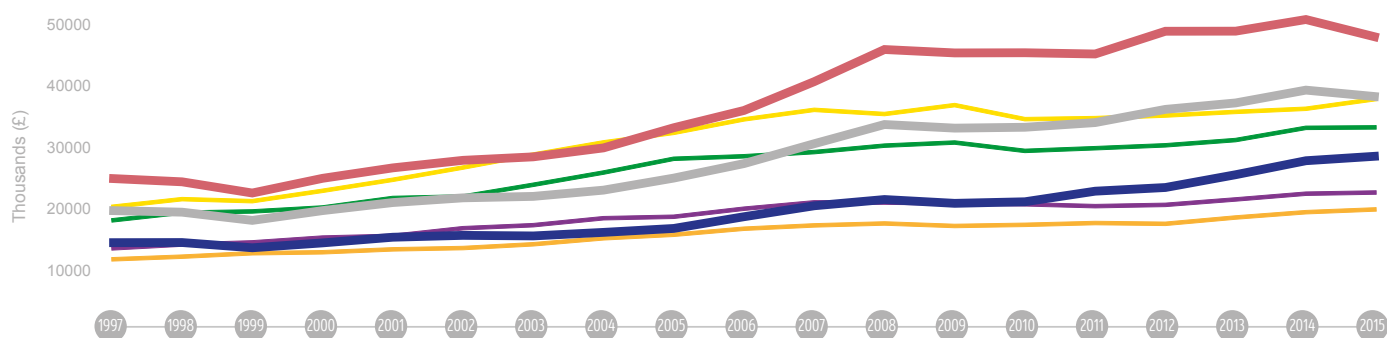**Jacobs**

Figure 4: Regional GVA (Total [Millions £]) Source: ONS 2016

Figure 5: Regional GVA (Per Head [Thousands £]) Source: ONS 2016

■ Aberdeen City	■ City of Edinburgh	■ Aberdeenshire	■ Scotland
■ City of Glasgow	■ Dundee City	■ Scottish Rural Average	■ Aberdeen City Region

- **Economic Activity Rates (Census, 2011); Aberdeen City 73%, Aberdeenshire 64%, Scotland 69%,** City of Edinburgh 69%, Glasgow City 64%, Dundee City 64% and SRA 70%;

- **Regional GVA Growth 1997-2015 (ONS, 2015); Aberdeen City 107%, Aberdeenshire 135%,** City of Edinburgh 112%, Glasgow City 92%, Dundee City 68% and SRA 87%;

- **Regional GVA Growth per Head 1997-2015 (ONS, 2015); Aberdeen City 95%, Aberdeenshire 103%,** City of Edinburgh 90%, Glasgow City 87%, Dundee City 71% and SRA 74%.

- **New Enterprise 2 Year Survival Rate (ONS, 2015); Aberdeen City 81%, Aberdeenshire 84%,** Scotland 77%, City of Edinburgh 75%, Glasgow City 72%, Dundee City 78% and SRA 78%.

Transport Context

1.6.1 Investment in transport infrastructure, historically, in the Aberdeen City Region has struggled to keep pace with the more rapid growth in population and key employment sectors. In recent years, however, this gap has been narrowed as key high-profile infrastructure projects are completed or are due for completion in the very near future. Examples of significant infrastructure investment include the Aberdeen Western Peripheral Route, Diamond Bridge, Haudagain junction improvements, the City Centre Masterplan, the new Aberdeen South Harbour and the Programme of Rail Revolution and strategies such as the Roads Hierarchy Study. Each of these initiatives is aimed at providing mechanisms for unlocking further growth, demographically and economically.

1.6.2 Key to the Regional Economic Strategy is the ability of the transport infrastructure in the region to enable future growth and opportunity within the region. Transport in the region plays two crucial roles, enabling the movement of people to and from jobs, leisure and residential locations; and linking businesses located within the Aberdeen City Region to their key local and external markets. Key to facilitating these movements are the main transport corridors and hubs, such as the forthcoming AWPR, radial bus routes, the rail network, Aberdeen International Airport and the ports and harbours of Aberdeen, Peterhead and Fraserburgh.

1.6.3 Within the region, travel by private car is dominant over all other methods of travel. This has significant impacts on the road network, which is further constrained by natural barriers such as the crossings at the Rivers Don and Dee. During peak periods, the heavy reliance on the private car has a detrimental impact on journey time reliability, emission levels and safety concerns with other road users and active travel conflicts.

1.6.4 Public transport suffers from a lack of competitiveness compared with private car, with evidence that journey times are long throughout the region and often there is a lack of direct services to non-Aberdeen city centre locations, due to the radial routing of most services. This often results in the need to undertake multiple interchanges

to travel to key locations. The Census 2011 data illustrates that the Aberdeen City Region has a lower public transport and active travel mode share compared to other cities and rural and national averages.

1.6.5 Aberdeen International Airport is the third largest airport within Scotland, providing direct and frequent flights to the rest of the UK and key European locations such as Amsterdam and Scandinavia. Additionally, the airport is the best-connected airport for UK to UK flights, which is a crucial aspect due to the propensity of the airport to be used for business flights. In 2013, 61% of all passengers from Aberdeen City Airport were business travellers, compared to 30% at Edinburgh Airport and 27% at Glasgow Airport. Passenger numbers have fluctuated in the last 10 years, although 2017 witnessed a growth of 4.6% from the previous year, after two preceding years of passenger reductions. The importance of the airport to the region is highlighted by the fact that the number of passengers is similar in scale to those traveling through Aberdeen Rail Station, whereas in Edinburgh and Glasgow the number of people travelling through the rail stations in the cities far exceeds those using the respective airports.

1.6.6 Due to the geographical proximity of Aberdeen to the North Sea oil fields and fishing waters, marine transport plays an important role in the growth in the region's economy. Aberdeen Harbour plays a crucial role in the supply and maintenance of vessels related to the oil and gas industry and handles over 6,500 shipping movements annually. Both Peterhead and Fraserburgh ports have also demonstrated growth in tonnage passing through the ports and play key roles in the fishing industry, with Peterhead also being the premier supply harbour for the larger subsea support vessels.
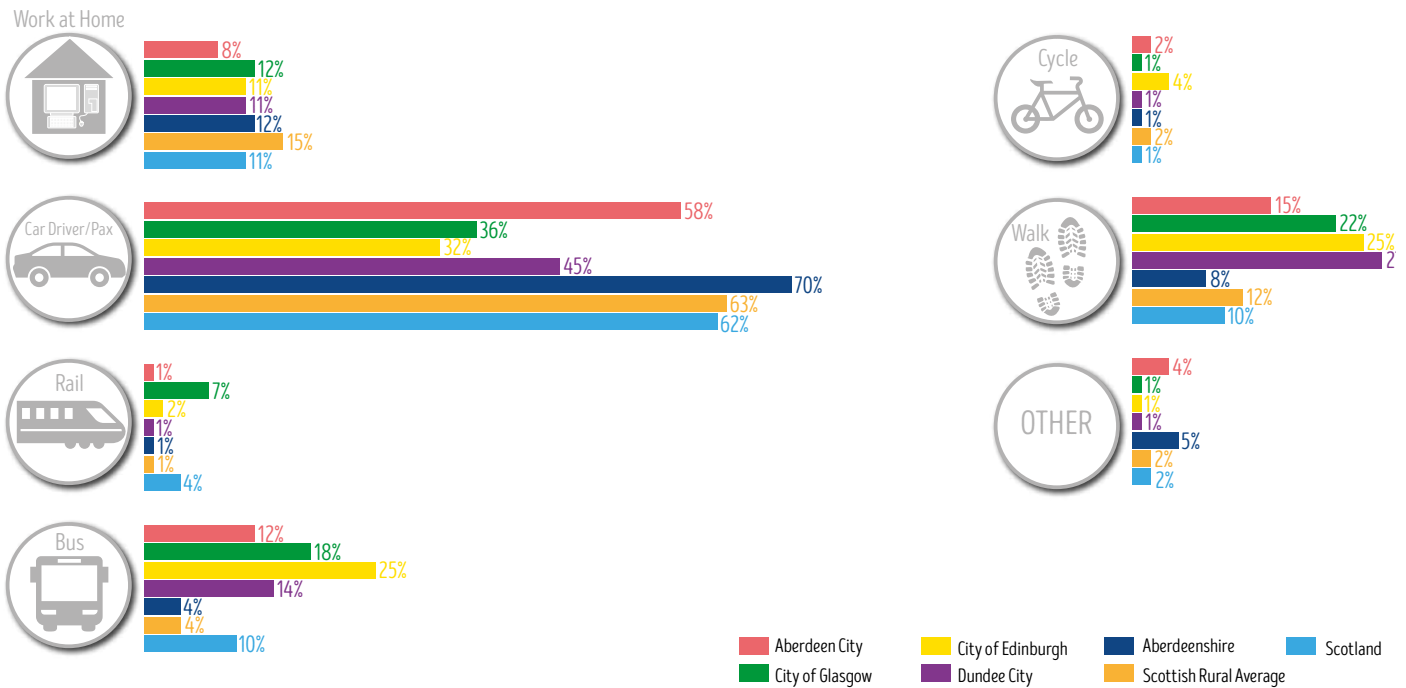
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Figure 6: Mode Share Source: Census 2011

Mode Share legend:
- Aberdeen City
- City of Glasgow
- City of Edinburgh
- Dundee City
- Aberdeenshire
- Scottish Rural Average
- Scotland

Work at Home: 8%, 12%, 11%, 11%, 12%, 15%, 11%

Car Driver/Pax: 58%, 36%, 32%, 45%, 70%, 63%, 62%

Rail: 1%, 7%, 2%, 1%, 1%, 1%, 4%

Bus: 12%, 18%, 25%, 14%, 4%, 4%, 10%

Cycle: 2%, 1%, 4%, 1%, 1%, 2%, 1%

Walk: 15%, 22%, 25%, 2, 8%, 12%, 10%

OTHER: 4%, 1%, 1%, 1%, 5%, 2%, 2%

- **Change in Vehicle KMs 2011-2015 (Scottish Transport Statistics, 2016); Aberdeen City 3%, Aberdeenshire 8%,** Scotland 5%, City of Edinburgh 4%, Glasgow City 6%, Dundee City 0% and SRA 5%;

- **Growth in Airport Terminal Passengers 2011-2017 (CAA, 2018); Aberdeen Airport 0.2% ,** Edinburgh Airport 42.9%, Glasgow Airport 44.3%;

- **Propensity to Fly 2017 (ratio of annual passengers to population of City Deal areas); Aberdeen Airport 6.3%,** Edinburgh Airport 9.8%, Glasgow Airport 5.4%;
  The ratio of passenger/population includes both arriving and departing at the airports

- **Rail Passenger Growth 2010-2015 (ORR, 2016);** Aberdeen 17% (+495,642); Inverurie 54% (+188,182), Dyce 15% (+84,736), Stonehaven 11% (+52,976), Portlethen 206% (+37,942), Insch 36% (31,524), Laurencekirk 42% (+30,942), Huntly 18% (+15,836);

- **Road Accidents 2011-2016 (STATS 19, 2016), 2017 [Provisional] (Police Scotland Accident File System);** Since 2011 there has been a 42% reduction in the number of accidents on roads in the Aberdeen City Region, decreasing from 878 (2011) to 513 (2017 Provisional). 27% of all accidents in 2016 involved a pedestrian or cyclist in the Aberdeen City Region compared to 47% in Edinburgh, 38% in Glasgow and 29% across Scotland; and

- **Aberdeen Sub Area Model 2014 (ASAM);** Analysis of model outputs has identified capacity issues at several locations across the network, including roads and junctions on Wellington Road, key junctions on Anderson Drive, and roads and junctions in the Dyce area.

The Aberdeen City Region

Problems & Opportunities

2.1.1 The identification and definition of Problems and Opportunities has been the fundamental basis for the derivation of the Key Themes and subsequent Objectives for this study. A two phased approach was undertaken as part of this process during Autumn and Winter 2017. The first phase consisted of:

- Stakeholder Engagement: key stakeholders were chosen because they represent a diverse range of organisations with a vested interest in the region's transport system. Extensive engagement was undertaken with these stakeholders through a variety of means:
  - Structured Interviews: with transport bodies, business and youth representatives;
  - Stakeholder Workshops: with local authorities, transport operators & organisations, business organisations, universities, disability organisations and the north east Scotland freight forum;
  - Elected Member Workshops: was held specifically for the region's Elected Members; and
  - Surveys: online surveys with Aberdeen City and Aberdeenshire community councils and the public.

- ASAM Transport Model: analysis covering current and future year forecasts of transport conditions.

2.1.2 Phase two involved using the two sources listed below to undertake gap analysis and validation of the identified problems and opportunities from phase one.

- Data analysis: covering socio-economic data, and transport and traffic data collated from a number of sources.

- Policy Review and Previous Studies: including:
  - National Transport Strategy Refresh;
  - Strategic Transport Projects Review;
  - Nestrans Regional Transport Strategy Refresh;
  - Aberdeen City Local Transport Strategy;
  - Aberdeenshire Local Transport Strategy;
  - Regional Economic Strategy;
  - Aberdeen City Region Deal;
  - Aberdeen City and Shire Strategic Development Plan;
  - Aberdeen City Local Development Plan;

- Aberdeenshire Local Development Plan;
- Aberdeen City Centre Masterplan and Delivery Programme; and
- Wide range of up to date Appraisals, which have included Aberdeen Roads Hierarchy, Aberdeen Cross City Connections, A90 Fraserburgh Peterhead Ellon – Aberdeen Corridor Study, A947 Route Improvement Strategy, Access from the South - Bridge of Dee Study and Wellington Road Multi-Modal Corridor Study.

2.1.3 This process generated large numbers of individual problems and opportunities that were analysed and distilled to more aggregate 'categories'.
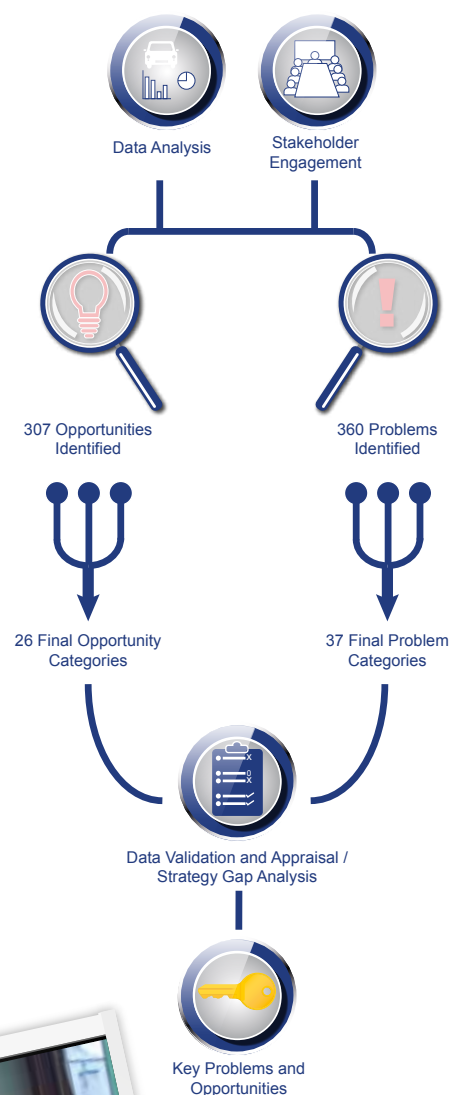
Data Analysis

Stakeholder Engagement

307 Opportunities Identified

360 Problems Identified

26 Final Opportunity Categories

37 Final Problem Categories

Data Validation and Appraisal / Strategy Gap Analysis

Key Problems and Opportunities

Figure 7: Identification of Problems & Opportunities

IDENTIFIED PROBLEMS

2.2.1 Having identified a range of problems and opportunities, these were further grouped to develop a number of categories as outlined below.

ACCESSIBILITY

- Long journey times to key destinations
- Local geography constrains ability to create efficient transport system
- Poor access to the airport from Dyce Rail Station

ACTIVE TRAVEL

- Lack of high quality connected active travel provision
- Road safety concerns hinders active travel uptake

CONNECTIVITY

- Relative isolation of the Aberdeen City Region to Central Belt and poor inter-town connectivity
- AWPR alone will not necessarily solve all problems of connectivity
- Lack of quality, accessible multi-modal interchanges
- Lack of high speed internet access

PUBLIC TRANSPORT

- Public transport options not being competitive when compared to the private car
- Lack of public transport accessibility
- Unreliable public transport journey times during peak times and in built up areas
- Lack of public transport capacity on key corridors
- High cost of travelling
- Difficult for vulnerable users to access public transport, i.e. connections to Aberdeen Rail Station from the city centre
- Limited scope for public sector funding for improved bus provision

ROAD

- Key corridors in region suffer journey time reliability issues during peak times
- Lack of high capacity road network provision
- Road infrastructure for freight movements is not always suitable
- Low cost and relative ease of parking in the city
- Safety issues on road network
- Poor perception of road maintenance
- Constrained road capacity on key corridors into city centre
- Constrained road capacity in the city centre
- Lack of alternative vehicular routes
- Vehicle dominant mode in city centre
- Unsafe driver behaviour
- City Centre journey time reliability issues during peak times
- High traffic volumes into city during peak times

SOCIO-ECONOMIC

- Over-reliance on car as main mode of travel
- Limited integration between land use and transport network
- Limited funding opportunities
- Negative health impact from vehicle emissions
- Growing and ageing population
- Oil and gas dominated economy
- Skills shortage for key industries
- Poor tourism infrastructure and difficult to access attractions

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IDENTIFIED OPPORTUNITIES

ACCESSIBILITY

- Better connect the region as a whole
- City Centre Masterplan
- Economic benefit of an airport well integrated with the city region
- Improved regional accessibility will facilitate change towards more sustainable movements
- Travel planning can result in behaviour change
- Maximise access to new harbours

ECONOMY & DEVELOPMENT

- Continued economic growth
- Develop the tourism offering
- Increase collaboration between government and business
- Move towards higher density and well located developments to reduce the need to travel by car
- Growth (economic, employment and tourism) generated by new harbour
- Local existing high skills base
- High quality of life in the Aberdeen City Region

CONNECTIVITY

- Recent digital connectivity improvements can reduce the need to travel
- Improved regional connectivity will facilitate change towards more sustainable movements

ACTIVE TRAVEL

- Quality sustainable travel provision shown to increase uptake of these modes
- Health benefits associated with an increase in walking and cycling
- Incorporation of high quality active travel provision as part of City Centre Masterplan

ENVIRONMENT

- Technology as a way of improving transport network efficiency
- Reduced emissions will improve air quality

PUBLIC TRANSPORT

- Committed rail developments including Kintore Station and Programme of Rail Revolution
- Increased positive growth in rail patronage
- Make bus more competitive with car
- Change perception of public transport
- Build on identified successes of rail park & ride sites

ROAD

- Lock in AWPR benefits
- Move towards a less car dependent region
- Freight efficiency benefits from AWPR
- Continuing improvements to road safety

KEY PROBLEMS

2.3.1 A further review of the wide range of problems and opportunities was carried out to determine the Key Problems and Opportunities, within the context of this study. These describe the specific regional context with which the transport network functions, or is expected to function in future, and views on how these may broadly be addressed:

KEY PROBLEMS

- High car usage in the Aberdeen City Region

- A large volume of private car movements combined with the constrained road network - linked to long / unreliable journey times, particularly in the peak periods

- Infrastructure and services need to keep a pace with development growth – where it doesn't that can lead to oversaturation of the network in constrained areas

- Poor perception of public transport provision in the Aberdeen City Region – uncompetitive option as a result of long / unreliability of journey times, relatively high ticket prices and lack of quality interchanges

- The rail network is currently limited to two main corridors, which suffer from overcrowding in the peak period; further land use development could add to the pressure on the routes

- Lack of a wide-spread high quality and fully integrated active travel network, in particular linked cycle routes – leads to a requirement to often cycle on roads, which hampers active travel uptake

- Relative remoteness of Aberdeen city centre in relation to key markets in the Central Belt and beyond

KEY OPPORTUNITIES

- A programme of Rail Revolution and the opening of Kintore Rail Station

- AWPR - combines a bypass for long distance traffic with peripheral, shorter journeys, with aim of removing traffic from city centre

- City Centre Masterplan - potential to improve the public realm for the benefit of all users and provide quality active travel routes

- Continued sustainable economic growth - stimulated through both traditional sectors and diversification

- Other Investment in the Region's Key Infrastructure, including Aberdeen South Harbour, Peterhead Harbour, Aberdeen Airport Terminal expansion, and TECA

- High quality of life in the Aberdeen City Region, has the ability to retain and attract high skilled individuals

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The Aberdeen City Region

Key Themes

3.1.1 From the process of identifying both problem and opportunity categories, key themes have been derived that directly reflect each of these elements. A similar process was undertaken from analysis of other relevant policies and strategies. The initial themes developed from the two phase process were then filtered through the identified themes from the other policies to generate a final set of key themes.

3.1.2 This process ensures that the key themes derived as part of the Pre-Appraisal directly reflect the outcomes from the four workstreams, and the development of each theme can be mapped back through each stage to the original set of individual problems and/ or opportunities in a clear and transparent manner. The themes are aimed at driving the future direction of objectives by expressing desired outcomes and following the SMART principles:

- **Specific**: it will say in precise terms what is sought.

- **Measurable**: there will exist means to establish to stakeholders' and decision maker's satisfaction whether or not the objective has been achieved.

- **Attainable**: there is general agreement that the objective 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.
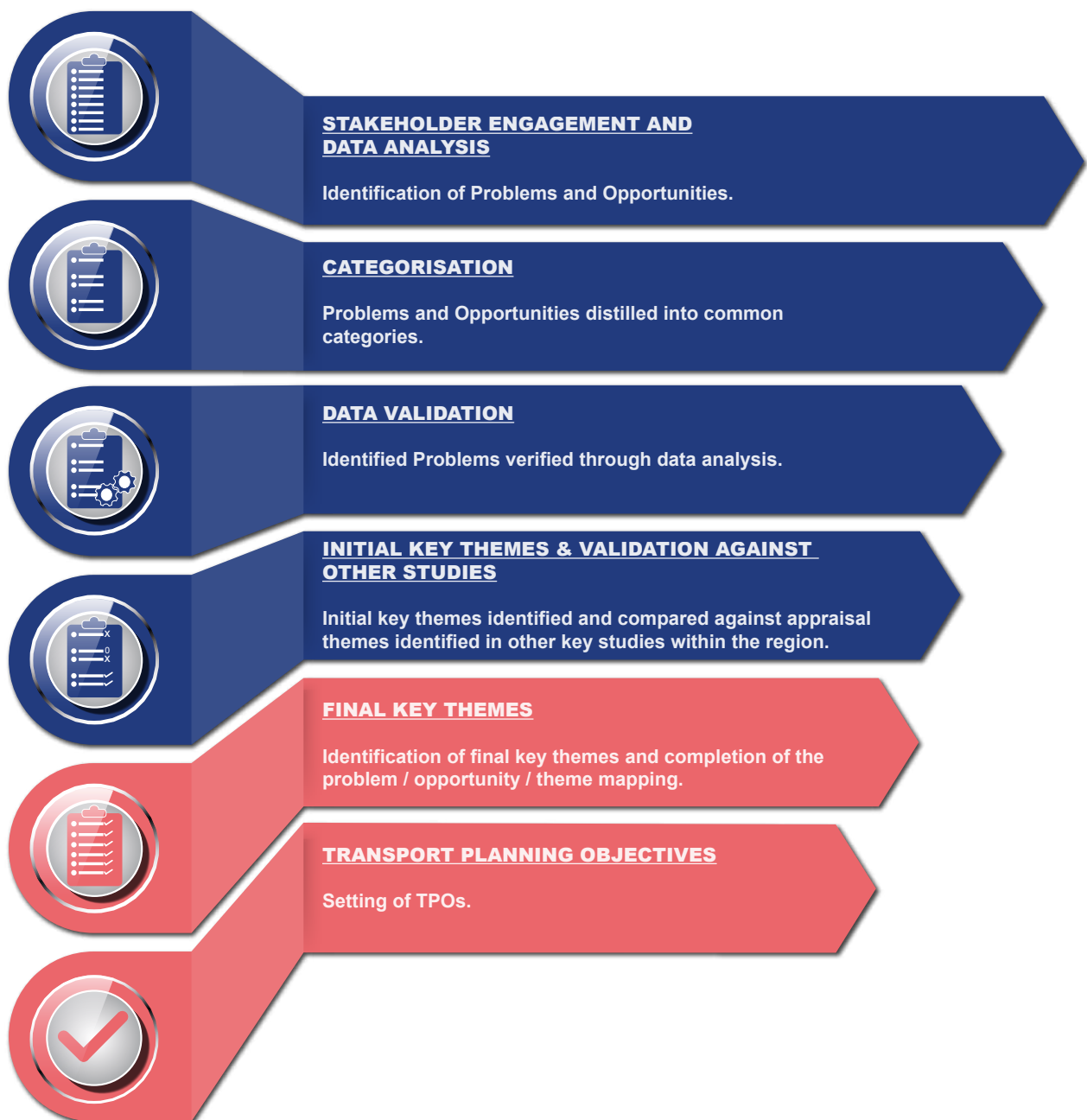
3.1.3 The Key Themes that have been derived are:

1. **Connections to and integration of core growth areas**
   Seeks to demonstrate that core growth areas are well connected to and integrated with existing land-uses and the transport network. The aim of this is to reduce dependence on the private car.

2. **Maintaining and enhancing the natural & built environment so that the region remains a desirable place to live, work and visit**
   Seeks to demonstrate that the current and future transport system does not negatively impact on the region's environment, and enhances it where possible.

3. **Increasing travel choices for all**
   Seeks to demonstrate that there are a number of travel choices available for key journeys with a particular focus on making the alternatives to private car more attractive.

4. **Reducing the need to travel**
   Seeks to demonstrate that alternative means are available to provide the region's residents the ability to fulfil more of their needs / responsibilities without having to travel to do so.

5. **Supporting key sectors and facilitating increased diversification of the region's economy**
   Seeks to demonstrate that the transport system provides efficient access to key markets.

6. **Creating a safe, resilient and affordable transport system**
   Seeks to demonstrate that the transport system reduces accidents, is able to accommodate unexpected changes and is cost effective to use.

7. **Improving strategic connectivity**
   Seeks to demonstrate that the region is connected to key markets so that it is not relatively disadvantaged compared with other regions.

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Transport Planning Objectives

4.1.1 The interim Transport Planning Objectives (TPOs) derived for this study are focused on reflecting the identified problems and opportunities, link significantly with the Key Themes and express the outcomes sought for the study. The interim TPOs can therefore be traced back through each step of the adopted methodology in a clear and transparent way. This allows their areas of coverage to be demonstrated, and the source of each, to ensure that a robust, evidence based audit trail is demonstrated.

4.1.2 The process followed to derive these Objectives was as follows:

Figure 8: Objective setting process

STAKEHOLDER ENGAGEMENT AND DATA ANALYSIS

Identification of Problems and Opportunities.

CATEGORISATION

Problems and Opportunities distilled into common categories.

DATA VALIDATION

Identified Problems verified through data analysis.

INITIAL KEY THEMES & VALIDATION AGAINST OTHER STUDIES

Initial key themes identified and compared against appraisal themes identified in other key studies within the region.

FINAL KEY THEMES

Identification of final key themes and completion of the problem / opportunity / theme mapping.

TRANSPORT PLANNING OBJECTIVES

Setting of TPOs.

4.1.3 The TPOs derived for this study are:

TPO1 : Increase access to a sustainable transport system for all, recognising specific needs of disadvantaged and vulnerable users.

Focus is on alleviating the problems and addressing the opportunities related to access to and the sustainability of the Aberdeen City Region transport system as a whole. The transport system includes the road, rail, and active travel networks and the various services (including bus, rail, taxi and freight) that operate on them. All users are included with particular recognition given to disadvantaged and vulnerable users to both improve access to potential employment and key services, and ultimately their quality of life.

TPO 2: Reduce the business costs of transport for all sectors of the economy to realise the aspirations of the Regional Economic Strategy.

Focus is on improving the competitiveness of businesses in the region, which is a key aspiration of the Regional Economic Strategy. The objective should be one that promotes the local economy by improving connectivity to the transport network for businesses to efficiently and effectively access key markets. Additionally, a focus will be on addressing key problems such as transport related costs, long journey times and journey time reliability.

TPO 3: Reduce the adverse impacts of transport on public health and the natural and built environment.

Focus is on alleviating transport related problems that adversely impact upon the quality of life in the region, including vehicle emissions and accidents, whilst maintaining and enhancing the high quality of the natural and built environment, which is a key factor attracting a skilled workforce and tourism to the region. This will encompass opportunities linked to new technologies and initiatives, such as electric/hydrogen vehicles and Mobility as a Service.

TPO 4: Improve the integration of transport and land use to reduce the need to travel by private car.

Focus is on addressing problems that act as barriers to linking employment, retail / leisure and residential areas with a sustainable, connected public transport and active travel network, to reduce the need to travel by private car. Additionally, a focus will be on creating a high quality digital network to reduce the need for travel.

TPO 5: Improve the relative competitiveness of public transport compared to the private car.

Focus is on addressing problems and opportunities in relation to the perception that public transport is not currently a desirable alternative to the private car due to factors including limited public transport network coverage within the region and cross-boundary, unreliable journey times and the low cost of parking availability within the city centre.

TPO 6: Maintain and enhance a safe, resilient and reliable transport network.

Focus is on addressing problems associated with road safety, particularly vehicle / active travel conflicts, and a lack of alternative routes should incidents occur. It is linked to opportunities concerning continuing road safety initiatives, freight movements and benefits that may be realised by capitalising on future major infrastructure commitments, such as Aberdeen Western Peripheral Route.

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The Aberdeen City Region

Next Steps: Developing the Strategies

5.1.1 This Aberdeen City Region Strategic Transport Appraisal – Pre Appraisal study has developed a robust framework for the derivation of objectives, which will subsequently be used to appraise the performance of options aimed at improving the performance of the Aberdeen City Region transport network and ultimately support economic growth in the region. In line with STAG, the objectives are directly linked to the key transport problems and opportunities within the study area.

5.1.2 In line with Scottish Transport Appraisal Guidance, the study identifies the key transport problems and opportunities within the study area, and these have directly informed the basis for theme identification and interim objective setting upon which future options might be appraised.
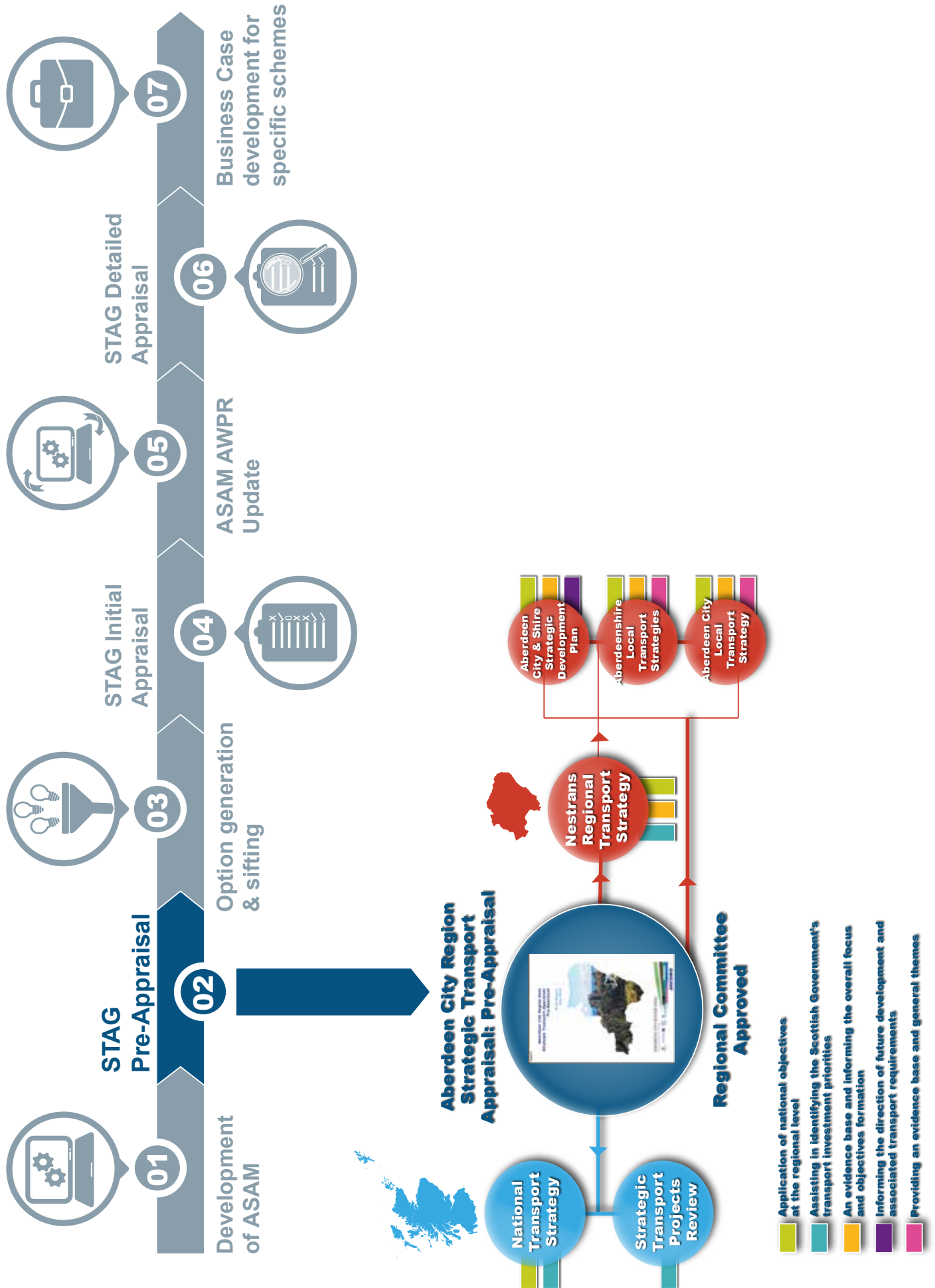
5.1.3 In looking forward, the key findings of this study will inform:

- The next **National Transport Strategy** – application of national objectives at the regional level;

- The next **Strategic Transport Projects Review** –identifying the Scottish Government's transport investment priorities;

- The next **Nestrans Regional Transport Strategy** – providing an evidence base and informing the overall focus and Objectives formation for this strategy;

- The next **Aberdeen City and Shire Strategic Development Plan** – informing the direction of future development in the area with associated transport requirements and providing context for the local development plans; and

- The next **Aberdeen City and Aberdeenshire Local Transport Strategies** – providing an evidence base and general themes for these strategies.

5.1.4 The study also provides the evidence base and interim Transport Planning Objectives, which will be finalised and against which future interventions will be assessed through the STAG process to include:

- The likely impacts of the options against the Transport Planning Objectives;

- The likely impacts of the options against STAG criteria [i.e. Environment, Safety, Economy, Integration, and Accessibility and Social Inclusion];

- Options against established policy directives; and

- Feasibility, affordability and public acceptability of the options.

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01 Development of ASAM

02 STAG Pre-Appraisal

03 Option generation & sifting

04 STAG Initial Appraisal

05 ASAM AWPR Update

06 STAG Detailed Appraisal

07 Business Case development for specific schemes

Aberdeen City Region Strategic Transport Appraisal: Pre-Appraisal

Nestrans Regional Transport Strategy

Aberdeen City & Shire Strategic Development Plan

Aberdeenshire Local Transport Strategies

Aberdeen City Local Transport Strategy

Regional Committee Approved

National Transport Strategy

Strategic Transport Projects Review

Application of national objectives at the regional level

Assisting in identifying the Scottish Government's transport investment priorities

An evidence base and informing the overall focus and objectives formation

Informing the direction of future development and associated transport requirements

Providing an evidence base and general themes

Option Genertion & Sifting

Introduction

6.1.1 Following the publication of the Interim Aberdeen City Region Deal Strategic Transport Appraisal: Pre-Appraisal in June 2018, Jacobs was commissioned in October 2018 to prepare an Option Generation and Sifting Report to act as an addendum to the Interim Appraisal Report. This note provides a high level summary of the findings of Option Generation and Sifting Report.

Option Generation & Sifting Framework Overview

6.2.1 The process used to generate and sift options is outlined in Figure 10 overleaf.

6.2.2 The generation of options was informed by:

- Holding three Option Generation Workshops with Officers, Key Stakeholders and Elected Members.

- Detailed review by the Jacobs Project Team

- Collaborative review with the Project and Client Team.

Option Generation

6.3.1 Through the Project and Client Team reviews and the engagement workshops, a total of 774 options were generated. An initial 'cleaning' exercise was then undertaken by Jacobs to reduce that number to a manageable level. This involved the removal of options that were not sufficiently defined, consolidation and grouping of similar options by type and some minor refinement of option wording. This process resulted in a list of 94 options, which can be broken down into the following types.

Table 6.1: Types of Options

Types of Options (based on breakout table modes)	No. of Options
Active Travel	31
Public Transport and Freight	27
Roads	17
Technology/Behaviour	19
Total	94

6.3.2 The options list then underwent a second review to further package and consolidate options, and resulted in 51 options being retained to progress into the option sifting stage.

Option Sifting

6.4.1 The option sifting, to qualitatively gauge the performance of each option against the criteria shown in Figure 10, was then undertaken using a multi-step process. The key steps involved were as follows:

1. Sifting out of options which were not within scope – i.e. options which are not considered strategic (given the strategic nature of the study)

2. Sifting out of options which do not provide at least a minor contribution to one or more of the six study objectives

3. Sense check of any options which are out with the region (given the regionally specific nature of the study)

4. Sifting out of options that presented any model issues – under the headings of:

   - Ownership – who is likely to have responsibility in the delivery and maintenance of the option (such as public or private sectors, or a mixture of both), and whether there is likely to be insurmountable issues with this meaning an option must be sifted out;

   - Operations – to what extent does the option affect the operation of the existing transport network, and will it cause any operational issues that may cause it to be undeliverable, and as such should be sifted out; and / or.

   - Packaging - is the option able to be delivered on its own, or would it be more successful if delivered as a package with other options. This was not used to sift out options but rather reduce the overall number of options through consolidation.

5. Sifting out of options which are 'showstoppers' - i.e. are unlikely to be deliverable

6.4.2 The sifting process outlined above resulted in the retention of a total of 42 options, as identified in Table 6.2 overleaf.
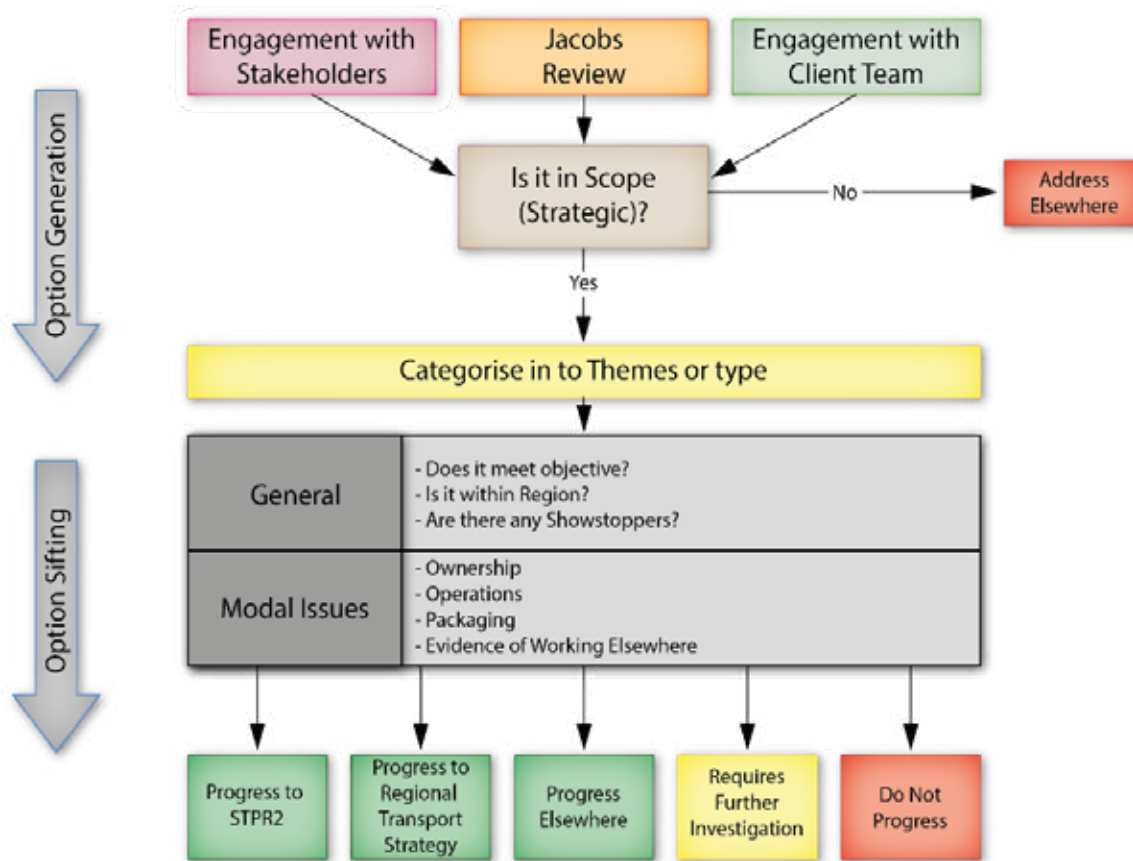
Figure 10: Option Generation and Sifting Framework

			Transport Planning Objectives						
	Type	Option Name	1: Increase access to a sutainable transport system for all, recognising specific needs of disadvantaged and vulnerable users	2: Reduce the business costs of transport for all sectors of the economy to realise the aspirations of the Regional Economic Strategy	3: Reduce the adverse impacts of transport on public health and the natural and built environment	4: Improve the integration of transport and land use to reduce the need to travel by private car	5: Improve the relative competitiveness of public transport compared to the private car	6: Maintain and enhance a safe, resilient and reliable transport network	Rationale for Outcome
1	Active Travel	Upgrade existing routes and develop a network of high quality and safe active travel routes across the region	✓✓	✓	✓✓✓	✓✓	✓	✓✓✓	Option is likely to require TS to act as National Lead, with responsibility for development and delivery most likely to be through the RTS and LTS.
2	Active Travel	Increase the provision and quality of active travel facilities across the Region	✓✓	O	✓	O	✓	✓✓	This option is recommended to progress to the RTS as it has positive benefits for both local and regional aspects of the active travel network in the North East.
3	Active Travel	Implement a regional cycle hire scheme	✓✓	O	✓	✓	✓	O	This option is recommended for consideration in the RTS due to the cumulative positive impact at the local level leading to a greater impact at regional level.
4	Active Travel	Continue develoment and roll out of Regional Active Travel Promotion Strategy with innovative awareness campaigns and incentives to encourage people to travel by active modes	✓	✓	✓✓✓	✓	✓	✓	This option is recommended for consideration in both STPR2 and the RTS due to the cumulative positive impact at the local level leading to a greater impact at regional level; and potential delivery as part of a national active travel promotional strategy.

Table 6.2 : Summary Table of Recommended Options

| | | Table 6.2 : Summary Table of Recommended Options | | | | | | | |
| | Type | Option Name | Transport Planning Objectives | | | | | | Rationale for Outcome |
			1: Increase access to a sutainable transport system for all, recognising specific needs of disadvantaged and vulnerable users	2: Reduce the business costs of transport for all sectors of the economy to realise the aspirations of the Regional Economic Strategy	3: Reduce the adverse impacts of transport on public health and the natural and built environment	4: Improve the integration of transport and land use to reduce the need to travel by private car	5: Improve the relative competitiveness of public transport compared to the private car	6: Maintain and enhance a safe, resilient and reliable transport network	
5	Bus	Implement BRT/Bus Priority schemes which improve bus service journey times and reliability on key corridors in the City and Towns in the Region	✓✓	✓✓	✓✓	✓	✓✓✓	✓✓	This option is recommended to be considered for the RTS. This option is likely to have positive benefits to journey time and journey time reliability for both local and regional bus services in Aberdeen City and towns across the region.
6	Bus	Consider future ownership/regulation/partnership models for buses - working with North East Bus Alliance	✓✓	✓	✓	✓✓	✓✓	O	This option is recommended to be Progressed Elsewhere - Scottish Government - as it requires legislation change at Scottish Government level to give provisions for Local Authorities to implement new ownership/regulation models for bus services. The potential policy/legal challenges and the acceptability issues may mean Showstoppers.
7	Bus	Demand Responsive Services	✓✓✓	✓	O	✓	✓✓	O	This option is recommended for consideration in the RTS to build on current experience in the region. Considered as having a regional level of impact due to the cumulative positive impacts across the towns and city, and also likely to have a positive impact on equality.

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	Type	Option Name	Transport Planning Objectives						Rationale for Outcome
			1: Increase access to a sutainable transport system for all, recognising specific needs of disadvantaged and vulnerable users	2: Reduce the business costs of transport for all sectors of the economy to realise the aspirations of the Regional Economic Strategy	3: Reduce the adverse impacts of transport on public health and the natural and built environment	4: Improve the integration of transport and land use to reduce the need to travel by private car	5: Improve the relative competitiveness of public transport compared to the private car	6: Maintain and enhance a safe, resilient and reliable transport network	
8	Freight	Development of an integrated, multimodal network of freight hubs across the Region	O	✓✓✓	✓	O	O	✓✓	This option is recommended to be considered in both STPR2 and the RTS as implementation should be progressed at national and regional levels to positively influence the logistics chain, ensure consistency across regions, and optimise 'Hub' locations.
9	Freight	Review provision of Rest Stops on trunk roads and key freight routes for HGVs	O	✓	✓	O	O	✓✓	This option is recommended to be considered in both STPR2 and the RTS due to the positive impact it should have on both national and regional freight traffic, the need for consistency across the regions and to optimise rest stop locations.
10	Freight	Improve road access to all regional ports	O	✓✓	O	O	O	✓✓	This option is recommended to be considered in STPR2 and the RTS due to the significant contribution the region's ports have at the national level. Links to the Northern Isles will also presumably inform the national Ferries Plan work.

Table 6.2 : Summary Table of Recommended Options

Table 6.2 : Summary Table of Recommended Options									
	Type	Option Name	Transport Planning Objectives						Rationale for Outcome
			1: Increase access to a sutainable transport system for all, recognising specific needs of disadvantaged and vulnerable users	2: Reduce the business costs of transport for all sectors of the economy to realise the aspirations of the Regional Economic Strategy	3: Reduce the adverse impacts of transport on public health and the natural and built environment	4: Improve the integration of transport and land use to reduce the need to travel by private car	5: Improve the relative competitiveness of public transport compared to the private car	6: Maintain and enhance a safe, resilient and reliable transport network	
11	Policy	Use price mechanisms to manage demand	O	O	✓✓	✓✓	✓✓	O	Recommended to be considered in STPR2 given there are tools within this option that would impact across the trunk road network as well as at the regional and local level. Scottish Government has a clear policy against the use of road and bridge tolls (Road User Charging) now or any time in the future on the trunk road network but can be delivered at the discretion of local roads authorities in relation to local roads. Powers for Workplace Parking Levys are being considered in the Transport Bill.
12	Policy	Revised approach to Development Planning Policy	✓✓✓	✓	✓✓	✓✓✓	✓✓	✓	This option is recommended for consideration in the RTS, in conjunction with Local and Regional Planning Bodies, as it should take into account the local and regional planning considerations that are specific to the North East, in order to create a new approach to transport in development planning policy.

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	Type	Option Name	Transport Planning Objectives						Rationale for Outcome
			1: Increase access to a sutainable transport system for all, recognising specific needs of disadvantaged and vulnerable users	2: Reduce the business costs of transport for all sectors of the economy to realise the aspirations of the Regional Economic Strategy	3: Reduce the adverse impacts of transport on public health and the natural and built environment	4: Improve the integration of transport and land use to reduce the need to travel by private car	5: Improve the relative competitiveness of public transport compared to the private car	6: Maintain and enhance a safe, resilient and reliable transport network	
13	Policy	Maintain and expand routes* and destinations (domestic and international) served by Aberdeen International Airport *Note: scope of STPR2 extends only to domestic air routes.	O	✓✓	O	O	O	✓	This option is recommended for consideration in the RTS given the importance of air travel to the region. It is also recommended for consideration STPR2, however it is noted the scope of STPR2 only extends to domestic air routes.
14	Policy	Maintain and enhance maritime services serving Aberdeen, and connections to Orkney and Shetland	✓	✓✓	O	O	O	✓	This option is recommended for consideration in both STPR2 and the RTS given the regional importance of ferry routes to the NE region, the national importance of the connecting services to the Northern Isles and the potential for expansion of the visitor cruise ship market.
15	Public Transport	Provision of high quality Park and Ride and multimodal interchange facilities, and supporting services	✓✓	✓	✓✓	✓✓	✓✓	✓	This option is recommended to be considered in both STPR2 and RTS as park and ride sites exist (and new ones as part of this intervention) on regional and nationally significant routes (i.e. rail network/stations, inter-city bus services).

Table 6.2 : Summary Table of Recommended Options

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	Type	Option Name	Transport Planning Objectives						Rationale for Outcome
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16	Public Transport	Improved marketing, information and digital connectivity (on and off) Public Transport services	✓✓	✓	O	O	✓✓	✓	This option is recommended for consideration in both STPR2 and the RTS as it involves increasing provision of public transport information across modes. This is not restricted to services within the North East region so should be considered at a national level to take into account regional and cross-border services, consistency of standards, hardware, comms etc.
17	Public Transport	Introduce new fares model for public transport (potentially linked to MaaS)	✓✓	✓✓	O	O	✓✓	O	This option is recommended for consideration in both STPR2 and the RTS as it involves the integration of tickets across modes, simplification of fare structures across modes/services that are not restricted to the North East region, as well as regional specific services.

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			Transport Planning Objectives						
	Type	Option Name	1: Increase access to a sutainable transport system for all, recognising specific needs of disadvantaged and vulnerable users	2: Reduce the business costs of transport for all sectors of the economy to realise the aspirations of the Regional Economic Strategy	3: Reduce the adverse impacts of transport on public health and the natural and built environment	4: Improve the integration of transport and land use to reduce the need to travel by private car	5: Improve the relative competitiveness of public transport compared to the private car	6: Maintain and enhance a safe, resilient and reliable transport network	Rationale for Outcome
18	Public Transport	Development of fully integrated public transport services across the region, including timetabling and multimodal interchanges/attractors	✓✓	✓✓	✓	✓	✓✓	✓	This option is recommended for consideration in both STPR2 and the RTS as the intervention involves improving timetable integration between all modes (bus, rail, ferry and air) within the North East, other regions, Nationally and Internationally
19	Public Transport	Timetable and capacity enhancements to deliver faster/more frequent services on core corridors	✓✓	✓✓✓	✓	O	✓✓✓	✓	This option is recommended for consideration in both STPR2 and the RTS as the intervention involves improving timetable and capacity enhancements to bus and rail services within the North East and extending to other regions in Scotland (and to England for cross-border bus and rail services).
20	Public Transport	Light Rail/Tram	✓✓	✓	✓✓	✓	✓✓✓	✓	Recommended for consideration in the RTS as similar examples of Fastlink (Glasgow) and Tram (Edinburgh).
21	Public Transport	Improve City Centre connections between Bus and Rail Stations	✓✓	✓	✓	✓✓	✓✓	✓	This option is recommended to be considered in the RTS as the intervention is of Regional significance and likely be delivered at this level.

Table 6.2 : Summary Table of Recommended Options

	Type	Option Name	Transport Planning Objectives						Rationale for Outcome
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22	Public Transport	Public Transport Connections to Airport	✓	✓✓	✓✓	✓✓	✓✓✓	✓	This option is recommended to be considered in both STPR2 and the RTS as the intervention would have regional and national importance - both for staff working at the airport, and for domestic/international air journeys
23	Rail	Expand the rail network in the North East (to the benefit of both Passenger and Freight users) via new and/or reinstated railway lines	✓✓	✓✓	✓	✓✓	✓✓✓	✓✓	This option is recommended for consideration in both STPR2 and the RTS as the intervention would likely have implications on across the wider national rail network, as well as the rail network within the region.
24	Rail	New Local Rail Stations on existing local routes	✓✓	✓✓	✓	✓✓	✓✓	✓	This option is recommended for consideration in both STPR2 and the RTS as the intervention would likely have implications on across the wider national rail network, as well as the rail network within the region.
25	Rail	Improve Strategic Inter-City Rail Connections	✓✓	✓✓	✓	✓✓	✓✓	✓✓	This option is recommended for consideration in both STPR2 and the RTS as the intervention would likely have implications on across the wider national rail network, as well as the rail network within the region.

Table 6.2 : Summary Table of Recommended Options

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			Transport Planning Objectives						
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26	Road	A90/A952 Upgrade Ellon to Peterhead/ Fraserburgh	O	✓✓✓	O	O	O	✓✓	This option is recommended for consideration in both STPR2 and the RTS as the intervention would involve changes to the trunk road network between Aberdeen and Fraserburgh - a key corridor for commuter, freight and strategic movements - therefore of regional and national significance.
27	Road	A90 Upgrade south of Aberdeen to Dundee (including the Kingsway)	O	✓✓✓	O	O	O	✓✓	This option is recommended for consideration in both STPR2 and the RTS as the intervention would involve changes the trunk road network to the south of Aberdeen - a key corridor for commuter, freight and strategic movements - therefore of regional and national significance.
28	Road	North/North West Radial Route Action Plans, including A947 Route Action Plan	O	✓✓	O	O	O	✓✓	This option is recommended for consideration in the RTS as the North/North West radial routes, notably the A947, perform a regionally significant function.
29	Road	Western Radial Routes Action Plans (A944, A93)	O	✓✓	O	O	O	✓✓	This option is recommended for consideration in the RTS as these routes perform a regionally significant function.

Table 6.2 : Summary Table of Recommended Options									
			Transport Planning Objectives						Rationale for Outcome
	Type	Option Name	1: Increase access to a sutainable transport system for all, recognising specific needs of disadvantaged and vulnerable users	2: Reduce the business costs of transport for all sectors of the economy to realise the aspirations of the Regional Economic Strategy	3: Reduce the adverse impacts of transport on public health and the natural and built environment	4: Improve the integration of transport and land use to reduce the need to travel by private car	5: Improve the relative competitiveness of public transport compared to the private car	6: Maintain and enhance a safe, resilient and reliable transport network	
30	Road	Route Action Plan on former A90/newly designated A92 between Blackdog and Stonehaven following AWPR completion	O	✓✓	O	O	O	✓✓	This option is recommended for consideration in both STPR2 and the RTS because of the significant role this section of the A90/newly designated A92 has at a regional and national level on access (for example, the Dee and Don crossings, and access to Aberdeen). It is recognised, however, this option is currently very wide ranging and should be refined at the next stage with specific schemes which can more robustly be appraised against the study objectives.
31	Road	Consolidated Asset Management and Prioritisation System	O	✓✓	✓	O	O	✓✓✓	This option is recommended as part of the RTS as it is the largely the remit of Local Authorities to maintain transport infrastructure (excl. for example Trunk Roads and Rail Network). This could however be incorporated into a National Asset Management and Prioritisation System, therefore, is also recommended for consideration in STPR2.

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32	Road	Introduce 20mph zones	✓	O	✓✓	O	O	✓✓	This option is recommended to be included as part of the RTS as it takes a region-specific approach to implementing 20mph speed limits, although it is likely to have positive impacts at the local level.
33	Technology	ITS to manage vehicle entry to lanes and zones based on vehicle types, time of day, real-time emissions and congestion levels	✓	✓	✓✓	O	✓✓	✓	This option is recommended to be considered in the RTS as aspects of it are region-specific and would need to be administered by the Local Authorities. Aspects would most likely be implemented on key access routes to the city and larger towns, and is likely to affect local and regional movements.
34	Technology	Wayfinding App for Tourists	✓	O	✓	O	O	✓	This option has been recommended to be considered in the RTS as it should consider the local and regional visitor hotspots and linking them with transport routes to create the trails.

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	Type	Option Name	Transport Planning Objectives						Rationale for Outcome
			1: Increase access to a sutainable transport system for all, recognising specific needs of disadvantaged and vulnerable users	2: Reduce the business costs of transport for all sectors of the economy to realise the aspirations of the Regional Economic Strategy	3: Reduce the adverse impacts of transport on public health and the natural and built environment	4: Improve the integration of transport and land use to reduce the need to travel by private car	5: Improve the relative competitiveness of public transport compared to the private car	6: Maintain and enhance a safe, resilient and reliable transport network	
35	Technology	Implement new technologies strategy for the region, across modes	✓✓	O	✓✓✓	O	✓	✓	This option has been recommended for consideration in STPR and the RTS as it should consider the local and regional needs and benefits of such technology, as well as consider local knowledge/research (e.g. alternative energy & fuels - Hydrogen) which could assist in the delivery of new technologies across the region. At the national level this should consider for example the impact of alternative fuels including Hydrogen for ferries, and the need for consistency of standards and optimisation of a national network of charging/fuelling stations.
36	Technology	Enhance network monitoring capability to collect real-time user information across all modes, to input to journey planning tools and real-time network management	✓	✓✓	✓	O	✓✓	✓	This option is recommended to be progressed to the RTS as it is a regional-based system. It could however complement a National Monitoring System

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	Type	Option Name	Transport Planning Objectives						Rationale for Outcome
			1: Increase access to a sutainable transport system for all, recognising specific needs of disadvantaged and vulnerable users	2: Reduce the business costs of transport for all sectors of the economy to realise the aspirations of the Regional Economic Strategy	3: Reduce the adverse impacts of transport on public health and the natural and built environment	4: Improve the integration of transport and land use to reduce the need to travel by private car	5: Improve the relative competitiveness of public transport compared to the private car	6: Maintain and enhance a safe, resilient and reliable transport network	
37	Technology	Policy support for a digital working strategy (including Broadband Connectivity Improvements) for the region to reduce peak-time travel, and encourage communities to develop potential working hubs	O	✓✓✓	✓✓✓	✓✓	✓	✓	This option is recommended to be progressed to the RTS as it is seen as a key option in influencing travel decisions and expanding travel choices. Not by itself a direct transport function or responsibility but will have a significant part to play in the future development of the region. Also needs close engagement with Scottish Government on broadband connectivity roll-out programmes.
38	Technology	Promotion of shared mobility services, including car clubs and facilitation of MaaS (mobility-as-a-service) providers	✓✓	✓✓	✓	O	✓✓	O	This option is recommended for consideration the RTS and Progress Elsewhere - NTS. The North East is already investigating MaaS Technology, however it is considered that Scottish Government/Transport Scotland would need to take a national lead on MaaS Technology, and examine the impacts (may be positive and/or negative) from a transport perspective.

Table 6.2 : Summary Table of Recommended Options

	Type	Option Name	Transport Planning Objectives						Rationale for Outcome
			1: Increase access to a sutainable transport system for all, recognising specific needs of disadvantaged and vulnerable users	2: Reduce the business costs of transport for all sectors of the economy to realise the aspirations of the Regional Economic Strategy	3: Reduce the adverse impacts of transport on public health and the natural and built environment	4: Improve the integration of transport and land use to reduce the need to travel by private car	5: Improve the relative competitiveness of public transport compared to the private car	6: Maintain and enhance a safe, resilient and reliable transport network	
39	Various	Infrastructure measures to complement City Centre Masterplan proposals	✓✓	O	✓✓	✓	✓	✓✓	This option has been recommended to be progressed to the RTS and Progress Elsewhere - CCMP - as it identifies interventions which mainly have a local focus, with regional benefits.
40	Various	Improved access to healthcare strategy	✓✓	O	✓	✓✓	✓✓	✓✓	This option has been recommended to be considered both in the RTS and 'Progress Elsewhere'. - The RTS should consider the healthcare needs across the region, the different levels of care and emergency provision, and the catchments served; and - Progress Elsewhere which references working with NHS and Third Sector Partners
41	Various	Programme of access for all improvements at all key public transport points, and within urban areas, to benefit those who may have mobility impairment	✓✓✓	O	✓	✓	✓✓	✓✓	This option has been recommended to be considered in the RTS to improve the local and regional mobility access, ensure consistency across the region in terms of implementation and provision.

Table 6.2 : Summary Table of Recommended Options

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Table 6.2 : Summary Table of Recommended Options									
			Transport Planning Objectives						Rationale for Outcome
	Type	Option Name	1: Increase access to a sutainable transport system for all, recognising specific needs of disadvantaged and vulnerable users	2: Reduce the business costs of transport for all sectors of the economy to realise the aspirations of the Regional Economic Strategy	3: Reduce the adverse impacts of transport on public health and the natural and built environment	4: Improve the integration of transport and land use to reduce the need to travel by private car	5: Improve the relative competitiveness of public transport compared to the private car	6: Maintain and enhance a safe, resilient and reliable transport network	
42	Funding	Local Transport Funding	✓✓	✓	O	✓✓	✓✓	✓✓	This option has been recommended to be considered in the RTS and also Progress Elsewhere - Scottish Government, LTS - as it consists of funding mechanisms that may be specifically tied to development planning, and what provisions may or may not be contained in the Planning Bill. - It would also be for the relevant authorities to consider and implement as a 'ring-fenced' funding stream. - Would require legislation to Progress Elsewhere - Scottish Government - and acceptability barriers may be Showstoppers for this option.

Option Generation & Sifting
Next Steps

6.5.1 This option generation and sifting stage completes the Aberdeen City Region Deal Strategic Transport Appraisal: Pre-Appraisal stage, in line with STAG guidance. It sets the context for the further appraisal of transport options for the Aberdeen City Region Deal, the Regional Transport Strategy and the second Strategic Transport Projects Review.

STAG Initial Appraisal (Part I Appraisal)

6.5.2 STAG Part I Initial Appraisal is the stage that follows Pre-Appraisal (or Case for Change) in the STAG appraisal process. The purpose of the Initial Appraisal will be to undertake an initial qualitative appraisal of the recommended options from Pre-Appraisal and would include an assessment of:

- the likely impacts of the options against the Transport Planning Objectives;

- the likely impacts of the options against STAG criteria (i.e. Environment, Safety, Economy, Integration, and Accessibility and Social Inclusion);

- options against established policy directives; and

- feasibility, affordability and public acceptability of the options.

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0	14/05/18	First draft for Project Working Group Review	Calum Robertson Steven Reid David Bryce	Euan Barr	Stuart Turnbull
1	26/06/18	Final Draft	Calum Robertson Steven Reid	Euan Barr	Stuart Turnbull
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3	07/10/20	Combining of 'Draft Interim Report' and 'Options Report'	Ciaran Leeson	Tom Bisset	Calum Robertson