



Gateshead Council (GMBC)

Speed Management Plan

October 2021

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Executive summary

Background

- i. Management of traffic speed is an important element of an effective transport network, supporting improved road safety, and helping to manage the impact of traffic on local communities.
- ii. Road Safety is an important issue and the Council and Northumbria Police each receive many requests and expressions of concern in relation to speed management each year. Speeding traffic also affects people in many other ways beyond immediate safety concerns. In particular it can discourage active and independent travel, and create community severance.
- iii. Over the last ten years, there has been a gradual downward trend in highway casualties in Gateshead, reducing from 872 in 2008 to 511 in 2018, a fall of 41%. It is important to continue this trend by continuing to carry out works which are aimed at tackling speed related accidents.
- iv. The updated Speed Management Plan sets out how the Council will develop and implement its approach to speed management, helping to minimise the number and severity of speed related accidents and reducing other problems associated with excess traffic speed.

Why review the Speed Management Plan?

- v. The Council's previous Speed Management Plan (SMP) was produced in 2007. It was informed by the Department for Transport (DfT) circular 1/06 'Setting Local Speed Limits'. In January 2013 the DfT revised its guidance and DfT circular 01/13 'Setting Local Speed Limits' was published. Whilst the principles contained within DfT circular 01/13 have informed the Council's speed management considerations since 2013, the SMP has not been formally reviewed and updated during this time.
- vi. It is also important to update the plan for the following reasons:
 - To reflect changes in other local and national policy and guidance
 - To reflect the speed management works that have taken place or are planned
 - To review and reflect on more up to date trends and statistics
 - To reflect changes in technology.
- vii. The Speed Management vision is: Safe and efficient speeds for all.
- viii. The Plan also sets out the Council's Speed Management Policy as:

Speed limits shall be introduced in a manner consistent with current government guidance and exceptions to

usual practice will be recorded and justified as a departure from standard.

ix. The introduction of speed management measures whether based on speed limits, engineering, education or enforcement will only be considered where it can be demonstrated that they meet and contribute to the:

- Contribute to the Speed Management Plan vision and core aims;
- Contribute to North East Transport Plan Goals – specifically those relating to road and community safety and climate change;
- Contribute to Gateshead Council's Thrive Agenda;
- Take into account relevant regulations, best practice, all highway users and local experience;
- Are consistent with Gateshead Council's Network Management Plan.

x. The core aims of the SMP are to:

- Reduce the incidence of inappropriate speed on Gateshead's roads;
- Achieve significant reductions in the number of personal injury accidents occurring on the highway as a result of excessive or inappropriate speed;
- Reduce the severity of road accidents that do occur;
- Increase levels of speed limit compliance;
- Reduce community severance;

- Contribute towards creating more attractive environments in which to live and work;
- Encourage the use of sustainable modes of transport; and
- Adapt to changes in technology.

xi. The Speed Management Plan will be based around the Safe Systems Approach (SSA) to road safety, which is centred on the principle that life and health should not be compromised by our need to travel.

Funding

xii. Speed management schemes will largely be funded by Local Transport Plan Integrated Transport funding, mainly coming under the Safe and Sustainable Communities key area.

xiii. This can sometimes be supplemented by specific bids to central government and its departments and through developer contributions linked to planning approvals. However, such opportunities are rarely linked specifically to speed management or road safety.

Identification and prioritisation of works

xiv. The method for prioritising schemes is set out in full detail in Table 1.2 of the Plan.

xv. Works will be incorporated into the Council's transport capital programme using the annual traffic management budget (for schemes less than £10k), as a standalone

scheme (for schemes above £10k), or as part of a wider scheme.

- xvi. Urgent works which cannot be accommodated within the budget will be carried out as an agreed overspend or through postponing less urgent works.
- xvii. If more than one location falls within the same category, the overall number of accidents, accident rate and accident severity will be considered.
- xviii. For rural roads, as recommended in DfT Circular 01/13, the Council will also draw upon the methods set out in the Transport Research Laboratory guidance 'Accident Analysis on Rural Roads: A Technical Guide' (2004).

Speed limits

- xix. Speed limits should be evidence-led and self-explaining and seek to reinforce people's assessment of what is a safe speed to travel. They should encourage self-compliance and be regarded as the maximum rather than the target speed.
- xx. Gateshead Council will assess speed limits and the need for intervention based on the 85th percentile (the speed below which 85% of motorists are travelling) and average speeds.
- xxi. The Plan proposes that speed limits will not be routinely reviewed other than in the case of 20mph limits for which

there is an ongoing programme of works, or in the following circumstances:

- As part of a wider highway scheme;
- Following a fatal accident (coroner recommendation or engineer assessment);
- Following a series of serious or slight accidents linked to speed;
- As a result of MP, Council Member or Emergency Service request
- Following receipt of a petition (in accordance with Gateshead Council Petition Scheme);
- At the request of a neighbouring Local Authority;
- When linked to new development.

New developments

- xxii. New residential developments will typically be required to adhere to the street hierarchy set out in Gateshead Council's Transport Design Guide (once approved), with the road type being linked to function. The hierarchy allows inclusion of factors such as speed limit, road geometry and level of user segregation in managing speed and road safety.

Speed Management Measures

xxiii. The Plan sets out several types of Speed Management measures available to the Council. These can be summarised as the following.

Speed limits

- Zonal speed limits
- Ultra low speed limits (below 20mph)

Engineering measures (general)

- Vehicle Activated signs/Driver feedback signs
- Road markings
- Passive safety

Engineering measures (urban/village)

- Vertical traffic calming
- Horizontal traffic calming and road narrowing
- Street closures
- On-street parking
- Traffic signals

Engineering measures (rural)

- Village gateways
- Bends (warning and safety measures)
- Quiet lanes

Education/enforcement

- Safety Camera Strategy/ Northumbria Safer roads Initiative (NSRI)
- Speed Monitoring Network/Traffic and Accident Data Unit (TADU)
- Publicity

Emerging technology

- Vehicle speed detection/limiters if introduced by UK government
- Connected and autonomous vehicles (when in broader use)

1 Introduction

Why review the SMP?

- 1.1 The Council's previous Speed Management Plan (SMP) was approved in 2007. It was informed by the Department for Transport (DfT) circular 1/06 'Setting Local Speed Limits'. In January 2013 the DfT revised its guidance and DfT circular 01/13 'Setting Local Speed Limits' was published. Whilst the principles contained within DfT circular 01/13 have informed the Council's speed management considerations since 2013 the SMP has not been formally reviewed and updated during this time.
- 1.2 Circular 01/13 retains and builds upon many of the underlying principles of DfT Circular 01/06 whilst providing additional evidence of the safety and wider benefits of setting appropriate speed limits.
- 1.3 It is also important to update the plan for the following reasons:
- To reflect changes in other local and national policy and guidance
 - To reflect the speed management works that have taken place or are planned
 - To review and reflect on more up to date trends and statistics
 - To reflect changes in technology

1.4 Since the initial establishment of the SMP a Police and Crime Commissioner has assumed responsibilities that were previously within the remit of a Police Authority. However, the Police continue to be responsible for speed enforcement on the highway.

1.5 In 2015 the speed limit for HGV's over 7.5 tonnes increased from 40mph to 50mph on single carriageway roads and from 50mph to 60mph on dual carriageway roads. Appendix B sets out the current UK speed limits by use class and road type.

Relevance of a SMP

1.6 Road Safety is an important issue, with excess speed a factor in a significant proportion of accidents, and the Council and Northumbria Police each receive many requests and expressions of concern in relation to speed management each year. Speeding traffic affects people in many different ways.

1.7 Over the last ten years, there has been a gradual downward trend in highway casualties in Gateshead, reducing from 872 in 2008 to 511 in 2018, a fall of 41%. This reduction is demonstrated through the table and chart below.

Casualties by Year and Severity

Year	Fatal	Serious	Slight	Total
2008	6	74	792	872
2009	6	85	809	900
2010	6	76	701	783
2011	4	63	631	698
2012	3	75	659	737
2013	8	53	592	653
2014	4	53	642	699
2015	4	60	661	725
2016	7	60	506	573
2017	3	50	421	474
2018	1	65	445	511
Total	52	714	6,859	7,625

Number and Severity of Casualties by Year

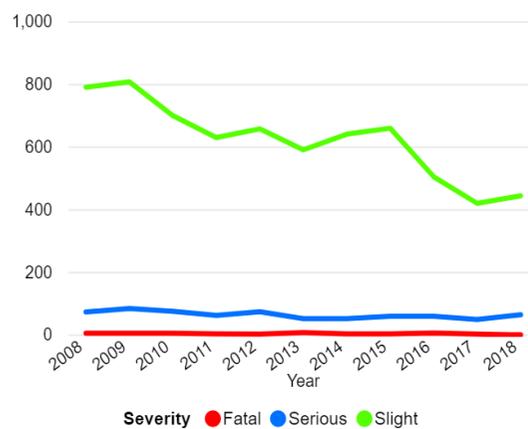


Figure 1 - Number and Severity of Highway Casualties in Gateshead, 2008 to 2018

- 1.8 Causation factors are recorded by the Police when attending a road traffic collision and this allows the number of injuries that the police believe were the result of a speeding to be identified. The figures for Gateshead are detailed in figure 2.
- 1.9 Figure 2 shows that the number of casualties linked to speed has been decreasing in line with overall injuries, with a 66% reduction from 2008 to 2018.
- 1.10 Figure 3 below shows the average value to society in road casualty prevention. Based on this the accidents set out in figure 1 can be estimated to have cost society more than £43 million. ⁱ

Casualties by Year and Severity

Year	Fatal	Serious	Slight	Total
2008	1	6	61	68
2009	3	12	61	76
2010	3	10	63	76
2011		11	42	53
2012		10	66	76
2013		1	33	34
2014	1	2	59	62
2015	1	4	35	40
2016	1	4	36	41
2017	1	3	20	24
2018		4	19	23
Total	11	67	495	573

Number and Severity of Casualties by Year

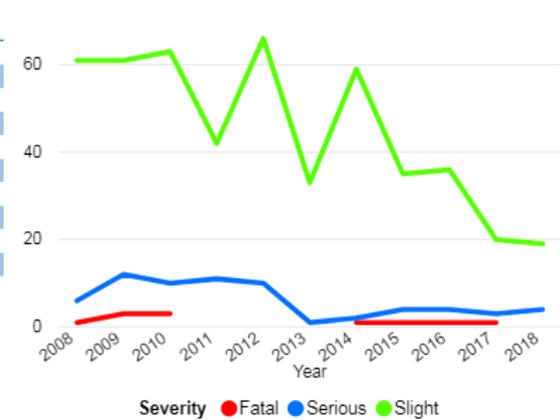


Figure 2 - Number and Severity of Road User Casualties in Gateshead where excessive or illegal Speed was judged to be a factor by the attending Police Officer, 2008 to 2018

- 1.11 The downward trend in injury accidents in Gateshead is positive, particularly when set against a background of increasing population/car use and plateauing national accident statistics.
- 1.12 Gateshead Council believes that any responsible community must recognise the benefits of reducing traffic speeds and take the issue of speeding traffic seriously. Further work must therefore be undertaken in a variety of ways to ensure accident levels remain low and continue to fall.

**Average value of prevention¹ per reported casualty and per reported road accident²:
GB 2017**

Accident/casualty type	£ (2017 prices)	
	Cost per casualty	Cost per accident
Fatal	1,897,129	2,130,922
Serious	213,184	243,635
Slight	16,434	25,451
Average for all severities	64,726	90,424
Damage only	-	2,272

1 The costs were based on 2017 prices and values

2 The number of reported road accidents were based on 2017 data

Source: STATS19, Transport Analysis Guidance - WebTAG

The figures in this table are National Statistics

Last updated: 27 September 2018

Figure 3 - Department for Transport, Accident and casualty costs (RAS60) (2018)

- 1.13 This SMP fits closely with Gateshead Council's Thrive Agenda which aims to make the borough a place where everyone Thrives. It also links closely to the Tyne and Wear Local Transport Plan, which includes policies to curb excessive road speeds, continue the introduction of 20mph speed limits, improve road safety and reduce road casualties through engineering, education and enforcement.
- 1.14 This SMP sets out how the Council intends to continue to develop and implement its approach towards speed management in Gateshead, and in doing so help minimise the number and severity of highway accidents in the borough.
- Speed as a factor in highway accidents**
- 1.15 Injury accidents on the highway can occur as a result of a number of factors, of which inappropriate and/or excessive speed is one. Nationally
- 1.16 Higher speeds mean that drivers have less time to identify and react to what is happening around them, it takes longer for the vehicle to stop and the vehicle carries more force into an impact with another object. It removes the driver's safety margin and turns near misses into crashes.^{iv}
- 1.17 One of the most powerful research findings of recent years found that an increase in average speed of 1mph results in an average 5% increase in the total number of accidents.^v Correspondingly, a 1mph reduction in average speed results in an average 5% reduction. This indicates that even marginal reductions in average speeds can result in major road safety gains.

1.18 The research by the Transport Research Laboratory^{vi vii} also showed that the reduction varies by road type, as follows:

- around 6% for urban roads with low average speeds
- around 4% for medium speed urban roads and lower speed rural main roads
- around 3% for higher speed urban roads and rural main roads

1.19 The link between speed, accident numbers and severity is well established. Analysis of vehicle speed in pedestrian fatalities in Great Britain^{viii} for example, found that 85% of pedestrians are killed when hit by a vehicle travelling at up to 40mph, dropping to 45% for speeds up to 30mph and 5% for speeds below 20mph.

1.20 Campaign group Road Safety GB North East reported in 2019 that 1 in 5 fatal collisions in the region between 2014 and 2018 involved excessive speed, which equates to 58 deaths. (Road safety GB North East)^{ix}

1.21 There is also a clear distinction between the accidents that occur in urban and rural scenarios. Around two thirds of highway fatalities in the UK occur on rural roads whereas a large proportion of pedestrian and cyclist injury accidents occur in urban settings.

Wider benefits of Reduced Speed

1.22 In addition to reducing the number and severity of accidents speed management/reduction has the potential to realise wider benefits, including;

Air quality/climate change-

- Reducing the relative attractiveness of the car and increased attractiveness of sustainable modes for shorter journeys. Half of all journeys made in Britain are less than two miles in length. When driven from a cold start, these journeys produce disproportionate amounts of harmful gases and particulate matter, which reduce air quality and impact negatively on climate change. Creating a road environment that encourages more people to make these shorter journeys on foot or by bicycle where possible is a key part of reducing unnecessary pollution from motor vehicles.

Noise pollution-

- Road traffic is a major source of noise nuisance, and this increases proportionally with speed.
- The UK Noise Association have reported that in urban areas with existing traffic speeds of between 20mph and 34mph reducing speeds by 6mph could reduce noise levels by up to 40%. Noise from vehicles travelling at higher speeds can be linked to both engine noise and tyre/road surface noise^x.

Health-

- By increasing the attractiveness of walking and cycling for shorter journeys greater levels of

activity and consequent physical and mental health benefits are realised. Safer road environments can also help to enable people with disabilities or additional needs to get active.

- Increased levels of sustainable travel will in turn improve air quality and reduce greenhouse gas emissions. Nationally in 2019 the UK Government published a Clean Air Strategy^{xi}, setting out measures and targets relating to improved air quality, which can be linked to a variety of respiratory problems as well as cancer and heart disease. In 2016 approximately 110 deaths were thought to have been the direct cause of air pollution in Gateshead. The Government's Road to Zero^{xii}, published in 2018 sets out measures to clean up transport and its decarbonisation in transport plan in support of this is expected in 2020.

Economy-

- Reduced pressures on the NHS as a result of fewer road casualties and a healthier population
- Reduced pressure on Ambulance, Police and Fire and Rescue Services
- Fewer lost work days due to sick leave
- Fewer delays in transporting goods and lost work time
- Less damage to property

Community-

- Reducing and managing vehicle speeds can help reconnect communities and make them more pleasant and attractive places to live. Encouraging people to walk and cycle rather than take the car improves social interaction, inclusion and helps create a better sense of place and community.

Wildlife-

- There are various studies outlining the impact of roads and human development in fragmenting wildlife habitats. The result is the need for wildlife to cross roads in order to move from one habitat area to another. Speed as a factor in this, particularly in rural and semi-rural areas, is important as it makes the crossing of the highway more difficult for wildlife. The British Mammal Society in June 2018 reported that 1 in 5 British Mammals face high risk of extinction. The report highlights road deaths and climate change as two key factors in this decline.

Who speeds?

1.23 Research shows that during free flow conditions a significant proportion of car drivers exceed the speed limit of the road on which they are travelling. On roads with a 30mph speed limit for example, 52% of motorists typically drive in excess of the speed limit, with 6% exceeding by more than 10mph.

1.24 Compliance with speed limits is clearly a major issue with many treating it as an acceptable social norm. Figure 4 below shows the level of speed limit exceedance on different types of road in Great Britain.^{xiii}

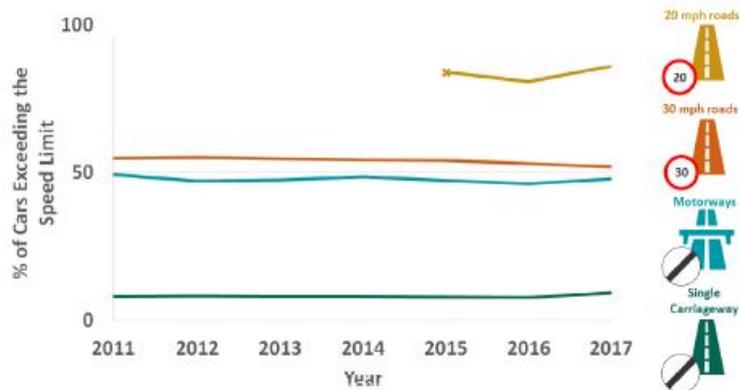


Figure 4 - Department for Transport- Vehicle speed compliance statistics, Great Britain : 2017

1.25 The Royal Society for the Prevention of Accidents (RoSPA) has identified three categories of driver as follows^{xiv};

- 1./ Compliant drivers (52%)- Drivers that observe speed limits
- 2./ Moderate speeders (33%)- Drivers that occasionally exceed speed limits
- 3./ Excessive speeders (15%)- Those who routinely exceed speed limits

1.23 Whilst Gateshead Council as highway authority, through this plan and associated measures, make highway safety a priority, there remains a responsibility on the highway user to travel in a way that ensures the safe passage of themselves and others.

What is speeding?

1.26 Speeding can include any of the following: -

- exceedance of the legal speed limit
- driving or riding too fast for the road conditions (i.e poor weather, poor visibility, road geometry or when in areas of high pedestrian movement)
- accelerating at a velocity which is greater than could typically be expected by other road users.

All of the above could be classed as dangerous driving.

2 The Gateshead Speed Management Plan

Vision

2.1 *'Safe and efficient speeds for all'*

Speed Management Policy

2.2 Speed limits shall be introduced in a manner consistent with current government guidance and exceptions to usual practice will be recorded and justified as a departure from standard.

2.3 The introduction of speed management measures whether based on speed limits, engineering, education or enforcement will only be considered where it can be demonstrated that they meet and contribute to the:

- Speed Management Plan vision and core aims
- North East Transport Plan Goals – specifically those relating to road and community safety and climate change
- Gateshead Council's Thrive Agenda

and;

- Take into account relevant regulations, best practice, the needs of all highway users and local experience
- Are consistent with Gateshead Council's Network Management Plan.

Who is responsible for the plan?

2.4 Gateshead Council as Highways Authority is responsible for the setting of speed limits and the management of speed on all public roads in Gateshead (except the A1 and A194(M), which are maintained by Highways England).

2.5 The Police are responsible for the enforcement of speed limits.

Aims

2.6 The continuing development of a SMP for Gateshead is closely linked to the Council's Thrive Agenda.

- Thrive Agenda- Access to employment, shops, leisure and services by all modes of transport safely, affordably and efficiently. Reducing road safety fears, especially among more vulnerable people.

2.7 The core aims of the SMP are to:

- Reduce the incidence of inappropriate speed on Gateshead's roads;
- Achieve significant reductions in the number of personal injury accidents occurring on the highway as a result of excessive or inappropriate speed;
- Reduce the severity of road accidents that do occur;

- Increase levels of speed limit compliance;
- Reduce community severance (when traffic or infrastructure acts as a barrier through an area, for example a busy road separating a residential area from local shops);
- Contribute towards creating more attractive environments in which to live and work;
- Encourage the use of sustainable modes of transport; and
- Adapt to changes in technology.

2.8 The remainder of this document will focus on how the Council will set about achieving these aims.

A Safe Systems Approach (SSA)

2.9 This Strategy will be based around the Safe Systems Approach (SSA) to road safety, which is centred on the principle that life and health should not be compromised by our need to travel. A SSA was identified as a key national priority in the government's British Road Safety Review (2015). It recognises that humans can make mistakes and that there is a shared responsibility amongst stakeholders when attempting to prevent collisions, and in ensuring that accidents do not result in death or serious injury.

2.10 Gateshead Council as Highways Authority will contribute to a SSA through a variety of measures set out below and will work with other stakeholders in improving the SSA. Of the five key pillars of action typically forming part of an SSA Gateshead Council has a clear link to three of the five strands (**bold**) as follows;

1./ **Safe road use**- education and enforcement.

2./ **Safe vehicles**- not part of this Strategy

3./ **Safe speeds** – setting of speed limits and use of engineering measures to encourage compliance

4./ **Safe roads and roadsides**- engineering and maintenance

5./ **Post crash response**- Mainly linked to emergency services and health care but could be linked to the review of accidents statistics, and the response to fatal accidents.

Funding

2.11 Transport and highways improvement works, including those linked to road safety engineering schemes, are largely undertaken using central government capital funding received through the Local Transport Plan Integrated Transport block. Schemes are typically identified in line with the objectives of the North East Transport Plan (approved in 2021), and are set out within three themes;

- Safe and Sustainable Communities
- Climate Change
- Economic Development

Speed management schemes will largely fall within the first category but may also form part of wider schemes falling in other categories.

2.12 The LTP capital funding is supplemented where possible through other sources of external funding such as specific bids to central government and its

departments and through developer contributions linked to planning approvals. However, such opportunities are rarely linked specifically to speed management or road safety.

Identification and prioritisation of works

- 2.13 Works will be prioritised where possible, in line with Table 1 below. Works will be incorporated into the Council's transport capital programme using the annual traffic management budget (<£10k), as an independent scheme (>£10k) or as part of a wider scheme. Where works are identified as being urgent and cannot be accommodated within the available budget they will be carried out as an agreed overspend or through the postponement of other less urgent works.
- 2.14 Where more than one location is identified as requiring intervention within the same category the overall number of accidents, accident rate and accident severity will be taken into consideration when prioritising which to undertake first.
- 2.15 As recommended in DfT Circular 01/13 the Council will also draw upon the methods set out in the Transport Research Laboratory guidance *Accident Analysis on Rural Roads: A Technical Guide (2004)* when assessing the need for intervention and prioritisation of schemes on rural roads. However, as acknowledged in the document it is not intended to completely replace local expertise and judgement.

Table 1 - Framework of timescales and types of treatment for speed management issues

Category	Speed*	Casualties**	Priority	Target timescale***	Treatment
1	High	High	Very High	<1 year	<ul style="list-style-type: none"> • Speed management engineering measures • Review of speed limit • Referral to Police/Northumbria Safer Roads Initiative for assessment
2	Low	High	High	<2 years	<ul style="list-style-type: none"> • Casualty reduction engineering measures • Highway maintenance • Review of speed limit
3	High	Low	Medium	< 3 years	<ul style="list-style-type: none"> • Speed management engineering measures • Review of speed limit
4	Low	Low	Low	None	<p>None unless part of a wider scheme or to meet other Speed Management Plan priorities such as:-</p> <ul style="list-style-type: none"> • Air quality • Promotion of sustainable travel

*Assessed in relation to table 2

** When compared to other links/junctions of a similar type and flows

***- May involve temporary works until more permanent measures can be undertaken due to scale/cost of works

General principles

2.16 Speed limits should be evidence-led and self-explaining and seek to reinforce people's assessment of what is a safe speed to travel. They should encourage self-compliance and be

regarded as the maximum rather than the target speed.

2.17 The minimum length of a speed limit should generally be not less than 600 metres and regular changes to speed limit on a single stretch of road will be avoided where possible to prevent

confusion. In exceptional circumstances the minimum length will be reduced to 300m but only in conjunction with lower speed limits.

2.18 The signed maximum speed limit is not an indication of a safe speed to drive, which can be influenced by factors such as road geometry, weather conditions and the like.

2.19 Speed limits should not be set in isolation or used to solve an isolated problem but should form part of a package of measures.

2.20 Roads should be designed so that mistakes made by road users (within the law) do not result in death or serious injury.

2.21 The overall speed limit framework, including the setting of national limits, is the responsibility of the government. The three national speed limits are:

- 30mph- on roads with a network of street lighting (restricted roads)
- 60mph- on single carriageway roads
- 70mph- on dual carriageways and motorways

Local authorities must prescribe speed limits at or below these national limits based upon local need.

2.22 Implementation of speed limits and other engineering measures will be undertaken in conjunction with relevant guidance and legislation, which includes:

- Traffic Signs Regulations and General Directions 2016 (TSRGD)

- Traffic Advisory Leaflets (TAL)
- Road Hump/Traffic calming Regulations (1999)
- Design Manual for roads and bridges (DMRB)

How is speed assessed?

2.23 Gateshead Council will use 85th percentile and average speeds when setting speed limits and assessing the need for engineering measures. In free flow conditions 85th percentile speeds and average speeds should be closely linked, with any significant difference indicating uncertainty amongst highway users of the appropriate speed to travel.

2.24 The 85th percentile speed is the speed below which 85% of motorists are travelling. The 85th percentile approach acknowledges the speed at which the vast majority of drivers feel is an appropriate speed to travel. It discounts the highest 15% of drivers which typically fall within the category of excessive speeders as identified by RoSPA (see para 1.22).

2.25 Gateshead Council will utilise permanent speed monitoring sites where available and in other locations will commission independent specialist contractors to carry out speed surveys. These will typically be 7-day surveys undertaken outside of holiday periods and other periods such as during road works or severe weather, which could influence results

2.26 Intervention may be required where the criteria set out in table 2 apply:-

Scenario	Method of identification
the average and 85 th percentile speeds are not closely linked	<ul style="list-style-type: none"> • Speed surveys • High levels of overtaking (observations) • Tailgating (observations) • Road rage (reported by Police or members of the public)
The 85 th percentile speed exceeds the speed limit* by more than 10% + 2mph (see table 3)	<ul style="list-style-type: none"> • Speed surveys • Reported by Ward Member, Stakeholder or member of the public followed by Engineer/Transport Planner assessment
A fatal accident linked to speed occurs	<ul style="list-style-type: none"> • Police/Coroner/Engineer assessment
A series of serious or slight accidents relating to speed occur at a particular location or within a defined area	<ul style="list-style-type: none"> • Police reports directly to GMBC • Engineer/Transport Planner assessment of TADU data • Reported by Ward Member, Stakeholder or member of the public followed by Engineer/Transport Planner assessment

*Design speed limit in Home Zones

Table 2- Speed scenarios and methods of identification

Speed limit	Average speed	85 th Percentile speed

20mph	20mph	24mph
-------	-------	-------

30mph	30mph	35mph
40mph	40mph	46mph
50mph	50mph	57mph
60mph	60mph	68mph

Table 3 - Speed limit and thresholds above which recorded speeds are considered high

2.27 Where investigations into speeding identify a problem one of the following approaches will be taken in tackling the issue;

- Single site action- dealing with a site-specific problem
- Mass action- addressing all locations with the same issue
- Area action- focusing of action into an area of the borough
- Route treatment- tackling an accident problem on a specific route

Review of speed limits

2.28 Whilst the SMP has not been updated since the DfT circular was released in 2013 the guidance has provided the basis for speed limit assessments and changes during that time. This plan formalises the Council's approach to speed management in relation to the 2013 circular.

2.29 The review of all speed limits in Gateshead and implementation of any changes resulting from the 2013 circular is however an extensive task, requiring

significant resources. Speed limits will not therefore be routinely reviewed other than in the case of 20mph limits for which there is an ongoing programme of works. Other speed limits will only be reviewed in the following circumstances;

- As part of a wider highway scheme
- Following a fatal accident (coroner recommendation or engineer assessment)
- Following a series of serious or slight accidents linked to speed
- As a result of MP, Council Member or Emergency Service request
- Following receipt of a petition (in accordance with Gateshead Council Petition Scheme).
- At the request of a neighbouring Local Authority
- When linked to new development

2.30 When assessing and making decisions on local speed limits and the need for engineering measures, the following factors will typically be considered;

- history of collisions, including frequency, severity, types and causes;
- road geometry and engineering (width, sightlines, bends, junctions, accesses and safety barriers etc.);

- road function (strategic, through traffic, local access etc.);
- composition of road users (including existing and potential levels of vulnerable road users);
- existing traffic speeds; and
- road environment, including level of road-side development and possible impacts on residents (e.g. severance, noise, or air quality).

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

2.32 Where the appropriate speed limit is in dispute or the benefits are unclear, the DfT speed limit appraisal tool may be used to help identify the appropriate speed limit and the cost benefit of any change. However, there are limitations to this tool and not all scenarios are covered. The Council may in those circumstances decide that there are specific local characteristics which the tool cannot allow for.

2.33 Any review of speed limits will not encompass the A1 or A194(M). These trunk roads are the responsibility of Highways England rather than Gateshead Council. GMBC will however liaise with Highways England when changes to speed limit are proposed on roads which connect directly to the HE network. They will similarly consult with

neighbouring authorities on any speed limit changes affecting cross boundary connections.

2.34 The underlying aim of any speed management works undertaken by Gateshead Council should be to achieve a safe distribution of speeds.

2.35 In most cases simply changing a speed limit through signage and a legal order will not be sufficient in delivering speed reduction and will only be appropriate where existing speeds already conform to a lower limit.

3 New Developments

3.1 As far as possible, within the Council's development management powers, it is intended that developers will be required to have a greater awareness of speed related problems generated

by their proposals. The following policies and guidance documents are considered key as part of this process;

- National Planning Policy Framework (NPPF)
- Newcastle Gateshead Core Strategy Policy CS13
- Gateshead Residential Design Code SPD
- Gateshead Highways Design Guide
- Transport Design Guide (not yet adopted)
- Gateshead Home Zone Design Guide

3.2 New residential developments will typically be required to adhere to the street hierarchy set out in Gateshead Council's Transport Design Guide, with the road type being linked to function. The hierarchy allows inclusion of factors such as speed limit, road geometry and level of user segregation in managing speed and road safety. The hierarchy ordered from major to minor will be;

- 1./ Local distributor
- 2./ Residential Road with buses
- 3./ Residential Road access collector
- 4./ Residential road

3.3 New residential developments should normally be designed as 20mph zones at no cost to the Council, which includes costs linked to any new/amended legal orders. Contributions will also

be obtained from developers towards the addressing of other related speed management issues, which may exist or be created outside of the development site.

3.4 However, where a residential development incorporates more strategic routes or is linked to other non-residential use classes there may be a requirement for a higher limit commensurate with the road function. The appropriate speed limit will be identified through the table in Appendix A.

3.5 A developer should first and foremost attempt to control traffic speeds through road geometry and horizontal deflection. Vertical traffic calming should only be used where such measures are not considered practical or cannot be achieved, such as on difficult infill sites. Designs will be assessed by Gateshead Council Transport Planners/Technicians to ensure a suitable layout.

3.6 All new street lighting schemes, whether installed as part of a private development or by the Council, will be assessed for their possible effect on speed limits.

4 Speed limits

Zonal speed limits

Speed limits other than those prescribed as national speed limits, which affect more than one road and on where only entry and exit signage is required

40mph Zones

- 4.1 A survey by the road safety charity Brake^{xv} has found that 60% of drivers feel unsafe travelling at the 60mph speed limit on rural single carriageway roads and that less than a quarter believe 60mph is a safe speed for a motor vehicle to travel where there may be a presence of pedestrians, cyclists and horse riders. The research also found that only 19% of those surveyed objected to a reduction in rural speed limits from 60mph. This approach is supported by the Cycling Embassy for Great Britain, which believes that 40mph should be the maximum speed at which cyclists and motorised traffic should mix without any segregate provision.
- 4.2 In accordance with DfT circular 01/13 and Appendix A Gateshead Council will implement 40mph Zones on rural roads which form part of a cycle route or where there is known to be a regular presence of vulnerable road users including pedestrians and horse riders. In rural areas it is often not cost effective or physically possible to provide segregated facilities, which may otherwise alleviate the need for a speed limit change.
- 4.3 The amended Traffic Signs Regulations and General Directions 2016 provides for the introduction of 40mph Zones without the need for DfT authorisation.
- 4.4 40mph Zones are the Councils preferred approach in areas where a 40mph speed limit is to be introduced in a wide area encompassing several roads.
- 4.5 A major advantage of a 40mph Zone over a 40mph speed limit is the reduced level of signage required. The zonal approach does not require the placement of repeater signage within the zone, which over a large area can be significant and have a negative impact on the rural surroundings in which they are placed. Instead repeater signage will be introduced in the form of speed limit roundels placed on the road surface. These are less intrusive and more sensitive to the rural surroundings.
- 4.6 Appendix E sets out a plan of existing and proposed 40mph Zones in the borough.
- 4.7 The introduction of 40mph Zones will only be considered where existing speeds are already within the accepted thresholds set out in table 3 or measures can be introduced to achieve compliance.
- 4.8 Gateshead Council through DfT approval introduced the first 40mph Zone outside of a National Park, when a 40mph Zone was introduced in the west of the borough in 2015.



Figure 5 - 40mph Zone entry

20mph Zones

- 4.9 DfT Circular 01/13 Setting local speed limits prioritises the need for Traffic Authorities to introduce more 20mph limits and zones in urban areas and built-up village streets that are primarily residential, to ensure greater safety for pedestrians and cyclists.
- 4.10 The benefits of 20mph Zones include:
- Improved environment for pedestrians and cyclists;
 - reduced noise pollution;
 - accidents of lower severity;
 - fewer accidents;
 - less 'rat running' through residential streets;
 - reduced street clutter due to fewer repeater signs when compared to 20mph speed limits (TAL 1/13);
 - improved community interaction, and;
 - Safer streets for children to play.
- 4.11 20mph Zones will be implemented in Gateshead in accordance with Appendix A, which draws on the recommendation set out in the DfT Circular and will be programmed in accordance with Council Cabinet approval.
- 4.12 20mph Zones will also be implemented in accordance with the following national guidance/regulations;
- Road Humps/Traffic Calming Regulations 1999
 - Traffic Advisory Leaflets
 - Traffic Signs Regulations and General Directions (2016)
 - Highways Act 1980
- 4.13 As 20mph Zones are self-regulating there is no expectation on the Police to carry out speed enforcement within such zones unless a specific issue is highlighted. Where zones are implemented and speeds remain above the accepted level

consideration will be given to the introduction of further physical measures to ensure compliance.

4.14 20mph Zones, which are self-regulating through road conditions (i.e road width, junctions) and other measures such as traffic calming (i.e road humps, speed cushions), remain Gateshead Council's preferred approach to implementing and managing 20mph speed limits in areas where there are high pedestrian movements.

4.15 Evidence suggest that introducing 20mph speed limits without any physical traffic calming has minimal impact on vehicle speeds and are therefore only suitable where 85th percentile speeds are already at 24mph or less. A research study in 2018 found that where signed 20mph speed limits had been introduced in the UK there was found to be an average reduction in the 85th percentile speed of just 1.1mph. ^{xvi}

4.16 A programme of 20mph Zone schemes has been implemented in Gateshead since the original Speed Management Plan was approved in 2007. This programme of schemes was targeted specifically at locations which fell into one of the following three categories:

- town or local centres
- schools or
- existing traffic calmed areas.

The majority of the schemes identified in the original programme will be completed by the end of the 2020/21 financial year.

4.17 The future programme of 20mph Zone schemes will focus mainly on residential areas which did not fall within the original scope, such as those where there is no existing traffic calming. The programme will also include further investment in existing 20mph Zones where compliance with the speed limit has reduced over time.

4.18 A list of proposed 20mph Zones is set out in Appendix C and an indicative plan set out in Appendix D. A lack of any existing traffic calming in these areas means that they will typically require a higher level of investment than those previously implemented. As such the number of schemes which can be completed annually within the available capital budget will be comparatively low and the timescale for implementation could extend beyond the 10 year life cycle of this plan.

4.19 When implementing 20mph Zones on existing streets, speed surveys will be carried out to determine existing speeds. Where the 85th percentile is already 24mph or less no traffic calming features will be introduced. Only where existing 85th percentile speeds exceed 24mph will physical traffic calming measures be considered necessary (a minimum of one feature is required in each zone to comply with TSGRD 2016.)

4.20 Wherever possible, particularly in rural and semi-rural village locations, 20mph zones will be designed so as not to be bordered by speed limits greater than 40mph. Where a proposed 20mph Zone will border a speed limit in excess of 40mph a section of intermediate speed limit will be introduced to prevent sudden braking and poor adherence to the 20mph limit.

4.21 Research into vehicle emissions in 20mph speed limits and zones has concluded that such speed management measures, including those involving vertical traffic calming, would not result in poorer air quality in those areas.^{xvii} Recent Transport for London research^{xviii} supports this ‘20mph zones do not appear to worsen air quality and they dramatically reduce road danger. They also support a shift to walking and cycling, generate less traffic noise and reduce community severance.’^{xix}



Figure 6 - 20mph signage

Other speed limits

Variable and advisory 20mph limits

4.22 The use of part time and advisory speed limits will not be considered, particularly in relation to 20mph Zones around schools. It is the Council’s view that

such restrictions are not effective and are contrary to the ongoing introduction of 20mph Zones in the borough. Introducing part time speed limits will increase uncertainty and suitably robust measures cannot be installed to ensure the lower speed limit is self-enforcing.

Ultra Low Speed Limits

4.23 There are locations, such as Home Zones, where even vehicle speeds of 20mph may be considered inappropriate. In these locations lower speeds will be achieved through street design which ensures that vehicles cannot be driven at speeds significantly in excess of walking pace. This will often include the provision of community facilities such as play equipment, seating and the like within the streetscape to encourage more social interaction and higher levels of pedestrian movement whilst also acting as a physical restriction to vehicle movement. Home Zone designs will be considered within new residential developments but will not typically be retrofitted into existing streets. Home Zones should be designed in accordance with Gateshead Council’s Home Zone Design Guide.



Figure 7 - Home Zone

5 Engineering measures

Where speed surveys identify a speeding problem Gateshead Council will consider the introduction of engineering measures in order to slow traffic and ensure better adherence to speed limits. This will typically include one of or a combination of the following, although this list is not exhaustive;

Urban/Village

Traffic calming measures

Vertical traffic calming

- 5.1 Vertical traffic calming can include road humps, speed tables, speed cushions or raised junctions. Each of these features protrude above the carriageway surface or form a new carriageway surface at a higher level than the former road surface and encourage vehicles to be driven over them at relatively low speeds.
- 5.2 Legislation only permits the installation of vertical traffic calming features on roads with a speed limit of 30mph or less and this approach is therefore only appropriate in urban, suburban and village locations.
- 5.3 When installing vertical calming consideration will be given to the road function and the level of use by buses and emergency vehicles. On bus routes only flat top humps with a table top of 10m or more or speed cushions will be permitted.
- 5.4 Although not a recognised traffic calming feature within the regulations the Council will also consider the use of raised street end treatments to reduce

vehicle speeds turning into side streets whilst also providing at grade crossing facilities for pedestrians.



Figure 8 -Speed cushions

Horizontal calming and road narrowing

- 5.5 The introduction of horizontal deflections, particularly on existing roads that are long and straight, can be an effective way of reducing traffic speeds. These can include:
- build-outs
 - chicanes
 - islands/pedestrian refuges
 - road narrowings/pinch points
 - mini roundabouts
 - road re-alignment

5.6 However, the use of buildouts which give priority to traffic travelling in a particular direction, will only be implemented in combination with a vertical calming feature as shown in figure 8. Installation of priority features independently can encourage sudden acceleration and stop/start of vehicles. This is contrary to the aim of encouraging consistent lower speeds, can have adverse impacts on air quality and also increase levels of driver frustration.

5.7 Horizontal measures set out above are in the main limited to roads with a speed limit of up to 40mph, although certain measures such as islands, which encourage slower speeds without any sudden horizontal deflection will be considered on roads with higher speed limits.

5.8 Where deflections and narrowings are introduced consideration will be given to the types of vehicles using the route. This will include:

- emergency services
- HGVs (including bin collection vehicles)
- buses
- abnormal load routes
- agricultural vehicles such as combine harvesters in rural locations



Figure 9 - Combined horizontal/vertical traffic calming

Street closures

5.9 Residential areas can often be used for through traffic or rat running and in situations such as this the traffic can have an adverse impact upon the community living on those streets, particularly where the speeds of vehicles is high. In such circumstances consideration will be given to the strategic closure of certain streets to reduce the impact of through traffic. A pilot scheme in London named 'Mini Holland' included numerous street closures in order to ensure through traffic was directed to main routes as opposed to residential streets.

5.10 Whilst such an approach can be used in isolation it is likely to be more effective as part of an area wide strategy and may also form one element of an area wide 20mph Zone scheme. Consideration must

also be given to ensuring suitable access is maintained to properties and that issues such as deliveries and refuse collection can be accommodated.



Figure 10 - Street closure

On-street parking

5.11 Whilst not a speed management engineering measure per se on street parking can perform a speed management function by narrowing the road. The Council will, therefore, when considering the installation of waiting restrictions to prevent or restrict parking on the carriageway, consider the potential impact upon traffic speeds and whether on street parking should be allowed to continue (where it is safe to do so) or be restricted but with the need for other remedial measures. On-street

parking may however only occur during part of the day and will not calm traffic at other times. The restrictions set out in the Highway Code will still apply in these circumstances, that parking is not permitted: “opposite or within 10 metres (32 feet) of a junction, except in an authorised parking space”.



Figure 11 - On-street parking

Traffic-signals

5.12 Gateshead Council as part of a 20mph Zone scheme on the A692 in Rowlands Gill installed a signalised pedestrian crossing with speed detection capabilities. This enables the traffic signals to recognise the speed of oncoming vehicles and where a speed limit exceedance is detected will turn red in order to force the approaching vehicle to stop. This occurs independently of the pedestrian crossing function and will occur even when there is no pedestrian waiting to cross. It is hoped that this

will promote greater speed adherence. Subject to monitoring of this facility this approach will be considered at other locations.



Figure 12 - Signalised crossing with speed detection

Rural

Village gateways

- 5.13 Rural and semi-rural villages, particularly in the west of the borough are often segregated from one another by roads with speed limits in excess of 40mph. Managing the transition from high speed road to a limit of 20 or 30mph within a village or small settlement is key to ensuring drivers adhere to lower limit and drive safely throughout. Gateshead Council aims to introduce village gateway treatments on all village entries in rural

and semi-rural locations. A standard approach will be taken wherever possible to ensure continuity and achieve greater levels of driver recognition that a change in speed limit and environment is occurring and in doing so influence drive behaviour. The standard approach will typically involve a combination of:

- Signage (speed limit, count down)
- fencing
- surface material changes
- bollards
- road markings (roundels, Dragons Teeth, transverse bar markings, hatching)
- Rumble devices (more than 200m from residential properties)

Particularly in rural areas combined fencing and signage will be used in order to be more sympathetic to the surroundings.

- 5.14 In situations where the above measures are ineffective the addition of buildouts and road narrowings will be considered.
- 5.15 Where the change in speed limit is significant a section of intermediate speed limit may be introduced in advance of the village gateway.



Figure 13 - Village entry treatment

Bends

5.16 A major cause of accidents in rural areas outside of villages is motorists losing control on bends and leaving the road, and this can often be linked to vehicle speed. Measures to make motorists more aware of the dangers of specific bends where speed is known to be a problem can be achieved through one or a combination of measures:

- bend warning signage
- chevron signs
- cats eyes
- bollards

- transverse or edge of carriageway road markings

5.17 At locations where the above measures are not successful in reducing speed related accidents consideration will be given to the introduction of an advisory speed limit or vehicle activated signage on the approach to the bend.



Figure 14 - Bend warning

5.18 Whilst altering the road geometry can be considered this is unlikely to be feasible for reasons linked to land availability and cost. Other considerations could include the protection from or removal of roadside hazards such as trees in the vicinity of the bend. It is the Council's approach to re-plant two new trees for every existing tree removed.

Quiet Lanes

5.19 On lower class rural roads, particularly those that are narrow and lightly trafficked, consideration will be given to introducing quiet lanes, which can improve the environment for vulnerable road users such as horse riders and walkers. Quiet Lanes will be considered in the following situations;

- Where there is strong community support
- 85th percentile speeds are below 35mph
- Traffic flows are below 1000 vehicles per day
- Road widths are below 5m

5.20 Quiet Lanes will typically include signage and discrete traffic calming such as road narrowing, central strips of vegetation, false cattle grids and fencing to encourage lower traffic speeds.

Urban/Rural

Vehicle Activated signs/Driver feedback signs

5.21 Vehicle Activated Signs (VAS) provide illuminated feedback to drivers who trigger the sign when the

vehicle approaches. The aim of such signs is typically linked to two main purposes;

- Speed limit reinforcement- Actual speed, Slow down, smiley/sad face
- Hazard warning- bend, junction

5.22 VAS will only be considered when there is an accident problem associated with inappropriate speed that has not been satisfactorily remedied by standard signing and other engineering measures. VAS should not be used as a replacement for standard signage or as a speed limit repeater.

5.23 Due to high levels of ongoing maintenance and concerns over the long-term effectiveness of such signs the use of VAS will be limited to exceptional circumstances only and will not be widely used.

5.24 The use of VAS signs on a temporary basis with signs regularly rotated between different sites has been found to achieve the greatest speed reduction impact^{xx}. The cost of implementing such an approach has not however been found to be cost effective and requires revenue funding not currently available.

5.25 Where VAS signs are installed this will be in accordance with the Department for Transport Traffic Advisory Leaflet 01/13 and TSRGD 2016.

5.26 Where VAS signs depicting actual vehicle speeds are installed, the signs will be set to give feedback up to 15mph above the speed limit to avoid instances of drivers attempting to attain higher speeds.



Figure 15 - Vehicle activated sign

Road markings

- 5.27 Speed limit roundels marked on the carriageway surface can be a useful way of reminding drivers of the speed limit, particularly in areas where signage is ineffective due to vegetation or in order to minimise sign clutter in speed limits requiring repeater signs. Roundels are not permitted as repeaters within TSRGD regulations on roads where the speed limit is 30mph.
- 5.28 SLOW markings or transverse bar markings placed within the carriageway and dragons' teeth (Fig. 5.9) placed either side of the carriageway can be an effective means to encourage lower speed on an approach to a hazard or speed limit change.



Figure 16 - Dragons teeth markings

Passive safety

- 5.29 Gateshead Council in designing highway schemes on roads with a speed limit of 40mph or greater will, as part of a safe systems approach, include the use of products which meet Passive Safety standards. Such designs allow for driver error by reducing the severity of impact when drivers do lose control and leave the carriageway. The products are also designed to ensure that, when struck by a vehicle, they act in a controlled way and do not cause secondary injury. Passively safe products typically include items of street furniture such as:-

- Road signage supports

- Street lighting
- Bollards
- Traffic signals
- Cabinets

5.30 Certain Passively Safe products can also be designed to withstand impact and return to their original shape thus ensuring they continue to function for the purpose they were installed. This ensures that drivers continue to benefit from the warnings they provide, which could prevent further accidents occurring.



Figure 17 - Passively safe signage

6 Education/Enforcement

Safety Camera Strategy/ Northumbria Safer roads Initiative (NSRI)

6.1 As shown in figure 18 public attitudes towards speed cameras have changed significantly over the past twelve years with 60% of people in 2017 believing speed cameras save lives when compared to 42% in 2005. In the same period the number of people who consider there to be too many speed cameras has also fallen from 47% to 29%.

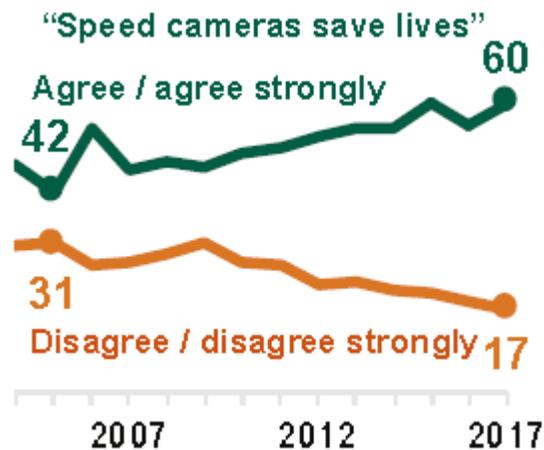


Figure 18 - British Social Attitudes Survey 2017- Public attitudes towards transport (DT)

6.2 The Northumbria Safer Roads Initiative (NSRI) is a partnership co-ordinating road safety interventions within the Northumbria Police Force area. Although the Police withdrew from the original partnership in 2016, moves are underway to re-establish this. This

will provide a new basis for joint working between local authorities and Northumbria Police, including the Safety Camera Strategy and publicity and educational initiatives.

6.3 In order to help achieve its aim of casualty reduction it is important that the scheme is publicised. To this end a communications team has been appointed that runs a proactive media and publicity campaign to help ensure that the public are fully informed of the scheme's activities.

6.4 Included in the media campaign are coordinated press releases, advertising, event attendance and social media activity. The Partnership also operate a website, which contains a range of information, including the location of all fixed and mobile camera sites and links to all partner websites and relevant road safety websites. The address of the website is www.safespeedforlife.co.uk.

Speed Monitoring Network/Traffic and Accident Data Unit (TADU)

6.5 Some 120 locations across the borough, including sites of permanent and mobile safety cameras, have traffic monitoring equipment installed in the carriageway. Many of these sites are capable of measuring traffic speeds, meaning that these can be monitored, with a view to determining changes over time. In this way, the impact of the SMP and its associated initiatives can be monitored.

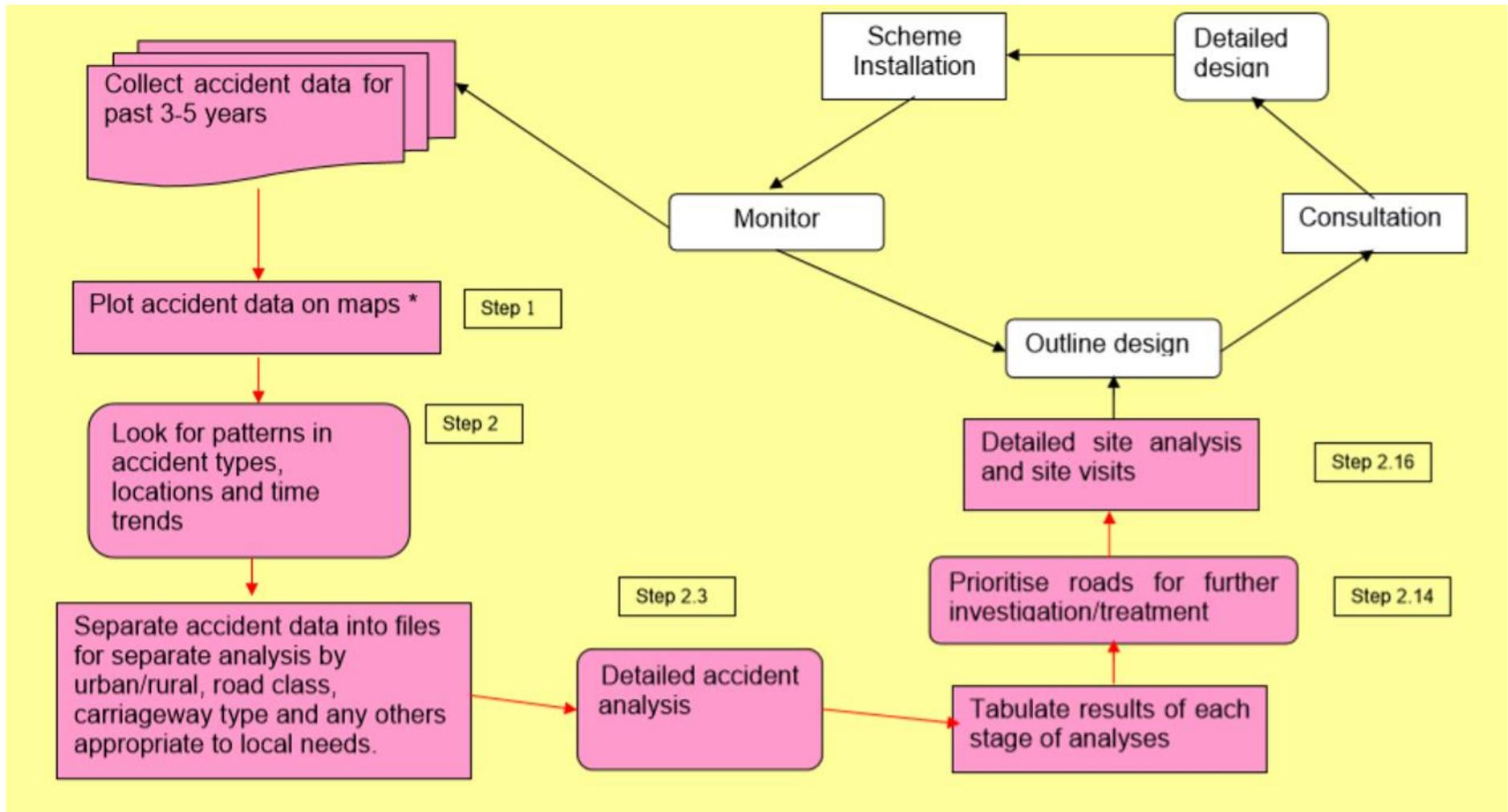
6.6 The locations and data from these speed counters is made available publicly on an annual basis on a web-based interactive dashboard: www.tinyurl.com/taduspeeddashboard, whilst a

background database is used for more detailed analysis of traffic speeds by council officers.

6.7 Gateshead Council officers in conjunction with the Tyne and Wear Traffic and Accident Data Unit (TADU) will utilise the data gathered from the speed monitoring network in conjunction with accident data to assess the requirement for speed management measures. This will be carried out annually and will involve analysis of accident clusters and assessment of locations where 85th percentile speeds exceed an

acceptable level. The process of accident analysis is summarised in figure 19 below.

6.8 In addition to the identification of problem sites the assessment of accidents will also attempt to identify trends linked to particular demographics or road user types, which may inform future targeted education programmes.



Figure

Education and Publicity

- 6.9 One of the key objectives identified within DfT circular 01/13 is an improved respect for speed limits, and in turn improved compliance. The main way that this can be achieved is through education and publicity.
- 6.10 It is, therefore, essential to continue with ongoing campaigns, both locally and nationally, which highlight the problems that inappropriate or excessive speed can create and in doing so ensure that the issue has a high profile in the minds of the public.
- 6.11 In July 2019 the government released a Road Safety Action Plan, aimed at reducing the number of people killed or seriously injured on UK roads.^{xxi} The plan includes:
- Continued support to the THINK Campaign with one of the focuses being speeding
 - Creation of a Rural Road Users Advisory Panel to discuss actions needed on issues such as rural speeding and speed limits
 - Funding for RoSPA to deliver education to motorcyclists on issues such as speed
- 6.12 Gateshead Council will continue to subscribe to Road Safety Great Britain (RSGB) as well as being a key partner within the regional RSGB North East working group to promote its own and other new and established national road safety campaigns.
- 6.13 A regional approach to road safety education and publicity will continue to allow resources to be pooled and enable procurement of a specialist digital marketing company to undertake the promotional works on behalf of the member authorities.
- 6.14 The Northumbria Safer Roads Initiative (NSRI), has continued to develop and implement a programme of road safety campaign work, targeting specific high-risk groups such as young drivers and raising awareness of the safety camera partnership works. Current moves to re-establish Northumbria Police as a key member of NSRI should help reinforce the scope for future activity.

7 Emerging technology

Vehicle speed detection/limiters

- 7.1 Efforts to manage speed and speed related accidents in recent times has largely been through a mixture of highway engineering, education and enforcement along with improvements in vehicle safety. The ongoing issue of speeding amongst a wide cross section of society and the recent plateauing in national accident statistics indicates that in order to achieve further improvements a new approach may be needed.
- 7.2 A key development, provisionally announced by the European Union in 2019, would see all new vehicles sold in the UK fitted with speed limiting technology from 2022 onwards.
- 7.3 Vehicles with this technology would be fitted with cameras capable of recognising road signs allowing the vehicle to limit the speed at which it travels and in doing so conform to the speed limit.
- 7.4 However, early indications suggest that either an override system could be installed to allow a driver to increase speed over the limit or that the vehicle may only warn drivers of an exceedance as opposed to an actual limiting of speed. This will be decided by UK government.
- 7.5 Gateshead Council will monitor the development of this EU ruling and the UK response to this, as there is likely to be a requirement on the part of Gateshead Council to ensure all speed limit signage is legible and compliant in order for

vehicles with speed limit recognition technology to operate correctly on the borough's roads.

- 7.6 Were a new law to come into force and automatic speed limiters become legally required on all vehicles in future the rate at which such cars replace those without the technology will need to be monitored. Should a point be reached where a significant proportion of vehicles were fitted with speed limiting technology consideration would need to be given as to whether engineering measures such as traffic calming, aimed at restricting the opportunity for drivers to choose to exceed the speed limit, continued to be necessary. The cost of removing this infrastructure is likely to be significant and take a number of years. However, this is likely to be beyond the timescale of this Plan and will require further review.

Connected and Autonomous vehicles

- 7.7 The emergence of driverless vehicle technology in the UK is gathering pace and the government announced in February 2019 that the UK is on track to meet its commitment to have full self-driving vehicles on UK roads by 2021.
- 7.8 One of the key advantages of autonomous vehicles is believed to be the improvements in road safety they will deliver. 94% of road deaths and injuries involve human error with driving at an inappropriate speed being a primary factor. The ability of autonomous vehicles to detect the correct speed at which to travel both in relation to the maximum signed speed limit and for the road conditions could see human error by autonomous vehicle

drivers as a factor in road traffic collisions removed but only if technology can firstly be proven to be suitably reliable.

7.9 Gateshead Council will continue to monitor such developments and review the need for changes SMP and highway infrastructure accordingly.

8 Legislative framework

- 8.1 Part VI of the Road Traffic Regulation Act (RTRA) 1984 deals specifically with speed limits and sections 81-84 deal with different speed limits and the speed limit order-making process.
- 8.2 GMBC will follow the processes set out in the Local Authorities' Traffic Orders (Procedure) (England and Wales) Regulations 1996 when making traffic orders, which includes speed limit orders. GMBC will refer to these Regulations in full and undertake the prescribed consultation before making a new traffic order.
- 8.3 Gateshead Council as Traffic Authority within the Borough of Gateshead will erect and maintain prescribed speed limit signs on all roads within its control in accordance with Section 85 of the Road Traffic Regulation Act (1984) and the Traffic Signs Regulations and General Directions (2016).

Appendix A – proposed speed limit hierarchy – summary

SPEED LIMIT	URBAN	RURAL
<20 mph* (without TRO)**	Only within Home Zones when also within a 20 mph zone.	As urban.
20 mph Zone	<ul style="list-style-type: none"> i. Residential areas ii. Limits with existing low speed – consideration to be given to conversion to zones as funds permit. iii. High streets, town and local centres – shopping areas with significant pedestrian crossing movements. iv. Outside and adjacent to schools. v. Other areas where high pedestrian movements are common i.e tourist areas <p>Where the above approach results in more than one zone in close proximity consideration will be given to combining these into a single larger zone</p>	Villages*** or areas within villages that meet the criteria set out for urban scenarios.
20 mph	In the above scenarios where existing speeds already comply	In the above scenarios where existing speeds already comply
20mph* (without TRO)	-	Quiet lanes.
30 mph****	<p>Built up areas with development on both sides of the road that are not subject to a 20mph speed limit and perform a more major function such as local distributors.</p> <p>OR</p> <p>As an intermediate speed limit between two other speed limits</p>	<p>Villages. ***</p> <p>OR</p> <p>As an intermediate speed limit between two other speed limits</p>

40 mph	<p>Higher quality suburban roads with;</p> <ul style="list-style-type: none"> • few vulnerable road users or a segregated provision with adequate crossing facilities. • little or no residential development fronting onto it. • Good width and layout with parking and buildings set back. <p>OR</p> <p>As an intermediate speed limit between two other speed limits</p>	<p>Development that is not to village standard or only on one side of the road with no requirement for vulnerable road users to cross.</p> <p>OR</p> <p>Zones in areas where higher levels of vulnerable road users are expected i.e on cycle routes****</p>
50 mph	<p>Completely segregated classified road with little or no roadside development</p>	<p>Lower quality single carriageway roads outside settlements</p> <p>OR</p> <p>Roads with high numbers of bends, junctions and accesses</p>
60 mph	–	<p>Outside of settlements on high quality single carriageway roads with few bends, junctions and accesses</p>
70 mph	–	<p>Outside of settlements on dual carriageway strategic A and B roads with few bends, junctions and accesses</p>

* Whilst it is not anticipated that Home Zones and Quiet Lanes will be subject to the introduction of formal speed limit orders, it is intended that they will be designed in such a way that speeds will be limited, by the provision of physical measures, to around 10 and 20 mph respectively.

** TRO – Traffic Regulation Order

*** 20 houses. Allowance will be made for other buildings such as shops, schools

**** 30 mph limits may be introduced by virtue of the existence of a system of street lighting, as defined in circular 1/13, so that when new systems of lighting are introduced it is essential that they should be audited for speed limit implications.

***** For narrower, minor, rural roads, especially where recreational use is to be promoted, a lower limit will be the norm.

Appendix B- UK speed limits by road and vehicle type (2019)

Type of vehicle	Built-up areas*	Single carriageways	Dual carriageways	Motorways
	MPH (km/h)	MPH (km/h)	MPH (km/h)	MPH (km/h)
Cars & motorcycles (including car derived vans up to 2 tonnes maximum laden weight)	30 (48)	60 (96)	70 (112)	70 (112)
Cars towing caravans or trailers (including car derived vans and motorcycles)	30 (48)	50 (80)	60 (96)	60 (96)
Buses, coaches and minibuses (not exceeding 12 metres in overall length)	30 (48)	50 (80)	60 (96)	70 (112)
Goods vehicles (not exceeding 7.5 tonnes maximum laden weight)	30 (48)	50 (80)	60 (96)	70† (112)
Goods vehicles (exceeding 7.5 tonnes maximum laden weight) in England and Wales	30 (48)	50 (80)	60 (96)	60 (96)
Goods vehicles (exceeding 7.5 tonnes maximum laden weight) in Scotland	30 (48)	40 (64)	50 (80)	60 (96)

Appendix C- List of proposed 20mph Zones and selection criteria (approved by Gateshead Council Cabinet February 2020)

Committed 20 mph Projects

	2019/2020	Year
A1	Winlaton	2020/2021
A2	Watermill area	2020/2021
A3	Heworth/Team area	2020/2021
A4	Barlow	Complete
A5	Dunston	2020/2021
A6	Staiths	2020/21

Future 20 mph Projects in order of priority

	Site	Notes
1	Shibdon Road	
2	Lyndhurst Estate	1
3	Byermoor (Sacred Heart)	
4	Dryden Centre Area	
5	South End Road Area	
6	Chopwell Village	
7	Wealcroft	
8	Teams	
9	Grace College	
10	Furrowfield	
11	Ventnor Gardens	
12	Fellside Road	
13	Victoria Road	
14	Windy Nook Road (causeway to Felling)	2
15	Blackhall Mill	
16	Broadway	
17	Swallowwell	
18	Dunston	3
19	Parkway	
20	Kirkstone Road	
21	Wellington Street (Felling)	4
22	Ryton area	
23	Victoria Avenue	
24	Wellington Street/Hill Street	
25	Felling Gate Road	
26	Eighton Banks area	
27	Hopper Road	
28	Brettany Road	
29	Sunniside area	
30	Whaggs Lane	
31	Mill Road Chopwell	
32	Whickham Highway	
33	Woodford	
34	Broadway	
35	Broom Lane	

36	Holmside Avenue area	
37	Clara Vale	
38	Winlaton Mill	
39	Woodburn	
40	Rectory Lane	
41	Woodgate Gardens (Bill Quay)	
42	Woodside	
43	Victoria Garesfield	
44	Chester Gardens	

20 mph included in Quality Transport Schemes

Low fell town centre	-
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Notes

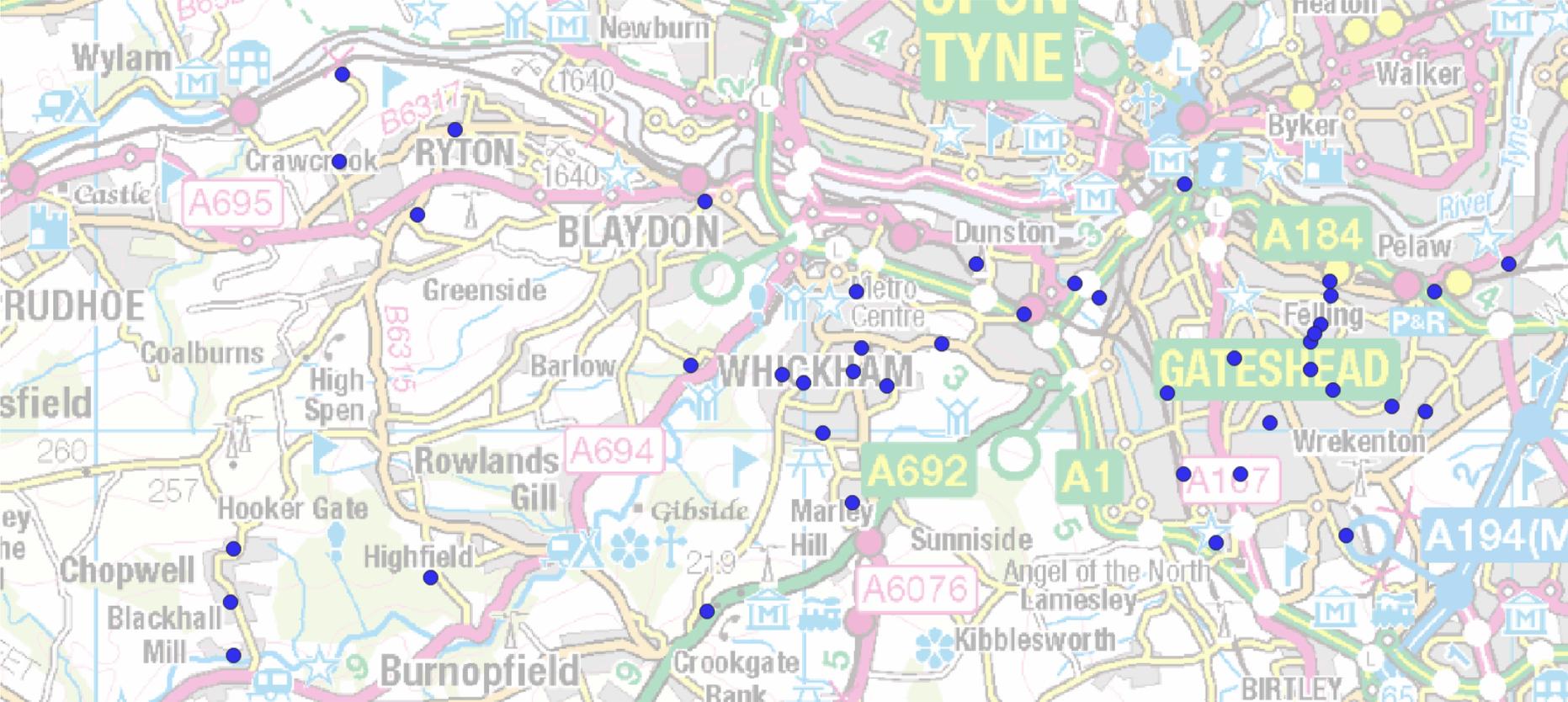
1. Lyndhurst includes part of Southend Road, part of Beacon Lough Road, and Carlisle Place
2. Windy Nook includes requests Victoria Avenue, Hopper Road and Brittany Road
3. Dunston includes request for Holmside Avenue Area
4. Wellington Street includes Felling Gate Road

Methodology for scoring of 20 mph zone requests

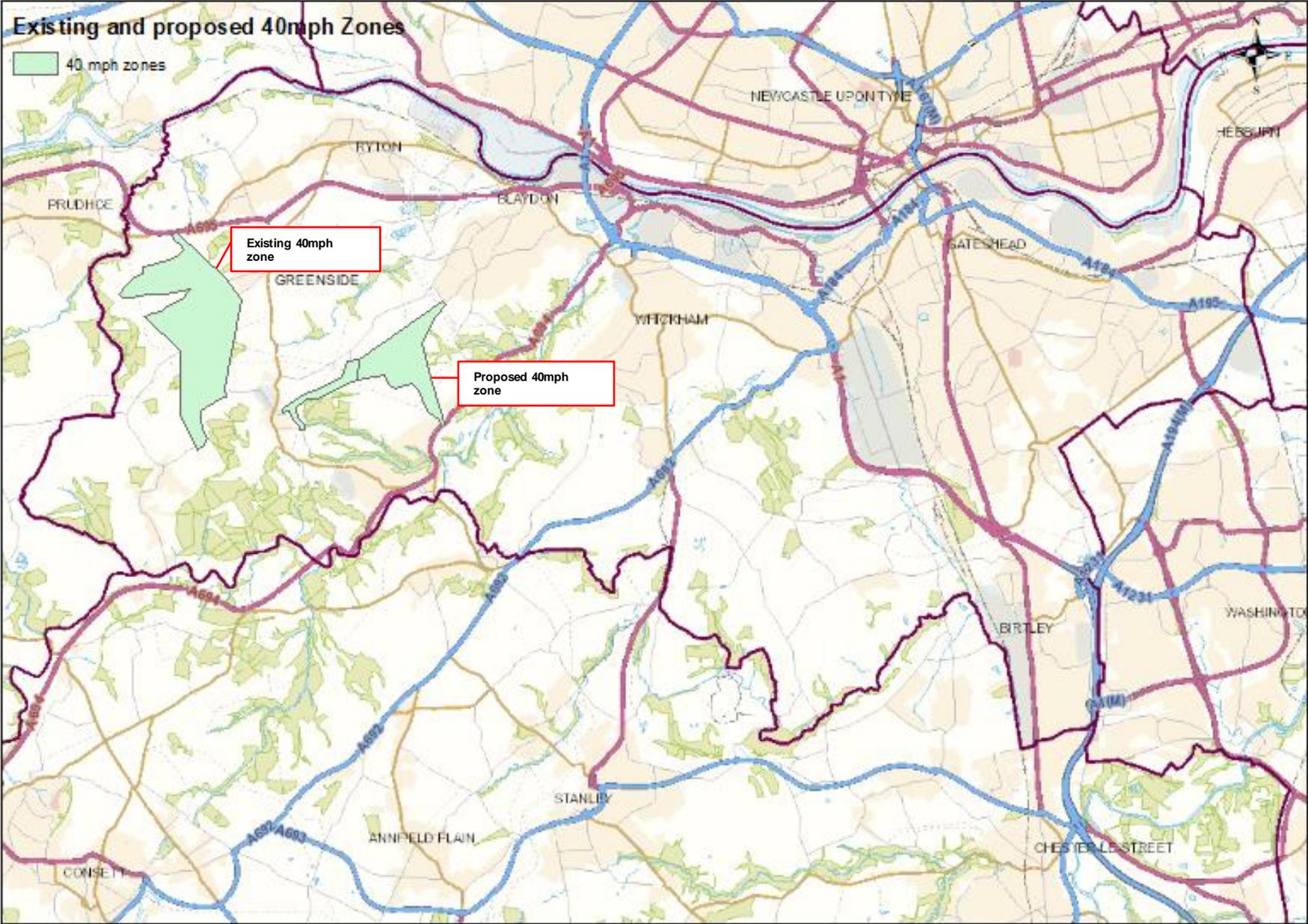
To enable a prioritisation of the areas where we have requests for 20 mph zones a system of scoring as shown below was introduced and has been used to rescore all previous schemes and new requests.

Proposed by Councillor	5
Proposed by public	5
Cycle Route	2
Park	1
Prow crossing	2
Linked to existing zone	1 per link
Linked to proposed zone	1 per link
Accidents (last 5 years)	2 slight, 5 serious, 10 fatal
Current speeding issues	5
Older Persons accommodation	2
Community centre	2
Attached to redevelopment	1
Attached to another council scheme	1

Appendix D- Indicative plan of proposed 20mph Zone speed limits



Appendix E- Plan of existing and proposed 40mph Zone speed limits



Appendix F- Safety camera site selection criteria for new core sites

Site Selection Criteria for core sites							
	Fixed speed camera sites		Mobile speed camera sites		Routes		Red light or combined red light speed camera sites
Site or route length requirements	Between 0.4 km and 1.5 km		Between 0.4 km and 5km		Between 5km and 20km		From stop line to stop line in direction of travel
Number of killed and serious collisions (KSI)	At least 3 KSI collisions per km in the baseline period*.		At least 1 KSI collisions per km (average) in the baseline period*.		A minimum of 3 existing core sites within the length. (There are no further requirements) OR Has at least 1 KSI collision per km (average) in the baseline period* and meets the PIC total value below.		At least 1 KSI collision within the junction in the baseline period*. Selection must be based upon a collision history of red light running.
*The baseline period is the most recent 36 month period available when site selection is carried out.							
Total value required	Built up 22 /km	Non built up 18 /km	Built up 11 /km	Non built up 9/km	Built up 8 /km	Non built up 6 /km	10
For sites up to 1km the above value is required. For sites longer than 1km the value is per km.							
85 th percentile speed at proposed sites	Speed survey shows free-flow 85 th percentile speed is at or above ACPO enforcement threshold.						Not applicable
Site conditions that are suitable for the type of enforcement proposed	Loading and unloading of camera can take place safely.		Location for mobile enforcement is easily accessible and there is space for enforcement to take place in a visible, legal and safe manner.		The location of collisions in the baseline period will determine the length of route.		Loading and unloading of the camera can take place safely.
Suitability of site for camera enforcement	The Highway Authority must undertake a site survey, demonstrating the following: (a) The speed limit has been reviewed confirming that camera enforcement is the right solution; (b) That the Traffic Regulation Order (where applicable) and signing are lawful and correct.						
<p>New camera sites will be selected using an assessment that includes the level of fatal, serious and slight collisions. The combined level of collisions will be expressed as a numerical scale (see below) and assessed relative to the road classification for the site - whether it is either a 'built up' or 'non-built up' area and according to the type of site i.e. route, fixed, mobile or red light.</p> <p>Fatal or serious injury collision = 5 (i.e. 2 serious collisions = 10) Slight injury collision = 1 (i.e. 5 slight collisions = 5)</p> <p>'Built up area' is defined as a road with a speed limit of 40 mph or less. 'Non-built up area' is defined as a road with a speed limit of 50 mph or more.</p>							

References-

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