



# **Aberdeen City Region Deal – Strategic Transport Appraisal**

## **Preliminary Options Appraisal Report Executive Summary**

On behalf of Nestrans, Aberdeenshire Council and Aberdeen City Council

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## Executive Summary

### Introduction

The Aberdeen City Region Deal Strategic Transport Appraisal (CRD STA) was initiated as a means to collate and rationalise the current and future problems and opportunities within the transport system, and to act as the mechanism to facilitate the delivery of transport projects to support the Regional Economic Strategy (RES).

The ‘*Aberdeen CRD STA, Initial appraisal: Case for Change*’ study was completed in 2018, and this report identified a range of problems and opportunities across the region, developed seven key themes, and subsequently defined six Transport Planning Objectives (TPOs). Option generation and sifting exercises were undertaken in 2018/19 and this process identified a list of 42 options recommended for further development and consideration. The *Initial appraisal: Case for Change* stage of the study, and the option generation and sifting outcomes and 42 option recommendations, were approved by Aberdeen City Council, Aberdeenshire Council, Nestrans and the Aberdeen City Region Deal Joint Board committees in Summer 2018 and Summer 2019 respectively.

At the national level, the National Transport Strategy 2 (NTS2) and the ongoing second Strategic Transport Projects Review (STPR2) are establishing the overarching strategic objectives for Scotland’s transport system and the associated transport investment programme.

This report sets out the appraisal and outcomes of the ‘*Aberdeen CRD STA Preliminary Options Appraisal*’ stage of the study, commencing from the 42 shortlisted options and Transport Planning Objectives developed during the earlier study stages. These options have been developed, refined and appraised here, and recommendations on appropriate pathways for their further development and delivery have been derived where appropriate.

### Outcomes Summary

Recent policy developments have had significant implications for transport, particularly with respect to decarbonisation. There is ever greater urgency in the need to focus on ‘greener’ transport, moving away from fossil fuel based transport towards electric and alternative fuelled vehicles, increasing use of public and active travel modes, and reducing the need to travel.

Given this context, the appraisal of the options here has led to the development of five option categories, prioritising and supporting the implementation of more sustainable transport while ensuring the promotion and development of Aberdeen city centre as the key regional centre for commerce, leisure and tourism. These five categories broadly comprise: **city connectivity** – ensuring sustainable connectivity to / from, and within the regional centre; **rural connectivity** – providing sustainable and proportionate travel choices across the region’s more rural hinterland; **strategic connectivity** – linking the region effectively to the rest of Scotland and internationally; **safety** – moving towards a zero fatalities target; and **demand management** measures – to manage resources effectively and encourage the use of sustainable modes.

Within these five categories, each option has been defined as either ‘**core**’ (large scale options designed to instigate substantive change), or ‘**supporting**’ (smaller supporting options, less likely to bring about substantive change in their own right, but nevertheless important in supporting the core measures and overall objectives).

The emerging overall package to be taken forward from this study can be seen as a **transport package to begin transitioning the north east to a post-carbon, more prosperous, safer, and more equitable future.**

## Preliminary Options Appraisal

### Setting the Scene

The options developed and appraised as part of this study build on a range of policies & strategies, and plans & projects which are already on-going or currently in development. Since the *Initial appraisal: Case for Change* stage of this study was completed, a number of important national, regional and local strategies and plans have been published, or reached important milestones in their development, providing a revised context in which the transport options for this study sit. Furthermore, new transport projects are now being developed and implemented.

The City Region Deal made a commitment to scope out the transport requirements to support the area for the next 20 years. Since the City Region Deal was signed in November 2016, the Scottish Government has amended the emerging Climate Change Bill with what are now the most stringent legislative targets anywhere in the world, aimed at ending Scotland's contribution to climate change within a generation.

The option appraisal recognises the new National Transport Strategy (NTS2) with its focus on reducing inequalities and taking climate action and is consistent with the emerging Regional Transport Strategy (RTS2040) which is setting out the vision and direction for transport provision in the north east for the next 20 years. This appraisal also recognises the recent publication of the Aberdeen City and Shire Strategic Development Plan (SDP) (2018), and both the Aberdeen City and Aberdeenshire Proposed Local Development Plans which went to the respective councils for consideration in March 2020, with all acknowledging the declared climate emergency.

The options developed for this study seek to work within this evolving policy context, championing regional and local strategies and in particular supporting the Aberdeen City Centre Masterplan and Sustainable Urban Mobility Plan. The options are also being underpinned by the recently developed Roads Hierarchy Principles and Aberdeenshire Council's *Town Centres First Approach*. Importantly, the options developed and appraised as part of this study should be seen as building on the foundations laid by the ongoing, committed and pipeline schemes, studies and projects including the range of improvements to the active travel, rail, bus and road networks.

### Revisiting the TPOs

Given the evolution of the policy landscape since the original study TPOs were developed and to provide consistency of approach, the TPOs were refined and aligned with the six RTS2040 priorities and their associated objectives.

### Option Development and Appraisal

The **42** options from the *Initial appraisal: Case for Change* stage of the study were **further developed** to allow for more meaningful appraisal at this stage. This included: (i) consideration of how policy landscape changes since the options were developed may impact on the options; (ii) a review of the rationale for the options; (iii) consideration of the geographical context and scalability of the options; and (iv) consideration of the role of the local authorities / Nestrans in delivering the options. As part of this process, strategic 'corridors' were also developed to provide ongoing geographical context, particularly where interventions are primarily capital investment.

An **option rationalisation** process was undertaken which included: (i) reviewing, repackaging and re-categorising options; (ii) identifying options for which a narrative was required rather than a full appraisal; and (iii) identifying those options no longer considered appropriate for appraisal as part of this study, but which may be considered in other workstreams with either a national or more local focus. This rationalisation process resulted in a total of **29** options.

The appraisal of each of these 29 options has been undertaken through:

- the development of logic mapping for each option which set out: (i) the underlying problems the option is seeking to address; (ii) the transport and wider societal impacts of implementing the option; (iii) which of the TPOs the option is supporting and, (iv) interdependencies with other options; and
- the development of a proportionate 'appraisal table', qualitatively appraising the option against the TPOs and key STAG criteria, drawing on existing studies, benchmarking exercises, case studies of similar schemes, and professional knowledge.

Additional data analysis and information gathering has been undertaken to provide more detailed and up-to-date information to: (i) facilitate the appraisal; (ii) understand where investment (across the various modes) should potentially be prioritised considering the geographical context, the location of key services, employment and population; and (iii) provide greater evidence to support the identification of the problems, and hence the appropriateness of an option.

In addition, while at this stage no one can accurately predict the long-term impacts to travel of the COVID-19 pandemic, its ramifications could be profound, and post-public consultation (undertaken during the Summer of 2020), there has been an opportunity to revisit each option and consider the potential implications of the pandemic. This has included consideration of both the positive and negative impacts of the pandemic on the viability of the options and their prioritisation in supporting a 'green recovery' from the pandemic. Close monitoring of travel behaviour and trends will enable appropriate decision making as the region transitions out of the pandemic.

The appraisal has highlighted that the transition of the vehicle fleet to electric vehicles in the coming years represents a substantive re-shaping of personal transport. Although they operate with zero tail pipe emissions, these vehicles are still carbon and resource intensive over their life cycle, and they still require road space. Cheaper running costs in the short term at least, and being marketed as a 'green' solution, could encourage people to continue to travel by private car as they currently do, or indeed increase their trip making by car. This is a particular risk given the current COVID-19 situation. Therefore, there is a balance to be struck between policies & measures which embrace and facilitate the move to electric vehicles on one hand, policies & measures which encourage people to use active travel and public transport and a requirement to ensure demand for private vehicles (fuelled by whatever means) is managed, particularly in the largest urban areas.

## Option Appraisal Outcomes

It is clear from the appraisal undertaken here that many of the options considered have merit in being taken forward for further detailed appraisal, as they make some contribution towards the TPOs. To provide a structured framework for delivery, the options have been categorised and broadly prioritised based on the appraisal outcomes. The five option categories, together with the key elements which should be taken forward for further development, appraisal and business case work are shown below.

As noted above, the options developed and appraised should be seen as building on the foundations laid by the ongoing, committed and pipeline transport schemes, studies and projects including the range of improvements to the active travel, rail, bus and road networks. The appraisal work is based on the assumption that those schemes which are currently associated with an established high degree of commitment and other preparatory work will be implemented, and are thus not included in the tables below. This includes: A96 Dualling; A96/A92 Haudagain roundabout improvements; A90/A937 Laurencekirk Junction improvement; External Links to Aberdeen South Harbour; Berryden Corridor Improvements and the South College Street improvements.

### Category 1: City Connectivity

To support the climate change agenda and deliver on the aims and aspirations of the City Centre Masterplan and Roads Hierarchy principles, it is clear that a step-change in public transport and active travel provision and use is needed. This category broadly focusses on connections to / from and within Aberdeen as the regional centre. This requires an improved sustainable travel network to enable efficient access including:

City Connectivity Measures
Mass transit provision, such as Bus Rapid Transit, on high demand corridors, anchored with a ring of Park & Ride sites
Bus priority improvements on other corridors
Bus ‘feeder’ services from more rural areas to link to the mass transit system
Bus Service Improvement Partnerships (BSIP) to ensure service levels and vehicle quality
Improvements to ticketing
High quality and safe active travel in key corridors linking to the city
Development of Montrose to Inverurie as a high-volume commuter rail corridor with new stations

Implementation of the above would build on the foundations set out in the Aberdeen and Aberdeenshire Strategic Development Plan and emerging City and Shire Local Development Plans.

### Category 2: Demand Management

As shown through the appraisal, many of the options seek to encourage behavioural change, whilst fewer options seek to actively dissuade people from travelling as they currently do. However, as established in the appraisal tables, in order to complement Category 1 options, there are options whose implementation would help achieve the step-change towards more sustainable travel that is required. These demand management measures can help create the shift to greener travel modes required, and in so doing also tackle the issues of city centre air quality, congestion and safety. Such demand management measure include:

Demand Management Measures
Low Emission Zone
Road-space reallocation in favour of public transport and active travel
Workplace parking charges
Increased on-street and off-street parking charges / extension of the current ‘controlled’ parking area.

Whilst these demand management (Category 2) options would support the success of the city connectivity (Category 1) options, Category 1 options must be provided in parallel with Category 2 options to enable efficient movement of people and goods, and thus support the continued prosperity of the region. The categories are therefore inextricably linked.

### Category 3: Rural Connectivity

Given the geography of the region, the issue of rural connectivity is vital in addressing inequalities and providing sustainable options in terms of access to employment, education, public services, healthcare and recreational facilities.

This category includes measures aimed at establishing a ‘connectivity benchmark’ based on settlement type (established through the Scottish Government’s Urban Rural Classification) for both those without access to a car, and those who would prefer not to use a car. Such a package requires a consistent ‘rural connectivity audit’ to establish appropriate connectivity across all of the region’s settlements, and this would benefit from being undertaken as a joint exercise with key partners such as NHS Grampian, higher education establishments and other community planning partners.

Building on the Aberdeenshire Town Centres First Framework, the audit would recognise the role that many of Aberdeenshire towns play in providing key service centres for their rural hinterlands. Establishing a settlement ‘connectivity benchmark’ is about ensuring connections between smaller towns and villages as well connecting with Aberdeen. Such an audit would also include understanding the role that improved digital connectivity could play in incentivising and enabling those resident in the region’s rural areas to reduce their need to travel by ensuring working from home can be done flexibly, effectively and efficiently.

The emerging category options will then include:

Rural Connectivity Measures
A step change in rural public transport connectivity
Provision of ‘mini’ interchange hubs
More formalised and consistent demand responsive services open to, and promoted to all; alongside consideration of other innovative interventions such Mobility As A Service (MAAS) pilots
Active travel improvements focussed around community accessibility to town centres and local services
Developing and implementing a Rural Digital Working Strategy for the region

#### Category 4: Safety

The safety of the transport system is key and is reflected in all national, regional and local plans & strategies. The RTS 2040 aims for zero fatalities on the road network. As such, this safety category comprises measures proven to reducing accident rates and includes:

Safety Measures
Community safety through the consideration of 20mph zones, school zones and other traffic calming measures
On-going safety, management and improvement measures on the key road routes in the region

These measures are set against a changing technological backdrop. This is particularly pertinent with respect to connected and autonomous vehicles which have the potential to substantially de-risk the movement of goods and people by road with respect to driver and passenger safety.

#### Category 5: Strategic Connectivity

Supporting and strengthening the region’s connectivity, strategically within the region, and to the rest of Scotland, the UK and overseas is vitally important in ensuring the efficient movement of people and goods to support the region’s economy. It is recognised that the ongoing development of the strategic rail, road, air and ferry sectors falls under the remit of national transport bodies and the Scottish Government. However, this study fully acknowledges the important role that Aberdeen City Council, Aberdeenshire Council and Nestrans play in influencing and lobbying, as well as partnering with national organisations, in order to ensure the continued and enhanced transport connectivity of the region.

Strategic Connectivity Measures
Improved strategic rail connectivity to the Central Belt and Inverness
Improved trunk road reliability (reflected through the road safety, management and improvement interventions noted in Category 4)

Improved access to the region's ports (reflected through both the road safety, management and improvement interventions noted in Category 4 and other on-going schemes such as the on-going *External Transportation Links to Aberdeen South Harbour* study)

### Option Delivery Pathway and Prioritisation

The 29 individual options appraised have been assigned to one of the categories listed above, with the exception of Option 25 and Option 26.

All options have been defined as either:

- **Core:** Large scale options required to instigate substantive change; or
- **Supporting:** Smaller supporting options, less likely to bring about substantive change in their own right, but nevertheless important in supporting the core measures and overall objectives.

The table below lists the 29 options with their assigned category and whether they are considered as 'Core' or 'Supporting'. The table also notes the most appropriate delivery 'pathways' in each case, together with the **proposed key next steps** for taking the option forward.

These options are presented broadly in line with Transport Scotland's sustainable transport hierarchy.

Option Categorisation and Type (Fully appraised options)

Op.	Description	Category	Type	Recommended Delivery Pathway				Potential Next Steps
				LTS / LA	RTS2040	CRD	STPR / TS	
1	Upgrade existing active travel routes	1: City Connectivity 3: Rural Connectivity	Core	✓	✓	✓		STAG-based feasibility and engineering work to consider the implementation of continuous, segregated active travel corridors into the city centre to inform subsequent Business Cases / funding applications. Local authorities to take the lead and continue to progress ongoing active travel focussed corridor studies.
2	Increase provision and quality of active travel routes across the region	1: City Connectivity 3: Rural Connectivity	Core	✓	✓			
3	Implement regional cycle hire scheme	3: Rural Connectivity	Supporting	✓	✓			Pending development of an Aberdeen City bike hire scheme (which complements the City Connectivity Package), Nestrans to undertake further investigation into the costs and benefits of smaller scale cycle hire schemes in town centres or other suitable locations across the region.
4	Softer Measures to encourage active travel	1: City Connectivity 3: Rural Connectivity	Supporting	✓	✓			Aberdeen City Council, Aberdeenshire Council and Nestrans, through the 'Getabout' partnership and brand, to increase current 'softer measures' initiatives to encourage and enable greater active travel use.
5	Improve bus services and network	1: City Connectivity 3: Rural Connectivity	Core	✓	✓			Nestrans, with support from the North East Scotland Bus Alliance, to lead a study to investigate how the new powers embodied in Transport Act could be used to provide a catalyst to generating a step change in bus provision and operations across the region. This would be informed by a region-wide bus network review including a 'rural connectivity audit' – considering current provision versus rural community needs.
6	Demand responsive services	3: Rural Connectivity	Core	✓	✓			Recognition must be made of the financial burden that the COVID-19 pandemic is likely to have on public transport patronage, the funding available to support bus operations across the region, as well as capital spending schemes.
7	New railway stations on existing lines	1: City Connectivity	Core	✓	✓	✓	✓	Nestrans, in partnership with Aberdeen City Council and Aberdeenshire Council, to undertake an Outline Business Case to confirm preferred option for the station sites between Aberdeen

Op.	Description	Category	Type	Recommended Delivery Pathway				Potential Next Steps
				LTS / LA	RTS2040	CRD	STPR / TS	
								and Dyce, (drawing on the work of the Aberdeen North-West Station Review). Outline Business Case to confirm preferred option for the station sites between Aberdeen and Laurencekirk, taking forward the recommendations from the Aberdeen to Laurencekirk Corridor Study. This would support the development a strong 'commuter line' between Montrose, Aberdeen, Dyce and Inverurie. Monitoring of rail passenger demand is required in the short term to understand the impacts of home working borne out of the COVID-19 pandemic. Medium to long term changes in travel behaviour and the use of the rail network would need to be appropriately reflected in any business cases developed.
8	New railway lines and associated stations	-	-	-	-	-	-	It is unlikely that railway line re-openings can be justified under existing Treasury criteria and transport appraisal criteria. Alignments should be protected in case there are substantial changes in appraisal guidance in the future, and the viability of opportunities should be kept under review in the light of policy development. Nestrans will continue to review changes to treasury guidance and transport appraisal criteria and other opportunities affecting the case for rail line re-opening.
9	Strategic Public Transport Corridor Scheme(s)	1: City Connectivity	Core	✓	✓	✓	✓	Nestrans, in partnership with Aberdeen City Council, Aberdeenshire Council and the North East Scotland Bus Allianceto undertake a STAG-based study of Bus Rapid Transit and other mass transit options to serve strategic locations and corridors across the Aberdeen travel to work area. This would in turn provide the Strategic Case for the subsequent Business Case. Funding could also be sought through Transport Scotland's Bus Partnership Fund.
10	Park & Ride Facilities	1: City Connectivity	Core	✓	✓	✓	✓	Park & Ride sites and smaller mini-interchange hubs to be further considered within the framework of corridor studies and rural accessibility analysis.
11	Improved Transport Hub	1: City Connectivity	Supporting	✓	✓			Nestrans to support the work of Aberdeen City Council in the implementation of the City Centre Masterplan including investigating the potential for improved accessibility between the rail / bus station and the harbour.

Op.	Description	Category	Type	Recommended Delivery Pathway				Potential Next Steps
				LTS / LA	RTS2040	CRD	STPR / TS	
12	Improved integrated ticketing (linked to option 5)	1: City Connectivity 3: Rural Connectivity	Supporting	✓	✓			Working in partnership with the North East of Scotland Bus Alliance, Nestrans to investigate the types of improved and smart integrated ticketing schemes that could be implemented region-wide and coordinate with national schemes.
13	Improved marketing / information about public transport services	1: City Connectivity 3: Rural Connectivity	Supporting	✓	✓			Building on current marketing of information in relation to public transport provision, investigate types of additional information provision that would have the greatest positive impact. To be progressed in partnership with bus and rail bodies including the North East of Scotland Bus Alliance and ScotRail as well as the regional Getabout partnership.
14	Access for all across all public transport (including taxi) modes	1: City Connectivity 3: Rural Connectivity	Supporting	✓	✓			Nestrans, partnership with Aberdeen City Council and Aberdeenshire Council , to undertake audit of existing mobility issues across all public transport modes and core urban realm across the region, to establish the specific problems and issues. To be progressed in partnership with bus and rail bodies including the North East of Scotland Bus Alliance and ScotRail, as well as the regional Getabout partnership.
15	A90(N) / A952: Ellon to Peterhead / Fraserburgh	4: Safety 5: Strategic Connectivity	Core	✓	✓	✓	✓	As a Trunk Road, the principal mechanism for delivery of future investment will be via STPR, with due regard to NTS2 investment hierarchy.  Aberdeenshire Council and Nestrans to continue to develop evidence to augment existing business case and appraisal work, and support interface with development management processes.  Nestrans to examine the most appropriate schemes to ensure connectivity to north of Aberdeen (noting the on-going planning for the A96 dualling). Nestrans in partnership with local authorities to examine the most appropriate schemes which would provide improved access to the region's ports at Fraserburgh and Peterhead.
16	A90(S): Aberdeen to Perth	4: Safety 5: Strategic Connectivity	Core	✓	✓		✓	As a Trunk Road, the principal mechanism for delivery of future investment will be via STPR, with due regard to NTS2 investment hierarchy.  Nestrans and Tactran have a joint interest in securing improvements to the safety, consistency and performance of this strategic route.

Op.	Description	Category	Type	Recommended Delivery Pathway				Potential Next Steps
				LTS / LA	RTS2040	CRD	STPR / TS	
								Nestrans to examine the most appropriate schemes to ensure connectivity to the Central Belt. Continue with work to develop a suitable scheme to provide improved connectivity to the new Aberdeen South Harbour at the Bay of Nigg, and associated improvements on A956 Wellington Road corridor.
17	A92: Blackdog to Stonehaven (inc. new River Dee bridge)	4: Safety 5: Strategic Connectivity	Supporting	✓	✓	✓		As a local road, Aberdeen City Council and Aberdeenshire Council to continue to manage the performance of the route and associated principal radials in line with investment hierarchy. Specific requirement to consider the function of the route in line with revised Roads Hierarchy, City Centre Masterplan, associated interventions on A956 Wellington Road/Link to Aberdeen South Harbour, and the performance/function of specific junctions. Nestrans to examine the most appropriate schemes to ensure connectivity to the Central Belt and north of Aberdeen (noting the on-going planning for the A96 dualling).
18	A947: Aberdeen to Banff	4: Safety	Supporting	✓	✓			As a local road, Aberdeen City Council and Aberdeenshire Council to undertake further work and risk analysis to examine the most appropriate schemes in line with investment hierarchy. Includes ongoing development of the A947 Route Action Plan and Dyce area interventions into timed and costed Delivery Plans and including options for an improved link between the A947 and A96 (dependent upon final agreed alignment for A96 dualling).
19	A98: Aberdeenshire / Moray boundary to Fraserburgh	4: Safety	Supporting	✓	✓			As a local road, Aberdeenshire Council to continue to manage the performance of the route in line with investment hierarchy. Includes options for Banff Bridge.
20	A944 / B9119: Aberdeen west to Aberdeenshire boundary with Moray	4: Safety	Core	✓	✓	✓		As a local road, Aberdeen City Council and Aberdeenshire Council to undertake further work and risk analysis to examine the most appropriate schemes on this route in line with investment hierarchy.  Early consideration required of multi-modal connectivity and route performance, as well as wider development pressures, between Aberdeen and the Westhill area.

Op.	Description	Category	Type	Recommended Delivery Pathway				Potential Next Steps
				LTS / LA	RTS2040	CRD	STPR / TS	
21	A93: Aberdeen to Braemar to Aberdeenshire boundary with Perthshire	4: Safety	Supporting	✓	✓			As a local road, local authorities to continue to manage the performance of the route in line with investment hierarchy.
22	Long Term Asset Management strategy	4: Safety	Core	✓	✓			Aberdeen City Council and Aberdeenshire Council to revisit the existing asset management and mitigation plans for both councils to consider whether the plans fully consider the management and maintenance of the road network and structures in light of the changing climate and financial pressures.
23	Community road safety measures	4: Safety	Core	✓	✓			Aberdeen City Council and Aberdeenshire Council to further investigate the potential to introduce 20mph zones in all urban environments building on experience from elsewhere.
24	Low Emission Zones / Zero Emission Zones (inc. consideration of freight restrictions)	2: Demand Management	Core	✓	✓		✓	Aberdeen City Council, Aberdeenshire Council and Nestrans, in partnership with Transport Scotland, to continue work developing the potential Aberdeen city centre LEZ and consider the case for other potential schemes.
25	Electric Vehicle and Hydrogen vehicle charging and refuelling strategy and implementation	-	Core	✓	✓			Aberdeen City Council and Aberdeenshire Council to work with Nestrans to extend the network of publicly available charging points.
26	Improved network monitoring and data use	-	Supporting	✓	✓			Aberdeen City Council and Aberdeenshire Council to continue to develop and explore emerging technology options for traffic monitoring and management, and how these could be applied within the region.
27	Congestion Zone charging	2: Demand Management	Supporting	✓	✓			Nestrans to progress a regional Demand Management Study in partnership with both Aberdeen City Council and Aberdeenshire Council to appraise the options in more detail. The scope of

Op.	Description	Category	Type	Recommended Delivery Pathway				Potential Next Steps
				LTS / LA	RTS2040	CRD	STPR / TS	
28	Parking Demand Management	2: Demand Management	Core	✓	✓			this study would include: the potential to raise parking charges and / or extend the current 'controlled' parking areas; introduce a workplace parking levy; and / or a congestion charging zone through the development of a viable Business Case exploring potential alternative charging models.
29	Improve Inter-City Rail Connections	5: Strategic Connectivity	Core		✓	✓	✓	Nestrans to continue to work with the Transport Scotland and Network Rail to implement plans to improve the rail network connecting Aberdeen to both the Central Belt and Inverness, including consideration of rail freight opportunities.

In addition to the options noted in the above tables, it is important to note the following options (for which a narrative was developed rather than a full appraisal) were also considered in this study, and are recommended for inclusion in the RTS2040:

- **Improved Access to Healthcare:** where Nestrans will continue to work with NHS Grampian to implement the Health and Transport Action Plan, integrated throughout relevant workstreams;
- **Revised Approach to Development Control:** where Nestrans has the potential to influence policy through national policy work;
- **Maintain and expand air routes:** where Nestrans will continue to work with regional parties in a lobbying role;
- **Maintain and enhance maritime routes:** where Nestrans will continue to work with regional parties in a lobbying role;
- **Digital connections:** where Nestrans will support work through the City Region Deal and economic development partners;
- **Freight Hubs and facilities:** whilst likely to be commercially driven, Nestrans will need to maintain a close monitoring role in liaison with the North East Freight Forum and planning partners and other relevant stakeholders (such as the ports and harbours); and
- **Infrastructure measures to support the Aberdeen City Centre Masterplan:** where Nestrans will continue to consider and input into individual elements as they are worked up in detail.

## Future Scenarios

The options were broadly developed and considered under a background ‘business as usual’ scenario. However, there are a number of issues which have the potential to materially re-shape how people use the transport network in the coming decades, and therefore how relevant some of the measures being considered here may be in the future. These issues can be thought of under three main themes:

- Decarbonisation;
- Technology; and
- Societal change.

Whilst there is a varying degree of uncertainty with respect to much of this, the potential implications should be considered in order to manage the risk of, for example, making investments now that are subsequently overtaken by events, leading to potential redundancy. Looking further ahead to the next steps listed above, any project appraisal will require a 60-year benefits stream to be calculated. Some of the issues discussed here, particularly full vehicle automation, are not likely to become a factor in the short or medium term, e.g. to 2040, but certainly would become a factor if looking to, for example, 2080. A broad commentary around these issues is presented in the report.

A further current consideration is the potential for medium-term, structural impacts of the COVID-19 pandemic to materially alter societal behaviour with respect to work and travel. In March 2020, the UK went into ‘lock-down’ due to the global pandemic. The aftermath of the pandemic has the potential to impact on the way we work, live and travel. Given the national need for working from home, employers and employees have had to adapt accordingly, implementing working strategies and technological solutions to enable this. The outcome may be a new working reality where staff choose to work more often from home, and some of the desired behavioural change outlined in the NTS2 and regional & local strategies may be achieved sooner than anticipated. There are also significant short to medium term restrictions on public transport capacities due to the requirements of social distancing. This evolving working and travel environment may have implications for schemes at the planning stages, as these may need to be revisited to explore whether they are still appropriate, or whether different types of schemes may now be considered more relevant. As noted above, while at this stage no one can accurately predict the long-term impacts to travel of the COVID-19 pandemic, the ramifications could be

profound, and any option being progressed for more detailed consideration beyond this stage of option appraisal should recognise and consider this.