

2 Speed and Traffic Management



1. Introduction

The Department for Transport (DfT) publishes guidance for Highway Authorities on setting local speed limits. Essex County Council has in turn developed a speed policy that takes into account the effect that appropriate traffic speeds have on environmental and social objectives, as well as their effect on road safety at a national and local level. Both documents place a high importance on consistent and coherent speed management to encourage driver compliance and to seek to reinforce the driver's assessment of the safe speed to travel.

Please note that the Essex Speed Management strategy is currently under review.

2. Typical Problems

'People are speeding through the village'

'The speed limit should be 20mph outside the school!'

'We need a roundabout so we can get out of the junction'

'There are lots of speeding cars and it isn't safe'

'We need a roundabout to slow the traffic.'

'Drivers are going too fast and I can't cross the road'

The speed at which a vehicle is travelling can be very difficult to estimate without collecting accurate data. Therefore, in order to accurately determine vehicle speeds, a speed survey can be undertaken. This is a process whereby tubes are laid across the road which record the speed of each vehicle crossing them. The survey also collects various other data, such as traffic volumes and times.

3. Things to Consider



It is often the case that residents' perception of a speeding problem is not supported by speed data.

Speed limits set the maximum legal speed which any vehicle should not exceed.

It is essential for motorists to know the speed limit for the road they are travelling on and remain within the prescribed maximum speed, as well as taking into consideration the road conditions and the vehicle that they are driving when determining a suitable speed at which to travel.

Where speeding is occurring, it is common to find that many of the people speeding are local residents. This is usually because they are familiar with the environment and adjust their driving accordingly.

Essex Speed Management Strategy

This [Essex Speed Management Strategy](#) sets out a consistent approach to speed management which will assist drivers to understand the speed they should be travelling wherever they are within the County.

The information in the members' toolkit is taken from the [strategy document](#). For more information please consult the full strategy document.

Any speed management decision outside the strategy must be approved through a Cabinet Member Action.



4. Typical Measures

Speed Limits

Changing speed limits can be very contentious and generally leads to significant objections. As a result, the process can be very lengthy and unlikely to please everyone. Any request to change an existing speed limit through the LHP will need to be assessed to ensure it meets The Essex Speed Management Strategy. Managing speed within an area may be more effective and easier to deliver.

Any changes to speed limits require a Speed Limit Order (SLO), which would include the Police as a statutory consultee. Once this is in place and is correctly signed then the speed limit is legally enforceable. Any enforcement activity would be considered against Police resources at that time.

If the legal process is not followed and/or the signing is not correct then the limit cannot be enforced.

The statutory process includes a formal consultation period (usually 21 days) during which time anyone can make written representations to the proposals.



If there are objections that cannot be resolved the LHP has three options:

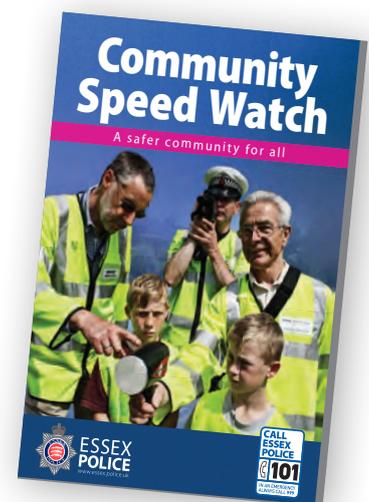
- Abandon the scheme.
- Submit a Cabinet Member Action to implement the scheme as designed.
- Amend the scheme to accommodate the objections although this will

incur additional design costs and potentially further formal

consultation

Community Speed Watch

Community Speed Watch is a traffic monitoring scheme that is co-ordinated by Essex Police but managed and run by volunteers in the community. The aim is to address the problem of real or perceived speeding in partnership with the community, in order to reduce the number of injuries from speed related road traffic collisions. Monitoring of speeds will be undertaken by pairs of volunteers in reflective 'Community Speed Watch' jackets supported by advance warning signs. Their operational logs will be forwarded to the Essex Police Mobile Support Division.



First time offenders will be sent warning letters by the Police with second and subsequent offences leading to Police action.

20mph limits and zones

A 20mph limit consists of a speed limit change however these are commonly installed with no physical measures to reduce vehicle speeds. Whereas a 20mph zone is designed to be self enforcing due to traffic calming measures, as well as the change in speed limit.

Permanent 20mph zones are not permitted on County Priority 1 and Priority 2 (PR1 and PR2) Routes. Permanent 20mph speed limits will not be permitted on PR1 routes and only permitted on PR2 routes in exceptional circumstances and with Cabinet Member Approval.



20mph speed limits will be permitted on **Local Roads** where

current speeds are greater than 24mph but equal to

or lower than 29mph. However, it must be noted that Police activity to enforce such a limit would be unlikely. It should also be noted that physical traffic calming measures will not be installed as part of a 20mph limit, they do however require repeater signs.



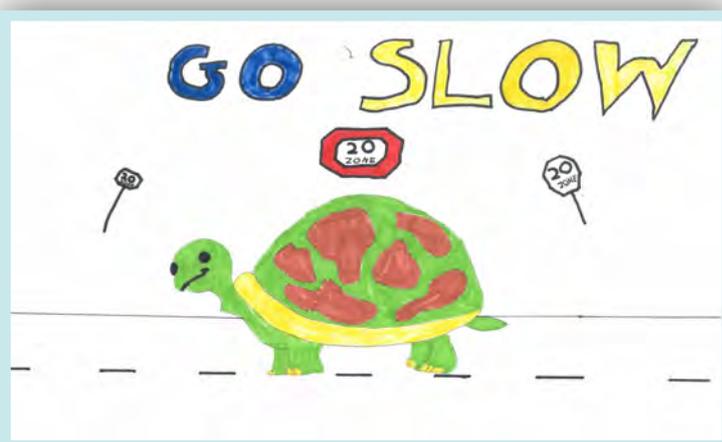
Where mean speeds are below 20mph then a 20mph speed limit or zone would not be appropriate, as it could lead to an increase in speed.

'20s Plenty'

This is a scheme for advisory 20mph limits, which cannot be enforced, on local 30mph roads outside educational establishments. The scheme is not suitable for PR1 route.

The scheme engages with schools and encourages locally designed 20mph signs that can be used to emphasise the speeds expected in the vicinity.

The winning design will be chosen by the local County Councillor and who would be invited to present the winner with a gift token. The LHP will normally be responsible for revenue funding a £25 gift token for the winning sign design.



4. Typical Measures continued

If you are interested in forming or joining a Community Speed Watch group, please email community.speedwatch@essex-fire.gov.uk.

'20's Plenty' must be supported by the " Small Changes Pledge" where schools and parents sign up to commit to the 20mph limit.

Requests for '20's plenty' must be validated to make sure they are likely to reduce the speeds and are suitable for the proposed location. The scheme also requires a Cabinet Member Action. The below table can be used as a quick reference guide to the approved criteria:

| Speed Restriction | Priority County Route One PR1 | Priority County Route Two PR2 | Local Roads |
|-------------------|-------------------------------|--|---|
| 20mph Speed Limit | Not Permitted | May be considered with the approval of the Cabinet Member for Infrastructure via a CMA where speeds are at or below 24mph in accordance with DfT guidance on the application of 20 mph limits. | May be considered; however, if mean speeds are lower than or equal to 24mph, Cabinet Member for Infrastructure approval is required. If mean speeds are >24mph but < 29mph, a 20mph speed limit may be considered in areas where a high volume of non-motorised road users may be expected. If mean speeds <20mph it would not be appropriate to install a limit. |

| Speed Restriction | Priority County Route One PR1 | Priority County Route Two PR2 | Local Roads |
|---|---|--|---|
| 20mph Zone | Not Permitted | May be considered with the approval of the Cabinet Member for Infrastructure via a CMA where speeds are at or below 24mph in accordance with DfT guidance on the application of 20 mph limits. | May be considered providing that set conditions are met and that there is a majority of local residents supporting the scheme |
| Mandatory Variable 20mph Limit (30/20 mph) | Only considered if the request is made through the Safety Engineering team and in consultation with the Cabinet Member | Will be considered if mean speeds are at or below 35mph in accordance with policy | Formal approval by the Cabinet Member for Infrastructure on a CMA. Full justification and rationale required. |
| Mandatory Variable 20/30mph limit in vicinity of school | Only considered if the request is made through the Essex Safety Engineering Team in consultation with the Cabinet Member for Infrastructure | Will be considered if mean speeds are at or below 35mph in accordance with policy | Should only be considered following examination of the use of advisory school flashing warning signs; in accordance with policy |
| Advisory flashing part time 20mph in vicinity of school | Not Permitted | Can be considered on an existing 30mph limit, where mean speeds at school times do not exceed 35mph and for a length not exceeding 250m | Can be considered on an existing 30mph limit, where mean speeds at school times do not exceed 35mph and for a length not exceeding 250m |

4. Typical Measures continued

Speed limits

Speed limits must always be implemented in a consistent way and must appear sensible to the driver. If drivers cannot understand why a limit is in force, many are unlikely to comply with it. The environment is the major determining factor in speed choice, so drivers should expect to see the same limits in similar environments. This consistency breaks down if exceptions are made and, as a result, drivers encounter unexpectedly low limits. These limits are the most likely to be abused but bring other limits into disrepute. Any posted speed limit would be a maximum and not a target speed

30mph speed limits

A 30mph speed limit would be the default in urban areas and villages. A system of street lighting along a road would indicate a 30mph speed limit, unless signed otherwise. Essex County Council has relaxed the Department for Transport definition of a village (under Traffic Advisory Leaflet TAL01/04) being 20 or more houses over a minimum length of 600 metres. The ECC requirements are for 11 or more properties to include houses, shops, churches or schools or public houses (traffic generators) over a minimum length of 350 metres.

40 and 50mph speed limits

Roads suitable for 40mph are generally higher quality suburban roads or those on the outskirts of urban areas where there is little development. A 40mph speed limit could also be considered where there is a high number of bends, junctions or accesses, development, a strong environmental or landscape reason or where there could be considerable numbers of vulnerable road users.

A 50mph speed limit would be used on higher quality roads, with little or no roadside development. They are often dual carriageway ring or radial routes or bypasses which have become partially built up.

National Speed Limit

If a road does not have a 20, 30, 40 or 50mph speed limit it would be classified as “national speed limit”. It is shown by a circular white sign with a single diagonal stripe through it. For cars the “national speed limit” would mean

- 60mph on a single carriageway
- 70mph on a dual carriageway/motorway.

4. Typical Measures continued

Managing speeds

Managing driver behaviour and encouraging drivers to stay within the speed limit can be achieved in many ways.

Build-outs

Essex County Council will consider the installation of build-outs:

- Where parking and cycling can be accommodated and congestion is not likely.
- Where any concerns from frontagers and bus providers has been addressed.
- The build-out design must include a physically protected cycle bypass lane of at least 1.5m width unless it has been designed in association with pedestrian crossing facilities. Or if this is not achievable, an unprotected cycle lane of over 1.5m. Or if this is not achievable a maximum running lane width of 3.0m.



Cyclists can be vulnerable where reduced road width brings them into close contact with motorised vehicles that might try to pass them.

Street furniture, such as bollards, associated with build-outs, can often be struck by vehicles adding to a maintenance liability.

Gateway features

These provide a visual clue to the start of a village. They can be effective in reducing the speeds on the approach to a village. The Parish/Town Council may need to take on the future maintenance of a village gateway depending on what features it includes e.g. planters/planting in the verge, both of which will require a licence.



Vehicle Activated Signs (VAS) and Speed Indicating Devices (SID)



Vehicle Activated Signs and Speed Indicating Devices can be an asset to the local community. Both types of device are activated by a vehicle's speed. The SID shows the actual speed of the vehicle, often accompanied by a pictogram of a smiley or sad face.

A VAS will show a set image, such as the speed limit, if the speed limit is exceeded. A VAS may also be used to indicate the proximity of a bend or junction to give drivers advance warning at casualty reduction sites.

It should be noted that ongoing maintenance for a VAS is currently funded from the limited LHP revenue budget so careful consideration should be given when installing new units across the County.

It is feasible for any Parish, District, Borough or City Council to buy, rotate and maintain a small VAS or SID on the highway network with the necessary approvals.

Rumblewave surfacing

Rumblewave surfacing is not suitable in residential areas due to noise and vibration. TAL 01/05 states that it is largely ineffectual when used alone so is rarely used as a speed reduction measure.

Where it has been installed it has been shown to require regular and expensive maintenance which places a significant burden on the ongoing maintenance budgets.

Coloured Road Surfacing

Essex County Council will **not** consider the use of red coloured road surfacing for Speed Management except in association with a Collision Reduction site unless used at a gateway or to highlight a specific hazard. The limited use is down to several factors including maintenance implications, its effect on the environment and the cost of installation.



Road Humps and Speed Cushions

Essex County Council will only implement road humps as a last resort after all other traffic calming measures have been considered and only on urban Local Roads. Any proposal for road humps and cushions needs to show why other measures cannot be implemented.

Full consultation with the local community and emergency services must be undertaken as they must be made aware of any negative impacts that a scheme comprising physical measures might have. This may include noise, discomfort or exclusion for certain user groups, including local disability/ access groups, loss of parking in some instances and changes to the visual environment. If road humps are used within a scheme, all physical measures relating to this addition will be subject to both informal and formal consultation.



Emergency services and bus operators (public and school services) are generally opposed to these measures so it is important to consult with these at an early stage. Public and school bus operators affected by any scheme are to provide written agreement to the scheme. In some instances the bus operators will not use a route with speed humps/cushions and may remove the service. If agreement cannot be reached, the community and ultimately the Cabinet Member for Infrastructure will have to consider whether the advantages of the scheme outweigh the possible loss of a bus service.

Carriageway Markings

All road markings add to the maintenance burden for the Council. Maintenance outside the normal maintenance regime will not normally be possible, however it may be feasible for an LHP to carry out a carriageway marking improvement scheme.

- **Edge Lining** can be used in a rural location. It can make the road appear narrower and protect carriageway edges from erosion.
- **Central Hatching** can only be used to reduce speeds at bends as part of a casualty reduction scheme.
- **Dragons Teeth** are no longer supported by Essex County Council as there is no documented evidence of the success of installing these markings in reducing drivers' speed. There is also a maintenance liability with their use. The DfT state that they can have little effect on amending driver behaviour.
- **Aesthetic Improvements** can be considered by the panel for relining existing road markings which they deem important but may score low in the maintenance programme.

4. Typical Measures continued

Mini Roundabouts

Mini roundabouts would normally only be considered if:

- The existing traffic flow from the side road is significant.
- The road is subject to a 30mph speed limit.
- On-site 85th%ile* recorded speeds are below 35mph
- There is adequate visibility.
- There are no physical constraints (e.g. nearby private accesses, bus stops or pedestrian crossings).
- The junction has no more than 3-arms ('T' junction).



*85th%ile - If the speeds of all motorists on a road are ranked from slowest to fastest, the '85th%ile speed' separates the slowest 85% from the fastest 15%.

Safety Cameras

The Safer Essex Roads Partnership (SERP) is responsible for managing the operation of over 100 fixed safety camera sites, 26 red light camera sites, 7 average speed camera systems and 2 Highways Agency Digital Enforcement Camera Systems (HADECs) across Essex, Southend and Thurrock. The Partnership's strategy also incorporates the use of mobile handheld devices, which allows for dynamic enforcement across the SERP's area at locations where a fixed site would not be justified.



Safety camera locations are managed on a site by site basis. The criteria used for identifying potential sites takes into account the collision history, speeding problem and community concern along each stretch of road.

The Safety camera policy is currently being updated, to allow Third Party funding for speed cameras such as Parish Councils.

You can find more information on the [SERP Safety Camera](#) web page.

5. Scheme Investigation

Speed management and new speed limits

Speed surveys will be required to establish the actual speeds at the location.

Any LHP scheme request for speed management and or new speed limits will need to go through the LHP scheme validation process. This is where the request would be investigated and feasible engineering solutions, where possible, to the issues raised would be put forward.

All schemes will be developed in line with the ECC Speed Management Strategy.

Essex Police are consulted on changes in speed limits. As the enforcing authority of such limits, their support is an important factor in ensuring any changes are successful in their stated aims. Any situation where the Police does not support such changes must be questioned regarding its suitability. The proposal could still be considered via a Cabinet Member Action, based on the merits of individual schemes.

6. Costs and Timescales

Part of the Essex County Council contract with Ringway Jacobs is a target cost and not typically a fixed price contract. The contract also allows for a direct delivery method for small highway improvement schemes on a fixed cost basis.

An explanation of the process can be found in Appendix 1

The costs and timescales for typical schemes can be found on the following hyperlink.

7. Glossary of Terms

| | |
|--------------|---|
| CMA | Cabinet Member Action |
| ECC | Essex County Council |
| EH | Essex Highways |
| HPN | Highway Practice Note |
| LHP | Local Highways Panel |
| PR | Priority Routes within ECC Functional Route Hierarchy |
| SID | Speed Indicating Device |
| SLO | Speed Limit Order |
| TRO | Traffic Regulation Order |
| TSRGD | Traffic Signs Regulations and General Directions |
| VAS | Vehicle Activated Sign |