

**SUSTAINABLE GROWTH AND  
ENVIRONMENT CAPITAL SCRUTINY  
COMMITTEE**

**Investigation into the benefits of extending  
20mph Speed Limits throughout residential  
areas across the Peterborough Unitary Authority  
Area.**

**January 2014**

**Report of the Sustainable Growth and Environment Capital Scrutiny Task and Finish Group**

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**1. INTRODUCTION**

At its meeting on 17 April 2013, Council called upon the Sustainable Growth and Environment Capital Scrutiny Committee to investigate the benefits of extending 20 mph signed speed limits throughout residential areas in the Peterborough District and to present proposals to the Cabinet not later than 31 March 2014.

The Sustainable Growth and Environment Capital Scrutiny Committee at its meeting on 12 June 2013 agreed to establish a Task and Finish Group to undertake the investigation.

The cross party Task and Finish group comprised of the following members:



**Cllr Diane Lamb, Conservative,  
Ginton & Wittering Ward**



**Cllr Dale McKean, Conservative  
Eye and Thorney Ward**



**Cllr John Peach, Conservative  
Park Ward**



**Cllr Asif Shaheed, Liberal Democrat,  
Walton Ward**



**Cllr John Shearman, Labour,  
Park Ward**



**Cllr Judy Fox, Independent,  
Werrington North Ward**



**Cllr John Fox, Independent,  
Werrington North Ward**

Officers supporting the Task and Finish Group were:

- Paulina Ford, Senior Governance Officer
- Gary Goose, Strategic Safer and Stronger Peterborough Manager
- Clare George, Senior Road Safety Officer

## 2. SUMMARY OF RECOMMENDATIONS

### **Recommendation 1**

Due to currently available levels of evidence of the impact of 20mph 'signed only' schemes across the country the group recommends that the council await the publication of further evaluation of schemes introduced in other similar size authorities prior to a recommendation on the roll-out of an authority-wide scheme. Officers to be charged with a further report in 12 months.

### **Recommendation 2**

Whilst being cognisant of the caveat in Recommendation 1 the group is satisfied that the council should progress with implementing 20mph 'signed only' limits in all its constituent villages, subject to consultation.

The implementation of reduced speed limits within villages should be used as a pilot. Implementation will be evaluated by officers to include speed, casualty reduction and a public perception survey as to improved quality of life (including levels of active travel).

### **Recommendation 3**

Undertake a public consultation to gain views of such a scheme in Peterborough, as information presented made it clear such limits need to be self-enforcing and something the public buy into.

### **Recommendation 4**

To agree that budget is made available to undertake the pilots in the villages. Budget will need to cover implementation of the limits as well as speed monitoring and public consultations.

Investigate the possible funding streams available from other organisations which would benefit from the introduction of a 20mph limits.

Cost of implementing in villages will cost an estimated £110,000. The costs are an estimate and are based on street furniture being available for signage. Dependent on what is available on site these costs could increase or decrease? The budget breakdown is as follows;

- Terminal, repeater signs and posts - £40k
- Before, during and after monitoring - £10k
- Public consultation - £5k
- Officer time for implementing scheme - £5k
- Works on current vehicle activated signs - £50k

### 3. OBJECTIVE AND SCOPE OF THE INVESTIGATION

#### Objective of the Investigation

The objective of the Investigation was to investigate the benefits of extending 20mph signed speed limits throughout residential areas in the Peterborough Unitary Authority area.

#### Scope of the Investigation

The scope of the investigation included looking at the following criteria to assess the benefit of extending 20mph signed speed limits:

##### **Safety**

- To seek a range of views on the impact of 20mph speed limits and 20 mph zones on road safety in terms of reducing vehicle speeds and casualty numbers.
- To investigate what options other local authorities across the country are pursuing in terms of 20 mph speed limits/zones

##### **Environmental**

- To gain an understanding of any potential environmental impacts of 20mph speed on air quality, tail pipe and carbon emissions as well as noise
- To gain an understanding of any potential consequences of any displacement of traffic as a result of introducing lower speed limits

##### **Health**

- To gain an understanding of the potential 'other benefits' which 20mph speeds may bring, such as health benefits, increased sociability and better walking and cycling conditions

##### **Economic**

- To identify the benefits, feasibility and potential cost of various 20 mph speed options in the city

##### **Equality**

- To investigate the benefits 20mph limits/zones will have on vulnerable people for example those with mobility issues, physical impairments and children in the city.

To develop recommendations for the future development of council policy on 20 mph speed limits/zones and prioritise implementation if required.

## 4. PROCESS AND METHODOLOGY USED FOR THE INVESTIGATION

### 4.1 Methodology

- Research
- 1:1 interviews with key witnesses/technical specialists/experts
- Information from special interest groups
- Consultation with other Authorities
- Use of social media if required

Initial baseline information used:

- Map of Peterborough to determine what a residential area was.
- National guidance and legislation
- Information from specialist interest groups
- Information from other authorities who have implemented 20MPH Speed Limits and those who have decided not to

### 4.2 Process

The timetable of the events leading to the production of this report are set out below:

<b>Meeting Date</b>	<b>Items discussed / Guests Attending</b>
29 May 2013	Initial Meeting to agree terms of reference
17 July 2013	Meeting to discuss base line evidence available from other Authorities, current data available, identify key witnesses and specialist interest groups.
3 September 2013	Meeting to discuss transport and engineering issues and hear from the 20's Plenty for Us Group. Guests in attendance: Peter Tebb, Peterborough Highways Services, Rod King, 20's Plenty for Us Campaign.
21 October 2013	Meeting to discuss Health and Enforcement. Hear evidence from Julian Base, Live Healthy Service Manager, Public Health Team and Nigel Brigham, Regional Director of Sustrans. Receive and consider written evidence from the Police on enforcement.

25 November 2013	<p>Meeting to discuss Environment and Enforcement issues. Guests in attendance Superintendent Dan Vajzovic and Charlotte Palmer, Climate Change Manager and Racheal Huxley, Chief Executive of PECT.</p> <p>Discuss conclusions and recommendations from research, data received and evidence heard.</p>
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**Key Witness's / Expert Advisers interviewed:**

- Clair George, Senior Road Safety Officer
- Gary Goose, Strategic Safer and Stronger Peterborough Manager
- Peter Tebb, Team Manager, Network Management Group, Peterborough Highways Services
- Rod King, Founder and Campaign Director of 20's Plenty for Us
- Julian Base, Live Healthy Service Manager, Public Health Team
- Nigel Brigham, Regional Director of Sustrans
- Superintendent Dan Vajzovic
- Charlotte Palmer, Climate Change manger
- Racheal Huxley, Chief Executive of PECT

The Task and Finish Group would like to thank everybody who assisted them during the course of the investigation for their support and openness. This assistance was greatly appreciated.



## 5. Background

The Department for Transport published new guidance for local authorities 'Setting Local Speed Limits' – Department for Transport Circular 01/2013. The guidance states that local authorities are asked to keep their speed limits under review with changing circumstance and to consider the introduction of more 20mph limits and zones over time, in urban areas and built-up village streets that are primarily residential to ensure greater safety for pedestrians and cyclists.

There is a significant difference between the characteristics of a 20mph speed limit and a 20mph zones.

- 20mph zones – use traffic calming measures to reduce the adverse impact of motor vehicles in built up areas. The principle is that the traffic calming slows vehicle speeds below the limit; and in this way the zone becomes self-enforcing. Zones usually cover a number of roads. Another option would be to use residential average speed cameras in zones which would work out more cost effective than traditional traffic calming.
- 20mph limits – are areas where the speed limit has been reduced to 20mph but there are no physical measures to reduce vehicle speeds within areas. Drivers are alerted to the speed limits with 20mph speed limit repeater signs.

Evidence supports the effectiveness of 20mph zones as a way of preventing injuries on the road. 20mph zones are costly to implement, therefore they tend to be priorities on roads with higher speeds and higher road casualties. A number of 20mph zones have been implemented in Peterborough in the past through the Local Transport Plan areas include New England and Stanground outside primary schools.

Royal Society Prevention of Accident (ROSPA) suggests evidence on 20mph limits is generally positive but they are less effective at reducing traffic speeds than 20mph zones. Typically there are small reductions in speed following the introduction of 20mph limits. However, there is a smaller evidence base for the introduction of signs on their own as they are more recent intervention and most schemes have only had a short follow up period.

The Task and Finish Group investigated the impacts of 20mph signed only limits rather than 20mph zones which are proved to impact on speed and casualties.

A number of local authorities are either in the process or have introduced 20mph signed limits. Although a number of these authorities have completed implementation or trials there is limited

detailed evaluation reports on the impact of these schemes in terms of casualty reduction, speed reduction and modal shift

## **6. FINDINGS AND CONCLUSIONS**

### **6.1 Safety**

Various documents and key witness statements were presented to the group which looked at the impacts 20mph limits have on casualty and speed reduction. It was noted by the group that the benefits 20mph limits can potentially have on communities are far reaching and should not be seen solely as a casualty reduction scheme.

There was a limited number of evaluations/monitoring reports published by local authorities on 20mph signed only limits. During the investigation it was discovered that many authorities were in phases of implementation or had only recently implemented and their evaluations would not be available until 2014. It was also noted that where authorities had undertaken a pilot 20mph limit they had decided to implement on all residential roads.

Portsmouth was the first local authority to introduce a 20mph limit on all residential roads. On the majority of roads where the 20mph limit was introduced the average speeds before installation were less than or equal to 24mph. For monitoring the results distinction was made between roads where the average speed before the 20mph limits was introduced was : 20mph or less; between 21mph and 24mph and over 24mph. This allowed the effect of the limits to be examined in the different conditions. There was an overall average speed reduction of 1.3mph following the introduction of the limits, however the reduction on roads with an average speed of 24mph or more resulted in a 6.3mph reduction

Other data collected from other authorities showed York found a reduction of 3mph in its pilot areas and Bristol reported an average 0.4mph reduction in traffic speeds, with a greater reduction on main roads. Warrington reported an overall speed reduction of 1.45mph across all trial sites.

With regards to reductions on casualties Portsmouth evidenced had shown a 22% reduction in the number of road casualties from 183 per year to 142 per year. During this period casualty numbers fell nationally by about 14% in comparable areas.

#### **Conclusions:**

- 20mph signed only limits are still a relatively new concept to Local Authorities – although a number of authorities have either implemented, implementation in progress or have committed to limits there is limited available data which clearly demonstrates the impacts

on speed and casualty reduction. Long-term casualty reduction benefits of 20mph are not conclusive.

- A number of authorities reported a reduction in speed as a result of the implementation of 20mph this ranged from 1mph to 6mph on the roads which had a higher average speed.
- Research suggests an average reduction in vehicle speed have the potential for delivering significant benefits across the transportation, environmental and health agendas. It has been established that for every 1mph average speed reduction in an urban areas a 6% reduction in collisions frequency can be expected.
- The relationship between a vehicle's impact speed and severity of injury is well established, especially for pedestrians who are more likely to be fatally injured at higher impact speeds. In built-up residential areas, reducing traffic speed is one of the most effective ways of reducing the risk to vulnerable road users, such as children, pedestrian and pedal cyclists.

## **6.2 Enforcement**

It was important for the group to consider levels of enforcement on 20mph speed limit roads. As it became apparent that any new created 20mph limit should not rely on additional enforcement.

Road safety is a part of the core policing role and Cambridgeshire Constabulary will consider the provision of speed enforcement action within areas subject to a 20mph speed restriction having first taken into consideration various factors. These may include traffic speed data, Department for Transport and Association of Chief Police Officer guidance and road traffic collision information. Where 20mph speed restrictions have been introduced in line with relevant guidance the police will continue to provide speed enforcement activity (including within other higher speed restriction areas) targeted at locations where evidence suggest we have unacceptable levels of speed compliance. It would seem appropriate that speed limit reductions are only considered for implementation when the 85% percentile speeds are not more than the ACPO prosecution threshold.

This does not mean the speed limit is wrong, it means that enforcement alone is not the solution. If a road does not feel like a 20mph limit then drivers would flout/ignore it so drivers continue to drive like they did before and no amount of enforcement will stop that.

If 15% of road users are travelling at greater than the enforcement limit then the number of prosecutions and amount of police resource need will be unmanageable

## **Conclusions:**

- Consider the current speed of vehicles on residential roads before implementing 20mph limits, and not create roads with speeding issues which put an unmanageable demand on enforcement.

### **6.3 Environmental**

During the course of the investigation it became evident that there was a lack of substantial evidence on environmental impacts either negative or positive. Evidence suggested that driving in lower gears could emit more exhaust fumes however it was suggested that driving at a constant 20mph speed would be more beneficial than stop – start driving. Evidence also suggested that if people felt safer on the roads more people would walk and cycle this would also impact of carbon emissions.

It was discussed that the environmental impacts are situational dependent and what mechanism are used to reduced speed. For example a constant speed through a 20mph signed only limit would have benefits on the environment whereas a traffic calmed area could have negative impacts as it would result on stop start driving as well as noise pollution. Measurable link between traffic noise and speed. A 6mph reduction in speed would result in a 40% cut in noise.

It was appreciated by the group that there are many factors that affect vehicle emissions such as speed, acceleration, gearing and its selection, road gradients and the vehicle type and cargo weight.

A negative impact on the environment could be the amount of signs/posts required in villages and urban areas to implement the limits, this can be seen as ‘street-clutter’. Where ever possible implemented limits should look at using existing street furniture.

## **Conclusions**

- Limited evidence available on both negative and positive impacts to the environment with the introduction of 20mph signed only limits. Unable to make recommendations of a 20mph signed limit on the environmental side alone.

### **6.4 Health**

Potential health benefits of 20mph speed limits in residential areas include quality of life and community benefits through the encouragement of healthier and more sustainable transport such as walking and cycling. The Local Government Information Unit (LGiU) commissioned research following which the produced an independent policy briefing on 20mph limits. The research places the public health benefits as its focal point.

A paper presented by Public Health outlined the public health benefits of a 20mph limit; these included;

- Reduced costs associated with A&E attendance and hospital admissions for unintentional injuries among children and young people under 15.
- Improved outcomes for children and young people such as improved health, quality of life, school attendance and attainment.
- Increased productivity for families and employers, by reducing the time that parents or carers have to take off from work to look after children and young people who have been injured.
- Preventing short-term and permanent disabilities and death from unintentional injury
- Reduced emotional impact and trauma for children and young people and their families
- Improved road safety may also have potential other positive outcomes for the wider community such as increased walking or cycling.

20's Plenty and Sustrans also presented to the group the benefits 20mph limits would have on the wider community and health of residents. The National Heart Forum positions statement "Areas with slower vehicle speeds are associated with increased opportunities for walking and cycling. Taking into account the wide health benefits of physical activity, including protecting against various risk factors or cardiovascular disease, the National Heart Forum supports a reduction in the default speed limit for built-up areas to 20mph."

In a number of Local Authorities, Public Health have contributed to the implementation of 20mph because of the impact they can have on improving the health of residents and how the limits can impact on the Public Health outcome framework.

## **Conclusions**

- Evidence suggests that introducing 20mph limits have a positive impact on health by encouraging more walking and cycling this is supported by the National Heart Forum, Sustrans and 20s plenty campaign.
- Information also suggests that the introduction of a 20mph residential speed limit would impact positively on public health as a result of increased physical activity.

## **6.5 Economic**

20mph speed limits without self-enforcing features have the attraction of being relatively inexpensive to implement compared to 20mph zones which require expensive traffic calming features. However, regards must be given to the 'before' speeds because the higher they are the less likely speeds will be reduced to 20mph and the new introduced limit could have little impact.

The Network Manager produced estimated costs for a 20mph signed only limits to the group. The estimates provided were for Helpston village and the Orton Waterville ward.

- Estimated cost for Helpston - £3,500 - £4,000  
The process for a village were relatively straight forward changeover of the current 30s at the terminal points and an increase in the number of repeater signs along the main road (B1443). The costs for villages are lower than urban wards due to the lack of street lighting at the village entrances
- Estimated costs for Orton Waterville - £60k + allowance of £30k for electrical connections  
Urban wards are a more complex situation with varying types of road and speed limits in existence. Likewise the presence of street lighting dictates that the terminal signs must be lit and this results in a large increase in costs.

Costs for other authorities were also looked at by the group, and varied from 1.2 million pounds to 0.5 million pounds for implementation on all residential streets. Information showed that costs vary between authorities' areas, it was dependent on the number of roads covered, and the size of the area covered. Because of the different variables between authorities it was difficult to compare overall costs.

### **Conclusions**

- A stance is required on the national position, lobbying is ongoing by pressure groups to make 20 the new 30. The City Council needs to take the national position into consideration before investing substantial amounts of money into a 20mph signed limits.
- The costs of establishing a default 20mph speed limit enforced by signage alone is considerably less than that of extending the number of 20mph zones by physical calming measures.
- Cost of implementation on all residential roads will be dependent on what roads are considered/classed as residential by using an approved methodology, and the amount budget required to undertake a publicity/engagement campaign.

- Capital and Revenue Budget would be required. Liverpool are spending around 25% of the overall budget on public engagement and education.
- A number of local authorities which have implemented or in the process of implementing 20mph speed limits have sourced funding across different departments as well as different organisations.

## **6.6 Equality**

Evidence suggest that the most vulnerable people in society would benefit from 20mph limits, for example those with mobility issues, people suffering hearing and sight problems, and children. This will ensures our residential roads feel safer, and quality of life would be improved by making the roads safer.

## **Conclusions**

Evidence provided by various key witnesses and detailed reports suggest that an adhered to 20mph limit can have a positive impact on the most vulnerable residents by making the roads safer.

## **6.7 Recommendations**

To develop recommendations for the future development of council policy on 20 mph speed limits/zones and prioritise implementation if required.

### **Recommendation 1**

Due to currently available levels of evidence of the impact of 20mph 'signed only' schemes across the country the group recommends that the council await the publication of further evaluation of schemes introduced in other similar size authorities prior to a recommendation on the roll-out of an authority-wide scheme. Officers to be charged with a further report in 12 months.

### **Recommendation 2**

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The implementation of reduced speed limits within villages should be used as a pilot. Implementation will be evaluated by officers to include speed, casualty reduction and a public perception survey as to improved quality of life (including levels of active travel).

### **Recommendation 3**

Undertake a public consultation to gain views of such a scheme in Peterborough, as information presented made it clear such limits need to be self-enforcing and something the public buy into.

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To agree that budget is made available to undertake the pilots in the villages. Budget will need to cover implementation of the limits as well as speed monitoring and public consultations.

Investigate the possible funding streams available from other organisations which would benefit from the introduction of a 20mph limits.

Cost of implementing in villages will cost an estimated £110,000. The costs are an estimate and are based on street furniture being available for signage. Dependent on what is available on site these costs could increase or decrease? The budget breakdown is as follows;

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## **7. List of background papers and research sources used during the investigation**

- Briefing notes and various other information provided 20's plenty campaign
- Setting Local Speed Limits – Department for Transport Circular 01/2013
- Casualty Data for Peterborough Area
- Interim Evaluation of the Implementation of 20mph Speed Limits in Portsmouth 2010
- National Heart Forum – reducing the default speed limits in built-up areas: Highlighting the health benefits of 20mph
- Presentation – Environment Impacts of 20mph – provided by Racheal Huxley, CEX, PECT
- Road Safety GB Website
- ACPO Speed Enforcement Policy Guidelines 2011 – 2015
- Information from Local Authorities – including Newcastle, Cambridge City, Brighton and York
- Royal Society for the Prevention of Accidents – Information 20mph zones and speed limits



Further information on this Investigation is available from:

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Chief Executive's Department  
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