

PERTH AND KINROSS COUNCIL

Environment and Infrastructure Committee

27 October 2021

20mph Speed Limit Trial

Report by Head of Environmental and Consumer Services

(Report No. 21/195)

This report presents the results of the 20mph Speed Limit Trial, which has identified the need for other road safety measures, in certain circumstances, in addition to the introduction of a 20mph speed limit signage to ensure that it is effective. The report also seeks approval for the introduction of a permanent Traffic Regulation Order for the five trial sites and the introduction of additional traffic calming measures where appropriate. It also provides a brief update on Spaces for People measures.

1. BACKGROUND

- 1.1 Environment & Infrastructure Committee, at its meeting in March 2019, approved proposals for a 20mph speed limit trial (Report No.19/85 refers). The purpose of the trial was to help inform the technical solution when considering requests for the introduction of future 20mph speed limits to ensure that they are effective.
- 1.2 Five locations across the Council area, representing five different road environments were selected:
 1. a town (Aberfeldy)
 2. a residential area (Dalginross in Comrie)
 3. a rural village (Errol)
 4. a village straddling an A Class road (Kinnesswood) and
 5. a school area (Rattray).
- 1.3 The different characteristics of each site allowed results to be compared and the suitability of each 20mph speed limit in a range of road contexts to be fully assessed.
- 1.4 The introduction of a 20mph speed limits can have a positive impact on communities where they have been implemented. 20mph speed limits can:
 - reduce the risk of a collision
 - reduce the severity of collisions
 - encourage active travel by increasing walking and cycling levels.
- 1.5 The trial commenced in February 2020 and involved the introduction of four speed reducing measures. A series of traffic surveys were undertaken within each trial site at the start of the trial, when the roads were still subject to the national urban speed limit of 30mph. Upon each subsequent change to the

road environment, additional traffic surveys were undertaken at the same locations to measure compliance rates and changes in travel patterns.

- 1.6 The four measures, which were introduced on a phased basis to assess their effectiveness, were as follows:

Measure 1: the installation of 20mph regulatory signs

Measure 2: the introduction of vehicle-activated signs (VAS)

Measure 3: the installation of speed cushions

Measure 4: a co-ordinated speed enforcement exercise undertaken by Police Scotland.

- 1.7 All of the sites, except Dalginross at Comrie, had existing vehicle activated signs. New VAS were installed at Comrie and the existing VAS were upgraded with a traffic recording facility. All the electronic signs were switched off at the start of the trial and re-activated for the second phase of the exercise, then traffic speeds recorded again.

- 1.8 The exact locations of the traffic surveys, speed limit signs, VAS and speed cushions within each trial site is shown in the maps in the appendices. The tables and charts showing the vehicle speed data are also shown in the appendices. Two types of speed measurements were assessed – the average speed and the 85th percentile speed. The 85th percentile is the speed at which 85% of all traffic is driving at or below. It is a measure used nationally for road design and to set speed limits.

- 1.9 The trial coincided with the Covid pandemic from Spring 2020. Across the public road network, traffic volumes initially dropped below 50% at the start of lockdown, rising slowly but gradually over the following weeks. With each subsequent lockdown and easing of restrictions, the traffic volumes fell and rose accordingly. In May 2020, traffic flows were at their lowest. By May 2021, traffic patterns had returned to 90% of their pre-Covid levels. Although traffic volumes fluctuated, vehicle speeds remained largely unaffected. Most roads were below capacity, so traffic remained in free-flow conditions.

Measure 1

- 1.10 The introduction of new 20mph regulatory signs, without any other changes to the road environment, resulted in minimal speed reductions at each trial site. Average speeds dropped by as little as 1mph.

Measure 2

- 1.11 Vehicle-activated signs, although enthusiastically received by local communities, also resulted in minor speed reductions of between 2 and 5mph.
- 1.12 Both measures 1 and 2 did help to reduce the percentage of vehicles travelling above 30mph and the number of vehicles travelling at excessive speeds (which is classed as 15mph above the maximum permitted speed

limit). A list of the vehicle-activated signs installed across the Council area in recent years is shown in Appendix 8.

Measure 3

- 1.13 The most significant long-term impact on vehicle speeds was the installation of physical traffic calming measures. At some sites, the speed cushions reduced speeds by 10mph. A regular sequence of physical traffic calming is required to prevent fluctuations in vehicle speeds. Positioning of speed cushions and ramps can be problematic due to associated noise and vibration. These types of speed reduction measures may not be appropriate on main transport routes with higher percentages of larger commercial or agricultural traffic.

Measure 4

- 1.14 Police Scotland undertook enforcement activity in Aberfeldy and Errol during the last set of traffic surveys. Enforcement proved to be the most effective short-term form of traffic calming, helping to bring down almost all vehicle speeds to below the maximum permitted limit. Road policing activity must be overt, so the patrol cars proved a strong visual deterrent to speeding motorists. However, vehicle speeds returned to pre-enforcement levels once the police officers left the site. Ideally, enforcement would be more widely available. However, Police Scotland have limited resources and a number of other competing priorities. Even if the Police had the resources, they should not be enforcing every speed limit all the time. Speed limits are supposed to be self-regulating and should not require continuous enforcement. There is a responsibility on all drivers to proceed at an appropriate speed up to the maximum permitted limit.
- 1.15 Speed limits should be self-enforcing and reflect the road environment. Transport Scotland has produced guidance for roads authorities regarding the implementation of 20mph speed limits. The guidance recommends that:-
- 20 mph speed limits should not be introduced on roads where there is no realistic expectation that they will be achieved
 - schemes should aim for compliance with the new speed limit and speeds should be monitored after introduction
 - following monitoring, where compliance levels are not at an acceptable level, consideration should be given to the addition of traffic calming measures or reverting to a 30-mph limit, if necessary.

2. PROPOSALS

- 2.1 The trial has demonstrated that the introduction of a 20mph zone using signage is not always effective, particularly where averaged speeds are above 24mph. Therefore, in such cases, additional speed reduction measures should be installed to encourage better compliance.

- 2.2 With regard to the five trial sites, there has been strong community support for the retention of the 20mph speed limits introduced during the trial, although as evidenced during the trial, there is a lack of compliance by some drivers. It is proposed, therefore, that the Experimental Traffic Regulation Order that was made for each site, should be made permanent in the areas involved in the trial.
- 2.3 Moving forward, it is proposed to use the learning from the trial when considering the introduction of future 20mph speed limits, and what traffic calming measures should be implemented. The process would involve the following:
- i. Upon receiving a request for a lower speed limit, traffic surveys would be undertaken to establish vehicle speeds, traffic flows, vehicle categories and travel patterns. Where the 85th percentile speed is 24mph or lower, a self-regulating 20mph speed limit can be considered. (i.e. the introduction of 20mph signage only).
 - ii. The additional 4mph is based on 10% + 2mph which allows for variations in vehicle speedometer displays. Most speedometers have tolerances of some $\pm 10\%$, mainly due to variations in tyre diameter.
 - iii. Where the 85th percentile speed exceeds 24mph, and if a lower speed limit is considered necessary, other traffic calming measures appropriate to the road environment would also be considered. These may include:
 - regulatory measures such as 30mph or 40mph buffers leading into the lower limits
 - informatory measures such as vehicle-activated signs displaying vehicle speeds or a road safety message
 - physical measures such as speed cushion, ramps, and priority systems
 - any combination of the above
- 2.4 At its meeting of 20 March 2019, (Report No.19/83 refers). E&I Committee agreed a criteria for prioritising requests for road safety initiatives from residents, elected members and community councils and that a database would be created. The agreed assessment criteria for prioritising schemes is based on collision and casualty reduction, road environment, road alignment, school travel planning and sustainable transport and cost (including income generation / third party funding). Each requested road safety scheme is allocated risk weighting points under each of the six criteria, with the highest scoring schemes deemed to be highest priority.
- 2.5 There are approximately 800 potential schemes currently on the database, and these are addressed as resources become available. The approval of this report will not have any impact on the prioritisation criteria agreed by the Committee. However, it would have an impact upon the traffic calming measures implemented to address the schemes on the list, as the evidence gathered during the trial will lead to a more effective solution. Furthermore, as

cost is reflected in the prioritisation criteria, then the requirement to undertake any additional measures as part of any individual scheme would increase the cost and therefore effect its position on the prioritisation list. Funding sources will also have to be identified in future years to cover the cost of implementing these extra measures.

Spaces for People

- 2.6 In addition to the 20mph trials, during the Covid pandemic, temporary 20mph speed limits were installed at two sets of locations:-
1. town centres where the numbers of pedestrians were higher
 2. rural villages with no footways where pedestrians share the road with vehicular traffic. This was part of the Spaces For People physical distancing project and it assisted the increased pedestrian activity by lowering vehicle speeds and reducing the risk of conflict between the various road users.
- 2.7 All of these Spaces for People speed limit sites are now being assessed as each Temporary Traffic Regulation Order (TTRO) is only valid for 18 months (similar to the ETRO for the 20mph Speed Limit Trial). An online attitudinal survey was conducted by the transport consultancy Systra to gauge community support for the lower speed limits. The findings will be taken into consideration when deciding whether to retain or remove the temporary speed limits. This will be brought back to Committee with recommendations in due course.

3. CONCLUSION AND RECOMMENDATIONS

- 3.1 The 20mph Speed Limit Trial evidenced that, where vehicle speeds are close to the maximum permitted speed (20-24mph), a lower limit can be self-regulating. However, at locations where vehicle speeds are higher than 24mph, additional traffic calming measures may be required to ensure compliance.
- 3.2 Physical traffic calming measures provide the greatest impact on vehicle speeds and driving behaviour and can be used alongside other speed reduction features such as signs and road markings.
- 3.3 It is recommended that the Committee:
- (i) notes the traffic survey analysis for the five trial sites which are set out at Appendix 1 to 5.
 - (ii) approves the introduction of a permanent Traffic Regulation Order for a full-time, mandatory 20mph speed limit for each of the five trial sites
 - (iii) notes the outcome of the trials, which will inform future decisions about the appropriate technical solution when considering the introduction of future 20mph zones.
 - (iv) requests that a report will be produced with recommendations on the temporary Spaces for People lower speed limits or alternatively for their removal and reinstatement of the previous speed limits.

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1. IMPLICATIONS, ASSESSMENTS, CONSULTATION AND COMMUNICATION

Strategic Implications	Yes / None
Community Plan	Yes
Corporate Plan	Yes
Resource Implications	
Financial	Yes
Workforce	None
Asset Management (land, property, IST)	None
Assessments	
Equality Impact Assessment	Yes
Strategic Environmental Assessment	Yes
Sustainability (community, economic, environmental)	Yes
Legal and Governance	Yes
Risk	None
Consultation	
Internal	Yes
External	Yes
Communication	
Communications Plan	Yes

1. Strategic Implications

Community Plan

- 1.1 The Perth and Kinross Community Planning Partnership (CPP) brings together organisations to plan and deliver services for the people of Perth and Kinross. Together the CPP has developed the Perth and Kinross Community Plan which outlines the key things we think are important for Perth and Kinross.
- 1.2 This section should set out how the proposals relate to the delivery of the Perth and Kinross Community Plan in terms of the following priorities:
- (i) Giving every child the best start in life
 - (ii) Developing educated, responsible, and informed citizens
 - (iii) Promoting a prosperous, inclusive, and sustainable economy
 - (iv) Supporting people to lead independent, healthy, and active lives
 - (v) Creating a safe and sustainable place for future generations
- 1.3 It is considered that the actions contained within this report primarily contribute to objectives iv) and v) above.

Corporate Plan

- 1.4 The Council's Corporate Plan outlines the same five objectives as those detailed above in the Community Plan. These objectives provide a clear strategic direction, inform decisions at a corporate and service level and shape resource allocation. It is considered that the actions contained in the report primarily contribute to objectives iv) and v). set out at 1.2 above.

2. Resource Implications

Financial

Capital

- 2.1 A Capital budget of £0.200m was required to implement the 20mph Speed Limit Trial in the five locations over three financial years. The first set of traffic surveys were undertaken in February 2020. The Temporary Traffic Regulation Orders, regulatory signs and vehicle-activated signs were installed, and most of the traffic surveys undertaken, throughout 2020/21. Due to delays caused by the Covid pandemic, the speed cushions and final traffic surveys were not completed until May 2021. Additional resources would need to be identified in order to implement new 20mph speed limits at requested sites.

Revenue

- 2.2 It is estimated that the Revenue budget commitments arising from the maintenance of the road signs and speed cushions (£2,000) will be met from the Roads Maintenance budget. Servicing and upgrading the vehicle-activated signs (£5,000) will be met from the Road Safety Initiatives budget. These costs will require to be prioritised within the existing revenue budgets.

Workforce

- 2.3 There are no workforce implications arising from the contents of this report.

Asset Management (land, property, IT)

- 2.4 There are no land and property, or information technology, implications arising from the contents of this report.

3. Assessments

Equality Impact Assessment

- 3.1 An equality impact assessment needs to be carried out for functions, policies, procedures, or strategies in relation to race, gender, and disability and other relevant protected characteristics. This supports the Council's legal requirement to comply with the duty to assess and consult on relevant new and existing policies.

3.2 The function, policy, procedure, or strategy presented in this report was considered under the Corporate Equalities Impact Assessment process (EqIA) with the following outcome:

- assessed as **relevant** and no actions are required to be taken to reduce or remove negative impacts.
- assessed as **relevant** and the following positive outcomes are expected following implementation.
- the measures, for example improved crossing facilities, footways, and traffic calming features, will provide improved access for communities, and will particularly improve travel opportunities for disabled people with mobility issues, sight or hearing impairment, children, elderly people & parent/carers walking with children in pushchairs/buggies.
- the measures will provide improvements for road users of all ages, but particularly for children and elderly people. This will include facilities to enable them to cross roads safely.
- the measures will also encourage children to walk or cycle to school, thus bringing health benefits.
- the measures will provide opportunities for increased travel by foot and cycle for all age groups.

Strategic Environmental Assessment

3.3 Strategic Environmental Assessment (SEA) is a legal requirement under the Environmental Assessment (Scotland) Act 2005 that applies to all qualifying plans, programmes and strategies, including policies (PPS).

3.4 The matters presented in this report were considered under the Environmental Assessment (Scotland) Act 2005 and no further action is required as it does not qualify as a PPS as defined by the Act and is therefore exempt.

Sustainability

3.5 Relevant Traffic Regulation Orders will be promoted in accordance with The Local Authorities' Traffic Orders (Procedure) (Scotland) Regulations 1999.

Risk

3.6 There are no significant risks associated with the implementation of this project.

4. Consultation

4.1 The Head of Legal and Governance, the Head of Finance and Police Scotland have been consulted in the preparation of this report.

4.2 As part of the scheme design, consultation has been carried out with the relevant parties where appropriate, including the local elected members.

- 4.3 Elected Members for the 20mph trial locations were contacted to gather opinions and to see if they supported the retention of the zones. Most of the Elected Members responded supporting the retention of the 20mph speed limit zones in their current arrangement. There were no negative responses received.

5. Communication

- 5.1 For this project, approval will allow a start to be made to the formal procedure to change the Experimental Traffic Regulation Order (ETRO) to a permanent Traffic Regulation Order (TRO). This procedure will involve statutory consultation, preparation of a draft TRO and advertising in the press. This will provide an opportunity for additional comments to be made or objections to be raised. If objections are raised, these will be reported back to Committee, with appropriate recommendations.

2. BACKGROUND PAPERS

- 2.1 The following background paper, as defined by Section 50D of the Local Government (Scotland) Act 1973 (and not containing confidential or exempt information) were relied on to a material extent in preparing the above Report:
- Report to Enterprise and Infrastructure Committee 20 March 2019, Perth, and Kinross 20mph Speed Limit Trial (19/85).

3. APPENDICES

- 3.1 Appendix 1 – Aberfeldy 20mph Speed Limit Trial summary of results.
- 3.2 Appendix 2 – Dalginross 20mph Speed Limit Trial summary of results.
- 3.3 Appendix 3 – Errol 20mph Speed Limit Trial summary of results.
- 3.4 Appendix 4 – Kinnesswood 20mph Speed Limit Trial summary of results.
- 3.5 Appendix 5 – Rattray 20mph Speed limit Trial summary of results.
- 3.6 Appendix 6 – 20mph Speed Limit Trial summary of costs.
- 3.7 Appendix 7 - 20mph Speed Limit Policy Flow Chart
- 3.8 Appendix 8 – List of Vehicle Activated Signs