



# STRATEGIC TRANSPORT PROJECTS REVIEW

PROTECTING OUR CLIMATE  
AND IMPROVING LIVES



## Appendix I: Recommendation Appraisal Summary Tables

December 2022

**Jacobs** **AECOM**

## 1. Detailed Appraisal Summary

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

### 1.1. Recommendation 3 - Village-town active travel connections

#### Recommendation Description

This recommendation would deliver short and medium-distance active travel routes linking villages with nearby towns in locations where these connections are not made by existing networks or new longer-distance routes that would be created by Recommendations 4 Connecting towns by active travel or 5 Long-distance active travel networks.

This recommendation would connect Scotland's town and village communities for people walking, wheeling and cycling, through the delivery of high-quality infrastructure on direct routes away from busy roads (for example, either on segregated paths or on quiet lanes with low traffic speed limits), improving access between neighbouring settlements and facilitating access to key trip attractors.

Village/town connections would provide attractive, safer, and convenient choices for many shorter commuter and leisure journeys, enabling people to benefit from improved access to local goods and services, using healthy and non-polluting modes. Village/town connections seek to address active travel challenges, including providing better (including safer) active travel routes for those vulnerable to social exclusion and transport poverty, such as disabled people, young and older people, and those without access to a car.

The implementation of these routes for people walking, wheeling and cycling between settlements has the potential to return significant benefits for community cohesion, environmental protection, and employment opportunities. New village/town links would integrate with existing active travel networks to provide continuous high-quality connections for journeys within urban areas and for longer-distance trips. This would build on the work that local and regional partners have been leading on and complement other STPR2 active travel infrastructure recommendations.

### 1.2. Relevance

#### Relevant to small communities that are relatively close to towns or cities

The benefits of improving safe active travel links have been highlighted in the STPR2 National Case for Change report. Improving and creating village/town active travel connections is relevant to many settlements across Scotland. The recommendation would provide efficient, safe, sustainable travel choices for short and medium-distance functional and recreational journeys; a large proportion of which are currently undertaken by motorised modes. With [the increasing use of e-bikes](#), which are proven to be successful in enabling longer-distance cycling journeys over varying topographies<sup>1</sup>, providing direct active travel routes to facilitate medium-distance active travel journeys is of increasing relevance.

As these connections improve access between neighbouring settlements and key trip

attractors, they may be particularly beneficial for linking more deprived communities with employment and training opportunities.

### 1.3. Estimated Cost

#### **£101 million - £500 million**

Given that the majority of new village/town links are likely to be constructed in a rural setting, with other recommendations (notably Active freeways and cycle parking hubs (2)) addressing the urban connections, capital cost estimates are of £200,000-£300,000 per kilometre where new routes are to be created, derived from outturn construction costs of recent projects in rural Scotland.

A potential network of active travel routes, developed to inform this appraisal, linking villages to towns across Scotland covers an estimated 2,500 kilometres. It has been estimated that only minor upgrades, such as signage and lighting, would be required on half of this length (as existing active travel links are in place). Applying the investment cost per kilometre to the additional 1,250 kilometres required to complete the potential network, gives total capital cost estimates of between £250 million and £375 million.

Some increased revenue funding would also be required in order to maintain new infrastructure.

### 1.4. Position in Sustainable Investment Hierarchy

#### **Reduces the need to travel unsustainably**

This recommendation would contribute to 10 of the 12 NTS2 outcomes, as follows:

- Provide fair access to services we need;
- Be easy to use for all;
- Be affordable for all;
- Be reliable, efficient and high quality;
- Help deliver our net-zero target;
- Promote greener, cleaner choices;
- Be safe and secure for all;
- Get people and goods to where they need to get to;
- 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	+	++	++	+	+	+	+	++	+	+++	+	++	+	+	++
High Scenario	+	++	++	+	+	+	+	++	+	+++	+	++	+	+	++

This recommendation makes a mostly positive contribution to the STPR2 Transport Planning Objectives (TPOs), STAG criteria, and Statutory Impact Assessment criteria, an assessment based on a wide body of evidence from other locations in the UK and beyond where similar schemes have been implemented successfully, with positive benefits realised.

Village-town active travel connections particularly contributes to objectives for social inclusion and health, and can also assist in meeting goals for environmental improvement and inclusive economic gain.

Village-town active travel connections are implementable from a feasibility perspective in many desired locations, albeit much detailed local engagement and design work is required to identify the most appropriate routes.

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

- **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.
- **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.
- **Tourism:** transport plays a vital part in supporting tourism. It enables people to get to, and travel within, Scotland and allows them to explore the many sights and experiences the country has to offer. Whilst tourism benefits are recognised, tourists should be encouraged to travel using sustainable modes.
- **Physical Activity:** the importance of active travel is becoming more evident as the consequences of physical inactivity are studied. [It is recognised that one of the most effective ways to secure the required 30 minutes of moderate activity per day is to reduce reliance on motorised transport, changing the means of everyday travel to walking and cycling<sup>ii</sup>.](#)

### 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

- Connected neighbourhoods (1);
- Active freeways and cycle parking hubs (2);
- Connecting towns by active travel (4);
- Long-distance active travel network (5);and
- Improving access to bikes (9).

#### Other areas of Scottish Government activity

- [Active Travel Framework](#) (2020)<sup>iii</sup>;
- [The National Walking Strategy](#) (2014)<sup>iv</sup>;
- [Cycling Action Plan for Scotland](#) (CAPS) (2017)<sup>v</sup>; and
- [Revised Draft Fourth National Planning Framework](#) (Revised Draft NPF4)<sup>vi</sup> National Development 8: National Walking, Cycling and Wheeling Network.

In some instances, village/town connections may require reallocation of road space away from other modes. Where this is the case, designs would need to be handled carefully in order to balance the sometimes-conflicting aspirations for improved active travel routes with those for bus priority, local access and servicing, and to avoid exacerbation of traffic pollution and congestion.



### 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
+	+

Modal shift from car to more sustainable modes of transport (including walking, wheeling, and cycling) reduces levels of air pollution and greenhouse gases. This recommendation would help encourage that for both functional and recreational journeys.

Evidence indicates a positive correlation between the implementation of active travel links between towns and villages and the number of new active travel journeys made; these journeys may otherwise be made by car. As part of the [Linking Communities programme](#), one of the schemes linked the village of Westcott (Surrey) with Dorking adjacent to the A25 via a direct active travel route to support commuters accessing employment centres. Following scheme implementation in 2012, the A25 experienced a notable reduction in average daily traffic flow<sup>vii</sup>.

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
++	++

[Not feeling safe on the roads is the biggest single barrier to active travel use<sup>viii</sup>](#), with children and older people particularly affected. [Inaccessible cycle infrastructure is the single biggest difficulty faced by disabled cyclists in the UK<sup>ix</sup>](#) and [women are under-represented in cycling<sup>x</sup>](#). Given the aspiration of the long-distance network is to provide segregated / traffic-free provision, this recommendation would improve transport inclusivity for commonly disadvantaged groups by providing safe and low-cost transport choices, though care would be needed in route design to ensure that personal security concerns are minimised.

When combined with Active freeways and cycle parking hubs (2) and other local improvements, a significant proportion of the urban, town and rural population of Scotland could benefit.

This recommendation is therefore 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
++	++

Active travel is beneficial to both physical health and mental wellbeing. 29% of adult men and 39% of adult women in Scotland do not meet [minimum physical activity guidelines<sup>xi</sup>](#). [Keeping physically active can reduce the risk of heart and circulatory disease](#) by as much as 35%, reduce risk of early death by as much as 30% and has also been shown to greatly reduce the chances of asthma, diabetes, lower blood pressure and cancer<sup>xii</sup>. [Adults who cycle regularly can have the fitness levels of someone up to 10 years younger<sup>xiii</sup>](#).

Improving active travel access between neighbouring towns and villages would enable and encourage many more people to be active for short and medium-length journeys, enhancing health and wellbeing. The measures may also, by increasing the number of people out and about within their communities, make a positive contribution to places.

This recommendation is therefore expected to have a moderate 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
+	+

[By improving residents’ access to key trip attractors in neighbouring settlements](#), this recommendation could enhance access to employment, training opportunities and to goods and services<sup>xiv</sup>. [Well-designed active travel infrastructure can improve economic performance of local retail centres](#), with typical increases in footfall of 20-30%<sup>xv</sup>.

Three of the [‘Linking Communities’ schemes](#) (an £18 million investment to better connect 35 English communities by active modes to economic opportunities) improved access between small to medium urban areas and rural communities, via active travel links ranging from 2.7 kilometres and 5.5 kilometres in distance; the combined estimated annual spend by recreational users is in excess of £1.3 million, sustaining direct and indirect jobs along the on-road and off-road routes<sup>xvi</sup>.

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
+	+

By providing more segregated / traffic-free routes, the village-town [active travel network would address fears around road safety, which is the most significant barrier to the uptake of active travel](#)<sup>xvii</sup>; [evidence suggests that perceived safety is more influential on active travel behaviour than journey time reliability or speed](#)<sup>xviii</sup>.

[Providing direct active travel routes, which offer uninterrupted journeys between settlements, away from busy roads, could significantly improve safety conditions and perceptions](#) for novice cyclists and walkers, especially children and disabled people<sup>xix</sup>.

This recommendation could also improve the resilience and reliability of the transport network through modal shift from car to active travel journeys, resulting in reductions in road congestion. Active travel infrastructure tends to be reliable for users, provided appropriate maintenance is undertaken, as users are largely independent from the actions of others (so not subject to delays and diversions caused by operational problems on public transport or road networks). This recommendation is therefore expected to have a minor positive 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 impact on this criterion in both Low and High scenarios.

2. Climate Change	
Low Scenario	High Scenario
+	+

This recommendation would help generate a modal shift from car to active modes for short and medium-length journeys and would thus lead to a modest reduction in greenhouse gas emissions.

No impact on the Vulnerability to Effects of Climate Change or Potential to Adapt to Effects of Climate Change is anticipated.

This recommendation is therefore 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
++	++

The importance of safety for people travelling actively was highlighted in the STPR2 Case for Change. By providing more segregated / traffic-free routes, the village-town [active travel network would address fears around road safety, which is the most significant barrier to the uptake of active travel<sup>xx</sup>](#); [evidence suggests that perceived safety is more influential on active travel behaviour than journey time reliability or speed<sup>xxi</sup>](#).

[Providing direct active travel routes, which offer uninterrupted journeys between settlements, away from busy roads, could significantly improve safety conditions and perceptions](#) for novice cyclists and walkers, especially children and disabled people<sup>xxii</sup>.

The resulting increase in rates of active travel would improve health and could improve access to health and wellbeing infrastructure, as well as improving personal security because of increased natural surveillance. Some adverse effects on visual amenity where new paths are constructed in rural areas could be anticipated during the construction period; however these interventions are unlikely to result in any significant adverse effects on visual amenity during operation.

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

### 4. Economy

Low Scenario	High Scenario
+	+

[By improving residents' access to key trip attractors in neighbouring settlements](#), this recommendation could enhance access to employment, training opportunities and to goods and services<sup>xxiii</sup>. [Well-designed active travel infrastructure can improve economic performance of local retail centres](#), with typical increases in footfall of 20-30%<sup>xxiv</sup>.

Three of the ['Linking Communities' schemes](#) (an £18 million investment to better connect 35 English communities by active modes to economic opportunities) improved access between small to medium urban areas and rural communities, via active travel links ranging from 2.7 kilometres and 5.5 kilometres in distance; the combined estimated annual spend by recreational users is in excess of £1.3 million, sustaining direct and indirect jobs along the on-road and off-road routes<sup>xxv</sup>.

No significant impact on Transport Economic Efficiency is anticipated.

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

**5. Equality and Accessibility**

Low Scenario	High Scenario
+++	+++

Walking, wheeling, and cycling between neighbouring towns and villages allows more people to feel connected with their local community by increasing the opportunities for social interactions and enabling people to play a greater role in community life, which in turn improves social inclusion. [Perceived road danger is the biggest single barrier to active travel use<sup>xxvi</sup>](#), with children and older people particularly affected. [Inaccessible cycle infrastructure is the single biggest difficulty faced by disabled cyclists in the UK<sup>xxvii</sup>](#) and [women are under-represented in cycling<sup>xxviii</sup>](#). Given the aspiration of the village-town network is to provide safer, segregated / low-traffic provision, this recommendation would improve transport inclusivity for commonly disadvantaged groups by providing safe and low-cost transport choices.

Analysis based on an indicative network of village/town connections showed over half (58%) of Scotland’s population would live within just 500 metres of a link on the network if it were completed. When combined with active freeways and cycle parking hubs (2) (not part of this recommendation) and other local improvements, much of the urban, town and rural population of Scotland could benefit.

[Research indicates that a multi-level approach of involving communities in the design process and incorporating education initiatives around the socio-economic and environmental policies of active travel is effective in encouraging walking and cycling in disadvantaged and vulnerable groups, such as deprived communities<sup>xxix</sup> and children<sup>xxx</sup>.](#)

This recommendation would extend active travel networks, which would enable many more people to access public transport. Beyond that, it is not expected to impact on public transport network coverage.

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

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

### 3.3. Deliverability

#### 1. Feasibility

This recommendation can build on the existing National Cycle Network (NCN), which is located in close proximity to a large proportion of the population of Scotland, and the efforts of many local authorities and partners to improve active travel routes. These demonstrate that active travel networks which connect villages to towns are likely to be feasible in many locations across Scotland.

However, much detailed development work, including community engagement, is required to identify the most appropriate routes and preferred fit with their local environments. Local authority support would be required.

#### 2. Affordability

Given the scale of investment required to deliver all potential village-town active travel links (estimated to be between £250 million and £375 million), this would likely be phased over a number of years, and would require further assessment to determine the most appropriate prioritisation approach. There are also likely to be some revenue costs to ensure that routes are maintained and enforced.

#### 3. Public Acceptability

[Over 25% of Scottish adults are 'looking to change' towards increased rates of active travel<sup>xxx</sup>](#) and [33% would likely consider more active pursuits](#), such as walking and cycling, when the COVID-19 lockdown is eased<sup>xxxii</sup>. Across the UK, [post-COVID recovery polling<sup>xxxiii</sup>](#) indicates that a substantial majority of the public want the government to focus on improving health and wellbeing over economic growth.

In Scotland, [evidence suggests there is strong public support for investing in high-quality on and off-road active travel links](#), with 65% of survey respondents supporting interventions that protect cyclists and pedestrians from cars, including reallocation of road space<sup>xxxiv</sup>. Increased investment in active travel was the most commonly-cited request in response to survey work undertaken for STPR2.

However, whilst experience suggests that active travel network interventions are very popular post-implementation, some pre and post-implementation challenges are expected from a number of people that feel they would be adversely affected, typically because of anticipated worsening of traffic congestion.

### 3.4. Statutory Impact Assessment Criteria

#### 1. Strategic Environmental Assessment (SEA)

Low Scenario	High Scenario
+	+

This recommendation is likely to result in positive effects on SEA objectives related to reducing greenhouse gas emissions and improving air quality (SEA Objectives 1 and 3), as it seeks to encourage a modal shift to more sustainable modes of travel, and, as a result, reduce levels of transport related air pollution and carbon emissions. The recommendation would also have a positive effect on the sustainable use of the transport network (Objective 8).

This recommendation is likely to result in positive effects for four SEA Objectives that fall under the population and human health SEA topic. These objectives are related to quality of life and sustainable accessibility, noise and vibration, the public realm and safety (Objectives 4 to 7). The positive scores are derived from the aims of this recommendation to improve the active travel network, providing more active travel options, safer routes, improving the quality of places and helping to reduce noise and vibration in both urban and rural locations.

There is potential for minor negative environmental effects as a result of the proposed recommendation on natural resources, the water environment, biodiversity, soil, cultural heritage and landscape and visual amenity during construction and operation (Objectives 9 to 14), due to the construction footprint of new routes. It is therefore recommended that further environmental assessment is undertaken when the locations of new interventions are identified, in order to identify potentially significant location-specific environmental effects and mitigation where appropriate.

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



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

Low Scenario	High Scenario
++	++

This recommendation potentially provides safer and affordable travel between villages and towns. This includes improved access to employment, education, health facilities and other transport services which are important to many groups with protected characteristics and especially those living in isolated rural communities without access to a car. The infrastructure installed to create the links would be designed to incorporate adapted cycles and address mobility issues experienced by groups such as disabled people and older people as well as those who are more likely to lack confidence to cycle such as women. The targeted safety measures in regard to segregation from busy roads would also reduce road safety concerns for active travel users, including children. An uptake in active travel may additionally improve health outcomes through physical fitness and is also likely to lead to air quality improvements if an uptake in active travel is matched by a reduction in private vehicle use and traffic congestion. Improved health outcomes as a result of better air quality are of particular benefit to those who are more vulnerable to air pollution, including children, older people and disabled people. However, the extent to which groups with protected characteristics would benefit from this recommendation would depend on the location of routes, proximity to deprived areas and required services and the ability for certain to groups to access active travel routes.

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

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

Low Scenario	High Scenario
+	+

This recommendation includes the potential to enhance cycle routes between towns and villages on islands. As with the EqIA assessment above, there are potential benefits for island communities in regard to improved, safer and less costly access to essential services and recreation. However, the extent to which island communities would benefit from village-town active travel connections would depend on the location of routes, proximity to required services and the ability for those from island communities to access the network.

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

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

Low Scenario	High Scenario
+	+

This recommendation could potentially lead to positive effects for children due to a reduction in the perceived danger of road accidents and casualties; improved air quality if the uptake in active travel is accompanied by a decrease in private vehicle use; better and less costly access to education and other services; and the consequential effects of improved access to services for the whole community (such as parent and carer access to employment).

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

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

Low Scenario	High Scenario
++	++

Beneficiaries of this recommendation could potentially include accessibility for deprived rural communities including deprived and disadvantaged communities. As well as benefitting these ‘communities of place’, the recommendation could potentially improve access to services for ‘communities of interest’ including those with lower access to private vehicle (such as women, young people and low-income households) and others who may benefit from less costly travel options. However, the extent to which this recommendation would reduce inequalities of outcome would depend on the location of routes, proximity to deprived areas and required services and the ability for those from deprived and disadvantaged communities to access the routes.

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

## References

- <sup>i</sup> Cairns, S., Behrendt, F. Raffo, D., Beaumont, C. and Kiefer, C. (2017), 'Electrically-assisted bikes: Potential impacts on travel behaviour', Transportation Research Part A, 103 pp. 327-342
- <sup>ii</sup> Scottish Government, Preventing Overweight and Obesity in Scotland Strategy, 2010, <https://www.gov.scot/publications/preventing-overweight-obesity-scotland-route-maptowards-healthy-weight/>
- <sup>iii</sup> Transport Scotland, Active Travel Framework, 2020, <https://www.transport.gov.scot/active-travel/active-travel-framework/>
- <sup>iv</sup> Scottish Government, Let's get Scotland Walking - The National Walking Strategy, 2014, <https://www.gov.scot/publications/lets-scotland-walking-national-walking-strategy/>
- <sup>v</sup> Transport Scotland, Cycling Action Plan for Scotland 2017 – 2020, 2017, <https://www.transport.gov.scot/publication/cycling-action-plan-for-scotland-2017-2020/>
- <sup>vi</sup> Scottish Government, Revised Draft Fourth National Planning Framework, 2022 <https://www.transformingplanning.scot/national-planning-framework/>
- <sup>vii</sup> <https://www.sustrans.org.uk/media/3690/3690.pdf>
- <sup>viii</sup> Cycling Scotland, Attitudes and Behaviours Towards Cycling in Scotland, 2019 <https://www.cycling.scot/mediaLibrary/other/english/7268.pdf>
- <sup>ix</sup> Cycling Scotland, Attitudes and Behaviours Towards Cycling in Scotland, 2019 <https://www.cycling.scot/mediaLibrary/other/english/7268.pdf>
- <sup>x</sup> Evaluating the economic and social impacts of cycling infrastructure: considerations for an evaluation framework, Technopolis Group for Department for Transport, 2016 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/509391/evaluating-economic-social-impacts-cycling-infrastructure-evaluation-framework.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/509391/evaluating-economic-social-impacts-cycling-infrastructure-evaluation-framework.pdf)
- <sup>xi</sup> Scottish Public Health Observatory [https://www.scotpho.org.uk/behaviour/physical-activity/data/adults#:~:text=Between%202012%20and%202019%2C%20the,for%20women%20\(Chart%204\)](https://www.scotpho.org.uk/behaviour/physical-activity/data/adults#:~:text=Between%202012%20and%202019%2C%20the,for%20women%20(Chart%204))
- <sup>xii</sup> Sustrans, Health benefits of cycling and walking, <https://www.sustrans.org.uk/our-blog/get-active/2019/everyday-walking-and-cycling/health-benefits-of-cycling-and-walking#:~:text=Getting%20out%20walking%20or%20cycling,your%20general%20health%20and%20wellbeing>
- <sup>xiii</sup> Sustrans, Health benefits of cycling and walking, <https://www.sustrans.org.uk/our-blog/get-active/2019/everyday-walking-and-cycling/health-benefits-of-cycling-and-walking#:~:text=Getting%20out%20walking%20or%20cycling,your%20general%20health%20and%20wellbeing>
- <sup>xiv</sup> Improving access for local journeys, Sustrans, 2014 <https://www.sustrans.org.uk/media/3690/3690.pdf>

- xv Walking & Cycling: the benefits for Dundee, Dundee City Council, 2021  
[https://www.dundee.gov.uk/sites/default/files/publications/benefits\\_of\\_active\\_travel\\_in\\_dundee\\_final.pdf](https://www.dundee.gov.uk/sites/default/files/publications/benefits_of_active_travel_in_dundee_final.pdf)
- xvi <https://www.sustrans.org.uk/media/3690/3690.pdf>
- xvii Cycling Scotland, Attitudes and Behaviours Towards Cycling in Scotland, 2019  
<https://www.cycling.scot/mediaLibrary/other/english/7268.pdf>
- xviii Transport for London, Barclays Cycle Superhighways Evaluation of Pilot Routes 3 and 7, 2011,  
<https://www.whatdotheyknow.com/request/162841/response/402026/attach/3/BCS%20pilot%20evaluation%20report.pdf>
- xix <https://wheelsforwellbeing.org.uk/wp-content/uploads/2019/06/FINAL.pdf>
- xx Cycling Scotland, Attitudes and Behaviours Towards Cycling in Scotland, 2019  
<https://www.cycling.scot/mediaLibrary/other/english/7268.pdf>
- xxi Transport for London, Barclays Cycle Superhighways Evaluation of Pilot Routes 3 and 7, 2011,  
<https://www.whatdotheyknow.com/request/162841/response/402026/attach/3/BCS%20pilot%20evaluation%20report.pdf>
- xxii <https://wheelsforwellbeing.org.uk/wp-content/uploads/2019/06/FINAL.pdf>
- xxiii Improving access for local journeys, Sustrans, 2014  
<https://www.sustrans.org.uk/media/3690/3690.pdf>
- xxiv Walking & Cycling: the benefits for Dundee, Dundee City Council, 2021  
[https://www.dundee.gov.uk/sites/default/files/publications/benefits\\_of\\_active\\_travel\\_in\\_dundee\\_final.pdf](https://www.dundee.gov.uk/sites/default/files/publications/benefits_of_active_travel_in_dundee_final.pdf)
- xxv <https://www.sustrans.org.uk/media/3690/3690.pdf>
- xxvi Cycling Scotland, Attitudes and Behaviours Towards Cycling in Scotland, 2019  
<https://www.cycling.scot/mediaLibrary/other/english/7268.pdf>
- xxvii Cycling Scotland, Attitudes and Behaviours Towards Cycling in Scotland, 2019  
<https://www.cycling.scot/mediaLibrary/other/english/7268.pdf>
- xxviii Evaluating the economic and social impacts of cycling infrastructure: considerations for an evaluation framework, Technopolis Group for Department for Transport, 2016  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/509391/evaluating-economic-social-impacts-cycling-infrastructure-evaluation-framework.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/509391/evaluating-economic-social-impacts-cycling-infrastructure-evaluation-framework.pdf)
- xxix <https://www.gov.uk/government/publications/switching-to-sustainable-transport-a-rapid-evidence-assessment>
- xxx <https://link.springer.com/article/10.1007/s40279-015-0432-6>
- xxxi Paths for All, National Survey of attitudes and barriers to walking in Scotland, 2019,  
<https://www.pathsforall.org.uk/mediaLibrary/other/english/paths-for-all-national-survey---attitudes-and-barriers-to-walking-in-scotland.pdf>
- xxxii <https://www.56degreeinsight.com/scottish-tourism-index>
- xxxiii <https://www.thersa.org/approach/bridges-future>
- xxxiv <https://www.walkipedia.scot/resource/bikeisbest--yougo2>