

# Report to Scrutiny Panel

<b>Name of Scrutiny Panel</b>	Economy and Environment	
<b>Meeting Date</b>	29 <sup>th</sup> February 2012	
<b>Subject</b>	Examples of 20mph Speed Limits and the consultation process	
<b>Wards Affected</b>	All	
<b>Report of</b>	Director, Economy and Environment	
<b>Type of Item</b> (please tick✓ )	<b>Review existing policy</b>	
	<b>Development of new policy</b>	
	<b>Performance management (inc. financial)</b>	
	<b>Briefing (inc. potential areas for scrutiny)</b>	✓
	<b>Statutory consultation</b>	
	<b>Council request</b>	
	<b>Cabinet request</b>	
	<b>Member request for scrutiny (CCFA)</b>	

## Why is it coming here?

In response to the Scrutiny Panel request at the meeting on 17<sup>th</sup> August 2011 to provide information on longstanding examples, relating to 20mph sites in Calderdale, and any other Local Authorities; including an update on the consultation process

## What are the key points?

Examples of 20mph speed limits indicate that they provide a cost effective means of reducing casualties. The Stainland and Elland 20mph speed limit areas are to be assessed and the results reported to Cabinet to support implementing further schemes. Consultation is an essential part for the success of each scheme in order to consider the views of those affected and to raise awareness.

## Possible courses of action

Support the continued implementation of 20mph speed limits in locations that are deemed suitable using the 'Sharing Space Safely Selection Method'

## Contact Officer

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## Should this report be exempt?

No

# Report to Scrutiny Panel

## 1 Background

1.1 On 17<sup>th</sup> August 2011 the Panel requested that the Director, Economy and Environment submit a written report providing information on longstanding examples, relating to 20mph sites in Calderdale, and any other Local Authorities; including an update on the consultation process.

1.2 The August report confirmed the difference between 20mph Zones and 20mph Speed Limits as having different legal standing in terms of how they are applied to the highway network.

A 20mph Zone requires entry signs indicating the speed limit and also physical traffic calming features, which negate the need for repeater signs.

A 20mph Speed Limit requires both entry and repeater signs indicating the speed limit, but does not specifically require any physical traffic calming features.

1.3 Appendix 1 provides detail on 20mph sites in Calderdale, information on 20mph sites in other Local Authorities and an update on the consultation process.

1.4 A summary of the main points is:-

### 1.4.1 Longstanding Examples of 20mph sites in Calderdale

20mph speed limits have been introduced in Calderdale over the last ten years in Hebden Bridge, Copley and Stainland with current proposals to implement a scheme in Elland. The schemes are a cost effective means of reducing casualty rates and providing a safer environment by reducing community severance and promoting walking and cycling.

### 1.4.2 20mph sites in Other Local Authorities

There are numerous examples of 20mph speed limits introduced in local authorities in Yorkshire and other parts of the country. The scope of the schemes varies but overall the principle is an accepted means of effective traffic management to produce a safer environment.

### 1.4.3 Consultation

Consultation with all those affected by 20mph speed limit proposals is a required essential mechanism to produce beneficial proposals. The consultation is extensive and the responses are duly considered, proposals amended accordingly and feedback provided to consultees.

## **2 Main issue for Scrutiny**

- 2.1 The panel are invited to note and comment on the information provided on longstanding examples, relating to 20mph sites in Calderdale, and any other Local Authorities; including an update on the consultation process.
- 2.2 The panel are also invited to confirm whether they are supportive of the continued implementation of 20mph speed limits depending on further review of the Stainland and Elland schemes to be submitted to Cabinet.

### **3 Consultation**

- 3.1 None for this report but individual schemes are consulted on locally and in accordance with the Council's consultation procedures – see Section 4 in Appendix 1.

### **4 Further action and timescales**

- 4.1 Further implementation of 20mph speed limits for residential communities will be at the discretion of Cabinet following an evaluation report on the effectiveness of the trial schemes in Stainland and Elland.
- 4.2 A detailed study of speeds within the Stainland 20mph speed limit area could identify additional measures which may be required to encourage slower speeds in the more sensitive areas around local schools.
- 4.3 There are growing demands from within communities to see further action taken against inappropriate speeds. Enforcement of the new 20mph speed limits is required for their overall success and West Yorkshire Police are key to bringing about this action.

### **5 Options**

- 5.1 This report is presented for information and comment. The report to the Panel on 17 August included the following options for consideration:-

#### **Option 1**

Continue to respond at the current rate of two areas per year to the identified need and clear demand from Calderdale residents for the continued introduction of the new lower residential 20mph speed limit in appropriate locations using the Calderdale Safer Streets - Site Selection Method.

#### **Option 2**

Delay the introduction of further schemes beyond the financial year 2011/12 until full evaluation evidence is available on the effectiveness of the trial schemes, which may not reduce the number and severity of casualties elsewhere as quickly as otherwise possible.

#### **Option 3**

Accelerate the introduction of the new 20mph speed limit areas before the full evaluation is complete. Targeting areas with a history of casualties, will have a greater influence on the number and severity of casualties over a shorter timeframe of 5-7 years but will require additional funding, which if met from the LTP would reduce the available funding for other road safety initiatives that provide improvements at known accident sites, provide pedestrian crossings, traffic signs and other safety improvements.

- 5.2 For each option there is a need to continue a positive dialogue with West Yorkshire Police with the aim of increasing enforcement / education on speed issues.
- 5.3 The panel may wish to consider the options and recommend a preferred option to Cabinet.

## **6 Conclusions**

- 6.1 The information in Appendix 1 describes the use of 20mph speed limits in Calderdale and other local authorities and provides evidence to prove the benefits in implementing these schemes to reduce casualties.
- 6.2 Consultation is a necessary part of these schemes and contributes to raising awareness and improves the effectiveness if those affected appreciate the benefits.
- 6.3 Continue liaison with West Yorkshire Police and encourage them to enforce and educate on 20mph speed limits.

## **7 Appendices**

Appendix 1 - Examples of 20mph Speed Limits and the Consultation Process

## **8 Background documents**

Calderdale Sharing Space Safely - Site Selection Method

Department for Transport press release, 9 June 2011 – Ministers cut traffic signs red tape for local councils

## **9 Documents available for inspection at:-**

The Highway Management office at Ainley's Depot, Huddersfield Road, Elland

Scrutiny Panel, 29 February 2012

## Report on Examples of 20mph Speed Limits and the Consultation Process

### Appendix 1

#### 1. Background

##### 1.1 Characteristics of 20mph Zones and 20mph Speed Limits

**20mph Zones** – use traffic calming measures to reduce the adverse impact of motor vehicles on built up areas. The principle is that the traffic calming slows vehicles down to speeds below the limit, and in this way the zone becomes “self-enforcing”. Speed humps, chicanes, road narrowing, planting and other measures can be introduced to both physically and visually reinforce the nature of the road.

**20mph Speed Limits** – are areas where the speed limit has been reduced to 20mph but there are no physical measures to reduce vehicle speeds within the areas. Drivers are alerted to the speed limit with 20mph speed limit repeater signs.

##### 1.2 Effectiveness of 20mph Zones and Speed Limits

- 1.2.1 Early research on 20mph zones by the Transport Research Laboratory in 1996 found that injury accidents were reduced by 60% and child injury accident were reduced by 67%.
  - 1.2.2 Later statistics from Hull in 2003 where 20mph zones had been introduced across much of the city over the preceding decade, provided a city wide decrease in total accidents of 56% and in fatal and serious injuries of 90%. The biggest reductions were in pedestrian casualties, which fell by 54% and child pedestrian casualties which fell by 74%.
  - 1.2.3 A report in the British Medical Journal in 2009 demonstrated a slightly diminished reduction of 41.9% in London.
  - 1.2.4 Research on 20mph speed limits has been rather less extensive. A report in 1998 the Transport Research Laboratory examined the effectiveness of 20mph speed limits without traffic calming and found that traffic calming was a more effective way of reducing vehicle speeds than signs only, however, it was also found that public awareness campaigns and enforcement further reduced traffic speeds.
- ##### 1.3 Casualties Near Schools
- 1.3.1 Whilst there is a common view held that 20mph zones and 20mph speed limits should be introduced outside schools, statistical evidence suggests that this isn't necessarily where the child casualties are occurring.

- 1.3.2 In the 12-16 year age group for example, locations of child casualties are widely dispersed, with many not directly linked to school trips. Although there are significant weekday peaks in child casualties during the 8:00-9:00am and 3:00-4:00pm periods, there is also a sustained significant level of child casualties occurring through the 4:00-10:00pm period and to a lesser degree through the 9:00am-3:00pm daytime period. The 6-11 year age group reflects a similar time based trend, although casualties in the evening reduce significantly after 8pm.

#### 1.4 The Portsmouth Experience

- 1.4.1 Portsmouth City Council is the first local authority in England to implement an extensive city wide 20mph speed limit, which introduced signed 20mph speed limits largely without traffic calming.
- 1.4.2 An independent report commissioned by the Department for Transport said;  
*Overall there was an increase in the number of sites that demonstrated speeds of 20 mph or less after the implementation of the scheme. Many sites already had low average speeds of 20 mph or less before the scheme was implemented. At the sites monitored with higher average speeds before the scheme was introduced, there were significant reductions in average speeds. For example for the group of sites monitored with average speeds of 24 mph or more before the scheme was introduced, the average speed reduction was 6.3 mph. The average reduction in mean speeds on all roads was 1.3 mph.*

And that;

*There is insufficient data to comment about the effects of the scheme on traffic routes and volumes. The expectation is that because most roads had fairly slow average speeds before the scheme was implemented, that the changes are likely to have been modest. Comparing the 3 years before the scheme was implemented and the 2 years afterwards, the number of recorded road casualties has fallen by 22% from 183 per year to 142 per year. During that period casualty numbers fell nationally – by about 14% in comparable areas.*

And concluded;

*In conclusion, early figures suggest that the implementation of the 20 mph Speed Limit scheme has been associated with reductions in road casualty numbers. The scheme has reduced average speeds and been well-supported during its first two years of operation.*

- 1.4.3 A general trend appears throughout the report in that a longer term monitoring period is required to establish a stronger evidence base.

## **2. Longstanding examples of 20mph Speed Limits in Calderdale**

### **2.1 The Calderdale Approach**

- 2.1.1 Over the last 10 years, 20mph zones and 20mph speed limits in Calderdale have been progressed in two ways; either as small scale specific schemes, progressed on the basis of either casualties, links to schools, speed limit reviews or district centres, or as development led schemes, which have been generally linked to residential or school developments.
- 2.1.2 In 2009 a concept began to develop through a pilot scheme in Copley, which led to the first of two trial sites (Stainland) being introduced in March 2011 and the second (Elland) being consulted on in the summer of 2011. This method has evolved to provide a 20mph speed limit over a wide area, whilst targeting traffic calming features where they are necessary to manage vehicle speeds to a level appropriate for the users of that road.
- 2.1.3 The two trial schemes were developed as residential area speed limits, through the 'Sharing Space Safely' initiative, which acknowledged at an early stage that although extensive traffic calming is very effective, it is also costly, disruptive to install, visually intrusive, a long term maintenance liability and generally unpopular with motorists and in particular bus operators.
- 2.1.4 The main difference of the approach taken by Calderdale is to target further speed management interventions on the basis of clear identifiable hazards through a process of consultation, casualty statistics and post implementation feedback mechanisms.
- 2.1.5 The key elements of the 'Sharing Space Safely' approach are:-
- A statistical based priority mechanism that looks at all casualty rates across a pre-defined set of areas in the borough, adding a weighting factor to accidents involving vulnerable road users (pedestrians, cyclists and powered two wheelers), a further weighting for accidents involving pedestrians under the age of 19 and a further weighting for casualties that have occurred more recently.
  - A consultation method that uses community engagement to establish local concerns early and gain public and police acceptance.
  - A consistent approach to signing, road markings, consultation process and branding.
  - A feedback mechanism that facilitates post-implementation feedback and a measure of vehicle speeds both before and after implementation.



2.1.6 The 'Sharing Space Safely Selection Method' divides all the residential areas of Calderdale into manageable community blocks, considers the length of streets and the rate of personal injury collisions in these communities. Extra emphasis was given to vulnerable road users (pedestrians, cyclists and powered two wheelers) and young pedestrian (under the age of 20) casualties using a weighting mechanism, similarly extra weighting was given to casualties occurring in the two most recent years. Casualty data for the five full preceding calendar years is used to create a ranking score for each community area, so that in 2011 data from the years 2006 to 2010 inclusively was used.

2.1.7 The Council's Cabinet gave approval for two trial sites (Stainland and Elland) to be progressed. Further work was completed on consultation with the Department for Transport of suitable standards for signing the 'Sharing Space Safely' area, researching best practice methods with other local authorities, development of a standard approach to signs and road markings and the design of a standard consultation document, which necessitated setting up of a dedicated e-mail address and telephone line.

## 2.2 Effectiveness of the Calderdale 20mph area speed limits

2.2.1 **Hebden Bridge** – The first 20mph area speed limit in Calderdale was introduced on the 12th November 2007 covering the A646 and a number of commercially focused streets mainly to the north of the A646.

- The annual rate of casualties killed or seriously injured (KSI's) has dropped dramatically from a rate of 1.80 per year prior to the implementation to a rate of 0.57 per year afterwards.
- The annual rate of slight casualties has remained steady at a rate of 3.00 per year prior to the implementation to a rate of 3.00 per year afterwards, which is a key indicator that the severity rate has reduced.
- Overall the annual rate of all casualties has dropped from a rate of 5.80 per year prior to the implementation to a rate of 4.57 per year afterwards.

2.2.2 The current approach that Calderdale is taking, would not generally seek to deploy a 20mph speed limit on a busy primary route such as the A646, but would however seek to deploy a 20mph speed limit on the commercially focused streets, perhaps with some complimentary speed management features.

2.2.3 Detailed investigation of accident locations and casualty severity in Hebden Bridge suggests a significant benefit to areas away from the A646. These benefits, however, are difficult to measure due to the effect of environmental improvements made at a similar time as when the 20mph was introduced. As such, it is felt that Hebden Bridge does not give a representative insight into how a 20mph speed limit would perform in a more residential area.

- 2.2.4 **Copley Village** – A pilot site for a residential area 20mph speed limit was implemented on the 9th March 2009. There had been two casualties in the area of the proposed 20mph speed limit prior in the five years before consultation was undertaken in April 2008, both slight, one in 2003, the other in 2006. In the two and half years since implementation, there have been no further casualties.
- 2.2.5 In contrast to Hebden Bridge, casualty rates were very low in Copley Village prior to the implementation of the 20mph speed limit, which reduce the strength of the evidence case for the benefits of 20mph speed limits.
- 2.2.6 **Stainland** – Introduced on the 28th March 2011, the initial casualty reduction indications show promise. In the five years prior to implementation, there where 3 KSI's and 16 slight casualties, which average out at a KSI every 20 months and a slight every four months. As of writing, we have just over five months of casualty data post implementation, with no casualties in that period.
- 2.2.7 Speeds were measured both before and after implementation and the results are summarised below in terms of 85<sup>th</sup> percentile speed and average speed.  
The 85<sup>th</sup> percentile is the speed at which 85% of vehicles is not exceeding and is a commonly used indicator of the true pace of a road. By excluding the top and bottom 15% of all measured speeds, the remaining 70% of vehicles generally travel within a narrow band of 5mph, thus removing the less representative bands of excessively slow and fast motorists and giving a more representative indication of what speed the majority of drivers are travelling.

<u>85<sup>th</sup> percentile speed (mph)</u>	<b>2010</b> ( <i>before</i> )	<b>2011</b> ( <i>after</i> )	<b>Difference</b>
Broad Carr Lane	29.8	28.9	- 0.9
Station Road, Holywell Green	33.2	31.2	- 2.0
Stainland Road, Holywell Green	31.5	30.4	- 1.1
Stainland Road, Bradley View	34.1	31.8	- 2.3
Stainland Road, Church Lane	32.4	28.3	- 4.1
Stainland Road, Post Office	28.1	26.6	- 1.5
Westgate, Stainland	28.6	28.1	- 0.5
High Street, Stainland	25.2	26.6	+ 1.4
Coldwells Hill, Stainland	22.3	20.3	- 2.0

<u>Average speed (mph)</u>	<b>2010</b> <i>(before)</i>	<b>2011</b> <i>(after)</i>	<b>Difference</b>
Broad Carr Lane	25.8	24.3	- 1.5
Station Road, Holywell Green	28.0	25.7	- 2.3
Stainland Road, Holywell Green	24.3	24.9	- 1.1
Stainland Road, Bradley View	28.8	25.6	- 2.3
Stainland Road, Church Lane	26.3	22.5	- 4.1
Stainland Road, Post Office	21.7	20.9	- 1.5
Westgate, Stainland	23.0	23.1	- 0.5
High Street, Stainland	21.4	22.0	+ 1.4
Coldwells Hill, Stainland	17.5	15.9	- 2.0

## 2.3 The cost of introducing 20mph Zones and 20mph Speed Limits

2.3.1 The direct cost of implementation of a 20mph zone is in the region of 10-15 times the cost of a similarly sized 20mph speed limit. That difference would reduce slightly if some targeted traffic calming is also used within a 20mph speed limit, to perhaps 8-10 times the cost, but the cost of consultation would be comparable for both limits and zones.

2.3.2 Typically to implement a 20mph zone in a large area such as Elland, it would cost in the region of £750,000 because of the significant number of traffic calming features required to comply with the requirements for signing as a zone. Whereas to implement a 20mph speed limit, would be in the region of £50,000, although it is not unreasonable to suggest that potentially up to £100,000 worth of traffic calming and crossing features may be required in some areas to target locations where vehicle speeds cannot be reasonably managed by signing alone.

2.3.3 The Stainland 20mph speed limit scheme costs were:-

Works	£26,000 - including street signing and lining and at one location some advance carriageway repair.
Design	£10,000 – including detailed surveys, scheme development, detailed design and supervision.
Consultation	£20,000 - Including widespread consultation, provision of consultation media, analysis and reporting of the results

2.3.4 The Elland 20mph speed limit scheme consultation was completed on 18 November. Objections were analysed and overruled by the Acting Head of Highways and Engineering and the scheme was recommended for implementation.

- 2.3.5 Consultation in advance of advertising the formal notice to implement an order gives people affected by a scheme an opportunity to influence the scope and scale of any proposals and should minimise the costs of managing formal objections to a legal notice. It also has the benefit of community involvement at an early stage which contributes to the success of any scheme.

### **3. 20mph Sites in Other Local Authorities**

- 3.1 Leeds City Council has been progressing 20mph zones, both with and without traffic calming. A large area-wide scheme is currently out to consultation as a 20mph speed limit with selective traffic calming at key locations where casualties had been reported and/or where vehicle speeds were excessive, which is a similar approach to Calderdale.
- 3.2 Kirklees Council are generally progressing 20mph zones in areas of high casualties, typically district centres, but accept that 20mph speed limits are something that could be deployed where vehicle speeds are at a suitably low level. There is one hybrid 20mph speed limit in Almondbury, along a street where some traffic calming already existed, but extended along a side street as a 20mph speed limit without traffic calming.
- 3.3 Wakefield Council have had mixed results on 20mph speed limits progressed to date, generally reducing casualties. The Council is progressing schemes on a casualty basis as 20mph zones or 20mph speed limits with traffic calming.
- 3.4 Rotherham Metropolitan Borough Council has had a series of casualty led traffic calming schemes as 20mph zones, have not progressed any 20mph speed limits without traffic calming but are considering introducing a town centre 20mph speed limit and 20mph speed limits are likely to be implemented.

### **4. Consultation**

- 4.1 As in all speed limit reviews, there is a statutory process of consultation that must be undertaken. The statutory consultation includes local Ward Councillors, statutory bodies like the Police, Fire and Ambulance services, Metro, local road users groups and those residents who front the changes.
- 4.2 The aim of the 'Sharing Space Safely' initiative is to encourage the community to take ownership of the changes, doing so from a position of a clear understanding of the rationale behind the proposals. As such, the consultation process has been wider than would normally undertaken more localised schemes.

- 4.3 In Stainland , 1900 households were involved in the consultation process, which in real terms means that probably twice as many individuals were consulted. The response rate to the consultation process was low, with under 3% of residents returning a formal response – but many others did contact the service for further information and or advice without wishing to leave a formal response.
- 4.4 In Elland, approximately 4,000 households were consulted and the response rates are in the region of 2-3%. A consultation day was held in the community to encourage wider participation, which attracted about 40 residents.
- 4.5 Consultation return rates may be low but this does not detract from continued efforts to involve local residents in issues that directly affect them. Consultation raises awareness and this contributes to the desired reduction in casualties.

## **5. Conclusions**

- 5.1 All indications suggest that the effectiveness of 20mph speed limits reduces as the speeds prior to implementation are higher, however, even with small reductions in vehicle speeds there is evidence that casualty severity reduces.
- 5.2 There is also evidence that 20mph speed limits offer better value in terms of the impact across a whole community. Road safety campaign groups suggest that traffic calming can be over 50 times more costly than 20mph speed limits. Experiences in Calderdale and elsewhere suggest the multiplier would be somewhat lower with low cost traffic calming techniques but when considering district/town sized areas, the multiplier could be getting close to the suggested figure.
- 5.3 Traffic calmed streets generally bring speeds down significantly in that single street, but the same amount of funding for a 20mph limit in an area gives a better rate of speed reduction overall across a whole community.
- 5.4 The Calderdale approach allows targeted speed management features to be added where they are required rather than regimentally across streets that wouldn't necessarily benefit from traffic calming, such as road humps, refuges, crossings, etc. Other benefits include reducing community severance and promoting walking and cycling.
- 5.5 Consultation is an essential part of any 20mph limit scheme and improves the effectiveness in casualty reduction by including the community in the decision making process.