STPR

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 5 – Long-distance active travel network

Recommendation Description

The implementation of high-quality segregated long-distance routes for people walking, wheeling and cycling has the potential to return considerable health and economic benefits. Through improving the existing National Cycle Network (NCN) and creating new links where necessary, this recommendation would ensure that all of Scotland's cities, large urban areas, regions and main strategic destinations are connected by high-quality active travel routes. These routes would be away from busy roads (either on segregated paths or on quiet lanes with low traffic speed limits). More local active travel connections are considered by other STPR2 recommendations, in particular Connecting towns by active travel (4) and Village-town active travel connections (3).

This recommendation would enhance the opportunities for safe walking, wheeling and cycling for functional and recreational journeys. In addition to their potential to facilitate long active travel journeys, these strategic links would pass through many settlements, providing the added benefit of connecting communities with key trip attractors, improving local accessibility and social inclusion. This recommendation would build on the work already underway to improve and enhance the NCN, which already provides circa 3,800 kilometres of routes in Scotland, of which over 1,000 kilometres are traffic-free. Given that 41% of the Scottish population lives within 500m of the current NCN[i], improved long-distance routes have the potential to encourage many more people to walk, wheel and cycle.

As well as health and inclusion benefits, an improved long-distance active travel network would enable the expansion of the burgeoning cycling and walking tourism industry, which would result in economic benefits[ii]. The development of a long-distance active travel network would complement other interurban and urban active travel network recommendations to create comprehensive and cohesive provision to support sustainable travel choices for a large proportion of the Scottish population.

1.2. Relevance

Relevant to linking towns, cities and regions across Scotland

The benefits of improving safe active travel links has been highlighted in the STPR2 National Case for Change report[iii]. A long-distance segregated / traffic-free active travel network would provide safe and sustainable travel choices for longer-distance active journeys and be particularly beneficial for connecting more rural settlements, whilst also providing new recreational walking, wheeling and cycling opportunities. It would deliver a network that connects all of Scotland's cities, large urban areas, regions and main strategic destinations.

Making these connections requires a network of an estimated 3,200 kilometres in length. Of this, around 1,500 kilometres of new links are identified as required in order to complete missing strategic connections. The remaining 1,700 kilometres is currently on the NCN, around 1,200 kilometres of which is estimated to need improvement to bring up to a high-quality route, segregated from traffic (the other 500 kilometres already being of good standard).

1.3. Estimated Cost

£501 million - £1,000 million

Given that the majority of new links are likely to be constructed in a rural setting, with other recommendations (especially Active freeways and cycle parking hubs (2)) addressing the urban connections, capital cost estimates are £200,000-£500,000 per kilometre, derived from outturn construction costs of recent projects in rural Scotland.

It is assumed that all the approximately 2,700 kilometres of network would need some investment (1,500 kilometres of new links plus 1,200 kilometres of improved routes), bringing total capital cost estimates of between around £550 million (at £200,000 per kilometre) and £1,350 million (at £500,000 per kilometre). This would likely be phased over a number of years.

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
The 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;   ▪ Help deliver our net-zero target;   ▪ Promote greener, cleaner choices;   ▪ Get people and goods to where they need to get to;   ▪ Enable us to make healthy travel choices;   ▪ Be reliable, efficient and high quality;   ▪ Be safe and secure for all; 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 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

Long-distance active travel networks particularly contribute to objectives for social inclusion and health, and can also assist in meeting goals for environmental improvement and inclusive economic gain.

Long-distance active travel networks 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 address 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[iv].

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);   ▪ Village-town active travel connections (3);   ▪ Connecting towns by active travel (4);   ▪ Behavioural change initiatives (6); and   ▪ Improving access to bikes (9).
Other areas of Scottish Government activity
▪ Active Travel Framework (2020)[v];   ▪ National Walking Strategy[vi];   ▪ Cycling Action Plan for Scotland (CAPS) (2017)[vii]; and   ▪ Revised Draft Fourth National Planning Framework (Revised Draft NPF4)[viii] National Development 8: National Walking, Cycling and Wheeling Network.

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 change and promote sustainable tourism/leisure journeys.

The usage per kilometre of the NCN in Scotland steadily increased over the period from 2012 to 2016 for both pedestrians and cyclists, which highlights its attractiveness; 121 million trips were made on the NCN in Scotland in 2014, which was an increase of 16% on the previous year[ix]. Each year the UK NCN benefits the economy by approximately £88 million as a direct result of reduced road congestion[x], demonstrating the role that a strategic active travel network can play in achieving modal shift from private vehicles and, in turn, generating associated environmental benefits.

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[xi], with children and older people particularly affected. Inaccessible cycle infrastructure is the single biggest difficulty faced by disabled cyclists in the UK[xii] as well as a significant barrier to users of adapted cycles. Women are under-represented in cycling[xiii]. 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.

Whilst a function of the long-distance network would be in accommodating leisure and tourism trips, it would also play a role in joining up many rural communities and, in turn, enabling access to employment and other opportunities[xiv]. The existing NCN in Scotland passes through 239 settlements, and with 41% of the Scottish population living within 500 metres of it, there is a potential to improve travel choices for a large proportion of the population if the current strategic network is improved and added to where appropriate.

Some people would benefit from more affordable journeys.

This recommendation is therefore expected to have a minor 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[xv]. 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, high blood pressure and cancer[xvi]. Adults who cycle regularly can have the fitness levels of someone up to 10 years younger[xvii].

UK-wide, each traffic-free mile of the NCN is estimated to be used for 77,000 walking trips and 23,000 cycling trips per annum[xviii], giving confidence that improved interurban routes would increase physical activity. The health benefits associated with walking and cycling on the UK-wide NCN in 2017 are thought to have prevented 630 early deaths and almost 8,000 serious long-term health conditions[xix]. Furthermore, Transform Scotland calculates that leisure cycling in Scotland leads to health benefits worth £4 million per year[xx].

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

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

Low Scenario	High Scenario
+	+

Long-distance strategic networks can generate significant economic benefits, particularly leisure- and tourism-related. In the UK, Sustrans estimates that leisure and tourism cycling on the NCN contributes £650 million a year to the economy and supports over 15,000 jobs[xxi]. Cycling-related tourism in Scotland contributes between £241 million and £362 million to the Scottish economy every year[xxii]. The Caledonia Way (Campbeltown – Inverness) attracts an estimated 2.5 million cycling journeys a year from residents, day visitors and tourists.

These examples demonstrate the potential that an enhanced long-distance cycle network can have in generating jobs, providing access to employment and boosting local economies.

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 long-distance active travel network would address fears around road safety, which is the most significant barrier to the uptake of active travel[xxiii]; evidence suggests that perceived safety is more influential on active travel behaviour than journey time reliability or speed[xxiv].

As part of Sustrans' 2018 review of the NCN, 69% of all issues identified on the on-road sections of the network related to road safety, but safety was not directly highlighted as an issue in relation to the traffic-free sections, demonstrating the value of segregated provision, which this recommendation would provide.

Active travel infrastructure tends to be reliable for users, provided appropriate maintenance is undertaken: users are largely independent from the actions of others (so not subject to delays or diversions caused by operational problems on public transport or road networks).

This recommendation is therefore expected to have a moderate 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 some 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 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 National STPR2 Case for Change. By providing more segregated / traffic-free routes, the long-distance active travel network would address fears around road safety, which is the most significant barrier to the uptake of active travel[xxv]; evidence suggests that perceived safety is more influential on active travel behaviour than journey time reliability or speed[xxvi].

As part of Sustrans' 2018 review of the NCN, 69% of all issues identified on the on-road sections of the network related to road safety, but safety was not directly highlighted as an issue in relation to the traffic-free sections, demonstrating the value of segregated provision, which this recommendation would provide.

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 negative effects on visual amenity where new paths are constructed in rural areas could be anticipated, particularly during the construction period; however, any negative visual effects are unlikely to be significant during operation.

This recommendation is expected to have a moderate positive impact on this criterion in

4. Economy

Low Scenario	High Scenario
+	+

Long-distance strategic networks can generate significant economic benefits, particularly leisure- and tourism-related. In the UK, Sustrans estimates that leisure and tourism cycling on the NCN contributes £650 million a year to the economy and supports over 15,000 jobs[xxvii]. Cycling-related tourism in Scotland contributes between £241 million and £362 million to the Scottish economy every year[xxviii]. The Caledonia Way (Campbeltown – Inverness) attracts an estimated 2.5 million cycling journeys a year from residents, day visitors and tourists.

These examples demonstrate the potential that an enhanced long-distance cycle network can have in generating jobs, providing access to employment and boosting local economies.

No significant impact on Transport Economic Efficiency is anticipated.

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
++	++

Perceived road danger is the biggest single barrier to active travel use[xxix], with children and older people particularly affected. Inaccessible cycle infrastructure is the single biggest difficulty faced by disabled cyclists in the UK[xxx] and women are under-represented in cycling[xxxi]. Given the aspiration of the long-distance network is to extend active travel network coverage and provide safe, segregated / traffic-free provision, this recommendation would improve transport inclusivity for commonly disadvantaged groups by providing safe and low-cost transport choices.

Whilst a function of the long-distance network would be in accommodating leisure and tourism trips, it would also play a role in joining up many rural communities and in turn enabling access to employment and other opportunities[xxxii]. The existing NCN in Scotland passes through 239 settlements, and with 41% of the Scottish population living within 500 metres of it, there is a potential to improve travel choices for a large proportion of the population if the current strategic network is improved and added to where appropriate.

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[xxxiii] and children[xxxiv].

This recommendation would not impact on public transport network coverage.

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

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

3.3. Deliverability

1. Feasibility

This recommendation can build on the existing 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 interurban active travel routes. These demonstrate that high quality segregated active travel networks of long-distance routes are 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 in most cases.

2. Affordability

Given the scale of investment required to deliver the full network (estimated to be £550 million - £1,350 million), this recommendation 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[xxxv] and 33% would likely consider more active pursuits, such as walking and cycling, when the COVID-19 lockdown is eased[xxxvi]. Across the UK, post-COVID recovery polling[xxxvii] 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[xxxviii].

There is a clear appetite for more traffic-free routes: of the 6,000 NCN users surveyed as part of the 2018 Sustrans review of the NCN, 81% wanted to see "*more traffic-free routes where everyone feels safe to get around'.* Furthermore, 62% wanted to see "*a network of routes that connect to towns, cities and the countryside"[xxxix].* 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 (SEA Objective 1) and improving air quality (SEA Objective 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. Given the nature of the recommendation, it has no clear link to the achievement of climate change adaptation (Objective 2).

The recommendation would also have a positive effect on 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 expand the existing and popular NCN active travel network, providing more active travel options, safer routes, improving the quality of places and also having the potential for positive effects on reducing traffic noise and vibration during operation. It would have a positive effect on sustainable accessibility (Objective 8) as it promotes a more sustainable use, and management of, the existing transport network.

There is an uncertain relationship between the recommendation and the water environment, biodiversity, soil, cultural heritage and landscape and visual amenity during construction and operation of the new routes (Objectives 10 to 14) at this time; however these are not anticipated to be significant effects in the context of the existing road network. The effects on natural resource (raw materials) requirements (Objective 9) are also uncertain at this stage. It is therefore recommended that further environmental assessment is undertaken as the recommendation develops, 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 in both the Low and High scenarios.

2. Equalities Impact Assessment (EqIA)	
Low Scenario	**High Scenario**
+	+

This recommendation provides the opportunity to provide safer and affordable access to services. This includes access to employment, education, health facilities and other transport services which are important to many groups with protected characteristics. The infrastructure installed as part of the network would be designed to incorporate adapted cycles and as such address mobility issues experienced by groups such as disabled people and older people as well as those who are more likely to lack confidence or are

underrepresented, such as women. The targeted safety measures in regard to complete segregation from traffic 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 and routing of the network, its proximity to required services and the ability for certain groups to access the network.

This recommendation is expected to have a minor 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 strategic cycle routes to islands through improved access to ferry terminals, but active travel route improvements on islands are addressed through other STPR2 recommendations.

This recommendation is 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 lead to improvements 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 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 is likely to additionally improve access to services for 'communities of interest', including those with lower access to private vehicle use (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 and routing of the network, its proximity to required services and the ability for those from deprived and disadvantaged communities to access the network.

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

References

[i] Paths for Everyone Sustrans' review of the National Cycle Network 2018 https://www.sustrans.org.uk/media/2804/paths_for_everyone_ncn_review_report_2018.pdf

[ii] The Value of Cycle Tourism, 2018 https://transform.scot/what-we-do/research/the-value-of-cycle-tourism/

[iii]

[iv] Scottish Government, Preventing Overweight and Obesity in Scotland Strategy, 2010, https://www.gov.scot/publications/preventing-overweight-obesity-scotland-route-maptowards-healthy-weight/

[v] Transport Scotland, Active Travel Framework, 2020, https://www.transport.gov.scot/active-travel/active-travel-framework/

[vi] Scottish Government, Let's get Scotland Walking - The National Walking Strategy, 2014, https://www.gov.scot/publications/lets-scotland-walking-national-walking-strategy/

[vii] Transport Scotland, Cycling Action Plan for Scotland 2017 – 2020, 2017, https://www.transport.gov.scot/publication/cycling-action-plan-for-scotland-2017-2020/

[viii] Scottish Government, Revised Draft Fourth National Planning Framework, 2022 https://www.transformingplanning.scot/national-planning-framework/

[ix] Scotland's Networks of Paths and Trails: Key Research Findings, Scottish Natural Heritage, 2018 https://www.nature.scot/sites/default/files/2018-09/Research%20Consolidation%20Report.pdf

[x] Paths for Everyone Sustrans' review of the National Cycle Network 2018 https://www.sustrans.org.uk/media/2804/paths_for_everyone_ncn_review_report_2018.pdf

[xi] Cycling Scotland, Attitudes and Behaviours Towards Cycling in Scotland, 2019 https://www.cycling.scot/mediaLibrary/other/english/7268.pdf

[xii] Cycling Scotland, Attitudes and Behaviours Towards Cycling in Scotland, 2019 https://www.cycling.scot/mediaLibrary/other/english/7268.pdf

[xiii] 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

[xiv] Improving access for local journeys, Sustrans, 2014 https://www.sustrans.org.uk/media/3690/3690.pdf

[xv] 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)

[xvi] 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

xvii 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

xviii Paths for Everyone Sustrans' review of the National Cycle Network 2018 https://www.sustrans.org.uk/media/2804/paths_for_everyone_ncn_review_report_2018.pdf

xix Paths for Everyone Sustrans' review of the National Cycle Network 2018 https://www.sustrans.org.uk/media/2804/paths_for_everyone_ncn_review_report_2018.pdf

xx
https://www.cyclinguk.org/sites/default/files/document/2020/07/benefits_of_cycle_tourism_factsheet_final10738.pdf

xxi Economic Benefits of Cycle Tourism, Cycling UK, 2020 https://www.cyclinguk.org/sites/default/files/document/2020/07/benefits_of_cycle_tourism_factsheet_final10738.pdf

xxii The Value of Cycle Tourism, 2018 https://transform.scot/what-we-do/research/the-value-of-cycle-tourism/

xxiii Cycling Scotland, Attitudes and Behaviours Towards Cycling in Scotland, 2019 https://www.cycling.scot/mediaLibrary/other/english/7268.pdf

xxiv 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

xxv Cycling Scotland, Attitudes and Behaviours Towards Cycling in Scotland, 2019 https://www.cycling.scot/mediaLibrary/other/english/7268.pdf

xxvi 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

xxvii Economic Benefits of Cycle Tourism, Cycling UK, 2020 https://www.cyclinguk.org/sites/default/files/document/2020/07/benefits_of_cycle_tourism_factsheet_final10738.pdf

xxviii The Value of Cycle Tourism, 2018 https://transform.scot/what-we-do/research/the-value-of-cycle-tourism/

xxix Cycling Scotland, Attitudes and Behaviours Towards Cycling in Scotland, 2019 https://www.cycling.scot/mediaLibrary/other/english/7268.pdf

xxx Cycling Scotland, Attitudes and Behaviours Towards Cycling in Scotland, 2019 https://www.cycling.scot/mediaLibrary/other/english/7268.pdf

xxxi 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/attach

ment_data/file/509391/evaluating-economic-social-impacts-cycling-infrastructure-evaluation-framework.pdf

xxxii Improving access for local journeys, Sustrans, 2014
https://www.sustrans.org.uk/media/3690/3690.pdf

xxxiii https://www.gov.uk/government/publications/switching-to-sustainable-transport-a-rapid-evidence-assessment

xxxiv https://link.springer.com/article/10.1007/s40279-015-0432-6

xxxv 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-inscotland.pdf

xxxvi https://www.56degreeinsight.com/scottish-tourism-index

xxxvii https://www.thersa.org/approach/bridges-future

xxxviii Walkipedia: Scotland - Public attitudes on cycling investment
https://www.walkipedia.scot/resource/bikeisbest--yougo2

xxxix Paths for Everyone Sustrans' review of the National Cycle Network 2018
https://www.sustrans.org.uk/media/2804/paths_for_everyone_ncn_review_report_2018.pdf