



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 20 - Investment in demand responsive transport and mobility as a service

Recommendation Description

This recommendation seeks to 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.

Provision of improved network coverage through the use of DRT or CT will often involve revenue funding. While revenue support does not fall under the remit of STPR2, this recommendation would use capital funding to support pilot schemes and demonstration projects to establish how DRT and CT services can provide improved public transport connectivity and integration without increasing the need for revenue support.

These pilot schemes should draw on innovative solutions and international best practice, supported by Mobility as a Service (MaaS) or smart technology where appropriate. Typically, MaaS includes a back-office digital platform that integrates booking, payment, planning and real time information for relevant modes, and a smartphone application that provides the user interface.

The results from the pilot schemes would help to establish whether scarce existing resources can be better utilised across the public network, home to school transport, special educational needs travel and non-emergency patient travel, either on the basis of fixed route services or through flexible routing.

1.2. Relevance

Relevant to all of Scotland

Investment in DRT and MaaS is likely to be relevant to all of Scotland, with the need to increase connectivity and support improved mobility raised across all regions during stakeholder engagement for STPR2. In some cases, this sought expansion of the fixed route network, whilst in others the emphasis was on trialling or expansion of DRT and/or CT services. Therefore, the competition for funding for the recommended pilot studies should be open to all areas across the whole of Scotland.

1.3. Estimated Cost

<£25 million Capital

[In 2015, the Department for Transport awarded £7.6 million of Total Transport funding to 37 schemesⁱ](#), with the aim of using efficiencies, technological solutions and organisational change to improve the provision of cross-sector publicly funded transport services. When taken in conjunction with [Transport Scotland’s £2 million MaaS Investment Fundⁱⁱ](#), which was launched in June 2019 to support pilot schemes that offer improved digital access to travel information, coupled with ticketing and payment options, this suggests that initial pilot scheme funding could cost in the region of £5 million-£10 million.

1.4. Position in Sustainable Investment Hierarchy

Reducing the need to travel unsustainably

Within the Sustainable Investment Hierarchy, this recommendation fits with reducing the need to travel unsustainably. However, where improvements are targeted at reducing transport poverty for those without access to a car, the recommendation would not fall directly into any of the categories.

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

- Provide fair access to services we need;
- Help deliver our Net Zero target;
- 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;
- Use beneficial innovation;
- Enable us to make healthy travel choices; and
- Help make our communities great places to live.

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	+	+	+	+	+	+	++	++	+	+

Investment in DRT and MaaS in order to provide better public transport connectivity in locations with low bus network connectivity or where conventional fixed route services may not be suitable or viable could have a positive impact against most of the STPR2 transport planning objectives (TPOs), STAG criteria and Statutory Impact Assessment (SIA) criteria.

Of key importance is the impact that this recommendation might have in reducing inequality of access to the public transport network, given the role that it can play in providing access to employment, education, healthcare and leisure activities, and in integrating with other services and other modes.

However, while it is feasible to improve public transport connectivity, the availability of appropriate technology and whether passengers could access this technology would need to be considered, as would the extent to which schemes could operate without the need for additional revenue support.

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

- **Scotland’s Regional Differences:** transport challenges differ across Scotland. Rural households tend to drive more frequently than urban households. The lack of public transport in rural areas acts as a barrier for young people accessing education, training and employment and is linked to long-term out-migration. Similar to remote and rural areas, transport can have an adverse impact on the long-term sustainability of island communities.
- **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.
- **Social Isolation:** there is increasing recognition of social isolation and loneliness as major public health issues that can have significant impacts on physical and mental wellbeing. Disabled people in particular can feel trapped due to a lack of accessible transport, particularly on islands and in remote and rural areas.
- **Poverty and Child Poverty:** public transport is very important to those on low incomes, yet in many areas of high social deprivation public transport options can be limited and relatively expensive. A key challenge is providing fair and affordable access to the services people need.
- **Information and Integration:** high-quality journey planning information, both digital and physical, is important to enable a resilient transport system that allows people and goods to get to where they need to get to. Some journeys are not possible due to a lack of connections or accessible modes of transport, and long wait times, the need for multiple tickets and complex connections deter people from some public transport services resulting in many running below capacity.

2.2. Interdependencies

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

Other STPR2 Recommendations

- Behavioural change initiatives (6);
- Improving access to bikes (9);
- Supporting integrated journeys at ferry terminals (18);
- Framework for the delivery of mobility hubs (22); and
- Smart, integrated public transport ticketing (23).

Other areas of Scottish Government activity

- [MaaS Investment Fund](#)ⁱⁱⁱ;
- [Future Intelligent Transport Systems Strategy](#) (2017)^{iv};
- [Smart Ticketing and Integrated Payments Delivery Strategy](#) (2018)^v;
- [Community Bus Fund](#)^{vi}; and
- [Network Support Grant](#)^{vii}.

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
+	+

Improving connectivity where current bus services do not provide satisfactory cover would increase the attractiveness of public transport and could introduce new links that are not currently provided. In addition, [29% of participants in the NaviGoGo MaaS trial in Dundee agreed or strongly agreed that NaviGoGo had made them travel without a car^{viii}](#).

Therefore, this recommendation has the potential to achieve modal transfer from car, which could help with achieving the net zero target. While some of the areas with lower bus service provision also have low car ownership, such as West Lothian, so service improvements would be targeted more at reducing transport poverty, others have much higher car ownership, such as Aberdeenshire, so modal transfer is more likely to be possible.

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

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

Low Scenario	High Scenario
++	++

Improving public transport connectivity, supported with better travel planning through MaaS, would increase accessibility to employment, education, healthcare and leisure

activities, especially for passengers from the most deprived households, who are less likely to own a car and are more reliant on travel by public transport.

However, if schemes delivered through the recommendation are dependent on MaaS, this is likely to exclude certain groups without access to the technology or bank accounts. For example, [research by the Financial Conduct Authority \(FCA\)](#)^x suggested that while 2% of white consumers are classified as ‘unbanked’, this figure rises to 5% in mixed-race communities and 6% in Asian communities, with modelling carried out by the FCA indicating that income was a key factor in explaining these differences. In addition, [information from the 2021 census](#)^x indicated that use of internet banking decreases markedly with age, with 91% of 16-24 year olds having used internet banking in the previous three months, dropping to 51% of 65-74 year olds and 18% of 80+ year olds. Therefore, those with lower incomes and the elderly may be less able to benefit from this recommendation if it is dependent on MaaS technology.

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

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

Low Scenario	High Scenario
+	+

Improving public transport connectivity, supported with better travel planning through MaaS, could reduce social isolation, enhancing locations as attractive places to live and improving the wellbeing of those living in these locations, with better access to healthcare also improving their health. However, as noted above, not all potential passengers may be able to benefit from this recommendation if it is dependent on MaaS technology.

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

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

Low Scenario	High Scenario
+	+

Technological advances, especially through the use of MaaS, could improve the financial viability of public transport, with increased efficiency of service provision relative to fixed route timetables. This could occur if several fixed route services can be replaced by a flexible service that is better targeted at demand, both by location and time. Where flexible services already exist, technology that can respond dynamically to different levels of

demand could potentially deliver more efficient scheduling of services, such that operating costs can be reduced, and demand is better served. Provision of new flexible services could also improve network coverage, which could increase the level of integration between services and modes, making it easier for people to travel where they wish to go. Even where network coverage is not improved, the use of MaaS could increase the perceived level of integration by providing better information on different travel options through a single app.

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

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

Low Scenario	High Scenario
0	0

Improving public transport connectivity could provide minor safety benefits if passengers are currently required to walk longer distances to bus stops using roads with poor pedestrian facilities, but these benefits are not likely to be substantial. It is also unlikely that there would be material impacts on reliability, resilience or security, unless the provision of real time passenger information via the MaaS platform can improve the perception of service reliability.

Overall, this recommendation is expected to have a neutral impact on this objective in both 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 Low and High scenarios.

2. Climate Change

Low Scenario	High Scenario
+	+

Improving connectivity where current bus services do not provide satisfactory cover and improved provision of information via a MaaS platform would increase the attractiveness of public transport and could result in transfer from car, although the impact on greenhouse gases, and hence climate change, would depend on the fuel being used by the affected buses and cars.

However, the impact on the vulnerability to effects of climate change and the potential to adapt to effects of climate change are expected to be neutral.

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

3. Health, Safety and Wellbeing

Low Scenario	High Scenario
+	+

Improving public transport connectivity, supported with better travel planning through MaaS, could reduce social isolation, enhancing locations as attractive places to live and improving the health and wellbeing of those living in these locations. It could also deliver better access to healthcare and wellbeing infrastructure, with additional safety benefits where people are currently travelling longer distances to bus stops using roads with poor pedestrian infrastructure.

There could also be a slight beneficial impact on perceived security if people do not feel safe travelling longer distances to bus stops. If schemes can reduce car use, there may additionally be a minor positive impact on accidents. There are unlikely to be any impacts on visual amenity.

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
+	+

There could be a beneficial economic impact through investment in DRT and MaaS, as improved connectivity could increase access to employment opportunities, education and other services, with subsequent benefits for the economy. Indeed, in locations where there is currently limited public transport network coverage, the economic benefits could be significant if new flexible services are able to provide improved connectivity.

There is also the potential for positive wider economic impacts in terms of increased employment for those from more deprived households (see also Equality and Accessibility), which could again be significant in locations where new services can improve network connectivity.

However, it is noted that DRT services have often required ongoing revenue support, with [research indicating that while some schemes operate without subsidy, an average subsidy of £5 per trip is more common](#)^{xi}. Therefore, it would be important for the pilot schemes to identify approaches that could reduce the need for subsidy.

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

5. Equality and Accessibility

Low Scenario	High Scenario
+	+

[There could be a large beneficial impact of improved accessibility and social inclusion, given that 48% of the most deprived households \(Scottish Index of Multiple Deprivation quintile 1\) do not have access to a car](#) and are twice as likely to use the bus to travel to work as households in the least deprived three quintiles^{xii}. The use of DRT to improve public transport connectivity could improve access to employment, education, healthcare and leisure activities for those most in need. Therefore, there could be beneficial impacts on public transport network connectivity, on comparative access for the most deprived households and on comparative access for affected areas.

However, if schemes delivered through the recommendation are dependent on MaaS, it is likely to exclude certain groups without access to this technology or bank accounts, as noted above in the TPO section, and this could disproportionately affect lower income households and the elderly.

Where DRT can provide a public transport link that did not previously exist, this would have a positive impact on affordability for those users who are eligible for free travel. However, the impact on affordability for other users would depend on the fares charged.

The recommendation is unlikely to affect active travel network coverage.

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

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

3.3. Deliverability

1. Feasibility

Improving public transport connectivity is feasible, but if technological advances are required to support these improvements, the availability of appropriate technology would need to be considered, as would the extent to which passengers could access this technology. While [NaviGoGo](#)^{xiii}, the first Scottish MaaS pilot, is now complete and the MaaS Investment Fund is facilitating five pilots, namely [GO-HI](#)^{xiv} in the Highlands and Islands region, [Enable](#)^{xv} in the Tayside area, [GetGo](#)^{xvi} in Dundee, the St Andrews [MaaSterplan](#)^{xvii} and [Go SEStran](#)^{xviii} in the South East of Scotland; transport operators' willingness to engage with MaaS systems and passengers' willingness to make use of them on an on-going basis remain to be confirmed.

2. Affordability

This recommendation may not be affordable if ongoing revenue support is required. However, capital funding provided through a new fund to support innovative pilot studies, and/or through new funding targeted at DRT, CT and MaaS, or at supporting growth in rural, island and peripheral communities may support measures to improve the efficiency of service provision, reducing the need for on-going revenue support.

3. Public Acceptability

Improving public transport connectivity is likely to be acceptable to the public, although this may depend on how it is to be funded. If these improvements are to be supported through the use of a digital platform, acceptability may also be dependent on passengers' ability to access this platform. It is also noted that [research for the Department for Transport](#)^{xix} found that public acceptability of MaaS was correlated with offering a service that was not already available via other channels and where travel would be cheaper than through existing fares, ticketing and payment options. Replacement of fixed route bus services with DRT may also be viewed negatively by some passengers.

3.4. Statutory Impact Assessment Criteria

1. Strategic Environmental Assessment (SEA)

Low Scenario	High Scenario
+	+

This recommendation is likely to result in positive effects for SEA Objectives related to greenhouse gas reduction (Objective 1) and air quality (Objective 3), particularly in relation to the achievement of a reduction in transport related emissions, as it seeks to encourage a modal shift to more sustainable public transport forms. It would also have a positive effect on quality of life (Objective 4), safety (Objective 7) and improve the sustainability of

the transport network (Objective 8), by providing a sustainable alternative for users to travel to employment, education, healthcare and leisure activities.

The recommendation is related to, but unlikely to have any effect on the achievement of SEA Objective 5 (noise and vibration) and is therefore considered neutral.

Given the nature of the recommendation, it has no (or negligible) clear relationship to the achievement of many of the SEA Objectives, including Objective 2 (climate adaptation), Objective 6 (high quality places), and natural resource usage, the water environment, biodiversity, soil, cultural heritage and landscape and visual amenity (Objectives 9 to 14).

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

2. Equalities Impact Assessment (EqIA)

Low Scenario	High Scenario
++	++

Barriers to transport, including active travel, are amplified when inequities already exist;

this is the case for women, older people, disabled people, people from ethnic minority groups and people at risk of deprivation^{xx}. There could be a beneficial impact of reduced barriers to travel for those with reduced mobility if improvements in public transport connectivity reduce the distance needing to be travelled in order to use a service.

However, if schemes delivered through the recommendation are dependent on MaaS, it is likely to exclude certain groups without access to this technology or bank accounts, which would disproportionately affect lower income households and the elderly.

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

3. Island Communities Impact Assessment (ICIA)

Low Scenario	High Scenario
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Given that one of the main aims of this recommendation is providing increased public transport connectivity in locations with low bus network connectivity or where conventional fixed route services may not be suitable or viable, such as island regions, there could be a large beneficial impact on Island Communities.

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

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

Low Scenario	High Scenario
+	+

Improved public transport connectivity could have a beneficial impact on children and young people, [given that 16% of children travel to school by bus^{xxi}](#), children and young people may also be more likely to use buses for leisure travel, as those under 17 would not be able to drive. Where children and young people are currently experiencing long walks to bus stops and a long wait for connecting services, improved connectivity could also result in improved personal security.

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

5. Fairer Scotland Duty Assessment (FSDA)

Low Scenario	High Scenario
+	+

There could be a large beneficial impact in tackling inequality, with improved public transport connectivity supporting reduced social isolation and improved health and wellbeing. [Given that 48% of the most deprived households \(Scottish Index of Multiple Deprivation quintile 1\) do not have access to a car](#) and are twice as likely to use the bus to travel to work as households in the least deprived three quintiles^{xxii}, the beneficial impacts would be highest for those from the most deprived households.

However, and as with the EqIA, if schemes delivered through the recommendation are dependent on MaaS, it is likely to exclude certain groups without access to this technology or bank accounts, which would disproportionately affect lower income households and the elderly.

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

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