



DEVELOPMENT AND INFRASTRUCTURE SERVICES

ROAD SPEED LIMIT POLICY FRAMEWORK

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ARGYLL AND BUTE ROAD SPEED LIMIT POLICY

1 SUMMARY

- 1.1 This policy establishes a framework for Argyll and Bute Council for the selection, prioritisation and approval of speed limits.
- 1.2 The speed of vehicles can be an emotive issue for communities that often generates intense local concern and debate. This can be due to the perception of what is an appropriate safe speed which can often differ greatly between, for example; drivers, pedestrians and pedal cyclists, many of whom live and work in the community. It is important, therefore, that Argyll and Bute Council clearly sets out its policy on how it will determine 'appropriate' speed limits and ensure consistency of application, in line with current Government recommendations.
- 1.3 Sections 5 & 6 of this Policy outline the environments and road characteristics suitable for appropriate urban and rural speed limits respectively, in accordance with Scottish Executive Circular 1/2006. Tables 1 & 2 summarise the recommended policy framework for the application of speed limits on local roads in the Council area.

2 BACKGROUND

- 2.1 The UK and Scottish Governments are committed to developing a speed management policy that will take account of the contribution of reduced speeds to road safety as well as environmental and social objectives.
- 2.2 To meet these aims and to ensure national consistency, the UK and Scottish Governments asked all Roads Authorities to review all existing speed limits on 'A' and 'B' roads by the end of 2010. Argyll and Bute Council carried out a Speed Limit Review in 2010/11 of all 'A' class roads.
- 2.3 Speed limits must be evidence-led and self-explaining, and should reinforce road users' assessments of the appropriate speed for a given environment. Speed limits should be established in a consistent manner that reflects the expectation of all road users.
- 2.4 The national speed limits of 30 and 60mph are not always appropriate. Reasons for this may include; road safety, road function, road geometry, road alignment, the surrounding environment, development and changes that occur along a route.

- 2.5 Where a speed limit is set inappropriately, for example substantially lower than the speed that the majority of drivers would otherwise choose, evidence shows it often will not be obeyed and can result in an over-reliance on Police enforcement.

3 GOVERNMENT POLICY

- 3.1 In August 2006, the Scottish Executive published ETLLD Circular No. 1/2006: Setting Local Speed Limits, which laid out recommendations on the setting of local speed limits. This superseded the recommendations given previously in SOD Circular No. 1/93. The new recommendations apply to the setting of speed limits, other than 20 mph speed limits, on single or dual carriageway roads in both urban and rural areas.
- 3.2 20 mph speed limits are still to be set in accordance with recommendations given in Scottish Executive circulars SEDD Circular No. 6/2001 and ETLLD Circular No. 1/2004.
- 3.3 The objectives of the new Circular are;
- the setting of appropriate local speed limits, including lowering or raising limits where conditions dictate;
 - establishing local speed limits that better reflect the needs of all road users, not just drivers;
 - improved quality of life for residents in urban and rural areas and a better balance between road safety, accessibility and environmental objectives, especially in rural communities;
 - improved recognition and understanding by road users of the risks involved on different types of road, the different speed limits that apply and the reasons why;
 - improved respect for speed limits and in turn improved self-compliance;
 - continued reductions in the number of road traffic collisions, injuries and deaths in which excessive or inappropriate speed is a contributory factor.
- 3.4 The new circular is to be used as the basis for future assessments of local speed limits and for developing route speed management strategies. Speed limits are only one element of speed management and local speed limits should not be set in isolation, but as part of a package of measures to manage speeds. This includes engineering measures such as traffic calming and landscaping features to raise drivers' awareness of the environment, as well as enforcement, education, driver information, training and publicity.

- 3.5 Alternative speed management options (as described in 3.4) must always be considered before proceeding with a new speed limit.
- 3.6 The new Circular allows Roads Authorities to retain the flexibility to set local speed limits that are appropriate to the individual road, while reflecting local needs and considerations. Although the national speed limit on restricted roads in urban areas is 30 mph, 40 or 50 mph speed limits can be used on roads where the environment and characteristics permit, such as; dual carriageways, distributor roads and roads with little frontage access.
- 3.7 The new Circular introduces an assessment framework, developed by the Transport Research Laboratory, to help achieve an appropriate and consistent balance between safety and mobility on single carriageway rural roads. This framework adopts a rural road network hierarchy of two tiers (upper and lower) based on function that is to be used when assessing speed limits on any single carriageway rural road.
- 3.8 From now on local speed limits, except 20mph speed limits, will be assessed and determined using mean traffic speeds. This is a change from the guidance given previously in Circular 1/93, which exclusively used 85th percentile speeds to determine speed limits. The 85th percentile speed refers to the speed at, or below which 85 per cent of the traffic is travelling. It is thought that the mean speed will be easier for road users to understand.
- 3.9 The aim is to achieve a distribution of speeds that reflects the function of the road and the impacts on the local community, with the posted speed limit aligned to the prevailing conditions.
- 3.10 Speed limits within the Council area need to be consistent with adjoining networks, including the Trunk Road.

4 ENFORCEMENT

- 4.1 Police Scotland is responsible for the enforcement of speed limits on roads in the Council area. Enforcement can be carried out at specific locations by Police officers using hand held equipment, or along routes using in-vehicle detection equipment.
- 4.2 It is intended that new and existing speed limits will be mostly self-enforcing. The adoption of the recommendations arising from the review of speed limits on the 'A' roads and the Speed Limit Policy Framework should assist drivers judgement of the appropriate speed for a given environment and result in speed limits that drivers can more readily comply with.
- 4.3 However, there is a group of drivers that will continue to disregard speed limits suggested by the surrounding environment or imposed through regulation. It is this group of drivers at whom Police enforcement is primarily aimed.

- 4.4 Before any new or altered speed limits are introduced, Police Scotland will be formally consulted to ensure they agree that the proposals are valid.

5 SPEED LIMITS ON RURAL ROADS

5.1 Rural Speed Limits

5.1.1 In accordance with the recommendations set out in Circular 1/2006 and guidance given by SCOTS¹, the rural road network in the Argyll and Bute Council area has been divided into a two-tier functional hierarchy of upper and lower tier roads.

5.1.2 The main purpose of the upper tier road network is to provide for the safe and efficient movement of long distance through traffic. These are typically 'A' and 'B' roads that link key towns and settlements and allow for easy movement around the Council area.

5.1.3 Lower tier roads are those with a primarily local or access function, typically 'C' and unclassified roads, but also including some 'B' roads. These roads may often cater for a variety of users, both vehicular and vulnerable, and quality of life issues will be important.

5.1.4 In the Argyll and Bute Council area, the national speed limit will remain the norm on rural roads. However, where collision rates exceed certain thresholds set in Circular 1/2006, lower speed limits will be considered together with other measures. The accident rate thresholds are;

- Upper tier - 35 injury accidents per 100million vehicle km;
- Lower tier - 60 injury accidents per 100million vehicle km.

5.1.5 The accident rate is a trigger for intervention, indicating that accident remedial or speed management measures may be necessary on a particular section of road.

5.1.6 In accordance with Circular 1/2006, further investigation will be necessary to allow all options to be considered in detail before any proposal to lower the speed limit is pursued.

5.1.7 Speed limits must not be set in isolation or used to try and solve problems at particular hazards (e.g. bends, junctions, accident sites, etc.), but should rather be used as part of an overall speed management package.

¹ Society of Chief Officers of Transportation in Scotland

5.1.8 It is important when implementing rural speed limits that are lower than the national speed limit on any particular road, that speed limits on adjoining roads are considered. This will avoid confusing situations where one road has a lower speed limit than an adjoining road of relatively lesser quality or importance.

5.1.9 30mph speed limits should be the norm in villages.

5.1.10 Examples of suitable roads and environments that various speed limits would be applicable are listed in Table 2.

Table 1: Speed Limits in Rural Areas		
Speed Limit (mph)	Upper tier – ‘A’ & ‘B’ roads with a predominant traffic flow function	Lower tier – ‘C’ & other roads with important local access or recreational function
60	Recommended for most high quality ‘A’ and ‘B’ roads with few bends, junctions or accesses	Recommended only for the best quality ‘C’ and Unclassified roads with a mixed (i.e. partial traffic flow) function with few bends, junctions or accesses.
50	May be considered for lower quality ‘A’ and ‘B’ roads that may have a relatively high number of bends, junctions or accesses. The accident rate should be above a threshold of 35 injury accidents per 100 million vehicle km.	May be considered for lower quality ‘C’ and unclassified roads with a mixed function where there is a relatively high number of bends, junction or accesses. The accident rate should be above a threshold of 60 injury accidents per 100 million vehicle km.
40	May be considered where there is a high number of bends, junctions or accesses, substantial development, or where the road is used by considerable numbers of vulnerable users.	May be considered for local roads with a predominantly local access or recreational function, or if it forms part of a recommended route for vulnerable road users.
30	Should be the norm in villages	

5.2 Village Speed Limits

- 5.2.1 In order to implement the Government policy that, where appropriate, 30 mph speed limit should be the norm in villages, it is necessary to define a 'village'. For the purpose of this speed limit policy the definition from Traffic Advisory Leaflet 1/04 – "Village Speed Limits" is used. This definition is based on simple criteria relating to frontage development and distance. Both upper and lower tier roads will therefore be subject to a 30 mph speed limit through a village if the following criteria are met;
- 20 or more houses (on one or both sides of the road);
 - a minimum density of 3 houses per 100m; and
 - a minimum length of 600m.
- 5.2.2 The minimum length of 600m is recommended to avoid frequent changes of speed limit and because many drivers are unlikely to reduce their speed to a new 30 mph limit if it is over a very short stretch of road, particularly if the end of the limit can be seen from the entry point.
- 5.2.3 This minimum density should generally also apply for each 100m section, but particularly for the first 100 metres of the speed limit at each end of the village, to reinforce the visual message for drivers.
- 5.2.4 In situations where the criteria for a 'village' are not strictly met, and there are slightly less than 20 houses, extra allowances will be made for public amenity buildings such as schools, churches, post offices, etc. In order to avoid ambiguity, a minimum of 80% of the required housing (16 houses) plus significant other building(s) is necessary for a 30 mph limit. One public amenity building is effectively equal to 4 houses. Housing density in the 50% to 80% range will be considered for a 40 mph speed limit.
- 5.2.5 However, in the Council area there may be settlements where the development density criteria are met over a shorter distance. In these instances the 30 mph limit can be imposed over the length of the development (minimum length 400m), and in such cases an intermediate 'buffer' speed limit of 40 mph may be implemented prior to the 30 mph terminal signs at the entrances to a village to ensure a minimum 'speed restricted' length of 600m.
- 5.2.6 Intermediate 40 mph limits may also be considered where there are outlying houses beyond the village boundary, houses are set back from the road, there are junctions and/or accesses present or on roads with high approach speeds.
- 5.2.7 Where there is a lesser degree of development than described above or where engineering measures are not practicable or cost effective, but outlying properties make a reduction from the national speed limit of 60mph desirable, a 50mph speed limit can be considered.

- 5.2.8 It may be necessary to consider other speed management measures to support the message of the speed limit and help encourage compliance so that no enforcement difficulties are created for the police. Where appropriate, such measures might include a vehicle activated sign, centre hatching or other measures that would have the effect of narrowing or changing the nature and appearance of the road.
- 5.2.9 Sections of road where 30mph speed limits are proposed will be monitored and should mean speeds be found to be higher than the proposed limit then further measures designed to reinforce the new speed limit, such as vehicle activated signs, must be considered. Such measures must be installed in conjunction with a new 30mph speed limit.
- 5.2.10 Villages on 'C' and Unclassified roads are predominantly subject to a 30 mph speed limit by virtue of the presence of street lighting. Any changes to existing limits where required will be made by Traffic Regulation Order.
- 5.2.11 Village speed limits will be, as far as is practicable, signed to a standard layout to ensure consistency across the Council area. Speed limit signs should be placed as near as practicable to the start of development so that drivers can easily associate housing with the lower speed limit, reinforcing the visual message that lower speeds are appropriate.
- 5.2.12 Village speed limits should commence at a distance no further than 20 metres from the first property in the settlement, unless a lack of visibility makes this impractical or where additional speed reducing features are to be used.
- 5.2.13 In most cases village boundaries will coincide with the start of lower speed limits and combination signs will be appropriate.

6 SPEED LIMITS ON URBAN ROADS

- 6.1 Urban roads by their nature are complex due to a need to satisfy a variety of functions and to provide a safe travel environment for pedestrians, cyclists and motorised traffic.
- 6.2 Lower speeds on urban roads will generally benefit all road users and setting appropriate speed limits is an important factor in urban safety management.
- 6.3 Examples of the characteristics of roads and environments where various urban speed limits would be applicable are listed in Table 1.

Speed Limit (mph)	Road Environment Characteristics
20	In town centres, residential areas and in the vicinity of schools where there is a high presence of vulnerable road users.
30	The standard limit in built up areas with street lighting and development on both sides of the road.
40	Higher quality suburban roads or those on the outskirts of urban areas where there is little development. Should be few vulnerable road users. Should have good width and layout, parking and waiting restrictions in operation, and buildings set back from the road. Should cater for the needs of vulnerable users, wherever possible, through segregation of road space, and have adequate footways and crossing places.
50	Usually most suited to special roads, dual carriageway ring or radial routes or bypasses which have become partially built up. Should be little or no roadside development.

6.4 20mph Speed Limits

- 6.4.1 The UK and Scottish Governments have recognised that 20mph speed limits play an important role in protecting vulnerable road users such as children, pedestrians and cyclists.
- 6.4.2 Local speed limits of 20mph are encouraged in situations where there is a clear risk to vulnerable road users and higher speed limits are inappropriate.
- 6.4.3 The information relating to 20mph speed limits in the Speed Limit Policy Framework will replace information currently contained within the 20 mph Speed Limit Policy (EV20040429).
- 6.4.4 There are four types of 20mph speed limit, three of which are proposed for use in this policy. These are based on the characteristics outlined in Table 1.

i. 20mph Zones

- The key to a successful 20mph zone is to have in place appropriate traffic calming measures in sufficient numbers and of appropriate design to reduce traffic speeds to an average of 20mph or less without the need for Police enforcement.
- A 20mph zone cannot be established without appropriate traffic calming features first being in place.

ii. 20mph Zones - New Residential Developments

- All new residential roads within residential developments shall comply with a maximum design speed of 20mph being the objective. They shall be designed to physically restrict vehicle speeds and provide a self-enforcing speed limit.
- Over and above this requirement the developer shall be required to meet the costs of all Traffic Regulation Orders and signage for the creation of a 20mph zone within the development. The creation of a 20mph zone minimises the number of signs required in a development, and provides an enforceable speed limit.

iii. 20mph Speed Limits (Mandatory)

- Mandatory 20mph speed limits can be established with signs only and with no supporting speed reducing features.

- This may seem an attractive option, but such limits should not be introduced when there is no realistic expectation that they will achieve the required decrease in traffic speeds, or where the Police are unable to give an undertaking to provide an effective level of enforcement.
- It is recommended that mandatory 20mph speed limits should be considered only for roads where the 85th percentile² speed is no higher than 24mph.
- Mandatory 20mph speed limits may be appropriate in residential areas that have been partially traffic calmed and the 85th percentile speed condition is likely to be met. This will avoid confusing situations arising where a local distributor road may be subject to a lower speed limit than adjoining streets.
- It is not considered that best value can be demonstrated by introducing mandatory 20mph speed limits in areas where speeds are already low simply to provide a 'feel good' factor.
- Repeater signs are usually necessary when implementing 20mph speed limits.

iv. Variable 20mph Speed Limits

- Variable speeds limits are those that vary between the existing speed limit and 20mph according to the time of day as specified in the speed limit Traffic Regulation Order.
- Part-time 20mph speed limits are only permitted on roads adjacent to schools in Scotland, in conjunction with specially authorised signs.

v. 20mph Advisory Speed Limits (Twenty's Plenty)

- 20mph advisory speed limits have no traffic calming features to reduce vehicle speeds or traffic regulation orders to allow enforcement. Instead they rely on the co-operation of drivers to slow down in areas where the signs are present.

² 85th percentile speed is the speed up to which 85 per cent of vehicles are travelling in free flow conditions. This is an industry standard measurement used for the basis of various elements of road design.

- A trial³ of low cost advisory 20mph speed limits was carried out at numerous sites across Scotland in 1997. An evaluation of the trials was published in 2001 and although this showed slight speed reductions across the trial sites, they were not significant.
- Given the inconclusive result of the trials, it is not proposed to implement any 20mph advisory speed limits in the council area.

6.5 30mph Speed Limits

- 6.5.1 The national speed limit applicable in urban areas is 30mph, which represents an appropriate balance between the mobility and safety of road users, particularly the more vulnerable.
- 6.5.2 Many urban roads, particularly those in city or town centres, serve a mixture of shopping, commercial and residential functions. These mixed priority routes can be complex and difficult to treat while accommodating all functions and users. 30mph speed limits are often the most appropriate, but speed management measures may also be required to accommodate the safe movement of vulnerable road users
- 6.5.3 Urban roads of particular importance, such as those that serve a strategic or distributor function will usually be subject to a 30mph speed limit, but 20mph speed limits may be appropriate in areas with particularly high levels of vulnerable road user movements.
- 6.5.4 Most 30mph speed limits on 'C' and unclassified roads exist by virtue of the presence of a street lighting system. On 'A' and 'B' roads a traffic regulation order must be in place for a 30mph speed limit to be enforceable.
- 6.5.5 In most cases it will be obvious where a 30mph speed limit is appropriate, but at the transition between different speed limits it is important that careful consideration is given to the surrounding environment when deciding where a 30mph speed limit starts/ends.
- 6.5.6 30mph speed limits at the entry points to towns and villages should not extend beyond a point where the frontage development density is less than 3 properties per 100m.
- 6.5.7 If a 30mph speed limit extends too far beyond a point where frontage development exist at the required density, drivers are unlikely to comply without the introduction of speed reducing measures or the threat of frequent Police enforcement.
- 6.5.8 The 30mph speed limit should commence within 20m of the first property although this can be varied to meet visibility criteria.
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³ 20mph Speed Reduction Initiative

6.5.9 Repeater signs are not permitted on roads subject to 30mph speed limits, if there is a system of street lighting present.

6.6 40mph Speed Limits

- 6.6.1 Roads suitable for 40mph are generally higher quality suburban roads or those on the outskirts of urban areas where there is little development.
- 6.6.2 They should have good width and layout; have parking and waiting restrictions in operation; and buildings set back from the road.
- 6.6.3 These roads should, wherever possible, cater for the needs of vulnerable road users through segregation of road space.
- 6.6.4 Alternatively, consideration must be given to the availability of convenient alternative routes for vulnerable users.
- 6.6.5 Any roads with a 40mph speed limit must have adequate footways and crossing provision for pedestrians, pedal cyclists and horse riders, as necessary.

6.7 50mph Speed Limits

- 6.7.1 In exceptional circumstances a 50mph speed limit may also be used on higher quality roads where there is little or no roadside development, and this can be done safely.
- 6.7.2 The roads most suited to these higher urban limits are Primary distributors with segregated junction and pedestrian facilities. They are usually dual carriageway ring or radial routes or bypasses that have become partially built up.
- 6.7.3 The impact on local communities and vulnerable road users must always be assessed before considering such speed limits.

7 GATEWAYS TO TOWNS & VILLAGES

7.1 Gateway features

- 7.1.1 The purpose of a gateway is to emphasise to drivers that they are entering a town or village road environment where it is likely they will encounter vulnerable users, including pedestrians and cyclists, and encourage drivers to adopt a speed that is appropriate for the road environment and function.
- 7.1.2 If approach speeds to a village are high or the start of a village is not obvious, gateway features incorporating standard signing are an effective way to slow traffic down and alert drivers.

- 7.1.3 Gateways should not be sited where they may cause a hazard, ideally avoiding encroachment of footway or cycle track, and should not interfere with access to frontage property. They should also be designed to be structurally 'forgiving' so as to minimise the likelihood of increasing injury in the event of a vehicle colliding with them.
- 7.1.4 Gateways need to be sited with a clear sight line, which is recommended to allow for at least the minimum stopping sight distance for the measured vehicle speeds.
- 7.1.5 Gateways may also include landscaping and artistic elements and it is therefore proposed to work closely with communities to ensure that their aspirations are met should changes be proposed.
- 7.1.6 Bespoke village signs cannot be used in combination with speed limit signs. Bespoke signs may be placed on a single side of the carriageway in advance of a village boundary in addition to any standard signing or gateway feature, providing they are structurally forgiving. Care must be taken to minimise the wording to ensure the signs do not become a distraction. A competent Council employee will determine if any bespoke signs' text and graphic layouts are safe and appropriate.

7.2 Buffer Speed Limits

- 7.2.1 Current Government policy recommends a minimum length of 600m for a single speed limit with an allowance to reduce this in exceptional circumstances.
- 7.2.2 There will be situations (for example on the outskirts of towns, or at small villages with adjoining intermittent development) where the recommended minimum length of speed limit is unachievable due to low development density, but it may be desirable to include outlying properties within a reduced speed limit.
- 7.2.3 Short lengths of 40mph or 50mph speed limits may be used in these situations as an intermediate transition between sections of road where a national speed limit and a lower speed limit apply. These transitional sections are termed 'buffer' speed limits.
- 7.2.4 Buffer speed limits on 'C' and unclassified roads should not normally be necessary because of low traffic volumes and the localised nature of the traffic.
- 7.2.5 Current guidance recommends a minimum length of 600m for a single speed limit with an allowance to reduce this to 400m or even 300m in exceptional circumstances.

- 7.2.6 There will be situations (for example on the outskirts of towns, or at small villages with adjoining intermittent development) where the recommended minimum length of speed limit is unachievable due to low development density, but it may be desirable to include outlying properties within a reduced speed limit.
- 7.2.7 Short lengths of 40mph or 50mph speed limits may be used in these situations as an intermediate transition between sections of road where a national speed limit and a lower speed limit apply. These transitional sections are termed 'buffer' speed limits.

7.3 Countdown Signs

- 7.3.1 Countdown signs have been erected on the approaches to many settlements across Scotland. Studies into the effectiveness of countdown markers show there is no statistical evidence of speed reduction at countdown sites.
- 7.3.2 The use of countdown signs increases the number of roadside hazards on rural roads, subsequently increasing the risk of injury to the driver or rider of any vehicle that may collide with them. Signposts have been shown to be particularly hazardous for motorcyclists, in the event of a collision.
- 7.3.3 It is recommended that these signs should only be installed where the main speed limit signs or village boundary have a severe visibility problem that cannot be easily remedied by moving the speed limit a short distance.
- 7.3.4 If these signs are deemed absolutely necessary, they should be placed on the near-side only to limit environmental intrusion. Countdown signs for a 30mph speed limit are not considered appropriate within any 40mph buffer zone.
- 7.3.5 The removal of countdown signs will be progressed in conjunction with changes to speed limits proposed in the Review. Communities will be informed before any relevant countdown signs are removed.

8 SPEED MANAGEMENT MEASURES

8.1 Traffic Calming Measures

- 8.1.1 Traffic calming involves the installation of proven physical or psychological measures to encourage lower traffic speeds. There are many measures available to help reduce vehicle speeds and improve compliance with the speed limit in place.

8.1.2 In situations where it is desirable to have a lower speed limit but the surrounding environment may not appear compatible, some form of traffic calming or speed management measures will be required.

8.1.3 The most popular and effective traffic calming measures include;

- road humps;
- speed cushions;
- road narrowings;
- gateways;
- rumble devices;
- road markings & coloured surfacing;
- roundabouts;
- vehicle activated signs (VAS).

8.2 Certain traffic calming features may not be appropriate in all situations for example; road humps would not be appropriate on a main through route; or, VAS would not be appropriate where speeds do not reach a set threshold.

8.3 Vehicle Activated Signs

8.3.1 Vehicle activated signs (VAS) were developed to help address the problem of inappropriate speed and to provide additional hazard warning where conventional signing had not proved effective. On rural roads, driving too fast for the conditions is more likely to be a factor in accidents than exceeding the speed limit. Encouraging drivers to adjust their speed to suit the conditions is therefore particularly important.

8.3.2 A range of rural road safety engineering measures, including VAS, are used to encourage drivers to approach hazards such as bends and junctions at a safe speed and improve compliance with speed limits (e.g. through villages). Drivers exceeding a set speed threshold trigger a sign indicating a specific hazard or speed limit. This may be accompanied by the message "SLOW DOWN". The latest generation of vehicle activated signs display symbols and words delineated by light emitting diodes (LEDs) mounted on the front panel of the sign. Different parts of the message or symbols can be shown in different colours. The sign face is provided with an automatic dimmer to reduce the intensity during night-time operation. When not activated by a vehicle, the sign remains blank (i.e. blacked out).

- 8.3.3 TRL conducted a study into the effectiveness of various types of VAS across a number of trial sites (TRL Report 548). The trial assessed the effect of the signs on speed, injury accidents and drivers' understanding of the signs. The signs appear to be very effective at reducing speeds, particularly those of the faster drivers who are disproportionately at risk of involvement in accidents, without the need for costly enforcement by police officers or speed cameras. The study also demonstrated a substantial accident reduction.
- 8.3.4 There are two main types of VAS;
- hazard warning; and
 - speed limit.
- 8.3.5 The provision of hazard warning VAS will be assessed on an individual site basis by a competent officer and only in response to an identified accident or road safety problem for which no other economically viable, or more effective solution is available. The installation of these signs must only be undertaken once all necessary fixed signing and road markings have been installed and assessed for effectiveness.

8.4 Speed Limit Vehicle Activated signs

- 8.4.1 The assessment and prioritisation process described below, will only apply to the provision of speed limit VAS, because there is greater potential for requests for their installation from the public, community representatives and elected members; and it will allow such requests to be prioritised systematically.
- 8.4.2 VAS are an effective speed management tool, but also serve as an collision reduction measure. To reflect this dual purpose and the effect that inappropriate traffic speeds can have on communities, any assessment will consider the existing traffic speed profile and reported injury accidents.
- 8.4.3 In order to be most effective and to prevent overuse, it is important that speed limit VAS are used only where a speeding problem is identified and this must be the primary indicator for progressing any request for VAS. However, the presence of relevant reported collisions will also be considered. Highest priority will be given to sites where the traffic speed criteria are met and there are relevant reported injury accidents.
- 8.4.4 Experience shows that typical sites for which requests for speed limit VAS are made, often do not have an existing collision problem. Consequently, while the presence of reported injury collisions is important, it is not essential for the consideration of speed limit reminder VAS.

- 8.4.5 Research found that mean speeds can be expected to fall by an average of 4mph through the use of speed limit reminder VAS alone. The proportion of 'speeders' (those travelling at or above enforcement levels) was also demonstrated to fall significantly. The greatest reductions in speed were experienced where existing mean speeds were highest.
- 8.4.6 The Department for Transport recommend that the activation threshold is set at; speed limit; +10%; +2mph. For a 30mph speed limit the activation speed is therefore 35mph. This recommended threshold calculation will be used to set the activation speed for all speed limit VAS on roads in the Council area.
- 8.4.7 To ensure there is a consistent relationship between the provision of speed limit VAS, the speed limit guidance and the recommended activation threshold, VAS will be considered only at sites where the 7 day average 85%ile speed is no less than the relevant threshold, or the 7 day mean speed is greater than the posted speed limit.
- 8.4.8 Consideration will also be given to the standard deviation or the distribution of speeds. A greater distribution of speeds is associated with an increased risk of collisions occurring, as faster traffic can conflict with slower traffic. Research shows that speed limit VAS target 'speeders' effectively. Appropriate use of VAS should reduce the standard deviation of speeds and consequently lower the collision risk at particular sites.
- 8.4.9 Collision searches will be carried out in association with each proposed VAS installation. Searches will be undertaken from a point 200m in advance of the proposed VAS for a distance of 600m. The shortest recommended speed limit section length is 600m.
- 8.4.10 To prioritise sites that are considered suitable for VAS and to maximise the overall benefit to communities and road users, sites will be ranked in descending order using the recorded mean speeds, recorded 85%ile speeds and reported injury collisions.
- 8.4.11 To ensure that speed limit VAS are correctly associated with existing speed limits and to avoid confusing drivers, any such signs should ideally be installed at point between 150 and 200 metres from the speed limit terminal signs, within the speed limit. This allows drivers to pass the fixed speed limit signs before the VAS activates.
- 8.4.12 Speed limit VAS may be installed at locations further into a speed limit, but only where there is an identified speeding problem, the environment or traffic composition do not support a higher speed limit and other speed reducing measures are inappropriate.
- 8.4.13 Speed limit VAS may also be installed as an interim measure in conjunction with new lower speed limits, pending the design and construction of permanent traffic management or speed reducing measures.

- 8.4.14 There will be circumstances where the environment precludes the use of VAS, even if all criteria are met e.g. inadequate visibility, insufficient verge or footway width, proximity of traffic signals, etc. Any such issues will be identified during the assessment process.

9 POLICY IMPLICATIONS

- 9.1 Currently, Argyll has no formal policy frameworks for the introduction of speed limits. The framework for all speed limits except 20mph is based on the previous Government Circular, SOID Circular No. 1/93 and the environment and road characteristics suitable for appropriate speed limits. The 20mph Speed Limit Policy Framework follows the guidance set out in Government Circulars SEDD Circular No. 6/2001 and ETTLD Circular No.1/2004.
- 9.2 The introduction of a new Government policy for the implementation of speed limits, ETTLD Circular 1/2006, has necessitated the adoption of a new Council Speed Limit Policy Framework. The policy takes the new Government guidance into consideration and by incorporating elements of the existing 20mph Speed Limit Policy Framework, will provide a basis for the consideration of all speed limits. The Policy Framework also formalises the custom and practice that has previously existed.
- 9.3 The adoption of such a policy will improve the consistency of speed limits, and enhance road users' understanding of speed limits leading to; improved road safety through better distribution of speeds and improved levels of compliance.
- 9.4 Adoption of the policy supports the long term outcomes of the Council's Single Outcome Agreement through Outcomes 2, 5 and 6 (2 - We have Infrastructure that supports sustainable growth, 5 - People live active, healthier and independent lives, and 6 - People live in safer and stronger communities).

10 COSTS

- 10.1 The typical cost of a 'signs only' speed limit is approximately £2,000. If illumination is required, this rises to approximately £3,900.

10.2 The typical cost of a signed speed limit with gateway feature is approximately £4,000. If illumination is required, this rises to approximately £6,100

10.3 Additional speed management or traffic calming measures will be required at certain locations to ensure that traffic speeds more closely match the desired speed limit. Typical minimum costs of various measures are as follows;

- rumble devices - £1,000;
- coloured surfacing - £1,500;
- textured surfacing - £4,500;
- rumblewave surfacing - £5,000;
- road narrowing - £2,500;
- gateways - £4,000;
- enhanced road markings - £1,000;
- vehicle activated sign - £8,000;
- conventional roundabout - £400,000;

Consideration also needs to be given to ongoing maintenance costs for any features installed.

10.4 20mph speed limit schemes will be prioritised in accordance with the council's agreed policy on the assessment and prioritisation of minor transport issues and schemes. Schemes will then be funded from Cycling, Walking and Safer Streets and Safer Routes to School budgets, as allocated by the council.

10.5 Typical costs for a 20mph speed limit would be c.£6,000, and for a 20mph speed limit zone (including traffic calming measures) c.£50,000.

10.6 There will be costs for maintaining additional infrastructure, which will require to be met from the Roads revenue budget.

11 INTRODUCTION OF NEW SPEED LIMITS

11.1 Area Committees shall be responsible for determining local speed limits within the framework of this Policy Document. Any speed limit changes requiring physical measures other than standard signing shall be reported to the Environment, Development and Infrastructure Committee for approval. The report shall detail the costs of the measures together with any ongoing maintenance implication and the funding streams for provision and maintenance.

12 BACKGROUND PAPERS

- 12.1 Scottish Executive ETLLD Circular 1/2006: Setting Local Speed Limits – Guidance for Local Authorities, August 2006.
- 12.2 SOID Circular No. 1/93 Road Traffic Regulation Act 1984 (Sections 81-85) SPEED LIMITS (Guidance for Local Authorities).
- 12.3 Development Department Research Programme Research Findings No.104 '20mph Speed Reduction Initiative', 2001
- 12.4 SEDD Circular No. 6/2001 '20mph Speed Limits'
- 12.5 ETLLD Circular No. 1/2004 '20mph Speed Limits around Schools on Roads with Speed Limits Higher than 30mph'.
- 12.6 Environmental Quality Committee Report (REP315EQ) 'Speed Limit Policy', 5 September 2002.
- 12.7 Environmental Quality Committee Report (REP363EQ) 'Speed Limit (Exceptions) Policy', 7 November 2002.
- 12.8 Paper to Environment Committee: Road Safety (REP618EC): Proposed Safety Camera Partnership – Camera Enforcement Cost Recovery Scheme, November 2005.
- 12.9 Department for Transport - Traffic Advisory Leaflet 1/03, 'Vehicle Activated Signs', March 2003.
- 12.10 Department for Transport - Traffic Advisory Leaflet 2/06, 'Speed Assessment Framework', September 2006.
- 12.11 Department for Transport – Local Transport Note 1/07 'Traffic Calming', April 2007.
- 12.12 Department for Transport – 'Road Safety Good Practice Guide', 2001.
- 12.13 Transport Research Laboratory - TRL Report 548 'Vehicle activated signs – a large scale evaluation', 2002.