PUBLIC

DERBYSHIRE AND DERBY ROAD SAFETY PARTNERSHIP SPEED MANAGEMENT PROTOCOL ENGINEERING

TECHNICAL ANNEX

November 2017

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1. SPEED LIMITS

Derbyshire County Council is responsible for setting speed limits on all roads in the County, and Derby City is responsible for those in its jurisdiction, and motorways and trunk roads – the M1, A38, A50, A52 (east of Derby), A5111, parts of the A6 and the A628 – which are the responsibility of National Highways. Any queries about speed limits on these routes can be directed via e-mail to info@nationalhighways.co.uk or by calling 0300 123 5000.

Speed limits are introduced to ensure greater road safety and should seek to balance this with accessibility and environmental objectives, improving the quality of life for local communities. Any changes we make to speed limits must adhere to criteria as set out by the Department for Transport (DfT).

Speed limits are the maximum speed at which vehicles may legally travel – they are not target speeds: You should always reduce your speed when:

- the road layout presents hazards, such as bends;
- you are sharing the road with pedestrians and;
- there are adverse weather conditions; or
- you are driving at night – as it is harder to see other road users and possible obstructions.

Balancing the need to travel and overcoming social exclusion and strengthening rural communities are also key but must be carefully assessed against reducing road traffic collision. The promotion and education of safe and considerate driving and encouraging road users to adopt appropriate speeds on our roads is also important to the success of speed limits. The responsibility for the enforcement of speed limits lies solely with the Police and instances of speeding can be reported to your local Police officers by contacting the local safer neighbourhood team. Contact details can be found on the following website: Follow Your SNT | Derbyshire Constabulary. In future the aspiration is to develop an area on the partnership website with appropriate links will facilitate the reporting of all speed related matters.

In January 2006, the DfT published guidance circular 01/2006 on 'Setting Local Speed Limits'* which sought a common national approach on the setting of limits, highlighting the need to manage speed in a way that is appropriate for the road function and local characteristics. Following release of this guidance, routes in Derbyshire were reviewed and changes to speed limits implemented where appropriate - [** circular 01/2006 has now been replaced by circular 01/2013 – see link below*]:

Department for Transport Setting Local Speed Limits Guidance

1.1 Speed limits in urban areas

DfT guidance states:

> *"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*

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users, and setting appropriate speed limits is therefore an important factor in improving urban safety."

On roads where a recognised system of street lighting is present (where there are 3 or more lighting columns not more than 183m apart) the default speed limit will be **30mph**, unless there are signs in place indicating a different limit, and will be signed accordingly where the street lights start. Such roads will have a significant degree of frontage development with pedestrian activity and the presence of driveways, junctions, traffic signals and crossings. By law we cannot put in additional 30mph (repeater) signs where street lighting is present.

A **40mph** speed limit is generally appropriate on higher quality suburban roads away with less frontage development but with side roads, some bends and traffic signals or pedestrian crossings. Repeater signs are required.

In exceptional circumstances, **50mph** speed limits may be introduced on roads where the environment and characteristics allow this speed to be achieved safely – e.g., dual carriageways, radial routes or bypasses. Higher speed limits encourage urban through traffic to use routes of this nature rather than less suitable residential streets.

Where roads do not have a speed limit and are unlit, the national limit applies, and drivers are expected to drive to the conditions. The following link provides a summary of national speed limits with reference to vehicle type: -

Gov.uk Speed Limit Information

1.2 Speed limits in rural areas

DfT guidance stipulates that **30mph** is considered the norm in villages, based on a simple criteria relating to the density of frontage development and distance:

- There should be 20 or more houses on one or both sides of the road, over a length of around 600m. This can be less if the level and density of development exceeds the 20 or more houses criterion. In instances where there are less than 20 houses, an extra allowance can be given for key buildings – i.e. churches, community centres, schools, etc.
- A preferred length of 600m is desirable to avoid too many changes of speed limit along the route, which could lead to motorists disregarding the changes.

In the absence of street lighting, 30mph repeater signs will be required.

70mph is the maximum speed limit for cars on dual carriageways and motorways.

The national speed limit applies to single carriageway roads (maximum of 60mph) that have very sparse development, are of a high quality, and have a strategic function.

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Lowering the speed limit to **50mph** can be considered where there are a high number of bends, junctions or accesses and a high level of injury collisions.

A speed limit of **40mph** may be considered in very exceptional circumstances in an area of outstanding natural beauty or across, or adjacent to, unenclosed common land; or if they form part of a recommended route for vulnerable road users. Such a special application would need, however, to be done in association with the DfT and in discussion with a national park authority.

Speed limits on single carriageway rural roads should take into account: the collision history, the road's function, existing average traffic speed, level of use by vulnerable road users, the road's geometry and engineering, and the environment, including the level of road-side development.

Terminal signs (at the start of a speed limit) must be positioned as close as practicable to the start of a built-up area. Where forward visibility is restricted, signs may be extended outwards to meet standard forward visibility requirements.

1.3 20mph Speed Limits and Zones

These can be differentiated as follows: -

- 20mph limits, which consist of just a speed limit change to 20mph which is indicated by the speed limit (and repeater) signs, and
- 20mph zones, which are designed to be "self-enforcing" due to traffic calming measures that are introduced along with the change in the speed limit.

Note – refer to Table 2 in section 4 for consideration criteria

20mph speed limits / zones are introduced sparingly, with casualty reduction being a priority for the selection of such schemes. Several trial sites will however be undertaken to ascertain whether there is further health, well-being and / or speed and casualty reduction benefits from 20 mph limits without associated engineering measures, and should subsequent monitoring reveal this is the case, then a review of this protocol would follow. Until the monitoring of the trials is available for scrutiny the existing criteria will stand.

A number of 20mph limits and zones are in operation in Derby and Derbyshire. They should be self-enforcing and so are usually only appropriate in areas where speeds are already naturally low or where a suitable package of traffic calming measures can be used to ensure compliance with the speed limit.

1.4 Traffic Regulation Orders

The imposition of any new speed limit, or amendment to an existing speed limit, requires a Traffic Regulation Order to be made. This is a legal process which includes a statutory consultation with public bodies such as the Police, Borough/District and Parish/Town Councils. A public notice period is also required – where details are advertised both on site and in the local press - to give local residents and road users the opportunity to comment on the proposal. Any representations need to be considered that in turn may result in changes to the original proposal. Where powers are delegated, representations can be dealt with by a delegated senior officer.

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Once a proposal has been approved, the necessary signs are ordered, and arrangements made for them to be in place on a certain date to coincide with the date the Order comes into force; the Order is then enforceable by the Police.

This entire process – from investigation to implementation – can take between 6 and 12 months to complete.

Introducing a Traffic Regulation Order is both a time consuming and costly process. As there are many requests for speed limits, after Officers have agreed to the principle of undertaking an order, they will then also apply a points-based scoring system to allow such requests to be internally prioritised by the council. This allows staff resources to be better targeted at those areas which highlight an issue with collisions. The ranking scheme is included overleaf:

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1.4.1 Table 1 Speed limit ranking scheme (for internal Officer use only)

Subject	Parameters	Points Range	Points scored
No. of collisions in the past 3 years (personal injury accidents)	Location has 3 or more in past 3 years Location has up to 3 in past 3 years None in past 3 years	10 5 0	
Road hierarchy	A road B road C road Unclassified	5 4 3 2	
Enforceability (Based upon 85%ile speed)	New limit self-enforcing Supporting engineering features required Regular Police enforcement	5 0 -5	
Benefits of scheme to vulnerable road users	Possible improvement No change Deterioration	2 0 -2	
Benefits to schools	Possible improvement No change Deterioration	2 0 -2	
Benefits to elderly/mobility impaired	Possible improvement No change Deterioration	2 0 -2	
Benefits to local facilities/businesses	Possible improvement No change Deterioration	2 0 -2	
Effect on emergency services response times	Possible improvement No change Deterioration	2 0 -2	

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Subject	**Parameters**	**Points Range**	**Points scored**
Support from residents	Yes No overall support Residents not in support	4 0 -1	
Support from community and/or special interest groups	Yes No support forthcoming Against proposals	3 0 -1	
Choose 1 of the 3 options	Safety led *(x 1.75)*		
	Political aspect *(x 1.25)*		
	Developer led *(x 1.25)*		
		TOTAL	

Ranking Status		
0 - 19 Low	20 - 39 Medium	40+ High

<u>Note</u>

If the proposals are safety, developer led and /or politically led the total score will increase the proposals priority, over others without these influences. In generality, safety issues would therefore, score the highest.

The ‘scoring’ system provides a clear list of Speed Limit Order proposals with those scoring the highest put forward for progressing. The number of Speed Limit Orders will depend upon the available budget allocation and staff resources.

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1.5 Speed limit change

Excess speeds alone are unlikely to justify the lowering of an existing speed limit. The speed limit will have been implemented according to DfT guidance and will be appropriate for the character of the road and level of built-up development. The vast majority of drivers will choose to drive at speeds they feel are appropriate and unnaturally low speed limits maybe ignored. Compliance could be achieved by introducing a package of traffic calming measures but, in the absence of a speed-related injury collision history, the expenditure would be difficult to justify.

1.6 Community speed watch

Community Speed Watch is administered by the Police in conjunction with the Safer Neighbourhood Team for the relevant area concerned, this is an option in dealing with speed related matters and police and local communities working together to solve local road safety issues. In future, the aspiration is to develop an area on the partnership website with appropriate links will facilitate the reporting of all speed related matters. Any new applications will be considered in due course.

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2. VEHICLE ACTIVATED SIGNS (VAS)

2.1 Introduction

This guidance puts in place detailed procedures to be followed in considering the installation of a wide variety of Vehicle Activated Signs (VAS).

VAS have become a popular, effective, less intrusive form of speed-reduction which can be used as an alternative to more physical measures. These are electronic signs which display a symbol and / or message when triggered by a vehicle travelling at a specific pre- set speed – the threshold speed usually being set at 10% + 2mph above the posted speed limit (e.g. 35mph in a 30mph limit). They are often introduced to supplement rather than replace traditional signing and lining and are aimed at addressing specific road safety problems. However, note that those displaying a speed limit sign only should be set at speed limit +2mph, see criteria 2.2(b) below).

Note – refer to Table 1 in section 4 for consideration criteria

Both **permanent** and **temporary** VAS measures have been used in Derbyshire and Derby City. Research has shown that the effectiveness of permanent VAS reduces as motorists become familiar with them. The advantage of a temporary VAS is that it can be moved around between a number of sites; remaining at one site for a number of months before being moved to another site before motorists become familiar with it. The sign can then be redeployed to the same site several months later to retain its effectiveness.

VAS have been developed in Derbyshire and Derby City to address not only problems of exceeding speed limits, but also to encourage drivers to approach hazards – such as bends or junctions – at a safe speed, and to provide hazard warnings where conventional signing alone has not been effective. Analysis of existing sites has shown that, where these signs have been introduced in response to injury collision problems, they have resulted in immediate and ongoing improvements to the casualty record and reductions in speed

There are still relatively few signs of this nature in Derbyshire and Derby City but there are concerns that to introduce them on a widespread basis would cause drivers to become used to them and their effect could diminish. In response to these concerns, where the council are funding such signs a stringent set of criteria is applied to each application we receive, to ensure that signs are introduced where they are most needed. This allows the Councils to determine their priorities for investment in VAS and to inform other bodies about where signs will be deployed and where installation is likely to be refused. It is accepted that there is a large public demand for speed indication devices, and where parishes, town and district councils are prepared to fund them a trial has now been set up to establish their success. A 12 month trial will commence in 2022 and on completion of this trial, the results on vehicle speeds will be reviewed to ascertain the benefits of these which will help determine whether this approach should be continued for those mentioned parties being permitted to fund such signs. The criteria that support this as an intervention will be reviewed as a result of the trials.

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The protocol dictates that all of the following criteria must be met for VAS funded by the council:

2.1(a) VAS should be considered at sites that have a **collision history associated with inappropriate speed**, or a hazard, that has not been satisfactorily remedied by standard signing. Other signing means must have been tried and have failed; the site must have been subject to a recent speed survey to determine justification for a VAS installation.

2.1(b) VAS displaying a speed limit should be located at sites which have a history of a **minimum of 6 injury collisions within 1km over the previous 3 years** and where speed has been a factor in some, if not all the collisions.

2.1(c) VAS displaying a speed limit should be located at sites where the results of traffic surveys show the 85th percentile speed is at least 10% over the speed limit +2mph, measured over a 7-day period [The 85th percentile is the speed at which up to 85% of the traffic is travelling].

2.1(d) Hazard warning VAS should be located at sites which have a history of a **minimum of 6 injury collisions within 1km over the previous 3 years**, and where the hazard has been the cause.

2.1(e) Requests for VAS that meet these criteria should be prioritised on the basis of a calculated estimate of casualty reduction benefits.

2.1(f) The flexibility of temporary VAS means they are the preferred option but the decision on which type of VAS to be used should be made on a case-by-case basis. To retain effectiveness, temporary VAS should remain on site for **no longer than 3 months and should not be redeployed at the same site within 6 months**.

2.2 Installation and Monitoring Criteria

2.2(a) VAS warning of a hazard should be set to operate at the 50th percentile speed measured before installation. However, discretion may be used to change this depending on the road conditions.

2.2(b) VAS displaying a speed limit, including those funded from elsewhere should normally be set to operate at 10% + 2mph above the posted speed limit (e.g. 35mph in a 30mph limit). However, discretion may be used to change this depending on the road conditions. This excludes speed indicator devices which show the actual speed irrespective whether it be above or below the posted speed limit.

2.2(c) The section of road in advance of the VAS must be straight over a reasonable distance to maximise visibility to the sign.

2.2(d) There should be little or no vegetation or street furniture that will block the view of the sign or affect the working of the radar equipment.

2.2(e) There must be sufficient footway or roadside verge to install the sign.

2.2(f) The sign should, wherever possible, not be intrusive to nearby residential properties and early consultation should be sought to establish residents' views. If the sign is proposed within the Peak District National Park, early consultation with the National Park Authority should be sought.

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2.2(g) VAS displaying a speed limit should be located between 100 metres and 200 metres beyond the start of the posted speed limit sign, except in urban areas with street lighting where a 30mph speed limit operates and where repeater signs are not allowed.

2.2(h) VAS warning of a hazard should be located between 50 metres and 100 metres in advance of that hazard.

2.2(i) Permanent VAS should be routinely inspected every six months and provided with regular maintenance, such as cleaning the sign face, removing any obstructing foliage and ensuring that the vehicle detection system is functioning correctly.

2.2(j) All VAS installations should be monitored for effectiveness by regular analysis of speed data and collision records. Any that are considered ineffective should be removed.

2.3 Temporary VAS – Funding by Borough, District or Parish/Town Councils

Where a local council has requested a VAS, which meets criteria for inclusion in the County Council's programmes but is a low priority for installation at the County Council's expense, then the local council may fund the installation. The Funder must undertake to be responsible for all costs, including long-term maintenance for the life of the installation, and removal if required.

3. TRAFFIC CALMING/SPEED REDUCTION MEASURES

Derbyshire County Council and Derby City, as local Highway Authorities, are committed to the reduction of casualties on their highway networks. There are a number of traffic calming measures available to help reduce traffic speeds, and discourage inappropriate through traffic, in order to achieve casualty reduction on our roads.

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The requests for traffic calming measures far outweigh the limited funding available for such schemes. Our funds must therefore be targeted at areas with a history of speed-related collisions resulting in **personal injury**; prioritised to those locations with the greatest number of collisions, with pattern and severity also taken into account. Sites of concern are identified either from data analysis (speed surveys and collision history) or from members of the public, in person or via their parish / town council / Neighbourhood Board / Councillor. Measures can only be introduced at locations where there is an identifiable problem (e.g. trend in collisions, inappropriate through traffic) and will be chosen based on the likelihood of an improvement being achieved.

Note – refer to Table 1 in section 4 for consideration criteria

The responsibility for the enforcement of speed limits lies solely with the Police and instances of speeding can be reported to your local Safer Neighbourhood Team. Contact details can be found on the following website: Follow Your SNT | Derbyshire Constabulary. In future the development of an area on the partnership website with appropriate links will facilitate the reporting of all speed related matters.

Below is a description of some of the speed-reduction measures we can consider, given the right circumstances. Physical calming measures - such as road humps or speed cushions (vertical deflection), build-outs and chicanes (horizontal deflection) – are costly and generally not well supported by the public and so we will tend to consider less intrusive measures wherever possible.

3.1 Road Humps

Perhaps the most recognisable form of traffic calming, **road humps** (commonly referred to as 'sleeping policemen'), can be used to reduce traffic speeds and discourage inappropriate through-traffic on residential roads in order to lessen the risk of speed- related collisions occurring.

A road hump is rarely introduced in isolation and a scheme would normally include several humps, set at regular intervals, in order to reduce speeds consistently over the given route.

A variation on road humps are **speed cushions**. Unlike road humps, speed cushions form small plateaux across the width of the carriageway with gaps in between. Arguably not as effective as road humps, speed cushions do, however, allow easier passage for wider vehicles (such as those used by the emergency services) as they can straddle either side of the plateau; a useful alternative to road humps on busy bus routes and those heavily trafficked by heavy goods vehicles.

Speed Tables take the form of single, raised 'table-top' plateaux across the width of the carriageway. In addition to achieving reductions in speed, tables also provide a safe crossing place for pedestrians, across the top of the plateau, where traffic speeds will be at their lowest.

Measures of vertical deflection, as described above, can only be introduced on roads with a speed limit of 30mph or less, and where street lighting is present. We are also

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governed by the Highways (Road Humps) Regulations 1999 which state that humps are to:

- be between 25mm and 100mm high.
- have a minimum length of 900mm.
- be either curved or flat topped, and
- be spaced at between 20m and 150m.

There will need to be very clear justification on grounds of road safety for any of these measures to be introduced as they are not well supported by the general public due to their detrimental effects. These measures will invariably create a level of noise/vibration pollution for local residents. The need for associated signage and street lighting can also be considered detrimental to the aesthetic of residential areas. Given the lack of support, less intrusive measures may be more appropriate in most situations where traffic calming is required.

3.2 Buildouts, Chicanes and Priority Narrowing

The benefit of horizontal deflection over vertical deflection is that vehicles do not have to travel over a physical feature and therefore problems of noise/vibration pollution are removed.

Such measures can often take the form of **chicanes** which uses features to either narrow the carriageway – allowing for two way traffic flow at slower speeds – or gives priority to drivers travelling in a certain direction, creating a break in traffic flow and reducing speeds.

Chicanes can be formed by creating **footway buildouts**; widening of the footway into the carriageway to provide improved visibility for pedestrians wishing to cross the road. This is of particular advantage on residential roads with high levels of parked cars. Build- outs introduced in isolation would not necessarily be used as a speed-reducing technique but the 'narrowing' of the carriageway will encourage some drivers to reduce speeds. A number of buildouts, introduced at strategic locations, will create a chicane effect and help to control traffic speeds along the route in question. Buildouts can be difficult to achieve where there are many private driveways restricting their positioning.

Priority narrowing is usually created through footway buildouts, extending into the carriageway to such a degree as to limit it to one-way traffic flow. The effect of this is that vehicles travelling in one direction have to give way to oncoming traffic, creating a break in traffic flow and subsequently reducing speeds. This measure does rely on oncoming traffic to be effective. A steady flow of traffic in either direction is needed and, if the balance is not right, can result in drivers speeding up to get through the gap first.

Footway buildouts and priority narrowing are often viewed as too intrusive by residents due to the associated kerbing required for the build-outs and signing/illumination of the priority system. An additional consequence of all forms of horizontal deflection is that it

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invariably removes lengths of on-street parking, which is unfavourable in areas where such provision is in high demand.

Less intrusive measures will be considered wherever possible.

As with vertical measures, horizontal measures can only be introduced on roads with a speed limit of 30mph or less, and where street lighting is present.

3.3 Road Markings

Before using any of the above measures, we will normally consider whether road markings could be used at sites which suffer from a poor road safety record. The use of road markings can be a cost-effective measure in resolving certain speed-related injury problems. How a road looks and feels has a measurable effect on traffic speeds and is one of the most effective means of promoting compliance with the speed limit. If motorists perceive that they have priority and that the street has been designed primarily for vehicular traffic, then they will drive accordingly, so careful consideration should be given be before introducing road marking.

An example of road markings we may consider are **rumble strips**. These would normally take the form of slightly raised strips, set across the entire width of the carriageway, and a different colour to the road surface. The strips cause vibration when driven over to alert drivers to reduce their speed and are typically used to draw attention to a change in speed limit – e.g. at the entrance to villages where there have been collision problems. Due to the noise generated by rumble strips, we are not recommended to introduce them within 200 metres of residential properties.

Another technique we may adopt is **visually narrowing road markings**, usually taking the form of white hatching placed down the centre of the carriageway. This creates a visual effect of narrow traffic lanes, reducing speeds and keeping opposing vehicle flows away from each other. They also encourage lower speeds when overtaking cyclists or parked vehicles. **'SLOW'** road markings can also be considered at problem location. However, in urban settings SLOW markings have little impact on vehicle speeds - it appears that they are often ignored by vehicle drivers. They will be even less effective if they are overused or used where they are seen as unnecessary. They are more suited to rural high-speed roads where unexpected bends or other hazards need highlighting and then they are generally used in conjunction with an upright warning sign. While the regulations still allow the use of the marking on 30mph roads as with all traffic signs the guidance suggests they should only be used where sound engineering principles justify them.

In the urban environment, road markings often emphasise the vehicular functions of streets to the detriment of other road users, consideration is therefore given to removing markings such as road centrelines. Research has shown it has a speed reducing effect, as it introduces an element of uncertainty and additional caution, when passing other vehicles.

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4. TABLE 2: IDENTIFIED TREATMENTS AND THEIR CRITERIA FOR CONSIDERATION OF IMPLEMENTATION AND ENFORCEMENT

Treatment Type	Treatment	Criteria	Considerations
Engineering	20mph zones.	• Only available for existing 30mph speed limit areas. • Not available for arterial/ strategic routes. • 6 highway relevant personal injury collisions over 1km (pro rata) in the latest 3 years. • Recorded mean speed and 85th percentile should be approximately 20mph.	Traffic Regulation Order legal process required
Engineering	Speed Limit Change.	• Current speed limit assessed and not appropriate. • Procedure to rank and prioritise requests for speed limits is applied for schemes already agreed by Officers.	Traffic Regulation Order legal process which is subject to the public and statutory bodies opinion.
Engineering	Vehicle Activated Signs (VAS).	• 6 personal injury collisions over 1km in the latest 3 years, where either a trend can be identified, or speed has been a factor in some of the collisions. • Site or Route Specific Road Markings and/or Traffic Signs methods have been evaluated and not worked • 85th percentile recorded speed has	Speed or specific collision trend required. Road user can become familiar.

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Treatment Type	Treatment	Criteria	Considerations
		exceeded the threshold • Other traffic calming measures inappropriate due to strategic nature, hierarchy and importance of the route and to avoid the use of less appropriate routes.	
Engineering	Speed Indicator Devices	Derby City has been using SID's in response to speeding concerns since 2010. The current criteria will be reviewed following the County wide trial that was approved by council cabinet on the 10th March 2022.	The trial will be conducted based on the information provided on this link: Speed indicator devices (SIDs) - Derbyshire County Council
Engineering	Horizontal Traffic Calming Measures (build-outs, chicanes and priority narrowing).	• 7 personal injury collisions over 1km (pro-rata) in the latest 3 years in an area or. • Identified rat-running route. • Current speed limit is 30mph or less. • Street lighting must be present.	Limited noise and vibration issues. Difficult to implement where there are private driveways. Often viewed as intrusive by residents. Additional traffic signing and illumination is required which has an environmental impact. Amount of on-street parking provided will be reduced.
Engineering	Vertical Traffic Calming Measures (road humps/speed cushions/speed tables/plateau.	• 7 personal injury collisions over 1km (pro-rata) in the latest 3 years in an area or.	Size/height, etc, is prescribed by Highways (Road Humps) Regulations

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Treatment Type	Treatment	Criteria	Considerations
		• Identified rat-running route with more desirable alternative route available. • Current speed limit is 30mph or less. • Street lighting must be present. • Cannot be provided on the strategic road network where there is a high proportion of heavy goods vehicle traffic.	1999. Can provide additional noise and vibration issues for residents. Additional traffic signing required which has an environmental impact.
Engineering	Site Specific Road Markings (rumble strips).	• 3 personal injury collisions over 1 km in the latest 3 years • Cannot be located within 200m of a residential property.	Noise impact upon nearby properties.
Engineering	Site or Route Specific Road Markings (white hatching/narrow lanes/SLOW markings) and or Traffic Signs. Reductions in signs and markings where beneficial to safety.	3 personal injury collisions over 1 km in the latest 3 years.	Environmental considerations, where signs and markings have a little impact upon road safety. Asset reduction and consideration to energy costs.
Engineering	Removal of road centrelines	Not suitable for all roads but should be considered on busy routes in urban areas as well as quiet residential roads and in village settings.	Reviewing all road markings as part of resurfacing works results in capital savings as well as ongoing maintenance
Enforcement	Site Specific Speed Enforcement Cameras and Average Speed Enforcement	• At least 3 KSI collisions per km (average) in the most recent 36 month period when proposal is submitted.	A risk assessment is undertaken to make sure:

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Issue 4

Treatment Type	Treatment	Criteria	Considerations
	Cameras	• Current Speed Limit has been reviewed via a site survey and there are no other more appropriate or cost effective engineering solutions. • Derbyshire County Council, Derby City Council and CREST to review collision causation factors. • A recent speed survey (within the last 36 months) shows free-flow 85th percentile speed is at or above 10% plus 2 mph of the speed limit. • Speed Survey results can apply to all vehicles or a vehicle class in order to truly reflect risk but must be compared consistently. • Site locations will be considered before KSI collision criteria is hit if public concern or risk factors show great enough weight to do so.	• Loading and unloading of camera can take place safely. • The camera can be accessed easily and safely for maintenance purposes. Traffic Regulation Order (where applicable) and signing are lawful and correct.
Enforcement	CREST Mobile Speed Enforcement	• At least 3 KSI collisions per km (average) in the most recent 36 month period when proposal is submitted. • Current Speed Limit has been reviewed via a site survey and there are no other more appropriate or cost effective engineering solutions. • The speed limit has not changed within the last 12 months	A risk assessment is undertaken to make sure: • The location for mobile enforcement is easily accessible. • There is enough space for enforcement to take place in a visible, legal and safe manner.

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Treatment Type	Treatment	Criteria	Considerations
		• A recent speed survey (within the last 36 months) shows free-flow 85th percentile speed is at or above 10% plus 2 mph of the speed limit. • Speed Survey results can apply to all vehicles or a vehicle class in order to truly reflect risk but must be compared consistently. • Site locations will be considered before KSI collision criteria is hit if public concern or risk factors show great enough weight to do so.	Traffic Regulation Order (where applicable) and signing are lawful and correct.
Enforcement	Road Policing Units (RPU)	• Sites to be generated by CREST following prioritisation through variables previously highlighted in mobile enforcement. • RPU to be tasked to visit the identified sites when permissible. • The sites selected by CREST must take into consideration RPU's response duties and therefore locations must be along 'fast road corridors' (i.e. A38, M1, A52) so vehicles and personnel may be deployable across the Force at speed and ease. • CREST is to manage/cultivate this relationship and obtain any data available from visits.	A risk assessment is undertaken to make sure: • The location for mobile enforcement is easily accessible. • There is enough space for enforcement to take place in a visible, legal and safe manner. Traffic Regulation Order (where applicable) and signing are lawful and correct.

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Enforcement	Community Speed Watch	• A concern must have been expressed by a member of the public (i.e. not a housing developer) to their local SNT and concerns must be held by more than one member of the community. • A commitment of time must be made from community members. • These locations do not require an evidenced speeding problem through collision or speed survey data. • Enforcement can only be carried out on roads at 30mph or below. • Community Speed Watch is to provide training for SNT officers on site assessment and speed detection equipment. • CSW Coordinators will provide the training for community members who wish to volunteer. SNT will provide day to day support for volunteers at section/area. • SNT officers are to assess the location for CSW Groups to make sure these are safe and legal to operate from. • CREST/Community Speed Watch is to manage/cultivate a relationship with local SNT's and obtain any data available from CSW operations.	A risk assessment is undertaken to make sure: • The location for mobile enforcement is easily accessible. • There is enough space for enforcement to take place in a visible, legal and safe manner. • New applications will be considered in due course Traffic Regulation Order (where applicable) and signing are lawful and correct.

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Treatment Type	Treatment	Criteria	Considerations
Education	Speed Reduction Educational Initiatives	No set criteria – delivery of local and national campaigns, including DfT and NPCC campaigns, which highlight the problems inappropriate or excessive speed can create	
Publicity	Temporary Roadside Signing	A concern must have been expressed by a member of the public or a Parish/County Councillor (i.e. not a housing developer) to DCC, CREST and/or their local SNT and concerns must be held by more than one member of the community. All other options for enforcement have been considered, including Community Speedwatch and mobile/RPU enforcement	A site assessment is undertaken to ensure suitable locations for the signs, Road users familiar with signs, signs erected for short periods of time

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