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for

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A96 Corridor Review

Strategic Business Case – Summary of Main Report (Draft)

2024

Figures

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Acronyms

Abbreviation	
AST	Appraisal Summary Table
AQMA	Air Quality Management Area
BRES	Business Register and Employment Survey
CO_2	Carbon Dioxide
CRWIA	Child Rights and Wellbeing Impact Assessment
CT	Community Transport
DRT	Demand Responsive Transport
EqIA	Equality Impact Assessment
EV	Electric Vehicle
FSDA	Fairer Scotland Duty Assessment
GVA	Gross Value Added
HEAT	Health Economic Assessment Tool
HGV	Heavy Goods Vehicle
ICE	Internal Combustion Engine
KSI	Killed or Seriously Injured
LA	Local Authority
MaaS	Mobility as a Service
NaPTAT	National Public Transport Accessibility Tool
NO_2	Nitrogen Dioxide
NTS2	The Second National Transport Strategy

Abbreviation	
OBC	Outline Business Case
PAF	Project Appraisal Framework
PIA	Personal Injury Accident
PM_{10}	Particulate Matter
PPM	Public Performance Measure
RTP	Regional Transport Partnership
SBC	Strategic Business Case
SABI	Scottish Accessibility to Bus Indicator
SAC	Special Areas of Conservation
SEA	Strategic Environmental Assessment
SIA	Statutory (and Duty) Impact Assessment
SMART	Specific, Measurable, Attainable, Realistic, Timed
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
STAG	Scottish Transport Appraisal Guidance
STPR2	The Second Strategic Transport Projects Review
TEE	Transport Economic Efficiency
TELMoS	Transport Economic Land-use Model of Scotland
TMfS	Transport Model for Scotland
TPO	Transport Planning Objective

1. Introduction

1.1 Background

1.1.1 In August 2021, it was agreed by the Scottish Government to take forward a transport enhancements programme on the A96 corridor that improves connectivity between surrounding towns, tackles congestion and addresses safety and environmental issues.

1.1.2 Whilst the current plan is to fully dual the A96 route, it was agreed as part of this process there would be a transparent, evidence-based review of the programme, to include a climate compatibility assessment to assess direct and indirect impacts on the climate. Statutory assessments would also be undertaken that include a Strategic Environmental Assessment (SEA) and social and equality related Statutory Impact Assessments (SIAs).

1.1.3 As it has already received Ministerial consent following a Public Local Inquiry, dualling of the A96 from Inverness to Nairn as well as a bypass of Nairn is separate from the wider A96 review process.

1.1.4 The A96 Corridor Review is being carried out in accordance with the Scottish Transport Appraisal Guidance (STAG) (https://www.transport.gov.scot/publication/scottish-transport-appraisal-guidance-managers-guide/). STAG is the best practice, objective-led approach to transport appraisal. The transport appraisal has considered all relevant transport modes within the A96 corridor, including active travel, public transport, rail and roads-based transport modes. Adopting STAG also brings the review in line with the same methodology as set out in the Second Strategic Transport Projects Review (STPR2) (https://www.transport.gov.scot/our-approach/strategy/strategic-transport-projects-review-2/).

1.1.5 The A96 Corridor Review is being carried out by design consultants Jacobs AECOM acting on behalf of Transport Scotland. The review considers transport problems and opportunities within the A96 corridor, the changing policy context and other key considerations, such as development and growth aims for the corridor and surrounding area. Additionally, it considers the impact of the global climate emergency and the COVID-19 pandemic on how people work and travel within the corridor.

1.1.6 The transport appraisal aspect of the A96 Corridor Review assessed the performance of interventions (or package of interventions) against the project specific Transport Planning Objectives (TPOs), and the five STAG criteria, comprising Environment; Climate Change; Health, Safety and Wellbeing; Economy; and Equality and Accessibility. The appraisal has also covered the deliverability, affordability and public acceptability elements associated with each intervention (or package), as well as their consistency with key themes identified from established policy objectives at a local, regional and national level. Key outcomes from the separate Statutory Impact Assessments (SIAs), specifically the Equality Impact Assessment (EqIA), Child Rights and Wellbeing Impact Assessment (CRWIA) and Fairer Scotland Duty Assessment (FSDA) that have been undertaken, have provided further input to inform the appraisal.

1.2 Report Purpose

1.2.1 The four key stages of STAG, including the current progression of the A96 Corridor Review, are illustrated in Figure 1.1.

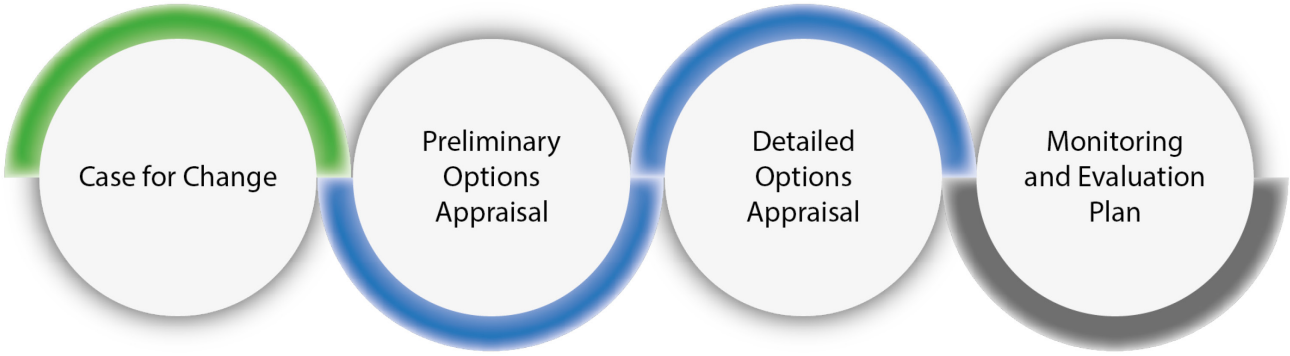

Figure 1.1: The Four Key Stages to the Scottish Transport Appraisal Guidance (STAG)

1.2.2 This report presents a summary of the A96 Corridor Review Case for Change and the Strategic Business Case – Transport Appraisal Report (Draft) (https://www.transport.gov.scot/publication/strategic-business-case-transport-appraisal-report-draft-a96-corridor-review/), which together form the Strategic Business Case (SBC) for the A96 Corridor Review. As the appraisal has followed the STAG process, it represents the first step in the assessment of potential solutions to transport problems and is at a sufficient level of detail to provide the SBC.

1.2.3 STAG defines a multi-criteria framework that appraises options' ability to meet the TPOs and appraises their performance against the five STAG criteria and established policy objectives. The appraisal also covers the 'deliverability' of options through identifying their feasibility, affordability, and public acceptability. The A96 Corridor Review Case for Change has already been completed and published on the Transport Scotland website (https://www.transport.gov.scot/publication/initial-appraisal-case-for-change-december-2022-a96-corridor-review/), with key aspects of the Case for Change summarised in Chapter 2 of this report. The remaining key stages of the STAG process for the A96 Corridor Review, are:

- Preliminary Options Appraisal – this comprised a qualitative appraisal of the options retained from the Option Sifting Stage (presented in the Case for Change) against the project specific TPOs, STAG criteria, established policy objectives and deliverability. As part of the A96 Corridor Review, the SIAs undertaken in parallel to the transport appraisal have also informed the options appraisal. A summary of the Preliminary Appraisal is presented in Chapter 3 of this report.
- Detailed Options Appraisal – the options remaining from the Preliminary Appraisal were progressed to the Detailed Appraisal stage. The appraisal at this stage transitioned from the qualitative approach adopted at the Preliminary Appraisal stage, to more quantitative appraisal elements where possible. Note that the Preliminary Appraisal and Detailed Appraisal were combined into the single Transport Appraisal Report. A summary of the Detailed Appraisal is presented in Chapter 3 of this report.
- Monitoring and Evaluation Plan – to determine the success of the implemented option in achieving the TPOs, performance against STAG criteria and any impacts on established policy objectives. A plan for monitoring (gathering and interpreting information on the performance of any implemented intervention) and evaluation (identification of whether the implemented intervention is performing as intended) should be set out prior to implementation of any deliverable. Although the development of a Monitoring and Evaluation plan forms part of STAG, for consistency with the STPR2 it was agreed that this would not be undertaken at this stage as part of the transport appraisal for the A96 Corridor Review.

1.2.4 The A96 Corridor Review Case for Change (https://www.transport.gov.scot/publication/initial-appraisal-case-for-change-december-2022-a96-corridor-review/), published in December 2022 and hereon referred to as the Case for Change, sets out the evidence base for problems and opportunities linked to the transport network for all modes within the study area and draws upon relevant data analysis, policy review and stakeholder engagement. The report sets out a robust method aligned with the principles of Scotland's Second National Transport Strategy (NTS2) to generate, 'clean' and sift options, ensuring that a broad range of options across all modes that would address the problems and opportunities in the transport corridor were considered.

1.2.5 This report summarises the content of both the A96 Corridor Review Case for Change and the Strategic Business Case – Transport Appraisal Report (Draft), which together form the Strategic Business Case in line with the Five Case Model for business cases (https://www.transport.gov.scot/publication/guidance-on-the-development-of-business-cases-march-2016/4-the-five-case-model/), which covers:

- The Strategic Case
- The Socio-Economic Case
- The Commercial Case
- The Financial Case

- The Management Case.

1.2.6 The purpose of any business case is to ensure that programmes and projects meet their intended objectives and deliver their intended benefits by making sure schemes:

- make a robust case for change – the 'strategic case'
- optimise value for money in terms of economic, social and environmental benefit – the 'socio-economic case'
- are commercially viable – the 'commercial case'
- are financially viable – the 'financial case'
- are achievable – the 'management case'.

1.2.7 As noted previously, the transport appraisal for the A96 Corridor Review undertaken following STAG covers the first two components of the Five Case Model and hence forms the Strategic Business Case. It is at the next stage of design development, for example Design Manual for Roads and Bridges (DMRB) Stage 2 and/or Stage 3, that all five components will be covered in greater detail as part of any later Outline Business Case (OBC) that is prepared prior to procurement.

2. Summary of the Case for Change (The Strategic Case)

2.1 Context

2.1.1 The Case for Change sets out the context of the A96 Corridor Review in relation to geography, policy, socio-economic considerations, environment, and transport. A summary of the key aspects from the Case for Change is presented in the following sections.

Geographical Context

2.1.2 The transport appraisal study area for the A96 Corridor Review, as defined within the Case for Change, is a geographically diverse area that includes Scotland's two most northerly cities of Aberdeen and Inverness, urban areas and rural communities.

Policy Context

2.1.3 To establish the overall strategic fit of the A96 Corridor Review, key elements of relevant policies and strategies were reviewed at a national, regional and local level. This included the consideration of not only infrastructure planning and investment but also broader topic areas including Spatial Planning, Economic Development and Climate Change.

2.1.4 Through this comprehensive review, it is recognised that there is significant impetus, across all levels, to strengthen and enhance multimodal connections through targeted infrastructure investment. This is particularly relevant for underserved rural areas, that can support emerging and future levels of planned growth and to facilitate a sustainable and just transition towards meeting ambitious climate change targets.

2.1.5 The relationship between the A96 Trunk Road corridor between Hardmuir (to the east of Nairn) and Aberdeen and its interfacing local communities and businesses is identified as being pivotal. Any enhancement of the current transport corridor will both directly and indirectly contribute towards successfully achieving strategic objectives and priorities, including both those relating to transport itself but also other dependent and complementary sectors.

Socio-Economic Context

2.1.6 Most of the region's population and employment opportunities are located within Aberdeen, Inverness and Elgin, which are also key hubs for economic activity. There is a trend of an aging population in the transport appraisal study area since 2012, with a growth in population aged 65 and over, particularly in rural settlements and areas. Industry is varied across the transport appraisal study area, but the Mining, Manufacturing and Utilities and the Human Health and Social Work sectors generally make up the highest proportion of roles (based on 2020 Business Register and Employment Survey (BRES) employment data). Aberdeen has a high proportion of Professional, Scientific and Technical Activities roles, whereas the other three council areas that make up the transport appraisal study area have higher than average Construction and Agricultural, Forestry and Fishing employment.

2.1.7 Gross Value Added (GVA) within the region has experienced strong growth, with Aberdeen contributing over £10Bn to the economy in 2018. Economic activity is high across the transport appraisal study area with a lower than national average rate of unemployment. Deprivation is also generally low in the transport appraisal study area, particularly in rural Aberdeenshire, though in urban centres there are pockets of higher deprivation.

Environmental Context

2.1.8 There are a number of cultural, natural and heritage land designations throughout the environmental study area defined in the Case for Change that include: Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). Within the environmental study area, the main sources of noise are from the A96 Trunk Road and the Aberdeen to Inverness rail line. In terms of air quality, the levels of nitrogen dioxide (NO_2) and particulate matter (PM_{10}) are generally well below the Air Quality Objective. There are no declared Air Quality Management Areas (AQMAs) within the environmental study area; however, there are three declared within the Aberdeen City Council area, all to the east of the Environmental study area, and one to the west within Inverness.

Transport Context

2.1.9 Private car is the dominant mode of transport within the transport appraisal study area and is very high in Aberdeenshire and towns surrounding Aberdeen. Compared to the national benchmark, bus is a popular mode in Aberdeen but low across the rest of the transport appraisal study area. Rail use is low across the entire transport appraisal study area for travel to work and there has been a trend of reducing use year on year since 2016.

2.1.10 Walking and cycling are popular in the transport appraisal study area, with areas in Aberdeen City, Moray and Highland all showing higher than national average use of active travel, though Aberdeenshire is well below this benchmark. Travel distances are often shorter in the largest urban areas of Aberdeen, Inverness and Elgin and the proportion of people who travel under 5km for work in the transport appraisal study area (39%) is higher than the national average (32%). Outside of these areas, travel distances are longer and often match the distance to the closest of the major economic centres: Aberdeen, Inverness, or Elgin. Over one fifth (22%) of people in Aberdeenshire travel over 20km to work, compared to the national average of just 13%.

2.2 Problems and Opportunities

2.2.1 Deriving evidence-based transport problems and opportunities is a critical element of the Case for Change. They have been identified from a range of sources including a review of existing policy and strategy documents, data analysis and extensive stakeholder engagement. For further detail on the identified problems and opportunities, please refer to the A96 Corridor Review Case for Change (https://www.transport.gov.scot/publication/initial-appraisal-case-for-change-december-2022-a96-corridor-review/).

Problems

2.2.2 The following transport-related problems have been identified for the transport appraisal study area, with evidence to support the problem and opportunity themes provided in this section. The identified problem themes are:

- Safety and Resilience
- Socio-Economic and Location of Services
- Public Transport Accessibility
- Competitiveness of Public Transport with Other Modes
- Travel Choice and Behaviour
- Health and Environment.

2.2.3 Within these themes, the key problems of note are:

2.2.4 **Safety and Resilience**: From the analysis of accident data, the rural sections of the A96 Trunk Road have overall Personal Injury Accident (PIA) rates lower than or similar to the national average based on all trunk A-roads of the equivalent type. There are, however, selected urban sections of the A96 Trunk Road for which the accident rate is higher than the national average, with specific locations in Forres and Keith. The rate of Killed or Seriously Injured (KSI) is also significantly higher in these two towns than the national average, nearly five times the national average in Keith and just above three times the national average in Forres. A number of rural sections of the A96 Trunk Road also have a KSI rate higher than the national average, these being between Hardmuir and Forres, Fochabers and Keith, Keith and East of Huntly, and Kintore and Craibstone.

2.2.5 The A96 is affected by closures and delays due to accidents, maintenance, and weather events. Recommended diversion routes can be lengthy throughout the corridor, up to approximately 65 km depending on where the closure occurs. The economic impact of closures can be significant for heavy goods vehicles (HGVs) and the movement of goods.

2.2.6 The rail network also demonstrates a certain level of unreliability. Services at Aberdeen, Inverness and Inverurie all have a Public Performance Measure (PPM) percentage worse than the national average pre-COVID-19. This is likely to contribute to the relatively low levels of rail mode share.

2.2.7 **Socio-Economic and Location of Services**: Employment and other key services, tend to be found in the three most populous and key economic locations within the study area: Aberdeen, Inverness and Elgin. Almost half of the total jobs in the transport appraisal study area are found within these three locations. Considering the travel distances between these three key economic centres and the other settlements in the transport appraisal study area, travelling by sustainable modes is relatively unattractive.

2.2.8 The key economic centres contain essential facilities such as major hospitals as well as a much greater density of education facilities. In addition, almost half of the total jobs in the transport appraisal study area are found within these three locations. Outside of these three areas, people making a trip to a workplace are more likely to travel over 10km, thus limiting the potential for active travel. Cycling is used for less than 5% of travel to work trips for all distances, whereas walking is used for over 50% of trips under 2km, but only between 4% and 8% of trips between 2km and 10km depending on the local authority area.

2.2.9 **Public Transport Accessibility:** Evidence across the transport appraisal study area suggests, that outside of Aberdeen, the level of public transport use is low in comparison to the rest of the country. Outside of Aberdeen City, the use of bus for commuting to work is significantly lower than the national average of 10%. This is true in larger settlements such as Inverness (6%) and Elgin (3%), as well as smaller towns such as Nairn (5%) and Lossiemouth (6%) and remote towns like Keith (4%) and Huntly (4%). The Scottish Accessibility to Bus Indicator (SABI) indicates that across the transport appraisal study area, the accessibility to bus is low outside of the urban areas of Aberdeen and parts of Inverness. Rail station accessibility is also an issue, as raised by stakeholders and the public, with Nairn, Huntly, Insch and Inverurie noted for not having completely step-free access to all platforms, potentially limiting patronage.

2.2.10 Nearly 15% of the population in the transport appraisal study area cannot access key services such as hospitals with emergency departments, or higher education within two hours by public transport. Moray and Aberdeenshire both have low accessibility to these services which is partly linked to the rural nature of these areas and that people may not be within typical walking thresholds to public transport stops to access the network. As such, public transport is not an option for many trip purposes within the transport appraisal study area.

2.2.11 **Competitiveness of Public Transport with Other Modes**: Journey times are not competitive for bus in comparison with train and car for longer trips across the transport appraisal study area. A journey between Aberdeen and Inverness for example is scheduled to take around three and a half hours by bus but estimated to take around three hours by car and under two hours thirty minutes by train, with journey times consistently higher by bus between towns along the route as well. The cost of rail and some long-distance bus trips in commuter zones is high in relation to car fuel costs (as at March 2022). Public consultation as part of the A96 Corridor Review has also indicated that the perception of delay and a lack of multimodal integration combined with the perceived high cost of fares, particularly for rail, makes public transport in the transport appraisal study area unattractive to users.

2.2.12 **Travel Choice and Behaviour**: The number of homes without access to a private vehicle in the transport appraisal study area is consistently lower than the Scottish average. Aberdeenshire has a high level of access to a private vehicle, with approximately 90% of households in Aberdeenshire in the transport appraisal study area having access to at least one vehicle and over half have access to multiple vehicles. There is a greater availability of car in the rural areas across the transport appraisal study area. This, combined with the travel to work mode shares, indicates a reliance on private vehicles for travel.

2.2.13 **Health and Environment**: Transport is a major contributor to greenhouse gas emissions along the A96 corridor, particularly in the Aberdeenshire and Highland Council areas. Transport contributes over 35% to total greenhouse gas emissions for both these LAs and between 25% and 30% in Aberdeen City and Moray. This is potentially an outcome of the reliance on private vehicles for travel, longer travel distances and the levels of road-based freight movements.

2.2.14 The route of the A96 travels through the centre of towns including Elgin and Keith, which puts a relatively large proportion of the population in close proximity to potential noise pollution and transport emissions that affect local air quality.

Opportunities

2.2.15 This section provides a summary of key opportunity themes identified for the A96 Corridor Review transport appraisal study area. The identified opportunity themes are:

- Sustainable Economic Growth
- Improving Safety
- Health and Environment Impacts of Travel
- Travel Choice and Behaviour.

2.2.16 **Sustainable Economic Growth**: There is an opportunity to support and enhance sustainable economic growth across the transport appraisal study area. The key industries in the region, including food and drink production and agriculture, forestry and fishing, have a high proportion of goods movement, as evidenced through the relatively high proportion of HGVs on the A96. A shift to more sustainable transport modes could improve journey time reliability, resulting in economic and environmental impacts, with trials being undertaken in recent years to increase the proportion of rail freight movements. Alternatively fuelled vehicles would also reduce the transport emissions and the contribution to air quality issues from the road-based movement of goods.

2.2.17 The transport appraisal study area has shown growth in tourism spend in recent years and in 2019 the sector boosted the Highland and Grampian economies by almost £2.5bn. The rise of whisky tourism and the Speyside Whisky Trail are major contributors to the tourism sector, with distilleries welcoming over two million visitors in 2018, representing growth of 56% from 2010. There are opportunities to change the way in which visitors travel to, from and within the region through improvements to the public transport network and active travel infrastructure. Walking and cycling tourism is one such opportunity and has the potential to create further economic growth by attracting new visitors to the region.

2.2.18 **Improving Safety:** There is the opportunity to reduce accidents and accident severities on the A96 Trunk Road. There are several sections of the road where KSI accident rates are high when compared to the national average for equivalent urban or rural trunk A-roads. Improving safety for road users would contribute to meeting the targets set out in Scotland's Road Safety Framework to 2030 to achieve the 50% reduction in people killed or seriously injured (60% reduction for children). Reducing the level of car-based kilometres travelled would also contribute to a reduction in accident numbers.

2.2.19 **Health and Environment Impacts of Travel**: Reducing the use of car travel throughout the transport appraisal study area, particularly for short trips that could be made by active travel, would help reduce the transport contribution to greenhouse gas emissions. Fewer vehicle kilometres travelled would also improve the local air quality, with associated health benefits, in communities along the A96.

2.2.20 The transition to electric vehicles (EVs) is underway and progressing rapidly but could be enhanced along the A96 by increasing the quantity and improving the quality and reliability of charging infrastructure. EVs would reduce road user greenhouse gas emissions and improve local air quality. Alternative fuelled freight vehicles and buses would also reduce emissions, along with the electrification of rail. Energy production in the areas that make up the transport appraisal study area is diversifying rapidly into renewable markets to provide cleaner energy that for example can help fuel EVs and potential electrification of the rail line between Aberdeen and Inverness.

2.2.21 **Travel Choice and Behaviour**: Travel choices throughout the transport appraisal study area could be increased through better integration of modes and the provision of more demand responsive options in areas with low provision. Physical accessibility at rail stations could also be improved to reduce the reliance on cars for longer trips.

2.2.22 Active travel will continue to play a key role in the transition to sustainable and zero carbon travel by reducing the reliance on private vehicles. In smaller, more remote areas and towns there is an opportunity to increase active travel with connections to safe walking and cycling infrastructure and subsequently reduce private vehicle trips.

2.2.23 Increasing digital connectivity and technology advancements in broadband and mobile connectivity provide opportunities to reduce the need to travel, for example, by allowing greater flexibility for homeworking. Other opportunities brought on by technology can help to integrate public transport and provide better information systems to improve the quality of journeys and enhance the travel experience.

2.3 Transport Planning Objectives

2.3.1 Transport Planning Objectives (TPOs) are of central importance to the STAG process. In line with STAG, the TPOs are based on a comprehensive and evidence-based understanding of problems and opportunities, as summarised in section 2.2, and inform a clear and transparent appraisal of transport options. The TPOs are a key element of the appraisal process from initial option identification and sifting, through to preliminary and detailed appraisal and subsequent monitoring/evaluation.

2.3.2 The A96 Corridor Review TPOs have been aligned to those set at the national level in STPR2, supported by corridor specific sub-objectives. An overarching set of TPOs was established as part of STPR2, which are in turn closely aligned with the four priorities, 12 outcomes and 24 policies contained within the NTS2 (https://www.transport.gov.scot/publication/national-transport-strategy-2/). To reflect the nature of the A96 transport corridor, the overarching TPOs have been amended from the national-level STPR2 objectives.

2.3.3 A series of sub-objectives has been developed to align with the overall direction of the TPOs, and hence the STPR2 national objectives. These sub-objectives complement the overarching TPOs, but with a particular focus on the specific evidence-based problems and opportunities for the A96 transport corridor.

2.3.4 The A96 Corridor Review TPOs and sub-objectives are presented in Table 2.1.

Table 2.1: A96 Corridor Review TPOs and Sub-Objectives

A96 Corridor Review Transport Planning Objectives (TPOs)	A96 Corridor Review Sub-Objectives
TPO1 – A sustainable strategic transport corridor that contributes to the Scottish Government's net zero emissions target.	• Reduce transport related emissions through a shift to more sustainable modes of transport. • Increase the active travel mode share for shorter everyday journeys.
TPO 2 – An inclusive strategic transport corridor that improves the accessibility of public transport in rural areas for access to healthcare, employment, and education.	• Increase public transport mode share by improving connections between sustainable modes of transport. • Reduce the reliance on private car for access to healthcare, employment, and education. • Improve mobility and inclusion, recognising the specific needs of disadvantaged and vulnerable users.

A96 Corridor Review Transport Planning Objectives (TPOs)	A96 Corridor Review Sub-Objectives
TPO 3 – A coherent strategic transport corridor that enhances communities as places, supporting health, wellbeing, and the environment.	• Reduce demand for unsustainable travel by enhancing placemaking within settlements along the A96. • Increase active travel mode share for both shorter and longer distance journeys. • Reduce real and perceived severance caused by the strategic transport network both between and within communities. • Protect or enhance the natural environment and heritage.
TPO 4 – An integrated strategic transport system that contributes towards sustainable inclusive growth throughout the corridor and beyond.	• Increase sustainable access to labour markets and key centres for employment, education, and training. • Increase the mode share of freight by sustainable modes. • Increase competitiveness of key sectors by improving journey time reliability for commercial transport.
TPO 5 – A reliable and resilient strategic transport system that is safe for users.	• Reduce the accident rates and severity of transport related casualties in line with reduction targets. • Improve resilience to disruption (from climate change events and maintenance activities) through adaptation of the corridor's trunk road and rail infrastructure.

2.4 Option Generation and Sifting

Option Development Process

2.4.1 In keeping with the principles of STAG, the appraisal included a robust method to generate, 'clean' and sift option suggestions, ensuring a broad range of options across all modes were initially considered. The approach to the generation of interventions for the A96 Corridor Review is summarised in Figure 2.1.

Figure 2.1 Approach to Option Generation and Sifting

Generation of Long List of 'Options'

2.4.2 The long list of initial suggestions for options was generated based on a range of sources, including a review of options identified from previous studies, as well as feedback received from stakeholder workshops and the public consultation survey. Options were also generated by the Jacobs AECOM A96 Corridor Review project team as part of the process.

2.4.3 Overall, the total number of suggestions generated was 11,091.

Option Cleaning

2.4.4 Within the 11,091 individual suggestions, there was a significant number that were either duplicate entries, or were too vague or ambiguous in their definition, or were submissions that could not be considered an 'option' (for example, those submissions that referenced non-transport related items). As such, an exercise was undertaken to 'clean' the long list.

2.4.5 Duplicate entries were identified, with a single 'master option' identified to represent all duplicated options. For example, there was a very high proportion of duplicate options for full or partial dualling of the A96 and bypasses. Removing these duplicates significantly lowered the total number of options retained for consideration as part of the subsequent sifting process.

2.4.6 Those submissions that could not be considered as options, either as a result of not being sufficiently well defined or being non-transport related items, were removed from the subsequent sifting process.

2.4.7 Following on from this cleaning process, a total of 227 options were retained as part of the 'cleaned' long list of options that formed the input into the Option Sifting process.

Option Sifting

2.4.8 Figure 2.2 demonstrates the option sifting process for the A96 Corridor Review, including the relevant criteria that were applied to the sifting of options at this stage.

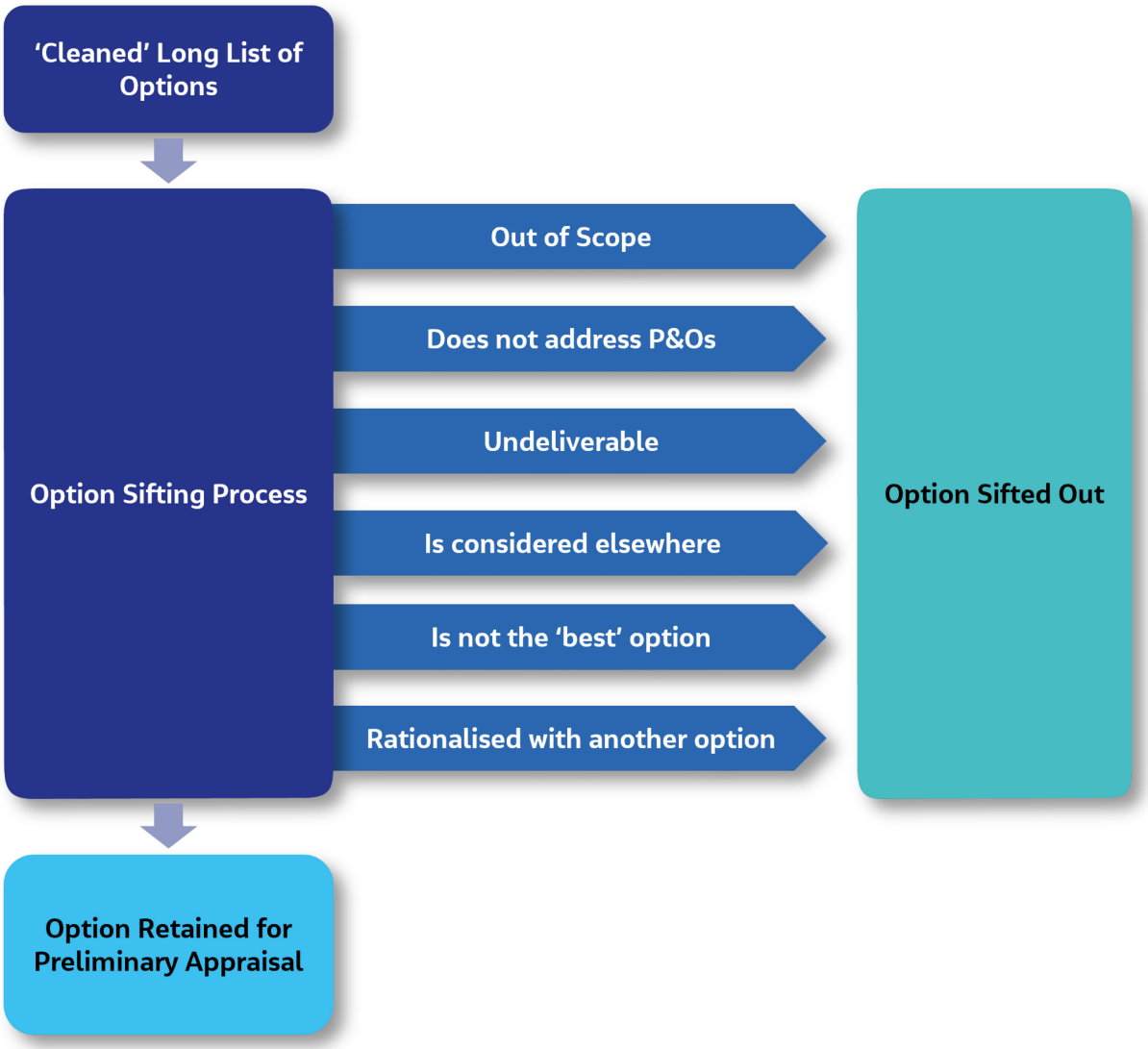

Figure 2.2: Option Sifting Methodology

2.4.9 Options were sifted at this stage for one or more of the following reasons:

- The option was out of scope based on the agreed set of definitions for the A96 Corridor Review (please refer to Appendix C of the A96 Corridor Review Case for Change (https://www.transport.gov.scot/publication/initial-appraisal-case-for-change-december-2022-a96-corridor-review/)).
- The option would not address the problems/opportunities in the region.
- The option would incur significant deliverability risks.
- The option is being progressed elsewhere, including through STPR2 at a national level, and this would be the most appropriate mechanism by which to progress this option.
- The problems/opportunities would be better addressed through another option.
- The option was rationalised with another, similar option.

2.4.10 Of the options retained, those that were similar or shared common elements were rationalised with each other to form the final list of retained options. A total of 227 options were considered, of which 177 were sifted out, leaving 50 options. Of these 50 options, 34 options were rationalised, leaving a final 'short list' of 16 options.

2.5 Retained Options

2.5.1 Following the sifting exercise, 16 options specific to the A96 Corridor Review remained to progress to Preliminary Appraisal. Table 2.2 lists and describes these options.

Table 2.2: List of Retained Options

Option	Mode of Transport	Description
Active Communities	Active Travel	Deliver networks of high quality active travel routes and placemaking improvements within key communities along the A96 corridor such as Nairn, Forres, Elgin, Fochabers, Keith, Huntly, and Inverurie.
Active Connections	Active Travel	Deliver high quality active travel linkages for people walking, wheeling, and cycling between settlements along the A96 corridor, which would combine to form a continuous traffic-free path all the way from Inverness to Aberdeen, either directly adjacent to, or close to, the A96.
Active Hubs	Multimodal	The creation of a strategy for the delivery of active hubs within communities across the length of the A96 corridor.

Option	Mode of Transport	Description
Improved Public Transport Passenger Interchange Facilities	Multimodal	Improve public transport passenger facilities, including accessibility and quality enhancements at bus stations and railway stations.
Bus Priority Measures and Park and Ride	Bus	Implement schemes targeted at delivering faster and more reliable journey times for bus passengers, coupled with the provision of new bus Park and Ride sites where appropriate.
Investment in Demand Responsive Transport (DRT) and Mobility as a Service (MaaS)	Public Transport	Improve access to travel opportunities in locations with low bus network connectivity or where conventional fixed route services may not be suitable or viable. In these areas, flexible services, such as Demand Responsive Transport (DRT) or Community Transport (CT), may be able to provide improved public transport links.
Introduction of Rail Freight Terminals	Freight	Facilitate the introduction, development, and operation of rail freight terminals by the private sector at Inverness, Elgin and Keith, to facilitate freight movements to/from these locations by rail.
Linespeed, Passenger and Freight Capacity Improvements on the Aberdeen to Inverness Rail Line	Rail	Three distinct improvements to the railway between Aberdeen and Inverness: linespeed improvements to cut journey times, the provision of passing loops to enable a more frequent passenger service, and the provision of freight facilities to enable intermodal freight to operate.
Improved Parking Provision at Railway Stations	Rail	Enhance parking facilities at railway stations between Aberdeen and Inverness with the aim of encouraging the use of existing low carbon infrastructure for medium and long-distance travel along the corridor.
A96 Full Dualling (plus Targeted Trunk Road Improvements)	Road	Full dualling of the A96 between Hardmuir to Craibstone to address road safety concerns and provide resilience and reliability improvements for a key connection between Inverness and Aberdeen.

Option	Mode of Transport	Description
Targeted Road Safety Improvements	Road	Improving the safety performance of the A96 Trunk Road to address both real and perceived road safety concerns (with potential measures ranging from minor improvements through to partial dualling).
Elgin Bypass	Road	Improve the safety, resilience, and reliability of the A96 within the vicinity of Elgin through the provision of a bypass of the town.
Keith Bypass	Road	Improve the safety, resilience, and reliability of the A96 within the vicinity of Keith through the provision of a bypass of the town.
Inverurie Bypass	Road	Improve the safety, resilience, and reliability of the A96 within the vicinity of Inverurie through the provision of a bypass of the town.
Forres Bypass	Road	Improve the safety, resilience, and reliability of the A96 in Forres through the provision of a bypass within the vicinity of the town.
A96 Electric Corridor	Technology	Provision of alternative refuelling infrastructure and facilities along the A96 corridor, its interfacing local roads as well as, where appropriate, strategic economic and transport hubs. This option will directly facilitate the dispensation of alternative sources of fuel for various modes of sustainable transport although it is recognised that the option is likely to focus on road vehicles.

2.5.2 The appraisal process is set out in the Strategic Business Case – Transport Appraisal Report (Draft) (https://www.transport.gov.scot/publication/strategic-business-case-transport-appraisal-report-draft-a96-corridor-review/) and summarised as part of the Socio-Economic Case in Chapter 3 of this report.

3. Summary of the Transport Appraisal (The Socio-Economic Case)

3.1 Overview

3.1.1 The socio-economic case seeks to demonstrate that the preferred solution will optimise value for money in terms of economic, social, and environmental benefit. Core to this is the transport appraisal process adopted as part of the A96 Corridor Review.

3.1.2 The A96 Corridor Review has been undertaken following STAG principles as set out in Section 1.2. The outcomes from the Preliminary and Detailed Appraisal stages of the options identified for the A96 Corridor Review are presented as part of the Socio-Economic Case.

3.1.3 Although 16 options were taken forward from the Initial Option Sifting as part of the Case for Change, not all of these were assessed fully during the Preliminary Appraisal.

3.1.4 Early in the Preliminary Appraisal process it was identified that the Active Hubs option would clearly align with and sit within STPR2 Recommendation 22 (Framework for Delivery of Mobility Hubs). It was determined that STPR2 would be the most appropriate mechanism by which to progress this option at a national level. As such, the appraisal of Active Hubs was not completed within the A96 Corridor Review, and outcomes relating to this option are therefore not presented in this chapter.

3.1.5 As the Scottish Government's current plan is to fully dual the A96 route between Inverness and Aberdeen, it was considered appropriate that it progressed to the Detailed Appraisal stage, as it has already been the subject of the appraisal undertaken in 2014 that established the Inverness to Aberdeen Corridor Study A96 Dualling Inverness to Aberdeen Strategic Business Case.

3.1.6 The option for A96 Full Dualling has been appraised as part of the Detailed Appraisal to assess its performance against current appraisal criteria including the TPOs developed for the A96 Corridor Review, the current STAG criteria and the relevant SIAs.

3.1.7 It is recognised that external factors that are out of the direct control or influence of Transport Scotland can have a large influence on future demand for travel. Transport Scotland took the decision to adopt a scenarios approach in STPR2, which considered a range of possible futures, and how the interventions would likely behave in them.

3.1.8 The scenarios that were developed for STPR2 have also been applied to the options appraisal for the A96 Corridor Review. For the Preliminary Appraisal, and subsequent Detailed Appraisal, the following two scenarios with their inherent variants of transport behaviour were considered:

- 'With Policy Scenario' - captures policy ambitions including 20% reduction (from 2019 levels) in car kilometres travelled by 2030, and assumptions to significantly

reduce levels of commuting/business journeys to reflect post COVID-19 working behaviours, leading to low levels of motorised traffic demand and emissions.

- 'Without Policy Scenario' - no policy ambitions are captured, and less significant reductions to levels of commuting/business journeys, leading to higher levels of motorised traffic demand and emissions.

3.1.9 These scenarios were originally developed using the Transport Model for Scotland (TMfS18) and the Transport and Economic/Land Use Model of Scotland (TELMoS18) for use in the appraisal stages of STPR2. Further detail on the development of the future appraisal scenarios can be found in Appendix A of the Strategic Business Case – Transport Appraisal Report (Draft) (https://www.transport.gov.scot/publication/strategic-business-case-transport-appraisal-report-draft-a96-corridor-review/).

3.2 Preliminary Appraisal

3.2.1 The A96 Corridor Review initially assessed 15 individual options as part of the Preliminary Appraisal stage. This included a range of options covering active travel, bus, rail, and road-based transport modes.

3.2.2 As previously highlighted, it was identified that for Active Hubs, STPR2 would be the most appropriate mechanism by which to progress this option at a national level.

3.2.3 The majority of the options performed positively across multiple TPOs and the STAG criteria and would also have positive contributions to the SIAs. In general, the active travel and public transport options would contribute positively across multiple criteria and appraisal metrics. These options are intended to promote a shift away from private vehicles to more sustainable forms of transport, with the resulting benefits including improved air quality, lower vehicle emissions, increased accessibility to key services and improved safety for transport users. The active travel options in particular would have moderate to major positive contributions against multiple TPOs, STAG criteria and SIAs.

3.2.4 The development of the A96 Electric Corridor also performs well against selected criteria. The provision of alternative fuel infrastructure and facilities along the transport corridor, including for both hydrogen and EV technologies, would help reduce the impacts of road-based transport on the environment.

3.2.5 Options requiring new transport infrastructure such as rail improvements, bypasses and targeted road safety improvements, would potentially impact on the Environment STAG criterion, particularly visual amenity, cultural heritage, and biodiversity.

3.2.6 The provision of bypasses would, however, act as key enablers for sustainable transport options to be implemented within communities and increase placemaking opportunities, and were therefore retained to progress to the Detailed Appraisal stage.

3.2.7 The option for Improved Parking Provision at Railway Stations was not taken forward to the Detailed Appraisal stage as its performance against the TPOs, STAG criteria and SIAs was considered marginal. It was considered to have the potential to encourage increased car use to access rail stations, and therefore would have a negative impact against a number of the TPOs and the Equality and Accessibility STAG criterion.

3.2.8 Therefore, of the 14 options assessed in the Preliminary Appraisal, 13 were retained to progress to Detailed Appraisal. As noted previously, the option for A96 Full Dualling has been assessed as part of the Detailed Appraisal.

3.3 Detailed Appraisal

3.3.1 As already outlined, 13 options were progressed to the Detailed Appraisal stage. In recognition that the retained options covered a range of transport modes and therefore would provide a greater net benefit if combined as a package rather than as standalone options, four multimodal packages were originally developed using an 'area-based' approach. These packages were developed to group options that would work in combination to meet the TPOs and thus address the identified problems and opportunities for the corridor. The area-based approach was adopted to develop multimodal packages to suit the varying needs of local communities and businesses along the transport corridor, and ensured no areas were unduly prioritised over others.

3.3.2 As the appraisal progressed, a fifth package was developed and added to the appraisal process. This package comprises all of the options that progressed from the Preliminary Appraisal to create an 'all in' package across the corridor.

3.3.3 Consequently, the Detailed Appraisal appraised the five packages that were developed rather than individual options, as well as appraising the A96 Full Dualling as noted in Section 3.1.5.

3.3.4 The five packages that were assessed at the Detailed Appraisal stage are:

- **Package 1** – relating to those towns along the A96 that contain an option to bypass as brought forward from the Preliminary Appraisal, specifically Forres, Elgin, Keith and Inverurie. This also includes Nairn as it is to be bypassed as part of the separate A96 Dualling Inverness to Nairn (including Nairn Bypass) scheme that has ministerial consent. In addition, this package focuses on delivering networks of high-quality active travel routes and placemaking improvements within the bypassed settlements. Public transport interventions are also included, targeted at delivering faster and more reliable journey times as well as improving the overall passenger experience. As part of the public transport interventions, the rail network would see linespeed, passenger and freight capacity improvements delivered for the Aberdeen and Inverness rail line. This package also includes the provision of alternative refuelling infrastructure and facilities throughout the A96 corridor, seeking to encourage a shift from internal combustion engine (ICE) vehicles.

- **Package 2** – relating to other settlements along the A96 where a bypass is not considered, namely Lhanbryde, Mosstodloch, Fochabers, Huntly, Kintore, and Blackburn. This package focuses on delivering networks of high-quality active travel routes, and placemaking improvements and public transport interventions, targeted at delivering faster and more reliable journey times. As part of the public transport interventions, the rail network would see linespeed, passenger and freight capacity improvements delivered for the Aberdeen and Inverness rail line. This package also includes the provision of alternative refuelling infrastructure and facilities throughout the A96 corridor, seeking to encourage a shift from ICE vehicles. Targeted road safety improvements, to address both real and perceived safety concerns on the A96 Trunk Road are also included.
- **Package 3** – relating to the rural sections between settlements. This package seeks to address both real and perceived safety concerns on the A96 Trunk Road through targeted road safety improvements, while delivering public transport interventions, targeted at faster and more reliable journey times. As part of the public transport interventions, the rail network would see linespeed, passenger and freight capacity improvements delivered for the Aberdeen and Inverness rail line. This package also aims to deliver networks of high-quality active travel routes between settlements along the A96 corridor. This package also includes the provision of alternative refuelling infrastructure and facilities throughout the A96 corridor, seeking to encourage a shift from ICE vehicles.
- **Package 4** – relating to longer distance components that may not be fully captured in the above three packages, including end-to-end movements. This package would provide high-quality active travel routes linking settlements along the A96 corridor while delivering public transport interventions targeted at delivering faster and more reliable journey times. As part of the public transport interventions, the rail network would see linespeed, passenger and freight capacity improvements delivered for the Aberdeen and Inverness rail line. This package also includes the provision of alternative refuelling infrastructure and facilities throughout the A96 corridor, seeking to encourage a shift from ICE vehicles. The package would also deliver targeted safety improvements aiming to address both real and perceived safety concerns on the A96 Trunk Road.
- **Package 5** – comprising all options brought forward from the Preliminary Appraisal. The multimodal package would provide bypasses of Forres, Elgin, Keith and Inverurie, with targeted road safety improvements delivered elsewhere along the A96 Trunk Road. The package would deliver networks of high-quality active travel routes within and between settlements along the A96 corridor. Public transport improvements would be included to enhance the accessibility and quality of interchange facilities and bus priority measures to provide quicker and more reliable journeys, along with linespeed, passenger and freight capacity improvements for the Aberdeen to Inverness rail line. This package also includes the provision of alternative refuelling infrastructure and facilities throughout the A96 corridor and investment in a DRT and MaaS pilot study.

3.3.5 Although each package was appraised individually, where appropriate and relevant, a number of individual options are included in more than one package. The options included within each package are shown in Table 3.1.

3.3.6 For the Detailed Appraisal the majority of options were considered as 'corridor-wide'. As four of the packages would cover different settlements, for appraisal purposes the Active Communities option would apply to the following locations:

- In Package 1 Active Communities are only considered within the bypassed communities of Forres, Elgin, Keith, Inverurie and Nairn [bypassed as part of the separate A96 Dualling Inverness to Nairn (including Nairn Bypass) scheme that has ministerial consent].
- In Package 2 Active Communities are only considered within the settlements and along the A96 Trunk Road sections related to Package 2, specifically Lhanbryde, Mosstodloch, Fochabers, Huntly, Kintore and Blackburn.
- In Packages 4 and 5 Active Communities are considered in the settlements of Nairn [bypassed as part of the separate A96 Dualling Inverness to Nairn (including Nairn Bypass) scheme that has ministerial consent], Forres, Elgin, Lhanbryde, Mosstodloch, Fochabers, Keith, Huntly, Inverurie, Kintore and Blackburn.

Table 3.1: Option Packaging Summary

	Package 1	Package 2	Package 3	Package 4	Package 5
Active Communities	✓	✓		✓	✓
Active Connections			✓	✓	✓
Bus Priority Measures	✓	✓	✓		✓
Improved Public Transport Passenger Interchange Facilities	✓	✓		✓	✓
Investment in DRT and MaaS	✓	✓	✓		✓
Introduction of Rail Freight Terminals				✓	✓
Linespeed, Passenger and Freight Capacity Improvements on the Aberdeen to Inverness Rail Line	✓	✓	✓	✓	✓
Targeted Road Safety Improvements		✓	✓	✓	✓
Forres Bypass	✓				✓
Elgin Bypass	✓				✓
Keith Bypass	✓				✓
Inverurie Bypass	✓				✓
A96 Electric Corridor	✓	✓	✓	✓	✓

3.3.7 The relevant scoring of the performance of the A96 Full Dualling and the five packages against the TPOs, STAG criteria and SIAs are presented in Table 3.2.

3.3.8 Within the table, the abbreviations of the STAG criteria refer to the following:

- Env: Environment
- CC: Climate Change
- H, S & W: Health, Safety and Wellbeing

- Econ: Economy
- Eq & A: Equality and Accessibility

Table 3.2: Detailed Appraisal Scoring Summary

Option or Package	TPO1	TPO2	TPO3	TPO4	TPO5	STAG – Env	STAG – CC	STAG – H, S & W	STAG – Econ	STAG – Eq & A	SIA – EqIA	SIA – CRWIA	SIA – FSDA
A96 Full Dualling under 'With Policy' Scenario	-	0	-	+	+++	- - -	-	+	++	0	+	+	+
A96 Full Dualling under 'Without Policy' Scenario	- -	0	-	+	+++	- - -	- -	+	++	0	+	+	+
Package 1 under 'With Policy' Scenario	++	++	++	+	++	- -	-	++	++	++	++	++	+
Package 1 under 'Without Policy' Scenario	++	++	++	+	++	- -	-	++	++	++	++	++	+
Package 2 under 'With Policy' Scenario	+	+	+	+	++	-	-	+	+	+	+	+	+
Package 2 under 'Without Policy' Scenario	+	+	+	+	++	-	-	+	+	+	+	+	+
Package 3 under 'With Policy' Scenario	+	+	+	+	++	-	-	+	+	+	+	+	+
Package 3 under 'Without Policy' Scenario	+	+	+	+	++	- -	-	+	+	+	+	+	+
Package 4 under 'With Policy' Scenario	++	+	++	+	++	-	-	++	+	+	+	+	+
Package 4 under 'Without Policy' Scenario	++	+	++	+	++	-	-	++	+	+	+	+	+
Package 5 under 'With Policy' Scenario	++	++	++	++	++	- -	-	++	++	++	++	++	+
Package 5 under 'Without Policy' Scenario	++	++	++	++	++	- -	-	++	++	++	++	++	+

3.3.9 The following sections summarise the outcomes of the Detailed Appraisal for the A96 Full Dualling and the five packages.

3.3.10 Full Detailed Appraisal Summary Tables can be found in Appendix D of the Strategic Business Case – Transport Appraisal Report (Draft).

Full Dualling

3.3.11 This option would provide a continuous dual carriageway standard road between Hardmuir (to the east of Nairn) and Craibstone (to the west of Aberdeen), connecting to the eastern extent of the A96 Dualling Inverness to Nairn (including Nairn Bypass) scheme that already has ministerial consent. This would connect Inverness and Aberdeen by a dual carriageway route along the entirety of the A96.

3.3.12 Full Dualling would be expected to offer safety benefits as accident rates would be lower than on a single carriageway national speed limit road. The delivery of a dual carriageway along with bypasses of major towns including Forres, Elgin, Keith, and Inverurie would bring improved journey times, and greater reliability to journey times through improved overtaking opportunities. The additional lanes in each direction would also offer increased network resilience in the case of maintenance closures or in response to incidents including accidents and/or vehicle breakdowns that may still occur. Benefits would be expected for private cars as well as commercial vehicle movements including HGVs and longer distance bus journeys that use the A96.

3.3.13 This option would deliver both positive and negative impacts in the context of the assessment against the A96 Corridor Review TPOs, STAG criteria, and SIA criteria. This option would result in minor to major negative impacts in the 'With Policy' and 'Without Policy' Scenarios, specifically when considering TPO1 (contributing to the Scottish Government's net zero targets) and TPO 3 (enhancing communities as places to support health, wellbeing and the environment) as well as the STAG Environment and Climate Change criteria. The negative impacts are anticipated to be more severe for TPO1 and the STAG Climate Change criteria in the 'Without Policy' Scenario, with its higher levels of motorised traffic demand and emissions, than the 'With Policy' Scenario.

3.3.14 Increasing the capacity and travel speeds over the length of the A96 has the potential to encourage additional road-based traffic, which would in turn increase associated transport emissions. Although the option would be expected to include provision for active travel along its length, the option overall would have a minor to moderate negative impact towards TPO1 for contributing to the Scottish Government's net zero targets and STAG Climate Change criterion. Impacts are anticipated to be worse in the 'Without Policy' Scenario (moderate negative) where vehicle kilometres travelled are not anticipated to reduce in line with current policy objectives.

3.3.15 The construction of a new dual carriageway would also have significant impacts on the STAG Environment criterion. Though some benefits are anticipated as the new route would improve air quality and reduce the levels of noise pollution in towns, it would increase total nitrous oxide (NO_x) and particulate matter ($PM_{2.5}$) emissions. It would also negatively affect the natural environment, including the water environment, biodiversity and habitats, landscape, the historic environment, geology and soils, and agriculture and forestry. This option would therefore have a major negative impact on the STAG Environment criterion in both scenarios. The impacts on the natural environment also contribute to the minor negative impact for TPO3 regarding the enhancement of communities as places to support health, wellbeing and the environment.

3.3.16 This option would provide road users, businesses, and communities along the route with a consistent road standard that would provide greater connectivity, improve journey time reliability and expand labour catchments along the corridor. Therefore, it is anticipated to make a minor positive contribution against the TPO4 contributing to sustainable inclusive growth, along with a minor positive impact on the STAG Health, Safety and Wellbeing criterion and a moderate positive impact in relation to the STAG Economy criterion. This option would have a major positive impact to TPO5 as a result of the benefits it would provide in terms of a safe, reliable and resilient transport system arising from the improved road standard and consistent overtaking facilities. The option would also have a minor positive impact to the three SIAs considered.

3.3.17 Delivery is considered to be feasible at this stage with Transport Scotland having extensive experience of delivery and implementation of similar projects across Scotland. A detailed assessment would be required to fully establish the details of the dual carriageway, including the optimal corridor, location of bypasses and the junction strategy. Whilst work has been advanced on sections of this route, further work would be required to progress the development of the full corridor.

3.3.18 The capital cost of A96 Full Dualling is estimated to be between £2,501m and £5,000m. Construction costs can vary significantly and are dependent on a number of other factors, such as the complexity of construction, the requirement for earthworks and structures, localised ground conditions, the purchase of land and various other engineering and environmental constraints. Therefore, at this stage an appropriate level of risk has been included in the overall affordability of the option. Transport Scotland would be the asset owner on completion and is therefore anticipated to take on the costs associated with the operation and maintenance of the dual carriageway.

3.3.19 Overall, there is likely to be general support for A96 Full Dualling. It is likely that the option would receive public support from local communities, with evidence that large sections of the local population are in favour of dualling the A96 Trunk Road. Over half of respondents in the A96 Corridor Review public consultation survey named dualling (either full or partial) as their top priority and suggestion (55% for both), while only approximately 11% noted their opposition to full or partial dualling as one of their three biggest priorities. Notable opposition is likely to come from landowners affected by construction and other stakeholders who have concerns over the potential impacts to the environment and the climate compatibility of full dualling.

Package 1

3.3.20 This package is focused primarily on delivering transport network improvements at key towns along the A96 corridor (Nairn, Forres, Elgin, Keith and Inverurie) combined with corridor-wide interventions that are anticipated to deliver benefits across the wider corridor. It should be noted that the A96 Dualling Inverness to Nairn (including Nairn Bypass) scheme does not form part of the A96 Corridor Review as it has successfully progressed through a Public Local Inquiry and has Ministerial consent. Interventions within Nairn itself, similar to those proposed within the other bypassed towns, have however been included in this package for appraisal.

3.3.21 The options that make up Package 1 are:

- Active Communities (specifically in the towns of Nairn, Forres, Elgin, Keith and Inverurie)
- Bus Priority Measures
- Improved Public Transport Passenger Interchange Facilities
- Investment in DRT and MaaS
- Linespeed, Passenger and Freight Capacity Improvements on the Aberdeen to Inverness Rail Line
- Bypasses of Forres, Elgin, Keith and Inverurie
- A96 Electric Corridor.

3.3.22 The delivery of bypasses at key towns would remove through traffic from town centres, improve safety, reduce the impact of severance caused by the A96 and reduce congestion within communities.

3.3.23 The package would enable the delivery of active travel infrastructure within bypassed settlements, supporting the development of Active Communities. Improved placemaking and better connections to key destinations by active travel links would help to increase travel within towns by active modes.

3.3.24 Public transport improvements, including the reallocation of road space within towns to provide bus priority combined with enhanced interchange facilities and rail improvements to linespeed and capacity, would reduce public transport journey times, improve public transport journey time reliability, and help to promote mode shift to more sustainable means of transport. Investment in DRT and MaaS would also help to increase the mode share of public transport and reduce the reliance on private cars for travel. Improvements to public transport are also anticipated to improve accessibility to key destinations and services via bus and rail to reduce the need for car travel.

3.3.25 Improved active and sustainable travel choices would help to encourage mode shift away from private car that would in turn improve safety in terms of reducing the number of road traffic accidents.

3.3.26 As part of this package, the delivery of alternative refuelling stations for EVs and hydrogen vehicles throughout the A96 corridor would contribute to the transition away from petrol and diesel cars to reduce the environmental impact of private travel.

3.3.27 This package would provide a positive contribution to all A96 Corridor Review TPOs. The options within this package would deliver moderate positive impacts on the A96 Corridor Review TPOs in relation to contributing to the Scottish Government's net zero targets (TPO1), improving inclusion through the increased accessibility of public transport (TPO2), enhancing communities as places to support health, wellbeing and the environment (TPO3), and providing a safe, reliable and resilient transport system (TPO5). The package would have a minor positive impact on TPO4 for contributing to sustainable inclusive growth. Benefits predominantly stem from the bypasses reducing trips in the centre of towns and allowing for increased active travel and multimodal trips in these locations whilst also reducing the risks of road accidents.

3.3.28 The package provides a mixed contribution to the STAG criteria, with negative impacts relating to the Environment and Climate Change criteria. Although it would encourage more sustainable travel choices through enhanced active travel networks within communities, promoting public transport use through bus and rail and facilitating the growth in EVs and hydrogen vehicles, the package would negatively impact on environmental considerations such as biodiversity, landscape and visual amenity and agriculture and soils where infrastructure improvements are introduced. This could include new road infrastructure such as the proposed bypasses, new rail lines and the provision of alternative fuelling stations along the A96 corridor. Overall, this is anticipated to result in a moderate negative impact to the Environment criterion.

3.3.29 The proposed infrastructure including the bypasses of Forres, Elgin, Keith and Inverurie, are considered enablers to maximising sustainable travel within these communities. However, these benefits are likely to be offset somewhat by an anticipated increase in Greenhouse gas emissions through construction and as a result of more vehicle kilometres travelled by vehicles using the bypasses around towns, contributing to a minor negative impact to the Climate Change criterion.

3.3.30 The package is anticipated to have a moderate positive impact on the STAG criteria for Health, Safety and Wellbeing, Economy and Equality and Accessibility through improved public transport and active travel connections to key services, as well as benefits for the wider economy and longer distance trips.

3.3.31 The package is also expected to positively contribute to the three SIAs, including a moderate positive impact for the EqIA and CRWIA, and a minor positive impact for the FSDA.

3.3.32 As the package would include bypasses of the larger towns along the A96 corridor, the benefits achieved are expected to positively impact the towns where the largest concentration of people reside. There would also be benefits for the wider economy and longer distance trips.

3.3.33 The majority of interventions included within this package are considered to be generally feasible and would be delivered by Transport Scotland or Network Rail, who have extensive experience of delivery and implementation across Scotland, with local authorities or Regional Transport Partnerships delivering interventions on the local road network. However, the feasibility of delivery at specific locations considered within this package remains to be tested, and detailed development work and local decision-making is required to identify the most appropriate solutions.

3.3.34 The capital cost of this package is estimated to be between £501m and £1,000m at this stage of the assessment process. Construction costs can vary significantly and is dependent on a number of other factors, such as the complexity of construction, the requirement for earthworks and structures, localised ground conditions, the purchase of land and various other engineering and environmental constraints. The relatively high-level nature of a number of the interventions within the package makes capital costs and the operation and maintenance costs more difficult to estimate. Therefore, at this stage an appropriate level of risk has been included in the overall affordability of the package. Strategic partnerships between relevant parties and asset owners can help spread the burden of costs, particularly for ongoing maintenance and operation.

3.3.35 Overall, public acceptability for this package is anticipated to be mixed, with some groups supporting the package, given the focus on active and sustainable modes of travel, whilst others are likely to oppose this package on, for example, environmental grounds as a result of the environmental impact from bypasses. Any landowners who have land acquired to enable interventions to be developed may not be receptive to the proposals.

Package 2

3.3.36 The specific settlements considered in this package are Lhanbryde, Mosstodloch, Fochabers, Huntly, Kintore and Blackburn. This package focuses on delivering transport network improvements within the vicinity of these towns, aiming to encourage a transfer to sustainable modes and improve road safety.

3.3.37 The options that make up Package 2 are:

- Active Communities (specifically in the towns of Lhanbryde, Mosstodloch, Fochabers, Huntly, Kintore and Blackburn)
- Bus Priority Measures
- Improved Public Transport Passenger Interchange Facilities
- Investment in DRT and MaaS
- Linespeed, Passenger and Freight Capacity Improvements on the Aberdeen to Inverness Rail Line
- Targeted Road Safety Improvements
- A96 Electric Corridor.

3.3.38 The package would enable the delivery of active travel infrastructure within the aforementioned settlements, supporting the development of Active Communities. Improved placemaking and better connections to key destinations by active travel links would help to increase travel within towns by active modes.

3.3.39 Public transport improvements, including the provision of bus priority within these towns combined with enhanced interchange facilities and rail improvements to linespeed and capacity, would reduce public transport journey times, improve public transport journey time reliability, and help to promote mode shift to more sustainable means of transport. Investment in DRT and MaaS would also help to increase the mode share of public transport, improving connectivity in areas that can be underserved by the current, fixed route public transport services. Improvements to public transport are also anticipated to improve accessibility to key destinations and services via bus and rail to reduce the need for car travel.

3.3.40 It should be noted that whilst this package is primarily targeted at specific settlements, interventions such as DRT and MaaS and rail linespeed and capacity improvements are anticipated to be delivered corridor-wide. This is expected to result in benefits being realised in other areas within the corridor.

3.3.41 Improved active and sustainable travel choices would help to encourage mode shift away from travel by private car that would in turn improve safety in terms of reducing the number of road traffic accidents. Alongside this, targeted safety improvements would be introduced to reduce the accident risk and safety concerns on the A96.

3.3.42 As part of this package, the delivery of alternative refuelling stations for EVs and hydrogen vehicles throughout the A96 corridor would contribute to the transition away from petrol and diesel cars to reduce the environmental impact of private travel.

3.3.43 This package is anticipated to make a positive impact on all A96 Corridor Review TPOs. The focus on sustainable travel choices for these settlements that tend to be smaller in size and population is expected to deliver minor positive contributions in relation to contributing to the Scottish Government's net zero targets (TPO1), improving inclusion through the accessibility of public transport (TPO2), enhancing communities as places to support health, wellbeing and the environment (TPO3), and contributing to sustainable inclusive growth (TPO4). The inclusion of targeted road safety interventions would provide a moderate positive contribution for TPO5 regarding the provision of a safe, reliable and resilience transport system.

3.3.44 However, the package would have a minor negative impact on the STAG Environment and Climate Change criteria. The package is anticipated to encourage more sustainable travel choices through enhanced active travel networks within communities, promote public transport use through bus and rail, and facilitate the growth in EVs and hydrogen vehicles through increased public charging and refuelling infrastructure. However, new infrastructure associated with road safety improvements, alternative refuelling infrastructure along the A96 corridor and improvements to the Aberdeen to Inverness rail line is expected to negatively impact environmental considerations including biodiversity and habitats, landscape, historic environment, water drainage and flooding, geology and soils and agriculture and forestry. The package would improve local air quality by providing alternatives to private car, but overall a minor negative impact is expected on the Environment criterion. In terms of climate change, the anticipated increase in greenhouse gas emissions from construction is expected to outweigh any reduction in road user greenhouse gas emissions, with a minor negative impact expected on this criterion.

3.3.45 This package is anticipated to have a minor positive impact on the STAG criteria in relation to Health, Safety and Wellbeing, Economy and Equality, and Accessibility by providing improved public transport and active travel connections in settlements to encourage their use over private car. There would also be some benefits for the wider economy. The package is also anticipated to have a minor positive contribution to all three of the SIAs.

3.3.46 As components of the package such as Active Communities are focused on smaller settlements along the A96 corridor with generally lower local populations, the magnitude of benefits is not anticipated to be as significant. Benefits are likely to be felt most by those living and working within the six settlements specifically considered in the package, with some corridor-wide benefits through interventions such as road safety improvements and rail improvements to linespeed and capacity. The overall impact on the problems and opportunities of the A96 corridor is therefore anticipated to be more limited.

3.3.47 The majority of interventions included within this package are considered to be generally feasible at this stage and would be delivered by Transport Scotland or Network Rail, who have extensive experience of delivery and implementation across Scotland. Local authorities or Regional Transport Partnerships would potentially deliver interventions on the local road network. However, the feasibility of delivery at specific locations considered within this package remains to be tested, and detailed development work and local decision-making is required to identify the most appropriate solutions.

3.3.48 The capital cost of this package is estimated to be between £501m and £1,000m at this stage of the assessment process. Construction costs can vary significantly and are dependent on a number of other factors, such as the complexity of construction, the requirement for earthworks and structures, localised ground conditions, the purchase of land and various other engineering and environmental constraints. The relatively high-level nature of a number of interventions within the package makes capital costs and the operation and maintenance costs more difficult to estimate. Therefore, at this stage an appropriate level of risk has been included in the overall affordability of the package. Strategic partnerships between relevant parties and asset owners can help spread the burden of costs, particularly for ongoing maintenance and operation.

3.3.49 Overall, public acceptability is anticipated to be mixed, with some groups supporting the package and others disagreeing with the focus and scale of interventions included. There are certain user groups who are likely to welcome this package, given the focus on active and sustainable modes of travel. A focus on smaller communities would likely reflect well locally, though there may be some opposition from other areas in the corridor if the perception is that the package does not appear to offer much benefit. Real and perceived safety concerns are evident along the corridor, and so the inclusion of targeted road safety interventions is anticipated to be largely welcomed. Any landowners who have land acquired to enable interventions to be developed may not be receptive to the proposals.

Package 3

3.3.50 This package is focused on delivering transport network improvements to rural areas along the A96 corridor and across the wider transport appraisal study area, aiming to encourage a transfer to sustainable modes and improve road safety.

3.3.51 The options that make up Package 3 are:

- Active Connections
- Bus Priority Measures
- Investment in DRT and MaaS
- Linespeed, Passenger and Freight Capacity Improvements on the Aberdeen to Inverness Rail Line
- Targeted Road Safety Improvements
- A96 Electric Corridor.

3.3.52 Active Connections would provide long distance networks of high-quality active travel routes between settlements along the A96 corridor and improve crossing facilities for active modes to encourage their use and improve safety of walking, wheeling, and cycling in rural areas. This would encourage more active travel trips from rural areas to key services, contributing to a modal shift away from private vehicles. Improved connectivity between key destinations by active travel links largely segregated from the A96 Trunk Road would help to increase travel between towns by active modes.

3.3.53 Public transport improvements, including the provision of bus priority, along with rail improvements to linespeed and capacity, would reduce public transport journey times, improve public transport journey time reliability and help to encourage mode shift to more sustainable means of transport across rural areas. Investment in DRT and MaaS would also help to increase the mode share of public transport, improving connectivity in rural areas which are often underserved by the current, fixed route public transport services. Improvements to public transport are also anticipated to improve accessibility to key destinations and services via bus and rail to reduce the need for car travel.

3.3.54 Improved active and sustainable travel choices would help to encourage mode shift away from travel by private car that would in turn improve safety in terms of reducing the number of road traffic accidents. Alongside this, targeted safety improvements would be introduced to reduce the accident risk and safety concerns on the A96.

3.3.55 As part of this package, the delivery of alternative refuelling stations for EVs and hydrogen vehicles throughout the A96 corridor would contribute to the transition away from petrol and diesel cars to reduce the environmental impact of private travel. This is particularly relevant to the rural areas throughout the A96 corridor where the reliance on private car travel is high.

3.3.56 This package makes a minor positive contribution to the majority of the A96 Corridor Review TPOs, with a moderate positive contribution to TPO5. The package focuses on delivering improvements to sustainable travel choices to promote mode shift away from cars for those within rural areas where the population is sparser, and existing active travel and public transport connections can be infrequent, unreliable or not a viable option. The package is expected to deliver minor positive contributions in relation to contributing to the Scottish Government's net zero targets (TPO1), improving inclusion through the accessibility of public transport (TPO2), enhancing communities as places to support health, wellbeing and the environment (TPO3), and contributing to sustainable inclusive growth (TPO4). A moderate positive contribution is anticipated in relation to TPO5 for providing a safe, reliable, and resilient transport system, predominantly as a result of the targeted road safety improvements and provision of high-quality active travel routes between settlements through Active Connections.

3.3.57 However, the package makes a minor negative impact on the STAG Environment and Climate Change criteria. Although it would encourage more sustainable choices through enhanced active travel networks to connect communities, promoting public transport use through bus and rail improvements, and facilitating growth in EVs and hydrogen vehicles through increased public charging and refuelling infrastructure, the package would negatively impact on environmental considerations such as biodiversity and habitats, landscape, water drainage and flooding and geology and soils where infrastructure improvements are introduced. This could include new road infrastructure through road safety interventions, active travel connections between settlements, improvements to the rail line and the provision of alternative fuelling stations along the A96 corridor. In terms of climate change, the anticipated increase in greenhouse gas emissions from construction is expected to outweigh any reduction in road user greenhouse gas emissions with a minor negative impact overall.

3.3.58 There would be minor positive impacts on the STAG Health, Safety and Wellbeing, Economy and Equality and Accessibility criteria through improved public transport and active travel connections in rural areas where current provision is often lacking, encouraging their use instead of private car. There would also be benefits for the wider economy and longer distance trips between communities. The improvement to the rail line and longer distance active travel routes, alongside the development of DRT and MaaS would have a positive impact on accessibility to key services for those in rural areas where current connections are often under provided. The package is also anticipated to have a minor positive contribution to all three SIAs.

3.3.59 As components of the package are focused on rural areas along the A96 with low local populations, the magnitude of benefits is not anticipated to be as significant. Benefits are likely to be felt most by those living and working within the rural areas considered in the package, with some corridor-wide benefits through interventions such as active connections, road safety improvements and rail improvements to linespeed and capacity. The overall impact on the problems and opportunities of the A96 corridor is therefore anticipated to be more limited.

3.3.60 The majority of interventions included within this package are considered to be readily feasible and would be delivered by Transport Scotland or Network Rail, who have extensive experience of delivery and implementation across Scotland. Local authorities or Regional Transport Partnerships would likely deliver interventions on the local road network. However, the feasibility of delivery at specific locations considered within this package remains to be tested, and detailed development work and local decision-making is required to identify the most appropriate solutions.

3.3.61 The capital cost of this package is estimated to be between £501m and £1,000m at this stage of the assessment process. Construction costs can vary significantly and is dependent on a number of other factors, such as the complexity of construction, the requirement for earthworks and structures, localised ground conditions, the purchase of land and various other engineering and environmental constraints. The relatively high-level nature of a number of interventions within the package makes capital costs and the operation and maintenance costs more difficult to estimate. Therefore, at this stage an appropriate level of risk has been included in the overall affordability of the package. Strategic partnerships between relevant parties and asset owners can help spread the burden of costs, particularly for ongoing maintenance and operation.

3.3.62 Overall, public acceptability is anticipated to be mixed, with some groups supporting the package and others disagreeing with the focus and scale of interventions included. Certain user groups would likely welcome this package given the focus on active and sustainable modes or travel. A focus on rural areas and smaller communities would likely reflect well locally, though there may be some opposition from other areas in the corridor if the perception is that the package does not appear to offer much benefit. Real and perceived safety concerns are evident on the corridor, and the inclusion of targeted road safety interventions is anticipated to be largely welcomed. Any landowners who have land acquired to enable interventions to be developed may not be receptive to the proposals.

Package 4

3.3.63 This package of interventions is targeted at longer distance journeys along the corridor that tend to be between settlements or into either Inverness or Aberdeen. The package focuses on delivering transport network improvements along the corridor aiming to encourage a transfer to sustainable modes and improve road safety.

3.3.64 The options that make up Package 4 are:

- Active Communities
- Active Connections
- Improved Public Transport Passenger Interchange Facilities
- Introduction of Rail Freight Terminals
- Linespeed, Passenger and Freight Capacity Improvements on the Aberdeen to Inverness Rail Line
- Targeted Road Safety Improvements
- A96 Electric Corridor.

3.3.65 Active Connections would provide longer distance networks of high-quality active travel routes between settlements along the A96 corridor and improve crossing facilities for active modes to encourage their use and improve safety of walking, wheeling, and cycling for longer distance trips. These would be connected through settlements via Active Communities to provide access to key services in settlements and facilitate a fully connected active travel network between Inverness and Aberdeen. Improved integration of active travel routes with placemaking and better connections to key destinations by active travel links would help to increase travel within and between towns by active modes.

3.3.66 Improved public transport interchange facilities, coupled with improvements to the rail line to increase capacity and linespeed would reduce public transport journey times, improve public transport journey time reliability, and help to promote mode shift to more sustainable means of transport for travel across the A96 corridor and into Inverness and Aberdeen. This would benefit those accessing healthcare facilities, education and employment and expand labour markets.

3.3.67 Rail Freight Terminals would be introduced to facilitate mode shift away from road-based freight and contribute to reducing the number of HGVs on the A96. This would reduce the environmental impact of freight across the A96 corridor, whilst also delivering safety improvements through reduced vehicle numbers and less driver frustration.

3.3.68 Improved active and sustainable travel choices would help to encourage mode shift away from travel by private car that would in turn improve safety in terms of reducing the number of road traffic accidents. Alongside this, targeted safety improvements would be introduced to reduce the accident risk and safety concerns on the A96.

3.3.69 As part of this package, the delivery of alternative refuelling stations for EVs and hydrogen vehicles throughout the A96 corridor would contribute to the transition away from petrol and diesel cars to reduce the environmental impact of private travel. This is particularly relevant to the rural areas throughout the A96 corridor where the reliance on private car travel is high.

3.3.70 This package makes a moderate positive contribution to three of the A96 Corridor Review TPOs, and a minor positive contribution to the remaining two. The focus on sustainable travel choices for longer distance travel, and the potential for mode shift away from car to public transport and active travel, is expected to deliver moderate positive contributions in relation to providing sustainable transport choices to contribute to the Scottish Government's net zero targets (TPO1), enhancing communities as places to support health, wellbeing, and the environment (TPO3) and providing a safe, reliable and resilient transport system (TPO5). The package has a minor positive contribution to improving inclusion through the accessibility of public transport (TPO2) and contributing to sustainable inclusive growth (TPO4).

3.3.71 The package would encourage more sustainable choices to be made by people and businesses along the A96 corridor through the creation of a fully connected long distance active travel network between Aberdeen and Inverness, promoting public transport through rail linespeed and capacity and interchange infrastructure improvements, encouraging a shift to more sustainable rail freight and facilitating the growth in alternatively fuelled vehicles through increased public EV charging and refuelling infrastructure. However, the package is expected to have an overall minor negative impact on the STAG Environment criterion as it would affect environmental considerations such as biodiversity and habitats, landscape, water drainage and flooding, and geology and soils where infrastructure improvements are introduced. This could include new road infrastructure such as safety interventions, improvements to the rail line, the active travel connections through rural areas and urban settlements and the provision of alternative fuelling stations along the A96 corridor. In terms of the Climate Change criterion, the anticipated increase in greenhouse gas emissions from construction is expected to outweigh any reduction in road user greenhouse gas emissions with a minor negative impact overall.

3.3.72 The package is anticipated to have a moderate positive impact on the STAG criterion for Health, Safety and Wellbeing, through increased levels of active travel improving health outcomes, accident reductions through targeted measures, and improved access to health and wellbeing services in key destinations such as Inverness, Elgin, and Aberdeen. The package is also expected to deliver a minor positive impact on the STAG Economy, and Equality and Accessibility criteria through improved public transport and active travel connections encouraging their use over private car for longer distance trips and providing increased access to labour markets. There would also be benefits for the wider economy, whilst freight terminals are anticipated to increase the rail mode share for freight, thus reducing the level of HGVs on the A96. The package is also expected to have a minor positive contribution to the three SIAs.

3.3.73 As the package focuses on longer distance travel, the impacts would predominantly affect those who travel between communities along the A96 corridor, or into Aberdeen and Inverness at either end of the trunk road. Those who travel internally within settlements would see some benefits to local placemaking where active travel routes are introduced or enhanced, as well as connections to local transport hubs and public transport interchanges.

3.3.74 The majority of interventions included within this package are considered to be readily feasible at this stage and would likely be delivered by Transport Scotland or Network Rail, who have extensive experience of delivery and implementation across Scotland. Local authorities or Regional Transport Partnerships would likely deliver interventions on the local road network. However, the feasibility of delivery at specific locations considered within this package remains to be tested, and detailed development work and local decision-making is required to identify the most appropriate solutions.

3.3.75 The capital cost of this package is estimated to be between £501m and £1,000m at this stage of the assessment process. Construction costs can vary significantly and are dependent on a number of other factors, such as the complexity of construction, the requirement for earthworks and structures, localised ground conditions, the purchase of land and various other engineering and environmental constraints. The relatively high-level nature of a number of interventions within the package makes capital costs and the operation and maintenance costs more difficult to estimate. Therefore, at this stage an appropriate level of risk has been included in the overall affordability of the package. Strategic partnerships between relevant parties and asset owners can help spread the burden of costs, particularly for ongoing maintenance and operation.

3.3.76 Overall, public acceptability is anticipated to be mixed, with some groups supporting the package and others disagreeing with the focus and scale of interventions included. Certain user groups are likely to welcome this package given the focus on active and sustainable modes of travel as an alternative to car. This package would see direct benefits for many across the corridor, noting the long travel distances across the region for access to key services in Aberdeen, Elgin and Inverness. Real and perceived safety concerns are also evident on the corridor, and the inclusion of targeted road safety measures is anticipated to be largely welcomed. Any landowners who have land acquired to enable interventions to be developed may not be receptive to the proposals.

Package 5

3.3.77 This package is focused on delivering transport network improvements to settlements and rural sections across the A96 corridor, which would aim to encourage a shift to sustainable modes, increase opportunities for residents and businesses and improve road safety. As part of this package, bypasses would be delivered at key towns (Forres, Elgin, Keith and Inverurie) along with corridor-wide interventions that are anticipated to deliver benefits across the wider corridor. It should be noted that the A96 Dualling Inverness to Nairn (including Nairn Bypass) scheme does not form part of the A96 Corridor Review as it has successfully progressed through a Public Local Inquiry and has ministerial consent. Interventions within Nairn itself, similar to those proposed within the other bypassed towns, however, have been included in this package for appraisal.

3.3.78 The options that make up Package 5 are:

- Active Communities
- Active Connections
- Bus Priority Measures
- Improved Public Transport Passenger Interchange Facilities
- Investment in DRT and MaaS
- Introduction of Rail Freight Terminals

- Linespeed, Passenger and Freight Capacity Improvements on the Aberdeen to Inverness Rail Line
- Targeted Road Safety Improvements
- Bypasses of Forres, Elgin, Keith and Inverurie
- A96 Electric Corridor.

3.3.79 The delivery of bypasses at key towns would remove through traffic from town centres, improve safety, reduce the impact of severance caused by the A96 and reduce congestion within communities. Bypassing towns would also enable the reallocation of existing road space to deliver sustainable transport links (such as new active travel routes or bus priority) within towns whilst aiding in the development of placemaking.

3.3.80 Active Connections would provide long distance networks of high-quality active travel routes between settlements along the A96 corridor and improve crossing facilities for active modes to encourage their use and improve the safety of walking, wheeling, and cycling for longer distance trips. These would be connected through settlements via Active Communities to provide access to key services in settlements and facilitate a fully connected active travel network between Inverness and Aberdeen. The provision of bypasses of key towns would help facilitate the introduction of active travel infrastructure in larger populated areas. Improved integration of active travel routes with placemaking and better connections to key destinations by active travel links would help to increase travel within and between towns by active modes.

3.3.81 Public transport improvements, including the provision of bus priority measures, the enhancement or creation of interchange facilities and rail improvements to linespeed and capacity, would reduce public transport journey times, improve public transport journey time reliability and help to promote mode shift to more sustainable means of transport. Investment in DRT and MaaS would also help to increase the mode share of public transport and reduce the reliance on private cars for travel. Improvements to public transport are also anticipated to improve accessibility to key destinations and services such as healthcare facilities, education and employment and expand labour markets via bus and rail to reduce the need for car travel.

3.3.82 Rail Freight Terminals would be introduced to facilitate a mode shift away from road-based freight and reduce the number of HGVs on the A96. This would reduce the environmental impact of freight across the A96 corridor, whilst also delivering safety improvements through reduced vehicle numbers and less driver frustration.

3.3.83 Improved active and sustainable travel choices would help to encourage mode shift away from travel by private car that would in turn improve safety in terms of reducing the number of road traffic accidents. Alongside this, targeted safety improvements would be introduced to reduce the accident risk and safety concerns on the A96.

3.3.84 As part of this package, the delivery of alternative refuelling stations for EVs and hydrogen vehicles throughout the A96 corridor would contribute to the transition away from petrol and diesel cars to reduce the environmental impact of private travel.

3.3.85 This package would provide a positive contribution to all A96 Corridor Review TPOs. The focus on sustainable travel choices across the corridor, both within settlements and between them, along with the provision of bypasses of the major settlements on the A96 Trunk Road is expected to deliver a moderate positive impact to TPO1 for contributing to the Scottish Government's net zero emissions target. The package is also anticipated to have moderate positive impacts for improving inclusion through the increased accessibility of public transport (TPO2), enhancing communities as places to support health, wellbeing and the environment (TPO3), contributing to sustainable inclusive growth (TPO4), and providing a safe, reliable and resilient transport system (TPO5).

3.3.86 The package provides a mixed contribution to the STAG criteria, with negative impacts relating to the Environment and Climate Change criteria. The package would encourage more sustainable choices through enhanced active travel networks within communities, promoting public transport use through bus and rail, and facilitating the growth in EVs and hydrogen vehicles through increased public charging and refuelling infrastructure. However, it would negatively impact on environmental considerations such as biodiversity, landscape and visual amenity, and agriculture and soils where infrastructure improvements are introduced. This could include new road infrastructure through the proposed bypasses, improvements to the rail line, the active travel connection through rural areas and urban settlements and the provision of alternative fuelling stations along the A96 corridor. Overall, this is anticipated to result in a moderate negative impact on the STAG Environment criterion. Greenhouse gas emissions are anticipated to rise, particularly as a result of the construction and an increase in vehicle kilometres travelled as a result of the inclusion of the four bypasses. However, travel by sustainable modes is anticipated to increase that partially offsets this, with an overall minor negative impact for the STAG Climate Change criterion.

3.3.87 The package is anticipated to have a moderate positive impact on the STAG criteria for Health, Safety and Wellbeing, and Equality and Accessibility through improved public transport and active travel connections to key services that include hospitals and other health centres. There is also anticipated to be a moderate positive impact on the STAG criteria in relation to Economy, with benefits expected locally as well as for the wider economy and longer distance trips. The package is also expected to positively contribute to the three SIAs scored as part of the Detailed Appraisal, including a moderate positive impact for the EqIA and CRWIA, and a minor positive impact for the FSDA.

3.3.88 Benefits are expected to be achieved across the corridor and across different demographic groups. As the package delivers bypasses to the larger towns along the A96 corridor, the benefits achieved are expected to positively impact the towns where the largest concentration of people reside.

3.3.89 Smaller communities along the A96 corridor and in more rural areas are also likely to see benefits from aspects of package5, though the magnitude is not likely to be as great as those in the more heavily populated communities. Where options within the package are focused on longer distance travel, such as rail improvements and the long-distance active travel connections, the impacts would benefit those that travel between communities along the A96 corridor or into Aberdeen and Inverness at either end of the route.

3.3.90 The majority of interventions included within this package are considered to be generally feasible at this stage and would likely be delivered by Transport Scotland or Network Rail, who have extensive experience of delivery and implementation across Scotland. Local authorities or Regional Transport Partnerships would likely deliver interventions on the local road network. However, the feasibility of delivery at specific locations considered within this package remains to be tested, and detailed development work and local decision-making is required to identify the most appropriate solutions.

3.3.91 The capital cost of this package is estimated to be between £1,001m and £2,500m at this stage of the assessment process. Construction costs can vary significantly and is dependent on a number of other factors, such as the complexity of construction, the requirement for earthworks and structures, localised ground conditions, the purchase of land and various other engineering and environmental constraints. The relatively high-level nature of a number of the interventions within the package makes capital costs and the operation and maintenance costs more difficult to estimate. As this package contains all options brought forward form Preliminary Appraisal, the costs are estimated to be higher than the other four packages. Therefore, at this stage an appropriate level of risk has been included in the overall affordability of the package. Strategic partnerships between relevant parties and asset owners can help spread the burden of costs, particularly for ongoing maintenance and operation.

3.3.92 Overall, public acceptability is anticipated to be mixed, with some groups supporting the package whilst others are likely to oppose the package on for example the environmental impacts of some of the interventions included. A mixed response is expected for the bypasses, with some welcoming them on account of the safety improvements and journey time reliability, but others having reservations about the environmental impact. Certain user groups are likely to welcome this package given the focus on active and sustainable modes of travel as an alternative to car. Real and perceived safety concerns are also evident on the corridor, and the inclusion of targeted road safety measures is anticipated to be largely welcomed. Any landowners who would have land acquired to enable interventions to be developed may not be receptive to the proposals.

3.4 Package Refinement

3.4.1 The appraisal of the area-based packaging approach has identified the likely benefits and the negative impacts of the five packages that were developed. However, it was acknowledged that there would be added value in disaggregating, as far as possible, the benefits of each package to identify the contribution that individual options were making to the overall packages' performance. The intention was to identify which options provided the greatest contribution to the total benefits of the packages, and what proportion of the total estimated cost they would represent.

3.4.2 An assessment of the benefits and contribution of the individual options to the performance of the overall packages has been undertaken. This has included additional detailed assessment using the available transport models to examine the impact of those options that could be represented in the models on an individual basis, and determine what proportion of the total benefits they would provide.

3.4.3 The additional assessments allowed the better performing options to be identified and these were combined to form an additional package, referred to as the Refined Package. This package was developed to maximise the level of potential benefits provided by combining the best performing options, whilst optimising investment within the corridor and delivering the value for money.

3.4.4 The options included in the Refined Package are shown in Table 3.3, alongside the original five packages for comparison.

3.4.5 For appraisal of the Refined Package, the majority of options were considered as 'corridor-wide', with the Active Communities option applied to the following locations for the purposes of the appraisal:

- In the Refined Package, Active Communities are considered in the settlements of Nairn [bypassed as part of the separate A96 Dualling Inverness to Nairn (including Nairn Bypass) scheme that has ministerial consent], Forres, Elgin, Lhanbryde, Mosstodloch, Fochabers, Keith, Huntly, Inverurie, Kintore and Blackburn.

Table 3.3: Options Included in the Refined Package

	Package 1	Package 2	Package 3	Package 4	Package 5	Refined Package
Active Communities	✓	✓		✓	✓	✓
Active Connections			✓	✓	✓	
Bus Priority Measures	✓	✓	✓		✓	
Improved Public Transport Passenger Interchange Facilities	✓	✓		✓	✓	✓
Investment in DRT and MaaS	✓	✓	✓		✓	✓
Introduction of Rail Freight Terminals				✓	✓	
Linespeed, Passenger and Freight Capacity Improvements on the Aberdeen to Inverness Rail Line	✓	✓	✓	✓	✓	✓
Targeted Road Safety Improvements		✓	✓	✓	✓	✓
Forres Bypass	✓				✓	
Elgin Bypass	✓				✓	✓
Keith Bypass	✓				✓	✓
Inverurie Bypass	✓				✓	
A96 Electric Corridor	✓	✓	✓	✓	✓	✓

3.4.6 Table 3.4 summarises the rationale for the options included in the Refined Package, and those that were not included in the Refined Package.

Table 3.4: Refined Package Option Selection Rationale

Intervention	Included in Refined Package?	Reasons for Inclusion or Otherwise
Active Communities	Yes	Would help to drive modal shift, contributing to net zero and placemaking in communities, supporting health and wellbeing and therefore positively contributing to multiple TPOs and STAG criteria. The option also provides significant benefits in reducing premature deaths, contributing £60m-£70m in benefits over a 20-year appraisal period.
Active Connections	No	Whilst there are likely to be some health-related benefits associated with the option, the distance between the towns and limited population catchment area means the likely increase in active travel usage following the inclusion of the intervention is considered very limited. Health Economic Assessment Tool (HEAT) benefits for Active Connections would be between approximately £1m-£5m over a 20-year appraisal period, which equates to a very small proportion of the Active Communities benefits. The contribution to the overall performance is therefore minimal and was not considered to provide a sufficiently acceptable return on the potential level of investment required.

Intervention	Included in Refined Package?	Reasons for Inclusion or Otherwise
Bus Priority Measures	No	The types and locations of bus priority measures were further developed during the detailed appraisal stage and resulted in proposed measures on the approaches to Aberdeen and Inverness and around the Port Elphinstone Junction at Inverurie. Whilst the National Public Transport Accessibility Tool (NaPTAT) assessment indicates that the bus priority measures would improve access to key services within the corridor, any benefits are predominantly located around Inverurie and on approach to Aberdeen. Bus priority and active travel measures within Aberdeenshire and Aberdeen City are already being assessed via a separate study, the A96 Inverurie to Aberdeen Multi-Modal Transport Study. The anticipated level of benefits on approach to Inverness are expected to be limited as bus priority measures would be constrained by a combination of geographical features, existing developments and structures on approach to the A9/A96 Raigmore Interchange. Separately, park and ride was examined for Elgin, but the population size and hence potential demand was not considered of sufficient 'critical mass' to make park and ride viable. In addition, there is restricted opportunity for any accompanying priority measures to be implemented on the A96 within Elgin.
Improved Public Transport Passenger Interchange Facilities	Yes	The option would enhance public transport connections including with the rail network, allowing a wider population to take advantage of the potential linespeed enhancements. This would result in Transport Economic Efficiency (TEE) benefits and encourage a modal shift away from car, whilst improving accessibility of the public transport network, contributing to a number of the TPOs and STAG criteria.
Investment in DRT and MaaS	Yes	The option would provide key accessibility benefits, particularly for vulnerable groups with limited transport options. It would also enhance connections with the wider public transport network including rail, allowing a wider population to take advantage of the potential Linespeed enhancements. This would further encourage a modal shift away from car. The option provides a positive contribution to a number of the TPOs and STAG criteria.

Intervention	Included in Refined Package?	Reasons for Inclusion or Otherwise
Introduce Rail Freight Terminals	No	Although the option is anticipated to encourage a mode shift from road to rail, resulting in minor positive benefits to many of the TPOs, STAG criteria and SIAs, the level of benefits are likely to be tempered by the available rail freight paths on the Aberdeen to Inverness line. It is also considered that the option would result in a minimal reduction of HGVs on the A96. There is also a degree of overlap between this intervention and the Linespeed, Passenger and Freight Capacity Improvements intervention, which includes making use of existing, disused facilities with Huntly likely to be most suitable for conversion to an intermodal facility. It is noted that STPR2 recommendation 44 'Rail freight terminals and facilities' recommends the need for a market study as a first step, but based on the evidence available at this stage it has not been included in the Refined Package.
Linespeed, Passenger and Freight Capacity Improvements on the Aberdeen to Inverness Rail Line	Yes	The option is anticipated to contribute to over 50% of the TEE benefits, equating to between £40m-£50m for both the 'With Policy' and 'Without Policy' scenarios, and make a significant contribution to improving accessibility to key services from settlements that contain a rail station. Modelling this intervention in isolation indicates that it contributes approximately 50%-60% of the public transport accessibility benefits associated with the larger towns such as Elgin and Inverurie. In the smaller settlements such as Insch, Huntly and Forres it provides an even greater proportion of accessibility benefits as these settlements have fewer alternative public transport options.
Targeted Road Safety Improvements	Yes	The option covers a range of potential measures ranging from minor improvements through to partial dualling and is anticipated to result in safety benefits of approximately £10m-£15m under the 'With Policy' Scenario and £15m-£20m under the 'Without Policy' Scenario. This intervention would target the areas of the network where there is a known or perceived safety issue to reduce the potential for accidents on the route. This would result in a significant positive contribution to TPO5 and the STAG Safety criterion in particular, with the reduction in accidents also enhancing the reliability of the route.

Intervention	Included in Refined Package?	Reasons for Inclusion or Otherwise
Forres Bypass	No	The bypass would remove a proportion of through traffic from the existing A96 Trunk Road, but as this does not pass directly through Forres town centre, traffic volumes on local roads through the town are forecast to remain largely unchanged following the introduction of the bypass. Economic benefits are minimal and it would not maximise opportunities for active travel within Forres itself with little contribution to placemaking. Forres bypass was therefore not considered to provide a sufficiently acceptable return on the potential level of investment required.
Elgin Bypass	Yes	The bypass would remove a significant proportion of through traffic from the town, enhancing safety and providing air quality benefits whilst also adding a level of reliability and resilience to the network. The bypass would also facilitate the Active Communities measures in the town for further localised benefits. Elgin and Keith bypasses in combination would contribute a significant proportion of the TEE benefits, approximately £20m-£25m in the 'With Policy' Scenario and £25m-£30m in the 'Without Policy' Scenario.
Keith Bypass	Yes	The bypass would remove a significant proportion of through traffic from the town, enhancing safety where there is a known safety problem and providing air quality benefits whilst also adding a level of reliability and resilience to the network. The bypass would also facilitate the Active Communities measures in the town for further localised benefits. Elgin and Keith bypasses in combination contribute to a significant proportion of the TEE benefits, approximately £20m-£25m in the 'With Policy' Scenario and £25m-£30m in the 'Without Policy' Scenario.

Intervention	Included in Refined Package?	Reasons for Inclusion or Otherwise
Inverurie Bypass	No	The bypass would remove a proportion of traffic from the existing A96 Trunk Road, but as this does not pass directly through Inverurie town centre, traffic volumes on local roads through the town are forecast to remain relatively unchanged following the introduction of the bypass. Economic benefits are minimal and it would not maximise opportunities for active travel within Inverurie itself with little contribution to placemaking. Inverurie bypass was therefore not considered to provide a sufficiently acceptable return on the potential level of investment required.
A96 Electric Corridor	Yes	The A96 Electric Corridor would seek to support the rapid decarbonisation of the transport sector, ensuring sufficient flexibility to accommodate the varying needs of transport users and local communities in the corridor whilst improving local and global air quality. It would therefore contribute significantly to a number of the TPOs as well as the STAG Climate Change criterion.

3.4.7 The following sections summarise the outcomes of the Detailed Appraisal for the Refined Package.

3.4.8 The Refined package would provide a positive contribution to all A96 Corridor Review TPOs. The options within this package would deliver moderate positive impacts in relation to contributing to the Scottish Government's net zero targets (TPO1), enhancing communities as places to support health, wellbeing and the environment (TPO3) and providing a safe, reliable and resilient transport system (TPO5). The package would contribute a minor positive impact to TPO2 relating to improving inclusion through the accessibility of public transport, and contributing to sustainable inclusive growth (TPO4). Selected benefits arise as a result of the bypasses reducing trips in the centre of Elgin and Keith, which in turn would facilitate an increase in active travel and multimodal trips in these locations. This package also encourages modal shift away from car for longer distance journeys through improvements on the rail network, whilst also reducing the risks of road accidents along the A96 Trunk Road through targeted road safety improvements.

3.4.9 The package is anticipated to result in negative impacts on the STAG Criteria relating to the Environment and Climate Change. This package would encourage more sustainable travel choices through enhanced active travel networks within communities, promote public transport use through improved interchange and rail improvements, and facilitate the growth in EVs and hydrogen vehicles through increased public charging and refuelling infrastructure. However, the construction of interventions within the package is likely to have a negative impact on the natural environment such as biodiversity, landscape and visual amenity and agriculture and soils. This could include new road infrastructure such as the proposed bypasses, new rail lines, and the provision of alternative fuelling stations along the A96 corridor. As a result, overall the package is anticipated to result in a minor negative impact on the STAG Environment criterion.

3.4.10 Whilst the proposed bypasses of Elgin and Keith would act as key enablers to enhancing sustainable travel within these communities, benefits to short distance trips and within communities are likely to be partially offset by an anticipated increase in GHG emissions at a corridor level, both during the construction and operational phases. In operation there is the potential for increased car kilometres travelled due to an increase in journey distance as a result of the bypasses. As such, overall this package would have a minor negative impact on the STAG Climate Change criterion.

3.4.11 The package is anticipated to have a moderate positive impact on the remaining three STAG criteria relating to Health, Safety and Wellbeing, Economy and Equality and Accessibility. The package would improve sustainable transport connections to key services that include hospitals and employment opportunities, reduce the risk of accidents on the A96 Trunk Road, as well as resulting in benefits for the wider economy and longer distance trips.

3.4.12 The package is also expected to positively contribute to the three SIAs, including a moderate positive impact for the EqIA and CRWIA, and a minor positive impact for the FSDA.

3.4.13 The majority of interventions included within this package are considered to be generally feasible at this stage and would likely be delivered by Transport Scotland or Network Rail, who have extensive experience of delivery and implementation across Scotland. Local authorities or Regional Transport Partnerships would likely deliver interventions on the local road network. However, the feasibility of delivery at specific locations considered within this package remains to be tested, and detailed development work and local decision-making is required to identify the most appropriate solutions.

3.4.14 The capital cost of this package is estimated to be between £501m and £1,000m at this stage of the assessment process. Construction costs can vary significantly and are dependent on a number of other factors, such as the complexity of construction, the requirement for earthworks and structures, localised ground conditions, the purchase of land and various other engineering and environmental constraints. The relatively high-level nature of a number of the interventions within the package makes capital costs and the operation and maintenance costs more difficult to estimate. Therefore, at this stage an appropriate level of risk has been included in the overall affordability of the package. Strategic partnerships between relevant parties and asset owners can help spread the burden of costs, particularly for ongoing maintenance and operation.

3.4.15 Overall, public acceptability of this package is anticipated to be mixed, with some groups supporting the package given the focus on active and sustainable modes of travel across the corridor. Real and perceived safety concerns are evident on the corridor, with improving road safety being the second most popular priority and suggestion theme identified in the A96 Corridor Review public consultation survey, so the inclusion of targeted road safety improvements is anticipated to be welcomed. Opposition to the package is likely to come from, for example, environmental grounds as the bypasses would be constructed in greenfield sites. Any landowners who would have land acquired as a result of this package may not be receptive to the proposals.

3.5 Detailed Appraisal Costs and Benefits

3.5.1 Table 3.5 shows the estimated cost ranges and the range of full benefits for each of the packages considered at Detailed Appraisal, including the Refined Package and the A96 Full Dualling. The range of benefits comprise the results from the economic assessment undertaken using the Department for Transport's (DfT) Transport Users Benefit Appraisal (TUBA), greenhouse gas benefits (or disbenefits) calculated using the DfT's Transport Analysis Guidance (TAG) Unit A3 and accident benefits, plus wider benefits derived from Wider Economic Impacts (WEIs), health benefits from active travel derived using the World Health Organisation's HEAT tool, and benefits associated with reduced driver frustration. Note transport appraisal requires benefits to be expressed in a common base year defined by the DfT, which is currently 2010, with the assessment software automatically calculating the values taking account of the effects of inflation and discounting to the base year. This is standard practice across for all transport appraisals undertaken across the UK. The cost bands presented in the table are based on recent benchmarked values and are therefore not discounted.

Table 3.5: Detailed Appraisal Costs and Benefits

Package	Cost Bands (Undiscounted)	Present Value Benefits 'With Policy' (2010 values)	Present Value Benefits 'Without Policy' (2010 values)
Package 1	£501m - £1,000m	£130m - £160m	£130m - £160m
Package 2	£501m - £1,000m	£100m - £125m	£110m - £135m
Package 3	£501m - £1,000m	£90m - £115m	£100m - £125m
Package 4	£501m - £1,000m	£120m - £150m	£130m - £160m
Package 5	£1,001m - £2,500m	£180m - £220m	£200m - £240m
Refined Package	£501m - £1,000m	£180m - £220m	£190m - £230m
A96 Full Dualling	£2,501m - £5,000m	£570m - £690m	£770m - £890m

3.5.2 A96 Full Dualling has the highest range of benefits in both scenarios, but with the highest estimated cost range. The higher combined benefit range for A96 Full Dualling is largely driven by the inclusion of driver frustration benefits, through the provision of consistent overtaking opportunities and the associated reduction in driver stress.

3.5.3 The Refined Package and Package 5 have the highest range of benefits in both scenarios, with Package 5 having a slightly higher benefit range in the 'Without Policy' Scenario albeit at a significantly higher cost range. Considering the monetised range of benefits captured as part of the assessment, the Refined Package represents the best performing package in comparison to Packages 1 to 5.

3.5.4 The Refined Package targets investment at locations which are anticipated to maximise the benefits within the corridor. The range of options covering all modes included in the Refined Package represents an inclusive multimodal corridor approach.

3.5.5 The delivery of bypasses at Elgin and Keith would remove through traffic from town centres, supporting modal shift and reducing traffic volumes in both Elgin and Keith by approximately 25%-35% and 65%-85% respectively, depending on the travel behaviour scenario. The bypasses would enable the reallocation of existing road space to deliver sustainable transport links within towns whilst aiding in the development of placemaking to maximise the benefits associated with Active Communities. The bypasses would also improve safety particularly in Keith where PIA and KSI rates are greater than the national average for similar trunk A-roads in Scotland, reduce the impact of severance caused by the A96 and reduce congestion within these communities.

3.5.6 The package would enable the delivery of active travel infrastructure within bypassed settlements, supporting the development of Active Communities. Improved placemaking and better connections to key destinations by active travel links would help to increase travel within towns by active modes.

3.5.7 Public transport benefits would be realised through the inclusion of the linespeed and capacity enhancements on the rail network and Public Transport Passenger Interchange Improvements. These options, as part of the Refined Package, would reduce rail journey times, improve journey time reliability and help to promote mode shift to more sustainable means of transport. Improvements to public transport are also anticipated to improve accessibility to key destinations and services via rail to reduce the need for car travel.

3.5.8 Investment in DRT and MaaS would complement these interventions to help increase the mode share of public transport and reduce the reliance on private cars for travel. DRT and MaaS would also provide benefits through enhancing accessibility within the corridor for those without access to a car, particularly for vulnerable groups such as children and the elderly.

3.5.9 The inclusion of Targeted Road Safety Improvements should help to reduce accidents at locations where the propensity for accidents to occur is greater, improving both real and perceived safety of the route. This would also improve the overall reliability of the route by reducing the level of disruption to road users and the local communities from incidents. The range of measures included in road safety improvements could also allow for the inclusion of additional overtaking opportunities, which would help contribute towards a reduction in driver frustration within the corridor. Improved active and sustainable travel choices would also help to encourage mode shift away from private car that would in turn improve safety in terms of reducing the number of road traffic accidents. Alongside this, as part of the Refined Package, the inclusion of the A96 Electric Corridor would also facilitate decarbonisation within the corridor for those who would still rely on car travel.

3.6 Outcomes of the Established Policy Objectives Assessment

3.6.1 The following sections summarise the outcomes of the bespoke Policy Assessment Framework (PAF) assessment for the six packages and A96 Full Dualling. This assessment considers the consistency of the packages and A96 Full Dualling option with Established Policy Objectives as set out in Section 3.6 of the Strategic Business Case – Transport Appraisal Report (Draft).

3.6.2 Further detail can be found in Appendix B of the Strategic Business Case – Transport Appraisal Report (Draft).

A96 Full Dualling

3.6.3 A96 Full Dualling is not fully consistent with a number of areas of current policy, including those with objective themes covering Environment, Climate Change and Equality. Although dualling would result in reduced traffic through settlements, it would be expected to result in an increased number of vehicles overall. The scale of the infrastructure involved has the potential to significantly impact the environment which will need to be assessed and mitigated, for example impacts on biodiversity and species. In general, the option does not promote a modal shift and the anticipated overall increase in vehicle kilometres travelled does not support the key Climate Change policy target of 20% reduction in car kilometres by 2030 and meeting net zero by 2045. In terms of Equality, the option predominantly only benefits those with access to private vehicles. Any impact upon the reliability or frequency of public transport remains uncertain and dependant on both the alignment of the potential dual carriageway and operator decisions with regards to service routing.

3.6.4 A96 Full Dualling is considered to have some potential consistency with the objective theme of Health, Safety and Wellbeing. A96 Full Dualling would likely improve the overall safe operation of the network by providing safer overtaking options and removing traffic and congestion from the bypassed towns. However, it is likely to reinforce the use of private vehicles for journeys and fails to provide attractive sustainable alternatives to benefit health outcomes and general wellbeing.

3.6.5 The option would provide reliability and resilience benefits to freight and other road users, supporting the transport of goods and providing additional capacity for key economic sectors in the north-east so has a general consistency with the Economic objective theme. However, A96 Full Dualling is only largely consistent with this theme as agricultural land may be lost to allow construction of the dualled trunk road with a consequent impact on local rural economies and there is potentially a reduction in passing trade for towns bypassed by the new dualled A96 Trunk Road.

Package 1

3.6.6 Package 1 has limited consistency with the Environment and Climate Change objective themes, with the impact of bypasses a key consideration. Whilst bypasses would remove some through traffic from towns, allowing for improved active travel and access to sustainable transport, overall traffic volumes may increase due to the increase in road capacity. Air quality may improve in settlements as a result but overall the contribution towards key Climate Change policy targets of a 20% reduction in car kilometres by 2030 and meeting net zero by 2045 may be limited by the inclusion of the four bypasses. Investment in the decarbonisation of travel through the A96 Electric Corridor is consistent with Climate Change policy but the extent of the physical works associated with the construction of some interventions, particularly rail improvements and the four bypasses, could introduce environmental impacts which will need to be assessed and mitigated, for example impacts on biodiversity and species. Whilst any new infrastructure should be designed to withstand predicted impacts of climate change it is likely to remain subject to damage from extreme weather, as is the case for the existing transport networks.

3.6.7 However, the package is generally consistent with the Health, Safety and Wellbeing and Equality objective themes. Reducing traffic volumes in bypassed settlements could improve actual and perceived feelings of safety whilst encouraging more people to take up active travel for shorter everyday journeys, supporting the 20-minute neighbourhood concept and improving health outcomes. The package also provides improvements in active travel network coverage within the bypassed settlements. The public transport improvements to the bus and rail network, as well as interchange facilities that along with the introduction of DRT and MaaS would help vulnerable users access critical services such as health care, employment and education, ensure Package 1 is consistent with the Equality objective theme.

3.6.8 Additionally, the package is mostly consistent with the Economic objective theme. Bypasses would improve the reliability of the trunk road network and reduce journey times. They are also anticipated to strengthen the reliability of local and regional supply chains. However, agricultural land may be lost and there is potentially a reduction in passing trade for the bypassed towns.

Package 2

3.6.9 Package 2 has limited consistency with the Environment and Climate Change objective themes. The package has the potential to create a modal shift away from private car through improvements to active travel in the settlements considered and rail improvements. Positive impacts may be limited by the scale of the package, and so it is only somewhat consistent with a key Climate Change policy target of 20% reduction in car kilometres by 2030. Investment in the decarbonisation of travel through the A96 Electric Corridor is also consistent with Climate Change policy but the extent of the physical works associated with the construction of some interventions, particularly rail improvements, could introduce environmental impacts which will need to be assessed and mitigated, for example impacts on biodiversity and species. Whilst any new infrastructure should be designed to withstand predicted impacts of climate change it is likely to remain subject to damage from extreme weather, as is the case for the existing transport networks.

3.6.10 The package however is consistent with the objective themes for Health, Safety and Wellbeing and Equality. The inclusion of active travel improvements and placemaking measures could improve actual and perceived feelings of safety as well as encourage more people to take up active travel for shorter everyday journeys within settlements, supporting the 20-minute neighbourhood concept and improving health outcomes. Education, employment and health facilities would be more accessible through improved public transport connections, particularly rail, and along with DRT and MaaS would support vulnerable groups. Improvements to active travel infrastructure and public transport interchanges would enhance sustainable connections in areas often underserved by commercial transport.

3.6.11 In addition, Package 2 is also consistent with the Economic objective theme. The package would support faster and more reliable public transport journeys, enhance rail capacity for movement of people and goods, and improve the reliability of the A96 Trunk Road by reducing the impact of accidents.

Package 3

3.6.12 Package 3 has limited consistency with the Environment and Climate Change objective themes. Whilst the package would promote alternatively fuelled vehicles and possibly induce a modal shift to sustainable transport in rural areas, the construction associated with the package, particularly rail improvements and Active Connections, have the potential to adversely impact the environment and would need to be assessed further as design progresses. Investment in public transport improvements and the provision of active travel routes between towns may encourage a small mode shift, supporting Climate Change objectives but are not likely to have a significant impact on a key policy target of achieving a 20% reduction in car kilometres by 2030. Investment in the decarbonisation of travel through the A96 Electric Corridor is also consistent with Climate Change policy but the extent of the physical works associated with the construction of some interventions could introduce environmental impacts which will need to be assessed and mitigated, for example impacts on biodiversity and species. Whilst any new infrastructure should be designed to withstand predicted impacts of climate change it is likely to remain subject to damage from extreme weather, as is the case for the existing transport networks.

3.6.13 The package has a degree of consistency with the objective theme of Health, Safety and Wellbeing. Targeted road safety improvements and traffic-free active travel routes between towns would reduce the perceived and actual safety risks associated with the current A96 Trunk Road, whilst public transport accessibility to critical services would also be enhanced. However, Package 3 has no active travel provision within communities so would not support the 20-minute neighbourhood concept or encourage healthy travel choices as part of multimodal trips, as it relates to the rural stretches of the corridor only.

3.6.14 The package is consistent with the Economic objective theme. The package would support faster and more reliable public transport journeys, enhance rail capacity for movement of people and goods, and improve the reliability of the A96 Trunk Road by reducing the impact of accidents.

3.6.15 Package 3 is also consistent with the objective theme of Equality. Education, employment and health facilities would be more accessible through improved public transport connections, particularly rail, and along with DRT and MaaS would support vulnerable groups. The package would also increase the active travel network coverage from rural communities towards key services, providing sustainable and affordable transport options.

Package 4

3.6.16 Package 4 is not fully consistent with the Environment and Climate Change objective themes. Whilst this package would promote alternatively fuelled vehicles and possibly induce a modal shift to sustainable transport for longer distance journeys, the construction associated with the package, particularly rail improvements and Active Connections, may adversely impact the environment and would need to be subject to further assessment during design development. Investment in active travel and rail infrastructure should induce a modal shift away from car, supporting some Climate Change policy objectives but not likely to have a significant impact on a key target of achieving a 20% reduction in car kilometres by 2030. Investment in the decarbonisation of travel through the A96 Electric Corridor is also consistent with Climate Change policy but the extent of the physical works associated with the construction of some interventions could introduce environmental impacts which will need to be assessed and mitigated, for example impacts on biodiversity and species. Whilst any new infrastructure should be designed to withstand predicted impacts of climate change it is likely to remain subject to damage from extreme weather, as is the case for the existing transport networks.

3.6.17 The package is consistent with the Health, Safety and Wellbeing and Equality objective themes. Both perceived and real safety concerns would be addressed on the A96 Trunk Road through targeted road safety improvements and the inclusion of pedestrian and cycling infrastructure in the form of long-distance active travel routes and local place improvements support the package's consistency with Health, Safety and Wellbeing policy. In terms of Equality, the increase in active travel network coverage would provide sustainable and affordable transport options. It would also improve the reliability of the rail network for access to health care services, employment and education. However, as the only public transport interventions in this package relate to rail improvements, and does not include bus or DRT based interventions, the consistency with the Equality objective theme would be subject to the cost of ticketing and accessibility of the rail network.

3.6.18 The package is also consistent with the Economic objective theme. The package would support faster and more reliable rail journeys and enhance the rail capacity for movement of people and goods, whilst also improving the reliability of the A96 Trunk Road by reducing the impact of accidents. Alongside this, the inclusion of public transport interventions, targeted road safety improvements and a shift towards more sustainable transport modes for goods through the introduction of rail freight terminals supports the enhancement and reliability of travel for both people and goods.

Package 5

3.6.19 Package 5 is not fully consistent with the Environment and Climate Change objective themes. Whilst this package would promote alternatively fuelled vehicles and possibly induce a modal shift away from cars, consistent with both the Environment and Climate Change themes, the construction of interventions within the package, particularly for the rail improvements and the four bypasses, have the potential to adversely impact the environment and would need to be subject to further assessment as design development is progressed. The four bypasses may also increase overall vehicle kilometres, which would limit the contribution towards key policy objectives for a 20% reduction in car kilometres by 2030 and reaching net zero targets by 2045. Investment in the decarbonisation of travel through the A96 Electric Corridor is consistent with Climate Change policy but the extent of the physical works associated with the construction of some interventions could introduce environmental impacts which will need to be assessed and mitigated, for example impacts on biodiversity and species. Whilst the new infrastructure should be designed to withstand the predicted impacts of climate change it may still be vulnerable to extreme weather, as is the case for the existing transport networks.

3.6.20 The package is generally consistent with the objective theme of Health, Safety and Wellbeing. Removing through traffic from settlements through the introduction of bypasses and introducing measures through Active Communities to enable walking and cycling in these locations could improve actual and perceived feelings of safety whilst encouraging active travel for shorter everyday journeys within settlements, supporting the 20-minute neighbourhood concept and improving health outcomes. Targeted road safety improvements would also improve real and perceived safety concerns and access to critical services would be enhanced through improvements to both active travel and public transport services.

3.6.21 Package 5 is also largely consistent with the Economic objective theme. Public transport and targeted road safety improvements along with a potential modal shift to more sustainable transport modes from interventions such as rail freight terminals would benefit journey time reliability for both people and goods. However, agricultural land may be required for construction for some interventions within the package so productive farming land may be lost, and the bypasses may result in a loss of passing trade within the bypassed towns.

3.6.22 The package is also consistent with the Equality objective theme. Access to key services and transport inclusivity would be improved for vulnerable groups through public transport improvements to bus, rail and interchanges, supported by DRT and MaaS. Enhanced active travel network coverage for journeys between and within settlements could help a range of community groups to access employment, education, healthcare and leisure facilities.

Refined Package

3.6.23 This package is not fully consistent with the Environment and Climate Change objective themes. Whilst the package would promote alternatively fuelled vehicles and possibly induce a modal shift to sustainable transport, the physical works associated with construction of interventions within the package, particularly for the rail improvements and the two bypasses, may adversely impact the environment and will require further assessment as design development is progressed. Air quality is likely to improve in the bypassed settlements of Elgin and Keith but, overall, the contribution towards key Climate Change policy targets of a 20% reduction in car kilometres by 2030 and reaching net zero targets by 2045 may be limited by the inclusion of these bypasses. The opportunity to increase active travel opportunities within bypassed settlements could further benefit air quality. Investment in the decarbonisation of travel through the A96 Electric Corridor is also consistent with Climate Change policy but the extent of the physical works associated with the construction of some interventions could introduce environmental impacts which will need to be assessed and mitigated, for example impacts on biodiversity and species. Whilst any new infrastructure should be designed to withstand the predicted impacts of climate change it is likely to remain vulnerable to the effects of extreme weather, as is the case for the existing transport networks.

3.6.24 The package is also generally consistent with the Health, Safety and Wellbeing and Equality objective themes. Removing through traffic from settlements through the introduction of bypasses at Elgin and Keith could improve actual and perceived feelings of safety, whilst encouraging more people to take up active travel for shorter everyday journeys within the settlements, supporting the 20-minute neighbourhood concept and improving health outcomes. Targeted road safety improvements would also improve real and perceived safety concerns, while access to critical services would be enhanced through active travel and rail improvements. In terms of Equality, improved access and transport inclusivity for vulnerable groups through improvements to the rail network and public transport interchanges, supported by DRT and MaaS, along with enhanced active travel network coverage in settlements would enable better access to locations of employment, education, healthcare and leisure facilities.

3.6.25 The Refined Package is also largely consistent with the Economic objective theme. Rail capacity enhancements and targeted road safety improvements would enhance journey time reliability for both people and goods. The two bypasses are also anticipated to strengthen the reliability of local and regional supply chains. However, agricultural land may be required for construction for some interventions within the package so productive farming land may be lost, and the bypasses may result in a loss of passing trade within the bypassed towns.

4. Appraisal Summary

4.1 Refined Package Detailed Appraisal

4.1.1 As highlighted in the previous section, the Refined Package was developed to maximise the level of potential benefits by combining the best performing options, whilst optimising investment within the corridor and delivering value for money.

4.1.2 The Refined Package performs well against the appraisal criteria and addresses the key problems and opportunities in the A96 corridor. The package of options targets investment at locations which are anticipated to maximise the benefits within the corridor, with the spread of options across all transport modes allowing an inclusive multimodal corridor approach to be considered.

4.1.3 The inclusion of Active Communities within the Refined Package at settlements throughout the A96 corridor would encourage modal shift for shorter everyday journeys, resulting in reduced emissions in each locality, and enhanced safety.

4.1.4 The Refined Package includes bypasses of Elgin and Keith, reducing traffic volumes and supporting modal shift within these towns. The bypasses would help to maximise the benefits associated with the Active Communities option at these locations, aiming to further reduce reliance on cars for trips within settlements through the provision of active travel infrastructure. The bypasses would also enhance journey time reliability for longer distance trips, removing conflicts with local movements within the towns, thus reducing real and perceived safety concerns.

4.1.5 The inclusion of Targeted Road Safety Improvements would help to reduce accidents at locations where the propensity for accidents to occur is greater, improving both real and perceived safety of the route. This would also improve the overall reliability of the route by reducing the level of disruption to road users and the local communities as a result of incidents. The types of measures associated with road safety improvements could also allow for additional overtaking opportunities, which should help contribute towards a reduction in driver frustration along the corridor.

4.1.6 Public Transport benefits would be realised through the inclusion of the rail linespeed and capacity improvements, which would be complemented by the inclusion of DRT and MaaS and improved passenger interchange facilities. These options would increase the attractiveness of the public transport within the corridor, which would in turn encourage a shift to more sustainable modes of travel, resulting in a reduction in transport related emissions. DRT and MaaS would also have benefits in their own right, improving accessibility within the corridor for those without access to a car, and vulnerable groups such as children and the elderly. The inclusion of the A96 Electric Corridor would also facilitate decarbonisation of transport within the corridor and help reduce transport related emissions.

4.1.7 The Refined Package would provide a higher range of monetised benefits overall than the other packages that were developed, except Package 5 which has a slightly higher range of benefits in the 'Without Policy' scenario but at a higher cost. The majority of the TEE benefits for the Refined Package are derived from the rail improvements and the Elgin and Keith bypasses.

4.1.8 Overall the Refined Package performs well against all of the TPOs, STAG criteria and SIA criteria, whilst optimising investment within the corridor and delivering value for money.

5. Next Steps

5.1 Following publication of the Strategic Business Case – Transport Appraisal Report (Draft) (https://www.transport.gov.scot/publication/strategic-business-case-transport-appraisal-report-draft-a96-corridor-review/), a consultation process will be undertaken to gather feedback from stakeholders and the public on the outcomes of the A96 Corridor Review. The consultation process will involve seeking the views of statutory consultees, wider stakeholders and the public on the assessment and findings set out in this draft Summary of Main Report and the draft Transport Appraisal Report.

5.2 The feedback received during the public consultation will assist the Scottish Ministers in making a final decision on the outcomes of the A96 Corridor Review.


ELGIN
FORRES
NAIRN
A96
INVERNESS
A96
KEITH
HUNTLY
INVERURIE
A96
ABERDEEN