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 38 – Speed Management Plan

Recommendation Description

This recommendation focuses on the development of a speed management plan, considering a range of measures such as speed management on motorways, speed limits through roadworks, speed limits through rural settlements on the trunk road network, and reducing speed limits in the urban environment and in residential areas. A study relating to the speed management plan is currently being progressed by Transport Scotland.

This recommendation also proposes a specific review of the national speed limit of Heavy Goods Vehicles (HGVs) over 7.5 tonnes on the trunk road network, potentially increasing the speed limit from 40mph to 50mph on single carriageway roads and 50mph to 60mph on dual carriageway roads.

Depending on the extent to which speed limits may be changed, significant changes could be required to the engineering, enforcement and education framework and the resources necessary to support these. Enforcement and education forms part of the Changing road user behaviour (7) recommendation

1.2. Relevance

Relevant to the road network across Scotland

This recommendation is relevant to the road network across Scotland, including the trunk road and motorway network, and roads in rural, urban and residential environments.

It is directly relevant to Scotland's Road Safety Framework to 2030[i]. The Framework sets out the vision for Scotland to have the best road safety performance in the world by 2030 and the long-term goal of Vision Zero where there are zero fatalities and serious injuries on Scotland's roads by 2050, with ambitious interim targets for the number of people killed or seriously injured to be halved by 2030.

The Framework is aligned with the second National Transport Strategy (NTS2))[ii] and embeds the Safe System approach to road safety delivery, which consists of five key pillars focusing efforts not only on road traffic casualty reduction (vulnerability of casualties) but also on road traffic danger reduction (sources of danger). Safe Speeds is one of the five pillars, and directly relevant to this recommendation.

The Climate Change Plan 2018 – 2032[iii] sets out Scotland's path to achieve a 75% reduction in greenhouse gas (GHG) emissions by 2030 and ultimately net-zero emissions by 2045. The Climate Change Act passed by the Scottish Parliament aims to reduce CO_2 emissions to 90% of 1990 levels by 2040[iv]. In 2019, transport was the single largest source of GHG emissions in Scotland, contributing 12.0 MtCO2e (Metric tons of carbon dioxide equivalent) and accounting for approximately 25% of all GHGs[v]. [vi].

Changing how speeds are managed has the potential to help meet the net-zero emission targets by reducing vehicle fuel consumption. Reducing speed limits in communities can also improve the sense of place and encourage active travel, with a positive impact on air quality as well as health and wellbeing.

1.3. Estimated Cost

<£25 million Capital

Capital costs for developing a speed management plan would be anticipated to be between £0 and £5 million. Capital costs including the implementation of a range of measures such as speed management on motorways and implementing revised speed limits, would be expected to cost in the range of £50 million - £100 million although this would be dependent on the recommendations of the plan. Revenue funding may also be required to ensure that schemes are maintained and enforced.

1.4. Position in Sustainable Investment Hierarchy

Maintaining and safely operating existing assets

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

- Help to deliver our net-zero target;
- Get people and good where they need to be;
- Be reliable, efficient and high quality;
- Use beneficial innovation;
- 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	+	0	+	+	+++	+	+	+++	0	+	+	+	+	+	+
High Scenario	+	0	+	+	+++	+	+	+++	0	+	+	+	+	+	+

This recommendation focuses on the development of a speed management plan to improve the safety of the road network, with a particular focus on the Safe Speeds pillar within the Safe System approach embedded in Scotland's Road Safety Framework.

This recommendation is likely to reduce average speeds for general traffic and potentially increase the speed of HGVs over 7.5 tonnes, which is anticipated to result in a more efficient driving speed, particularly on national speed limit single carriageways.

It is therefore anticipated that this recommendation would make a positive contribution to a number of the STPR2 Transport Planning Objectives (TPOs) and STAG criteria, and all of the Statutory Impact Assessment criteria, performing particularly strongly against the sustainable inclusive growth TPO and the and STAG safety criteria.

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

2. Context

2.1. Problems and Opportunities

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

Relevant Problem & Opportunity Themes Identified in National Case for Change
▪ **Global Climate Emergency:** the Scottish Parliament committed to an ambitious target of net zero emissions by 2045 and transport needs to play its part. Transport is currently Scotland's largest sectoral emitter, responsible for 37% of Scotland's total greenhouse gas emissions (Greenhouse gas emissions encompass CO2 emissions)[vii] in 2018[viii]. Our transport system needs to minimise the future impacts of transport on our climate ▪ **Air Quality:** transport, and road transport in particular, remains a significant contributor to poor air quality. Air pollution increases the risk of diseases such as asthma, respiratory and heart disease, particularly for those who are more vulnerable. Air quality is often worse in areas of deprivation and is a health inequality issue. ▪ **Productivity:** whilst Scotland's productivity level is not solely driven by the efficiency of its transport system, improvements in transport connectivity between businesses reduces costs and increases productivity, thus generating higher levels of economic growth. ▪ **Trade and Connectivity:** transport is crucial for trade and competitiveness, within Scotland, across the UK and internationally. ▪ **Freight:** whilst recognising the importance of freight within Scotland's economy, a key challenge will be to ensure that the negative impacts generated by the movement of goods vehicles, such as increased emissions from road freight, are tackled. ▪ **Reliability:** without intervention, forecast increases in traffic volumes on the road network will impact negatively on reliability through increased congestion and more roadworks as greater pressure is placed on the operational efficiency of the network. Reliability can also be an issue on the rail network[vii]. ▪ **Safety and Security:** Scotland's transport system needs to be safe. Whilst the number of road accident casualties reduced by 11% between 2017 and 2018[viii], the number of fatalities has increased[ix].

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

- Changing road user behaviour (7);
- Expansion of 20mph limits and zones (10);
- Trunk road and motorway safety improvements to progress towards 'Vision Zero' (30);
- Future Intelligent Transport Systems (33);
- Traffic Scotland System renewal (34);
- Intelligent Transport System renewal and replacement (35);
- Improving active travel on trunk roads through communities (37); and
- Access to Stranraer and the ports at Cairnryan (40).

Other areas of Scottish Government activity

- National Transport Strategy (NTS2)[x];
- Revised Draft Fourth National Planning Framework (Revised Draft NPF4)[xi];
- Strategic Road Safety Plan (2016)[xii];
- Scotland's Road Safety Framework to 2030[xiii];
- Infrastructure Investment Plan 2021/22 – 2025/26 (IIP)[xiv];
- Climate Change Plan 2018-32 Update; and
- Climate Change (Emissions Reduction Targets) (Scotland) Act 2019.

The types of interventions considered should incorporate provision to support sustainable travel. This would be further considered as the development and design of interventions is progressed.

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
+	+

A speed management review would be required as part of this recommendation and whilst the outcomes of this speed management review are not yet known, it is assumed that the review would recommend a reduction in national speed limits for general traffic, particularly on single carriageway roads. The relationship between vehicle speed and air quality is complex and can be influenced by several factors, including consistency of driving speed and road environment[xv]. Evidence suggests[xvi] that driving at 55mph instead of 65mph can reduce fuel consumption by 10% to 15%. The speed management plan is also likely to consider a review of HGV speed limits, with the potential to increase the national speed limit on single carriageway roads from 40mph to 50mph and dual carriageways from 50mph to 60mph, which could result in HGVs driving at more fuel-efficient speeds with an associated reduction in transport-based emissions.

Whilst existing research suggests reducing traffic speeds from 30mph to 20mph in urban environments and residential areas has the potential to reduce carbon emissions (along with air pollution and noise levels in free flow conditions, in some instances a reduction in speed from 30mph to 20mph may increase road-based transport emissions, depending on a range of build-environment and atmospheric conditions. Any benefits to emissions are likely to be a result of a reduction in average and top percentile vehicle speeds, smoother, more consistent driving speeds or a mode shift away from car[xvii].

As fear of road danger is the biggest deterrent to use of active modes[xviii], measures to reduce traffic speed are likely to have a positive impact on the share of trips made by walking, wheeling and cycling, contributing to a reduction in vehicle emissions.

However, it is acknowledged that, particularly on quieter routes, a change in speed limit on its own may be unlikely to result in a significant change in average speeds and there is therefore a need to implement supporting measures such as behavioural change campaigns, aimed at changing attitudes towards speed, alongside speed management interventions. It is therefore important to consider the benefits of this intervention alongside Changing road user behaviour (recommendation 7).

Overall, this recommendation is anticipated to have a minor positive impact on this objective in both the Low and High scenarios.

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

Low Scenario	High Scenario
0	0

Whilst the outcomes of this recommendation are unknown as the speed management review has not yet been undertaken, it could result in reduced speed limits which are unlikely to impact the affordability and accessibility of public transport.

Local bus services could be subject to lower speed limits, with the potential introduction of 20mph speed limits in urban areas. However, the high stopping frequency of urban services means this is unlikely to have a discernible impact on bus journey times and is not anticipated to impact on the accessibility of bus services on these sections of the road network.

Reducing speed limits from 30mph to 20mph in urban environments and residential areas can support increased active travel[xix] which in turn can make access to public transport more inclusive. Benefits arise especially for those for whom road danger is the biggest deterrent, in particular older people, disabled people and children[xx].

Other aspects of this recommendation are unlikely to have a significant impact on accessibility of public transport.

No impact on the affordability of public transport is anticipated.

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

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

Low Scenario	High Scenario
+	+

Whilst the outcomes of this recommendation are unknown as the speed management review has not yet been undertaken, it is likely to focus on speed limits, which could see a reduction in speed limits in urban environments and residential areas from 30mph to 20mph, and a reduction in speed limits through rural settlements on the trunk road network.

Evidence suggests that reducing speed limits in urban areas can positively enhance communities and neighbourhoods and can have a positive impact on the quality of life[xxi].

The main barrier to active travel is road danger, and a reduction in local road speeds can be an important motivator to walking, wheeling and cycling[xxii]. Active travel is good for health and wellbeing, helping to reduce the risk of chronic conditions and mitigate health inequalities[xxiii]. Therefore, there are likely to be health and wellbeing benefits arising from speed management measures, particularly those associated with reducing the speed limit in urban and residential areas, with lower road speeds encouraging more people to walk and cycle[xxiv]. The measures may also make a positive contribution to places, by increasing the number of people out and about within their communities.

Measures such as speed management on motorways and reduced speeds through roadworks would also improve safety, with associated positive impacts on health and wellbeing for users of the road network, including construction workers.

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

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

Low Scenario	High Scenario
+	+

This recommendation considers speed limits across all roads in Scotland, including a review of speed limits for HGVs on national speed limit roads, with consideration being given to increasing the national speed limit on single and dual carriageways. This may reduce travel times and allow HGVs to travel more efficiently, potentially reducing operating costs, which would be of benefit to industries that rely on the road network to transport goods to both key domestic and international markets. Reduced journey times

would be particularly significant for industries that transport time-critical goods, such as perishable items. This change would bring Scotland in line with England[xxv], increasing the competitiveness of the trunk road network in facilitating the efficient movement of goods[xxvi], however it is acknowledged that a proportion of HGVs currently travel in excess of the speed limit.

Reducing traffic speeds from 30mph to 20mph in urban environments and residential areas can positively impact sustainable and inclusive growth in Scotland by reducing the number of traffic accidents and associated casualties in urban areas. It is estimated that the value of accident and casualty prevention based on speed reduction to 20mph in Scotland could be between £27.1 million and £39.9 million annually[xxvii]. The implementation of speed management on motorways and reduced speed limits through rural settlements on the trunk road network would be expected to also deliver economic benefits associated with accident and casualty reductions.

This recommendation is unlikely to impact sustainable access to labour markets and may, by increasing the national speed limit for HGVs, increase the attractiveness of road for the movement of, and access to, goods and services.

This recommendation is unlikely to significantly impact on the resilience of access to key domestic and international markets. However reducing the number of speed-related accidents and associated disruption on the road network could deliver benefits to all road users, in particular freight movements in rural areas where diversion routes can be significant in length.

Overall, this recommendation is anticipated to have a minor positive impact on this objective in both the Low and High scenarios.

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

Low Scenario	High Scenario
+++	+++

Traffic speed reduction is a key part of improving road safety, with Safe Speed being one of five pillars in the Safe System approach to road safety delivery, which is embedded within the NTS2 and Scotland's Road Safety Framework to 2030.

Research by the UK Transport Research Laboratory has shown that every 1mph reduction in average urban vehicle speeds can be expected to result in a 6% fall in the number of casualties[xxviii].

Whilst it is not anticipated that implementing a 20mph speed limit in urban environments and residential areas would reduce travel speeds to 20mph, it is anticipated that average speeds would reduce. Evidence suggests that 81% of car drivers on a road with a 20mph speed limit travel at 29mph or below, compared to 49% of vehicles on roads with a 30mph

limit[xxix]. This is anticipated to reduce the number and severity of accidents in urban areas. A study on the impact of 20mph limits on urban roads in Scotland found that reducing speed limits from 30mph to 20mph could potentially prevent 530 to 750 casualties annually (across Scotland)[xxx]. A recent trial by Scottish Borders Council to set 20mph speed limits across towns and villages in the authority area showed promising results with an independent evaluation – based on public consultation and analysis of data at 125 survey sites across 97 settlements – finding that vehicle speeds had reduced in almost all settlements, in some instances by 6mph, with an average reduction closer to 3mph[xxxi].

Similarly, by reducing the speed limits through rural settlements on the trunk road network, it is anticipated that vehicles would travel slower, and therefore reduce the number and severity of accidents on the trunk road, particularly in rural areas, where excessive speed can be an issue.

Measures such as speed management on motorways and reduced speeds through roadworks would improve safety, with associated positive impacts for users of the road network, including construction workers.

A review of HGV speed limits, with the potential to increase the national speed limit on single and dual carriageways would reduce the speed differential between all vehicles and HGVs. This has the potential to positively impact on driver frustration, which can result in dangerous overtaking manoeuvres. Therefore, there are likely to be safety benefits associated with this element of the recommendation.

However, it is acknowledged that, particularly on quieter routes, a change in speed limit on its own may be unlikely to result in a significant change in average speeds. As such, there is a need to implement supporting measures such as behavioural change campaigns, aimed at changing attitudes towards speed, alongside speed management interventions. It is therefore important to consider the benefits of this recommendation alongside Changing road user behaviour (recommendation 7).

This recommendation is likely to have accident benefits, which would improve the resilience and reliability of the network, resulting in a benefit to all road users, however this would be a particular benefit to freight in rural areas where diversion routes can be significant in the event of trunk road closures due to accidents.

Overall, this recommendation is anticipated to have a major positive impact on this objective in both the Low and High scenarios.

3.2. STAG Criteria

1. Environment

Low Scenario	High Scenario
+	+

See Strategic Environmental Assessment (SEA) below.

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

2. Climate Change

Low Scenario	High Scenario
+	+

The outcomes of this recommendation are unknown as the speed management review has not yet been undertaken, however it is assumed that the review would recommend a reduction in national speed limits, particularly on single carriageway roads for general traffic.

The relationship between vehicle speed and air quality is complex and can be influenced by several factors, including consistency of driving speed and road environment[xxxii].

Evidence suggests that driving at 55mph instead of 65mph can reduce fuel consumption by 10% to 15%. The speed management plan is also likely to consider a review of HGV speed limits, with the potential to increase the national speed limit on single carriageway roads from 40mph to 50mph and dual carriageways from 50mph to 60mph, which could result in HGVs driving at more fuel-efficient speeds that could reduce Greenhouse Gas Emissions associated with transport.

There is also evidence to suggest that reducing traffic speeds from 30mph to 20mph in urban environments and residential areas has the potential to reduce emissions (along with air pollution), as a result of reducing average and top percentile vehicle speeds[xxxiii], however there is conflicting evidence on this as it generally only occurs in free flow conditions. Reducing speeds in urban areas could however result in modal shift from car to active modes for short journeys, which, if achieved in communities across Scotland, would result in a positive impact on Greenhouse Gas Emissions.

Overall, it is anticipated that this recommendation would result in a minor positive impact in relation to Greenhouse Gas Emissions.

However, it is acknowledged that, particularly on quieter routes, a change in speed limit on its own may be unlikely to result in a significant change in average speeds and there is

therefore a need to implement supporting measures such as behavioural change campaigns, aimed at changing attitudes towards speed, alongside speed management interventions. It is therefore important to consider the benefits of this intervention alongside Changing road user behaviour (recommendation 7).

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

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
+++	+++

Traffic speed reduction is a key part of improving road safety, with Safe Speed being one of five key pillars in the Safe System approach to road safety delivery, which is embedded within the NTS2 and Scotland's Road Safety Framework to 2030.

Research by the UK Transport Research Laboratory has shown that every 1mph reduction in average urban vehicle speeds can be expected to result in a 6% fall in the number of casualties[xxxiv].

Whilst it is not anticipated that implementing a 20mph speed limit in urban environments and residential areas would reduce travel speeds to 20mph, it is anticipated that speeds would reduce. Evidence suggests that 81% of car drivers on a road with a 20mph speed limit travel at 29mph or below, compared to 49% of vehicles on roads with a 30mph limit.[xxxv] This is anticipated to reduce the number and severity of accidents in urban areas. A study on the impact of 20mph limits on urban roads in Scotland found that reducing speed limits from 30mph to 20mph could potentially prevent 530 to 750 casualties annually (across Scotland)[xxxvi].

Similarly, by reducing the national speed limit of the trunk road network, it is anticipated that vehicles would travel at lower speeds, therefore reducing the number and severity of accidents occurring on the trunk road.

A review of HGV speed limits, with the potential to increase the national speed limit on single and dual carriageways would reduce the speed differential between all vehicles and HGVs. This has the potential to reduce vehicle platoons, which are a source of driver frustration and can result in dangerous overtaking manoeuvres. Therefore, there are likely to be safety benefits associated with this element of the recommendation.

The recommendation is unlikely to have an impact on access to health and wellbeing infrastructure, such as healthcare facilities or infrastructure, including open space or foot and cycle ways. It is however anticipated to have a positive impact on health if the

recommendation results in a reduction in average speeds, positively impacting on air quality, if vehicles travel at more efficient speeds. Furthermore, evidence suggests a reduction in average speeds within an urban area can encourage more active travel trips, which would have a positive health outcome.

Limited impacts on security would be anticipated with this recommendation.

There is an uncertain relationship between the recommendation and visual amenity at this time, however any effect is not anticipated to be significant in the context of the existing road network.

However, it is acknowledged that, particularly on quieter routes, a change in speed limit on its own is unlikely to result in a significant change in average travel speeds. As such, there is a need to implement supporting measures such as behavioural change campaigns, aimed at changing attitudes towards speed, alongside speed management interventions. It is therefore important to consider the benefits of this intervention alongside Changing road user behaviour (recommendation 7).

Overall, this recommendation is anticipated to have a major positive impact on this criterion under both the Low and High scenarios.

4. Economy

Low Scenario	High Scenario
0	0

This recommendation considers speed limits across all roads in Scotland, including a review of speed limits for HGVs on national speed limit roads, with consideration being given to increasing the national speed limit on single and dual carriageways. This may reduce travel times and enable HGVs to travel more efficiently, potentially reducing operating costs, which would be of benefit to industries that rely on the road network to transport goods to both key domestic and international markets. This is likely to have a minor benefit to Wider Economic Impacts (WEI). Reduced journey times would be particularly significant for industries that transport time-critical goods, such as perishable items. This change would bring Scotland in line with England, increasing the competitiveness of the trunk road network in facilitating the efficient movement of goods. However, by increasing the national speed limit for HGVs, this may discourage a move to more sustainable modes of freight travel, such as rail, as road journey times reduce.

In addition, this recommendation is likely to have accident benefits, which would improve the resilience and reliability of the network, resulting in a benefit to all road users. However this would be a particular benefit to freight in rural areas where diversionary routes can be significant.

This recommendation is likely to reduce speed limits for the majority of vehicles, and thus there is the potential for journey times to increase which would result in negative user benefits under Transport Economic Efficiency (TEE), with the exception of business users who may see a benefit as HGV speeds increase. Furthermore, a reduction in average speed is anticipated to result in vehicles travelling more efficiently, particularly on national speed limit single carriageway routes, which would reduce fuel consumption, reducing vehicle operating costs for users but resulting in negative indirect tax benefits to central government.

The benefits of the HGV speed limit review on local, regional and national economies, with the potential to encourage investment and growth within Scotland, may be offset by disbenefits associated with wider increases in journey times for other road users associated with lower speed limits.

Overall, this recommendation is anticipated to have a neutral impact on this criterion in both the Low and High scenarios.

5. Equality and Accessibility

Low Scenario	High Scenario
+	+

Whilst the outcomes of this recommendation are unknown as the speed management review has not yet been undertaken, it is likely to focus on speed limits, which could, amongst other interventions, see a reduction in speed limits in urban areas from 30mph to 20mph, and a reduction in speed limits through rural settlements on the trunk road network. Lower speeds are likely to improve road safety. In addition to benefitting those travelling in vehicles on the road network, this could lead to an improved sense of safety and security for those walking, wheeling and cycling. This would provide some positive effects for protected characteristic groups who are more likely to walk, wheel or cycle, or who are more vulnerable to fear of road danger, including children, young people, women, disabled people and older people, having a minor positive impact on comparative access by people group.

This recommendation is anticipated to reduce average speeds, resulting in increased journey times, particularly over longer distances. Remote and rural areas are therefore likely to have increased journey times when travelling to key services, resulting in a minor negative impact on comparative access by geographical location. There may, however, be a minor affordability benefit to users as vehicles travel at more efficient speeds, however this would need to be assessed in greater detail once the outcome of the speed management plan is known.

This recommendation is not anticipated to have an impact on public transport or 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
This recommendation would be led by Transport Scotland, however elements of the implementation of the outcome of the speed management plan may be undertaken by local authorities or Regional Transport Partnerships. The development of a speed management plan is anticipated to utilise tried and tested techniques for traffic speed data gathering, analysis and assessment and is therefore considered feasible. Depending on the extent to which speed limits may be changed, significant changes could be required to the engineering, enforcement and education framework and the resources necessary to support these. There is already significant experience of the effective delivery of road safety campaigns, education and training initiatives including those by Road Safety Scotland (RSS), which would support the delivery of the outcome of the road safety plan. Enforcement and education forms part of the Changing road user behaviour (7) recommendation.

2. Affordability
The recommendation is for a speed management plan to be developed, which is likely to be relatively inexpensive, with funding potentially available within existing funding streams to fund the initial analysis and study required to support the plan's development. The implementation of the plan could result in significant investment if enhancement or modification to the network is required to encourage compliance with the outcomes of the plan. Further interventions on behaviour change campaigns, which would be required to change road user behaviour in relation to speed, are appraised further under Changing road user behaviour (7). Revenue funding would also be required to ensure that schemes are maintained and enforced.

3. Public Acceptability

Wide public support is anticipated for this recommendation as it is likely to improve road safety, however there may be an element of the public who react negatively to the proposals as the outcomes of the recommendation could increase journey times for general traffic, particularly on longer distance journeys.

There is, however, likely to be support from stakeholders in the wider business community as an increase in the HGV speed limit is likely to be seen as a positive, particularly by those industries that rely on the road network to transport goods and time-critical produce.

There may also be support from wider environmental groups as this recommendation is likely to reduce road-based emissions as vehicles travel at more efficient speeds. There is also the potential for mode shift in urban areas, reducing the reliance on private vehicles.

3.4. Statutory Impact Assessment criteria

1. Strategic Environmental Assessment (SEA)

Low Scenario	High Scenario
+	+

The recommendation is anticipated to lower the average speeds of vehicles, which is likely to result in moderate positive effects on the SEA Objective related to safety (Objective 7), due to improvements in safety on the road network.

Minor positive effects have been assessed in relation to reducing greenhouse gas emissions (Objective 1), improving air quality (Objective 3) and quality of life (Objective 4), as reduced speeds should help to reduce greenhouse gas and other vehicle emissions, whilst also potentially encouraging a mode shift to active travel within urban areas.

Similarly, a reduction in speed limit is anticipated to reduce noise and vibration (SEA Objective 5), which has been assessed as a minor positive effect.

The recommendation has no (or negligible) clear relationship to the achievement of SEA Objective 6, which relates to the development of high-quality places. The recommendation is not anticipated to adapt the transport network to the effects of climate change or reduce the use of natural resources and therefore is unlikely to have a notable effect on the achievement of SEA Objectives 2 (climate adaptation), 8 and 9 (sustainability of the transport network and natural resource usage). In addition, it is considered unlikely to have a notable effect on the achievement of the remaining SEA objectives.

Although further research is required through the development of the speed management plan, this recommendation is expected to have a minor positive effect on this criterion in both Low and High scenarios.

2. Equalities Impact Assessment (EqIA)

Low Scenario	High Scenario
+	+

This recommendation is anticipated to lower average speeds, which is likely to improve road safety. In addition to benefitting those travelling in vehicles, this could lead to an improved sense of road safety and security for those walking, wheeling and cycling, particularly in urban environments and residential areas. This would provide some positive effects for protected characteristic groups who are more likely to walk, wheel or cycle, or who are more vulnerable to fear of road danger, including children, young people, women, disabled people and older people.

Speed limit reductions in urban areas may lead to reductions in noise and vibration, and lower transport-related emissions thereby improving air quality. This could in turn lead to improvements in health, especially for the most vulnerable: children, disabled people and women (pregnancy).

Although further research is required through the development of the speed management plan, 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 is applicable to all roads and therefore island communities are expected to experience the same level of benefit as the rest of Scotland. The increase in HGV speeds is also likely to benefit freight services to and from the Islands.

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 is anticipated to lower average speeds, which is likely to improve road safety. Improving road safety for road users in general is likely to benefit children and young

people who are travelling on, and interacting with, the road network. This is also likely to be of benefit to children and young people who are more vulnerable to fear of road danger, particularly in urban areas.

This recommendation is anticipated to reduce the average speed of general traffic, resulting in improvement to air quality, especially in urban areas, which is likely to benefit children who are more vulnerable to the adverse health effects from traffic pollution.

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
+	+

Deprived areas are more likely to suffer from poor air quality and therefore air quality improvements through reduced average traffic speeds may have a positive effect on some communities, especially for those most vulnerable to ill health effects (children, disabled people and women (pregnancy)).

Whilst all road users could be expected to benefit from improved road safety, benefits would likely be felt to a lesser extent by individuals who do not own or have access to a private car, as well as those unable to drive. However the reduction in average speeds can also reduce the fear of road danger, particularly in urban areas and for those travelling actively. It is considered unlikely that there would be negative effects on public transport journeys, however the outcome of the development of a speed management plan is currently unknown. Nevertheless, evidence shows that people from deprived neighbourhoods are more likely to be injured or killed as road users and are therefore likely to benefit from this recommendation.

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

References

[i] Transport Scotland, Scotland's Road Safety Framework to 2030, February 2021, https://www.transport.gov.scot/media/49893/scotlands-road-safety-framework-to-2030.pdf

[ii] Transport Scotland, National Transport Strategy, February 2020, https://www.transport.gov.scot/media/47052/national-transport-strategy.pdf

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