



# STRATEGIC TRANSPORT PROJECTS REVIEW

PROTECTING OUR CLIMATE  
AND IMPROVING LIVES



## Appendix I: Recommendation Appraisal Summary Tables

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## 1. Detailed Appraisal Summary

An 'Appendix I: Recommendation Appraisal Summary Tables (ASTs) Explanatory Note' accompanies this AST.

### 1.1. Recommendation 13 – Aberdeen Rapid Transit

#### Recommendation Description

This recommendation focuses on the development of a high-quality bus-based rapid transit system within the North East Region.

This 'Aberdeen Rapid Transit' system (ART) recommendation centres on Aberdeen City as the main population and economic area of the region, providing a 'step-change' in public transport provision. It will likely consist of two proposed corridors, listed below, which would connect key destinations and the wider region via efficient priority routes, supported by integrated multi-modal interchanges with the entire public transport network in the area:

- Bridge of Don P&R – Westhill (via City Centre)
- Craibstone P&R – (proposed) Portlethen Transport Interchange (via City Centre)

Other modes such as Light Rapid Transit /Tram (LRT), as well as references to other road corridors, were considered at the Preliminary Appraisal stage. However, these were discounted due to their likely cost and complexity in the context of a constrained city centre. The decision involved discussions with Nestrans and it was collectively agreed that the proposals would focus on a Bus Priority/BRT type solution on the two core corridors listed above. The current proposals align with both the [local ART Vision](#) and parallel work being undertaken by transport authorities in the North East of Scotland.

The ART system would fully complement and integrate with the existing bus and rail networks (including SMART, integrated ticketing, timetabling and Real Time Passenger Information (RTPI)), and link with Aberdeen Airport and Ferry Terminal. The proposed corridors align with the existing strategic park and ride sites around Aberdeen, and the proposed Transport Interchange site at Portlethen. The recommendation would involve reallocating existing road space to ART which would reduce the impact of congestion on public transport journey times and reliability, particularly on the proposed road corridors in Aberdeen City. The corridors align with a range of key trip generators - including the city centre, but also out-of-town employment sites and residential areas, education and training sites, healthcare and leisure destinations.

## 1.2. Relevance

### Relevant to North East Region

The recommendation is aimed at addressing the [identified problems in the Aberdeen City Region](#) of high car usage and growing volumes on the constrained road network; and the perceptions of bus being an uncompetitive mode choice as a result of long, unreliable journey times, relatively high cost of existing public transport compared to parking costs, lack of accessibility and quality of interchanges. [Despite significant investment in bus services and infrastructure in recent years to address these problems, bus patronage in the region continues to drop.](#) The recent opening of the [Aberdeen Western Peripheral Route \(AWPR\)](#) however gives the region a unique opportunity to ‘lock-in’ the benefits experienced from reduced vehicular traffic routeing through the City, alongside [Aberdeen City Centre Masterplan \(CCMP\)](#) proposals to prioritise space for bus and active travel. Reallocation of road space on the corridors under consideration within the ART recommendation would provide the step-change in public transport provision required to improve perceptions of public transport and deliver an attractive, competitive, and accessible alternative to private car use, to enable the modal shift required to deliver on both National and Regional priorities ([Aberdeen City and Shire Strategic Development Plan 2020](#), [Aberdeen City Centre Masterplan \(CCMP\)](#) and [Nestrans 2040 – Regional Transport Strategy for the North East of Scotland](#)).

## 1.3. Estimated Cost

### £101 million – £500 million Capital

Indicative capital costs per kilometre were collated for similar schemes across the UK for bus-based/ Bus Rapid Transit schemes, which range from approximately £2.7 million to £7.7 million per kilometre.

Local factors play an important role in the overall cost of a scheme therefore these costs can vary significantly between regions and schemes. Based on the approximate distance of the proposed ART corridors, it is anticipated the capital cost of the scheme would be £150 million to £350 million.

It is anticipated that the recommendation would require some level of revenue support in its initial years until it operates as a ‘system’. Note – revenue funding support is not proposed in this recommendation, nor is it in scope for STPR2.

## 1.4. Position in Sustainable Investment Hierarchy

### Targeted Infrastructure Improvements

This recommendation would contribute to eight of the NTS2 outcomes, as follows:

- Provide fair access to the services we need;
- Be easy to use for all;
- Help deliver our net zero target;
- Help adapt to the effects of climate change;
- Promote greener, cleaner choices;
- Get people and goods to where they need to get to;
- Be reliable, efficient and high quality; and
- Be safe and secure for all.

## 1.5. Summary Rationale

### Summary of Appraisal

	TPO					STAG					SIA				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Low Scenario	++	++	+	++	++	+	++	+	++	++	+	++	0	+	+
High Scenario	++	++	+	++	++	+	++	+	++	++	+	++	0	+	+

ART positively contributes to all STPR2 Transport Planning Objectives, particularly Net Zero Target, Inclusive Growth and Safety and Security. It also positively contributes towards some of the STAG and the EQIA, CRWIA and FSDA Statutory Impact Assessment criteria.

The costs to deliver Bus Priority/BRT are significantly less than a similar LRT offering and it offers greater flexibility in terms of both its implementation and routing of bus-based services. By recommending Bus Priority/BRT, it also ensures alignment with current policy and aspirations set out by North East transport authorities, whose Vision is to develop a BRT-style rapid transit system in and around Aberdeen City.

This Bus Priority/BRT is deemed deliverable, subject to further work required to be undertaken. Funding could be achieved through several streams including, but not limited to, the Bus Partnership Fund (BPF), subject to BPF criteria and evaluation processes. Funding for initial appraisal is currently being funded through BPF.

Details behind this summary are discussed in Section 3, below.

## 2. Context

### 2.1. Problems and Opportunities

This recommendation could help to tackle the following problems and opportunities:

#### Relevant Problem & Opportunity Themes Identified in National Case for Change

- **Global Climate Emergency:** the Scottish Parliament committed to an ambitious target of net zero emissions by 2045 and transport needs to play its part. Transport is currently Scotland's largest sectoral emitter, responsible for 37% of Scotland's total greenhouse gas emissions (greenhouse gas emissions encompass CO<sub>2</sub> emissions) in 2018([National Atmospheric Emissions Inventory 1990-2017](#)). Our transport system needs to minimise the future impacts of transport on our climate.
- **Air Quality:** transport, and road transport in particular, remains a significant contributor to poor air quality. Air pollution increases the risks of diseases such as asthma, respiratory and heart disease, particularly for those who are more vulnerable. Air quality is often worse in areas of deprivation and is a health inequality issue.
- **Changing Travel Behaviour:** changing people's travel behaviour to use more sustainable modes will have a positive impact on the environment, as well as health and wellbeing.
- **Decline in Bus Use:** bus is particularly important to areas which are not served by the rail network, including much of rural Scotland. It can be an important element in multi-modal journeys and is a sustainable and space-efficient mode of travel. [Reducing passenger numbers risks driving down revenues and making some services unviable, resulting in cancellations and, in some cases, communities being isolated.](#)
- **Labour Markets:** people often need transport to access employment, education and training and therefore help reduce the numbers out of work and support Scotland's ambitions for growth. Transport can ensure that the skills and experience of those in the labour force are effectively matched with the needs of businesses, helping to increase incomes and improve productivity.
- **Reliability:** without intervention, forecast increases in traffic volumes on the road network will impact negatively on reliability through increased congestion and more roadworks as greater pressure is placed on the operational efficiency of the network. [Reliability can also be an issue on the rail network.](#)

## 2.2. Interdependencies

This recommendation has potential overlap with other STPR2 recommendations and would also complement other areas of Scottish Government activity.

<b>Other STPR2 Recommendations</b>
<ul style="list-style-type: none"><li>▪ Behavioural change initiatives (6)</li><li>▪ Provision of strategic bus priority measures (14)</li><li>▪ Improved public transport passenger interchange facilities (21)</li><li>▪ Framework for the delivery of mobility hubs (22)</li><li>▪ Smart, integrated public transport ticketing (23)</li></ul>
<b>Other areas of Scottish Government activity:</b>
<ul style="list-style-type: none"><li>▪ <a href="#">Bus Partnership Fund</a> (BPF);</li><li>▪ <a href="#">Revised Draft Fourth National Planning Framework</a> (Revised Draft NPF4) National Developments 6: Urban Mass/Rapid Transit Networks and 14: Aberdeen Harbour;</li><li>▪ <a href="#">Climate Change Plan 2018-32 Update</a>;</li><li>▪ <a href="#">Infrastructure Investment Plan 2021/22-2025/26</a> (IIP); and</li><li>▪ <a href="#">The Place Principle</a>.</li></ul>

### 3. Appraisal

This section provides an assessment of the recommendation against:

- STPR2 Transport Planning Objectives (TPOs);
- STAG criteria;
- Deliverability criteria; and
- Statutory Impact Assessment criteria.

The seven-point assessment scale has been used to indicate the impact of the recommendation when considered under the ‘Low’ and ‘High’ Transport Behaviour Scenarios (which are described in Appendix F of the Technical Report).

#### 3.1. Transport Planning Objectives

1. A sustainable strategic transport system that contributes significantly to the Scottish Government’s net-zero emissions target	
Low Scenario	High Scenario
++	++

Whilst per capita CO<sub>2</sub> emissions from road transport in the North East reduced by 8% between 2005 and 2017, the total road vehicle kilometres in both Aberdeen City and Aberdeenshire increased by 3% and 8% respectively, compared to 5% nationally from 2011 to 2016. Aberdeen Sub-Area Model (ASAM) analysis suggests in a ‘Do Minimum’ scenario, vehicle kilometres and journey times would increase by up to 30% and 40%, respectively, by 2037. Based on evidence from new UK BRT and LRT routes, 13% to 22% of the passengers previously travelled by car. ART would therefore be expected to deliver a modal shift from private car, reducing air pollution and greenhouse gases emissions from private car use on the rapid transit corridors; and would further maximise the emissions savings already made from North East P&R sites.

In relation to the emissions of vehicles that would operate on ART infrastructure, this is dependent on both the operating model of ART (in relation to bus fleet responsibilities) and restrictions on which bus vehicles are allowed to use the ART infrastructure. However, given both Scottish Government targets for decarbonisation of bus fleets, and the significant investment in commercial hydrogen bus fleet production and refuelling infrastructure in the North East in recent years, it is likely that the vehicles using ART infrastructure would be Ultra Low Emission (ULEVs) (for example, powered by hydrogen or electric/battery), delivering low emission travel from the outset.

This recommendation is expected to have a moderate positive impact on this objective in both the Low and High scenarios

**2. An inclusive strategic transport system that improves the affordability and accessibility of public transport.**

Low Scenario	High Scenario
++	++

[Evidence shows that accessibility by public transport in Aberdeen is a problem for some](#): only 51% of North East postcodes can access Union Street by public transport, and over 70% of NE postcodes are unable to access key out of town employment locations (such as Altens, Arnhall and Prime Four) – both measures within a 60-minute public transport journey time during the AM peak. This highlights both a lack of direct connections, and long public transport journey times requiring interchange via the City Centre for a significant amount of the North East population to access key regional employment destinations. This creates a reliance on the private car, and disadvantages vulnerable users without access to a private car and users experiencing transport poverty. ART would improve accessibility for those postcodes and destinations poorly served by public transport through providing a greater number of direct connections removing the need for interchange between services and faster and more frequent services on the corridors under consideration.

As bus-based/BRT rapid transit solutions are generally higher-costing public transport options to deliver, the revenue model would require consideration to ensure the recommendation is affordable to all users, and competitive with car ownership and parking costs. Details of this are not known at this stage, however, as an example, [the fares model for Edinburgh Trams](#) is integrated within the [pricing structure for Lothian Buses services](#) such that tickets cost the same price between the modes.

This recommendation is expected to have a moderate positive impact on this objective in both the Low and High scenarios.

**3. A cohesive strategic transport system that enhances communities as places, supporting health and wellbeing.**

Low Scenario	High Scenario
+	+

This recommendation would bring both physical and mental health benefits to its users, particularly those who shift from car travel to ART. [Evidence shows car commuters are more likely to suffer from strain and lack of concentration, in comparison to those who take public transport.](#) This is due to physical activity from



walking/ wheeling/ cycling to access the service, alongside mental health benefit from relaxing, reading or socialising whilst riding on the service.

[Several studies in the North East have identified locations of community severance, several of which are located on high-traffic corridors and SIMD locations.](#) The ART corridors under consideration align with these locations and the design of the system would create the opportunity to reduce severance for these communities, through reduced private car demand, reduced congestion (and rat running) from modal shift to ART, as well as improved walking, wheeling and cycle facilities – particularly crossing points at junctions – along these corridors.

In addition, [ART stops/interchanges would be designed using ‘mobility hub’ principles.](#)

This this recommendation is expected to have a minor positive impact on this objective in both the Low and High scenarios.

**4. An integrated strategic transport system that contributes towards sustainable inclusive growth in Scotland.**

Low Scenario	High Scenario
++	++

[ART corridors would integrate with existing bus, rail, sea and air modes; and land-use planning policy providing inclusive and sustainable access to labour markets and key centres for employment, education and training in the City Region, and an alternative to the private car.](#) For instance:

- The corridor operating between Craibstone Park & Ride/Airport /TECA via City Centre to the proposed Transport Interchange at Portlethen would connect the key employment sites at Dyce, City Centre, Aberdeen Harbour and Altens/Cove with many residential areas on the route (including SIMD areas such as Middlefield and Kincorth);
- The corridor operating between Westhill and Bridge of Don (via City Centre) would connect the key employment sites at Westhill (Arnhall), Kingswells (Prime Four), City Centre and Bridge of Don with many residential areas on the route (including Mastrick and Seaton) and education facilities such as Aberdeen University.

Providing sustainable surface access through ART for Aberdeen Bus and Rail Stations, International Airport, and Ferry Terminal, and the strategic growth areas would positively benefit domestic, national and international business connections, and would encourage people to live, work, study, visit and invest in the North East and Scotland. This recognises particularly the importance of efficient access surface access to the ports and airport by a range of travel options, and working with the

harbour boards and airport authority to optimise links with external air and sea connections.

Modal shift from private car to ART would improve journey time reliability (through reduced road traffic) and therefore savings for other road users, such as commuters and commercial road transport (for example, HGVs), [due to less road congestion](#) and [fewer accidents](#) associated with higher traffic volumes on the corridors under consideration (See STAG Economy).

This recommendation is expected to have a moderate positive impact on this objective in both the Low and High scenarios.

**5. A reliable and resilient strategic transport system that is safe and secure for users.**

Low Scenario	High Scenario
++	++

ART would improve the reliability of the road network, particularly on the corridors it serves, but also the wider road network, through the modal shift expected from private car journeys changing to ART. [Reduction in the number of private journeys would improve traffic flow arising from reduced demand and road congestion experienced and forecast on the ART corridors under consideration, alongside reduction in disruption caused by road traffic accidents](#) .

By providing a ‘step-change’ in capacity and new facilities, it is envisaged that ART would increase the resilience to the region’s public transport network by providing additional public transport choices within the region.

In addition, the controlled and modern nature of these systems tends to result in high levels of reliability. New infrastructure gives the opportunity to include modern safety and security systems from the outset, improving both actual and perceived safety and security for its users.

This recommendation is expected to have a moderate positive impact on this objective in both the Low and High scenarios.

**3.2. STAG Criteria**

**1. Environment**

Low Scenario	High Scenario
+	+

See Strategic Environmental Assessment (SEA) below.

This recommendation is expected to have a minor positive effect on this criterion in both the Low and High scenarios.

## 2. Climate Change

Low Scenario	High Scenario
++	++

ART would be expected to encourage significant modal shift from car to public transport, and also to provide a public transport offering with lower emissions, and therefore has the potential to significantly reduce greenhouse gas emissions.

There is not expected to be any impact on vulnerability to effects of climate change or potential to adapt to effects of climate change.

This recommendation is expected to have a moderate positive impact on this criterion in both Low and High scenarios.

## 3. Health, Safety and Wellbeing

Low Scenario	High Scenario
+	+

[Between 2011 and 2016, Aberdeen City Centre recorded the highest number and proportion of road casualties in the region](#) (825, 11% fatal), with 27% of the casualties in 2016 involving a cyclist or pedestrian. Several of the fatal accident locations during this period align with the corridors under consideration for this recommendation, such as A956 King St, Market St, A92(S) between Kincorth and Portlethen, A92 Anderson Drive, and to the west on the A944 and B9119 Skene Road.

ART would reduce the number of casualties on the corridors under consideration. [Evidence shows the number of accidents on corridors where Bus Priority/BRT is implemented can reduce by approximately 14% to 50%, with greater reductions up to 60-70% for 'serious' accidents. Bus-based BRT systems are not entirely disengaged from general road traffic, therefore there would be some accident risk related to their use.](#) Risks however can be reduced and mitigated through careful design. A reduction in accidents in the wider Aberdeen City Region area would be expected resulting from modal shift from private car to rapid transit, as [evidence shows reduced vehicle kilometres travelled results in less interactions between road users.](#)

The recommendation would improve actual and perceived safety and security of users on the corridors it operates, with provision of high quality vehicles, stops and interchanges that would be designed in line with modern safety and security standards (lighting, CCTV, Non-Motorised User (NMU) access (for example crossing

points)). For example, the Belfast Glider BRT saw a 25% increase in older people and people with disabilities compared with 2017 patronage levels.

There may be some health benefits from improved air quality due to reduced emissions attributed to modal shift from private vehicles, and this can make communities more attractive for walking and cycling, with associated benefits on health and wellbeing.

This recommendation would bring both physical and mental health benefits to its users, particularly those who shift from car travel to ART. [Evidence shows car commuters are more likely to suffer from strain and lack of concentration, in comparison to those who take public transport.](#) This is due to physical activity from walking, wheeling and cycling to access the service, alongside mental health benefit from relaxing, reading or socialising whilst riding on the service.

Access to health and wellbeing infrastructure may improve slightly due to improved public transport provision. In addition, ART also has the potential to improve physical and mental health, social connection and wellbeing, by increasing the access opportunities to non-healthcare related activities.

[Several studies in the North East have identified locations of community severance, several of which are located on high-traffic corridors and SIMD locations.](#) The ART corridors under consideration align with these locations and the design of the system would create the opportunity to reduce severance for these communities, through reduced private car demand, reduced congestion (and rat running) from modal shift to ART, as well as improved walking, wheeling and cycle facilities – particularly crossing points at junctions – along these corridors.

There is potential for negative environmental impacts during construction and operation of the system, including on Visual Amenity, for example impacts from the construction footprint of any new transport infrastructure. Further assessment would be required to identify potentially significant location-specific environmental impacts and mitigation where appropriate. [See also SEA]

Overall, this recommendation is expected to have a minor positive impact on this criterion in both Low and High scenarios.

#### 4. Economy

Low Scenario	High Scenario
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In terms of Transport Economic Efficiency - [in 2016, congestion was estimated to have cost car drivers in Aberdeen £1,331 with 35 peak hours spent in traffic – resulting in £138 million in direct and indirect disbenefits across the city](#) (those incurred directly by drivers, and those incurred by businesses, increasing prices for

customers). Current congestion on the ART corridors under consideration, particularly in the City Centre (Union St, Market St and Guild St), has a detrimental impact on bus journey time reliability, with a cumulative impact given the majority of bus and coach services route through via the City Centre. The Aberdeen Sub-Area [Transport] Model (ASAM) analysis also suggests congestion would worsen, with the 2037 forecast indicating 38 and 51 junctions during the AM and PM peaks, respectively, would exceed 85% operating capacity.

In terms of wider economic impacts - evidence shows that Bus Priority/BRT corridors can save on average up to 0.4 to 0.9 minutes per kilometre, via the provision of signal prioritisation and segregation, respectively. In terms of employment, business and trade impacts, ART would therefore provide economic benefits through journey time savings to its users with direct, fast, frequent and reliable journey times not being affected by congestion. This would widen access for the labour market, improving the ability for people and businesses to access employment, training, education and services more efficiently. Modal shift from private car to the ART solution would improve journey time reliability (through reduced private car traffic) and therefore cost savings for other road users, such as commuters and commercial road transport (for example, HGVs), due to less congestion and accidents associated with high traffic volumes.

This recommendation is expected to have a moderate positive impact of this criterion in both the Low and High scenarios.

## 5. Equality and Accessibility

Low Scenario	High Scenario
++	++

ART would increase public transport coverage through higher service frequency, faster journey times, direct services on the corridors under consideration (as mentioned in the recommendation description), and full integration with the wider transport network, reducing the need to interchange and barriers associated with it (for example, multiple tickets, poor physical and timetable connections). This would address the problems associated with poor public transport access (see TPO2) and widen access for those living in Aberdeen and across wider city region with connections between communities and key trip generators (see TPO4).

There is expected to be a neutral impact on active travel network coverage, with the potential for some active travel infrastructure on ART corridors to be enhanced (for example, infrastructure around rapid transit stops). Careful consideration would be required in the design of and reallocation of road space to ART infrastructure. It should both complement existing, nor should it hinder future development, of active travel facilities on the proposed corridors.

In terms of comparative access by people group, the ART corridors under consideration align with many residential areas (see TPO3), several of which identified as SIMD communities with severance issues. Access to local services in these communities would be improved due to a mode shift of private car users to ART reducing traffic volumes on the main carriageways, and consequentially drivers re-routing via these communities to avoid congested junctions. The reduced traffic levels would reduce the characteristics of severance (for example, fear and intimidation) and improve both actual and perceived safety for communities to access local services by walking, wheeling and cycling.

ART would particularly benefit people without access to, or who wish not to choose, the private car to travel; those with poor access to the public transport network; and people living at postcodes where public transport service provision does not enable them to access employment, healthcare, education and leisure destinations. Accessible and secure system design would also benefit those vulnerable and mobility impaired users reliant on public transport.

In terms of comparative access by geographic location, the main locational impacts would be felt by populations living in the immediate surroundings of the ART corridors under consideration (in particular, the City Centre and the SIMD communities mentioned above), and would be from higher quality and frequency of public transport services for access to trip generators; increased mode choice for both those with and without access to the private car; and reduced impact from congestion, air quality and severance on those corridors and from cars re-routing through communities to avoid congested junctions, as a result of modal shift from private car to rapid transit. Wider benefits would be felt by users living on the outskirts of the Aberdeen City Council and Aberdeenshire Council areas who would be able to access rapid transit at the P&R sites flanking each corridor (the sites being referred to here are the existing Bridge of Don, Craibstone and Kingswells Park & Ride sites, plus the proposed Portlethen Transport Interchange), increasing the opportunity to make sustainable travel choices to destinations within and around Aberdeen City.

During construction negative impacts would be felt by road and bus users, residents and businesses on the ART corridors under consideration, with the scale of impact being dependent on specific details of the intervention and duration of the works.

The funding and revenue model would need to be considered and designed to ensure that ART is affordable to all users, and comparative to car ownership costs. Subject to fare structure, it is considered that the recommendation would have a positive impact on affordability.

Also refer to EqIA/ICIA/FSDA/CRWIA Assessment in section 3.4.

This recommendation is expected to have a moderate positive impact on this criterion in both the Low and High scenarios.

### 3.3. Deliverability

#### 1. Feasibility

ART would make use of existing infrastructure where possible along existing road corridors, but new infrastructure would be required. It would also make use of existing, proven technology and would generally be expected to operate inside existing design standards. At this stage, there are a number of planning and construction risks and uncertainties associated with the recommendation, however bus-based rapid transit schemes are generally easier to deliver in comparison to other types of Mass Transit modes such as LRT and Metro which involve more fixed infrastructure (track laying, overhead line equipment).

#### 2. Affordability

Cost for the delivery of the option would likely be relatively high (compared to other public transport recommendations) due to its extensive nature and may rely in part on funding provided by private developers. Likely to be delivered in phases over a significant time period – estimated 10 years.

The preferred mode for ART is bus-based/Bus Rapid Transit. Whilst LRT was considered previously and known to have greater potential for passenger capacity and journey time benefits, it is a much more costly mode to both develop, construct and operate. Whilst BRT is still costly, it has the potential to negate the need for costly investment in fixed LRT infrastructure, be implemented incrementally, flexible to work with various bus operators, and at the same time deliver journey time benefits and flexibility in service routing.

Once operational, there is potential for the revenue generated by the system to maintain operational costs; as well as wider economic benefits experienced through widened public transport access for the labour market to employment locations, and journey time savings benefits to both public transport and road network users associated with modal shift to ART.

#### 3. Public Acceptability

Investment in high quality public transport facilities generally enjoys a high degree of public support. Where new systems have been introduced (for example, Belfast Glider, Manchester Metrolink), they have proven popular and there has been substantial public pressure for system expansion. [There has, however, been mixed public acceptability for bus priority in Aberdeen City in recent years](#), and the perception of bus travel by non-bus users remains poor (the North East CfC public survey reported an average score for the quality of the North East bus network as 2 out of 10).

Investment in public transport services providing a step-change from current provision would likely be welcomed on this basis, however would require a concerted public and stakeholder engagement programme to ensure public buy-in and support for ART.

There are likely to be specific impacts that would require mitigation, particularly for local residents and businesses during the construction phase to minimise disruption from road closures, access issues and any delays, in order to reduce the risk of long-lasting negative views of the system (as was experienced during Edinburgh Trams Phase 1).

### 3.4. Statutory Impact Assessment Criteria

1. Strategic Environmental Assessment (SEA)	
Low Scenario	High Scenario
+	+
<p>ART would have positive effects on the SEA objectives related to reducing greenhouse gas emissions (SEA Objective 1) and improving air quality (Objective 3) due to enhancing the bus network and promoting a modal shift to a more sustainable transport option. Positive effects anticipated on Population and Human Health (Objective 4) include an expected increase in sustainable access to essential services, improved interchanges, and planning for future capacity of public transport. The extent of positive effects are dependent on the alternatives being safe, affordable and available for all users to ensure modal shift.</p> <p>There is potential for minor negative environmental effects associated with the reallocation of road space, but these are not expected to be significant. This applies to effects on noise and vibration (Objective 5), the development of high quality places (Objective 6), the safety of the transport network (Objective 7), climate adaptation (Objective 2) and natural resource usage (Objective 9). It is therefore recommended that further environmental assessment is undertaken as the option develops to identify potentially significant location-specific environmental impacts and mitigation where appropriate.</p> <p>Effects on the remaining SEA objectives are expected to be negligible.</p> <p>This recommendation is expected to have a minor positive effect on this criterion in both Low and High scenarios.</p>	



**2. Equalities Impact Assessment (EqIA)**

Low Scenario	High Scenario
++	++

This recommendation would provide a high quality and accessible public transport network potentially benefitting a wide range of protected characteristic groups who are more reliant on public transport services such as older people, the elderly, children, young people, women and people from certain ethnic minority groups.

However, the extent to which these groups would benefit from this recommendation would depend on their ability to access rapid transit services from the areas in which they live or through connections with other transport modes. It would also depend on the rapid transit routes serving important destinations for these groups, such as employment centres, retail, health, education and social networks.

New stations/stops would be required to be compliant with inclusive design standards and there would be an opportunity with new infrastructure to design-in level access. This would potentially provide greater access to the public transport network for those who are currently excluded due to accessibility barriers.

This recommendation is therefore expected to have a moderate positive on this criterion in both the Low and High scenarios.

**3. Island Communities Impact Assessment (ICIA)**

Low Scenario	High Scenario
0	0

ART would improve both the surface access connectivity and accessibility of Aberdeen Ferry Terminal and Aberdeen Airport with the Aberdeen City Region by public transport. This would be to the benefit of users travelling to/from Orkney and Shetland, and those employed at the port and airport sites. This would be developed through working with Aberdeen Harbour Board and the Aberdeen Airport Authority, in recognition of the importance of efficient surface access to these gateways by a range of travel options.

There would be no direct impact on islands for this recommendation. However, ART would increase connectivity to/from Aberdeen Ferry Terminal and Aberdeen Airport, providing negligible benefits for users travelling to/from Orkney/Shetland.

This recommendation is therefore expected to have a neutral impact on this criterion in both the Low and High scenarios.

**4. Children’s Rights and Wellbeing Impact Assessment (CRWIA)**

Low Scenario	High Scenario
+	+

This recommendation is anticipated to have a minor positive impact with regard to children’s rights and wellbeing. Depending on final alignments, Rapid Transit may provide improved access to education for children and young people. New alignments may provide enhanced opportunities and access to education facilities (even over a relatively short distance), in the context of a modern, safe and reliable system. By encouraging modal shift from private car to public transport, the recommendation could contribute to improving local air quality. This would benefit children and young people who are more vulnerable to the adverse health impacts of traffic-related emissions.

This recommendation is therefore expected to have a minor positive on this criterion in both the Low and High scenarios.

**5. Fairer Scotland Duty Assessment (FSDA)**

Low Scenario	High Scenario
+	+

Work contained in the North East Region Case for Change report demonstrates that, whilst proportionately the Aberdeen City Region has relatively fewer SIMD areas and higher levels of car ownership, a significant proportion of postcode areas are unable to access a range of destinations across Aberdeen by public transport within a 60-minute journey time. In addition to this impacting on people without access to a car, it also limits those households who only have access to one car – for example families with two working parents. The need to improve connectivity and accessibility to higher quality public transport for these areas would be a driver for the development of routes.

The option would be designed such that it would be affordable for all users, and comparatively against car ownership costs. This could have minor positive impacts in helping to reduce inequalities of outcome caused by socio-economic disadvantage.

This recommendation is therefore expected to have a minor positive impact on this criterion in both the Low and High scenarios.