



Aberdeen Rapid Transit – Options Appraisal

Case for Change – Executive Summary

On behalf of **Nestrans**

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Executive Summary

The Changing Policy Landscape

Recent changes across the policy landscape, most notably around climate change, present decision makers with the rationale and justification to implement the supporting changes and behavioural change catalysts required to help contribute towards lowering carbon emissions from transport.

The publication of the Scottish Government's updated *Climate Change Plan* in 2020 set out revised climate change targets including: reducing car kilometres by 20% by 2030; phasing out petrol and diesel vehicles; and supporting all transformational active travel projects. Furthermore, the *Reducing car use for a healthier, fairer and greener Scotland* (2022) publication outlines the route map to achieving the 20% reduction in car kilometres by 2030 and describes the key sustainable travel behaviours which make up the framework, including investing in the public transport network.

Scotland's National Transport Strategy 2 (NTS2), published in 2020 presents the '*Sustainable Travel Hierarchy*' and '*Sustainable Investment Hierarchy*', which together guide decision making by promoting walking, wheeling, cycling, public transport and shared transport options in preference to single occupancy private cars.

This strong underpinning policy context offers strengthened opportunities for successfully developing and implementing sustainable transport schemes.

Furthermore, the Transport (Scotland) Act 2019 provides new opportunities for Local Authorities to develop Bus Services Improvement Partnerships and the powers to make Local Services Franchises (replacing Quality Contract Schemes (QCSs)). Furthermore, the Act provides Local Authorities with the powers to implement a workplace parking license scheme and Low Emission Zone (LEZ). Such complementary demand management measures are likely to encourage the uptake of sustainable modes and support the success of sustainable transport schemes.

Why is a step-change in public transport needed?

The completion of the Aberdeen Western Peripheral Route (AWPR), funded by Transport Scotland and the local authorities, has enabled through traffic to now route around Aberdeen. This provided the opportunity to reassess the roads hierarchy within the city, prioritise sustainable transport infrastructure and facilities on routes into the centre, and bring forward the City Centre Masterplan schemes.

Car use has increased in the north-east, with traffic slowly increasing since 2013, up to around 4.4 billion vehicle kilometres in 2018¹. Taking account of the growth in vehicle kilometres in the preceding decade, this has led to a growth in traffic of around 8% between 2008 and 2018. While there has been extensive progress in the production of electric vehicles (EV) and in providing the enabling infrastructure to support more EVs on Scotland's roads, a total switch to EVs is not the panacea to reducing the carbon emissions associated with transport. Whilst this does eliminate tailpipe emissions, the whole life carbon associated with EVs manufacture and usage is still higher than if public transport were used instead. In addition, traffic congestion has an economic and environmental cost, and the brakes and tyres still contribute to unhealthy air pollution where EVs are driven. This further highlights the step change to public transport that is needed to (i) reduce the whole-life emissions associated with transport and (ii) provide a more efficient transport network in and around Aberdeen. Furthermore, the purchase of an electric vehicle is not affordable for all, and alternative sustainable transport connections are required to ensure equality in the transport system.

While the COVID-19 pandemic has dramatically altered, at least in the short term, travel patterns and travel demand, a number of key trends in bus patronage had been established prior to 2020, with bus

¹ https://www.nestrans.org.uk/wp-content/uploads/2021/12/Nestrans-RTS_PUBLISHED.pdf

patronage declining across Scotland over the last decade. The ‘*Travel and Transport in Scotland Key Findings | 2019*’ (published by Transport Scotland in September 2020²) confirms this downward trend, with 39% of people having used the bus in the past month (in 2019), compared to 46% in 2011. At the regional level, the *2019 Nestrans Regional Transport Strategy Monitoring Report* highlights that total bus patronage dropped by 11% between 2015/16 and 2017/18 with paying customer numbers dropping by 16% over the same period. Despite bus industry efforts to boost passenger numbers, a range of factors have hampered this including: rising car ownership and use, traffic congestion, changing shopping habits and reduced public sector investment. Many of these factors, have been exacerbated by the COVID-19 pandemic and FirstGroup’s half-yearly report in 2021 noted that passenger volumes had only recovered to 71% of pre-pandemic levels³. Passenger figures continue to be below pre-pandemic levels as of March 2022, with Stagecoach stating that during the first half of February overall journeys for their regional business ranged between **70% - 78% percentage** of pre-COVID levels (on a rolling seven-day average)⁴.

While there has been significant government investment in the rail network, there has been considerably less invested in the bus industry, with Scottish Government support for rail per passenger trip roughly 10 times that for each bus passenger, despite bus travel making up 8% of all journeys made, and rail just 2%⁵.

On the key corridors into Aberdeen, **bus journey times are significantly slower than car or rail** (where rail is an alternative). Key arterial routes into the city are congested, with intermittent or absent bus priority, and bus lanes only operational over certain times. Buses are therefore often subject to general traffic congestion. As an example, analysis of a range of trips along the A90(N) corridor to Ellon by bus and car highlighted the average speed by car is approximately 21.5mph, compared to 12.7mph by bus^{Error! Bookmark not defined.} While some bus routes have seen improvements in journey times since the opening of the AWPR in 2018/19, the proportional improvement in bus journey times has been, in general, less than that for general traffic⁶, making the bus even less attractive in relation to the car.

A common criticism levelled at bus services is that **bus journey times can be unreliable, or are at least perceived to be unreliable**, and that this is a barrier to bus use, and a frustration amongst bus users. To a user, bus journey times can be made unreliable by two factors: the bus not turning up at the stop at its timetabled time; and / or the bus being delayed on route beyond its scheduled travel and arrival time. This perceived unreliability reduces the attractiveness of the bus use and undermines passenger confidence in terms of the certainty of their journey. In order to provide consistency for the user, operators have had to extend their scheduled journey times in recent years as a result of traffic congestion. As an example, scheduled bus journey time between Inverurie and Aberdeen city centre can be nearly 20 minutes longer at peak times compared to off-peak periods, and between Westhill and Aberdeen they can be over 20 minutes longer in the peak.

The **cost of bus travel is often perceived to be poor value for money and more expensive than travel by private car** and is often noted as a barrier to greater use. Bus fares have risen more than inflation due to increased costs and there is readily available parking within the city centre with a day bus ticket 1.8 times the price of 2 hours car parking. It is however noted that travel with children will now be cheaper due to the introduction of the Scotland wide under-22 free bus travel scheme (which started in January 2022) and will address this barrier to use for those affected by this change.

The perception of bus travel is influenced by the quality of bus infrastructure. **Poor quality bus infrastructure** has been identified across the bus network within Aberdeen and Aberdeenshire and

² <https://www.transport.gov.scot/publication/travel-and-transport-in-scotland-key-findings-2019/>

³ https://www.heraldscotland.com/business_hq/19775562.passenger-volumes-increase-firstgroup-pandemic-makes-pace-recover-uncertain/

⁴ <https://www.scotsman.com/business/stagecoach-sees-more-passengers-get-on-board-its-buses-but-cost-inflation-drags-3593199>

⁵ [How Do We Travel? | Transport Scotland](#)

⁶ [Monitoring-report-2020.pdf \(nestrans.org.uk\)](#)

includes: the wide variation in bus shelter provision and information at bus stops on routes and fares; lack of provision of real time information; absence of DDA compliant kerbs making it more difficult for disabled people and those with mobility issues to board the bus; bus stops on narrow shared footways; poor pavement quality; indiscriminate parking at stops and drainage issues. All these factors combine to present a diminished view of travel by bus.

Aberdeen city is served by Park & Ride (P&R) sites at Ellon, Bridge of Don, Craibstone, and Kingswells, and a smaller site at Newtonhill. At present, limited express services serve the sites and the lack of bus priority on the corridors from the P&R sites into the city centre means **there is limited encouragement for the public to use the P&R sites as they do not offer an attractive alternative to the private car**. Indeed, 2019 P&R usage data shows that while Ellon P&R was operating at around 50% capacity and Newtonhill at 41% capacity, the Kingswells site was operating at just 24% capacity, with the sites at Bridge of Don at 7% capacity, and Craibstone at just 1% capacity. Furthermore, between 2015-2019 there was an 80% drop in the usage of the Bridge of Don site and a 20% drop in the usage of the site at Ellon (and an overall drop across all sites of just over 40%). The public has raised concerns over a perception of a lack of vehicle security at the sites, including issues relating to lighting and personal security, and a perceived lack of information on payment methods and permitted length of stay. It is clear that the sites represent a significantly underutilised asset but that a step change in their offering would be required to turn these assets into a success.

Bus travel in Aberdeen is not well integrated with other transport modes, including with the active travel network and rail network, and to some degree even with car-based interchange facilities (i.e. P&R sites). Recognising that all bus journeys require a component of active travel (before boarding and after alighting the bus), poor bus stop accessibility in terms of crossing facilities, pavement quality and general street clutter (such as guardrails) create a range of issues which discourage use. Bus stop infrastructure is also often not well integrated, with stops positioned on narrow footways in amongst other street furniture, and at the P&R sites at the Bridge of Don or Newtonhill a lack of electric charging infrastructure is a potential barrier to use for those with electric vehicles.

All the issues noted above feed into **poor public perceptions of bus travel** and that travel by bus is a low-quality travel option. There is a perpetual negative perception of bus travel amongst a cohort of the population leading to a reluctance to use the bus, and the image of bus travel needs to be improved (by resolving the problems above) to address this.

It is clear from the above that despite investments made by the bus industry over the last decade there has still been a considerable decline in bus patronage. Simply continuing with the status quo is clearly not going to provide the change required to reverse this decline and enable more trips by bus, which will support the industry in playing its part in the 2030 car kilometres reduction target.

Capitalising on the re-focussed national policy position, a much greater **step-change** solution is required, to take advantage of the opening of the AWPR and the development of the new roads hierarchy, reverse the decline in bus patronage, alter perceptions of bus travel, and support positive social, environmental and economic performance of the City and Region.

Why Aberdeen Rapid Transit (ART) and what is the Vision?

Aberdeen Rapid Transit emerged through the Nestrans Regional Transport Strategy (RTS:2040)⁷, which was endorsed by the Transport minister and formally adopted by the Nestrans Board in November 2021. RTS:2040 drew heavily from work undertaken on a regional Strategic Transport Appraisal (STA), undertaken through funding provision as part of the Aberdeen City Region Deal, and the STA itself was developed to inform the Regional Transport Strategy work, as well as Transport Scotland's second Strategic Transport Projects Review (STPR2). The STA identified *Strategic Public Transport Corridor Scheme(s)* as a regional scheme, with the RTS:2040 recognising that to encourage

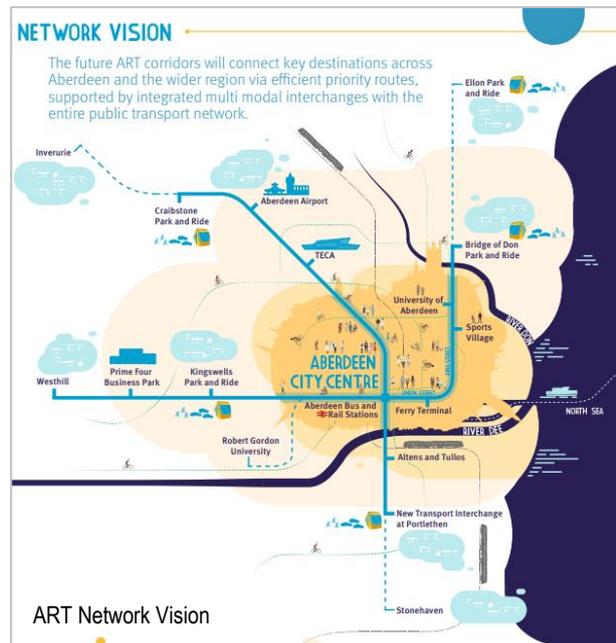
⁷ [Documents – Regional Transport Strategy 2040 | NESTRANS](#)

modal shift to achieve environmental, economic and social objectives, a fresh approach to public transport was necessary.

The ambition was set to develop a **high quality, high frequency mass transit network across the city on key corridors and linking key destinations, anchored by P&R facilities** on each corridor, and addresses the issues noted above. Reflecting the prioritised list of corridors identified by the North East Bus Alliance through the ‘*State of the Network*’ report, ART is envisaged to operate on the arterial A90 (N), A96, A944 and A92(S) corridors into the city.

Addressing the issues noted above, ART seeks to deliver:

- Improved travel times for all public transport users to support growth across all economic sectors
- A high quality, contemporary and effective means of connectivity across the City and Region
- An integrated solution, creating seamless connections with other public transport, cycling and walking networks



ART already has national recognition. Transport Scotland’s *Strategic Transport Projects Review 2* (STPR2) draft was published in January 2022 and includes a recommendation (Recommendation 13) for continued working with local partners in developing plans for a bus-based rapid transit system for Aberdeen. The document notes the project would support all five of the key STPR objectives of: *net zero emissions; affordable and accessible public transport; places, health and wellbeing; sustainable inclusive growth; and increasing safety and resilience in the transport system*.

Furthermore, Draft National Planning Framework 4 (consulted on between November 2021 and March 2022), identifies an Urban Mass / Rapid Transit Network in Aberdeen as a national development. It also states that designation as a national development means that ‘*the principle of the development does not need to be agreed in later consenting processes, providing more certainty for communities, businesses and investors*’.

There is already work underway through a series of multi-modal studies which are considering options for improving transport connections and infrastructure on the key arterial corridors into Aberdeen. The focus of these studies is on improvements to transport infrastructure, and covers the types of bus priority measures (and active travel connections) that would be required to facilitate the success of ART.

Recognising the issue noted above and the ART vision, five objectives have been set for the ART scheme:

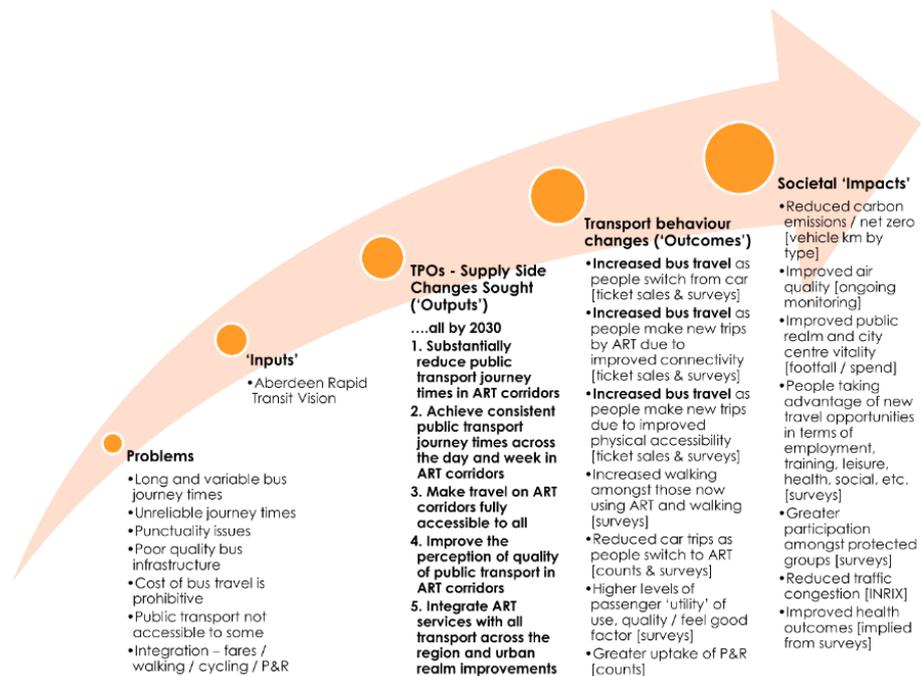
- **TPO1:** Substantially reduce public transport journey times in ART corridors
- **TPO2:** Achieve consistent public transport journey times across the day and week in ART corridors
- **TPO3:** Make travel on ART corridors fully accessible to all
- **TPO4:** Improve the perception of quality of bus travel in ART corridors

- **TPO5:** Integrate ART services with all transport across the region and urban realm improvements

What benefits will Aberdeen Rapid Transit deliver?

ART has the potential to deliver both transport behavioural change and positive societal impacts. The ART proposals are a key component to supporting long-term more sustainable growth in the region and addressing local priorities and challenges including:

- Supporting the targeted reduction in transport emissions to net zero by 2045
- Increasing active travel and supporting healthy lifestyles
- Enhancing connectivity
- Providing affordable and integrated ticketing
- Creating a healthier environment in the city and enabling the redesign of public spaces
- Ensuring equal access for all.



How does Aberdeen Rapid Transit align with and complement Aberdeen and Aberdeenshire wide plans?

There is a wealth of ongoing change within Aberdeen itself, focussed around the **City Centre Masterplan** (including the Union Street transformation and development of a Low Emission Zone) and **Beach Masterplanning** work. The development of the ART scheme will take cognisance of the planned city centre changes (including the Sustainable Urban Mobility Plan) but will ultimately support the masterplanning visions by enabling fast and reliable car free access to the city centre and beach areas.

The Aberdeen City Council, Aberdeenshire Council and Opportunity North East **Regional Economic Strategy** identifies a number of potential investment opportunities including improving the deployment of low carbon transport and accelerating the transition to a more balanced economy. The envisioned ART network encompasses the three strategic growth corridors for the region (as identified in the region's **Strategic Development Plan**), namely the A90(S), A90(N) and A96 corridors, and will catalyse the unlocking of development on these corridors through the provision of fully accessible, sustainable transport alternatives. Alongside the communities located on the corridors, there are key employment centres (at Bridge of Don, Dyce, Kingswells, Westhill and Aberdeen centre itself) and ART will provide effective sustainable transport solutions to accessing employment (and education) which will have a positive impact on regional labour markets and productivity. By providing improved integration with other transport modes, ART will help facilitate seamless journeys across the city and align with the aspirations of the **local transport strategies** and **active travel plans and strategies**.