

DERBYSHIRE COUNTY COUNCIL

**MEETING OF CABINET MEMBER – HIGHWAYS, TRANSPORT AND
INFRASTRUCTURE**

26 April 2018

Report of the Strategic Director – Economy, Transport and Environment

PETITION REQUESTING HIGHWAY IMPROVEMENTS – A615 TANSLEY

(1) **Purpose of Report** To inform the Cabinet Member of investigations carried out following the receipt of a petition requesting the consideration of traffic calming, a pedestrian crossing facility, bus stop improvements and footway repairs on the A615 at Tansley.

(2) **Information and Analysis** At the meeting on 16 November 2017, the Cabinet Member acknowledged receipt of a petition, containing 382 signatures from approximately 242 properties (Minute No.114/17 refers). The petition reads as follows:

“We the undersigned residents of Tansley, call on Derbyshire County Council to implement some comprehensive traffic calming, preferably including speed cameras, on the A615 between the present 30mph speed limit and the Tavern Public House.

Furthermore, a pedestrian crossing would be desirable, opposite the Tavern together with a bus stop on land adopted by the County Council, as Highway Authority, as well as re-surfacing of the pavement to improve pedestrian safety.”

Officer Comment

In terms of the provision of traffic calming measures, the classification of this road (Principal Road – A615) limits the types of traffic calming measures that could be introduced. For instance, adequate two way width needs to be maintained at all times for the largest of vehicles and vertical deflection (e.g. road humps) is not recommended for use on such routes due to the noise and vibration generated by such features which would not be acceptable to nearby residents. Speed limit roundels on the carriageway at the start of the speed limit along with village name plates carrying a road safety message have already been provided to create a “gateway” effect into the village at both ends. Also, in response to the Parish Council’s concerns, a vehicle activated sign has been provided on Nottingham Road which illuminates when it detects vehicles exceeding a set speed. Most recently, the centre line has been

omitted to highlight to motorists that they have entered a different environment to the rest of the route. This has been used to good effect elsewhere.

To ensure a consistent and cost effective approach to identifying road safety intervention measures across the network, the Derby and Derbyshire Road Safety Partnership has recently adopted a Speed Management Protocol Engineering Technical Annex. This combines several technical policies and contains a table of criteria for various treatments. A copy of this is attached at Appendix A.

With regard to the collision statistics in Tansley during the latest three year period, from 1 September 2014 to 31 August 2017, there have been five recorded injury related collisions within the 30mph section of the A615. Having scrutinised the causation factors of these collisions looking for any common trends with a view to the consideration of intervention measures, two of the collisions involved rear-end shunts at the Thatchers Lane junction. The road has been resurfaced since these incidents and this has provided a better surface with a higher skid resistance which will improve the braking performance of vehicles. Details of the other recorded collisions suggest it is unlikely that any engineering measures would have prevented these. It would seem that inappropriate speed may have been a factor in only one of these collisions.

Speed cameras are only ever considered to address a known speed related collision problem. Their primary function is to reduce the number of Killed or Seriously Injured (KSI) collisions on the network. The collision history in Tansley would not support the consideration of speed cameras. Out of the five recorded injury collisions to which have been referred above, four have been categorised as 'slight' in severity and one as 'serious'. However, as highlighted on the CREST website, the A615 in Tansley is already identified as a mobile speed camera location. The lead petitioner has also been in direct contact with Police representatives about speed enforcement on the A615 and the appropriate advice has been provided including that of setting up a community speed watch site.

With regard to speeds in general, survey equipment monitored the speed of traffic between 18 April 2016 and 24 April 2016 at two locations within the 30mph zone in Tansley as a result of concerns raised about excessive vehicle speeds. One site was on Nottingham Road and one was on Alfreton Road. The survey site on Nottingham Road had the higher general speeds with the westbound 85th percentile speed of 36mph (31.4mph mean) and eastbound 85th percentile speed 37mph (32.3mph mean). This reveals that 15% of the total traffic flow exceeded 37mph in both directions. The survey site on Alfreton Road had lower speeds with the westbound 85th percentile speed of 33mph (29.4mph mean) and eastbound 85th percentile speed 32mph (28.1mph mean). This reveals that 15% of the total traffic flow exceeded 33mph in both directions.

The Association of Chief Police officers' enforcement recommendations would only consider prosecution where the speed recorded exceeded 35mph in a 30mph zone. The Police are aware of this data and the local policing section will continue to carry out enforcement speed checks, supported by the Mobile Enforcement Team.

As with any 'A' class road, the traffic levels can mean that pedestrians have to exercise patience whilst waiting for a safe gap to cross the road on occasions. In terms of a pedestrian crossing, there needs to be a significant pedestrian demand before such a facility would be considered. Nationally recognised criteria is applied to each request to ensure that there is sufficient justification and, indeed, that a crossing facility would improve safety. A pedestrian count has been carried out in Tansley in the past, but the results fell below the desired criteria. As this count was carried out some years ago, an up-to-date survey could be carried out to determine whether the situation has changed significantly enough that a crossing facility could be considered further. It has to be borne in mind that providing a crossing where there is a low pedestrian demand can actually prove counter-productive in terms of road safety.

The Department for Transport advice states that caution should be exercised when considering a signal-controlled crossing on roads when pedestrian flows are light for long periods of the day. Drivers become accustomed to not having to stop at the crossing and may begin to ignore its existence. This can increase the risk for pedestrians who, on seeing a green man signal, assume it is safe to cross and may step out in front of a driver who has ignored the crossing. If, following a reassessment, there is sufficient justification for a crossing to be considered, this may then require land acquisition to accommodate the required equipment dependent upon where the pedestrian desire line is. It may be that the Parish Council could be of assistance if this scenario was to arise.

On the subject of the unadopted land opposite The Tavern, upon which is a footway where a bus stop already exists, there has been much correspondence regarding this which the Parish Council has generally been party to. The latest letter to the developer (dated 21 October 2016) sought to clarify his intentions in respect of completing the estate streets and pointing out the potential legal implications in relation to the area of land on which the current bus stop sits. However, no response has been received to date. As no agreement or dedication has been entered into, the footway remains the liability of the developer/landowner.

Local Member Comment

Councillor Sue Burfoot has been consulted and made the following comment:

"I fully support Tansley Parish Council and the residents (nearly 400 of whom signed the petition) in their request for DCC to implement some

comprehensive traffic calming and road safety measures on the A615. These measures have been requested over several years.

Increase in the volume and speed of traffic has made the road increasingly dangerous, especially for parents with pushchairs, elderly people and Highfields pupils crossing the road for the bus as well as walking to school.

More than 100 new homes are planned including on Thatchers Croft, adding to the significant number of houses on the south side of the A615. Narrow, badly maintained pavements add to the dangers.

I hope consideration can be given to implementing some form of traffic calming/road safety measures, preferably including speed camera, a pedestrian crossing, solar powered vehicle activated signs showing vehicle speed and pavement improvement."

(3) **Financial Considerations** There are no financial considerations associated with this report.

Other Considerations

In preparing this report the relevance of the following factors has been considered: legal, prevention of crime and disorder, equality and diversity, human resources, environmental, health, property, social value and transport considerations.

(4) **Key Decision** No.

(5) **Call-In** Is it required that call-in be waived in respect of the decisions proposed in the report? No.

(6) **Background Papers** Held on file within the Economy, Transport and Environment Department. Officer contact details – Steve Alcock, extension 38176.

(7) **OFFICER'S RECOMMENDATIONS** That:

7.1 A further survey be carried out to determine the current pedestrian demand on the A615, Tansley.

7.2 The Parish Council be informed of the outcomes of the further investigations.

7.3 The local Member and lead petitioner be informed accordingly.

Mike Ashworth
Strategic Director – Economy, Transport and Environment

Derby and Derbyshire Road Safety Partnership - Speed Management Protocol

Engineering Technical Annex

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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 Highways England. Any queries about speed limits on these routes can be directed via e-mail to info@highwaysengland.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 dialling their 101 non-emergency number. In future the development of 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]:

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

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

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 encourages 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:-

<https://www.gov.uk/speed-limits>

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.

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 national 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, 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 1 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.

A number of 20mph zones are in operation in 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.

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. We receive many requests for speed limits and therefore apply a points-based scoring system to allow such requests to be prioritised. This allows resources to be better targeted at those areas which highlight an issue with collisions. The ranking scheme is included below.

1.4.1 Speed limit ranking scheme

Subject	Parameters	Points range	Points scored
Collisions	Serious and Fatal Slight Non-Injury Sub-total score Divided by crash exposure value: (volume (volume per day) x length (m) x 365) x 2 Total collision component score	10 5 1 = =	
Capital scheme or developer funded	Yes No	5 0	
Road hierarchy	A road B road C road Unclassified	5 4 3 2	
Enforceability (based upon 85 percentile 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	

Subject	Parameters	Points range	Points scored
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	
Support from residents	Yes No overall support Residents not in support	2 0 -2	
Support from community and/or special interest groups	Yes No support forthcoming Against proposals	2 0 -2	
Cost of speed limit, including advertisements and associated works	<£5,000 £5,000 to £7,500 £7,500 to £10,000 £10,000 to £15,000 > £15,000	10 8 6 3 1	
		Total	

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 will be 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 and will be an option in dealing with speed related matters. In future, the development of an area on the partnership website with appropriate links will facilitate the reporting of all speed related matters

2 VEHICLE ACTIVATED SIGNS (VAS)

2.1 Introduction

This guidance puts in place detailed procedures to be followed in considering the installation of permanent, temporary or mobile 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 advantages 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.

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 would diminish. In response to these concerns we apply a stringent set of criteria to each application we receive, to guard against over-proliferation and 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.

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

- 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 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.
- 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. There must also be reasonable access to a power supply.
- 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.
- 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 Permanent and 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. All selection, installation and monitoring criteria above will apply, with the exception of criteria 2.1(e).

2.4 Mobile VAS

Mobile VAS differ from temporary VAS as they are completely mobile and do not require pre-prepared sites, and may be deployed in locations which would not meet the criteria for permanent or temporary sites. Currently, there are no mobile VAS operating, but are included as they may be employed in the future. Decisions on where they may be deployed, and the length of deployment, should be taken through established selection and consultation procedures of the sign's owner, either the County Council, Derby City or Derby and Derbyshire Road Safety Partnership. The owner may seek contributions to costs from the local council requesting the installation. In no circumstances should mobile VAS be deployed for longer than the three month limit applying to temporary installations.

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.

We receive many requests for traffic calming measures which 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/County Council Member. Measures can only be introduced at locations where there is an identifiable problem (e.g. trend in collisions) and will be chosen based on the likelihood of an improvement to the road safety record 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 Police officers by dialling their 101 non-emergency number. 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

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 Build-outs, 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 build-outs**; 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 build-outs, introduced at strategic locations, will create a chicane effect and help to control traffic speeds along the route in question. Build-outs can be difficult to achieve where there are many private driveways restricting their positioning.

Priority narrowing is usually created through footway build-outs, 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 build-outs 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

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.

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 locations.

4 TABLE 1: IDENTIFIED TREATMENTS AND THEIR CRITERIA FOR CONSIDERATION OF IMPLEMENTATION

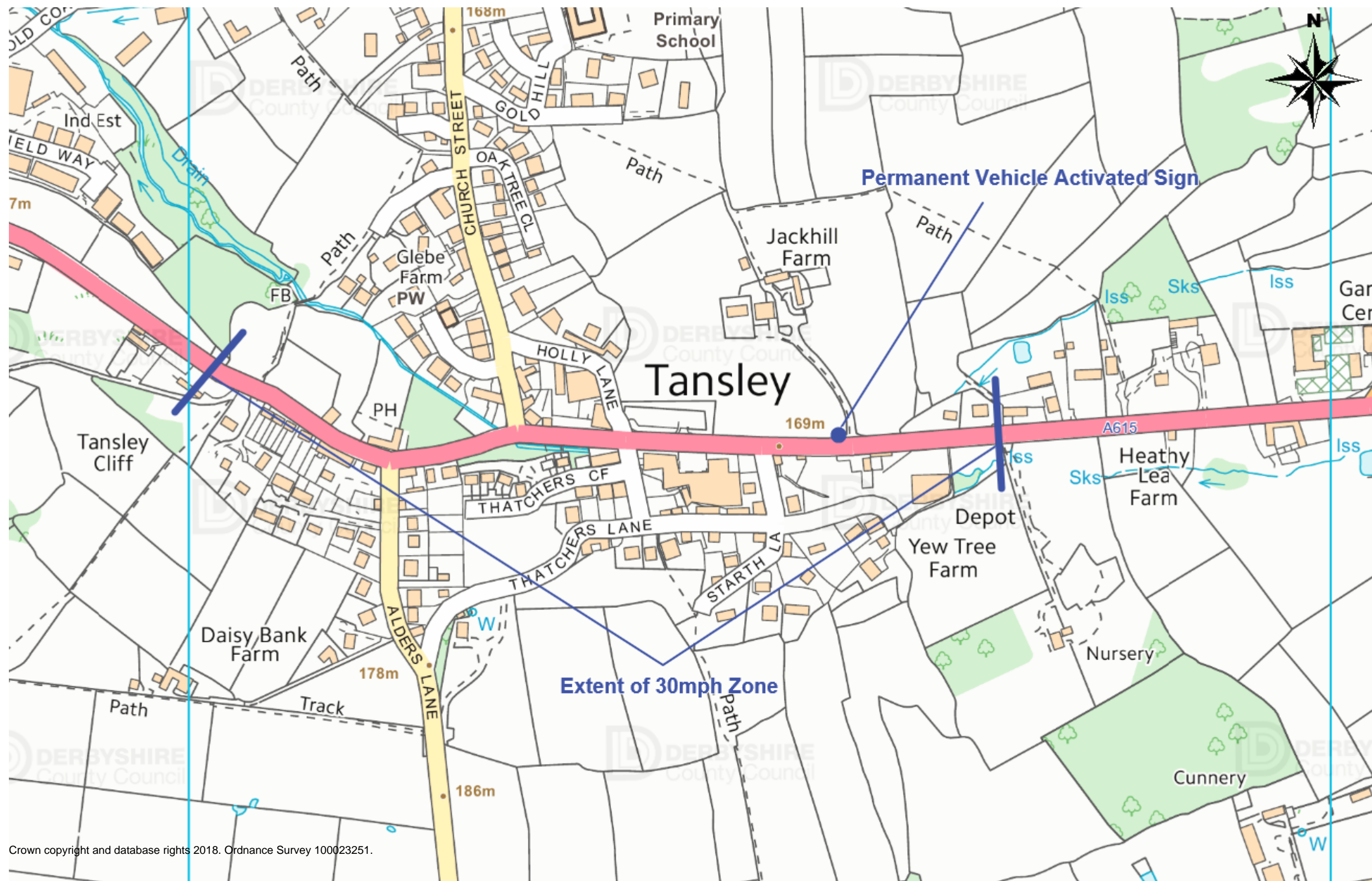
Treatment Type	Treatment	Criteria	Considerations
Engineering	20mph zones.	<ul style="list-style-type: none"> Only available for existing 30mph speed limit areas. Not available for arterial/strategic routes. 6 personal injury collisions over 1km (pro rata) in the latest 3 years. Recorded mean speed and 85th percentile should be approximately 20mph. 	Traffic Regulation Order legal process required
Engineering	Speed Limit Change.	<ul style="list-style-type: none"> Current speed limit assessed and not appropriate. Procedure to rank and prioritise requests for speed limits is applied. 	Traffic Regulation Order legal process which is subject to the public and statutory bodies opinion.
Engineering	Permanent Vehicle Activated Signs (VAS).	<ul style="list-style-type: none"> 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 exceeded the threshold specified in Table 2. Other traffic calming measures inappropriate due to strategic nature, hierarchy and importance of the route and to avoid the use of less appropriate routes. 	Speed or specific collision trend required. Road user can become familiar.
Engineering	Temporary VAS.	<ul style="list-style-type: none"> 6 personal injury collisions over 1km in the latest 3 years, where either a trend can be identified or speed 	Road user less likely to become familiar and effectiveness is retained. VAS should remain in place for no longer than 3 months and not

Treatment Type	Treatment	Criteria	Considerations
		<p>has been a factor in some of the collisions.</p> <ul style="list-style-type: none"> • Site or Route Specific Road Markings, Traffic Signs and other engineering methods have been evaluated and not worked. • 85th percentile recorded speed has exceeded the threshold specified in Table 2. • Other traffic calming measures inappropriate due to strategic nature, hierarchy and importance of the route and to avoid the use of less appropriate routes. 	<p>redeployed at the same site within 6 months (subject to resourcing and funding).</p>
Engineering	Horizontal Traffic Calming Measures (build-outs, chicanes and priority narrowing).	<ul style="list-style-type: none"> • 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. 	<p>Limited noise and vibration issues.</p> <p>Difficult to implement where there are private driveways. Often viewed as intrusive by residents.</p> <p>Additional traffic signing and illumination is required which has an environmental impact.</p> <p>Amount of on-street parking provided will be reduced.</p>
Engineering	Vertical Traffic Calming Measures (road humps/speed cushions/speed tables/plateaux).	<ul style="list-style-type: none"> • 7 personal injury collisions over 1km (pro-rata) in the latest 3 years in an area or. • 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. 	<p>Size/height, etc, is prescribed by Highways (Road Humps) Regulations 1999.</p> <p>Can provide additional noise and vibration issues for residents.</p> <p>Additional traffic signing required which has an environmental impact.</p>
Engineering	Site Specific Road Markings (rumble strips).	<ul style="list-style-type: none"> • 3 personal injury collisions over 1 km in the latest 3 years 	<p>Noise impact upon nearby properties.</p>

Treatment Type	Treatment	Criteria	Considerations
		<ul style="list-style-type: none"> Cannot be located within 200m of a residential property. 	
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.	<ul style="list-style-type: none"> 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.

5 TABLE 2: MEAN AND 85TH PERCENTILE SPEED THRESHOLDS

Speed Limit	Threshold (mean speeds)	Threshold (85th percentile speeds)
20mph	20mph	24mph
30mph	30mph	35mph
40mph	40mph	46mph
50mph	50mph	57mph
60mph	60mph	68mph



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100 m
Scale = 1 : 3462.480

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