

## Appendix I

Department for Transport Circular 01/2013



1. Home (<https://www.gov.uk/>)
2. Regional and local government (<https://www.gov.uk/regional-and-local-government>)
3. Local government (<https://www.gov.uk/regional-and-local-government/local-government>)
4. Setting local speed limits (<https://www.gov.uk/government/publications/setting-local-speed-limits>)

- Department  
for Transport (<https://www.gov.uk/government/organisations/department-for-transport>)

Guidance

# Setting local speed limits

Updated 18 January 2013

## Contents

SECTION 1. INTRODUCTION

SECTION 2: BACKGROUND AND OBJECTIVES OF THE CIRCULAR

SECTION 3: THE UNDERLYING PRINCIPLES OF LOCAL SPEED LIMITS

SECTION 4: THE LEGISLATIVE FRAMEWORK

SECTION 5: THE SPEED LIMIT APPRAISAL TOOL

SECTION 6: URBAN SPEED LIMITS

SECTION 7: RURAL SPEED MANAGEMENT

SECTION 8: REFERENCES/BIBLIOGRAPHY

Print this page



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Department for Transport Circular 01/2013

January 2013

## SECTION 1. INTRODUCTION

### Key points

Speed limits should be evidence-led and self-explaining and seek to reinforce people's assessment of what is a safe speed to travel. They should encourage self-compliance. Speed limits should be seen by drivers as the maximum rather than a target speed.

Traffic authorities set local speed limits in situations where local needs and conditions suggest a speed limit which is lower than the national speed limit.

This guidance is to be used for setting all local speed limits on single and dual carriageway roads in both urban and rural areas.

This guidance should also be used as the basis for assessments of local speed limits, for developing route management strategies and for developing the speed management strategies which can be included in Local Transport Plans.

Traffic authorities are asked to keep their speed limits under review with changing circumstances, and to consider the introduction of more 20 mph limits and zones, over time, in urban areas and built-up village streets that are primarily residential, to ensure greater safety for pedestrians and cyclists, using the criteria in Section 6.

This guidance applies to England.

### Details

- 1) The Department for Transport has a vision for a transport system that is an engine for economic growth, but one that is also more sustainable, safer, and improves quality of life in our communities.
- 2) It is clear how setting appropriate speed limits with the aim of achieving safe and appropriate driving speeds can play an important role in supporting this vision. This guidance sets out the framework that traffic authorities should follow when setting and reviewing local speed limits.
- 3) Roads should be designed so that mistakes made by road users do not result in death or serious injury. Effective speed management is part of creating a safe road environment which is fit for purpose. It involves many components designed to work together to require, encourage and help road users to adopt appropriate and safe speeds below the speed limit. As well as being the legal limit, speed limits are a key source of information to road users, particularly as an indicator of the nature and risks posed by that road both to themselves and to all other road users. Speed limits should, therefore, be evidence-led and self-explaining, and seek to reinforce people's assessment of what is a safe speed to travel and encourage self-compliance. They should be seen by drivers as the maximum speed rather than as a target speed at which to drive, irrespective of conditions. It is often not appropriate or safe to drive at the maximum speed limit.
- 4) The overall speed limit framework, including the setting of national limits for different road types, and which exceptions to these general limits can be applied, is the responsibility of the government.

The three national speed limits are:

- the 30 mph speed limit on roads with street lighting (sometimes referred to as Restricted Roads)
- the national speed limit of 60 mph on single carriageway roads
- the national speed limit of 70 mph on dual carriageways and motorways

These national limits are not, however, appropriate for all roads. The speed limit regime enables traffic authorities to set local speed limits in situations where local needs and conditions suggest a speed limit which is different from the respective national speed limit.

5) Local speed limits are determined by traffic authorities having regard to guidance issued by the Department for Transport. This guidance applies to England and supersedes that previously contained in DfT Circular 01/2006, which is now cancelled. <sup>[footnote 1]</sup>

6) The guidance retains and builds upon many of the underlying principles of DfT Circular 01/2006, but provides additional evidence of the safety and wider benefits of setting appropriate speed limits. It builds on the responses received to the consultation held by the Department in 2012 as well as to an earlier consultation held in 2009.

7) It is aimed primarily at traffic authorities responsible for setting local speed limits, but is also designed to help improve the wider understanding of why and how local speed limits are determined.

8) The guidance is to be used for setting all local speed limits on single and dual carriageway roads in both urban and rural areas. It brings together some of the main features of other published guidance on speed limit related issues, including speed-related road traffic regulation and signing, street lighting, traffic calming, speed limits in villages, and 20 mph speed limits and zones.

9) The guidance should not, however, be used in isolation, but read in conjunction with the more comprehensive advice on these matters set out in the appropriate Traffic Advisory Leaflets and with the relevant legislation, including the Traffic Signs Regulations and General Directions 2002 (TSRGD 2002<sup>[footnote 2]</sup>). Please note that all references to legislation within this Circular are references to that legislation as amended.

10) This guidance introduces, in section 5, the Speed Limit Appraisal Tool (<https://www.gov.uk/government/publications/speed-limit-appraisal-tool>). It has been designed to help local authorities assess the full costs and benefits of any proposed schemes and make robust, evidence-based decisions about which limits they put in place.

## Priorities for action

11) The guidance in this Circular should be used as the basis for:

- assessments of local speed limits
- developing route management strategies
- developing speed management strategies

12) Traffic authorities are asked to:

- keep their speed limits under review with changing circumstances

- consider the introduction of more 20 mph limits and zones, over time, in urban areas and built-up village streets that are primarily residential, to ensure greater safety for pedestrians and cyclists, using the criteria in Section 6

## SECTION 2: BACKGROUND AND OBJECTIVES OF THE CIRCULAR

### Key points

Traffic authorities continue to have the flexibility to set local speed limits that are appropriate for the individual road, reflecting local needs and taking account of all local considerations.

Local speed limits should not be set in isolation, but as part of a package with other measures to manage vehicle speeds and improve road safety.

### Background

13) Setting speed limits at the appropriate level for the road, and ensuring compliance with these limits, play a key part in ensuring greater safety for all road users. The relationship between speed and likelihood of collision as well as severity of injury is complex, but there is a strong correlation.

As a general rule for every 1 mph reduction in average speed, collision frequency reduces by around 5% (Taylor, Lynam and Baruya, 2000). For typical types of road traffic collisions the risk of death for drivers and pedestrians involved reduces with reduced vehicle speeds and it is particularly important to consider those speeds where the balance tips in favour of survival.

14) Reported road casualty statistics also show the role of exceeding the speed limit and travelling too fast for the conditions as contributory factors in road traffic collisions. In 2011 at least one of these two factors was reported in 12 per cent of all accidents and these accidents accounted for 25 per cent of all fatalities. Other reported contributory factors such as loss of control or careless, reckless or in a hurry can often be related to excess or inappropriate speed, and even where the contributory factors are unrelated to the vehicle speed, higher speeds will often aggravate the outcome of the collision and injuries. It should be recognised that identification of contributory factors is largely subjective and is not necessarily the result of extensive investigation.

15) This updated guidance provides part of the framework for speed limits, where local authorities can set speed limits on their roads below the national limit, in response to local risk factors and conditions. It will help ensure appropriate and consistent speed limits, which will contribute to reducing the number of road deaths, as well as casualties overall; tackling pedestrian and cyclist casualties in towns and cities; improving the safety on rural roads; and reducing variations in safety from area to area and road to road.

16) The objectives of this guidance also fit into the context of some wider transport and cross-government priorities, which those responsible for setting local speed limits should bear in mind:

- The Department for Transport's vision is for a transport system that is an engine for economic growth but one that is also greener and safer and improves quality of life in our communities
- we also want our roads to become safer, less congested and less polluted
- we want to encourage sustainable local travel and economic growth by making public transport and cycling and walking more attractive and effective, promoting lower carbon transport and tackling local road congestion

- we want to contribute to wider public health and safety outcomes by contributing to a reduction in road casualties

## Objectives of the Circular

17) The key objectives of this guidance are:

- the provision of up-to-date and consistent advice to traffic authorities; ☐ improved clarity which will aid greater consistency of speed limits across the country
- enabling the setting of more appropriate local speed limits, including lower or higher limits where conditions dictate
- achieving local speed limits that better reflect the needs of all road users, not just motorised vehicles
- ensuring improved quality of life for local communities 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 speed limits that apply, and the reasons why
- improved respect for speed limits, and in turn improved compliance
- continued reductions in the number of road traffic collisions, injuries and deaths in which excessive or inappropriate speed is a contributory factor

18) Speed limits are only one element of speed management. Local speed limits should not be set in isolation. They should be part of a package with other speed management measures including engineering and road geometry that respect the needs of all road users and raise the driver's awareness of their environment; education; driver information; training and publicity.

Within their overall network management responsibilities, these measures should enable traffic authorities to deliver speed limits and, as importantly, actual vehicle speeds that are safe and appropriate for the road and its surroundings. The measures should also help drivers to be more readily aware of the road environment and to drive at an appropriate speed at all times.

19) Unless a speed limit is set with support from the local community, the police and other local services, with supporting education, and with consideration of whether engineering measures are necessary to reduce speeds; or if it is set unrealistically low for the particular road function and condition, it may be ineffective and drivers may not comply with the speed.

20) If many drivers continued to travel at unacceptable speeds, the risk of collisions and injuries would increase and significant and avoidable enforcement activity would be needed.

## SECTION 3: THE UNDERLYING PRINCIPLES OF LOCAL SPEED LIMITS

### Key points

The Highways Agency is responsible for determining speed limits on the trunk road network. Local traffic authorities are responsible for determining speed limits on the local road network.

It is important that traffic authorities and police forces work closely together in determining, or considering, any changes to speed limits.

The full range of speed management measures should always be considered before a new speed limit is introduced.

The underlying aim should be to achieve a 'safe' distribution of speeds. The key factors that should be taken into account in any decisions on local speed limits are:

- history of collisions
- road geometry and engineering
- road function
- composition of road users (including existing and potential levels of vulnerable road users)
- existing traffic speeds
- road environment

While these factors need to be considered for all road types, they may be weighted differently in urban or rural areas. The impact on community and environmental outcomes should also be considered.

The minimum length of a speed limit should generally be not less than 600 metres to avoid too many changes of speed limit along the route.

Speed limits should not be used to attempt to solve the problem of isolated hazards, such as a single road junction or reduced forward visibility, for example, at a bend.

## Background

### Responsibility for local speed limits

21) The Highways Agency is responsible for determining speed limits on the trunk road network, and local traffic authorities are responsible for determining speed limits on the local road network. In this Circular, the term 'traffic authority' is used to denote both the Highways Agency and local traffic authorities.

22) It is important that traffic authorities and police forces work together closely and from an early stage when considering or determining any changes to speed limits. This may be through the local road safety partnership arrangements. It is also important that neighbouring traffic authorities work closely together, especially where roads cross boundaries, to ensure speed limits remain consistent. As part of the process of making a speed limit order, consultation of those affected is of key importance and, together with good information about planned changes, this will improve support for and compliance with new limits.

The legislative requirements are summarised in Section 4.

### Considerations in setting local speed limits

23) A study of types of crashes, their severity, causes and frequency, together with a survey of traffic speeds, should indicate whether an existing speed limit is appropriate for the type of road and mix of use by different groups of road users, including the presence or potential presence of vulnerable road users



(including people walking, cycling or riding horses, or on motorbikes), or whether it needs to be changed. Local residents may also express their concerns or desire for a lower speed limit and these comments should be considered.

24) Where limits for air quality are in danger of being exceeded, compliance with those air quality limits could be an important factor in the choice of speed limit. But depending on the individual circumstances the imposition of a speed limit will not always be the solution. And the visible characteristics of a road affect the speed that a driver chooses: to be effective, the reasons for a limit need to be apparent.

25) It may well be that a speed limit need not be changed if the collision rate can be improved or wider quality of life objectives can be achieved through other speed management measures, or other measures. These alternative measures should always be considered before proceeding with a new speed limit.

26) Where there is poor compliance with an existing speed limit on a road or stretch of road the reasons for the non-compliance should be examined before a solution is sought. If the speed limit is set too low for no clear reason and the risk of collisions is low, then it may be appropriate to increase the limit.

If the existing limit is in place for a good reason, solutions may include engineering measures or changes to the road environment to ensure it better matches the speed limit, or local education and publicity. Enforcement may also be appropriate, but should be considered only after the other measures and jointly with the police force.

## The underlying principles

27) The aim of speed management policies should be to achieve a safe distribution of speeds consistent with the speed limit that reflects the function of the road and the road environment. This should imply a mean speed appropriate to the prevailing road environment, and all vehicles moving at speeds below or at the posted speed limit, while having regard to the traffic conditions.

28) The estimated collision and injury savings should also be an important factor when considering changes to a local speed limit. Another key factor when setting a speed limit is what the road looks like to the road users. Drivers are likely to expect and respect lower limits, and be influenced when deciding on what is an appropriate speed, where they can see there are potential hazards, for example outside schools, in residential areas or villages and in shopping streets.

29) A principal aim in determining appropriate speed limits should, therefore, be to provide a consistent message between speed limit and what the road looks like, and for changes in speed limit to be reflective of changes in the road layout and characteristics.

30) The following will be important factors when considering what is an appropriate speed limit:

- history of collisions, including frequency, severity, types and causes
- road geometry and engineering (width, sightlines, bends, junctions, accesses and safety barriers and so on)
- road function (strategic, through traffic, local access et cetera)
- composition of road users (including existing and potential levels of vulnerable road users); □ existing traffic speeds
- road environment, including level of road-side development and possible impacts on residents (e.g. severance, noise, or air quality)

While these factors need to be considered for all road types, they may be weighted differently in urban or rural areas. The impact on community and environmental outcomes should also be considered.

31) Before introducing or changing a local speed limit, traffic authorities will wish to satisfy themselves that the expected benefits exceed the costs. Many of the costs and benefits do not have monetary values associated with them, but traffic authorities should include an assessment of the following factors:

- collision and casualty savings
- conditions and facilities for vulnerable road users
- impacts on walking and cycling and other mode shift
- congestion and journey time reliability
- environmental, community and quality of life impact

Quality of life impact may include emissions, severance of local communities, visual impact, noise and vibration and costs, including of engineering and other physical measures including signing, maintenance and cost of enforcement.

The speed limit appraisal toolkit, found at section 5, will help assess the full costs and benefits of any proposed schemes.

32) Different road users perceive risks and appropriate speeds differently, and drivers and riders of motor vehicles often do not have the same perception of the hazards of speed as do people on foot, on bicycles or on horseback. Fear of traffic can affect peoples' quality of life and the needs of vulnerable road users must be fully taken into account in order to further encourage these modes of travel and improve their safety. Speed management strategies should seek to protect local community life.

33) In order to ensure compliance with a new lower local limit, as well as make it legally enforceable, it is important that the limit is signed correctly and consistently. The introduction of a new Speed Limit Order must coincide with the signing of the new limit. Traffic Authorities must ensure that speed limits meet the legislative process and the requirements of the TSRGD. Any new limit should also be accompanied by publicity and, where appropriate, effective engineering changes to the road itself. Without these measures, the new limit is unlikely to be fully complied with.

34) On rural roads there is often a difference of opinion as to what constitutes a reasonable balance between the risk of a collision, journey efficiency and environmental impact. Higher speed is often perceived to bring benefits in terms of shorter travel times for people and goods.

However, evidence suggests that when traffic is travelling at constant speeds, even at a lower level, it may result in shorter and more reliable overall journey times, and that journey time savings from higher speed are often overestimated (Stradling et al., 2008). The objective should be to seek an acceptable balance between costs and benefits, so that speed-management policies take account of environmental, economic and social effects as well as the reduction in casualties they are aiming to achieve.

35) Mean speed and 85th percentile speed (the speed at or below which 85% of vehicles are travelling) are the most commonly used measures of actual traffic speed. Traffic authorities should continue to routinely collect and assess both, but mean speeds should be used as the basis for determining local speed limits.

36) For the majority of roads there is a consistent relationship between mean speed and 85th percentile speed. Where this is not the case, it will usually indicate that drivers have difficulty in deciding the appropriate speed for the road, suggesting that a better match between road design and speed limit is

required. It may be necessary to consider additional measures to reduce the larger than normal difference between mean and 85th percentile speeds or to bring the speed distribution more in line with typical distributions. The aim for local speed limits should be to align the speed limit to the conditions of the road and road environment.

37) The minimum length of a speed limit should generally be not less than 600 metres to avoid too many changes of speed limit along the route. In exceptional circumstances this can be reduced to 400 metres for lower speed limits, or even 300 metres on roads with a purely local access function, or where a variable 20 mph limit is introduced, for example outside a school. Anything shorter is not recommended. The length adopted for a limit will depend on the limit applied and also on the conditions at or beyond the end points.

The terminal points of speed limits need to take account of the particular local circumstances, such as steep gradients, sharp bends, junctions, access roads, humpbacked bridges or other hazards, and also good visibility of the signs, and an extension of the speed limit may be needed to ensure this.

38) For consistency within routes, separate assessments should be made for each length of road of 600 metres or more for which a different speed limit might be considered appropriate. When this is completed, the final choice of appropriate speed limit for individual sections might need to be adjusted to provide reasonable consistency over the route as a whole.

39) Occasionally it may be appropriate to use a short length of 40 mph or 50 mph speed limit as a transition between a length of road subject to a national limit and another length on which a lower limit is in force, for example on the outskirts of villages or urban areas with adjoining intermittent development. However, the use of such transitional limits should be restricted to sections of road where immediate speed reduction would cause risks or is likely to be less effective.

40) Speed limits should not be used to attempt to solve the problem of isolated hazards, for example a single road junction or reduced forward visibility such as at a bend, since speed limits are difficult to enforce over such a short length. Other measures, such as warning signs including vehicle activated signs, carriageway markings, junction improvements, superelevation of bends and new or improved street lighting, are likely to be more effective in addressing such hazards. Similarly, crossings or, in rural areas, the provision of adequate footways can be a more effective means of improving pedestrian safety than lowering a speed limit over a short distance.

41) Where several roads with different speed limits enter a roundabout, the roundabout should be restricted at the same level as the majority of the approach roads. If there is an equal division, for example where a 30 mph road crosses one with a limit of 40 mph, the roundabout itself should take the lower limit.

## **SECTION 4: THE LEGISLATIVE FRAMEWORK**

### **Key points**

All speed limits, other than those on restricted roads, should be made by order under Section 84 of the Road Traffic Regulation Act 1984.

Any speed limits below 30 mph, other than 20 mph limits or 20 mph zones, require individual consent from the Secretary of State.

Unless an order has been made and the road is signed to the contrary, a 30 mph speed limit applies where there is a system of street lighting furnished by means of lamps placed not more than 200 yards apart.

Traffic authorities have a duty to erect and maintain prescribed speed limit signs on their roads in accordance with the Traffic Signs Regulations and General Directions 2002 (TSRGD 2002).

If traffic authorities wish to deviate from what is prescribed in signing regulations, they must first gain the Secretary of State's authorisation. Traffic authorities are not permitted to erect different speed limit signs relating to different classes of vehicle.

Vehicle-activated signs must not be used as an alternative to standard static signing, but as an additional measure to warn drivers of a potential hazard or to remind them of the speed limit in force.

## Background

### Main speed limit legislation

42) Most road traffic law pertaining to speed limits is contained in the Road Traffic Regulation Act 1984 (RTRA 1984). Other relevant legislation includes the Highways Act 1980, in particular Sections 90A-F concerning the construction and maintenance of road humps and Sections 90G-I concerning other traffic-calming works.

43) Part VI of the RTRA 1984 deals specifically with speed limits, with Sections 81-84 dealing with different speed limits and the speed limit order-making process. Section 82(1)(a) defines a restricted road in England and Wales as a road on which there is provided "a system of street lighting furnished by means of lamps placed not more than 200 yards apart". Section 81 makes it an offence for a person to drive a motor vehicle at a speed of more than 30 mph on a restricted road.

44) The establishment of speed limits is also a method through which legal sanctions can be brought to bear on those who exceed the limit set on a particular road. It is therefore important to preserve carefully all records relating to the making and validity of a speed limit and speed limit signs.

45) All speed limits, other than those on restricted roads or special roads (a highway which is a special road in accordance with s 16 of the Highways Act 1980), should be made by order under Section 84 of the RTRA 1984. This includes the making of a 30 mph speed limit on an unlit road.

46) All speed limits other than the national limits are made by speed limit order. Traffic authorities should comply with their own consultation procedures and must, as a minimum, follow the full consultation procedure set out in legislation, before any new speed limit is introduced. More detail about these requirements is in Appendix A.

### Restricted roads

47) Section 82(2) RTRA 1984 (as amended) gives traffic authorities powers to remove restricted road status, and give restricted road status to roads which are not restricted. However, the Department's policy on the use of this power is that it should be used only to reinstate restricted road status in those cases where a road which has a system of street lighting has previously had its restricted road status removed.

48) If a road with street lighting has a 40 mph limit and this is to be reduced to 30 mph, the 40 mph order under Section 84 should be revoked. Assuming the street lamps are no more than 2003 yards apart [footnote 3], the road will be a restricted road by virtue of section 82(1)(a) RTRA.

Similarly, where a speed limit of 30 mph is imposed by order under Section 84 because there is no street lighting, that order should be revoked if street lighting is subsequently provided. The Department considers that it is best practice for traffic authorities to make an order under section 84 RTRA to create a 30mph speed limit on an unlit stretch of road.

49) Any speed limits below 30 mph, other than 20 mph limits or 20 mph zones, require individual consent from the Secretary of State.

## Street lighting

50) Direction 11 of the Traffic Signs Regulations and General Directions 2002 (TSRGD 2002), as amended, defines the requirements for the placing of speed-limit repeater signs. This states that speed-limit repeater signs cannot be placed along a road on which there is carriageway lighting not more than 183 metres apart and which is subject to a 30 mph speed limit. This direction applies regardless of how the speed limit has been imposed.

51) The Department will not make exceptions to this rule. This means it should be assumed that, unless an order has been made and the road is signed to the contrary, a 30 mph speed limit applies where there are three or more lamps throwing light on the carriageway and placed not more than 183 metres apart.

## Speed limit signing

52) While increased understanding and acceptance of why a speed limit applies on a certain road will help compliance, drivers are aided by clear, visible and regular signing which enables them unhesitatingly to know what speed limit is in force.

53) Under Section 85 of the RTRA 1984 it is the duty of the traffic authority to erect and maintain prescribed speed limit signs on their roads in accordance with the Secretary of State's directions. The Traffic Signs Regulations and General Directions 2002 prescribe the designs and conditions of use for traffic signs, including speed limit signing, in England, Scotland and Wales.

54) Traffic authorities should generally follow these Regulations when signing speed limits. If a traffic authority wishes to deviate from what is prescribed, it must first obtain the Secretary of State's authorisation, and signing that is not in line with the Regulations must not be installed without such authorisation. Authorisation applications should be sent to the Department for Transport.

55) Speed limit signs which do not comply with the Regulations or which have not been authorised by the Secretary of State are not lawfully placed. Where the sign is not lawfully placed, no offence is committed by a person exceeding the signed speed limit and any prosecutions are likely to fail accordingly. Traffic authorities should therefore remove any unlawful signs, bring them into compliance with the Regulations or obtain authorisation to make them lawful.

56) Lower maximum speed limits apply on certain roads to certain traffic classes of vehicles. These are set out in Schedule 6 of the RTRA 1984 and in the Highway Code. Drivers of these vehicles are expected to be aware of this and follow these special limitations without having to be reminded by specific speed limit signs for particular vehicles. Traffic authorities are not permitted to erect different speed limit signs relating to different classes of vehicle.

57) Vehicle-activated signs (VAS), triggered by an approaching vehicle, have been developed to help address the problem of inappropriate speed. They must not be used as an alternative to standard static signing, but as an additional measure to warn drivers of a potential hazard or to remind them of the speed limit in force. VAS have proved particularly effective in rural areas, including at the approaches to junctions and bends. The Department has provided guidance in Traffic Advisory Leaflet 1/03 Vehicle Activated Signs (DfT, 2003).

58) The legislation does not prescribe the use of countdown markers on the approach to speed limit terminal signs, and research has shown that they generally have little or no effect on vehicle speeds and can add to sign clutter.

59) Chapter 3 of the Traffic Signs Manual (Department for Transport, 2008) provides guidance to local traffic authorities on best practice when signing speed limits. It includes tables and pictures to illustrate where speed limit signs should be placed. This complements TSRGD 2002, which sets out the mandatory requirements for signing.

## **Traffic Regulation Orders**

60) If speed limits are to be legally implemented and enforceable, Traffic Orders must be made. Part VI of the Road Traffic Regulation Act (RTRA) 1984 deals specifically with speed limits and includes the powers under which Traffic Authorities may make speed limit orders.

61) The Local Authorities' Traffic Orders (Procedure) (England and Wales) Regulations 1996 sets out the procedure to be followed when making these (and other) orders. Traffic Authorities will need to comply with the consultation and publicity requirements before making an order, and with the publicity and traffic signing requirements once an order has been made.

62) Traffic Authorities may find it more efficient to produce speed limit orders for 20 mph zones or limits, or to introduce speed limit changes as a result of rural speed limit reviews, where these cover a number of roads, through one order covering all those roads covered by the new speed limit. If they decide to proceed in this manner it is particularly important to ensure that the order is comprehensive and correct, and that the consultation and publicity is directed at those likely to be affected.

63) Further key pieces of legislation and regulations relating to speed limit and related signing are referred to in Appendix A.

## **SECTION 5: THE SPEED LIMIT APPRAISAL TOOL**

64) In the Strategic Framework for Road Safety (DfT, May 2011) the Department for Transport announced that it would provide a new speed limit appraisal tool to help local authorities assess the full costs and benefits of any proposed schemes and help make evidence-based decisions to introduce local speeds that reflect the needs of all road users.

65) Local authorities are invited, though not required, to use the Speed Limit Tool (<https://www.gov.uk/government/publications/speed-limit-appraisal-tool>). Its use is free of charge and is not restricted to local authorities.

66) The tool has been designed to enable local highway authority officers and other professionals to:

- forecast mean and 85th percentile speeds for speed limit changes

- forecast changes to: journey times separately for business and personal users -vehicle operating costs including fuel; accidents by severity; CO2 emissions; and NOX emissions
- appraise changes in speed limits to 20mph, 30mph, 40mph, 50mph, 60mph and, on dual carriageways, 70mph

67) In addition to enabling a local highway authority to decide whether or not to introduce a new speed limit scheme, the tool introduces transparency in the decision making process. It also provides a facility that encourages local highway authorities to adopt a more consistent appraisal process, whilst still allowing the flexibility for the highway authority to take into account local road conditions and the surrounding environment.

68) Full User Guidance is provided with the tool covering instructions on how to run the appraisal tool, and also a practical guide to the assessment of a range of aspects that local authorities should consider when planning to introduce a change in speed limits. The guidance should therefore be read in conjunction with this circular.

69) The tool has been developed to be economical to apply and straightforward to operate, and to provide informative outputs that can be flexibly interpreted in the context of the local highway authority's requirements. At its basic level, it does not call for specialist skills such as demand modelling and environmental analysis.

70) The Guidance describes how the tool deals with those aspects of speed limit changes that can be quantified, such as accidents, journey time savings and CO2 emissions, and those that presently cannot be quantified because of a lack of evidence, such as journey time reliability, model shift and impacts on public anxiety.

71) Reference is made throughout the document to current DfT guidance and relevant WebTAG <sup>[footnote 4]</sup> units to help the user compile the data that is required to run the tool and to guide the reader to more detailed information, should this be required.

72) The tool outputs are presented in Excel table formats that show economic impacts and other quantifiable impacts, and makes provision for non-quantified information also to be presented in both the data entry tables and the output reporting tables.

73) The output spreadsheets should be considered as a starting point for developing the appraisal into a case that can be readily understood and appreciated by a range of people, and which reflects wider considerations than the quantitative values that the tool provides.

74) Details on how the relationships that are used in the tool were developed are set out in an annex to the User Guidance, enabling the reader to gain an understanding of the background calculations that the tool is performing. 4 Department for Transport Web-based Transport Analysis Guidance

## SECTION 6: URBAN SPEED LIMITS

### Key points

Speed limits in urban areas affect everyone, not only as motorists, but as pedestrians, cyclists and residents. As well as influencing safety they can influence quality of life, the environment and the local economy.

Traffic authorities are encouraged to adopt the Institution of Highways and Transportation's urban safety management guidelines <sup>[footnote 5]</sup> (see IHT, 2003), in which road hierarchies are adopted that reflect a road's function and the mix of traffic that it carries.

The national speed limit on street lit roads is 30 mph.

Traffic authorities can, over time, introduce 20mph speed limits or zones on major streets where there are – or could be - significant numbers of journeys on foot where pedal cycle movements are an important consideration, and this outweighs the disadvantage of longer journey times for motorised traffic.

This is in addition to residential streets in cities, towns and villages, particularly where the streets are being used by people on foot and on bicycles, there is community support and the characteristics of the street are suitable.

Where they do so, general compliance needs to be achievable without an excessive reliance on enforcement.

Roads suitable for a 40 mph limit are generally higher quality suburban roads or those on the outskirts of urban areas where there is little development. Usually, the movement of motor vehicles is the primary function.

In exceptional circumstances, 50 mph limits can be implemented on special roads and dual carriageways, radial routes or bypasses where the road environment and characteristics allow this speed to be achieved safely.

## Background

75) Urban roads by their nature are complex as they need to provide for safe travel on foot, bicycle and by motorised traffic. Lower speeds benefit all urban road users, and setting appropriate speed limits is therefore an important factor in improving urban safety. Traffic authorities are encouraged to adopt the urban safety management guidelines published by the Institution of Highways and Transportation (IHT, 2003), in which road hierarchies are adopted that reflect a road's function and the mix of traffic that it carries.

Within this approach the principle should be to ensure that the appropriate traffic travels on the appropriate roads, and at an appropriate speed. This can help balance what can be competing demands for higher or lower speed limits.

76) It is on urban roads that the majority of road casualties occur, including 87% of all pedestrian and 83% of all pedal cyclists casualties (DfT, 2011). Collisions typically involve pedestrians and cyclists, including children, and knowledge of the relationship between vehicle speed and injury severity in any collision must inform decisions on speed limits.

Research has shown that the risk of a pedestrian dying in a collision with a car increases slowly up to an impact speed of around 30mph, but at speeds above 30 mph the risk of death increases rapidly (Rosén and Sander, 2009). Car occupants also benefit from lower speeds. Research in London showed that the largest casualty reductions associated with 20mph zones were children killed and seriously injured, and car occupants (Grundy et al, 2008).



77) The standard speed limit in urban areas is 30 mph, which represents a balance between mobility and safety factors. However, for residential streets and other town and city streets with high pedestrian and cyclist movement, local traffic authorities should consider the use of 20 mph schemes.

On dual carriageways where the road environment and characteristics allow, traffic authorities can also implement 40 mph and, in exceptional circumstances, 50 mph limits. Generally, efforts should be made to promote the use of suitable routes for urban through traffic and to manage the speed of traffic requiring access to residential streets using traffic calming and associated techniques.

78) In many urban centres, main traffic routes often have a mixture of shopping, commercial and/or residential functions. These mixed priority routes are complex and difficult to treat, but the most successful measures have included speed management to keep speed at appropriate levels in the context of both 20 and 30 mph limits and a reassignment of space to the different functions, taking into account the needs of people on foot or on bikes. Sometimes a decision about a road's primary or most important function needs to be taken.

## 6.1 20 MPH SPEED LIMITS AND ZONES

79) 20 mph zones and limits are now relatively wide-spread, with more than 2,000 schemes in operation in England, the majority of which are 20 mph zones.

80) 20 mph zones require traffic calming measures (e.g. speed humps, chicanes) or repeater speed limit signing and/or roundel road markings at regular intervals, so that no point within a zone is more than 50 m from such a feature. In addition, the beginning and end of a zone is indicated by a terminal sign. Zones usually cover a number of roads.

81) 20 mph limits are signed with terminal and at least one repeater sign, and do not require traffic calming. 20 mph limits are similar to other local speed limits and normally apply to individual or small numbers of roads but are increasingly being applied to larger areas.

82) There is clear evidence of the effect of reducing traffic speeds on the reduction of collisions and casualties, as collision frequency is lower at lower speeds; and where collisions do occur, there is a lower risk of fatal injury at lower speeds. Research shows that on urban roads with low average traffic speeds any 1 mph reduction in average speed can reduce the collision frequency by around 6% (Taylor, Lynam and Baruya, 2000). There is also clear evidence confirming the greater chance of survival of pedestrians in collisions at lower speeds.

83) Important benefits of 20 mph schemes include quality of life and community benefits, and encouragement of healthier and more sustainable transport modes such as walking and cycling (Kirkby, 2002). There may also be environmental benefits as, generally, driving more slowly at a steady pace will save fuel and reduce pollution, unless an unnecessarily low gear is used. Walking and cycling can make a very positive contribution to improving health and tackling obesity, improving accessibility and tackling congestion, and reducing carbon emissions and improving the local environment.

84) Based on this positive effect on road safety, and a generally favourable reception from local residents, traffic authorities are able to use their power to introduce 20mph speed limits or zones on:

- major streets where there are – or could be - significant numbers of journeys on foot, and/or where pedal cycle movements are an important consideration, and this outweighs the disadvantage of longer journey times for motorised traffic.

This is in addition to:

- residential streets in cities, towns and villages, particularly where the streets are being used by people on foot and on bicycles, there is community support and the characteristics of the street are suitable.

85) Successful 20 mph zones and 20 mph speed limits are generally self-enforcing, i.e. the existing conditions of the road together with measures such as traffic calming or signing, publicity and information as part of the scheme, lead to a mean traffic speed compliant with the speed limit. To achieve compliance there should be no expectation on the police to provide additional enforcement beyond their routine activity, unless this has been explicitly agreed.

86) Evidence from successful 20 mph schemes shows that the introduction of 20 mph zones generally reduces mean traffic speed by more than is the case when a signed-only 20 mph limit is introduced. Historically, more zones than limits have been introduced.

87) A comprehensive and early consultation of all those who may be affected by the introduction of a 20 mph scheme is an essential part of the implementation process. This needs to include local residents, all tiers of local government, the police and emergency services, public transport providers and any other relevant local groups (including for example, groups representing pedestrians, cyclists, drivers, or equestrians). Further details about consultations are set out in Appendix A.

88) It is important to consider the full range of options and their benefits, both road safety and wider community and environmental benefits and costs, before making a decision as to the most appropriate method of introducing a 20 mph scheme to meet the local objectives and the road conditions.

## 20 mph zones

89) 20 mph zones are very effective at reducing collisions and injuries. Research in 1996 showed that overall average annual collision frequency could fall by around 60%, and the number of collisions involving injury to children could be reduced by up to two-thirds. Zones may also bring further benefits, such as a modal shift towards more walking and cycling and overall reductions in traffic flow, where research has shown a reduction by over a quarter (Webster and Mackie, 1996). There is no evidence of migration of collisions and casualties to streets outside the zone. (Grundy et al, 2008; Grundy et al, 2009).

90) 20 mph zones are predominantly used in urban areas, both town centres and residential areas, and in the vicinity of schools. They should also be used around shops, markets, playgrounds and other areas with high pedestrian or cyclist traffic, though they should not include roads where motor vehicle movement is the primary function. It is generally recommended that they are imposed over an area consisting of several roads.

91) A 20 mph zone is indicated by 20 mph zone entry and exit signs (TSRGD, diagrams 674 and 675). The statutory provisions (direction 16(1) TSRGD) require that no point within the zone must be further than 50 metres from a traffic calming feature (unless in a cul-de-sac less than 80 metres long).

92) The Department has recently made significant changes to facilitate and reduce the cost for providing 20 mph zones in England. Traffic authorities can now place any of the following:

- repeater speed sign (TSRGD diagram 670)
- a speed roundel road marking (TSRGD diagram 1065)
- a combination of both of these signs

- traffic calming features

93) At least one traffic calming feature as defined in direction 16(2) TSRGD must be placed in a 20 mph zone and the features and signing must still be placed at intervals not greater than 100 metres: it is not the intention to remove physical features, but to ensure that the most appropriate measure is used to ensure the continuity of the zone. Only where speeds are already constrained to near the limit should local authorities consider placing the speed limit sign or a roundel marking, in addition to physical features within a zone.

94) These new arrangements should significantly reduce the requirement for signing and traffic calming features. Traffic authorities can now incorporate wider areas within a 20 mph zone, by effectively signing 20mph speed limits on distributor roads where traffic calming features are not suitable, or for small individual roads or stretches of road, where mean speeds are already at or below 24 mph.

Where a 20 mph zone leads into a 20 mph limit, it is important to use the correct signing to indicate this. It is not appropriate to use the sign that indicates the end of a 20 mph zone and the start of a different, higher speed limit. Instead, a standard 20 mph terminal sign (TSRGD 2002, diagram 670) must be used.

## 20 mph speed limits

95) Research into signed-only 20 mph speed limits shows that they generally lead to only small reductions in traffic speeds. Signed-only 20 mph speed limits are therefore most appropriate for areas where vehicle speeds are already low. This may, for example, be on roads that are very narrow, through engineering or on-road car parking. If the mean speed is already at or below 24 mph on a road, introducing a 20 mph speed limit through signing alone is likely to lead to general compliance with the new speed limit.

96) 20 mph limits covering most streets in Portsmouth have demonstrated that it is possible to introduce large-scale 20 mph limits in some built-up environments. Traffic speeds in most of the streets treated were relatively low (less than 20 mph) to start with. The early evidence suggests that it is likely that some speed and casualty reductions have taken place and this is consistent with previous research that has indicated that 20 mph limits without traffic calming reduce mean speeds by about 1 mph on average.

A minority of streets in Portsmouth had average speeds of 25 mph or higher before the 20 mph speed limits were introduced and here the reductions in average speed tended to be greater, but insufficient to make the resulting speeds generally compliant with the new 20 mph limits. City-wide schemes may also contribute to changing travel and driving behaviour positively in the longer run, and the objectives of the Portsmouth speed limits spread well beyond improving road safety. Schemes need to aim for compliance with the new speed limit.

97) The implementation of 20 mph limits over a larger number of roads, which the previous Speed Limit Circular (01/2006) advised against, should be considered where mean speeds at or below 24 mph are already achieved over a number of roads. Traffic authorities are already free to use additional measures in 20 mph limits to achieve compliance, such as some traffic calming measures and vehicle activated signs, or safety cameras. Average speed cameras may provide a useful tool for enforcing compliance with urban speed limits.

98) A 20 mph speed limit is indicated by terminal speed limit signs, and amendments to TSRGD (January 2012) require at least one speed limit repeater sign to be placed. Traffic authorities should ensure sufficient repeater signs are placed to inform road users of the speed limit in force. Chapter 3 of the Traffic Signs Manual provides guidance on the placing of repeater signs.

99) Every English authority has a traffic sign authorisation which permits them to place a 20mph speed roundel road marking as a repeater sign, without the requirement for an upright sign, to reduce unnecessary signing.

100) The amendments regulations to TSRGD (January 2012) have also provided thresholds below which speed repeater signs are no longer required by Direction 11 of TSRGD, but may still be placed if considered necessary. These thresholds are determined by carriageway length and the applicable speed limit.

101) Where traffic calming measures are placed, they should be signed in line with regulations (TSRGD 2002, diagram 557.1–4 and 883).

## **Variable 20 mph limits**

102) Traffic authorities have powers to introduce 20 mph speed limits that apply only at certain times of day. These variable limits may be particularly relevant where for example a school is located on a road that is not suitable for a full-time 20 mph zone or limit, such as a major through road.

To indicate these limits, variable message signs are available (TSRGD, Regulation 58). To reduce costs and sign clutter, the Department will consider authorising the placing of a single variable message sign on the approaching traffic lane (rather than signs on both sides of the road) on a case by case basis.

103) The Secretary of State has provided a special authorisation for every English traffic authority to place an advisory part-time 20mph limit sign, with flashing school warning lights. This can be a more cost-effective solution, where appropriate, and reduces the requirement for signing.

## **6.2 TRAFFIC CALMING MEASURES**

104) Traffic calming involves the installation of specific physical measures to encourage lower traffic speeds. There are many measures available to traffic authorities to help reduce vehicle speeds and ensure compliance with the speed limit in force. These are required at regular intervals in 20 mph zones and may be used in 20 mph limits. As set out above, speed limit traffic signs and/or speed roundel markings can now also be used by traffic authorities in England.

105) The Highways (Road Humps) Regulations 1999, The Highways (Traffic Calming) Regulations 1999, and Direction 16 of TSRGD 2002 (as amended) give details of the traffic calming measures that meet the requirements for a 20 mph zone.

106) These calming measures range from more substantive engineering measures to lighter touch road surface treatments and include, for example:

- road humps
- road narrowing measures - such as chicanes, pinch-points or overrun areas
- gateways
- road markings
- rumble devices

107) A recent review of 20 mph zone and limit implementation (Atkins, 2009) shows that the vast majority of traffic calming measures in use are speed humps, tables, cushions or rumble devices, so called vertical deflections, but traffic authorities will want to consider the full set of available measures.

## 6.3 40 MPH AND 50 MPH SPEED LIMITS

108) 30 mph is the standard speed limit for urban areas, but a 40 mph limit may be used where appropriate and, in exceptional circumstances, a 50 mph limit may be considered.

109) Roads suitable for 40 mph are generally higher-quality suburban roads or those on the outskirts of urban areas where there is little development. They should have good width and layout, parking and waiting restrictions in operation, and buildings set back from the road.

These roads should, wherever possible, cater for the needs of non-motorised road users through segregation of road space, and have adequate footways and crossing places. Alternatively, traffic authorities should consider whether there are convenient alternative routes available.

110) In exceptional circumstances a 50 mph limit may also be used on higher-quality roads where there is little or no roadside development and such speeds can be achieved safely. The roads most suited to these higher urban limits are special roads or those with segregated junctions and pedestrian facilities, such as primary distributors. They are usually dual carriageway ring or radial routes or bypasses that have become partially built up.

Traffic authorities should, however, always assess the potential impact upon the local community and non-motorised road users before considering such a limit.

Speed limit (mph)	Where limit should apply
20 (including 20 mph zone)	In streets that are primarily residential and in other town or city streets where pedestrian and cyclist movements are high, such as around schools, shops, markets, playgrounds and other areas, where motor vehicle movement is not the primary function.
30	In other built-up areas (where motor vehicle movement is deemed more important), with development on both sides of the road.
40	On higher quality suburban roads or those on the outskirts of urban areas where there is little development, with few cyclists, pedestrians or equestrians. On roads with good width and layout, parking and waiting restrictions in operation, and buildings set back from the road. On roads that, wherever possible, cater for the needs of non-motorised users through segregation of road space, and have adequate footways and crossing places.
50	On dual carriageway ring or radial routes or bypasses that have become partially built up, with little or no roadside development.

## SECTION 7: RURAL SPEED MANAGEMENT

### Key points

The national speed limit on the rural road network is 60 mph on single carriageway roads and 70 mph on dual carriageways.

Rural dual carriageways with segregated junctions and facilities for vulnerable road users would generally be suitable for 70 mph limits. However, a lower limit may be appropriate if, for example, a collision history indicates that this cannot be achieved safely.

In 2011, 66% of road deaths in Britain occurred on rural roads, and 51% of road deaths occurred on single rural carriageway roads subject to the National Speed Limit of 60 mph limit.

The speed limit on single carriageway rural roads should take into account the history of collisions, the road's function, existing mean traffic speed, use by vulnerable road users, the road's geometry and engineering, and the road environment including level of road-side development.

It is government policy that a 30 mph speed limit should be the norm in villages. It may also be appropriate to consider 20 mph zones and limits in built-up village streets.

It is recommended that the minimum length of a village speed limit should be 600 metres. However, traffic authorities may lower this to 400 metres, and in exceptional circumstances to 300 metres.

## Background

111) The vast majority of the rural road network is subject to the national speed limit of 60 mph on single carriageway roads, and 70 mph on dual carriageways. On many of these roads, the majority of drivers are travelling below – sometimes significantly below – the speed limit because of the characteristics of the roads. This is especially evident on the C and Unclassified roads where the geometric characteristics include many narrow roads, bends, junctions and accesses.

112) Rural roads account for 66% of all road deaths, and 82% of car occupant deaths in particular, but only around 42% of the distance travelled. Of all road deaths in Britain in 2011, 51% occurred on National Speed Limit rural single carriageway roads (DfT, 2011). The reduction in road casualties and especially deaths on rural roads is one of the key road safety challenges.

Research has assessed the risk of death in collisions at various impact speeds for typical collision types on rural roads. This research suggests that the risk of a driver dying in a head on collision involving two cars travelling at 60 mph is around 90%, but that this drops rapidly with speed, so that it is around 50% at 48 mph (Richards and Cuerden, 2009).

113) Inappropriate speed, at levels below the legal limit but above those appropriate for the road at the time (for example, because of the weather conditions or because vulnerable road users are present), is a particular problem for rural roads. Exceeding the speed limit or travelling too fast for the conditions are reported as contributory factors in 16% of collisions on rural roads. Specifically, inappropriate speed is recorded as a contributory factor in 20% of crashes on minor rural roads with a 60 mph limit.

114) Speed limit changes are therefore unlikely to fully address this problem and should therefore be considered only as one part of rural safety management. Where collision and casualty rates are high, traffic authorities should first seek to understand the particular types of crashes taking place and their causes, to allow them to choose effective solutions to reduce the risk.

115) To help in this process the Accident Analysis on Rural Roads: A Technical Guide (TRL, 2004) has been developed, which provides information on typical collision rates and typical proportions of different collision types on different types of rural road. This can be used to assess where there are above-average collision rates and provides help to traffic authorities in identifying the types of site or route specific intervention measures that might be appropriate to manage speeds and reduce collisions along the route.

116) Traffic authorities may wish to note the Road Safety Foundation's risk ratings for A roads in Britain. This rates the risk, based on frequency of death and serious injury in relation to amount of traffic on the particular road, into five categories ranging from low-risk, safe roads to high-risk roads. <sup>[footnote 6]</sup>

117) The Road Safety Foundation has assessed the safety of the trunk road network, assessing the protection levels that the design and engineering features of roadsides, medians and junctions on these roads offer in case of a crash. This assessment uses a star-based European Road Assessment Programme (EuroRAP) Road Protection Score, and has found that two-thirds of single carriageway trunk roads achieve only a 2-star (out of 4) rating. Even though this assessment has only been applied to trunk roads it suggests that engineering measures may often be more appropriate to manage speed and reduce collisions on rural single carriageway roads.

118) If high collision rates persist despite these measures, then lower speed limits may also be considered. Again, to achieve a change in motorists' behaviour and compliance with the limit, supporting physical measures, driver information and publicity or other measures are likely to be required.

Such measures could include, for example, the use of vehicle-activated signs (VAS), which have proved particularly effective at the approaches to isolated hazards, junctions and bends in rural areas (Winnett and Wheeler, 2003). There should be no expectation on the police to provide additional enforcement to ensure compliance with a new limit beyond their routine activity, unless this has been explicitly agreed.

119) The aim of speed management actions is to deliver a balance between safety objectives for all road users and mobility objectives to ensure efficient travel, as well as environmental and community outcomes. So every effort should be made to achieve an appropriate balance between actual vehicle speeds, speed limits, road design and other measures. This balance may be delivered by introducing one or more speed management measures in conjunction with the new speed limits, and/or as part of an overall route safety strategy.

120) While routine enforcement should normally only be considered after other speed management measures have been considered, there may be occasions where the use of average speed cameras may offer a solution through calming traffic speed over a stretch of road. The Department has received a small sample of evaluation data of average speed cameras at non-roadworks sites from some local partnerships, and this data suggests a reduction in the percentage of motorists exceeding the speed limit from 55% before installation of cameras, to 18% afterwards, and an average reduction of killed and seriously injured casualties (KSI) per km of around 69%, and of personal injury collisions (PIC) of around 38%, (not adjusted for national trends and regression to mean effect). <sup>[footnote 7]</sup>

## **7.1 DUAL CARRIAGEWAY RURAL ROADS**

121) Dual carriageway roads with segregated junctions and separate facilities for vulnerable road users are generally subject to and suitable for the National Speed Limit of 70 mph. However, a lower limit may be appropriate if, for example, a collision history indicates that this speed cannot be achieved safely and this risk of collisions cannot be addressed through other engineering measures.

## **7.2 SINGLE CARRIAGEWAY RURAL ROADS**

122) In most instances, consideration of collision history, road function, mix of road users including presence of vulnerable road users, road geometry, engineering and environment, and actual traffic speed should enable traffic authorities to determine the appropriate limit on single carriageway rural roads.

123) Roads may have primarily either a through traffic function or a local access function. Both need to be provided safely. Mobility benefits will be more important for roads with a through-traffic function, while environmental and community benefits are likely to be of greater importance for the local access roads.

124) There may be many roads below A and B classification that serve a mixed through-traffic and access function. Where that traffic function is currently being achieved without a high collision rate, these roads should be judged as through-traffic roads. If, however, for all or parts of these roads there is a substantial potential risk to vulnerable road users, these sections should be assessed as roads with a local access function.

125) Within routes, separate assessments should be made for each section of road of 600 metres or more for which a separate speed limit might be considered appropriate. When this is completed, the final choice of appropriate speed limit for individual sections might need to be adjusted to provide consistency over the route as a whole.

126) The choice of speed limits should take account of whether there is substantial roadside development and whether the road forms part of a recognised route for vulnerable road users, including whether there is a footway.

127) Table 2 sets out recommended speed limits for roads with a predominant motor traffic flow function. If walking, cycling, horse riding, community or environmental factors are particularly important on any road section, consideration should be given to using the lower limit.

**Table 2 Speed limits for single carriageway roads <sup>[footnote 8]</sup> with a predominant motor traffic flow function**

Speed limit (mph)	Where limit should apply:
60	Recommended for most high quality strategic A and B roads with few bends, junctions or accesses.
50	Should be considered for lower quality A and B roads that may have a relatively high number of bends, junctions or accesses. Can also be considered where mean speeds are below 50 mph, so lower limit does not interfere with traffic flow.
40	Should be considered where there are many bends, junctions or accesses, substantial development, a strong environmental or landscape reason, or where there are considerable numbers of vulnerable road users.

128) For C and Unclassified roads with important access and recreational function, the following speed limits are deemed appropriate and traffic authorities should use these as guidance when reviewing the speed limits on these roads:

- the national speed limit of 60 mph is only appropriate for the best quality C unclassified roads with a mixed (i.e. partial traffic flow) function with few bends, junctions or accesses - in the longer term, these roads should be assessed against through-traffic criteria. For lower quality C and Unclassified roads with a mixed function and high numbers of bends, junctions or accesses 50 mph may be appropriate



- a speed limit of 40 mph may be considered for roads with a predominantly local, access or recreational function, for example in national parks or areas of outstanding natural beauty (AONB), or across, or adjacent to, unenclosed common land; or if they form part of a recommended route for vulnerable road users. It may also be appropriate if there is a particular collision problem

129) It is important to note that the above does not imply that speed limits should automatically be reduced. Indeed, in some cases the assessment may suggest that the existing speed limit may be too low, and a higher speed limit should be considered, as it is likely to be achievable safely.

130) We would welcome applications for zonal rural speed limits, usually 40 mph zones, for example in national parks or AONBs or on other networks of minor rural roads where speeds are already in line with such a limit. Such zones would include entry treatment and painted repeater roundels. The Department is keen to consider the effectiveness of such zones in reducing speeds and signing requirements.

## 7.3 VILLAGES

131) Fear of traffic can affect people's quality of life in villages and it is self-evident that villages should have comparable speed limits to similar roads in urban areas. It is therefore government policy that a 30 mph speed limit should be the norm through villages.

132) It may also be appropriate to consider 20 mph limits or zones in built-up village streets which are primarily residential in nature, or where pedestrian and cyclist movements are high. Such limits should not, however, be considered on roads with a strategic function or where the movement of motor vehicles is the primary function.

133) Traffic Advisory Leaflet 01/04 (DfT, 2004) sets out policy on achieving lower speed limits in villages. It suggests that reasonable minimum criteria for the definition of what constitutes a village, for the purpose of applying a village speed limit of 30 mph, would be that there were: □ 20 or more houses (on one or both sides of the road) - and a minimum length of 600 metres.

134) If there are just fewer than 20 houses, traffic authorities should make extra allowance for any other key buildings, such as a church, shop or school. Where the character of a village falls outside this definition, local authorities are encouraged to use their discretion in deciding whether a lower speed limit is appropriate.

135) The criteria above should give adequate visual messages to drivers to reduce their speed. It is recommended that the minimum length for the new limit is at least 600 metres to avoid too many changes in speed limits along a route, and to aid compliance. Traffic authorities may, however, lower this to 400 metres when the level of development density over this shorter length exceeds the 20 or more houses criterion and, in exceptional circumstances, to 300 metres.

136) In some circumstances it might be appropriate to consider an intermediate speed limit of 40 mph prior to the 30 mph terminal speed limit signs at the entrance to a village, in particular where there are outlying houses beyond the village boundary or roads with high approach speeds.

For the latter, traffic authorities might also need 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 local police force. 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.

137) Where the speed limit commences at the village boundary, the village nameplate sign (prescribed in diagram 2402.1 of TSRGD 2002) and speed limit roundel may be mounted together. The combined sign should be located at the point where the speed limit starts, and it may be helpful if drivers can see housing at the same time as the signs, reinforcing the visual message for reduced speed.

138) If there are high approach speeds to a village, or the start of the village is not obvious, village gateway treatments can also be an effective way to slow drivers down. Advice can be found in Local Transport Note 1/07 Traffic Calming (DfT, 2007) and Traffic Advisory Leaflets 01/94 VISP – A Summary (DoT, 1994a) and 01/04 Village Speed Limits (DfT, 2004).

139) In situations where the above criteria for a village are not met and there is a lesser degree of development, or where engineering measures are not practicable or cost-effective to achieve a 30 mph limit, but a reduction from the national 60 mph speed limit is considered appropriate, traffic authorities should consider alternative lower limits of 40 or 50 mph.

140) A recommendation to use the framework for the assessment of speed limit options on rural single carriageway roads, in place since the publication of the previous Speed Limit Circular (01/2006), is withdrawn.

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## **APPENDIX A: KEY PIECES OF SPEED LIMIT, SIGNING AND RELATED LEGISLATION AND REGULATIONS**

1) Key speed limit and safety camera signs diagrams in Traffic Signs Regulations and General Directions, (TSRGD) 2002, as amended, include:

- diagram 670 – 'Maximum speed limit' sign
- diagram 671 – 'National speed limits apply'
- diagrams 672 and 673 – Start and end of minimum speed limits respectively
- diagrams 674 and 675 – Entrance and end of 20 mph 'Speed limit zone' signs respectively

- diagrams 878, 879 and 880 – ‘Camera warning’ signs □ diagram 1065 – Carriageway roundel road marking □ diagram 2402.1 and 2403.1 – Town or village gateway sign (boundary sign) (may be combined on the same post or backing board with a speed limit sign) □ diagram 7032 – Temporary ‘New 30 mph speed limit’ sign

2) The main directions for the use and placing of speed limit restrictions in TSRDG 2002, as amended, are:

- directions 8 and 9 – Beginning of speed limit restrictions
- direction 10 – Ending of speed limit restrictions
- direction 11 – Placement of speed limit repeater signs
- direction 16 – Speed limits of 20 mph □ directions 41 and 42 – Mounting and backing of signs.

3) Further detailed advice on the form and siting of speed limit signs is given in Chapter 3 of the Traffic Signs Manual (DfT, 2008).

## Speed Limit Orders

4) Part VI of the Road Traffic Regulation Act (RTRA) 1984 deals specifically with speed limits and sections 81-84 deal with different speed limits and the speed limit order-making process. The Local Authorities’ Traffic Orders (Procedure) (England and Wales) Regulations 1996 sets out the process of making traffic orders, which includes speed limit orders. Traffic authorities will need to refer to these Regulations in full. They set out the persons and organisations to be consulted before traffic orders are made, and an extract is below.

“Consultation 6) (1) An order making authority shall, before making an order in a case specified in column (2) of an item in the table below, consult the persons specified in column (3) of the item.

Item	Case	Consultee
	Where the order relates to, or appears to the order making authority to be likely to affect traffic on, a road for which another 1. authority is the highway authority or the traffic authority	The other authority
	Where the order relates to, or appears to the order making authority to be likely to 2. affect traffic on, a Crown road	The appropriate Crown authority
	Where the order relates to, or appears to the order making authority to be likely to 4. affect traffic on, a road on which a tramcar or trolley vehicle service is provided	The concessionaire

Item	Case	Consultee
	Where the order relates to, or appears to the order making authority to be likely to affect traffic on,- (a) a road outside Greater London 5. which is included in the route of a local service; or (b) a road in Greater London which is included in the route of a London bus service	In case (a) the operator of the service In case (b) the operator of the service and Transport for London
	Where it appears to the authority that the order is likely to affect the passage on any 6. road of- (a) ambulances; or Where it appears to the authority that the order is likely to affect the passage on any 6. road of- (a) ambulances; or (b) fire-fighting vehicles	In case (a) the chief officer of the appropriate NHS trust or NHS Foundation Trust In case (b) the fire and rescue authority
	All cases	(a) The Freight Transport Association (b) The Road Haulage Association (c) Such other organisations (if any) representing persons likely to be affected by any provision in the order as the order making authority thinks it appropriate to consult”

5) The regulations also set out the requirements for publication of the proposal before making an order through a notice and further adequate publicity.

6) The Road Traffic Regulation Act 1984 Schedule 9 Part III s 20 contains a requirement also to consult the Chief Officer of Police.

## Consultation for traffic calming measures

7) Full consultation must take place before any traffic calming measures are installed. For road humps, the process is outlined in The Highways (Road Humps) Regulations 1999 (SI 1999 No. 1025) as follows (Regulation 3):

“Where the Secretary of State or a local traffic authority proposes to construct a road hump, he or they shall, as well as consulting the chief officer of police as required by section 90C(1) of the Act, also consult -

(a) where the proposal is by the local traffic authority in England which is the council of a County, any district council in whose district the highway is situated;

(b) in all cases, the chief officer of the fire brigade for the area in which the highway concerned is situated and the chief officer of any body providing ambulance services under the National Health Service Act 1977(a) and operating in that area;

(c) in all cases, organisations appearing to him or them to represent persons who use the highway to which the proposal related, or to represent persons who are otherwise likely to be affected by the road hump.” “The Act” refers to the Highways Act 1980.

8) For all other traffic calming, the consultation process is outlined in The Highways (Traffic Calming) Regulations 1999 as follows (Regulation 4): “Where a traffic authority proposes to construct a traffic calming work in a highway they shall –

(a) consult the chief officer of police for the area in which the highway is situated; and

(b) consult such persons or organisations representing persons who use the highway or who are otherwise likely to be affected by the traffic calming work as the traffic authority thinks fit.”

9) Although there is no requirement to consult all the emergency services for traffic calming measures other than road humps, it is **strongly recommended** that both the ambulance service and the Fire and Rescue Service are included in any consultation for all traffic calming as a matter of course.

## Footnotes

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1. In Wales, Setting Local Speed Limits in Wales, Welsh Assembly Government Circular No: 24/2009, issued by the Welsh Assembly Government in October 2009, is in use. In Scotland, Setting Local Speed Limits - Guidance for Local Authorities: ETLLD Circular 1/2006 applies.
2. Please note that all references to legislation within this Circular are references to that legislation as amended.
3. Older legislation specifies 200 yards; later legislation specifies 183 metres. These are equivalent measures.
4. Department for Transport Web-based Transport Analysis Guidance.
5. IHT are now called Chartered Institution of Highways and Transportation, CIHT.
6. Please see [www.eurorap.org](http://www.eurorap.org) for detailed maps.
7. Comprehensive before and after data were obtained for 11 permanent average speed camera sites on A roads with speed limits of 40, 50, 60, and 70 mph, where safety cameras were installed between 2000 and 2006, based on an informal data request. It should be noted that this is not a representative sample, has not been centrally and independently validated and should therefore only be seen as indicative of possible effects of average speed cameras.
8. For speed limits in villages, please refer to Section 7.3.

Print this page



## Appendix II

Traffic Advisory Leaflet 1/04



## Village Speed Limits



### INTRODUCTION

The Government's road safety strategy 'Tomorrow's roads: safer for everyone' (Department of the Environment, Transport and the Regions, 2000) stated that a standard speed limit of 30 mph in villages should be the norm. This guidance seeks to give examples of the measures available to encourage compliance with the limit. This guidance may be suitable for those villages situated on primary routes. But where there is concern, an assessment framework currently under development will help identify the strategic significance of such roads, thereby helping to define the most appropriate speed limit.



## CURRENT SPEED LIMIT GUIDANCE

The current guidance for the setting of speed limits, Circular Roads 1/93 (CR1/93, Department of Transport, 1993), sets out procedures for determining appropriate speed limits. In Scotland, the equivalent guidance is SOID Circular 1/93 (Scottish Office, 1993). Both contain information on flexibility for the treatment of villages in respect of lower limits is contained in the guidance.

## VILLAGE DEFINITION

To assist local authorities by providing them with an understanding of which speed limit should apply on particular roads, there is a need to provide a definition of a village which may be applied consistently when determining speed limits. It is recognised that there is a variety of widely different circumstances regarding the characteristics of villages across the country, which makes the task of village definition difficult. Essentially, however, a national definition of a village for applying a 30mph speed limit is only concerned with setting some reasonable minimum criteria. At the same time, the intention is to make this village definition as simple and straightforward as possible.

A survey of local authorities has established that only a small number have a formal definition for villages, and that these definitions cover a range of different circumstances and complexity. Most of the definitions are based on various levels of frontage development, a few are based on population, and others use the presence of a key building (e.g. school, retail outlet, church or village hall) or the presence of a village nameplate.

It is therefore suggested that the definition of a village should be based on simple criteria relating to frontage development and distance, as shown below: -

- 20 or more houses; and
- a minimum length of 600 metres;

Where the character of a village falls outside this definition, local authorities are encouraged to use their discretion in deciding whether a lower speed limit is appropriate.

## FRONTAGE DEVELOPMENT

It is recommended that a village should be defined by a minimum number of 20 houses, irrespective of whether these are on one or both sides of the road. If there are just fewer than 20 houses, extra allowance

should be made for any other key buildings, such as a church, shop or school. Such allowance is left to the discretion of local authorities to take account of the particular circumstances.

## MINIMUM LENGTH FOR SPEED LIMIT

It is not considered practicable to have a 30mph speed limit extending over a very short stretch of road. Many drivers would be unlikely to slow down to the new speed limit, particularly if the end of the 30mph limit can be seen at the entry point. Short sections of speed limits may also result in enforcement difficulties. The current minimum length as set out in CR 1/93 is approximately 800 metres, but a number of local authorities are successfully using a minimum length less than 800 metres. Given this, it is suggested that the minimum recommended length might be 400m, with at least 600m where possible to avoid too many changes of speed limit along the route.



IMAGE 3 ON COVER: WEST SUSSEX COUNTY COUNCIL

## MEASURE OF DENSITY

As a visual message to drivers that they are in a village, a measure of density is needed to give some minimum standard as to the frequency of the houses over the extent of the speed limit. On the basis of the minimum number of houses and length of speed limit, an average density of at least 3 houses per 100 metres over the extent of the 30mph speed limit is recommended. 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. This recommended measure of density, over which the speed limit should apply, should be reserved to cover the main body of the village only. The limit should therefore not extend beyond these minimum requirements except in exceptional circumstances (e.g.

where the main focal point of the village such as a community hall or church is situated outside the main density area of the village).

### OTHER ISSUES

In situations where the above criteria for a village is not met, and there is a lesser degree of development, there may still be a need for a limit lower than the national limit (e.g. 40 or 50mph).

In some circumstances there might be a need to consider an intermediate speed limit prior to the 30mph speed limit signs at the entrance to a village. The intermediate limit would normally be 40mph. The instances where this approach might be appropriate would include outlying houses beyond the village boundary or roads with high approach speeds. If the latter, local authorities might also need to consider other speed management measures to encourage compliance with the intermediate limit and to avoid enforcement difficulties for the police. Such measures might include centre hatchings, a vehicle activated sign and/or some form of road narrowing to change the nature and appearance of the road.

If the distance between adjacent villages is less than 600 metres, it is recommended that the 30mph speed limit should apply throughout, to avoid frequent changes in speed limit.

Again, the development of a speed limit assessment framework, as already mentioned, will help authorities to assess the most appropriate speed limit to suit local circumstances.



### SIGNING

Where the speed limit commences at the village boundary, the boundary sign and the speed limit roundel may be mounted together. The boundary sign must then be in the simple format prescribed in diagram 2402.1 and not of the type shown in diagram 2403.1.

Direction 11(4) in the Traffic Signs Regulations and General Directions 2002 prohibits the use of 30mph

repeater signs where there is a system of street lights. Elongated roundel road markings (diagram 1065) may be used but only in conjunction with speed limit terminal or repeater signs. TA Leaflet 1/95 provides guidance on the spacing of repeater signs for villages without street lighting, or where street lamps are more than 183 metres apart (185 metres in Scotland).

The combined village nameplate and 30 mph signs should be located as near as practicable to the start of the development so that drivers see housing at the same time as the signs, reinforcing the visual message for reduced speed. The position of the entrance signing will depend on various local factors, such as forward visibility, road layout, and vegetation. Maximum forward visibility of the speed limit entry terminal signs is of paramount importance. Speed limit terminal signs should not be placed where their visibility may be obscured. In such cases the new speed limit should commence a little earlier.

### TRAFFIC CALMING AND SPEED REDUCING MEASURES

If there are high approach speeds to the village, or the start of the village is not obvious, village gateway treatments can be an effective way to slow drivers. There are a number of Traffic Advisory Leaflets on the subject of traffic calming relevant to villages, and these are listed at the back of this document.

When changing the speed limit (the new speed assessment framework will provide further guidance), local authorities must look at what supporting speed reducing measures are required, as reducing the speed limit alone is unlikely to have much effect on vehicle speeds unless these are already close to the new limit.

The following interventions are suitable in different situations, and are presented here as examples that local authorities may consider, depending on local circumstances.

### Carriageway Roundels

Speed limit carriageway roundels can be used but they must be accompanied by upright repeater signs. They are also not allowed as repeaters on roads where there is a system of street lighting and a 30mph speed limit is in force. Carriageway roundels on their own will not be authorised as wear and tear and adverse weather conditions can render them difficult to see and therefore may cause enforcement difficulties for the police. Requests for carriageway roundels without upright speed limit signs in areas of natural beauty would require special authorisation.



## Chicanes

Chicanes have the effect of narrowing the carriageway and encouraging drivers to reduce speed. These might be considered more appropriate in villages, especially where road humps are deemed inappropriate.



## Countdown Signs

As a general rule the Department does not authorise the use of countdown signs. This is primarily because they have been shown to have little effect on vehicle speeds. Only in exceptional cases where both written and photographic evidence shows insurmountable visibility problems associated with speed limit terminal signs might consideration be given to their installation.

## Dragons Teeth Markings

These are usually placed prior to speed limit terminal signs. They are rather unsightly and the Department believes their value to be limited as they can only be seen close to their location and only have a minor effect on vehicle speeds. However, they are not regarded as traffic signs and do not therefore require any special authorisation, their use is solely a matter for individual traffic authorities. Authorities should also be mindful of the impact of these markings on the visual amenity of the road and surrounding rural environment.



WEST SUSSEX COUNTY COUNCIL

## Gateways

A gateway feature, usually combined with other traffic calming features can be used to mark the entry point to a village and can act as a speed reducing measure if properly designed. A gateway usually includes vertical elements at the sides of the road and may also include horizontal elements such as build outs.



## Hatch Markings

These have the effect of visually narrowing the width of the carriageway, and have in some circumstances been used in association with coloured surfacing.

## Pedestrian Crossing Facilities

There are many forms of pedestrian crossings, including zebra and signed controlled crossings. On their own they can act as a speed reducing measure, or additionally these crossings can be raised (speed table).

## Speed Enforcement Cameras

Cameras might be appropriate where there is already a history of accidents related to excessive speed. However, they should be used only after consideration of engineering and or other measures.



### Traffic Islands

These also have the effect of reducing the width of the carriageway. Although they do not usually have the same speed reducing effect as chicanes they do have the effect of changing the nature and appearance of the road. Local authorities may wish to consider combining this measure with centre hatchings.

### Vehicle Activated signs

These are appropriate to address the problems of inappropriate speed or reminding the driver of the speed limit in force. It should be noted that these signs must only be used as a final measure and in addition to and not instead of conventional static signing.

### 20mph Zones/Limits

The Department would not usually recommend the introduction of either a 20mph zone or 20mph limit on a through road in a village. To gain compliance with such a limit would usually require extensive speed reducing features which would be inappropriate in most villages. Some minor roads in the village may be suitable for 20mph zones or limits. (It should be noted that the Scottish Executive is promoting the implementation of 20mph speed limits around schools in Scotland, including schools on through roads. This also includes the use of variable 20mph speed limits and advisory 20mph speed limits).

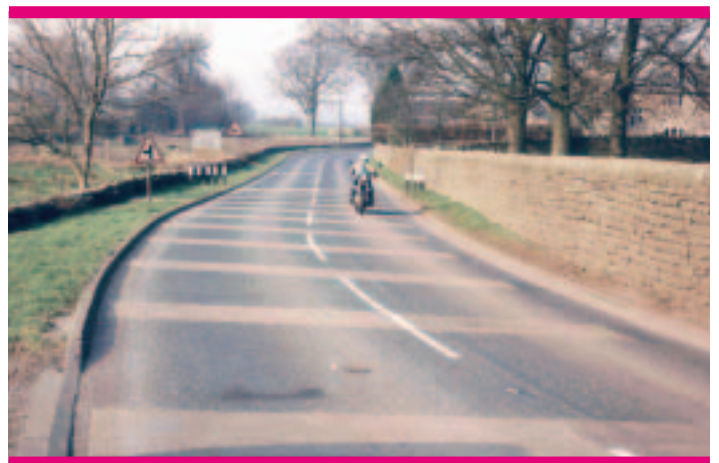
Other speed reducing measures that have also been used to some effect include a change in road surfacing, the use of rumble strips and the introduction of mini roundabouts. It should be noted though that a change in road surfacing will suffer

from wear and tear and may be less visible in adverse weather conditions which may therefore affect its effectiveness. Rumble strips can be effective but should not be placed near housing as this often results in complaints about noise.

It should be noted that all the measures listed above would have a visual impact on the village. Therefore the potential environmental intrusions and ways of ameliorating them should always be considered before any measures are introduced.

### SECTIONS 81-85 OF THE ROAD TRAFFIC REGULATION ACT 1984

Sections 81-85 give details of Speed Limit Order making, and Direction 11 of TSRGD 2002 gives details on the placing of speed limit repeater signs. It should be noted that no repeaters are allowed where the speed limit is 30mph and a system of street lights is present. Where villages are unlit, repeaters, including for a 30mph speed limit, should be placed in accordance with Traffic Advisory Leaflet 1/95.





## REFERENCES AND ADDITIONAL READING

Department of the Environment, Transport and the Regions (2000). *Tomorrow's Roads: Safer for Everyone*. DETR: London.

Department of the Environment, Transport and the Regions (2001). *Road Safety Good Practice Guide for Highway Authorities* (1st Ed.). DETR: London.

National Assembly for Wales 2001. *The Rural Town and Village Trunk Road Initiative – Reducing Accidents and Making Life Better*.

## REGULATIONS AND LEGISLATION

The Traffic Signs Regulations and General Directions 2002. *The Stationery Office: London*. (S.I No 3113)

The Highways (Traffic Calming) Regulations 1999 (S.I. No: 1026 1999). *The Stationery Office: London*

The Roads (Traffic Calming) (Scotland) Regulations 1994 (S.I. 1994/2488) as amended by the Road Humps and Traffic Calming (Scotland) Amendment Regulations 1999 (S.I. 1999/1000)

## TRAFFIC ADVISORY LEAFLETS

TA Leaflet 11/93. *Rumble Devices*  
TA Leaflet 13/93. *Gateways*  
TA Leaflet 1/94. *VISP – A Summary*

TA Leaflet 1/95. *Speed Limit Signs: A Guide to Good Practice*

TA Leaflet 7/95. *Traffic Islands for Speed Control*

TA Leaflet 6/97. *Traffic Calming on Major Roads A47, Thorney, Cambridgeshire*

TA Leaflet 12/97. *Chicane schemes*  
TA Leaflet 9/99. *20mph speed limits and zones*

TA Leaflet 14/99. *Traffic Calming on Major Roads: A Traffic Calming Scheme at Costessey, Norfolk*

TA Leaflet 1/00. *Traffic calming in villages on major Roads*

TA Leaflet 11/00. *Village Traffic Calming – Reducing accidents*

TA Leaflet 1/03. *Vehicle Activated Signs*

To obtain copies of any of the above contact:

Publications Centre  
PO Box 236  
Wetherby  
W Yorkshire LS23 7NB  
Tel: 0870 1226 236  
Fax: 0870 1226 237

## CIRCULARS

Circular Roads 1/92, *Use of Technology For Traffic Enforcement: Guidance on Deployment*

Circular Roads 1/93, *Road Traffic Regulation Act 1984 – Sections 81-85 Local Speed Limits*

SOID Circular 1/93, *Road Traffic Regulation Act 1984 - Sections 81-85 SPEED LIMITS (Guidance for Local Authorities)*. (CR 1/93 Department of Transport/Welsh Office 1993)

Circular Roads 1/95, *Traffic Signal and Speed Camera Signing*

Circular Roads 02/03, *The Traffic Signs Regulations and General Directions (TSRGD) 2002*

## LOCAL TRANSPORT NOTES

Local Transport Note 1/95, *The assessment of pedestrian crossings*

Local Transport Note 2/95, *The design of pedestrian crossings*

## ENQUIRIES

Road Safety Division 2  
Department for Transport  
Zone 2/13, Great Minster House  
76 Marsham Street  
London SW1P 4DR  
Email: [Roadsafety@dft.gsi.gov.uk](mailto:Roadsafety@dft.gsi.gov.uk)

Details of Traffic Advisory Leaflets available on the DfT website can be accessed as follows: [www.dft.gov.uk](http://www.dft.gov.uk)

From the DfT homepage, click on Roads and Vehicles, then Traffic and Parking Management and then Traffic Advisory Leaflets.

The Department for Transport sponsors a wide range of research into traffic management issues. The results published in Traffic Advisory Leaflets are applicable to England, Wales and Scotland. Attention is drawn to variations in statutory provisions or administrative practices between the countries.

The Traffic Advisory Unit (TAU) is a multi-disciplinary group working within the Department for Transport. The TAU seeks to promote the most effective traffic management and parking techniques for the benefit, safety and convenience of all road users.

### Department for Transport

Requests for unpriced TAU publications to:  
Charging and Local Transport Division,  
Zone 3/19, Great Minster House  
76 Marsham Street, London, SW1P 4DR.  
Telephone 020 7944 2478  
e-mail: [tal@dft.gsi.gov.uk](mailto:tal@dft.gsi.gov.uk)



Cycling



Traffic Management



Walking



Bus Priority Systems



Parking



Signs and Signals



Intelligent Transport Systems

### Scottish Executive

Within Scotland enquiries should be made to:  
Scottish Executive, Development  
Department, Transport Division 3, Zone 2-F,  
Victoria Quay, Edinburgh, EH6 6QQ,  
Telephone 0131 244 0847  
e-mail: [roadsafety2@scotland.gsi.gov.uk](mailto:roadsafety2@scotland.gsi.gov.uk)

### Llywodrath Cynulliad Cymru Welsh Assembly Government

Within Wales, enquiries should be made to:  
Welsh Assembly Government,  
Transport Directorate, 2nd Floor, Cathays Park,  
Cardiff, CF10 3NQ  
Telephone 029 2082 5111  
e-mail: [cone@wales.gsi.gov.uk](mailto:cone@wales.gsi.gov.uk)

## Appendix III

### Hertfordshire's Speed Management Strategy (November 2020)



# Speed Management Strategy

November 2020



<b>Version</b>	<b>Date</b>	<b>Signoff</b>	<b>Notes</b>
6.0	22 May 2020	RT /SJ	Version taken to Super Cabinet Panel 3 June
6.01	08 June 2020	DP /SJ	Correction of minor typos
7.0	20 October 2020	DP	Rewrite following consultation
7.01	23 October 2020	SJ	Final changes following review
7.02	27 October 2020	RT	Final changes following run through with Exec member
7.02a	4 November 2020	SJ	Final formatting changes. Version taken to H & E panel 19 November 2020

## Table of Contents

<b>Section 1: Executive Summary</b>	<b>5</b>
<b>Section 2: Introduction</b>	<b>8</b>
2.1 What is the Speed Management Strategy?	8
2.2 Who is the strategy for?	8
2.3 Who is responsible for the strategy?	9
2.4 What has changed in this version of the strategy?	9
2.5 Format of the strategy	10
<b>Section 3: Policy Context</b>	<b>11</b>
3.1 National Guidance	11
3.2 Hertfordshire Corporate Plan	11
3.3 Hertfordshire Local Transport Plan and Accompanying Strategies	11
3.4 Place and Movement Approach	12
<b>Section 4: Core Principles</b>	<b>14</b>
4.1 The Core Principles of Speed Management	14
<b>Section 5: Principles of Setting Speed Limits</b>	<b>15</b>
5.1 Introduction	15
5.2 Place and Movement Category	16
5.3 Existing Speeds	17
5.4 Temporary Speed Limits	18
5.5 Universal Key Criteria	19
<b>Section 6: 20mph Areas</b>	<b>20</b>
6.1 Introduction	20
6.2 Terminology	20
6.3 Application of the Place and Movement Approach	20
6.4 Identifying Appropriate 20mph Areas	21
6.5 Schools	21
6.6 New Developments	21
6.7 Key Criteria	22
6.8 20mph Area Signage	23
6.9 Existing 20mph Areas in Hertfordshire	23
<b>Section 7: Application of other speed limits</b>	<b>24</b>
7.1 Overview	24
7.2 Rural Speed Limits	24
<b>Section 8: Speed Limit Framework</b>	<b>25</b>
8.1 Overview	25

<b>Section 9: Supporting Measures .....</b>	<b>32</b>
9.1 Overview.....	32
<b>Section 10: Design Influences and Engineering Measures .....</b>	<b>33</b>
10.1 Introduction.....	33
10.2 Implementing Engineering Measures .....	33
10.3 Key Criteria for Engineering Measures .....	34
<b>Section 11: Speed Indicator Devices (SIDs).....</b>	<b>35</b>
11.1 Introduction.....	35
11.2 Speed Criteria.....	35
11.3 Location Requirements.....	36
11.4 SID Effectiveness .....	37
11.5 SID Relocations and Swivels.....	37
11.6 Data Collection and Use .....	37
11.7 Commuted Sum.....	38
11.8 Third-party Funding .....	38
11.9 Key Criteria for Installation.....	38
<b>Section 12: Safety and Speed Cameras.....</b>	<b>39</b>
12.1 Introduction.....	39
12.2 Core Sites.....	39
12.3 Community Concern Sites .....	40
12.4 Other Site Criteria .....	41
12.5 Future Camera Technology use in Hertfordshire .....	41
12.6 Key Criteria for Installation of Cameras .....	42
<b>Section 13: Education, Training and Publicity .....</b>	<b>43</b>
13.1 Overview.....	43
13.2 Learn2Live.....	43
13.3 National Driver Offender Retraining Scheme (NDORS) Courses .....	43
13.4 Publicity Campaigns .....	44
13.5 Key Criteria.....	44
<b>Section 14: The Role of the Speed Management Group .....</b>	<b>45</b>
14.1 Overview.....	45
14.2 Purpose of the Group .....	45
14.3 Membership of the Group .....	45
<b>Section 15: Potential Funding .....</b>	<b>47</b>
15.1 Introduction.....	47
15.2 Local Transport Plan Funding.....	47
15.3 External Funding .....	47

15.4	Highways and Locality Budgets.....	48
15.5	Developer Funding .....	48
<b>Section 16: Process for Changing Speed Limits .....</b>		<b>49</b>
16.1	Introduction.....	49
16.2	Police Support .....	51
16.3	Traffic Regulation Orders.....	51
<b>Section 17: Speed Enforcement.....</b>		<b>52</b>
17.1	Introduction.....	52
17.2	The Role of the Police .....	52
17.3	Local Priorities .....	52
17.4	The Role of the Police and Crime Commissioner .....	53
17.5	Community DriveSafe Campaign .....	53
17.6	OPCC Road Safety Fund .....	54
<b>Section 18: Appendices .....</b>		<b>55</b>
18.1	Appendix A – Glossary of terms and acronyms.....	55
18.2	Appendix B – Changes between strategies .....	59
	Appendix C – Technical guidance on collection & interpretation of speed data	62
	Appendix D – Signage requirements.....	63
	Appendix E – 20mph areas additional guidance .....	65
	Appendix F – Criteria for Safety Camera Core Site Selection and Implementation	71
	Appendix G – Hertfordshire Constabulary speed enforcement guide .....	73
	Appendix H – Speed limit form.....	74
	Appendix I – Frequently asked questions .....	74
	Appendix J – Key Criteria Overview.....	82
	Appendix K – Key Criteria for Engineering Measures .....	85
18.3	Hertfordshire - County of Opportunity.....	99

## Section 1: Executive Summary

Hertfordshire has developed a Speed Management Strategy to enable clear and transparent decision making around the setting and application of speed limits in the county. Whilst DfT Circular 01/2013 *Setting Local Speed Limits* provides guidance on appropriate environments for different types of limit, this is open to some interpretation and therefore can potentially lead to inconsistencies in approach. A Hertfordshire based strategy with a framework setting out the requirements for different limits and a process for implementing them removes this ambiguity and will ensure that a consistent approach to speed limit setting is followed across the county.

This document therefore presents the strategy and process for setting speed limits in Hertfordshire. It also provides information on the measures which can be used to support speed limits including traffic calming measures, camera technology and the role of education, training, publicity and enforcement and in doing so helps set out what might need to be considered to ensure speed limit compliance

This document is an update of the previous strategy adopted in 2014 and reflects changes in regulation, guidance and policy since then. A key change is the adoption of Hertfordshire's Local Transport Plan 4 which places much greater emphasis on the consideration of the needs of vulnerable road users such as pedestrians and cyclists. In order to support this the County Council has also adopted a place and movement approach which takes account of the varying functions and uses of its roads and categorises them based on whether they are places people want to visit or whether they are primarily focussed on vehicle movement. This helps identify locations which may be suitable for the application of lower speed limits.

We know from experience that in Hertfordshire where the wrong limits are applied to a road they are generally ignored. This means that safety is compromised by drivers failing to comply as walkers and cyclists may be given a false sense of security. Therefore, it is important that we follow a considered approach using design to encourage self-compliance where possible. This is also the key principle in national guidance (DfT Circular 01/2013 *Setting Local Speed Limits*).

The key aim of the strategy is therefore as follows:

- To ensure the speed limit for any road is in keeping with its environment.
- This is underpinned by 5 core principles:
- We will encourage speed limit changes that support active travel (walking and cycling)
- In some cases (where appropriate) we will lower speed limits
- In some cases (where appropriate) we will need to change the design of a road to change behaviour
- We won't put up speed limit signs alone and expect a significant behaviour change

In some cases (where we establish that speed limits are too low for the environment) we may need to raise speed limits

The strategy includes a framework which sets out criteria for setting different speed limits. This follows guidance given in DfT Circular 01/200113 setting out the types of environment which may be appropriate for different limits and applies this to the Hertfordshire context making use of the place and movement approach.

The DfT guidance states that existing mean speeds should be used as the basis for determining local speed limits and the framework sets out the speed ranges appropriate for different limits. Technical guidance on the measurement of speed limits is given in the appendices.

The new strategy recognises the importance of encouraging active travel (cycling and walking) in our towns and villages in line with LTP4 and the strong public desire for implementation of 20mph speed limits over wider areas. Our framework provides a means of identifying areas suitable for 20mph using the place and movement approach, a consideration of the local road environment and existing speed measurements. Where existing speeds are 24mph or lower than the area is likely to be suitable for a 20mph limit with signage alone. Where speeds are above 24mph additional measures will be required to lower speeds. Roads with existing speeds above 30mph are unlikely to be suitable for 20mph.

The strategy supports the introduction of advisory 20mph outside schools where the environment is suitable and states that 20mph should be assumed where new schools are proposed or where significant changes are made to existing school facilities. It also recommends that the physical design of any new residential developments should naturally encourage motorists to drive at 20mph or less.

The document identifies physical engineering measures which have the potential to significantly change vehicle speed and gives guidance on where these may be appropriate in [Appendix K](#).

The role of technology to help manage speed is covered in the document. Speed Indicator Devices (SIDs) are informational signs rather than being linked to enforcement and are used to remind drivers about speed limits. They can have a role in modifying behaviour on 20 - 40mph roads where recorded speeds are over the limit by set margins. The document sets out a range of locational criteria which need to be followed to ensure that the devices operate effectively and safely.

Camera technology includes core safety camera sites. The primary objective for these is to reduce deaths, injury and health loss resulting from road collisions through enforcing the speed of traffic and reducing red light running. Stringent criteria are used for the selection of these sites based on the number of people killed or seriously injured at the site. These are funded through the Safety Camera Partnership.

Other types of camera are funded from a variety of other sources and their deployment is based on other criteria. These include cameras at sites where there are concerns from the local community or police over traffic speeds, but which don't necessarily have an associated collision record. Funding for these is typically provided through the Office of Police and Crime Commissioner (OPCC). Other sites for camera deployment include traffic management sites (associated with roadworks) or event-based sites (covering locations where significant offending takes place). The strategy also recognises the potential for average speed cameras on certain types of roads.

Education, training and publicity are tools for encouraging compliance with speed limits. The county council as part of the Hertfordshire Road Safety Partnership delivers a range of educational programmes for road users including the Learn2Live programme for young people, the National Driver Offender Retraining Scheme (NDORS) (which is used as an alternative to punishment for low level speeding and other driving offences) and targeted publicity campaigns.

Finally, the document clarifies the role of the police in speed enforcement and the process to be followed with requests for changing speed limits including the role of the Speed Management Group in checking the requests against the framework.



## Section 2: Introduction

### 2.1 What is the Speed Management Strategy?

The Speed Management Strategy (SMS) is a supporting document to the fourth Local Transport Plan, LTP4

The overall purpose of the SMS is to establish a consistent approach to the setting of speed limits based on the function and nature of the route as set out in DfT Circular 01/2013 *Setting Local Speed Limits*

The county council, as highway authority, and police, as enforcement authority, receive many requests regarding speed management and compliance. These can be addressed through a number of tools:

- Engineering and design measures;
- Education, training, and publicity;
- Behaviour change initiatives such as fixed or mobile community Drivesafe schemes;
- Speed Indicator Devices (SIDs)
- Camera based technology
- Speed enforcement

The strategy acknowledges these tools and provides:

- Consistency in setting speed limits based on the function and nature of the road and area.
- Consistency in the implementation of speed management and traffic calming features
- Consistency in the selection of safety camera sites.
- Clarification of the role of the police and county council in relation to setting speed limits and undertaking enforcement.
- Information on how the Office of the Police and Crime Commissioner (OPCC) Road Safety Fund can be used to address community concerns relating to traffic speeds.
- Information on education and publicity programmes.

### 2.2 Who is the strategy for?

The strategy is intended to be read and used by:

- Hertfordshire County Council officers,
- Officers or consultants with a professional interest in speed management,
- Elected county councillors,
- Hertfordshire Constabulary,

- Other stakeholders, such as developers of new roads, and
- Members of the public

As a predominantly technical document, it is recognised not all users will be comfortable with certain terms and concepts. Appendix A contains a glossary of traffic management terminology and Appendix I contains frequently asked questions that may help understanding.

## 2.3 Who is responsible for the strategy?

Hertfordshire County Council serve as the highway authority (Highways Act, 1980) and the traffic authority (Traffic Management Act, 2004) and is therefore responsible for the management of speed on most public roads in Hertfordshire. The primary exceptions are motorways and trunk roads, which are managed by Highways England.

The county council are also a relevant authority under the Road Traffic Act, 1988 and have certain responsibilities towards road safety that may extend to the amendment or management of speed limits.

The Chief Constable of Hertfordshire is responsible for the direction and control of officers and staff who are members of the constabulary, known as the enforcement authority within this document.

The Strategy supports the work of the multi-agency Hertfordshire Road Safety Partnership and contributes to delivering a coordinated safe systems approach to road safety as detailed in Hertfordshire's Road Safety Strategy and the Department for Transport's Road Safety Statement 2019 (A Lifetime of Road Safety)

## 2.4 What has changed in this version of the strategy?

The previous SMS was adopted in 2014, and there have been changes at both a local and national level since then. These include but are not limited to:

- The county council adopting LTP4 in May 2018, establishing transport objectives and policies through to 2031.
- The introduction of the Office of Police and Crime Commissioners (OPCC) Road Safety Fund, a source of potential funding for any organisation that can contribute to improving road safety across the county.
- The county council adopting the principles of Place and Movement approach for road categorisation.
- The publication of the revised Traffic Signs Regulations and General Directions (TSRGD) in 2016, granting more discretion to authorities for the placement of certain traffic signs.

Detail of the changes between strategies is given in [Appendix B](#). The key changes are as follows:

- The establishment of 5 core principles
- The clarification of the relationship between mean speed and 85<sup>th</sup> percentile speed

- A new section on design and potential engineering measures required to change driver behaviour
- The amalgamation of 20mph zones and limits into the collective term of 20mph areas
- A review and clarification of the role of the Speed Management Group
- The incorporation of a section on Speed Indicator Devices (SIDs)

The coronavirus pandemic of 2020 is recognised to have had an impact on travel patterns locally, nationally, and indeed globally – including an increase in walking and cycling and a reduction in vehicle use. The long-term impact is unclear at the time of writing, but the principles of this strategy support a shift in focus to these modes.

## **2.5 Format of the strategy**

The strategy is divided into sections relating to aspects of the strategy.

In developing this strategy, a set number of key criteria have been established, many of which apply in specific circumstances. A summary of these is included in the appropriate section, along with a combined list in [Appendix J](#).

Other strategies or policy documents may be referenced in the document. Unless otherwise noted, these may be found on the [Hertfordshire.gov.uk](https://www.hertfordshire.gov.uk) website.

Additional technical information relevant to the section is included in appropriate appendices and referenced at appropriate points of the document.

## Section 3: Policy Context

### 3.1 National Guidance

The SMS is underpinned by national guidance and regulations on speed limits, principally DfT Transport Circular 01/2013 *Setting Local Speed Limits*.

The responsibility for setting speed limits lies jointly between highway and enforcement authorities. For most roads in the county, Hertfordshire County Council are the highways authority. Notable exceptions are the motorway and trunk road network, managed by Highways England.

Hertfordshire Constabulary serve as the enforcement authority and are supported by the Hertfordshire Safety Camera Partnership.

### 3.2 Hertfordshire Corporate Plan

Hertfordshire County Council have a corporate vision that is used to guide the long-term objectives of the council and is summarised in this short, high level statement:

**We want Hertfordshire to continue to be a county where people have the opportunity to live healthy, fulfilling lives in thriving, prosperous communities.**

The corporate vision is supported by the corporate plan, which establishes the key priorities of the county council, including our ambition to provide residents with the opportunity to:

- Thrive,
- Prosper,
- Be healthy and safe, and
- Take part

The SMS is directly relevant to the ambition to be healthy and safe, though the safe management of the highway network will support all of these ambitions.

### 3.3 Hertfordshire Local Transport Plan and Accompanying Strategies

In May 2018 the new Local Transport Plan (LTP4) was adopted, setting out the transport vision for Hertfordshire through to 2031 with a framework for transport planning and investment and recognition of the transport issues and problems facing the county.

LTP4 identifies objectives, policies, and schemes that will assist with delivering a sustainable transport strategy in contrast to the previous car-centric local transport plans.

LTP4 is divided into themes, objectives, and principles which are then translated into policies and compliant schemes. It is recognised that the SMS can assist with delivering the following objectives:

- Objective 5 – Enhance the quality and vitality of town centres

- Objective 6 – Preserve the character and quality of the Hertfordshire environment
- Objective 7 – Reduce carbon emissions
- Objective 8 – Make journeys and their impacts safer and healthier

LTP4 contains 23 policy areas encompassing all areas of transport. The SMS directly contributes to or influences the following:

- Policy 1: Transport User Hierarchy
- Policy 5: Development Management
- Policy 7: Active Travel Walking
- Policy 8: Active Travel Cycling
- Policy 12: Network Management
- Policy 13: New Roads and Junctions
- Policy 15: Speed Management
- Policy 17: Road Safety

Policy 1, the transport user hierarchy, affirms that the county council will consider the needs of vulnerable road users such as pedestrians or cyclists ahead of other motor vehicle users in the design of any scheme and the development of any strategy. The reduction of speed limits to support active travel, as outlined in the SMS, is in direct support of this policy.

LTP4 contains a specific speed management policy – Policy 15 – which states:

**The county council through its Speed Management Strategy, a joint working strategy with the Police, will seek to manage the network to achieve appropriate speeds in the interests of safety, other road users, and the environment.**

The SMS sits alongside strategies and documents associated with other LTP4 policies, including but not limited to:

- Active Travel Strategy
- Roads in Hertfordshire – A Design Guide
- Road Safety Strategy
- Network Management Strategy

### 3.4 Place and Movement Approach

HCC has adopted a place and movement approach to road classification, recognising that the function and usage of roads across the county differ.

Building on an approach used by Transport for London, a matrix has been developed which classifies the highway network into 9 categories based on its relative place and movement function. Broadly speaking, roads that prioritise vehicle movement score highly for movement; roads that prioritise the movement or actions of people score highly for place.

Place and movement values are subject to change and may be used to identify areas where change is needed or desired. Aspirational place and movement values may support a change of environment, and consequently a change in speed, but will need to balance

The speed limit of a road can serve to encourage or discourage certain behaviours, and it is important that it matches the function of the road. As such, the place and movement category is a consideration when reviewing or amending speed limits, or when considering changes to street design or the local environment.

Further detail on the approach is given in [section 5.2](#).

## Section 4: Core Principles

### 4.1 The Core Principles of Speed Management

The purpose of the SMS is to both deliver LTP4 policies and to provide a consistent approach to setting speed limits across the county.

The key principle of the SMS is to ensure that the speed for any road is in keeping with its environment.

In practice, this has led to the following five core principles:

- We will encourage speed limit changes that support active travel
- In some cases (where appropriate) we will lower speed limits
- In some cases (where appropriate) we will need to change the design of a road to change behaviour
- We won't put up speed limit signs alone and expect a significant behaviour change

In some cases (where we establish that speed limits are too low for the environment) we may need to raise speed limits

These principles will be applied to all roads in Hertfordshire where the county council serves as the highway authority.

These principles support the safe systems approach embedded in the road safety strategy both by accounting for driver awareness and strengthening road design.

# Section 5: Principles of Setting Speed Limits

## 5.1 Introduction

Speed limits across the county should be consistent if they are to be understood and complied with by the majority of drivers. Badly set or inappropriate speed limits are often ignored and can impact compliance with the wider traffic network.

On an average journey it is likely that you will pass through numerous and frequent speed limit changes. If these speed limits are not closely aligned with the highway environment, they can cause tension, build frustration and increase the risk of inappropriate speed being used on a motorists ongoing journey.

This is a situation which needs to be rectified and may well involve the need to increase the speed limit in some locations to better suit the highway environment in an attempt to get better speed limit compliance further into a motorist's journey, such as through a town or village.

The enforcement authority, Hertfordshire Constabulary, provides speed enforcement alongside other duties involving community safety and issues of public concern. Departments including the Roads Policing Unit and Safety Camera Partnership have roles in the enforcement, education, and deterrence of speeding and other moving traffic violations.

Predominantly, enforcement is focused on the strategic road network. Whilst there is the potential to request enforcement activity via official channels – such as the priority setting forums, comprised of the local Safer Neighbourhood Team, or [ECHO](#), a platform for submitting views, opinion, and feedback to the police, and approval from the appropriate police inspector for the area – available resourcing is not infinite and should not be seen as the first or immediate response.

The overriding principle for applying speed limits is, as outlined in Circular 01/2013 *Setting Local Speed Limits*, that they should encourage self-compliance. To achieve this speed limits must:

- Be appropriate for the physical environment,
- Reflect the level of use by both motor vehicles and vulnerable road users
- Take account of the speed vehicles are currently travelling at,
- Account for any speed related collision history.
- Following this principle will allow the highways authority to encourage compliance by design.
- When setting speed limits, appropriate considerations include:
  - The level of use by vulnerable users such as pedestrians and cyclists
  - The surrounding environment, for example the presence of schools; shops; and places people want to visit, (ie the place and movement category)
  - The local road environment, including width, visibility, and parking



- The personal injury collision history
- The speeds vehicles are currently travelling at

Speed limits should be evidence-led, self-explanatory and appropriate for the environment. They should be seen as a maximum, not a target speed, and should reinforce the driver's assessment of an appropriate speed at which to progress

The appropriate management of speed limits can assist with managing congestion and increasing journey efficiency across the local and wider network. This complies with statutory duties placed on the traffic authority under the Traffic Management Act (2004).

The Hertfordshire speed limit framework serves to condense these guiding principles into a reference with appropriate examples of rural and urban environments operating at the desired speed limit. This framework is provided in Section 8 and is to be used as a starting point for identifying desired speed limits.

## **5.2 Place and Movement Category**

The local environment and likely users of the road are important considerations when implementing changes, such as alterations to the speed limit. For example – residential area, schools, and shops are likely to have a higher number of pedestrians and cyclists, making lower speeds more suitable.

The county council has developed a process, known as place and movement, to categorise the network and take account for the various uses of roads. As a rule, roads with a high place value are those that people want to visit – roads with a high movement value are those that facilitate traffic

The place and movement value alone will not dictate the appropriate limit but can be used within the speed limit framework to identify where lower limits may be appropriate and whether changes to the environment need to be considered.

All roads in Hertfordshire have been assessed and scored based on a three by three matrix (Figure 1, below) which describes their appropriate place and movement values.

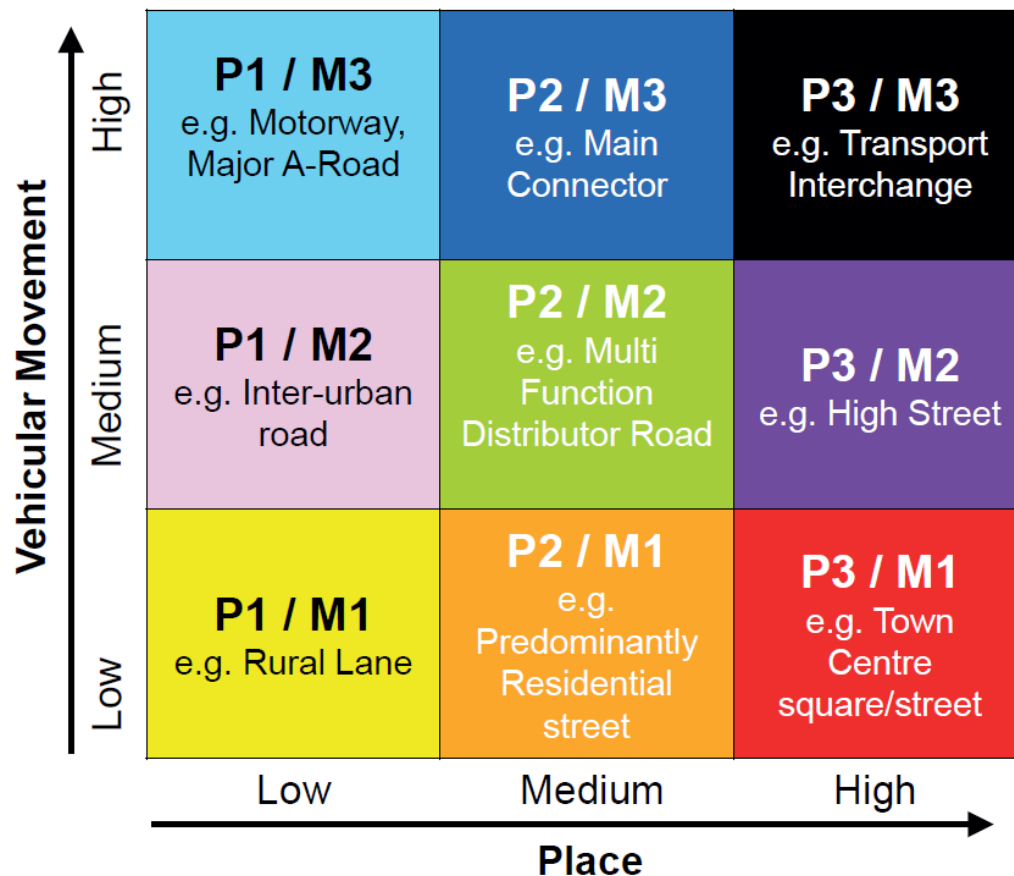


Figure 1 - Place and movement categories with example road types

Section 6 and 7 provide further detail in how the place and movement approach is applied to certain speed limits.

### 5.3 Existing Speeds

Circular 01/2013 *Setting Local Speed Limits* is the current national guidance and states that whilst traffic authorities should continue to routinely collect and assess both mean and 85<sup>th</sup> percentile speeds, mean averages should be used as the basis for determining local speed limits.

For clarity, the distinction between the mean and 85<sup>th</sup> percentile value is:

**Mean speeds** are the average speeds that vehicles travel at

**85<sup>th</sup> percentile speeds** are the speeds at or below which 85% of vehicles are observed to travel under free-flowing conditions. This is a nationally recognised method of assessing traffic speeds.

A discrepancy between the mean and 85<sup>th</sup> percentile speeds will usually indicate that motorists have difficulty in deciding the appropriate speed for the road and would suggest that there is a disconnect between the speed limit and the environment. In such circumstances, it may be necessary to consider amending either the limit or the road design to ensure an appropriate match.

Table 1, below, shows the appropriate and expected speeds for different speed limits. In most cases, the mean speeds should match the posted or proposed speed limit.

85<sup>th</sup> percentile speeds are based on previous guidelines issued by the Association of Chief Police Officers (ACPO, now the National Police Chiefs Council, NPCC), and represent a 10% increase above the limit with a 2mph margin of error.

20mph speeds differ and are discussed in detail in Section 6.

Speed Limit	Mean Speed	85 <sup>th</sup> Percentile Speed	Standard Deviation
20	24	28	4
30	30	35	5
40	40	46	6
50	50	57	7
60	60	68	8

*Table 1 - Speed limit ranges. All values in mph*

On roads where surveys indicate that the measured speeds are beyond these thresholds, the appropriateness of the speed limit should be reviewed. This may indicate the need for additional speed management measures.

If the current measured speed is higher than the limit then the strategy allows for one of three outcomes:

- Keep the speed limit as it is,
- Introduce measures to reduce speeds to the limit

Review the rationale for the existing limit. In a small number of cases a higher speed limit may be more fitting for the environment and help encourage overall network compliance.

Appendix C includes further technical detail on the collection and application of speed data.

It may be necessary to collect speed data from multiple points in a road, route, or area depending on the extent of the scheme and differences in the local environment.

## 5.4 Temporary Speed Limits

If it should become necessary to place a temporary speed limit on a section of road, this must be agreed with the network management team for the area and follow the temporary order process identified on our website ahead of time as part of the routine permit or works application process.

These temporary restrictions should remain in place only when necessary and be reviewed as the local situation changes. Compliance with temporary speed limits can drop when there is no perceived reason for them, which may lead to limits being ignored when there is a more pressing need to protect life and equipment.

Any existing speed limit signage should not be visible in areas subjected to a temporary speed limit so as not to create driver confusion.

## 5.5 Universal Key Criteria

The first seven key criteria will apply to any amendments to existing, or introduction of new, speed limits in Hertfordshire and are listed in Table 2 below

### Universal Key Criteria – Setting Speed

KC1	An assessment of the environment must be made to confirm that a speed limit is appropriate for the road. The Hertfordshire Speed Limit Framework will be used to meet this criterion
KC2	An assessment of the place and movement function of the road will be made to determine whether the appropriate speed limit will enable the correct place and movement activity to be undertaken. The HCC Webmap layer will be used for this assessment
KC3	For 30mph to 70mph limits, the mean speed should not exceed the proposed limit once implemented.
KC4	Mean and 85th percentile speeds will be collected before a limit is implemented or changed. Although mean speeds will be used as the basis for setting speed limits, if there is not a consistent relationship between the 85th percentile and mean speeds (see Appendix C), the appropriateness of the limit without additional measures will be considered.
KC5	When collecting existing speed data this should be recorded on the fastest section of road in free-flowing conditions.
KC6	When considering a revised speed limit, the promoting officer must follow the speed limits and zones implementation process and complete a Speed Limit Change Form (Appendix H) to ensure that all the relevant SMS criteria have been met.
KC7	The form is to be submitted to the Speed Management Group for approval prior to consultation and again following legal advertisement

Table 2 - Universal Key Criteria

## Section 6: 20mph Areas

### 6.1 Introduction

The introduction of 20mph areas has been shown to encourage the uptake of active travel within an area<sup>1</sup>, and as such serves to promote various LTP4 policies including Policy 1 (the transport user hierarchy).

All roads in 20mph areas must demonstrate speed compliance. In some cases, this may require the installation of traffic calming measures in order for a scheme to be agreed.

Mean speeds of 24mph or lower are considered to be compliant for the purpose of 20mph areas.

### 6.2 Terminology

Nationally there are two definitions for roads with 20 mph speeds, these are:

**20mph limits** (indicated by road signage only)

**20mph zones** (self-enforcing areas with engineering measures and some road signage)

It is recognised that the distinction between the two can create confusion, and they are often used interchangeably.

It is additionally recognised that a consistent approach to road signage is required to ensure the public understand and feel comfortable within posted limits.

To alleviate this, the county council will now use the collective term of **20mph areas** and introduce a minimum signing requirement.

Engineers will still be required to follow national legislation for zones and limits, however there will now be a requirement for additional speed signage on schemes which predominantly involve traffic calming. Further guidance is provided in Appendix E.

### 6.3 Application of the Place and Movement Approach

The place and movement approach can be used to identify those areas which may be appropriate for lower speeds due to higher pedestrian and cycle movements (due to local land use) and relatively low vehicle movement.

Roads and streets with a high place value are generally streets where vehicle movements are, or should be, low and where pedestrian or cycle movements are more desirable. Such areas would benefit most from 20mph areas.

As a starting point, 20mph areas are potentially appropriate on residential streets (place and movement P2/M1) and town centres (place and movement P3/M1). Some high streets (P3/M2) may also be suitable, depending on their character and location.

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<sup>1</sup> (Atkins, Aecom, and Professor Mike Maher (UCL), 2018)

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/757302/20mph-technical-report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/757302/20mph-technical-report.pdf)

As noted previously place and movement is not the sole criteria for determining speed limits, and the specific environment will be considered in all cases.

Other roads with a higher movement value (i.e P2/M2 ) frequently connect areas with a high place value. Whilst some may be appropriate for 20mph areas, they are also likely to require additional supporting measures to ensure compliance.

Whilst the place and movement value can provide an indication of suitability for 20mph, other criteria will need to be taken into account as detailed in [section 6.7](#).

## **6.4 Identifying Appropriate 20mph Areas**

Speed measurements must be undertaken in any area where a 20mph area is proposed in order to support the design of the scheme. As noted in 6.1.3, roads with speeds of 24mph or lower are considered complaint.

Where existing speeds are over 24mph, the implementation of a 20mph area will likely require traffic calming and/or technological measures to reduce and control speed to the appropriate levels and ensure self-compliance.

## **6.5 Schools**

Advisory 20mph speed limits can be introduced outside schools should the environment be appropriate (P2/M1 or P3/M1) and mean speeds are measured as 30mph or less (during school pick up or drop off) prior to implementation. These advisory provisions are not legally enforceable but are a potential tool to encourage behaviour change.

Any advisory 20mph speed will operate during school start and finish times, if speeds are currently below 30mph.

These advisory limits do not preclude formal 20mph areas. Schools contribute to place value and are likely to benefit from 20mph areas should the environment be suitable or adaptable.

The default position for the county council is that a 20mph area will be implemented – if the environment allows – when new schools are proposed, or where significant changes are made to existing school facilities.

## **6.6 New Developments**

The physical design of new residential developments should encourage motorists to drive at 20mph or less with reinforcement by signage in predominantly residential areas and outside schools and other community facilities.

A revision to the 'Roads in Hertfordshire' technical guidance document will provide appropriate advice on the layout and design of roads to achieve this, incorporating best practice and requirements from national regulations, guidance, and specifications.

New roads designed for 20mph speeds will require a traffic regulation order to be progressed and funded by the promoter.

## 6.7 Key Criteria

The Key criteria which have been developed to guide the setting of 20mph areas in Hertfordshire are shown below:

### 20mph Area Key Criteria

KC8	HCC use a collective term of 20mph Areas to describe either a 20mph zone or a 20mph limit. 20mph Areas have different requirements to that found in national guidance and will always confirm to legislation. (A comparison table is contained within Appendix E)
KC9	When collecting speed data for 20mph areas, the following will apply: <ul style="list-style-type: none"> <li>• The lead engineer will visit all roads in a proposed area</li> <li>• Mean speeds will be collected in all roads where there is a concern that vehicle speeds are high</li> <li>• Mean speeds will be collected in a random sample of other roads within the proposed area</li> <li>• The locations of the above will be agreed with the relevant police traffic management officer</li> <li>• With the correct judgement and experience this should avoid the need to count every road within a proposed 20mph Area.</li> </ul>
KC10	An assessment of the environment must be made to confirm that a 20mph speed limit is appropriate for the road(s). The Hertfordshire speed limit framework will be used to meet this criterion
KC11	20mph areas without additional traffic calming measures will only be considered where the existing mean speeds are 24mph or below.
KC12	Speeds will be re-measured within one year on the roads that were surveyed before implementation, and must demonstrate that: 20mph areas have a maximum mean speed of 24mph once implemented, and 20mph areas are generally self-enforcing.
KC13	Where schemes have mean speeds higher than 24mph following installation then there are two options: Reintroduce the 30mph limit in whole or part, Introduce additional traffic calming measures
KC14	The 'Bus Infrastructure in Hertfordshire - Design Guide' says that if physical measures in a 20mph area are considered necessary on a bus route then the extent of these features (or length of area) should be kept to a minimum so as not to adversely affect the quality of the ride.
KC15	Advisory 20mph limits will be considered outside schools where existing mean speeds are 30mph or less during school start and finish times
KC16	Variable 20mph limits need to be self-enforcing and have a maximum mean speed of 24mph during their times of operation. A speed limit change form will still be required.
KC17	The default position for the county council is that a 20mph area will be implemented – if the environment allows – when new schools are proposed, or significant changes are made to existing school facilities

KC18	Where new roads are designed for 20mph then a traffic regulation order is required to be progressed and funded by the promoter. This applies even if the road has been designed along principles within the 'Manual for Streets.'
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*Table 3 - 20mph Area Key Criteria*

## 6.8 20mph Area Signage

In 20mph areas it is particularly important that the public understand the limit. This necessitates the need for repeater signs or markings within the area to reinforce the limit. National guidance on 20mph speeds requires frequent signing (limits) or physical features with minimal signing (zones). The usage of 20mph areas in Hertfordshire allows more discretion with signing to ensure the public have a better understanding of what the speed limit is.

Where there is a 20mph area there would be repeater signs, roundels, or markings no less than every 200m unless local deviations are agreed with the Speed Management Group. Deviations are not permitted for 20mph zones.

In historic areas discretion will be exercised to help limit signage and any departures from policy would be overseen by the Speed Management Group

Further details of the signage requirements are given in Appendix D.

## 6.9 Existing 20mph Areas in Hertfordshire

It is recognised that there are variances in how 20mph speed limits and zones have been implemented historically across the county.

These schemes were correct at the time of installation, though do not necessarily comply with this revised strategy.

All schemes designed and delivered following the adoption of this document shall comply with the new strategy and older schemes do not set precedents nor allow for exemptions.



## Section 7: Application of other speed limits

### 7.1 Overview

The default national position remains that:

**30mph limits** are applicable in areas with a system of street lighting, and

**The national speed limit** (60mph for single carriageway and 70mph for dual carriageway roads) applies in all areas without.

The county council recognise that there is a wide spectrum of roads within these two categories and has established a speed limit framework (Section 8) to identify limits appropriate for certain roads.

In all cases, the speed limit for the road should match the environment and the usage of the road.

### 7.2 Rural Speed Limits

Significant areas in Hertfordshire are rural in nature and require different approaches to managing speed limits.

The Speed limit framework recognises the differences in environment, and accounts for both urban and rural settings when setting speed limits.

The principle remains that the speed limit is a maximum speed, not a target speed, and drivers should not feel that the limit of a road – regardless of circumstance – is the speed at which they should be progressing. In many cases the characteristics of the local road (eg road width and presence of bends) means that the majority of drivers will adjust their speed to the environment. Where there is a collision history or community concerns then lower speed limits may be considered.

Some rural areas may be suitable for a zonal 40mph speed limit when applying the criteria in Table 4:

Rural 40mph Speed Limits

KC19	<p>The County Council may consider 40mph zonal rural speed limits subject to criteria including:</p> <ul style="list-style-type: none"><li>• The zone being self-enforcing. Mean speeds on all roads within the zone will be 40mph or less once implemented.</li><li>• The zone will be within a defined geographical area, e.g. bounded by A &amp; B roads or in an AONB.</li><li>• The zone would have a predominantly local, access or recreational function and/or form part of a recommended network of routes for vulnerable road users.</li><li>• A recognised or known collision problem</li></ul>
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Table 4 - Rural 40mph Speed Limits

## Section 8: Speed Limit Framework

### 8.1 Overview

The Speed limit framework serves as a guide for the identification and selection of speed limits in both urban and rural settings by documenting the traits and features of a suitable environment.

The framework is designed to operate in tandem with place and movement.



The framework is split into possible speed limits, and is laid out as below:

Type of limit	
Urban	Rural
Picture example	Picture example
Road name	Road name
Key or expected features	Key or expected features
Guidance	Guidance

Speed Limit Threshold	
Before Implementation	Maximum mean speed
After Implementation	Maximum mean speed

The framework is based on guidance from the Department for Transport in Circular 1/2013 . *Setting Local Speed Limits*. Note that not all features will be present in all cases, nor is there an expectation for all to be present. They are intended indicative of environment only.

## 20mph Speed Areas

Urban	Rural
	
Prince Street, Watford	High Street, Ashwell
<p>Streets that are primarily residential, or where there is a high presence of pedestrians and cyclists.</p> <p>Areas around schools, shops, markets, playgrounds and similar areas where motor vehicle movement is not a primary concern – P2/M1 or P3/M1 place and movement categories (see section 6.3)</p> <p>May also be suitable for High Streets (P3/M2) depending on local character and traffic volume</p>	<p>Village streets that are primarily residential in nature</p> <p>Areas where there is a high volume of pedestrian or cycling movement – P2/M1 or P3/M1 place and movement categories (see section 6.3)</p> <p>Areas where roads are non-strategic and where motor vehicle movement is not the primary function.</p>
Circular 01/2013 – table1 & paragraph 90	Circular 01/2013 – paragraph 132



### Speed Limit Threshold (Compulsory)

Before Implementation	24mph
After Implementation	24mph

### Speed Limit Threshold (Advisory)

Before Implementation	30mph
After Implementation	<30mph



## 30mph Speed Limits

Urban	Rural
	
Howlands, Welwyn Garden City	Rabley Heath Road, Rabley Heath
<p>System of street lighting.</p> <p>The standard limit in built up areas with development on both sides of the road</p>	<p>Villages with 20 or more houses over a length of at least 600m, with a density of 3 houses per 100m (minimum).</p> <p>If there are fewer than 20 houses, exemptions can be made for key attractor buildings such as schools, shops, or places of worship.</p>
	<p>Circular 01/2013 – paragraphs 131, 133 &amp; 134</p> <p>Traffic Advisory Leaflet 1/04</p>

### Speed Limit Threshold

Before Implementation	30mph
After Implementation	30mph

## 40mph Speed Limits



Urban	Rural
	
Black Fan Road, Welwyn Garden City	B656 London Road, Langley
<p>Higher quality, wider suburban roads or those on the outskirts of urban areas.</p> <p>Little development</p> <p>Few vulnerable road users (pedestrians, cyclists, or equestrians)</p> <p>Parking and waiting restrictions present</p> <p>Buildings, if present, set back from the carriageway</p> <p>Where possible, caters for non-motorised users via segregation. May possess parallel, well provision footways or cycleways or a segregated facility in carriageway</p>	<p>Upper tier roads (typically A &amp; B roads) with:</p> <p>A high number of bends, junctions, or accesses</p> <p>Substantial development</p> <p>A strong environmental or landscape reason</p> <p>A considerable number of vulnerable road users</p> <p>OR</p> <p>Lower tier roads with:</p> <p>Predominantly a local, access or recreational function, such as an AONB or adjacent to unenclosed common land</p> <p>A recommended route for vulnerable road users</p> <p>A recognised or known collision problem.</p>
	Circular 01/2013 – paragraph 128

### Speed Limit Threshold

Before Implementation	40mph
After Implementation	40mph





## 50mph Speed Limits

Urban	Rural
	
Comet Way, Hatfield	A602 between the A10 and Anchor Lane
<p>Dual carriageway ring or radial routes</p> <p>Bypasses that have since become partially built up</p> <p>Should be little or no roadside development</p>	<p>Upper Tier roads with predominant traffic flow function. (Typically, A &amp; B roads):</p> <p>Lower quality A &amp; B roads which have a relatively high number of bends, junctions and or access.</p> <p>Areas where mean speeds are below 50mph and where the imposed limit would not impact traffic flow</p> <p>OR</p> <p>Lower Tier roads with important access and recreational facilities. (Typically, C &amp; unclassified roads)</p> <p>C and unclassified roads with a mixed function and high numbers of bends, junctions or accesses.</p>
Circular 01/2013 – table 1	<p>Circular 01/2013 – table 2</p> <p>OR</p> <p>Circular 01/2013 - paragraph 128</p>

### Speed Limit Threshold

Before Implementation	50
After Implementation	50



## 60mph Speed Limits

Urban	Rural
	
A1001 South Way, Hatfield	B1000, Welwyn
<p>Upper Tier roads with a traffic flow function. (Typically A &amp; B roads):</p> <p>Strategic A &amp; B roads with few bends, junctions or accesses.</p> <p>Edge of urban areas close to strategic routes.</p> <p>Little or no pedestrian use.</p>	<p>Upper Tier roads with predominantly traffic flow function. (Typically, A &amp; B roads):</p> <p>High quality strategic A &amp; B roads with few bends, junctions or accesses.</p> <p>OR</p> <p>Very high quality C and unclassified roads with a mixed function with few bends, junctions or accesses.</p>
	<p>Circular 01/2013 – Table 2</p> <p>OR</p> <p>Circular 01/2013 – Paragraph 128</p>

### Speed Limit Threshold

Before Implementation	60
After Implementation	60

## 70mph Speed Limits

Urban	Rural
	
A10, Broxbourne	A414, St Albans
<p>Dual carriageways which form key inter-urban routes with few bends, junctions, or accesses</p> <p>Very low or no pedestrian presence</p> <p>Core strategic routes connecting population centres</p>	<p>Rural dual carriageway roads with segregated junctions and separate facilities for vulnerable road users.</p> <p>Areas that do not require intervention to control or mitigate speeds for safety reasons</p>
	Circular 01/2013 – Paragraph 121

### Speed Limit Threshold

Before Implementation	70
After Implementation	70



## Section 9: Supporting Measures

### 9.1 Overview

Speed limits in Hertfordshire should encourage self-compliance. That is to say, the speed limit should match the environment of the road section wherever possible.

To influence this, the highway and traffic authority have access to a number of measures including:

- Physical engineering measures, for example vertical and horizontal traffic calming
- Speed Indicator Devices (SIDs)
- Technology such as safety cameras, average speed cameras, and variable message signs
- Education, training, and publicity

The following sections provide an overview of these measures, with further information available in the appendices of this document.

# Section 10: Design Influences and Engineering Measures

## 10.1 Introduction

Hertfordshire County Council use design to dictate speed where possible. This has been found to be the most effective means to significantly change driver behaviour. The advice given to drivers through rule 146 of the Highway Code is to:

**Adapt your driving to the appropriate type and condition of the road you are on.**

Road users should be prepared, anticipate and be able to stop within the distance they can see to be clear. It is important that drivers understand the speed they are expected to travel at through the layout and context of a road.

A report<sup>2</sup> from the Transport Research Laboratory found that static signs alone had a small impact on measured speeds, with around a 2mph reduction on average. Subsequent research<sup>3</sup> has confirmed these findings and shown that speed limit signs alone are insufficient to significantly alter drive behaviour.

Where measured speeds are above the thresholds for the desired limit (as set out in Table 1), additional measures will be required to ensure compliance and adherence by drivers

## 10.2 Implementing Engineering Measures

The engineer must first confirm that the speed limit is suitable and appropriate for the environment prior to considering engineering measures. This may include a review of the extent of the limit to better match surroundings – for example, moving the start of a limit to a village boundary to reflect a visual change in environment. If, after consideration, there remains the need to implement measures those listed below have been identified as having the potential to influence vehicle speeds to varying degrees. Note the list is not exhaustive, suitability of measures at individual locations will need to be considered and it is outside the scope of this strategy to provide technical design guidance. This may be found within Roads in Hertfordshire, or through Local Traffic Notes including LTN 1/07 (Traffic Calming)

### Existing Roads

Roundels and road markings

Vertical Measures (eg. Humps)

Horizontal Measures (eg chicanes)

Road or point closures

Road width (including formalised parking)

Enforcement/Technological Measures

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<sup>2</sup> (Transport Research Laboratory, 1998)  
<https://trl.co.uk/uploads/trl/documents/TRL363.pdf>

<sup>3</sup> (Atkins, Aecom, and Professor Mike Maher (UCL), 2018)  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/757302/20mph-technical-report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/757302/20mph-technical-report.pdf)

**New Roads**

Road width (including formalised parking)

Enforcement/Technological Measures

Curvature

New junctions

Roundabouts

Traffic signals

### **10.3 Key Criteria for Engineering Measures**

The county council have established a number of criteria to guide the appropriate implementation of engineering measures. These measures and the accompanying criteria are included as Appendix K

For reference, the below measures are included within the appendix:

- Speed limit buffer zones
- Speed limit countdown markers
- Home zones
- Quiet lanes
- Gateway and entry features
- Chicanes
- Pinch points
- Roundels and road markings
- Central islands and refuges
- Round top and flat top humps
- Cushions
- Sinusoidal humps
- Rumble strips and rumblewave
- Mini roundabouts

# Section 11: Speed Indicator Devices (SIDs)

## 11.1 Introduction

Speed Indicator Devices (SIDs) are a tool to remind drivers of the speed limit and can be useful when there is a disparity between the posted limit and observed speeds. They are informational repeater signs only, and do not provide any enforcement function.

SIDs consist of a screen, radar detector, and solar panel/battery unit mounted on a pole within either a retention socket or foundation. When movement is detected in the field of view, the device triggers and returns a value (speed in mph) that is then displayed on the screen to oncoming vehicles, along with either a 'happy' or 'angry' face depending on the rate of travel in relation to the speed limit. More excessive speeds trigger a 'Too Fast' message.

The county council provide new Speed Indicator Devices (SIDs) through several routes:

- Non-core budgets, such as the Locality Budget which comprises the Highways Locality Budget (HLB) and the more general locality budget held by the county councillor for the area
- Third parties such as parish councils
- The OPCC Road Safety Fund

Very rarely, core budgets may be used to replace older installations with modern SIDs or as part of wider programmes.

Retention sockets allow the SIDs to be relocated to other locations or to be swivelled in their current location to face a different direction of travel. Relocating or swivelling SIDs regularly has been demonstrated to have greater influence on traffic speeds, as SIDs become less effective if retained in the same location for longer than six months.

SIDs should not be confused with Vehicle Activated Signs (VAS). VAS are distinguishable as they do not display a vehicle's travelling speed but instead typically an image of the posted speed limit or a hazard ahead e.g. bend in the road. This distinction is further clarified in Department for Transport Circular 01/17

The majority of SIDs have been and continue to be installed using HLB, as such the Highways locality team administer all requests and review all sites. Before any consideration is given, a funding source must be identified.

## 11.2 Speed Criteria

SIDs and sockets installed with via HLB, the OPCC Road Safety Fund, or HCC's core budgets must be in locations which meet at least one of the speed criteria given in Table 5

SIDs and sockets fully funded by third parties (not the OPCC Road Safety Fund) or the general locality budget are not required to satisfy the speed criteria.

Speed criteria must be checked using speed survey data collected by either HCC or the police over a full seven-day period. Existing data (no older than five years) may be used if no significant change to the environment has occurred since the data was collected.

Posted speed limit	Minimum average speed	Minimum 85 <sup>th</sup> percentile speed
20	20.1	24
30	30.1	35
40	40.1	46

*Table 5 - SID speed criteria. All speeds in MPH, 85<sup>th</sup> percentile speeds based on OPCC guidelines*

Roads with a posted speed limit above 40mph are not recommended for SIDs and would instead require further study. This may produce a package of measures including a SID

## 11.3 Location Requirements

All SIDs require certain circumstances to operate correctly and effectively and must fulfil the criteria given in Table 6.

Item	Requirement
Data Collection Safety	There is sufficient access to the site to allow the safe collection of data.
Daylight	The proposed location will receive a high level of daylight and is free of existing or seasonal vegetation. The solar panel should be facing as close to due south as possible.
Footway Clearance	At least 1.5m footway sideways clearance (if present) is available for pedestrians.
Forward Visibility	There is forward visibility of at least 50m (20-30mph limit) or 75m (40mph limit).
Highway Land	The proposed location is on highway land, supported by a recent boundary plan.
Multiple Detection Vectors	The SID will not activate for roads running adjacent or parallel to the site.
Operational Distance	The SID has no large obstructions (gates/fences, buildings, railings) within 100m.
Property Boundary	If necessary to install outside of a property, the SID should be sited on a boundary line so as to not interfere with an existing or potential access.
Set Back	The proposed location for the pole is set back at least 1.0m from kerb edge, or 0.5m from the edge of the sign (greater distances are required for higher speed roads and/or if the SID is positioned on a bend/junction radius).
Single Carriageway	The SID serves a single carriageway road.
Underground Obstructions	The site is clear of any utility or manhole covers or trenches that may suggest interfering with placement (check of underground utilities will also be undertaken).
Structures	The proposed location is at least 5m from a bridge, culvert, or other structure.
Vertical Clearance	There is at least 2.4m vertical clearance (this should be standard at point of install) – if the sign overhangs a cycle

Item	Requirement
	track or shared use space, this should have a minimum of 2.5m vertical clearance.
Visibility splay of other signs	The sign is clear of the visibility splay of other highway signs.
Vegetation	Double check vegetation and likely vegetation growth if the site is inspected during autumn/winter. Vegetation will be the likely reason that a SID is impeded, whether to the forward visibility to the sign or to the solar panel.
Within speed limit	The SID will not activate outside of the speed limit it is intended to indicate.

*Table 6 - SID installation guidelines*

## 11.4 SID Effectiveness

Research undertaken by the Transport Research Laboratory<sup>4</sup> found that SIDs are most effective when moved regularly

The same research found that, in ideal conditions, SIDs would provide a reduction to mean speeds of around 2mph

## 11.5 SID Relocations and Swivels

Placing SIDs in retention sockets allows for them to be easily moved and/or rotated as necessary.

SID signs can be rotated to face alternative directions of traffic, allowing a carefully placed installation to serve a considerable length of road. In some locations, additional sockets may be required to ensure appropriate visibility

Given the benefits of moving SIDs to keep them effective, applicants are strongly advised to consider providing additional sockets and the funds to routinely move the SIDs.

## 11.6 Data Collection and Use

SIDs store up to 200,000 unique events in their internal memory – this includes information as to the date, time, and speed of traffic recorded. This data can be downloaded by the county council only and subsequently cleared from the device via a mobile application.

SIDs collect data as part of routine operation but this is not the primary function of the device. As such, they are not calibrated to serve as traffic counters and there remain concerns over the accuracy and validity of data accessed from SIDs. This, along with the accompanying costs, prevents the county council from establishing a programme of routine data collection. Applicants may request data for which a fee will be charged

<sup>4</sup> (Transport Research Laboratory, 2008) <https://trl.co.uk/uploads/trl/documents/PPR314.pdf>

## 11.7 Commuted Sum

The price to install a new SID includes a commuted sum to provide for maintenance and replacement for a set period (currently five years) from the first installation. A second commuted sum may be paid at the start of the sixth year, which will insure the device for a further five years.

Where a commuted sum is not paid any SID that is damaged or irreparable will be removed and not replaced. The same applies for SIDs that go beyond the period covered by the commuted sum.

## 11.8 Third-party Funding

The success of SIDs within local communities often leads to a demand that cannot be met solely by using the councillors' HLB. Third-party funding for SIDs has increased as a result, and sources now include the OPCC, town and parish councils, and recognised Resident Associations. SIDs cannot be funded by private individuals.

The county councillor general Locality Budget is also considered as third-party funding for this purpose.

Irrespective of the funding source, the SID becomes an HCC asset once installed – a third-party is not able to move or access the SID without ordering or requesting such services through HCC.

## 11.9 Key Criteria for Installation

The four key criteria that apply to SIDs are listed below:

### Speed Indicator Devices

KC43	SIDs funded using the Highways Locality Budget (HLB), the Police and Crime Commissioner's Road Safety Fund (PCC), or HCC core budgets must meet at least one of the criteria in Table 5
KC44	SIDs funded by other sources (not HLB, OPCC or HCC core budgets) are not subject to the speed criteria set out in Table 5
KC45	SIDs are not recommended for speed limits above 40mph
KC46	In all cases SIDs are required to satisfy the location requirements in Table 6

*Table 7 - SIDs key criteria*

# Section 12: Safety and Speed Cameras

## 12.1 Introduction

Camera technology deployed in the county includes Safety Cameras (core sites) as well as other non-core sites which address more general speeding concerns. The use of such technology can be a cost effective and robust means of managing speeds in appropriate environments

The primary purpose for installing safety cameras on the highway is to reduce the frequency and severity of people being injured due to collisions on the road network through enforcing traffic speeds and reducing red-light running.

Other camera types on the network may be installed due to community concerns.

The use of cameras should always be proportionate, targeted, consistent and transparent in line with current NPCC guidance.

Before any camera technology can be used on a public highway it must hold Home Office Type Approval for it to be legally enforceable.

The following camera technology is currently used in Hertfordshire:

- Rearward facing static cameras.
- Forward facing static cameras.
- Simultaneous bi-direction cameras.
- Red light static cameras.
- Mobile vans equipped with enforcement technology.
- Average safety cameras used by Highways England for road works enforcement.
- Average speed cameras commissioned by the OPCC.
- This section outlines the criteria to be applied to different camera sites.

## 12.2 Core Sites

Stringent criteria are used (Appendix F) for the selection of core site safety cameras, based on collected data from police Stats 19 forms collated over the previous three-year period. An emphasis is placed on the number of people killed or seriously injured.

The county council, as highway authority, does not have the legal jurisdiction to enforce moving traffic violations relating to speed and red-light enforcement. Therefore, the core site safety camera network is operated and funded by the Hertfordshire Safety Camera Partnership which comprises Hertfordshire County Council, Hertfordshire Constabulary, and HM Courts and Tribunals Service.

The collision criteria vary for static, mobile and red-light cameras. An assessment of speed data is also required. Other cost-effective measures must be considered as part of the selection process before safety cameras are chosen as a potential option.



This should avoid the situation experienced elsewhere in the country where large numbers of cameras have been deployed in a variety of disparate locations putting additional maintenance liabilities on local councils and additional pressure on police back office staff to operate them.

Evidence from independent evaluations of the National Safety Camera Programme has consistently shown that the use of cameras has been effective when deployment was based upon locations where a specific level of killed or seriously injured (KSI) collisions and excessive speed above NPCC thresholds had occurred.

Collision reduction figures in Table 8 compare a three-year period before installation with the most recent three year after installation for safety cameras in Hertfordshire. This information shows the continued effect that the safety cameras have in reducing collisions and traffic speeds.

	Static	Mobile	Red light
Collision reduction KSI	48%	39%	47%
Collision reduction all severity	78%	71%	80%
Speed reduction	7.1mph	2.3mph	N/A

*Table 8 - Safety camera collision reduction*

All new sites require the agreement of the Speed Management Group.

Details of current Safety Camera locations can be found at:

<https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/speed-awareness-and-driver-training/safety-camera-locations-speed-cameras/safety-camera-locations-speed-cameras.aspx?searchInput=&page=1&resultsPerPage=10&view=list>

## 12.3 Community Concern Sites

Community concern sites do not have to meet the core safety camera site criteria but must have documented and widely supported concerns from both the community and partner agencies. These sites will be associated with genuine levels of traffic violation which may give rise to a fear of harm, or which may reduce the take up of active travel.

These sites typically suffer from anti-social and intimidating non-compliance with the speed limit, but which may or may not be associated with a number of collisions and injuries.

Any assessment will be evidence led to determine the scale of the problem and to consider whether camera intervention is justified, fair, and proportionate and other alternatives are not suitable. Funding is usually only available from external sources.

One specific source of funding for community concern sites is the OPCC's Road Safety fund. If a camera is deemed to be the most appropriate solution to address an identified issue these locations would be owned and operated by the OPCC who provide a commuted sum to the county council for ongoing maintenance. The county council would be responsible for making the site safe in the event of a camera becoming damaged.

The criteria for concern sites are awaiting agreement, but includes sites where:

- A genuine speeding issue has been identified which is in excess of NPCC enforcement thresholds.
- There is wide and documented support from the relevant parish/town council and community.
- There is agreement from the police as enforcement authority.
- There is agreement from the elected county councillor on behalf of the Highway Authority.
- Funding has been identified.
- The site conditions are suitable for the type of enforcement equipment proposed.
- That safety camera enforcement is the right solution.

## 12.4 Other Site Criteria

Other non-core sites for potential camera deployment include:

**Traffic Management Sites** - these are sites where analysis identifies that traffic will need to be managed as a result of an increased risk of harm to road users whilst a highway is being altered. Examples include the Highways Agency Digital Enforcement Camera System (HADECS) installed and used by Highways England on smart motorways

**Event-based Sites** - these are sites that have been identified as having a value in camera enforcement as a deterrent to offending or anti-social behaviour, either due to being locations of significant offending rates or where offenders are known to gather. An example is the system on the A10 proposed by the police and funded by the PCC to deter illegal street racing.

## 12.5 Future Camera Technology use in Hertfordshire

Technology is ever changing, and we are aware that a number of safety camera devices based on camera systems linked to Automatic Number Plate Recognition systems are in 'Type Approval' stage with the Home Office. All make use of digital and radar sensor technologies. The county council will continue to monitor the technological developments and identify potential opportunities for piloting or trialling new types of system

Hertfordshire was an early adopter of digital camera technology with very few locations requiring upgrades.

It is also noted that in vehicle technology such as intelligent speed assistance systems are now supporting the camera partnership's wider objectives, enabling motorists to achieve greater self-compliance with posted speed limits

Average speed technology will be considered through our route criteria contained within Appendix F, where deemed appropriate, and if funding is available. This technology works best on roads with large distances between junctions, which enables monitoring over a reasonable distance. In urban areas more, junctions require more camera locations to cover a zone and these systems do not allow for instances where, for example, a pelican crossing will stop traffic. This reduces their effectiveness as the approach and exit speeds can be high but, due to the delays during the journey, the average speed technology would not recognise an offence having been committed.

## 12.6 Key Criteria for Installation of Cameras

The applicable criterion for safety cameras is given in Table 9

### Safety Cameras

KC47	The County Council will use the 'Criteria for Safety Camera Site Selection and Implementation' matrix in Appendix F to assess the suitability and implementation of locations for safety cameras
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*Table 9 - Key criteria for safety cameras*

## Section 13: Education, Training and Publicity

### 13.1 Overview

As part of the Hertfordshire Road safety partnership, the county council delivers a range of educational programmes for all road users, including pedestrians, cyclists, and motorists. These programmes make reference to the dangers of speed to the individual and/or other road users.

Training activities which have a clear emphasis on speeding issues are set out in this section.

### 13.2 Learn2Live

Younger people continue to be disproportionately represented in Hertfordshire's KSI statistics, with cited reasons including:

- Lack of experience and poor hazard perception
- An often too casual and over-confident attitude to speed
- Low risk awareness and peer pressure

In response, the Hertfordshire Road Safety Partnership runs the Learn 2 Live young road user event for approximately 7,500 students every year. It is acclaimed by attendees and has been verified as positively changing the attitudes of young drivers and pre-drivers

### 13.3 National Driver Offender Retraining Scheme (NDORS) Courses

The county council deliver the full range of NDORS courses on behalf of Hertfordshire Constabulary. These courses provide eligible offending drivers with a short course of retraining as an alternative to punishment for low-level speeding and other driving offences

The National Speed Awareness Course (NSAC) has the primary purpose of encouraging and facilitating compliance with speed limits by challenging attitudes towards speeding/ The course offers insight, awareness, and understanding of speed choices and equips participants with the knowledge necessary to change their behaviour.

Nationally, evaluations in 2018 found that participation in the NSAC has a larger effect on reducing speed reoffending than penalty points and fines associated with the Fixed Penalty Notice which would otherwise be issued.

Further web-based information on safer driving, education, and courses may be found here: <https://www.hertfordshire.gov.uk/services/Highways-roads-and-pavements/Speed-awareness-and-driver-training/Speed-awareness-and-driver-training.aspx>

## 13.4 Publicity Campaigns

The Members of Hertfordshire's Road Safety Partnership deliver a range of publicity campaigns aimed at raising the awareness of unsafe behaviours (often referred to as the 'Fatal 5') including inappropriate and excess speed. These are coordinated to support the NPCC's road safety calendar. These campaigns are data and intelligence led and based on the at-risk groups and issues identified in the Road Safety Strategy.

## 13.5 Key Criteria

The education key criterion is detailed below:

### Education, Training & Publicity

KC48	The County Council will continue to run and develop education, training and publicity programmes to reduce speed related collisions.
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*Table 10 - Key criteria for education, training & publicity*

## **Section 14: The Role of the Speed Management Group**

### **14.1 Overview**

A formal process is in place to consider speed limit changes and ensure a consistent approach is followed countywide. This is encouraged by the usage of specific key criteria found within the SMS and outlined in Appendix J.

Changes to speed limits may be proposed in isolation, as part of a wider scheme involving more substantial highway alteration, or as a result of or to facilitate development sites. It is important, given the wide variety of possible sources, for there to be a point of consistency during the process

The speed limit change process, including the role of the group, is outlined in section 16

### **14.2 Purpose of the Group**

The Speed Management Group (SMG) is a policy led officer group which meets quarterly.

The group do not propose or authorise speed limit changes and have no budget allocation or resourcing. Officers attend the group as a function of their regular duties.

Primarily, the SMG ensure that the strategy and framework within have been applied correctly and consistently whenever handling a request for a speed limit alteration. This finding would then be presented as a recommendation to the lead officer for a scheme.

The SMG will make a recommendation as to whether the request for speed limit alteration should be granted based on its compliance with the framework. Any recommendations will be then taken to the HCC Director of Environment and other Senior Hertfordshire County Council officers for agreement and then to the Executive Member for Highways and Environment for political signoff.

Any proposed changes to speed limits will be subject to public consultation as part of the Traffic Regulation Order process. The consultation materials will include a record of the technical recommendation from the Speed Management Group.

The SMG will additionally review speed compliance schemes that have been delivered and ensure that relevant findings are taken forward should it be necessary.

### **14.3 Membership of the Group**

As the remit of the group is to provide technical review against the framework, and with countywide responsibility, the membership of the SMG is sourced primarily from the highway authority.

As the SMS serves as a joint strategy, and the enforcement authority is consulted on all speed limit changes, Hertfordshire Constabulary do maintain a presence as part of the group.

Current membership of the group is provided in Table 11 below.

Hertfordshire County Council	Highways Safety Team
Hertfordshire County Council	Highway Design Team
Hertfordshire County Council	Highways Strategy Team
Hertfordshire County Council	Development Management Team
Hertfordshire County Council	Network Management
Hertfordshire County Council	Road Safety Team
Hertfordshire Constabulary	Road Policing Unit (Operations)
Hertfordshire Constabulary	Road Policing Unit (Strategy)

*Table 11 - SMG membership, October 2020*

Other departments or organisations may join the group should a need be identified. Membership of the group will be reviewed frequently to ensure appropriate officers, departments, and organisations are present

## **Section 15: Potential Funding**

### **15.1 Introduction**

This section serves to outline potential funding sources for speed management work countywide.

Speed reduction measures can be costly, and funding will likely be subjected to internal or external bidding processes before being secured. It should not be assumed that there is funding available to implement traffic calming features to facilitate speed limit changes.

Primarily, schemes will be delivered by the highway authority using a variety of possible funding streams detailed below.

Some schemes may be funded or delivered by development sites under legal agreements (usually, section 106 and 278 (both Highways Act, 1980) respectively).

### **15.2 Local Transport Plan Funding**

Local Transport Plan capital funding is used to deliver the county council Integrated Transport Programme (ITP). ITP schemes are a core part of the County's Highways Service, delivering a mixture of transport and highway improvement measures across the County. ITP schemes support the delivery of the council's LTP4 nine transport objectives

The types of changes delivered by the programme include:

- Introducing traffic calming measures,
- The introduction of 20mph areas,
- New pedestrian crossings,
- New cycling infrastructure, or
- Urban realm improvements.

An annual ranking process is undertaken to prioritise safety related schemes for the ITP programme.

### **15.3 External Funding**

External funding may be made available by various groups, including but not limited to:

- District, borough, town, or parish councils;
- Central government funding;
- The OPCC Road Safety Fund
- Grants

Where possible, the county council will work with other local authorities with a local interest to jointly fund or deliver speed management schemes that meet the objectives of both parties.



Grants and external funding may place conditions on what projects can or cannot be delivered or provide timescales for delivery. The county council will review conditions to ensure schemes are appropriate for the funding sources available.

More details about the OPCC Road Safety Fund can be found in 14.6

## **15.4 Highways and Locality Budgets**

Either the Highways Locality Budget (HLB) or more general Locality budget can be used towards speed management schemes, so long as the key criteria outlined in the SMS are followed and the implementation remains consistent.

Historically, these budgets have been used to fund SIDs or studies into measures that would be required.

## **15.5 Developer Funding**

Funding for introducing speed control measures may be made available via development sites. These will usually be focused on the local area and be aligned to ensure the development does not adversely impact local transport.

Section 278 agreements would allow for third party works – if permitted by the highway authority – to introduce a permanent change to the network, which may include a change of speed limit and measures to ensure compliance with this change.

Some districts have begun to introduce the Community Infrastructure Levy (CIL), a charge local authority may levy on new developments within their area. CIL funding can provide a route to deliver the infrastructure required to support a development.

Section 106 funding would be sourced from a development and provide a set amount of funds to be spent in line with an accompanying agreement.

This fund may be suitable for speed management schemes, providing:

- It is appropriate to the wording of the agreement, and
- The Environment and Infrastructure Department Highways and Transport S106 Guidelines have been followed.

# Section 16: Process for Changing Speed Limits

## 16.1 Introduction

The county council have devised a 4-stage process for considering a request for a speed limit change, outlined in Figure 2, as follows:

- Stage 1—Assessment of whether it is a priority
- Stage 2—Check against SMS criteria
- Stage 3—Check against funding availability
- Stage 4—Public consultation (for TRO purposes)

In order to begin this process, the officer promoting a change of speed limit will need to complete a Change of Speed Limit form (Appendix H) which will validate relevant criteria from the SMS.

If, following this, the proposal is taken forward for promotion the form will also require manager approval and submission to the Speed Management Group (SMG) for review.

The SMG will then assess the proposal against the speed limit framework and make a recommendation as to whether the change should be adopted.

Any recommendations will be then taken to the HCC Director of Environment and other Senior Hertfordshire County Council officers through the Strategic Transport Issues Board (STIB) for agreement and then to the Executive Member for Highways and Environment for political signoff.

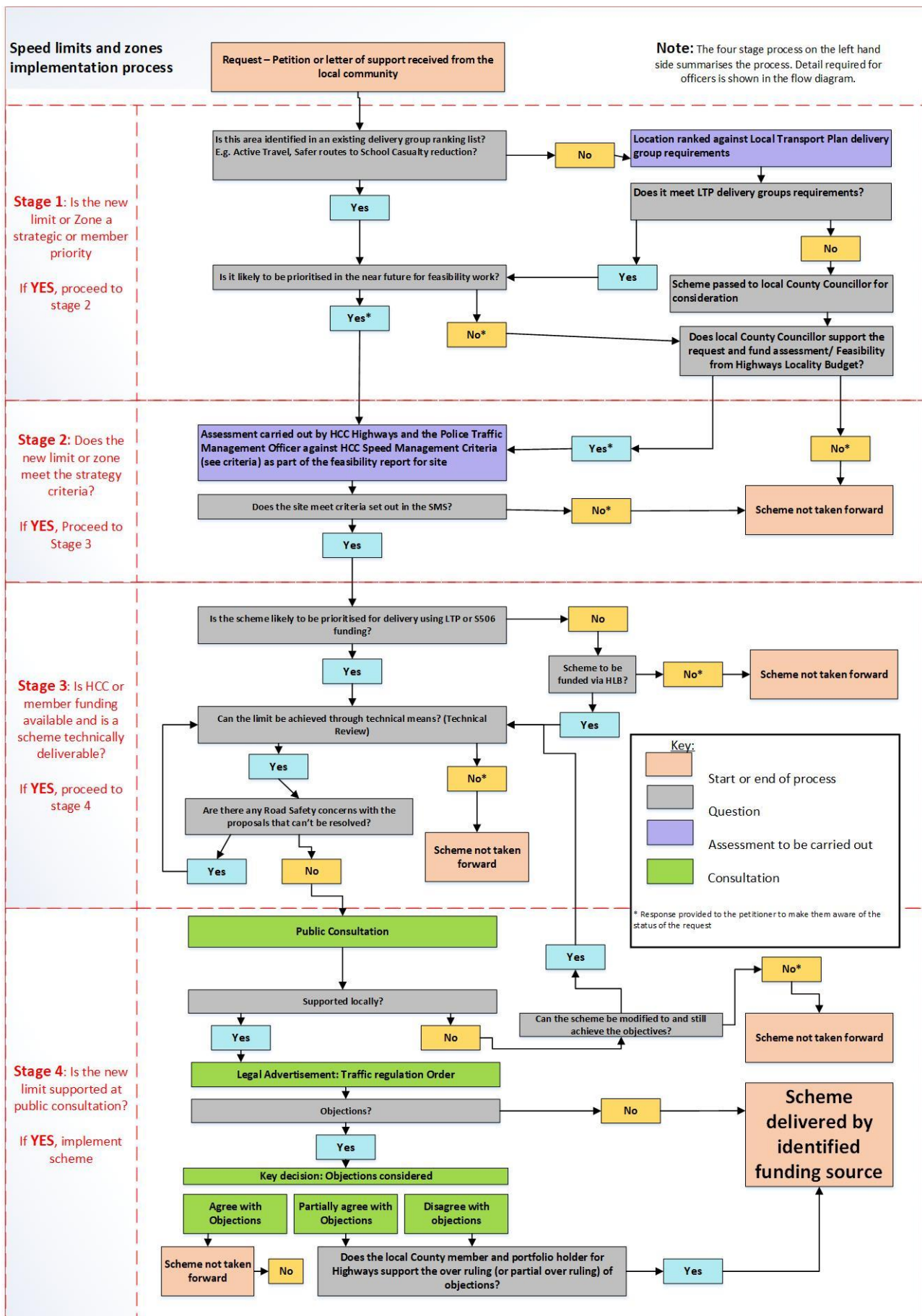


Figure 2 - Change of speed limit process

## **16.2 Police Support**

Enforcement of speed limits may only be undertaken by the enforcement authority, and as such comment and support from the police should be obtained as soon as practical.

Engagement with the police may be undertaken via the SMG, which will allow for a collective review with county council officers to ensure the identified or desired speed is appropriate

## **16.3 Traffic Regulation Orders**

Speed limits are set via Traffic Regulation Orders (TROs); without a TRO, the road would default to the national speed limit or 30mph – if possessing a system of street lighting. A TRO is required to change an existing limit to 30mph.

TROs must follow a consultation and advertisement process, being reviewed by members of the public and key stakeholders. This process will allow for local representation to any proposed changes.

Given the consultation requirement, it is recommended that wherever possible local support be identified prior to beginning the TRO process.

## **Section 17: Speed Enforcement**

### **17.1 Introduction**

The highway authority, enforcement authority, and by extension Safety Camera Partnership all have functions and roles related to speed enforcement

The Chief Constable is responsible for the direction of the enforcement authority and all officers and staff within the constabulary. The enforcement authority is responsible for speed enforcement

The county council serves as both the highway and traffic authority and is responsible for the management of speed, and setting of speed limits, on all public roads not under the control of Highways England

The Hertfordshire Safety Camera Partnership installs, operates, and maintains most safety cameras – the exceptions being operated by Highways England or the OPCC. The partnership seeks to reduce road collisions and casualties through the prevention, detection, and enforcement of speed and red-light offences.

### **17.2 The Role of the Police**

The enforcement authority will use the 'Hertfordshire Constabulary Speed Enforcement Guide' (see flowchart in Appendix G) focusing Roads Policing Unit officers at speed related collision history sites and Safer Neighbourhood Team (SNT) officers at speed complaint sites.

By conducting speed enforcement and education activity at locations identified as having a speed related collision history the police intend to try to reduce the number of collisions and casualties occurring on our roads as well as contributing to achieving road safety targets.

The police have a high demand for officer time countywide, and adherence to the process above will ensure that priorities are balanced accordingly.

Each time a road traffic personal injury collision is reported to the police, comprehensive details about the circumstances involved are recorded on a STATS 19 form. This data is shared with the Highway Authority who use it to identify locations where engineering or educational activity may be used to address a particular problem.

For speed enforcement purposes the police use this data to identify the locations that most frequently experience speed related collisions so they can be considered for enforcement.

### **17.3 Local Priorities**

The means by which the enforcement authority collects and collates local priorities differs across the various branches and stations across the county. Local priorities may include issues related to or surrounding speeding, include anti-social behaviour or excessive noise.

Hertfordshire Constabulary run the platform ECHO, which allows the public the ability to communicate points of concern or suggestions to the enforcement authority for review. This is not a suitable route to report crimes.

Safer Neighbourhood Teams (SNTs) continue to provide a focus on local policing and can provide advice on current and future priorities. Details on the appropriate Safer Neighbourhood Team may be found here: <https://www.police.uk/pu/your-area/hertfordshire-constabulary/>

Raising issues as a local priority may lead to speed enforcement or further monitoring should resource and environment allow. This is additionally outlined in [Appendix G](#)

## **17.4 The Role of the Police and Crime Commissioner**

The Police Reform and Social Responsibility Act replaced Police Authorities with elected Police and Crime Commissioners on 22 November 2012. This created the Office of the Police and Crime Commissioner (OPCC)

The Police and Crime Plan for Hertfordshire 'Everybody's Business: Community Safety and Criminal Justice Plan 2019 –2024' recognises that speeding takes a high toll in relation to those killed or seriously injured on the roads and seeks to address concerns raised by residents through the use of his Road Safety Fund.

As well as working closely with the chief constable, the Commissioner works with the full range of other public services (for example local government, the courts, and the fire service) that can help prevent crime.

The OPCC operate two campaigns that specifically target speed management and road safety, and are listed below:

## **17.5 Community DriveSafe Campaign**

The DriveSafe campaign allows residents to petition the Commissioner with concerns of speeding vehicles in their communities. At least ten people living or working in the area must support the campaign, and at least three of those must be willing to run the scheme and use roadside speed monitoring tools.

There are currently 28 active DriveSafe groups operating across the county helping to educate motorists about the dangers of excessive speed.

Volunteers are trained by their local police officers in operating safely near highways and in how to use the speed management equipment. They will also be equipped with high-visibility jackets and warning triangles. This works in two ways - for the safety of the volunteer and to highlight to motorists and the wider community that DriveSafe activity is going on.

The speed monitoring device indicates the speed of passing vehicles, showing a 'smiley face' to those travelling within the speed limit and a 'sad face' if they are over the limit. The volunteers will record the car registration numbers of vehicles travelling in excess of the speed limit and warning letters will be sent to the registered keeper of the vehicle. The volunteers can also record anti-social or dangerous driving, such as occupants not wearing seat belts or drivers using their mobile phones.

For further information about the Community DriveSafe scheme please visit the following web page: <https://www.hertscommissioner.org/community-drivesafe-scheme-hertfordshire>.

## **17.6 OPCC Road Safety Fund**

The Police and Crime Commissioner's Road Safety Fund is an additional source of funding available to any organisation that can contribute to improving road safety across the county. This funding stream is supported by the Hertfordshire Road Safety Partnership and may be used to fund 'community concern' speed management schemes and measures with a focus on education (such as the SIDs) and enforcement (e.g. camera technology) rather than engineering measures which are seen as a highways function.



## Section 18: Appendices

### 18.1 Appendix A – Glossary of terms and acronyms

#### Definitions

**20mph Area:** A collective term used exclusively in the SMS to discuss matters that affect 20mph Limits or 20mph zones.

**20mph Limit:** A road or series of roads where mean speed is 24mph or less.

**20mph Zone:** A series of roads which may include traffic calming measures where mean speeds are 24mph or less.

**85<sup>th</sup> Percentile Speed:** The speeds at or below which 85% of all vehicles are observed to travel under free-flowing conditions. This is a nationally recognised method of assessing traffic speeds.

**Advisory 20mph Limit:** A part time 20mph speed limit which does not have a legal order (Traffic Regulation Order). It is therefore not enforceable. To be used outside schools only.

**Advertisement (Legal):** The process where a Speed Limit order is legally advertised. At this point the scheme can only be reduced or withdrawn.

**Consultation:** The legal process where opinion is sought and used to influence the scheme outcome. A scheme can be changed at this point.

**ECHO:** The Police comment / suggestion forum - a means for the public to provide feedback on the police service and the community

**Free Flowing Traffic:** See Appendix D

**Features:** Repeater signs and repeater roundels and traffic calming measures.

**Hazardous Site:** A site that meets one of a number of injury collision criteria as set out in the Road Safety Strategy.

**Hertfordshire Road Safety Partnership:** A partnership of organisations comprising who are responsible for delivering road safety schemes, initiatives and campaigns across the county, and supports national road safety campaigns. The Partnership comprises Hertfordshire County Council (Highways, Trading Standards, Public Health), Herts Fire and Rescue, Hertfordshire Constabulary, Herts Air Ambulance, Highways England and the Office of Police and Crime Commissioner.

**Highways Locality Budget:** Budget held by the county councillors to facilitate improvements on the highway within their division.

**Local Transport Plan:** Statutory document which sets out the overall objectives and targets for improving transport in the County. The current version is Local Transport Plan 4.

**Mean Speed:** The average speed at which all vehicles travel.



**Police and Crime Commissioner:** Works closely with the Chief Constable to reduce crime, keep communities safe and ensure the criminal justice system works well. The elected PCC has the responsibility to hold the police and the chief constable to account on behalf of the public.

**Police and Crime Commissioner Road Safety Fund:** A fund that uses the surplus generated from motorists who have committed driving offences and been ordered to pay court costs following prosecution, or who have attended educational diversionary courses (such as a speed awareness course), to address community concerns and fund new and innovative ways of improving road safety and changing behaviour.

**Roundel:** In context, a roundel is the circular disc or marking that displays the speed limit applicable to a road. Roundels are placed at appropriate intervals as road markings, normally larger and more conspicuous at the start or change of a limit.

**Rural:** An area not shown on the “Hertfordshire Urban Area” published data set.

**Section 106 Agreement:** Funding obtained from developers when building new housing and other buildings to mitigate the impact that the development has on the transport network.

**Section 278 Agreement:** An agreement to permit a third party to introduce permanent changes to the highway network, usually used to facilitate or connect to new development sites.

**Settlement:** An area shown on the “Government National Statistics Hertfordshire Census Settlements” published data set.

**Speed Management Group:** A group of HCC and police officers who provide advice to other HCC officers, developers and other bodies on the implementation of the Speed Management Strategy and consider changes to Speed Limits and confirm whether proposed changes are in compliance with the Speed Management Strategy.

**Spatial Transport Plan:** Key strategic transport document for a growth focused area within the County that identifies schemes in the area that will deliver LTP policies and objectives.

**Standard Deviation:** The difference between mean speed and 85<sup>th</sup> percentile speeds as shown below. This is used as method or measure to identify speeding traffic (where there is a large standard deviation), as given in the below table:

<b>Speed Limit</b>	20 mph	30 mph	40 mph	50mph	60 mph
<b>Mean speeds</b>	24 mph	30 mph	40 mph	50 mph	60 mph
<b>85<sup>th</sup> percentile speeds</b>	28 mph	35 mph	46 mph	57mph	68mph
<b>Standard Deviation</b>	4 mph	5 mph	6 mph	7 mph	8 mph

**STATS 19 Form:** The department for transport compiles data on personal injury collisions, resulting casualties, and the vehicles involved. The police fill in this form for each collision occurring on the public highway, and which become known to them within 30 days.

**Traffic Calming Measure:** Humps in accordance with the Highways (Road Hump) regulations 1999, traffic calming works in accordance with the Highways (traffic calming) regulations 1999, a pedestrian refuge designed to slow traffic, variation in widths of the carriageway for the purpose of slowing traffic constructed after 1999 and a horizontal bend as defined in TRSGD 2016.

For avoidance of doubt a traffic calming measures will alter a vehicles speed significantly if designed correctly. The spacing in TSRGD 2016 are the minimum to suffice the legal signing requirements for setting out a zone. It does not guarantee that vehicle that vehicle speeds will reduce. Traffic calming measures should be designed in accordance with LTN 1/07 and at a spacing intended to achieve the required speed reduction for the type of traffic calming measures chosen.

**Traffic Regulation Order:** A Traffic Regulation Order (TRO) is a legal order, which allows us the regulation of speed, movement, and parking of vehicles. They are enforced by the police, with parking restrictions enforced by local district councils.

**Urban:** An area shown on the “Hertfordshire Urban Area” published data set.

**Variable 20mph Limit:** A 20mph speed limit that is only operational at certain times of the day. Similar to that used on Smart Motorways (with varying limits).

## **Abbreviations and Acronyms**

<b>APCO</b>	Association of Public Safety Communications Officials
<b>AONB</b>	Area of Outstanding Natural Beauty
<b>CIL</b>	Community Infrastructure Levy
<b>DfT</b>	Department for Transport
<b>HLB</b>	Highways Locality Budget
<b>HADECS</b>	Highways Agency Digital Enforcement Camera System (a type of speed camera)
<b>KSI</b>	Killed or Seriously Injured
<b>LTP</b>	Local Transport Plan
<b>NMU</b>	Non-motorised user
<b>NPCC</b>	National Police Chiefs Council
<b>OPCC</b>	Office of Police and Crime Commissioner
<b>PCC</b>	Police and Crime Commissioner
<b>RTC</b>	Road Traffic Collision
<b>S106</b>	Funding negotiated from developers to mitigate the impact of the development
<b>SID</b>	Speed Indication Device
<b>SMG</b>	Speed Management Group
<b>SNT</b>	Safer Neighbourhood Team
<b>TAL</b>	Traffic Advisory Leaflet (produced by the DfT)
<b>TM</b>	Traffic Management
<b>TMO</b>	Traffic Management Officer
<b>TRO</b>	Traffic Regulation Order
<b>VAS</b>	Vehicle Activated Sign

## 18.2 Appendix B – Changes between strategies

No.	Change	Previous Strategy (March 2014)	Current Strategy (April 2020)	Change impact	Comment
1	Limit and Zone Definitions, Introduction of 20mph areas as a collective term, signage requirements	A limit is a single road with a 20mph speed limit, with or without physical measures. A zone is two or more adjacent roads with a 20mph speed limit, with or without physical measures.	Limits and Zones will revert to Dft Definitions. Allowing limits to be used on multiple roads. In the strategy we will use the term collectively refer to them as 20mph Areas. In practice though we will have a mixture of limits and zones	Previously the standardisation of zones across the county led to more signs being installed than necessary. In a zone signs are required every 100m (if there are no other traffic calming measures). Whereas is if limits had been progressed, less signage would have been needed.	This resets the use of limits and zones across the county to the following principals. Where speeds are already low then a 20mph limit can be used. Where speeds need to be lowered with traffic calming then a 20mph zone can be used. Designers will be able to mix and match these principals across town to save signage costs.
2	Limit and Zone Definitions, Introduction of 20mph areas as a collective term, signage requirements	Zones (multiple roads) were signed as required by legislation (Every 100m unless traffic calming features were used). Limits (single roads) were signed by legislation every 200m.	Changes in legislation (TRSGD 2016) means that limit signage spacing is now guidance. To sign zones and limits consistently. A new criterion has been included that whether a limit or a zone there will be a speed limit sign at least every 200m.	When zones are being promoted that are traffic calmed or designed for low speed there will be an increased cost of additional signs every 200m.	This is so that public can easily identify the speed limit of a particular road. This is important when encouraging persons to use active travel modes. Past logic has been around design that if the environment caused vehicle to travel slowly then there wasn't a need to have road sign telling the driver that the speed limit. However, research has shown (Atkins et al 2018) that persons are more likely to use active travel modes if they know the speed limit is set at 20mph. Therefore, perception is an important new consideration is convincing persons to use active travel modes.
3	Place & Movement Criteria	N/A	The introduction of place and movement as a criterion for review when considering speed limit changes, including the establishment of 20mph areas as being suitable for roads with a higher place value	This will allow town wide 20mph areas to be planned and progressed, as well as providing another tool to better match speed limits with environments.	Previously officers had to identify areas then collect data to confirm which led to a piecemeal progression of 20mph zones. Use the P&M criteria to identify 20mph areas will demonstrate the commitment of 20mph in residential areas.

No.	Change	Previous Strategy (March 2014)	Current Strategy (April 2020)	Change impact	Comment
4	Speed data collection	Mean speeds will be used as the basis for setting speed limits in 20mph speed limits and zones.	Mean speeds and 85 <sup>th</sup> %tile speeds will be collected. The difference between the two will be compared to identify if there are speeding issues on any particular road that would need interventions.	Cost neutral.	Previous use of the mean only to set speed limits had missed that low means can mask speeding problems. The difference (standard deviation) indicated the spread of speeds. Ideally a low standard deviation would indicate good correlation with the mean. A high standard deviation would show greater spread of traffic speeds either side of the mean. This would indicate speeding issues.
5	Existing speeds for proposed 20mph zones without physical measures.	The following now applies: -Where at least 90% of the total number of roads in the proposed zone have existing mean speeds 25mph or below. -Where up to 10% of the total number of roads in the proposed zone have existing mean speeds above 25mph, but below 27mph.	This requirement has been removed.	In terms of having speed limits that work, this is a positive step forward. There will be increased construction cost as measures are developed for non-conforming measures.	This criteria had unforeseen effect with designers selecting roads purely on a numerical basis to trigger the 10% rule. In some cases wrong roads were selected which were not suited to 20mph without applying traffic calming. If traffic speeds are above 24mph then proportionate traffic calming is needed to slow traffic. (See Section 9.0)
6	SIDS criteria		New criteria added	N/A	Publicising process for Speed Indicating Devices.
7	The Role of the Speed Management Group	The Officers Speed Management Group will no longer assess speed limit change requests. Promoting officers will now complete the Speed Limit Change Form	SMG is now reformed. And its role is discussion in Section 14.0	More transparent process for changing speed limits.	N/A

No.	Change	Previous Strategy (March 2014)	Current Strategy (April 2020)	Change impact	Comment
8	5 Core principles	Not covered	5 core principles have been introduced to cover how HCC approaches speed management	N/A	These cover important points about setting speed limits for Hertfordshire
9	Speed limits by design	Not covered	Section 9.0 covers	This will have a positive impact on speed management.	Officers were facing increased requests to change speed limits to bring about a behaviour change. Such as to overcome a visibility problem. In general, this is not effective speed management and the new chapter sets out how to change vehicle speed to support a limit change.

## **Appendix C – Technical guidance on collection & interpretation of speed data**

When analysing traffic speed data. It is important to look at the speeds that occur under free flow conditions, and therefore the 12 hour or 24 hour average mean and 85th percentile speeds may not be appropriate. It may be necessary to exclude peak hour data as congestion may have a significant effect on the results.

The following steps are taken to identify the roads that require a speed survey within a proposed 20mph area:

- The lead engineer visits all the 30mph roads in the proposed areas.
- Following discussions with the Traffic Management Officer at Hertfordshire Constabulary roads are identified where there is a concern that the vehicle speeds are high.
- Speed surveys are undertaken on these roads.
- Speed surveys are also undertaken in a random 25% sample of the remaining roads in the proposed area.

For example, if there were 30 roads in an area and 13 were identified as being of concern an extra 5 roads would be surveyed (25% of the 17 roads where speed wasn't a problem) and a total of 18 surveys would be required.

The use of local knowledge is important when examining the speed data particularly if events have had an effect on the data. When assessing speed limit, free-flow conditions during a typical weekday will be used as a baseline.

Free flow conditions are when vehicles are unlikely to be accelerating or braking. Measurements should not be taken near isolated sharp bends, gradients and road narrowing's.

A minimum of one weeks automated data should be collected. The full weeks data should be reviewed to establish whether there is consistency or large differences in speeds that may affect the use of mean speeds.

Queueing traffic can be identified by a large spread of speeds across all measured speeds – say from 5mph up to the mean speed if it occurs at isolated times of day i.e. at morning or evening peaks. Free flow traffic would have a smaller range.

## Appendix D – Signage requirements

In general Hertfordshire County Council will erect speed limit repeater signage in accordance with the Table D1 below. Local variations may be necessary due to local obstructions or in locations of historic interest and are to be documented via Departures from Standard and agreed with the Speed Management Group. Where the regulations permit, signs can be substituted by road markings.

**Table D1 Size, spacing and minimum clear visibility distances (CVD) for repeater signs**

Speed limit and type of road (Notes 1 and 2)	Size of sign (mm)	Maximum distance (m) between			CVD (m)
		Consecutive signs on alternate sides of the carriage-way (Note 3)	Consecutive signs on the same side of the carriage-way	Terminal sign and first repeater	
20 mph zone*	-	100	100	50	-
20 mph	300	200	300	200	20
30 mph with street lighting	-	No repeaters	No repeaters	No repeaters	-
30 mph without street lighting	300	250	400	200	30
40 mph	300	350	500	250	40
50 mph	450	450	700	350	50
60 mph (dual carriageway)	600	500	800	400	60
National speed limit (lit single carriageway)	450	500	800	400	60
National speed limit (lit dual carriageway)	600	600	900	450	70
National speed limit (unlit road)	-	No repeaters	No repeaters	No repeaters	-

\*In a 20mph zone any one point of the road must be no more than 50m from a feature as outlined in TSRGD 2016 Schedule 10 General Directions section 1. One feature in the zone must be a traffic calming measure the remainder can be repeater signs at no greater than 100m spacing.

As a Hertfordshire specific policy 20mph zones and limits have been combined into 20mph areas with a requirement for repeaters at least every 200m. This is so that 20mph zone or limits will have the same appearance from a signing point of view.



**NOTE 1:** street lighting or lit carriageway means “a system of carriageway lighting furnished by lamps lit by electricity placed not more than 183 metres apart. Where a road does not have a system of street lighting throughout and requires repeater signs for both the lit and unlit sections, a repeater sign should be provided at the point where the street lighting commences.

**NOTE 2:** Sign size, spacing and clear visibility distance for motorways, including link roads, will be the same as shown for 40 mph, 50 mph and 60 mph, as appropriate.

**NOTE 3:** Repeater signs need not be provided where the length of the speed limit is less than the distance shown in this column.

## Appendix E – 20mph areas additional guidance

Hertfordshire County Council is bound by legislative requirements for 20mph Limits and Zones and as such all 20mph Areas will be laid out in accordance with these requirements.

To promote Hertfordshire's active travel principles, we will sign both 20mph Areas (consisting of Limits and Zones) consistently so that all are aware they are within them.

This additional guidance is to be applied by those considering 20 mph areas. Just because a particular area may have one or more of these elements it doesn't automatically mean that it is suitable for a 20mph area. The whole situation should be reviewed including the guidance of experienced practitioners as appropriate.

### 20mph Area General Guidelines

#### Potential for active travel

Research undertaken by the Transport Research Laboratory for the Department for Transport shows a strong correlation between speed of travel and risk of fatality,

RoSPA has summarised this in its *Relationship between Speed and Risk of Fatal Injury: Pedestrians and Car Occupants*<sup>5</sup>

Therefore, the implementation of 20mph areas is a mechanism for encouraging safe active travel.

In line with LTP4 principles we will support 20mph areas where there is potential for active travel. Evidence has shown that persons are more likely to consider active travel with speed limits are low and as such Hertfordshire County Council will consider funding areas where there are greater chances of active travel. E.g. residential areas surrounding town centres with a high place function in the Place and Movement categorisation (P2/M1, P3/M1).

#### Pedestrians

Where there is evidence of high pedestrian footfall consideration should be given to a lower speed limit to reduce conflict between pedestrians and motor vehicles. This is particularly relevant where pedestrians are close to the road particularly where a footway is very narrow. For example, in historic areas which were not designed for motor traffic.

#### Buildings

Where buildings are close to the carriageway it creates an effect of visual narrowness which can slow vehicle speeds. The opposite effect occurs where buildings are set back such as when gardens are provided at the front. This phenomenon is discussed in Manual for Streets. The density of buildings also has an effect as high-density housing can generate higher footfall.

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<sup>5</sup> DC Richards (2010) *Relationship between Speed and Risk of Fatal Injury: Pedestrians and Car Occupants*. Transport Research Laboratory. [https://nacto.org/docs/usdg/relationship\\_between\\_speed\\_risk\\_fatal\\_injury\\_pedestrians\\_and\\_car\\_occupants\\_richards.pdf](https://nacto.org/docs/usdg/relationship_between_speed_risk_fatal_injury_pedestrians_and_car_occupants_richards.pdf)

This can also be thought about in respect to towns versus rural settlements. But in these occasions the Place and Movement assessment should be used as an indicator over whether the road is considered residential or not.

There are certain buildings by their nature that require special consideration, and these are described in the paragraphs below.

### Schools

Schools by their nature and the vulnerability of their users require traffic to be travelling at slower speeds and as such a specific requirement is contained within the strategy for lower speed limits.

### Community facilities

The presence of facilities such as community centres, churches or shopping parades. These can be areas which generate higher footfall.

### Active Frontage

When buildings and footfall are combined the term active frontage is used. This means that motor traffic can be potentially slowed by interactions with adjacent uses. For example, a parade of shops where vehicles and pedestrians will be calling at could be considered an active frontage.

### Environment

The environment or setting of a road can be enough to warrant a 20mph area but to evaluate this the road will need to be examined by any experienced practitioner. For the environment to contribute to slower speeds there is a combination of factors that need to be considered such as width of carriageway, vegetation, available forward visibility and the presence of on street parking.

### Motor vehicle Speed

In section 4 the range of speeds that are required in a 20mph area are set out. The resultant speed is a prime criteria in the consideration of a 20mph area. And while most things are possible in terms of engineering a solution there comes a point where cost outweighs the overall benefit therefore the following is a broad guide to the speeds and the type of 20mph area that will be needed.

If mean speeds are 24mph or less then the existing environment is already suitable for a 20mph area and therefore only speed limit signs are required

If mean speeds are 30mph or less than the existing environment is likely to be suitable for a 20mph area with traffic calming.

Where 85th percentile speeds exceed 36mph the existing environment is unlikely to be suitable for a 20mph area as traffic calming is required to bring the vehicle speeds to that needed for a 30mph limit. If untreated then consideration should be given to raising the limit to 40mph

## 20mph area additional considerations

The following are additional considerations for 20mph areas but they are not considered criteria as they are factors or symptoms of other problems that could be tackled with different solutions.

### Traffic volume

Traffic volume has a significant impact on the speed of traffic if it builds to a point when congestion is created and, in some situations, this can lead to requests for lower speed limits due to the severance issues created by high traffic volumes. Severance is caused by the inability for pedestrians to cross a road for example. Officers receiving requests for lower speed limits should check that traffic volume is not playing a part in local community concerns as lowering the speed limit is unlikely to address those concerns. Providing crossing facilities may be a more appropriate solution depending on the situation experienced.

If traffic volume is the only factor lowering vehicle speeds then outside of times when volume is high then the 20mph area is unlikely to be effective.

### Collisions

The presence of collisions is not a reason alone to reduce speed limit. Collisions within a proposed area should be reviewed as these may indicate where the design of the road needs to be changed.

## 20mph Areas specific technical criteria

### 20mph Zones



The beginning and end of a zone must be indicated by terminal signing. The zone can be implemented with features and/or traffic calming measures. Traffic Regulation Order (TRO) required to be legally enforceable.

In Hertfordshire we sign 20mph zone and limits consistently. The minimum signing requirement for a 20mph zone is to have repeaters every 200m

TRSGD 2016 requires features at smaller interval than this. Therefore, if the proposed zone is made largely of traffic calming measures then additional signs will be required at no less than 200m.

If the proposed zone is largely based on signing due to the environment being largely self-enforcing then designers should either reconsider the design approach and make use of a 20mph limit which would ultimately require less signs than a 20mph zone.

## 20mph Limits



Signed with terminal signing at entry and exits and repeater signs at intervals only.

Traffic Regulation Order (TRO) required to be legally enforceable.

## Advisory Part Time 20mph Limits Outside Schools



An advisory 20mph limit sign can be mounted with the school warning lights and school ahead warning sign. The advisory limit will be active when the lights are flashing during school operating hours. In general, this will be school drop off and pick up times.

Mean speeds must be 30mph or less before implementation. As the limit is advisory it not required to be self-enforcing whereas other 20mph limit and zones are.

An advisory limit is not enforceable by the police and does not require a traffic regulation order.

## Variable 20mph Limits

Traffic authorities have powers to introduce speed limits that apply only at certain times of the day. These are similar in concept to Smart Motorways where variable speed limits apply and are indicated by variable message signing.

Specific signage would need to be authorised by DfT prior to a scheme being implemented.

TRO required to be legally enforceable.

**Table E1: 20mph Areas (Differences between Zones and Limits)**

20mph Speed Limit	20mph Zone	National Guidance/Legislation requirements [and interpretations]
<p>Signed by signs only</p> <p>Terminal Signs S10-2-1 (diag 670) (600mm dia plus) at start/end of limit.</p> <p>Repeater signs S10-2-1 (diag 670) (300mm) dia (every 200m)*</p> <p>Repeater signs can be substituted for roundels S10-2-9 (diag 1065)</p> <p>Sign illumination within limits are relaxed (TSRGD 2016)</p> <p>Terminal signs must be lit when with 50m of a Principal Road (A classification Road)</p>	<p>Signed by S10-12-5 (diag 674) on entry and S10-2-6 (diag 675A) on exit.</p> <p>Must have one physical traffic calming measure within the zone. Repeater signs are NOT a physical traffic calming measure.</p> <p>No one part of the zone must be more than 50m from measure as defined by TSRGD 2016. Unless cul de sac 80m or less.</p> <p>Entry signs are not classed as a traffic calming measure so first measure must be at 50m unless entry roundels are used. In practice this allows spacing every 100m.</p> <p>Sign illumination requirements with the zone are relaxed (TSRGD 2016)</p> <p>Road hump lighting requirements are relaxed in 20mph zones at the discretion of HCC Street Lighting.</p> <p>Sign requirements for traffic calming measures, humps, chicanes etc are relaxed and warning signs can be omitted.</p>	
<p><b>In either a limit or a zone the minimum requirement for a repeater signage shall be no less than 200m spacing.</b></p>	<p><b>In either a limit or a zone the minimum requirement for a repeater signage shall be no less than 200m spacing</b></p>	<p><b>HCC Policy</b></p>

## **20mph Area Public Consultation requirements**

All consultation documents will state that a 20mph limit or zone will generally be self-enforcing with little or no police enforcement.

A clear process will be agreed with local members and stakeholders prior to consultation being undertaken setting out the response rate required and the level of mandated support that needs to be demonstrated for a scheme to progress. This would be clearly set out in any consultation material in order to ensure that people are fully informed and that schemes are appropriate and supported locally.

## **20mph Area monitoring**

### Before and After Studies:

A before and after study will be completed within one year of the limit or zone being implemented. This will include comparison of vehicle mean speeds.

If maximum mean speed “After” limits do not meet the criteria set out in the Speed Limit Framework, a review of the scheme will be required.

## Appendix F – Criteria for Safety Camera Core Site Selection and Implementation

<b>Initial qualifying criteria</b>	<b>Fixed safety camera sites</b>	<b>Mobile speed camera safety</b>	<b>Routes (may comprise of a number of Fixed, Mobile or an Average Speed solution)</b>	<b>Red-light or combined red-light safety camera</b>
Site length requirement	Between 0.4km and 1.5km	Between 0.4km and 1.5km	Between 1.5km and 10km	Within junction from stop line to stop line in direction of travel.
Number of killed and serious injury collisions (KSI)	At least 4 KSI collisions per km in the baseline period.*	At least 2 KSI collisions per km in the baseline period.*	At least 3 KSI collisions per km (average) in the baseline period.*  OR  A minimum of 3 existing sites within the length.	At least 1 KSI collision within the junction in the baseline period.*  Selection must be based upon a collision history of red-light running. Where speed and red light enforcement is to be combined then the fixed speed camera criteria would need to be met.
Speeds at proposed sites	Speed survey shows free-flow 85th percentile speed is at or above NPCC (National Police Chief Council) enforcement threshold.	Speed survey shows free-flow 85th percentile speed is at or above NPCC (National Police Chief Council) enforcement threshold.	Speed survey shows free-flow 85th percentile speed is at or above NPCC (National Police Chief Council) enforcement threshold.	Not applicable for red light running only enforcement.

\* The baseline period is the most recent three calendar years available at the time of review.



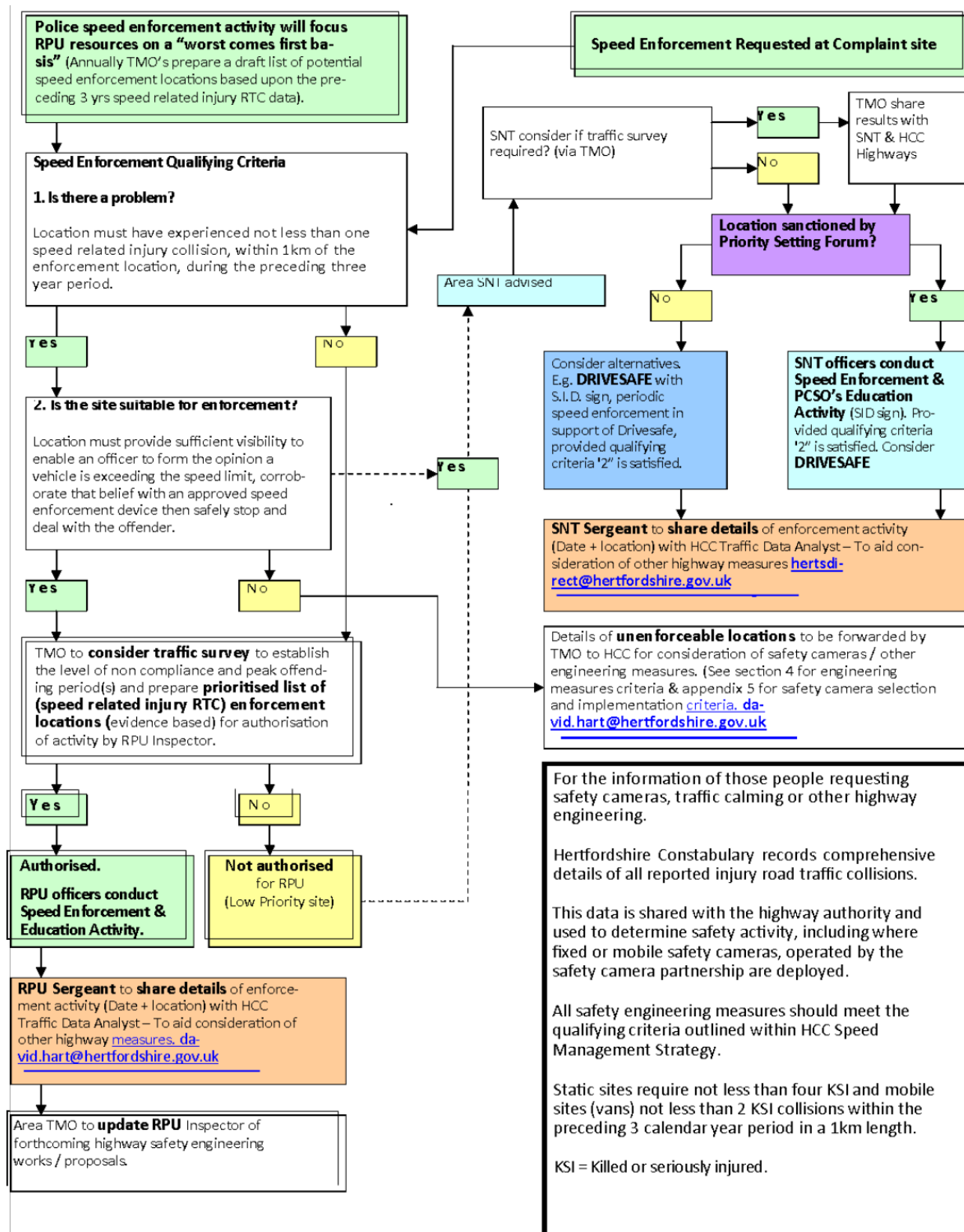
**For sites that have successfully met the criteria above, then the following steps will be undertaken**

**Suitability of site for camera enforcement**

1. Does the collision analysis indicate that safety camera enforcement would address the collision history at the location?
2. There is no other cost-effective engineering solution that is more appropriate to resolve the collision types identified as part of the collision analysis.
3. The highway authority must undertake a site survey, demonstrating the following:
  - That safety camera enforcement is the right solution.
  - That the Traffic Regulation Order (where applicable) and signing are lawful and correct.
  - That where new signage is required this can be installed safely and in compliance with relevant guidance documents.
  - That the site conditions outlined below are achievable

<b>Rule</b>	Site conditions that are suitable for the type of enforcement equipment
<b>Fixed safety camera sites</b>	Access to the camera housing is safe for operational purposes.
<b>Mobile safety camera sites</b>	Location for mobile enforcement is easily and safely accessible. That there is space for enforcement to take place in a visible, legal and safe manner.
<b>Routes</b>	Access to the camera housing is safe for operational purposes. For average systems approval in principle is required for; the structure over the highway; the proposed vehicle restraint system (where required)
<b>Red-light or combined red-light speed</b>	Access to the camera housing is safe for operational purposes.

## Appendix G – Hertfordshire Constabulary speed enforcement guide



## Appendix H – Speed limit form

<b>Part A – to be completed prior to initial consideration by the SMG</b>
All sections to be completed prior to submission to the SMG.
All submissions must include:
<ul style="list-style-type: none"> <li>• Site plan</li> <li>• Speed data (in line with the SMS data collection framework)</li> <li>• Drawings of proposed speed management measures (if applicable)</li> </ul>

Proposing officer contact details			
Name	Email	Tel No	Department
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Source of Request		Choose an item.	
Reasoning		Click or tap here to enter text.	

Site Details					
Road Name	Click or tap here to enter text.		Site code	Click or tap here to enter text.	
From	Click or tap here to enter text.	To		Length	
Town	Click or tap here to enter text.		District/Borough	Choose an item.	
County Division:			Click or tap here to enter text.		
Is the county councillor aware of the proposal?			<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Origin
Police Speed Enforcement site?			<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Speed and Environment Data					
Current speed Limit	Choose an item. mph		Proposed speed limit:	Choose an item. mph	
Place and Movement Value			P		M
Current Measured Speeds (MPH)					
Mean		85 <sup>th</sup>		Difference	
Are current speeds compliant with the proposed limit?					<input type="checkbox"/> Yes <input type="checkbox"/> No
If no, what measures are proposed to bring speeds to the required level?					
Click or tap here to enter text.					

Speed Management Group Recommendation			
Agree in principle	<input type="checkbox"/>	Reject	<input type="checkbox"/>
Reasoning			
Click or tap here to enter text.			
Date	Click or tap to enter a date.		Chair's Initials
Date for decision to be taken to STIB:		Click or tap to enter a date.	

Senior Officer & Executive Member Signoff			
The Strategic Transport Issues Board OR The Senior Officer			
Choose an item.		with the recommendation of the speed management group	
Name:	Click or tap here to enter text.		Date
Click or tap to enter a date.			
The Executive Member for Highways and Environment			
Choose an item.		the recommendation of the speed management group	
Name:	Click or tap here to enter text.		Date
Click or tap to enter a date.			

<b>Part B – to be completed prior to advertising TRO</b>
<b>All sections to be completed prior to submission to the SMG</b>
<b>All submissions must include:</b>
<ul style="list-style-type: none"> <li>• Site plan (including measures, if appropriate)</li> <li>• Consultation response data</li> </ul>

Consultation Details			
<b>Dates of consultation</b>			
<b>From</b>	Click or tap to enter a date.	<b>To</b>	Click or tap to enter a date.
<b>Responses requested:</b>		<b>Responses received:</b>	
<b>For</b>		<b>Against</b>	<b>Neutral</b>
<b>Overall, is there support for the speed limit change?</b>			<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>If no, what is the proposed next step?</b>			
Click or tap here to enter text.			

Stakeholder Comments	
Police	Click or tap here to enter text.
Fire and Rescue	Click or tap here to enter text.
Ambulance	Click or tap here to enter text.
County Member	Click or tap here to enter text.
Highways Locality Manager	Click or tap here to enter text.
PTU	Click or tap here to enter text.
District/Borough Council	Click or tap here to enter text.
Parish/Town Council	Click or tap here to enter text.
Other	Click or tap here to enter text.
Other	Click or tap here to enter text.
Other	Click or tap here to enter text.

Changes to proposal		
<b>Have any changes been made as a result of the consultation?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>If yes, please detail the changes below:</b>		
Click or tap here to enter text.		

<b>Proposer Sign off</b>		
I hereby confirm that the proposals have been checked verified by a suitably experienced WCS Designer/Officer.		
I acknowledge that errors in the application will result in the application being rejected and may not be considered until the next Speed Management Group meeting (Held quarterly)		
<b>Name</b>	<b>Signature</b>	<b>Date</b>

Speed Management Group Recommendation		
<b>Accept</b>	<input type="checkbox"/>	<b>Reject</b>
<b>Reasoning</b>		

## Appendix I – Frequently asked questions

### Setting Local Speed Limits

#### **Q1 What are 85th percentile and mean speeds?**

**85th percentile speeds** are the speeds at or below 85% of all vehicles are observed to travel under free-flowing conditions. This is a nationally recognised method of assessing traffic speeds.

**Mean speeds** are the average speeds that all vehicles travel at.

#### **Q2 What is the difference between a 20mph limit and zone?**

National legislation allows 20mph limits to be generally used where the existing environment encourages and therefore enforces through its nature slow speed. It will be defined by traffic signs showing the speed limit.

A 20mph zone is where the existing environment has been engineered or changed to bring about a slow speed environment. This means that as well as traffic signs showing the speed limit the area may have engineering measures e.g. humps that slow traffic down.

In Hertfordshire these have been combined into 20mph Areas with consistent signing requirements. The technical differences are explained in Appendix E Table E1

#### **Q3 Can we have a 20mph limit or zone outside a school?**

Possibly. As with considering any type of traffic calming measure, consideration first of all has to be given to whether the environment is appropriate for a 20mph limit or zone and whether existing speeds are less than 30mph.

Full details in relation to the Department for Transport Circular 01/2013 “Setting Local Speed Limits” can be found online at:

<https://www.gov.uk/government/publications/setting-local-speed-limits/setting-local-speed-limits>

Secondly, an appropriate funding source needs to be identified - either through the Local Transport Plan, S106 funding or other funding.

- The main funding source for schemes outside or near schools is through the Mode
- Share to School target in the county council's Local Transport Plan. Any scheme which
- is funded in this manner must show that it could encourage more children to walk and
- cycle to school. One of the key criteria for being considered for this funding is that the
- school has written and is implementing a School Travel Plan.
- For other funding sources see Section 15

The county council need to consider what the most effective measure(s) will be. A 20mph limit, zone, advisory limit or variable limit may be considered along with other measures.

#### **Q4 Can I make my whole village/town 20mph?**

Possibly. It would depend on the existing speeds on the area you are considering and the availability of funding to do so. The specifics of the area would need to be looked at using experts within the Highway Service and following the criteria set out in Section 5 and Appendix E.

#### **Q5 But other areas such as Portsmouth have done it.**

Yes, talking in generalities is difficult as no two situations are the same and we could create a false expectation that some is possible when it's not. But to help consider the process further here is a more detailed answer for how you could in Hertfordshire.

The Place & Movement criteria (P2/M1) (discussed in Section 4.3 and 5.2) is a good starting point to identify areas suitable for a 20mph area. From this point the normal processes to create a 20mph limit or zone would need to be applied. The P&M criteria is new for Hertfordshire and provides a better way of identifying things that match our active travel principle. As a starting point officers have identified that the categories (P2/M1 equating to residential streets) and P3/M1 (town centres) matches aspirations for 20mph areas. Other categories with a high place function may also be suitable but will need further investigation.

If all the roads in that category already have a low speed then providing the costs are met then yes, a 20mph area could be applied. Speed limits are subject to legal processes and therefore we can't say a definite yes until it has been through public consultation.

If there are roads in your area where traffic is travelling too fast then there are a couple of ways of dealing with this

- Treat the roads so traffic goes slower (See section 9 for ideas)
- Leave the speed limits on those roads at 30mph.

In all occasions it is best to look at your proposals over a plan and look at the specifics of the problem. Delivering large 20mph areas is complex and needs careful consideration for them to work.

#### **Q6 This seems a long process. Couldn't you just change it all overnight?**

We know from experience that in Hertfordshire where the wrong limits are applied to a road they are generally ignored. We want 20mph areas to work and therefore we want to follow a considered approach and the principles of Speed limits by design.

#### **Q7 Are the views of local residents and councillors taken into account with speed limit changes?**

Any change to the speed limit would require a traffic regulation order. These orders must follow a consultation process, that would allow residents, businesses, and stakeholders the opportunity to comment on proposals and seek clarification from the highway authority.

We may also undertake an engagement exercise prior to this, which will be an informal exercise to gauge the level of support for a scheme and any concerns that residents or stakeholders believe we should be aware of. The results to any consultation will be shared and considered when making a decision.

**Q8 Doesn't lowering speed limits result in more pollution?**

Recent studies (including by Atkins and the Transport Research Laboratory) have not conclusively proven that a reduction in speed leads to an increase in emissions. Evidence suggests that harsh behaviour – that is, rapid acceleration and braking – can lead to an increase in emissions, though not of a significant amount to be detrimental to local air quality.

Conversely, if the road environment creates a consistent speed there is unlikely to be an increase in emissions. This would suggest that careful consideration and selection is used when deploying 20mph areas, and to avoid using intermittent traffic calming that can lead to harsh behaviours

**Q9 Doesn't lowering speed limits result in more congestion?**

Congestion on the highway network forms when there is an obstruction ahead, or where there is insufficient capacity at a certain point to cope with demand and facilitate flow – such as at a junction, or where there is a reduction in running lanes. A reduction in vehicle speeds can, therefore, reduce the volume of vehicles that are entering a junction or obstruction zone, allowing the point to clear. This has been supported by both traffic theory and evidence from smart motorway projects, which ease congestion by introducing lower speed limits so as not to overload capacity.

Whilst, in theory, a vehicle travelling at a lower average speed would take longer to complete a journey than one making the same journey at a higher average speed, the improvements to junction queues and disruption would serve to counterbalance this.

It should also be stressed that the place and movement approach does recognise certain routes have a core function to facilitate vehicle movements, and this would be a factor in considering any speed limit change.

## **Engineering Measures**

### **Q10 Can we have a vehicle activated sign?**

Before vehicle activated signs are considered the Highways department must assess if the issue can be solved using traditional fixed signing.

Recorded speeds also need to be checked and must exceed the NPCC prosecution threshold speed (e.g. 35mph in a 30mph limit, 46mph in a 40mph limit).

There also need to be at least three recorded personal injury collisions that are relevant to the locations, with at least one being speed related.

### **Q11 Does a serious collision need to occur before action will be taken by authorities?**

Although we would like to address sites where it is perceived collisions may occur, funding limitations dictate that our resources must be focused upon sites where collision resulting in injury are already occurring. However, there are other funding sources which are available to address community led concerns (e.g. the Police and Crime Commissioner Road Safety Fund)

### **Q12 Why does the speed limit change so many times over the length of some roads?**

There are locations where relatively short speed limits have been introduced called buffer zones. These are used to bring vehicle speeds down gradually and provide better compliance within the lower speed limit. Most limits will be a minimum of 600m in length, or 400m in exceptional circumstances.



## **Speed Enforcement**

### **Q13 Please can we have more speed enforcement?**

Due to limited resources, the police prioritise speed enforcement activity at locations with a history of speed related collisions.

Additional speed enforcement requests can be considered for periodic attention by the ward Priority Setting Forum which meets every three months.

### **Q14 How can I find out about my local Priority Setting Forum?**

Details, dates and locations of these panels can be ascertained by telephoning 101 or contacting the relevant Safer Neighbourhood Team. Details can be found at:

<https://www.police.uk/pu/your-area/hertfordshire-constabulary>

### **Q15 Who carries out speed enforcement?**

The police are responsible for the enforcement of speed limits.

The county council as the Highway Authority is responsible for the management of speed on all public roads in Hertfordshire (except trunk roads and motorways which are managed by Highways England).

### **Q16 How do I contact my local Safer Neighbourhood Team?**

Contact details can be found on Hertfordshire Constabulary's website at this location -

<https://www.police.uk/pu/your-area/hertfordshire-constabulary>

### **Q17 How can I access Community DriveSafe?**

For further information about the Community DriveSafe scheme please visit the following web page: <https://www.hertscommissioner.org/community-drivesafe-scheme-hertfordshire>.

## **Safety Cameras**

### **Q18 Can we have a safety camera?**

The county council considers any location for a safety camera against the criteria in Section 12 and 'Criteria for Safety Camera Core Site Selection and Implementation' matrix.

(Appendix F)

### **Q19 Can we have a safety camera if we pay for it?**

No, it is essential that the provision of every camera site can be justified by a logical and democratically supported process which is through the 'Criteria for Safety Camera Core Site Selection and Implementation' matrix (Appendix F). It should be noted that there are ongoing maintenance and back office costs beyond the initial cost of providing and installing a camera.

### **Q20 Aren't speed cameras just a means of making money from motorists?**

Section 12 provides details on the nature of enforcement camera technology found on the Hertfordshire network.

Safety cameras are installed to discourage speeding where there has been a proven history of injury or death. Appendix F of the SMS includes the appropriate criteria and matrix for site selection that is used by the Hertfordshire Safety Camera Partnership

## **Education, Training and Publicity**

### **Q21 How can I find out more about:**

- Speed awareness courses
- The driver improvement course
- Advanced driving courses
- Motorcycling courses

Go online at [https:](https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/speed-awareness-and-driver-training/speed-awareness-and-driver-training.aspx)

[//www.hertfordshire.gov.uk/services/highways-roads-and-pavements/speed-awareness-and-driver-training/speed-awareness-and-driver-training.aspx](https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/speed-awareness-and-driver-training/speed-awareness-and-driver-training.aspx)

## Appendix J – Key Criteria Overview


Reference	Comment	Location
KC1	An assessment of the environment must be made to confirm that a speed limit is appropriate for the road. The Hertfordshire Speed Limit Framework will be used to meet this criterion	Table 2
KC2	An assessment of the place and movement function of the road will be made to determine whether the appropriate speed limit will enable the correct place and movement activity to be undertaken. The HCC Webmap layer will be used for this assessment	Table 2
KC3	For 30mph to 70mph limits, the mean speed should not exceed the proposed limit once implemented.	Table 2
KC4	Mean and 85th percentile speeds will be collected before a limit is implemented or changed. Although mean speeds will be used as the basis for setting speed limits, if there is not a consistent relationship between the 85th percentile and mean speeds (see Appendix C), the appropriateness of the existing limit will be reconsidered.	Table 2
KC5	When collecting existing speed data this should be recorded on the fastest section of road in free-flowing conditions.	Table 2
KC6	When considering a revised speed limit, the promoting officer must follow the speed limits and zones implementation process and complete a Speed Limit Change Form to ensure that all the relevant SMS criteria have been met.	Table 2
KC7	The form is to be submitted to the Speed Management Group for approval prior to consultation and again following legal advertisement	Table 2
KC8	HCC use a collective term of 20mph Areas to describe either a 20mph zone or a 20mph limit. 20mph Areas have different requirements to that found in national guidance and will always confirm to legislation. (A comparison table is contained within Appendix E)	Table 3
KC9	When collecting speed data for 20mph areas, the following will apply: The lead engineer will visit all roads in a proposed area Mean speeds will be collected in all roads where there is a concern that vehicle speeds are high Mean speeds will be collected in a random sample of other roads within the proposed area The locations of the above will be agreed with the relevant police traffic management officer With the correct judgement and experience this should avoid the need to count every road within a proposed 20mph Area.	Table 3
KC10	An assessment of the environment must be made to confirm that a 20mph speed limit is appropriate for the road(s). The Hertfordshire speed limit framework will be used to meet this criterion	Table 3

Reference	Comment	Location
KC11	20mph areas without traffic calming measures will only be considered where the existing mean speeds are 24mph or below.	Table 3
KC12	Speeds will be re-measured within one year on the roads that were surveyed before implementation, and must demonstrate that: 20mph areas have a maximum mean speed of 24mph or below once implemented, and 20mph areas are generally self-enforcing.	Table 3
KC13	Where post schemes have a mean higher than 24mph then there are two options: Reintroduce the 30mph limit in whole or part, Introduce traffic calming measures	Table 3
KC14	The 'Bus Infrastructure in Hertfordshire - Design Guide' says that if physical measures in a 20mph area are considered necessary on a bus route then the extent of these features (or length of area) should be kept to a minimum so as not to adversely affect the quality of the ride.	Table 3
KC15	Advisory 20mph limits will only be considered outside schools where existing mean speeds are 30mph or less.	Table 3
KC16	Variable 20mph limits need to be self-enforcing and have a maximum mean speed of 24mph during their times of operation. A speed limit change form will still be required.	Table 3
KC17	The default position for the county council is that a 20mph area will be implemented – if the environment allows – when new schools are proposed or significant changes are made to existing school facilities	Table 3
KC18	Where new roads are designed for 20mph then a traffic regulation order is required to be progressed and funded by the promoter. This applies even if the road has been designed along principles within the 'Manual for Streets'	Table 3
KC19	The County Council may consider 40mph zonal rural speed limits subject to criteria including: The zone being self-enforcing. Mean speeds on all roads within the zone will be 40mph or less once implemented. The zone will be within a defined geographical area, e.g. bounded by A & B roads or in an AONB. The zone would have a predominantly local, access or recreational function and/or form part of a recommended network of routes for vulnerable road users. A recognised or known collision problem	Table 4
KC20-42	Engineering and design measure specific key criteria	Appendix K – Key Criteria for Engineering Measures
KC43	SIDs funded using the Highways Locality Budget (HLB), the Police and Crime	Table 7

Reference	Comment	Location
	<p>Commissioner's Road Safety Fund (PCC), or HCC core budgets must meet at least one of the following speed criteria:</p> <p>Average speed must be above the posted speed limit.</p> <p>The 85th Percentile speed must be over the National Police Chiefs' Council's (NPCC) guideline values.</p>	
KC44	SIDs funded by other sources (not HLB, PCC or HCC core budgets) are not subject to the speed criteria	Table 7
KC45	SIDs are not recommended for speed limits above 40mph	Table 7
KC46	In all cases SIDs are required to satisfy the location requirements in Table 6	Table 7
KC47	The County Council will use the 'Criteria for Safety Camera Site Selection and Implementation' matrix in Appendix F to assess the suitability and implementation of locations for safety cameras	Table 9
KC48	The County Council will continue to run and develop education, training and publicity programmes to reduce speed related collisions.	Table 10

## Appendix K – Key Criteria for Engineering Measures


### Speed Limit Buffer Zones (KC20 & KC21)

	<p>On the outskirts of villages/urban areas, or where there is intermittent development beyond the existing 30mph, it may be appropriate to introduce a short (400-600m) section of intermediate speed limit if immediate speed reduction causes real difficulty or is likely to be less effective.</p>
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#### DfT Circular 01/2013 *Setting Local Speed Limits*

<p>KC20</p>	<p>Buffer zones provide a step down where the change in limits is significant. I.e. National to 30mph or National to 20mph and where there is evidence (or it is likely based on engineering judgement) that mean speeds are likely to be higher when entering the lower limit due to the absence of a speed reducing feature.</p> <p>In some circumstances it might be appropriate to consider an intermediate speed limit of 40 mph prior to the 30-mph terminal speed limit signs at the entrance to a village, in particular where there are outlying houses beyond the village boundary or roads with high approach speeds. In this instance the choice of the buffer zone speed limit must reflect actual vehicle speeds.</p>
<p>KC21</p>	<p>DfT circular 01/2013 states that buffer zones should generally be no less than 600m. In exceptional circumstances lengths of between 400 – 600m can be considered. Advice in these instances should be sought from the Speed Management Group</p>

## Speed limit countdown markers (KC22)

	<p>Countdown markers have been used on the approach to speed limit terminal signs to highlight to drivers that they are approaching a lower speed limit. Legislation does not prescribe the use of countdown markers on the approach to speed limit terminal signs.</p>
KC22	<p>Countdown markers are not be used due to lack of supporting legislation.</p>

## Home Zones (KC23 – KC25)

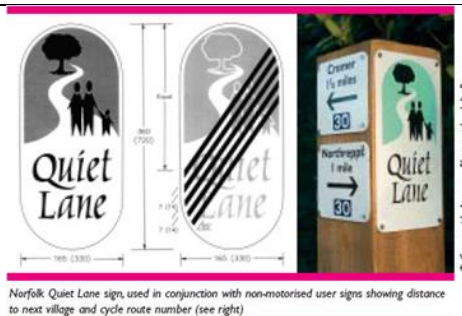
	<p>Home Zones aim to improve the quality of life in residential roads by making them places for people, instead of just being thoroughfares for vehicles. The key elements to a Home Zone are:</p> <ul style="list-style-type: none"> <li>• Community involvement to encourage a change in user behaviour</li> <li>• For the road to be designed in such a way as to allow it to be used for a range of activities and to encourage very slow vehicle speeds (usually involving sensitively designed traffic calming).</li> </ul>
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- Transport Act 2000
- SI 2006 No. 2082 - The Quiet Lanes and Homes Zones (England) Regulations 2006
- DfT Circular 2/06 The Quiet Lanes and Home Zones (England) Regulations 2006
- LTN 1/07 Traffic Calming - Section 3.1 Shared road space
- TAL 8/02 Home Zones - Public Participation
- TAL 10/01 Home Zones - Planning and Design
- Manual for Streets

KC23	Home Zones will only be considered where mean speeds are 24mph or less.
KC24	A Home Zone will only be considered where the afternoon peak flows are less than 100 vehicles.
KC25	Due to their expense, all requests for Home Zones will be considered by the Speed Management Group



## Quiet Lanes (KC26)



Quiet Lanes are minor rural roads that are appropriate for use by walkers, cyclists, horse riders and motorised users. These roads should have low levels of traffic, travelling at low speeds.

The aim of Quiet Lanes is to maintain the character of minor rural roads by seeking to contain rising traffic growth that is widespread in rural areas.

The Quiet Lanes concept involves two key elements:

- Local community engagement to encourage a change in driver behaviour.
- Area wide direction signing strategy to re-route traffic and Quiet Lane network signing.

The concept is aimed at identifying networks of minor rural roads and is not solely about addressing issues on individual roads. Where possible public rights of way should be included within these networks.

The concept is not intended as a device to traffic calm busy roads or to address issues of rat running and heavy goods vehicle movements.

- SI 2006 No. 2082 - The Quiet Lanes and Homes Zones (England) Regulations 2006
- DfT Circular 2/06 The Quiet Lanes and Home Zones (England) Regulations 2006
- LTN 1/07 Traffic Calming - Section 3.1 Shared road space.
- TAL 3/04 - Quiet Lanes

KC26	Quiet lanes are gateway features within rural areas. However, based on evidence collated from previous work (including the Hertfordshire trial), Quiet Lanes will not be implemented due to their limited success.
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## Gateway and entry features (KC27 & KC28)



Gateways are used to signify the approach into a settlement or traffic calmed area. They can take many different forms, but those implemented to date have most commonly incorporated:

- a distinctive change in road surface colour or material
- a prominent sign to alert drivers to the calmed area
- 'Dragons Teeth'

Gateway features are normally used on the approach to settlements to reinforce a lower speed limit and reinforce the village identity.

An entry treatment is a form of a gateway and is usually used in urban areas. Entry treatments have been developed for use at side roads to let drivers know that they are leaving a major road and entering an area of different character, which may be a residential road. They may indicate the start of a series of traffic calming measures, or they may identify the gateway at the boundary of a 20mph zone or Home Zone.

LTN 1/07

KC27	Gateway and entry features will be only be considered as part of a package of measures to assist in the reduction of vehicle speeds.
KC28	Careful consideration will be given to material choices for gateway and entrance features in relation to future maintenance liabilities

## Chicanes (KC29 & KC30)



Chicane designs vary considerably but most fall into two broad categories

- Single lane working, consisting of staggered build outs and narrowing the road so that the traffic from one direction has to give way to opposing traffic
- Two way working, using build outs to provide deflection but with lanes separated by road markings or a central island.

A single lane working chicane allows traffic flow in both directions, but there is only room for one vehicle to pass at a time. Generally, priority is given to one direction, so that the possibility of vehicle conflicts is minimised. Priority should be given to vehicles leaving a traffic-calmed area, so that the speed of vehicles entering is reduced.

Two way working chicanes require more carriageway width than single lane chicanes, as they allow two vehicles to pass in opposite directions at the same time. Where chicanes do not have a central divider, vehicles can encroach into the opposing traffic lane, and this may result in less speed reduction being achieved, and/or safety being compromised.

LTN 1/07

KC29	When using single way working, two-way vehicle flows should not exceed 3,000 vehicles per day and shall not exceed 4,000.
KC30	Chicanes can be used on roads with a speed limit of 40mph or below.

## Pinch points (KC31 & KC32)




A pinch point is where the road is narrowed from both sides at the same position along the road for a distance of 5 to 10m. By implementing this measure, the carriageway width can be restricted so that only one vehicle at a time may pass, or so that two vehicles can pass slowly. Roads with a high frequency of buses and/or heavy goods vehicles need a wider carriageway width between the pinch points.

Pinch points can be used as crossing points for pedestrians, but this would prevent a cycle bypass being installed. As this measure creates conflict between vulnerable users (one's benefit is traded for another) consider alternative measures before using pinch points as pedestrian crossing points.

LTN 1/07

KC31	Pinch points will not be used in isolation to reduce vehicle speeds, only as part of a package of measures.
KC32	Pinch points will not be used in a road with a speed limit above 40mph.

## Roundels and Road Marking

	<p>Road markings and roundels, as specified in the TSRGD, may serve to reinforce some elements of driver behaviour. Alone they may have a very limited impact on speed compliance (around 1-2mph), and ultimately should be secondary to the environment, but remain a measure that can be considered for installation.</p>
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- TSRGD
- LTN 1/07

## Central islands and refuges (KC33)



Central islands and refuges can be installed in the middle of the carriageway to narrow the width of the traffic lanes and assist in reducing vehicle speeds. Such facilities must be accompanied by the relevant road markings.

These can create pinch points for cyclist if designed to reduce traffic speed.

LTN 1/07

KC33

Central islands and refuges will only be used as part of a package of measures in order to reduce speeds. They will not be used in isolation for the purpose of traffic calming.

## Round top and flat top humps (KC34 & KC35)




A pinch point is where the road is narrowed from both sides at the same position along the road for a distance of 5 to 10m. By implementing this measure, the carriageway width can be restricted so that only one vehicle at a time may pass, or so that two vehicles can pass slowly. Roads with a high frequency of buses and/or heavy goods vehicles need a wider carriageway width between the pinch points.

Pinch points can be used as crossing points for pedestrians, but this would prevent a cycle bypass being installed. As this measure creates conflict between vulnerable users (one's benefit is traded for another) consider alternative measures before using pinch points as pedestrian crossing points.

- SI 1999 No. 1025 - The Highways (Road Humps) Regulations 1999
- LTN 1/07 Traffic Calming
- Bus Infrastructure in Hertfordshire – A Design Guide (June 2011)
- Protocol for the construction of Vertical Traffic Calming WCS-D-172

KC34	Humps shall be more than 25m from a bus stop. Speed cushions are preferred to speed tables on bus routes.
KC35	Round top humps are not permitted on bus routes and the principal (A) road network.

## Cushions (KC36 & KC37)

			Cushions are favoured more commonly over road top and flat top humps
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- SI 1999 No. 1025 - The Highways (Road Humps) Regulations 1999
- LTN 1/07 Traffic Calming
- Bus Infrastructure in Hertfordshire – A Design Guide (June 2011)
- Protocol for the construction of Vertical Traffic Calming WCS-D-172

KC36	Parking restrictions may be needed near cushions on bus routes.
KC37	Cushions will be constructed in asphalt due to whole life cost of the alternatives




## Sinusoidal humps

	Sinusoidal humps are type of road hump which have a less severe profile for cyclists. These have not yet been used in Hertfordshire, but we are open to discussions about their use.
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- LCDS
- LTN 1/20

## Rumble strips (incl. Rumblewave) (KC38 –KC41)

	<p><b>Rumble strips</b> Rumble devices are designed to provide a vibratory and/or audible effect. They are intended to alert drivers to take greater care in advance of a hazard such as a bend or junction, and to help in reducing vehicle speeds.</p> <p>Reliance should not be placed on such traffic calming surfaces alone when seeking speed reduction.</p> <p><b>Rumblewave</b></p> <p>TRL Ltd was commissioned to develop a profile that would create noise and vibration within vehicles passing over it, but not increase noise levels significantly for those outside the vehicles.</p>
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LTN 1/07 Traffic Calming

TAL 1/05 Rumblewave Surfacing

KC38	Rumble strips should be used across the full width of the carriageway to avoid vehicles swerving to avoid them.
KC39	Rumble strips must be more than 200m from any residential property and are therefore suited to rural areas.
KC40	Rumble strips should only be used as a part of a package of measures (i.e. as part of a village gateway).
KC41	Rumblewave surfacing is not recommended due to concerns over its effectiveness and the whole life cost of the product.

## Mini roundabouts (KC42)



Mini roundabouts assist in giving easier access from side roads. A mini roundabout should not be considered as a traffic calming measure in isolation and should only be considered as a package of measures.

CD116

KC42

Mini roundabouts should only be considered as a part of a package of measures to reduce vehicle speeds.

## 18.3 Hertfordshire - County of Opportunity

### **Our services include:**

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- Household waste and recycling centres
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To find out who your county councillor is and how to contact them, visit:

<https://democracy.hertfordshire.gov.uk/mgMemberIndex.aspx?bcr=1>

You can access the internet for free at any Hertfordshire library.

## Appendix IV

### Hertfordshire's Speed Management Group Comments

McCauley, Lindsay

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From: Lindsay McCauley1 (Highways) [REDACTED]  
Sent: 09 March 2021 13:48  
To: McCauley, Lindsay  
Subject: FW: Speed Management Group - Bullen's Green Lane, Colney Heath

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From: [REDACTED]@hertfordshire.gov.uk>  
Sent: 09 March 2021 12:26  
To: Lindsay McCauley1 (Highways) [REDACTED]  
Cc: [REDACTED]  
Subject: RE: Speed Management Group - Bullen's Green Lane, Colney Heath

Hi Lindsay,

I've now had feedback on these proposals from the Speed Management Group, including from the police liaison.

The unfortunate headline is that we would not support a speed limit change as detailed for several reasons, as detailed below:

- The environment does not support a 30mph
  - Bullen's Green Lane is a P1/M1 rural lane, not considered suitable for a speed limit in most situations. The 'rural' 30mph criteria as detailed in the SMS (page 28) is: Villages with 20 or more houses over a length of at least 600m, with a density of 3 houses per 100m (minimum). If there are fewer than 20 houses, exemptions can be made for key attractor buildings such as schools, shops, or places of worship
  - The proposed widening at the junction point may lead to an increase in traffic speeds without on street parking as witnessed further along Bullen's Green Lane, and would be counter to expectations when entering a lower limit
  - We don't have information on the placement or number of properties that may contribute to an active frontage, however from the access proposal it would appear a row of planting will separate the carriageway from the footpath. This will not substantively improve the perception of the environment for drivers
- It is unclear where the speed surveys were taken
  - The details provided suggest these were around 100m N and S of the proposed site access. Without know the exact location, we can't be certain what has contributed to the detected speeds or that Key Criteria 5 has been met
- Existing speeds are already above the proposed 30mph limit
  - We are assuming that site 2 is the area outside of the 30mph limit; average speeds here are already over 30mph in contravention to Key Criteria 3 of the SMS and there is no proposed intervention to reduce these speeds prior to the establishment of an access
- There is no clear relationship between 85<sup>th</sup> percentile and mean speeds recorded in the survey
  - Referring again to site 2, there is a clear delta between 85<sup>th</sup> percentile and mean speeds. This discrepancy has previously been found to suggest a difference between what is the perceived appropriate speed, and the speed that drivers feel able to progress. On this instance, given the lack of mitigating features this is likely to continue after a speed limit change and would not be supported.

Dan



Sent: 15 February 2021 23:03

To: Daniel

Cc:

Subject: Speed Management Group - Bullen's Green Lane, Colney Heath

Hello Daniel,

I hope you are well?

I have a planning application that is in St Albans but is also in Welwyn Hatfield. This application has gone to appeal now so they are trying to clear up a number of the outstanding refusals (one being highways). They have proposed an access that is designed to 30mph; however, at the point of access the posted limit is derestricted (60mph). The applicant is proposing to change the speed limit from the point where the limit currently changes approximately 100-120m north of the proposed access to a point approximately 100m south of the proposed access.

The application is being taken to appeal and they have submitted additional information to support that the change is feasible. Please see attached the speed data from ATCs which were placed on Bullen's Green Lane approximately 100m either side of the proposed access. The TA Addendum stated: 'Automatic Traffic Counters (ATCs) were installed approximately 100m to the north and south of the proposed site access on Bullen's Green Lane. The ATCs recorded vehicle speeds, in addition to the number of vehicles and vehicle classifications in both directions. The survey was carried out between 25/09/20 and 01/10/20. ' The summary of the data showed that the 85<sup>th</sup> percentile and mean speeds were as follows:

- 2.25 The mean and 85<sup>th</sup> percentile speeds recorded over 24 hours at both ATC locations, are presented in Table 2.5 below.

Table 2.5: Speed Survey Results Northbound and Southbound on Bullen's Green Lane

	Mean Speed (mph)	85 <sup>th</sup> Percentile Speed (mph)
Northbound - ATC 1	22.6	28.7
Southbound - ATC 1	23.4	28.5
Northbound / Southbound - ATC 1	23.0	28.6

	Mean Speed (mph)	85 <sup>th</sup> Percentile Speed (mph)
Northbound - ATC 2	26.4	33.7
Southbound - ATC 2	27.7	33.5
Northbound / Southbound - ATC 2	27.1	33.6

The proposed access design is attached, a snapshot of proposed site and Bullen's Green Lane (around where the access would be) are provided below and a link to the google map is < [Here](#) >.





As I mentioned, this is going to appeal and we need to Grampian Condition the TRO for Speed Reduction; however, the LPA would like to know if it is likely to get approval. Is there any chance of getting the Speed Management Group together to discuss this scheme to give us an indication of whether the TRO would likely be successful/supported? I understand that an in principle review of acceptability of speed limit change can be undertaken via email during this period as well.

If you have any other questions or need additional details please do not hesitate to let me know.

Thank you in advance.

All the best  
Lindsay



Lindsay McCauley, MCIHT  
Principal Transport Planner | She/Her  
Development Management | Whole Client Service, Environment &  
Infrastructure  
Hertfordshire County Council  
County Hall, Pegs Lane, Hertford, SG13 8DE



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