

**DERBYSHIRE COUNTY COUNCIL**

**CABINET**

**2 February 2016**

**Report of the Chair of the Improvement and Scrutiny Committee – Places**

**Review of 20mph speed limits in Derbyshire**

**1. Purpose of the Report**

To present Cabinet with the final report of the review of 20mph speed limits.

**2. Information and Analysis**

The Improvement and Scrutiny Committee – Places has completed a review of 20mph speed limits.

A working group of Committee Members was established to conduct the review and the Members appointed to the working group were Councillors Kevin Gillott, Celia Cox, David Williams, Simon Spencer.

The final report is attached and gives details of the research, meetings and evidence gathering which informed the review and helped develop the outcomes and recommendations.

Cabinet is asked to receive the report and respond to the Improvement and Scrutiny Committee at its meeting on 18 May 2016 to indicate whether it accepts some or all of the review recommendations

As recommendations are implemented, progress will be monitored by the Improvement and Scrutiny Committee – Places through an action plan, a template of which is appended to the report. This action plan should be completed and provided to the Committee for information, usually within two months.

**3. Considerations**

In preparing this report the relevance of the following factors have been considered: financial, legal, prevention of crime and disorder, equality of opportunity, human rights, personnel, environmental, health, property 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**

Documents held on file by Improvement and Scrutiny Committee review working group and Minutes of Improvement and Scrutiny Committee meetings.

**7. RECOMMENDATIONS**

- (a) Cabinet receives the final report of the review of 20mph speed limits and submits a considered response to the recommendations at the meeting of the Improvement and Scrutiny Committee Places on 18 May 2016.
- (b) Cabinet notes that, as recommendations are implemented, progress will be monitored by the Improvement and Scrutiny Committee - Places at strategic intervals through the completed action plan to be provided to the Committee on 18 May 2016.

**Councillor Kevin Gillott**

**Chair of the Improvement and Scrutiny Committee – Places**

**Derbyshire County Council  
Improvement and Scrutiny Committee – Places**



**Review of 20mph Speed Limits  
9 December 2015**

**Cllr. Kevin Gillott (Chair)  
Cllr. Celia Cox  
Cllr. David Williams  
Cllr. Simon Spencer**

**Improvement and Scrutiny Officer - Roz Savage**

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## Acknowledgements

The review working group would like to thank the following people for their kind involvement in this review:-

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# **1. Background to the Review**

## **1.1 Scope of the Review**

This review considers the available evidence relevant to the adoption of 20mph speed limits and the lessons learnt from implementation in other parts of the country.

The review was proposed by Cllr Dean Collins, Cabinet Member for Highways, Transport and Infrastructure in response to requests from a number of communities for 20mph limits. The Improvement and Scrutiny - Places Committee, at its meeting on 20 May 2015, agreed to undertake the review and a working group was appointed to conduct the investigations (Cllrs Kevin Gillott, Celia Cox, David Williams and Simon Spencer).

During the course of the review the working group members spoke to a range of witnesses. The witnesses included the Cabinet Member for Highways Transport and Infrastructure, public health professionals, traffic engineers and road safety officers, a representative from the “20’s Plenty for Us” campaign, County Councillors who represent Derbyshire communities that have expressed an interest in 20mph speed limits and Local Highway Authorities who have introduced area-wide 20mph limits. The information provided by these witnesses is given in section 2 of this report.

To capture the views of Derbyshire residents, an on-line survey was published on the Council’s website and publicised via the Council’s social media channels and the local media. All Derbyshire Parish Councils were informed about the consultation via e-mail and invited to respond. Young people were alerted to the consultation via the YOUTHINC twitter account and Facebook pages. Paper copies were also available on request. The consultation ran from 10 August to 30 September. The purpose of the survey was to find out what local people think about 20mph speed limits on residential streets in Derbyshire.

The review set out to assess the Council’s current approach to 20mph limits on residential streets and make recommendations about future policy and decision making procedures. It was not a function of the review to make recommendations about the appropriateness of specific locations for the introduction of 20mph limits.

## 1.2 Definitions

Throughout this report a distinction is made between 20mph zones and 20mph speed limits:

- **20mph zones** use traffic calming measures such as road humps or build-outs which make the speed restrictions effectively self-enforcing, as these features force drivers to slow down.
- **20mph limits** do not have physical measures to reduce vehicle speed. Drivers are alerted to the 20mph speed limit by boundary signs and repeater signs.

The main focus of this review was 20mph limits on residential streets sometimes referred to as “signs-only 20mph limits” to emphasise the absence of traffic calming measures.

## 1.3 Current approach in Derbyshire

The Council’s current policy on 20mph speed limits and zones is to use them “sparingly” and the primary consideration when determining their suitability is the casualty rate of the section of road in question.

A previous review conducted by the ETE Department in 2011 identified twenty five 20mph zones in Derbyshire which had been introduced to address high casualty rates on particular sections of road.

In 2013 the Department for Transport (DfT) revised its guidance on setting local speed limits and made it easier for traffic authorities to introduce 20mph speed limits by removing the need for physical features. This is the first review of the Council’s approach to 20mph speed limits since the 2013 revision of the DfT guidance.

## 1.4 Alternative approaches nationally

Nationally, for some time, there has been an ongoing debate about the benefits (or otherwise) of signs-only 20mph limits in residential areas.

More traffic authorities are turning to signs-only 20mph limits, which are cheaper to introduce than 20mph zones, as they do not include physical traffic calming measures. In some parts of the country (for example Brighton, Portsmouth, Manchester and Lancashire) area wide 20mph limits have been adopted.

There are a range of reasons put forward in support of 20mph limits, the most widely canvassed argument being that they lead to a reduction in road collisions and casualties. Advocates also argue that they contribute to an improvement in air quality and a reduction in noise; they encourage walking and cycling; facilitate social interaction and result in more pleasant streets generally.

Opponents of signs-only 20mph limits argue that they are not effective in reducing vehicle speeds, that the limits are not enforced by the police and are frequently ignored.

There is clear evidence that reducing vehicle speeds results in fewer and less severe collisions, particularly for vulnerable road users. What is not clear, however, is how effective 20mph limits are in changing driver behaviour and reducing vehicle speeds.

Published evidence suggests that 20 mph speed limits have the potential to deliver improvements in public health as it is expected that this is likely to create an environment where people are more physically active and benefit from greater social interaction. There is some evidence and learning from other areas, such as Bristol, that demonstrates the delivery of these community benefits. However there is limited evidence of the degree to which the intervention results in these outcomes.

Currently there is a paucity of data in the UK to conclusively support or counter firmly held views about the benefits of 20mph limits. A number of schemes across the country have been evaluated and some of the key published outcomes are discussed in section 2.4 of this report, however where evaluation data is available it has not been collated and presented in a consistent manner so analysis is difficult. Whether making the case for or against 20 mph speed limits, it is possible to find evidence in support of both positions. The aim of this review is to provide a balanced perspective given that evidence base.

There is stronger evidence to support the use of 20mph zones for casualty reduction than 20mph limits and national guidance suggests that 20mph limits are best implemented on appropriate roads where current average speeds are already low.

Best Practice suggests that schemes should be evaluated over a minimum six-year period (three years before and three years after) in order to have sufficient data, therefore more time needs to elapse before firm conclusions can be drawn.

To support and inform future policy development the Department for Transport has commissioned research into the effectiveness of 20mph



speed limits. The research will evaluate the effectiveness of 20mph speed limits in terms of a range of outcomes including speed, collisions, injury severity, mode shift, quality of life, community, economic, public health benefits and air quality. It will also examine drivers', riders' and residents' perceptions of 20mph speed limits and assess the relative cost/benefits to specific vulnerable road user groups including children, cyclists and the elderly. Unfortunately the research findings will not be available until 2017.

## **2. Evidence Gathering**

### **2.1 Cabinet Member for Highways, Infrastructure & Transport**

On 8 June the working group met with Cllr Dean Collins, the Cabinet Member for Highways, Infrastructure and Transport. Cllr Collins informed the working group that a number of communities in Derbyshire have expressed interest in 20mph speed limits being applied to residential streets in their locality.

He acknowledged that the evidence for and against 20mph limits is, at present, inconclusive but went on to say where there was community interest he was supportive of 20mph speed limits and that he was open to running pilots in rural and urban areas.

He also acknowledged that casualty reduction is not the sole reason for introducing 20mph limits and said that he would support their introduction to meet wider community benefits such as health and wellbeing gains. He did however, on the grounds of cost, caution against wide scale use of physical measures such as speed humps and build-outs.

### **2.2 Officers from Economy, Transport & Environment Department**

On 15 June the working group met two officers from the Environment Transport and Economy (ETE) Department: Simon Tranter (Principal Engineer - Traffic and Safety) and Matt Pickard (Senior Project Officer - Casualty Reduction Strategy).

The working group learnt that a previous review conducted by the ETE Department in 2011 identified twenty five 20mph zones in Derbyshire which had been introduced to address high casualty rates on particular sections of road.

The officers stated they were not aware of any other roads in the county with a high casualty rate that would benefit from the introduction of a 20mph limit or zone, including roads immediately adjacent to schools. Statistics show that more road traffic accidents occur on the journey to school rather than immediately outside school. All Derbyshire schools have a School travel plan aimed at promoting more sustainable modes of transport.

The number of people killed or seriously injured (KSI) on Derbyshire Roads in 2013 was the lowest for 30 years, however in 2014 there was a marked increase in the KSI figures. Overall in 2014 there were 2311 reported casualties, compared to 2306 in 2013, an increase of 5 which is statistically insignificant. Slight injuries reduced, but the number of KSI

casualties increased substantially from 302 to 416. Nationally the trend in 2014 was for an increase in casualties, but the pattern in Derbyshire of a reduction in slight injuries and a large increase in KSIs is unusual. A number of factors contributed to this, principally weather, and increased economic activity. The increases were observed in the first half of the year, and in the final quarter of the year the trend was reducing.

The Council's current policy on 20mph speed limits and zones is to use them "sparingly" and the primary consideration when determining their suitability has always been the casualty rate of the section of road in question.

In 2013 the Department for Transport (DfT) revised its guidance on setting local speed limits and made it easier for traffic authorities to introduce 20mph speed limits by removing the need for physical features. This is the first review of the Council's approach to 20mph speed limits since the 2013 revision of the DfT guidance. This is a pertinent point as the ETE Department did not meet its commitment (stated in a Cabinet paper dated 13 December 2011) to report to Cabinet when the current DfT guidance was revised.

The officers stated that 20mph zones have been shown to be effective in reducing vehicle speeds, as the physical traffic calming measures force vehicles to slow down.

Nationally the evidence is that 20mph zones with traffic calming generally reduce traffic speed by an average of 9mph and reduce casualties by 40%. There is, however, limited evidence about the effectiveness of signs-only 20mph limits in reducing vehicle speed or the wider community benefits that area-wide 20mph speed limits may deliver.

In the view of the officers DfT's rationale for encouraging signs-only 20mph limits is unclear, given that the evidence to support their introduction, on the grounds of road safety and associated health benefits, is inconclusive. For this reason the officers await with interest the findings of research commissioned by the DfT into the effectiveness of 20mph speed limits which is due to be published in 2017.

The officers acknowledge that there is often community support for 20mph limits and went on to say that the perception that vehicles are travelling too fast is a key factor in communities wanting them.

Elected Members from the Glossop area are supportive of 20mph limits and a pilot scheme has been proposed in Padfield. As a result monitoring of traffic speed, Co2 and noise is currently being carried out. There is also community support for 20mph limits in parts of Ilkeston.

The officers advised that future pilots of signs-only 20mph speed limits (whether in rural or urban settings) should be monitored for at least two years (ideally longer) so that the benefits can be evaluated. They recommended that the monitoring should include traffic speed, carbon dioxide and noise.

The officers stated that in their professional opinions the decision to introduce a 20mph limit should take into account the specific characteristics and factors pertaining to each area, rather than a blanket approach. They also said they would like the decision making process to be more transparent so that it is clear to the public why a scheme has been introduced. The reasons might be collision reduction, promotion of healthier lifestyles and sustainable modes of transport or other community benefits.

The ETE department is currently developing a “Speed Management Protocol”. This will set out how the department and partners such as the Police deal with complaints about speed and will rank issues in order of severity. A key aim of the protocol will be to ensure a common, consistent approach across all agencies to address concerns raised by the public.

### **2.3 Representative from “20’s Plenty for Us” Campaign**

On 29 March 2015 the working group met with Rod King, founder of “20’s Plenty for Us”. This is a campaign organisation that encourages local authorities to move away from micro considerations of traffic management on individual streets to macro considerations of social engagement and area-wide reductions in speed limits.

The organisation was established in 2007 and currently has 268 campaign groups in the country. In Derbyshire there are campaigns in Chesterfield, Charlesworth, Padfield and Whaley Bridge.

One of the key messages of the campaign is that the benefits of area-wide 20mph limits extend far beyond casualty reduction. The benefits include: reduced noise and vehicle emissions, modal shift from cars to more

sustainable and active methods of travel, independent mobility for children and older people, social equality and community cohesion. In short they make an area a better place to live.

Traditionally, decisions about local speed limits have focused on casualty reduction. “20 is Plenty for Us” believe there needs to be a cultural change in the way local authorities make decisions about speed limits in residential areas and that greater consideration should be given to the wider community benefits.

The British Social Attitude Survey in 2013 found that 68% of people were in favour of 20mph speed limits in residential streets.

The Alliance of British Drivers does not support the implementation of area-wide 20mph limits. In fact they campaign against most speed limits and their enforcement.

The AA say they support 20mph limits where appropriate.

Examples of councils that have introduced area-wide 20mph limits include Lancashire, Bath & NE Somerset, Sefton. Many unitary authorities have included outlying villages in their 20mph implementations.

Historically it has been easier to measure the impact of 20mph zones on casualty statistics than the wider community benefits of 20mph limits. Therefore if a local authority only considers the issue from a traffic engineering point of view then this will not show the wider benefits of introducing 20mph limits on residential streets.

Now that the Public Health function has been transferred to local authorities there is an opportunity for a wider range of opinions to enter the debate about local speed limits. This is pertinent because it has been shown that more active lifestyles deliver considerable long term benefits for communities.

There is historical evidence that roads with lower average speeds have higher levels of pollution. However where lower speeds are induced by congestion the higher levels of pollution are as a result of a large volume of traffic frequently stopping and starting. If slower moving traffic is induced

by speed limiting it will remain free flowing and there is not a rise in pollution levels.

Area-wide limits are more effective in changing driver behaviour than 20mph limits on isolated streets. This is because isolated limits encourage drivers, as they leave the 20mph limit, to speed up by virtue of the fact that there is a large sign telling the driver to speed up. Area wide limits change the mind-set of drivers by making it the norm to travel at 20mph in residential areas.

During a discussion about the DfT's guidance on setting local speed limits the working group were advised that:

- The guidance contains a requirement for the local authority to set the correct local speed limit based on a number of criteria. Completely separately in the guidance there is a discussion about whether to use limits or zones.
- There is now a lot of flexibility regarding the implementation of 20mph zones. It used to be the case that a 20mph zone had to have a physical traffic calming measure (such as a hump or build-out) every 100m. In 2013 the guidance changed so that a zone must have a minimum of one physical measure. What this means is that rather than having a zone made up of lots of physical calming measures or a limit with no physical calming, local authorities can implement a hybrid of the two. It's possible to have a zone with maybe one physical traffic calming measure and then rely on other measures such as repeater signs and roundels.
- The guidance defines a village as 20 properties. It does not define a residential road or specify what the speed limit should be in a village.
- There is nothing in the guidance about compliance when setting the speed limit. Whilst it is good practice to consult with the Police when setting the speed limit, the guidance does not say that their endorsement is a prerequisite. The local elected representatives set the speed limits and the Police enforce them.

Mr King went on to say that local authorities need to be creative about 20mph limits in terms of how they fund, implement and promote them.

Funding can be accessed from a variety of sources; other authorities have used contributions from their Local Transport Plan, Public Health Resource Fund, and Local Sustainability Fund.

Implementation can include relatively inexpensive measures to visibly alter the appearance of a street, such as staggered parking bays or planters. Measures at entry points might include road roundels, a change in surface material or a small build-out. It is an opportunity for traffic engineers to be creative and flexible in their design.

If an area-wide scheme does not involve a lot of engineering and design work it becomes more of an administrative exercise. Therefore it may be worth recruiting an administrative assistant to process the traffic regulation orders in order to free up the technical skills of the traffic engineers.

When 20mph limits are introduced repeater signs are put up and some people in the community may feel they create street clutter. However other signs such as warning signs may be removed. “20’s Plenty for Us” is lobbying DfT to make 20mph the default speed limit in residential areas which would alleviate the need for repeater signs where there are street lights.

Promotion and community engagement in some areas has been delivered by Public Health teams and have led to a range of innovative ideas. For example in Liverpool 20mph schemes were endorsed by the city’s two football teams, they ran a “yarn bombing” campaign where knitted 20mph signs were put up across the city and drivers caught speeding outside one school were given the option of a fixed penalty, paying for a speed awareness course or appearing in front of a jury of children at the school. Other areas have involved local residents in community speedwatch campaigns.

The key to the success of area-wide 20mph speed limits is to engage the community. The Council needs to act as a catalyst and promote the benefits of 20mph limits.

It is not about putting up 20mph signs and expecting drivers to slow down. It’s about promoting their benefits and encouraging people to change the way they use and share the roads to the benefit of everyone in the community. He said it was as much about “reinforcement as enforcement”.

## **2.4 Written Submission from Public Health**

Zara Hammond, Specialty Registrar in Public Health submitted the following report to the working group on behalf of Public Health. The report provides a review of the current literature pertinent to the effectiveness of 20mph limits and concludes with five key points that Public Health wish to emphasise to the working group. The references in the submission can be found in appendix 1 of this report.

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## **20 mph Speed Limits: Public Health Submission to the Derbyshire County Council Improvement and Scrutiny Committee – Places**

*Author: Zara Hammond, Specialty Registrar in Public Health*

### **1.0 What is being considered?**

*20mph limits are intended to restrict the speed at which vehicles travel on roads by alerting drivers to the maximum speed allowed using road signs (ROSPA, 2015). Implementing 20 mph limits in an area does not include applying physical measures, such as road humps and chicanes to reduce speed.*

### **2.0 Why is it being considered?**

- A number of communities in Derbyshire have expressed an interest in 20mph speed limits being applied to residential streets in their locality.*
- Local authority initiatives are key opportunities to create better conditions for improving road safety, physical activity and wellbeing, with recent regulatory changes making it simpler for local authorities to implement 20mph speed limits to support this.*

### **3.0 20 mph limits - do they work?**

#### **3.1 Reducing injuries and casualties**

*A substantial proportion of injuries and deaths that result from accidents on the road can be attributed to excess or inappropriate speed (WHO, 2004). Speed contributes to almost a third of road related fatalities in high income countries (WHO, 2004) and more than 80% of road casualties among children occur on streets with a 30 mph speed limit (PHE, 2013). Measures aimed at limiting vehicle speeds can prevent road traffic incidents from happening in the first place as well as reduce the impact and seriousness of any injuries when they do occur (WHO, 2004).*

*A recent review of evidence was commissioned by Durham County Council to look at the health impact of 20 mph zones and limits. The evidence across five systematic reviews (considered to be the highest level of evidence) was examined and while none looked exclusively at 20 mph limits, it was concluded that both 20mph zones and limits were effective in reducing accidents and injuries, traffic speed and volume (Cairns et al, 2014).*



*There is stronger evidence to support the use of 20 mph zones for casualty reduction than 20 mph speed limits (ROSPA, 2015). National guidance on the prevention of unintentional road injuries in children under 15 years of age (NICE, 2010) recommend providing safer routes and reducing speeds in areas commonly used by children and young people, particularly around schools, colleges and residential streets, where there are often higher levels of pedestrians and cycling. NICE recommendations support the use of both 20 mph zones and 20 speed limits for casualty reduction but suggest that sign only limits are best implemented on appropriate roads where current average speeds are already low, in line with Department for Transport guidelines (NICE, 2010).*

*Changes in casualty reduction and traffic can be difficult to detect over shorter periods, often requiring long term monitoring. However, even a modest reduction in vehicle speeds can increase the time available for people to react and reduce the severity of collisions (NICE, 2010). A study carried out for the Department for Transport looked at three sets of pedestrian accident data collected over the last 30 years and found that the risk of being killed was much lower and increased slowly below impact speeds of 30mph but increased rapidly thereafter (Richards, 2010). It is also widely accepted that every 1 mph reduction in average speed results in a 5% reduction in collision frequency (Taylor et al, 2000), indicating that even a small drop in average speed can have a meaningful and beneficial impact on road safety.*

### **3.2 Improving health and wellbeing**

*The benefits of improving physical activity are wide reaching, having a positive effect on both physical and mental wellbeing by contributing towards personal weight management and substantially reducing the risk of ill health from cardiovascular disease, type-2 diabetes and hypertension as well as anxiety, depression and loneliness through isolation (WHO, 2013).*

*Latest figures from the National Child Measurement Programme 2013-14 show that a third of children in England aged 10-11 years and over a fifth of 4-5 year olds are overweight or obese (PHE, 2015d). In Derbyshire over two-thirds of adults are overweight or obese, which is significantly worse than the England average (PHE, 2015b). Information from the 'National Travel Survey' shows that over the last 30 years, the distance people walk and cycle has declined considerably (DfT, 2007a), therefore creating an environment that supports children, young people and families to be*

*active as part of their daily life is important for generating positive health behaviours that continue into adulthood.*

*Physical activity and opportunities for active travel are directly and indirectly influenced by the built environment, with vehicle speed and the perceived danger on roads being reported as a key barrier (National Heart Forum, 2010). A fundamental aim of introducing 20 mph limits is to reduce car use, thereby encouraging more active travel among communities and workplaces through walking and cycling (Sustrans, 2015). This in turn is expected to lead to less congestion on roads, higher levels of social capital through stronger communities and more social interaction, as well as less noise pollution (Ingamells & Raffle, 2012).*

*20mph speed limits for roads where people live, work and shop may be one of the most effective approaches available for creating urban environments that are health promoting (National Heart Forum, 2010). At a national level there is wide ranging support for limiting the speed of vehicles on appropriate roads, with results from the British Social Attitudes Survey 2013 showing that 68% of respondents were in favour of 20mph speed limits in residential streets (DFT, 2014). Just 16% of respondents were against 20 mph speed limits, which is modest when compared with the majority in favour (DFT, 2014) however research from areas where 20 mph limits have been implemented suggests there can be a mismatch between outward support for 20 mph limits and actual driving behaviour (Toy et al, 2014).*

*The most up to date Public Health indicator information for Derbyshire shows that just 13.3% of people are using outdoor space for exercise and health reasons, which is significantly worse than the England average (PHE, 2015c). In addition to the broad support for 20 mph limits, the British Social Attitudes Survey 2013 found that 61% of respondents felt it was too dangerous to cycle on roads. When this response was broken down it indicated that perceptions of risk may be heightened by increasing age, with 47% of respondents aged 18-24 saying it was too dangerous to cycle on roads, rising to 65% of those aged 65 years and older (DFT, 2014). Safety on roads and perceived risk can have a strong influence on both travel behaviour and outdoor exercise habits.*

### **3.3 Reducing inequalities and wider community benefits**

*At present there has been little research into the effect of 20 mph speed limits on health and social inequalities experienced by individuals and communities (Cairns et al, 2014). However, there are well established links between socioeconomic status and risk of*

*injury from road accidents (WHO, 2009), with children from the most deprived 10% of wards accounting for more than a quarter of total child pedestrian injuries (Greyling et al 2002).*

*Exposure to danger is a significant factor in child accidents on roads (Edwards et al 2006), with it being more likely that people from a lower socioeconomic status live in residential areas where there is more on-street parking, high-speed traffic and fewer off-street play areas (NICE, 2010). It is therefore reasonable to expect that any improvements in road safety would have a positive impact on reducing associated health and social inequalities. NICE guidelines on Physical Activity and the Environment recommend that planning applications for new developments 'prioritise the need for people (including those whose mobility is impaired) to be physically active as a routine part of their daily life' by for example, restricting road speeds, creating safer routes to school and improving opportunities for walking and other physical activity (NICE, 2008a)*

*In addition there are known health inequalities in relation to cardiovascular disease, with people from lower socioeconomic groups being disproportionately affected (NICE, 2008b). At a local level, circulatory disease (including coronary heart disease and stroke) contributed 31.2% to the gap in life expectancy in men (8.1 years) and 27.5% to the gap in life expectancy in women (5.9 years) between the most deprived 20% of the Derbyshire County population and the least deprived in 2010-2012 (PHE, 2015). Increasing physical activity through active travel may create some of the largest health gains for those people from lower socio-economic groups. Reducing the default speed limit in built-up areas is expected to encourage social inclusion by promoting a more inviting environment for walking and cycling, thereby encouraging more accessible and affordable forms of personal travel that enhance health and social related quality of life (National Heart Forum, 2010).*

### **3.4 Road traffic congestion and environmental impact**

*Daily and long-term average concentrations of air pollutants (including Particulate Matter) have been clearly associated with effects on cardiovascular health and this is reflected by a variety of outcome measures, including hospital admissions and risk of death (DOH, 2006). A study of air quality in 20 mph speed restricted areas of London (Williams & North, 2013) found that Particulate Matter 10 (PM<sub>10</sub>) emission factors were lower for both petrol and diesel vehicles over 20mph drive cycles compared to 30mph drive cycles (with the exception of vehicles with engines over 2.0 litres in size). Modelling of average speeds had suggested that a lower speed limit*

*in urban areas may result in higher pollutant emissions and while the study by Imperial College found that the overall effect on vehicle emissions was mixed, it was concluded that there was no evidence to suggest that 20mph speed restrictions would be detrimental to ambient local air quality (Williams & North, 2013).*

*Although effects of 20 mph speed limits on pollution may be slight when considering vehicle journeys, integrating active travel into daily life through walking and cycling can be expected to have a positive impact on the level of emissions that contribute to climate change and local air pollution when compared with motorised transport (PHE, 2013). In addition, slower speeds have been attributed to an ease in traffic flow as drivers find it easier to merge into shorter gaps at a lower speed. (King, 2015) and may result in less vehicle related noise pollution in 20 mph areas (National Heart Forum, 2010)*

#### **4.0 Cost Effectiveness**

*The relatively high cost of self-enforcing 20 mph zones and traffic calming schemes has led to a greater emphasis being placed on signs-only 20 mph speed limits in recent years. Casualty reduction is a key aspect of any measure aimed at reducing vehicle speeds and costs to the health system from treating casualties can be substantial. Figures released by the Department for Transport in 2011 calculated the cost of road accident casualties in order to understand the value of prevention, with it being shown that the average cost per casualty for a slight injury was £14,611, serious injury £189,519 and fatal injury £1.69 million (DFT, 2011).*

*Inactivity results in the NHS spending an estimated £1.06 billion a year in direct costs (NICE, 2012). Improving physical activity levels through active travel can help to reduce demand on existing local health services, reduce costs to the local economy from sickness absence (NICE, 2012), as well as creating individual cost savings from fewer car journeys. Online tools available to support the economic assessment of health benefits from active travel include the WHO Health Economic Assessment Tool (HEAT) for walking and cycling (WHO, 2014). HEAT can be used to generate projected increases in cycling from new programmes or infrastructure, or to evaluate measured changes and this methodology is now incorporated into Department for Transport economic appraisal of transport schemes (PHE, 2013).*

#### **5.0 Learning from other areas**

- 5.1** *Portsmouth was one of the first local authorities to implement 20 mph limits using just road signs, covering most residential roads that*

*previously had a 30 mph speed limit. Interim evaluation carried out for the Department for Transport (DFT, 2010) based on 2 years of data collection found the following results:*

- In areas where the 20 mph limits were put in place, average speed dropped by 1.3 mph.*
- At sites where the average speed was 24 mph or more prior to implementation, average speed was reduced by 6.3 mph.*
- Comparing the 3 years before implementation to the two years after, the number of road accident casualties fell by 22% from 183 a year to 142, compared with a 14% national drop in comparable areas. However the report concluded that 'casualty benefits greater than the national trend have not been demonstrated'.*

*5.2 Bristol first piloted 20 mph speed limits in 2010. The approach focused on cost and culture change, implementing sign-only 20 mph speed limits but in combination with a social marketing and communications strategy to encourage active lifestyles (BCC, 2012). This included:*

- Pre and post monitoring of speed counts, injury data, walking and cycling counts, noise and air quality assessments, doorstep questionnaires, and monitoring of reliability and journey time for buses.*
- A 'social norming' approach by discouraging commuter parking, improving the local cycling infrastructure, promoting bus schemes and publicising the scheme through football clubs, the fire service, community involvement and liaison with the local police force.*

*Evaluation of outcomes in Bristol (BCC, 2012) after the pilot period found:*

- Mean average speed across all roads dropped to 23mph and under between 7am to 7pm.*
- Increase in counts for cycling ranged from a 4% to 37% increase*
- Increase in counts for walking ranged from a 10% to 36% increase*
- Strong support for 20 mph limits from residents*
- Pedestrian casualties remained constant over the monitoring period, however casualty and traffic monitoring data is unpredictable over short periods. Numbers were very small and it was not possible to properly assess the impact.*

*Clear communications and support from partners was considered key to delivery of the 20 mph limits scheme in Bristol and the approach taken is consistent with recommendations made by the Department for Transport (FT, 2012), whereby limits are only one element of speed management. Rather than being set in isolation they should be 'part of a package with other speed management measures including engineering and road geometry that respect the needs of all road users and raise the driver's awareness of their environment; education; driver information; training and publicity'(DFT, 2012).*

## **6.0 Are there any unintended consequences of 20 mph speed limits?**

- *National data released by the Department for Transport (DFT, 2011) indicated that between 2010 and 2011, the national number of injuries to people on roads in built-up areas with 20mph speed restrictions was 2,262. This was contentious as media reports publicised this as being a 24% increase in injuries despite there being no official figures indicating that this was significant (BBC, 2012). Responses to the figures suggested this reflected an increase in the proportion of roads with 20 mph limits and should not detract from the fact that many more casualties occur on 30 mph roads compared to 20 mph (Ingamells & Raffle, 2012).*
- *Discussion with Bristol City Council representatives indicated that this area of work generates both local and national discussion. This may result in a number of Freedom of Information requests in relation to the work and appropriate resource and staff time may be required to cope with any increase in requests.*
- *The Royal Society for the Prevention of Accidents recommends consulting with local communities and relevant stakeholders, such as the emergency services, to ensure that the relative benefits and consequences of 20 mph limits are fully understood prior to considering implementation (ROSPA, 2015).*

**Key Points:**

- *National guidance on preventing unintentional road injuries among children and young people (NICE 2010) supports the use of both 20 mph zones and 20 mph limits on appropriate roads, as measures to reduce vehicle speed and improve road safety.*
- *Slight reductions in average speed can have a meaningful impact on improving road safety. However, relatively small numbers of people killed or injured on roads can mean that it is difficult to detect changes in casualty reduction over short periods of time and long-term monitoring is often needed. A range of social, economic and environmental factors can have a strong influence on physical activity levels. 20mph speed limits for roads where people live, work and shop may be one of the most effective approaches available for creating urban environments that are health promoting and support safe, active travel.*
- *Improvements in road safety and built environments that support active lifestyles may produce some of the largest health gains for those people from lower socio-economic groups and are expected to reduce health inequalities. Evaluation of 20 mph limits should be comprehensive, including for example impact on road related injuries and casualties, perceptions of risk, the number of people walking or cycling as well as local acceptability and attitudes.*
- *National surveys suggest there is considerable support for 20 mph speed limits on residential streets. However, learning from other areas indicates that 20 mph limits should be considered as part of a broader package of measures including working with partners, improving active travel infrastructure, communication and social norming to create behaviour change.*

**2.5 Bristol City Council**

On 1 September 2015 the working group held a teleconference with Dr Adrian Davis a Public Health and Transport Specialist based at Bristol City Council and Helen Wigginton the Principal Transport Planning Officer for the city-wide roll out of 20mph speed limits in Bristol City. During the discussion the following points were made:

## Rationale

- The rationale for city-wide 20mph roll out in Bristol was to:
  - improve road safety
  - encourage more walking, more cycling and more independent mobility for children and elderly people.
  - Improve social cohesion.
- Post war ownership of motorised vehicles has led to what is referred to as the “severance effect”. This is where pedestrians are discouraged from moving freely within the community by fast moving vehicles.
- Epidemiological evidence shows that the more friends and acquaintances a person has the more likely their health will be better and the more likely they will live longer.
- It was noted that a significant number of short journeys in the city were being taken by car and it was thought that by creating a pedestrian friendly environment and promoting sustainable modes of travel some of the short car trips might be replaced with more active ways of travelling.
- Bristol City Council saw 20mph limits as a cost effective way of reducing community severance, rebuilding trust and community cohesion, supporting residents to increase their total activity time and in so doing achieving positive health outcomes.
- No one reason for introducing 20mph limits was seen as more important than any other. The benefits of improving road safety, physical activity and social cohesion are equally balanced.
- In Bristol the project is not purely a road safety intervention. It is seen as an important player in reducing the disease burden. Many more people, in this country, die from physical inactivity (because they develop cardiovascular disease or diabetes) than die from road traffic accidents. Cardiovascular disease is the number one cause of death in the UK.
- Public health in Bristol has played a big role in the decision making about 20mph limits. Dr Adrian Davis has been integrated in the Transport Section of the city for 7 years, long before local authorities acquired the responsibility for Public Health. This has enabled different disciplines to work closely together, to build up trust and identify transport related funding streams that can support public health initiatives (and vice versa).



## **Behaviour Change, Social Marketing and Social Norming**

- The project is a behaviour change intervention, and behaviour change is notoriously difficult taking years to work through. Therefore sufficient time has to elapse before outcomes can be reliably evaluated. Key to achieving behaviour change is social marketing. The advice from Bristol is to devote a lot of resources to this. Raising awareness is vital “if you want people to drive at 20mph they have to know it is 20mph”. To get the message across they have placed 20mph repeater signs 200m apart, used social media to direct people to the website and recruited respected public figures in the community to act as advocates. They have now engaged the services of a company called “Slow-mo” – who are social marketing experts.
- Social norming is another important approach to achieving behaviour change. People take more notice if it they see someone they trust adopting a new behaviour and then are more inclined to do the same.
- By Derbyshire starting the debate now, it is much more likely to achieve compliance if a decision is made to go ahead with 20mph limits in the future.

## **Public Opinion**

- Before the start of the project 74% of people in Bristol were in favour of a 20mph limit on their own street. Since the project has been rolled out 88% of people are in favour.
- As each phase has been rolled out there have been fewer objections about the principle of 20mph, but more comments relating to specific streets.
- Sampling opinion through household surveys gives a good insight into what local people think and if their behaviour has changed. In Bristol’s experience it is a better gauge of local opinion than the flurry of comments submitted from local campaign groups (for or against 20mph).

## **Would approach be transferable to a rural locality?**

- Dr Davis was not aware of evidence that relates specifically to the introduction of 20mph limits in rural areas. His advice was to work with communities to identify appropriate roads and develop a plan. In his view public opinion will be similar in rural and urban settings as the desire for fewer road casualties, areas where children can play safely

and a more pleasant living environment is a fairly universal public response.

## **Roll out**

- The City-wide roll-out of 20mph speed limits is a 4 year plan.
- In 2010 two 'signs only' pilots were set up near the centre of Bristol, covering 500 roads and 30,000 households.
- The pilot areas were chosen because they suffered from deprivation and it is known that traffic collisions are more likely to occur in deprived areas.
- Prior to commencement of the pilots extensive monitoring was undertaken. This included objective data such as manual traffic counts and self-reported data such as doorstep surveys.
- In July 2012 Bristol City Council made the decision to introduce 20mph limits throughout the City with the exception of 40 or 50mph roads and dual carriageways.
- The approach taken was to make 20mph the default for all residential roads and that a case would have to be made for a residential road having a 30mph limit.
- Project was divided into 6 phases. In January 2014 rollout began with a large central area joining up the two pilot areas.

## **Public Engagement**

- For each phase a considerable amount of time, planning and resources was devoted to engaging local people, businesses and partner organisations. Informal consultation and publicity work began long before detailed plans were developed and formally consulted upon.
- Community engagement included attendance at community forum meetings in each area, several times over a period of 12 months.
- Emails were sent to the head teacher of every primary and secondary school in Bristol City
- The aim was to engage with the entire spectrum of people and organisations that would be affected by the proposed changes: shops, businesses, emergency services, bus operators, taxi operators, cycling groups, walking groups, neighbourhood partnerships, freight

associations motorcycle groups etc. The advice is to get a dialogue going with all sectors of the community as quickly as possible to build up a relationship.

- The projects website was a key consultation tool and now is an important promotional tool. The website contains information about the rationale and the detailed plans for each phase. To publicise the website a postcard was designed and posted to all households in the area. This allowed the project team to reach out to many more people – particularly those unlikely to attend a community forum.
- A map showing hospitals, schools etc was used to plan each phase of the project and this was shared with the community. Road by road a decision was made about the appropriate speed limit. The default starting point was 20mph and a case then had to be made for 30mph.

### **Police Involvement**

- The police were sceptical at first. It was important to the police that the “look and feel” of roads made the limits self-enforcing. The police are now enforcing 20mph limits. Their approach is to educate rather than penalise. Bristol Police are 1 of only 6 constabularies that run 20mph speed awareness courses and to date 600 people have attended a course in Bristol.
- When new limits are introduced it is important to allow for an adjustment period because educating the public is a gradual process. People may not be sure if the new limit is mandatory or not. Also traffic speed is often a lot slower than residents perceive. Bristol use an evidence based approach. If residents raise concerns that vehicles are travelling too fast, GPS data is used to assess vehicle speeds and when appropriate the police are notified and asked to conduct speed checks. The speed checks are often conducted in areas where they are highly visible, such as outside schools and shopping areas, to reinforce the message that the limit is now 20mph.
- In Bristol there is no difference in the enforcement of 20mph and 30 mph limits – “after all, the overall number of roads has not increased”.
- There is a network of 15 Community Speed Watch areas in the city. The Council provides the equipment and the police provide the training.

### **Outcomes**

- At present there is not sufficient data to be able to evaluate the project. Road causality numbers are small (10-12 a year) so it is necessary to

wait a long time for data to be meaningful and statistically significant.

- In phase one of the project an increase in physical activity was recorded. At the start of phase one 78% of people walked 10 minutes a day in the local area, now 88% of people do.

### **Budget and expenditure**

- The total budget for the full roll-out of the 20mph speed limit across the whole of Bristol (over 4 years) was £2.3m.
- The budget covers implementation , monitoring and social marketing
- £1.525m of this was funded from the Government's Local Sustainable Transport Fund (£1.3m capital, £225k revenue)
- The remaining £800k was allocated from the Local Transport Plan (LTP) Integrated Transport Block grant funding
- Of the £1.645m spent to date £840k has been spent on engineering work including design and build; £81k on legal fees; £120k on internal staff time; £48k on consultation; £150k on maintenance; £218k on monitoring, including equipment such as Vehicle Activated Signs (VAS) and £188k on marketing and promotion of the schemes
- With regards to signing specifically, just over £125k has been spent on signs for phases 1 to 3 so to complete the whole city approximately £250k will have been spent on signs, which is 11% of the total budget for the project.

## **2.6 Lancashire County Council**

On 28 July the working group held a teleconference with Lancashire County Council. The Members chose Lancashire to speak to as its geography is similar to Derbyshire. It is a large county with a mixture of rural and urban communities and it has introduced 20mph limits county-wide.

The rationale for the £6 million project, which introduced 20mph limits to all residential areas in Lancashire, was to reduce road casualties. The project was in response to a report in 2010 that revealed a high rate of children being killed or seriously injured and was welcomed by Members and officers.

The approach was initially piloted in three areas with traffic speed being monitored before and after implementation. Subsequently the programme was rolled out county wide over a period of 3 years.

Working with partners, and co-ordinating a clear and consistent message to residents, was considered crucial to the delivery of the project.

Post implementation the scheme was marketed and reinforced through a variety of channels. Approaches included: a poster and radio campaign; school speed watches, competitions and lesson plans; working with parish councils and community groups; mobile speed indicator signs and community speed watches.

The approach of the Police was to focus on engagement before enforcement. Drivers identified through speed watch initiatives received letters which were followed up with police visits.

Evaluation has shown that the scheme has not, so far, delivered the desired reduction in the number of people killed and seriously injured in Lancashire. Cllr Fillis, Cabinet Member for Highways and Transport at Lancashire County Council, felt that it was too early to be able to reliably recommend to Derbyshire a county-wide roll-out of 20mph limits. His advice was that 20mph limits should not be used in isolation and viewed as the tool of choice to bring about a reduction in road casualties.

## **2.7 Derbyshire Police**

Until recently Derbyshire Police have tended to object to 20mph limits which have no physical measures, because communities have an expectation that they will be enforced, and in reality this is difficult for the police to resource.

On 18 June 2015 the Police Commissioner wrote to Cllr Gillott to advise that Derbyshire Police had made a significant change in policy in relation to consultations on 20mph proposals. He stated that the police will no longer object to a 20mph limit or zone on the grounds of there being no physical engineering measures (such as humps and chicanes) and that enforcement will be conducted in the same way as enforcement for any other speed limit.

## **2.8 Evidence from Elected Members**

The working group met with a small group of cross party members (Cllrs Ratcliffe, Greenhalgh, Kemp, Chilton, Street) on 7 July 2015. The purpose of the meeting was not to gauge support for 20mph limits but to hear the experiences of Councillors when they have requested 20mph limits. During

the discussion Councillors described a number of scenarios where communities had requested 20mph speed limits.

- Cllr Greenhalgh talked about residents in Glossopdale being concerned about the speed of traffic on densely populated streets and their wish to reclaim the streets for the community.
- Cllr Ratcliffe referred to communities in the Wirksworth Division who have, for many years, requested 20mph limits (for example in and around Carsington and Brassington).
- Individual officers in the ETE Department are held in high regard by the Members. However the session centred around feelings of frustration experienced by Members, and their communities, when they have approached the Council about the introduction of 20mph speed limits as a consequence of the current policy.
- It was acknowledged that the ETE Department has finite resources (particularly officer time) however Members expressed feelings of dissatisfaction and disempowerment that negotiations with the Department have been time consuming and protracted.
- Currently the approach is for officer recommendations to focus on narrow parameters, and decisions about 20mph limits are based on road casualty rates alone. The approach does not take into account wider community benefits and the views of residents.
- There is a need for a more transparent process. This would help to better manage public expectation and improve the public perception of the Council.
- Cumbersome administrative processes appear to prevent officers addressing the needs of local communities and responding to requests within a timeframe that is acceptable to Members for reporting back to their constituents.

## 2.9 Community Opinion

To capture the views of Derbyshire residents an on-line survey was published on the Council's website and promoted via the Council's social media channels and the local media.

The questionnaire was compiled with input from officers from Economy, Transport and Environment, Public Health and Policy and Research. The purpose of the survey was to find out what local people think about 20mph speed limits in Derbyshire. The introduction to the survey made it clear that the questions related to residential streets (but not major through routes) and that the 20mph speed limits would not have physical traffic calming measures such as speed humps.

All Derbyshire Parish Councils were informed about the consultation via an e-mail and invited to respond. Young people were alerted to the consultation via the YOUTHINC twitter account and Facebook pages. Paper copies were also available on request. The consultation ran from 10 August to 30 September.

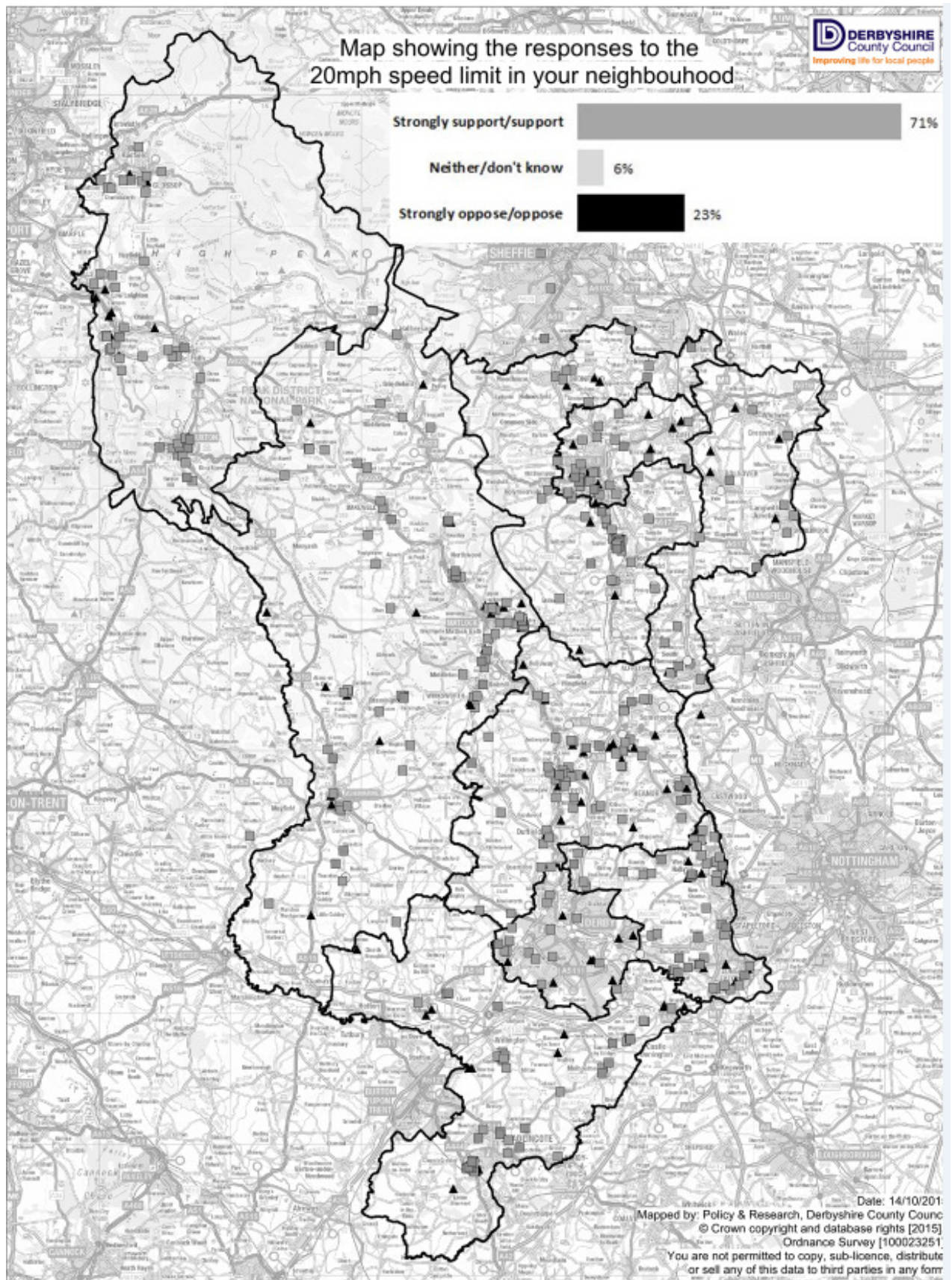
The consultation generated considerable public interest. In total there were 1098 responses to the questionnaire (The majority of responses were submitted on-line, with only 18 paper questionnaires being completed. More males (58%) responded to the questionnaire than females (42%) and the average age of respondents was 54.

The home postcodes of respondents are plotted on the map of Derbyshire below (Figure 1). The graphic suggests that there is county-wide interest in the issue of 20mph speed limits and highlights some areas of support and opposition to 20mph limits.

The key outcomes of the survey are detailed below.

There was strong support for the introduction of 20mph limits in Derbyshire. Over two thirds (71%) of respondents expressed support for 20mph speed limits in their neighbourhood compared to 23% who opposed them.

Support for schemes in urban areas was greater (65%) than the support for schemes in rural areas (54%) but in both locations the percentage of supporters outweighed the opponents: A quarter of respondents (25%) opposed the idea of having 20mph limits in urban areas compared to a third of respondents (33%) who were against 20mph limits in rural locations.





Respondents were asked a series of questions about what they think the benefits or disadvantages of 20mph limits might be.

In terms of the benefits:

- 70% said they make residential areas better places to live.
- 70% said they reduce accidents.
- 74% said they make areas safer for pedestrians
- 70% said they make areas safer for cyclists
- 63% said they make areas safer for drivers
- 59% said they reduce traffic noise (compared to 36% that said they didn't)
- 43% said they reduce pollution (compared to 41% that said they didn't)

In terms of the disadvantages:

- 79% said they need enforcing or publicising more
- 69% said they will be ignored by drivers
- 56% said they frustrate drivers.
- 30% said they increase traffic congestion (compared to 62% that said they didn't)
- 27% said they delay drivers unnecessarily (compared to 69% that said they don't)

When asked about which areas should be a priority for 20mph limits people responded in the following way:

- Near schools 88%
- Around parks and playgrounds 72%
- In residential areas 64%
- Near accident hotspots 51%
- Near shopping areas 49%
- Near hospitals and medical centres 47%
- Near cycle lanes 33%
- None of these 9%
- Other 5%

When designing the questionnaire it was felt that it would be useful to have an indication of the modes of transport used by respondents. In terms of daily travelling behaviour 62% travelled by car, 56% walked, 4% cycled and 2% went by bus. In terms of weekly travelling behaviour 91% travelled by car, 81% walked, 13% cycled and 10% went by bus.

Respondents were asked what the impact might be if a 20mph limit was introduced in the area where they live.

- Over two thirds (67%) said it would improve their local environment and 57% said it would improve their quality of life.
- The majority of respondents (74% compared to 22%) said it would make them drive more slowly. Interestingly in a previous question a similar proportion of respondents (69%) said that 20mph limits would be ignored by drivers.
- In terms of travelling behaviour 36% of respondents said it would encourage them to walk more and 26% would be encouraged to cycle more. But the majority of people said it would not change their walking (61%) or cycling (72%) behaviour.

### 3. Review Conclusions

After considering the documented evidence and information provided by the key witnesses the review working group reached the following conclusions:

- There is clear evidence that slight reductions in average speed can have a meaningful population level impact on improving road safety, and, there is a reasonable expectation that 20mph speed limits in areas where people live, work and shop would create environments that encourage people to be more physically active.
- The evidence, however, for and against the effectiveness of signs-only 20mph limits in bringing about a reduction in road casualties and delivering wider community benefits is, at present, inconclusive. More long-term and comprehensive evaluation of area-wide 20mph limits is required. Over short periods of time road casualties (in a specified area) are likely to be low and not statistically significant. Similarly sufficient time must elapse before modal shift and changes in community interactions can be reliably assessed.
- To support and inform future policy development the Department for Transport has commissioned research into the effectiveness of 20mph speed limits. The research will evaluate the effectiveness of 20mph speed limits in terms of a range of outcomes including speed, collisions, injury severity, mode shift, quality of life, community, economic, public health benefits and air quality. It will also examine drivers', riders' and residents' perceptions of 20mph speed limits and assess the relative cost/benefits to specific vulnerable road user groups including children, cyclists and the elderly. The research findings will not be available until 2017, well after the conclusion of this improvement and scrutiny review.
- It is noted that across the country there is now a considerable number of area-wide schemes. These schemes tend to be in cities or large conurbations where residential areas are more densely populated, and have tended to be in areas where vehicles speeds were already low (often below 24mph) due to the volume of traffic and the physical nature of the streets. To varying degrees, and in different ways, these schemes are being monitored by the local authorities that have introduced them. Insufficient time, however, has elapsed to enable the collection of enough data to provide conclusive evidence that area-wide 20mph limits are effective in reducing road casualties and encouraging more cycling, walking and community interaction.

- Since the evidence base for the effectiveness of area-wide schemes is inconclusive and it is not clear whether they represent value for money, the working group is not in favour, at this point in time, of a county-wide roll out of signs-only 20mph speed limits.
- There is strong community support in Derbyshire for 20mph limits. In a survey 71% of respondents said they would like the speed limit in their neighbourhood to be 20mph. This is in line with previous national surveys.
- Over two thirds (70%) of the respondents to the Derbyshire survey felt that 20mph speed limits would make residential areas better places to live and 57% said that a scheme in their neighbourhood would improve their quality of life.
- The working group is strongly supportive of further signs only 20mph schemes being piloted in the county where local circumstances are appropriate and there is local member support for a scheme.
- Much can be learnt from approaches adopted by other authorities to consult local communities about proposed 20mph schemes and engage partner organisations and the public, pre and post implementation.
- Discussions with both Bristol City Council and Lancashire County Council highlighted the importance of engaging, at the outset, with a wide spectrum of people and organisations and promoting information via community forums, webpages, letters to schools and businesses and postcards to all households in the area.
- Currently in Derbyshire the approach is for officer recommendations to focus on narrow parameters, and decisions about 20mph limits are based on road casualty rates alone. The approach does not take into account wider community benefits and the views and concerns of residents.
- The review working group learnt that public health and transport policy are highly integrated in some local authorities. For example, at Bristol City Council the implementation of an area-wide 20mph limit is seen as an important player in delivering positive health outcomes and not purely a road safety intervention. One of the reasons being that many more people in the UK die from physical inactivity (because they develop cardiovascular disease or diabetes) than die from road traffic accidents.

- At the present time in Derbyshire, recommendations about the introduction of 20mph limits are made by officers in the ETE Department and there appears to be limited joint working on road safety between the Highways Service and Public Health. A more collaborative approach in assessing the suitability of schemes would ensure that opportunities to deliver wider community benefits and address local concerns are considered more fully.
- Wider community benefits thought to be associated with 20mph limits include reducing community severance, rebuilding trust and community cohesion, supporting residents to increase their total activity time (by encouraging more walking and cycling) and, in so doing, achieving positive health outcomes.
- Understandably, a key priority for capital spending on Highways projects is accident reduction and this should continue to be the case. However “Improving life for local people” is Derbyshire’s strap line, and, therefore non-safety factors such as quality of life should still carry weight when decisions are made.
- The decision making processes in relation to 20mph limits have tended to be long winded and not transparent. Elected Members reported that whilst individual officers are responsive and are held in high regard, the framework in which they operate is bureaucratic and frequently frustrates Councillors and the communities they represent.
- The decision making process needs to be more transparent and the ETE Department needs to respond to Elected Members and communities in a shorter timeframe. The rationale for a scheme’s introduction needs to be clear from the outset. For example, is it predominately a casualty reduction scheme put forward by officers or has the community requested it because of quality of life factors?
- Police nationally, and until recently this was true in Derbyshire, have tended to object to 20mph limits with no physical measures. The reason being that communities have an expectation that they will be enforced, and in reality this is often difficult to resource. However the Police and Crime Commissioner has recently stated that Derbyshire Police will no longer object to 20mph limits on the grounds of there being no physical engineering measures (such as humps and chicanes) and that enforcement will be conducted in the same way as enforcement for any other speed limit. Each proposal will be considered on a case by case basis and enforcement activity will be determined at a local level.
- Communities need to understand that a 20mph speed limit is unlikely to be enforced by the police with any degree of priority and, therefore,

future schemes that aren't driven by casualty reduction statistics should only be considered where there is strong community support.

- It has been shown that 20mph zones have been successful at reducing speeds by using physical traffic calming measures. The reductions in speed achieved by signs-only 20mph limits tend to be smaller.
- To achieve sustained and meaningful speed reductions in signs-only 20mph limits it is important that measures to foster and support changes to driver attitudes and behaviour are an integral part of all 20mph schemes.
- Experience elsewhere in the country has shown that raising awareness through social marketing is vital to the success of a scheme. If you want people to drive at 20mph they have to know it is 20mph and be informed of the benefits. Marketing initiatives adopted by local authorities include press releases, posts on social media to direct people to more detailed information on a website and doorstep leafleting.
- Recruiting respected public figures in the community to act as advocates is thought to be a good way to achieve "social norming" and delivering desired behavioural change. People take more notice if they see someone they trust adopting a behaviour (i.e. driving at 20mph) and then are more inclined to do the same.
- The implementation of some city-wide schemes for example, Manchester and Bristol, have in part been financially supported by public health funds as it is believed that positive community health and wellbeing benefits result from the implementation of 20mph limits.
- Clearly in a time of reducing budgets the decision to introduce a 20mph limit should also be mindful of value for money and seek to maximise the positive impact of the money being spent. Opportunities for complementary projects and associated funding streams should be sought to maximise the benefits, for example projects to improve active travel infrastructure.

## 4. Recommendations

The Members of the working group make the following recommendations:

- 1) Given the strength of support for 20mph limits in Derbyshire the Council should be more open to introducing signs-only 20mph limits in areas where the circumstances are appropriate.
- 2) The road casualty statistics of an area should remain an important consideration, but if an area does not have a poor accident history this should not preclude the introduction of a 20mph limit if there is strong community support for the scheme and members of the community are willing to work with the Council and the local police.
- 3) Generally future schemes that aren't driven by casualty reduction statistics should only be considered where:
  - a. The Local Member supports the scheme
  - b. The Parish/Town Council supports the scheme and is willing to contribute financially towards the implementation costs (or where there isn't a Parish/Town Council there is support from the District/Borough Council)
  - c. There is a working Community Speed Watch in place for the area with a proven record of carrying out checks.
  - d. The reasons for introducing the scheme are clear and transparent and the inability of the police to enforce with any degree of priority is understood by the local community from the outset.
- 4) Given the current budget restraints, priority should always be given to schemes in areas where there is a high casualty rate.
- 5) Where a scheme is introduced there needs to be continual engagement with the community. Some of the initiatives used in other parts of the country that have been identified during the course of this review should be borne in mind during the development, design and delivery of future pilots. For example, inviting pupils from local primary schools to express their concerns to drivers caught by a Community Speed Watch.
- 6) When assessing the suitability of a scheme, Highways Services and Public Health should adopt a more collaborative approach in order to maximise opportunities to improve road safety and deliver wider community benefits. The views of Public Health should be sought and expressly stated in Cabinet Member/Cabinet Reports pertaining to 20mph limits.

- 7) The ETE department should ensure that Elected Members are kept informed about the progress and likely timescale of proposed schemes so that they can keep constituents better informed.
- 8) As part of the 2016/17 capital programme, funding should be set aside for additional pilot schemes and consideration should be given to piloting signs-only 20mph schemes in rural and semi-rural locations as well as urban areas.
- 9) All pilot schemes should be comprehensively evaluated. Evaluation should include impact on road related injuries and casualties, the number of people walking or cycling and household surveys to assess local attitudes and levels of acceptability.
- 10) The Council should not (at this stage) introduce 20mph limits on a blanket county-wide basis. The decision about a county-wide scheme should be revisited when there is more evidence based research available to inform the debate.
- 11) When the Department for Transport publishes the findings of the research it has commissioned into the effectiveness of 20mph limits, and the guidance on 20mph limits is revised, the ETE Department should report to Cabinet outlining any policy implications for Derbyshire.



## Appendix 1: References:

BBC (2012). Casualties on 20mph roads up by quarter in 2011. BBC News. Available at: <http://www.bbc.co.uk/news/uk-19226144>

BCC (2012). 20mph Speed Limit Pilot Areas: Monitoring Report, March 2012. Bristol City Council. Available at: [http://www.bristol.gov.uk/sites/default/files/documents/transport\\_and\\_streets/managing\\_roads\\_and\\_traffic\\_schemes/20mphMonitoringReport6\\_3\\_12.pdf](http://www.bristol.gov.uk/sites/default/files/documents/transport_and_streets/managing_roads_and_traffic_schemes/20mphMonitoringReport6_3_12.pdf)

Cairns, J., Warren, J., Garthwaite, K., Greig, G. & Bamba, C. (2014). Go slow: an umbrella review of the effects of 20mph zones and limits on health and health inequalities. Journal of Public Health. 10.1093/pubmed/fdu067. Available online at: <http://www.ncbi.nlm.nih.gov/pubmed/25266281>.

DFT (2007). National travel survey 2006. London: Department for Transport. Cited in: NICE (2008a). PH8: Physical activity and the environment. National Institute of Health and Social Care Excellence. Available at: <http://www.nice.org.uk/guidance/ph8/resources/guidance-physical-activity-and-the-environment-pdf>

DFT (2010). Interim evaluation of the implementation of 20 mph speed limits in Portsmouth. Atkins for DFT. 16 September 2010 Available online at: <http://www.ctc.org.uk/sites/default/files/speed-limits-portsmouth.pdf>

DFT (2011). Reported Road Casualties in Great Britain: 2011 Annual Report. Department for Transport. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/9275/rrcg\\_b2011-02.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/9275/rrcg_b2011-02.pdf)

DFT (2012). Setting local speed limits. Department for Transport. Department for Transport Circular 01/2013. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/63975/circular-01-2013.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/63975/circular-01-2013.pdf)

DFT (2014). British Social Attitudes Survey 2013: Public attitudes towards transport. Department for Transport. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/326097/british-social-attitudes-survey-2013.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/326097/british-social-attitudes-survey-2013.pdf)

DOH (2006). Cardiovascular Disease and Air Pollution A report by the Committee on the Medical Effects of Air Pollutants. Department of Health. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/304668/COMEAP\\_cardiovascular\\_disease\\_and\\_air\\_pollution.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/304668/COMEAP_cardiovascular_disease_and_air_pollution.pdf)

DOH (2011). Soft measures – hard facts’ The value for money of transport measures which change travel behaviour A Review of the Evidence. Available at: [http://www.erpho.org.uk/Download/Public/21632/1/Soft%20measures%20-%20hard%20facts\\_2011\\_final.pdf](http://www.erpho.org.uk/Download/Public/21632/1/Soft%20measures%20-%20hard%20facts_2011_final.pdf)

Edwards P, Roberts I, Green J, et al. (2006) Deaths from injury in children and employment status in family: analysis of trends in class specific death rates. British Medical Journal 333: 119–21. Cited in: NICE (2010). NICE PH31. Preventing unintentional road injuries among under-15s. Available online at:

<https://www.nice.org.uk/guidance/ph31/resources/guidance-preventing-unintentional-road-injuries-among-under15s-pdf>

Greyling T, Hallam K, Daniel G, et al. (2002) Streets ahead: safe and liveable streets for children.

London: Institute for Public Policy Research. Cited in: NICE (2010). NICE PH31. Preventing unintentional road injuries among under-15s. Available online at: <https://www.nice.org.uk/guidance/ph31/resources/guidance-preventing-unintentional-road-injuries-among-under15s-pdf>

Ingamells, S. & Raffle, A. (2012). Researchers defend 20 mph speed limits despite rise in casualties: Rapid Response. The British Medical Journal. BMJ 2012;345:e5580. Available at: <http://www.bmj.com/content/345/bmj.e5580>

King, R. (2015). 10 ways that 20 mph limits benefit motorists. 20's Plenty for Us. Available online at: [http://www.20splentyforus.org.uk/BriefingSheets/20s\\_plentyfor\\_us\\_drivers\\_too.pdf](http://www.20splentyforus.org.uk/BriefingSheets/20s_plentyfor_us_drivers_too.pdf)

National Heart Forum. (2010). Reducing the default speed limit in built-up areas: highlighting the health benefits of 20mph. London 2010. Available at: [http://www.adph.org.uk/wp-content/uploads/2013/08/NHF\\_PositionStatement20mph\\_2010.pdf](http://www.adph.org.uk/wp-content/uploads/2013/08/NHF_PositionStatement20mph_2010.pdf).

NICE (2008a). PH8: Physical activity and the environment. National Institute of Health and Social Care Excellence. Available at: <http://www.nice.org.uk/guidance/ph8/resources/guidance-physical-activity-and-the-environment-pdf>

NICE (2008b). NICE PH15. Identifying and supporting people most at risk of dying prematurely. Available online at: <http://www.nice.org.uk/guidance/ph15/chapter/2-public-health-need-and-practice>

NICE (2010). NICE PH31. Preventing unintentional road injuries among under-15s. Available online at: <https://www.nice.org.uk/guidance/ph31/resources/guidance-preventing-unintentional-road-injuries-among-under15s-pdf>

NICE (2012). NICE advice LGB3: Physical Activity. Available at: <https://www.nice.org.uk/advice/lgb3/chapter/What-can-local-authorities-achieve-by-encouraging-people-to-be-more-physically-active#reduce-health-inequalities>

PHE (2013). Healthy people, healthy places briefing: Obesity and the environment: increasing physical activity. Public Health England & LGA report. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/256796/Briefing\\_Obesity\\_and\\_active\\_travel\\_final.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/256796/Briefing_Obesity_and_active_travel_final.pdf)

PHE (2015a). Public Health England. The Segment Tool. Segmenting Life Expectancy Gaps by Cause of Death. Key results for Derbyshire (E10000007). Updated January 2015. Available at: [http://www.lho.org.uk/LHO\\_Topics/Analytic\\_Tools/Segment/Documents/LA\\_E10000007.pdf](http://www.lho.org.uk/LHO_Topics/Analytic_Tools/Segment/Documents/LA_E10000007.pdf)

PHE (2015b). Public Health Outcomes Framework. Indicator 2.12. Based on data from Active People Survey, Sport England (2012). Available at: <http://www.phoutcomes.info/public-health-outcomes->

[framework#gid/1000042/pat/6/ati/102/page/3/nn//par/E12000004/are/E10000007/iid/90640/age/164/sex/4](http://www.phoutcomes.info/public-health-outcomes-framework#gid/1000042/pat/6/ati/102/page/3/nn//par/E12000004/are/E10000007/iid/90640/age/164/sex/4)

PHE (2015c). Public Health Outcomes Framework. Indicator 1.16: Utilisation of outdoor space for exercise/health reasons. Based on data from Natural England: Monitor of Engagement with the Natural Environment (MENE) survey. Available at: <http://www.phoutcomes.info/public-health-outcomes-framework#gid/1000041/pat/6/ati/102/page/3/nn//par/E12000004/are/E10000007/iid/11601/age/164/sex/4>

PHE (2015d). National Child Measurement Programme 2013/14 data. Available online at: [http://www.noo.org.uk/NOO\\_about\\_obesity/child\\_obesity](http://www.noo.org.uk/NOO_about_obesity/child_obesity)

Richards, D.C. (2010). Road Safety Web Publication No.16. Relationship between Speed and Risk of Fatal Injury: Pedestrians and Car Occupants. September 2010. Department for Transport. Available at: <http://webarchive.nationalarchives.gov.uk/20121105134522/http://assets.dft.gov.uk/publications/pgr-roadsafety-research-rsrr-theme5-researchreport16-pdf/rswp116.pdf>

ROSPA (2015). Road Safety Information: 20 mph Zones and Speed Limits. June 2015. Available at: <http://www.rospa.com/rospaweb/docs/advice-services/road-safety/drivers/20-mph-zone-factsheet.pdf>

Sustrans (2015). Getting Communities Active. Available at: <http://www.sustrans.org.uk/our-services/what-we-do/getting-communities-active>

Taylor, M. C., Lynam, D. A. and Baruya, A. (2000). TRL Report 421 – The Effects of Drivers' Speed on the Frequency of Road Accidents. Crowthorne: TRL. Cited in: DFT (2012). Setting local speed limits. Department for Transport. Department for Transport Circular 01/2013. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/63975/circular-01-2013.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/63975/circular-01-2013.pdf)

Toy, S., Tapp, A., Musselwhite, A. & Davis, A. (2014). Can social marketing make 20mph the new norm? Journal of Transport and Health. DOI: 10.1016/j.jth.2014.05.003. Available at: [http://www.researchgate.net/publication/263316607\\_Can\\_social\\_marketing\\_make\\_20\\_mph\\_the\\_new\\_norm](http://www.researchgate.net/publication/263316607_Can_social_marketing_make_20_mph_the_new_norm).

WHO (2004). Facts: Road Safety – Speed. World Health Organisation. Available at: [http://www.who.int/violence\\_injury\\_prevention/publications/road\\_traffic/world\\_report/speed\\_en.pdf](http://www.who.int/violence_injury_prevention/publications/road_traffic/world_report/speed_en.pdf)

WHO (2009). Socioeconomic difference in injury risks: A review of findings and a discussion of potential countermeasures. January 2009. World Health Organisation. Available at: [http://www.euro.who.int/\\_data/assets/pdf\\_file/0012/111036/E91823.pdf](http://www.euro.who.int/_data/assets/pdf_file/0012/111036/E91823.pdf)

WHO (2013). Networking for Physical Activity: Results of the PHAN project on networking and action on healthy and equitable environments for physical activity. Available at: [http://www.euro.who.int/\\_data/assets/pdf\\_file/0016/240334/Networking-for-Physical-Activity-brochure.pdf?ua=1](http://www.euro.who.int/_data/assets/pdf_file/0016/240334/Networking-for-Physical-Activity-brochure.pdf?ua=1)

WHO (2014). Health Economic Assessment Tool. World Health Organisation. Available at: <http://www.heatwalkingcycling.org/>

Williams, D. & North, R. (2013). An evaluation of the estimated impacts on vehicle emissions of a 20mph speed restriction in central London. Transport and Environmental Analysis Group. Centre for Transport Studies, Imperial College London. Available at: <https://www.cityoflondon.gov.uk/business/environmental-health/environmental-protection/air-quality/Documents/speed-restriction-air-quality-report-2013-for-web.pdf>

## Review of 20mph speed limits in Derbyshire

### Recommendations Action Plan

Rec. No.	Recommendation Wording	Responsible Officer	Action Required	Progress report to Committee
1	Given the strength of support for 20mph limits in Derbyshire the Council should be more open to introducing signs-only 20mph limits in areas where the circumstances are appropriate.			
2	The road casualty statistics of an area should remain an important consideration, but if an area does not have a poor accident history this should not preclude the introduction of a 20mph limit if there is strong community support for the scheme and members of the community are willing to work with the Council and the local police.			
3	Generally future schemes that aren't driven by casualty reduction statistics should only be considered where: a. The Local Member supports the scheme b. The Parish/Town Council supports the scheme and is willing to contribute financially towards the implementation costs (or where there isn't a Parish/Town Council there is support from the District/Borough Council) c. There is a working Community Speed Watch in place for the area with a proven record of carrying out checks. d. The reasons for introducing the scheme are clear and transparent and the inability of the			

	police to enforce with any degree of priority is understood by the local community from the outset.			
4	Given the current budget restraints, priority should always be given to schemes in areas where there is a high casualty rate.			
5	Where a scheme is introduced there needs to be continual engagement with the community. Some of the initiatives used in other parts of the country that have been identified during the course of this review should be borne in mind during the development, design and delivery of future pilots. For example, inviting pupils from local primary schools to express their concerns to drivers caught by a Community Speed Watch.			
6	When assessing the suitability of a scheme, Highways Services and Public Health should adopt a more collaborative approach in order to maximise opportunities to improve road safety and deliver wider community benefits. The views of Public Health should be sought and expressly stated in Cabinet Member/Cabinet Reports pertaining to 20mph limits.			
7	The ETE department should ensure that Elected Members are kept informed about the progress and likely timescale of proposed schemes so that they can keep constituents better informed.			
8	As part of the 2016/17 capital programme, funding should be set aside for additional pilot schemes and consideration should be given to piloting signs-only 20mph schemes in rural and semi-rural locations as			

	well as urban areas.			
9	All pilot schemes should be comprehensively evaluated. Evaluation should include impact on road related injuries and casualties, the number of people walking or cycling and household surveys to assess local attitudes and levels of acceptability			
10	The Council should not (at this stage) introduce 20mph limits on a blanket county-wide basis. The decision about a county-wide scheme should be revisited when there is more evidence based research available to inform the debate.			
11	When the Department for Transport publishes the findings of the research it has commissioned into the effectiveness of 20mph limits, and the guidance on 20mph limits is revised, the ETE Department should report to Cabinet outlining any policy implications for Derbyshire.			