

INTRODUCTION OF 20 MPH ZONES IN THE CITY – UPDATE

JOINT REPORT OF THE LEAD SCRUTINY MEMBERS

1. Purpose of Report

- 1.1 The purpose of the report is to provide an update on the current position in relation to the introduction of 20mph zones in Sunderland and consider the findings of work carried out by the City Services Scrutiny Panel in relation to a revised methodology and criteria for priority schemes.

2. Background

- 2.1 In 2009 engineering consultants Jacobs were commissioned by Sunderland City Council to contribute to the review of its speed management strategy. In February 2010 Jacobs published their *Casualty Reduction Initiative for Residential Areas* report detailing the findings of investigations into prospective pilot areas for the introduction of 20 mph zones and speed limits in Sunderland. The report followed an investigation into this issue by a Task and Finish Group formed by the Environment and Attractive City Scrutiny Committee.
- 2.2 On 2 June 2010, Cabinet agreed the report and its recommendations for the introduction of 20 mph zones, and on 18 December 2012, the City Services Scrutiny Panel considered an update on the implementation of 20 mph zones in the city.
- 2.3 At that meeting, the Panel suggested that it was an appropriate time to revisit the accident figures and criteria used in the original study. Consequently, further reports were considered by the Panel on 18 July and 11 November 2013. These reports set out details of proposed changes to the 20 mph zone / limit methodology and scheme priority.
- 2.5 These proposed changes were agreed by the City Services Scrutiny Panel on 11 November 2013 and are submitted to the Scrutiny Committee for further consideration.

3 Current Position

- 3.1 In the original report, fifteen areas were identified as being suitable for 20 mph zone pilot schemes. These locations were ranked in order of priority for implementation with the location having the poorest overall record being given the greatest priority.
- 3.2 The areas ranked in order of priority were:

- 1 Silksworth
- 2 Marley Potts
- 3 Plains Farm
- 4 Concord
- 5 Biddick
- 6 Pennywell
- 7 Seaburn Dene
- 8 Hill View
- 9 Hetton
- 10 Town End Farm
- 11 Red House
- 12 Ford
- 13 Oxclose
- 14 Leechmere
- 15 Hall Farm

- 3.3 Since the publication of the original report the data sets used by Jacobs to identify the pilot areas would likely have changed. Following a meeting with the Scrutiny Panel on 18 July 2013 it was agreed to further examine collision and other relevant data. This review offered the opportunity to reconsider the order of priority set by the Cabinet approved Jacobs report.

DfT Guidance for 20mph Speed Limits and Zones

- 3.4 The Department for Transport has recently made significant changes to facilitate and reduce the cost for providing 20 mph Zones in England. DfT Circular 01/2013, Setting Local Speed Limits published in January 2013, section 6, urban speed management sets out the policy for 20 mph zones and speed limits.

Key points of the Guidance

- 3.5 Speed limits in urban areas affect everyone not only as motorists, but as pedestrians, cyclists and residents. As well as influencing safety they can influence quality of life, the environment and the local economy.

- 3.6 Traffic authorities can over time introduce 20 mph speed limits or zones on:-

Major streets where there are – or could be – significant numbers of journeys on foot, and/or where pedal cycle movements are an important consideration, and this outweighs the disadvantage of longer journey times for motorised traffic.

- 3.7 This is in addition to:-

Residential streets in cities, towns and villages, particularly where the streets are being used by people on foot and on bicycles, there is community support and the characteristics of the street are suitable.

- 3.8 Where they do so, general compliance needs to be achievable without an excessive reliance on enforcement.

20 MPH Zones

- 3.9 These are predominantly used in urban areas, both town centres and residential areas and in the vicinity of schools, shops, markets, playgrounds and other areas with greater levels of pedestrian and cyclist traffic. They should not be applied to streets where motor traffic is the primary function.
- 3.10 Zones are signed at all entry points and require traffic calming measures such as speed humps and chicanes or repeater speed limit signing and/or roundel road markings at regular intervals so that no point in the zone is more than 50 metres from a feature. The end of the zone is indicated with a terminal sign.
- 3.11 Research in to the effectiveness of 20 mph Zones with traffic calming suggests the overall average annual collision rate can be reduced up to 60%. Zones can also encourage modal shift from vehicle use increasing walking and cycling with an overall reduction in traffic flows.

20 MPH Limits

- 3.12 These are similar to other local speed limits and normally applied to individual or small numbers of roads. They do not require the use of traffic calming but are increasingly being applied to larger areas and are signed at the start and ended with a terminal sign between which there is at least one repeater sign.
- 3.13 Research in to the effectiveness of signed only 20 mph speed limits suggests that they lead only to relatively small reductions in speed vehicle speeds. Therefore, they are generally only appropriate for areas where traffic speeds are already low. If the mean speed is already at or below 24 mph the introduction of a 20 mph limit through signing alone is likely to lead to general compliance with the applied limit.
- 3.14 National statistics suggest that 20 mph zones / speed limits can provide the following benefits: -
- Improved Road Safety, particularly for vulnerable road users;
 - Enhanced environmental quality and liveability in residential areas;
 - More sustainable travel behaviours through encouragement of walking, cycling and public transport;

- Efficiency gains in operations, for instance making it easier to recruit and retain School Crossing Patrols; and
- Opportunities to capture private sector funding contributions as part of the development process.

Scheme Delivery and Staged Approach

- 3.15 The Silksworth, Marley Potts and Plains Farm sites, ranked 1 to 3 respectively are in the process of installation or consultation. The remaining locations (4 – 15) have yet to be consulted on or programmed.
- 3.16 Subject to satisfactory consultation the proposed implementation of the remaining 12 sites is programmed over the next 6 – 8 years.
- 3.17 However, given the changes specified in *Setting Local Speed Limits* it is considered possible to reduce the delivery timescale to an estimated 4 years.
- 3.18 The aim of the 20 mph limits / zones is to achieve 85th %ile speeds not greater than 24 mph (the speed at or below which 85% of drivers travel at). This can be achieved through the installation of different engineering measures, some of which will be more effective than others depending upon the location and the existing layout and operation of the highway.
- 3.19 Department for Transport expects 20 mph zones to be self-enforcing and, as such, zones should include traffic calming features to help maintain slower speeds. However the new guidance allows Traffic authorities to now place any of the following:
 - repeater sign (TSRGD diagram 670)
 - a speed roundel road marking TSRGD diagram 1065)
 - or a combination of both these signs, and;
 - typical traffic calming features
- 3.20 These new arrangements should significantly reduce the requirement for signing and traffic calming features and traffic authorities can now incorporate wider areas within a 20 mph zone where physical traffic calming features may not be appropriate.
- 3.21 It is envisaged that the zone entry signs and 20 mph roundel road markings will help educate drivers of the appropriate maximum speed that should be driven within the zone. A change in driving behaviour should lead to reduced vehicle speeds that will improve road safety within an area with greater numbers of small children and other vulnerable road users.

- 3.22 In consideration of these changes a two stage approach has been devised. Each location will be subject to Stage 1 works in order to expedite the implementation of the zones. The areas will be monitored to determine the impact of the measures. Those areas which are found to require additional features to achieve the target speed reduction will be subject to Stage 2 works.

Stage 1

- Speed surveys to determine the current operating speed of the road(s) within the respective areas.
- Installation of and 20 mph zone / limit signs and the supporting roundel road markings.

Stage 2

- Speed surveys to determine the current operating speeds of the roads in the respective areas since the introduction of the new speed limit and traffic calming features.
- The installation of physical measures such as speed humps and cushions at those sites which still have 85thile speeds above 24 mph.
- Vehicle speeds and accident injury records will continue to be monitored after implementation of the scheme helping with the planning and implementation of future pilot 20 mph speed limit zones.

Existing Methodology

- 3.23 The Jacobs report used a relatively complex method of assessment to determine its 15 proposed sites. As well as collision data, sites were scored against criteria such as likelihood of compliance, public acceptability, proximity to school and cost of implementation
- 3.24 Whilst this is a more in depth approach it is considered that a simpler and less time consuming methodology may provide as accurate a reflection of the need for implementation at a particular site. The new methodology also gives greater weight to key criteria such as collisions.
- 3.25 Therefore it is proposed to simplify the assessment methodology. For the purposes of this review, the 15 identified sites were compared on collision data alone scoring the sites in volume and severity. It is considered that this simple method would robustly reflect the performance of each site and the need for action. It will also be easier to update the programme annually and make comparisons.
- 3.26 The collision data assessment interrogates the Northumbria Police Authority road traffic collision records (STATS 19) available through the

web based programme CIRTAS to determine which of the 20 mph zones has the highest collision risk

- 3.27 The sites are initially ranked by volume of collisions to identify the worst performing site(s) in that particular study period. Any sites with the same number of collisions will be separated through severity, the site with the highest number of greater severity collisions taking precedence.
- 3.28 Each site is scored with the highest number of points given to the site(s) with the highest number of collisions and rank in that year. The site(s) with lowest number of collisions and rank receives the fewest points. Should two or more sites have exactly the same record they will be awarded the same score value. The scoring system is;
- Rank 1 15 pts
 - Rank 2 14 pts
 - Rank 3 13 pts and so on.
- 3.29 Each site will then have the severity of its collisions scored. This mechanism is applied to filter those sights which exhibit a greater collision record but of a lesser severity from those sites which exhibit fewer collisions but of a greater severity. The scoring system is;
- Fatal 10 pts
 - Serious 5 pts
 - Slight 1 pt
- 3.30 Subject to the severity scoring mechanism the sites are ranked accordingly with the highest scoring site being ranked as 1. The sites, as previously explained, are again scored from 15 pts downwards against its new rank.
- 3.31 Combining the volume and severity rank scores gives a final total and the order of priority for implementation.
- 3.23 Appendix A to this report shows the scoring table setting the revised order of priority.

Data Analysis

- 3.33 A study of the latest collision data indicates that the exiting order could be amended to reflect the changes in the number, severity and type of collisions in the respective areas.
- 3.34 The Silksworth, Marley Potts and Plains Farm sites, ranked 1 to 3 respectively are in the process of installation or consultation. The remaining locations (4 – 15) have yet to be consulted on or programmed.
- 3.35 Appendix B to this report set out the collision data and the respective changes and the amended order of priority. However a simple

comparative list of previous and proposed rank is set out in the table below.

Area	Initial Priority	Proposed Priority
Ford	4	1
Leechmere	5	2
Hetton	6	2
Town End Farm	7	3
Concord	8	4
Biddick	9	4
Seaburn Dene	10	4
Red House	11	4
Pennywell	12	5
Hill View	13	5
Oxclose	14	5
Hall Farm	15	5

Public Concern

- 3.36 In addition to the delivery of this programme it is also recommended to install 20 mph zones / limits at sites of public concern. Differing to the predominantly residential streets and areas that the existing sites cover Public Concern Sites will typically be individual streets which are not necessarily residential. Such as those outside of schools, shops and play parks etc where there isn't the need to address the wider area. These schemes can be implemented relatively quickly and with comparatively lower financial input and appeasing the concerns of the local community and stakeholders.
- 3.37 Public Concern Site schemes would be limited to a construction cost of £8,000 and funded through the Mass Action element of the Local Transport Plan (LTP). Should a scheme be estimated at costing in excess of this it would be subject to the Highway Assessment Framework prioritised against other local road safety schemes.

New Developments

- 3.38 It is proposed to install 20 mph zones / limits at recently constructed residential developments which have geometric designed highways to produce lower vehicle speeds. Such areas will already have lower vehicle speeds and the installation / implementation of the supporting signing, road markings and Traffic Regulation Orders (TRO's) will enhance the message to drivers and maintain lower speeds.
- 3.39 In line with the actions set in the June 2010 Cabinet report section 278 / section 38 agreements require that the roads should be constructed to the 20 mph design speed and the appropriate signing, road markings installed / implemented prior to adoption by the Council. It is intended to extend the

requirements of the developer to include the implementation of the supporting TRO's.

- 3.40 This also allows the Council the opportunity to access private developer funding contributing to the improvement of the highway network.

4 Conclusion

- 4.1 In summary there is clear evidence to suggest that 20 mph treatments can be an effective means of improving road safety in residential and urban areas with significant benefits in terms of improving road safety, particularly among the vulnerable road user categories. It is therefore important that the programmed implementation continues.
- 4.2 It is also important to develop an approach to implementing public concern sites.
- 4.3 However, in consideration of the latest research and changes to the regulations the order of priority as set in the Jacobs report could be amended to reflect the current performance of the respective areas.
- 4.4 Cabinet approval is required to gain agreement that the order of priority is reviewed annually (September) to determine the three sites for implementation in the subsequent financial year.

5 Recommendation

- 5.1 The Scrutiny Committee is asked to consider and comment upon:-
- (i) The content of the report including the proposed changes to the scheme;
 - (ii) The public consultations for Marley Potts and Plains Farm; and
 - (ii) Public concern sites being included in future programmes.

6. Background Papers

- Scrutiny Committee Agenda and Papers

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Appendix A

Collisions by Volume (3 years)							Collisions by Severity					Combined Rank Score	Priority
Area	Fatal	Serious	Slight	Total	Rank	Rank Score (1 - 15)	Fatal (10)	Serious (5)	Slight (1)	Total	Rank Score (1-15)		
Ford	1	1	6	8	1	15	10	5	6	21	15	30	1
Leechmere	0	1	1	2	5	11	0	5	1	6	14	25	2
Hetton	0	0	4	4	3	13	0	0	4	4	12	25	2
Town End Farm	0	0	3	3	4	12	0	0	3	3	11	23	3
Concord	0	0	1	1	6	10	0	0	1	1	10	20	4
Biddick	0	0	1	1	6	10	0	0	1	1	10	20	4
Seaburn Dene	0	0	1	1	6	10	0	0	1	1	10	20	4
Red House	0	0	1	1	6	10	0	0	1	1	10	20	4
Pennywell	0	0	0	0	7	9	0	0	0	0	9	18	5
Hill View	0	0	0	0	7	9	0	0	0	0	9	18	5
Oxclose	0	0	0	0	7	9	0	0	0	0	9	18	5
Hall Farm	0	0	0	0	7	9	0	0	0	0	9	18	5

Appendix B

Ford – Initial rank 4 / Proposed Rank 1			
Collision Data 2005 / 09 (5 yrs)	Annual Average	Collision Data 2010 / 12 (3 yrs)	Annual Average
0 x Fatal	0.0	1 x Fatal	0.33
5 x Serious	1.0	1 x Serious	0.33
5 x Slight	1.0	6 x Slight	2.00

Leechmere – Initial Rank 5 / Proposed Rank 2			
Collision Data 2005 / 09 (5 yrs)	Annual Average	Collision Data 2010 / 12 (3 yrs)	Annual Average
0 x Fatal	0.0	0 x Fatal	0.0
0 x Serious	0.0	1 x Serious	0.33
3 x Slight	0.6	1 x Slight	0.33

Hetton – Initial Rank 6 / Proposed Rank 2			
Collision Data 2005 / 09 (5 yrs)	Annual Average	Collision Data 2010 / 12 (3 yrs)	Annual Average
0 x Fatal	0.0	0 x Fatal	0.0
0 x Serious	0.2	0 x Serious	0.0
4 x Slight	0.8	4 x Slight	1.33

Town End Farm – Initial Rank 7 / Proposed Rank 3			
Collision Data 2005 / 09 (5 yrs)	Annual Average	Collision Data 2010 / 12 (3 yrs)	Annual Average
0 x Fatal	0.0	0 x Fatal	0.0
0 x Serious	0.0	0 x Serious	0.0
3 x Slight	0.6	3 x Slight	1.0

Concord – Initial Rank 8 / Proposed Rank 4			
Collision Data 2005 / 09 (5 yrs)	Annual Average	Collision Data 2010 / 12 (3 yrs)	Annual Average
0 x Fatal 0 x Serious 5 x Slight	0.0 0.0 1.0	0 x Fatal 0 x Serious 1 x Slight	0.0 0.0 0.33

Biddick - Initial Rank 9 / Proposed Rank 4			
Collision Data 2005 / 09 (5 yrs)	Annual Average	Collision Data 2010 / 12 (3 yrs)	Annual Average
0 x Fatal 0 x Serious 3 x Slight	0.0 0.0 0.6	0 x Fatal 0 x Serious 1 x Slight	0.0 0.0 0.33

Seaburn Dene - Initial Rank 10 / Proposed Rank 4			
Collision Data 2005 / 09 (5 yrs)	Annual Average	Collision Data 2010 / 12 (3 yrs)	Annual Average
0 x Fatal 0 x Serious 2 x Slight	0.0 0.2 0.4	0 x Fatal 0 x Serious 1 x Slight	0.0 0.0 0.33

Red House - Initial Rank 11 / Proposed Rank 4			
Collision Data 2005 / 09 (5 yrs)	Annual Average	Collision Data 2010 / 12 (3 yrs)	Annual Average
0 x Fatal 0 x Serious 4 x Slight	0.0 0.0 0.4	0 x Fatal 0 x Serious 1 x Slight	0.0 0.0 0.33

Pennywell - Initial Rank 12 / Proposed Rank 5			
Collision Data 2005 / 09 (5 yrs)	Annual Average	Collision Data 2010 / 12 (3 yrs)	Annual Average
0 x Fatal	0.0	0 x Fatal	0.0
1 x Serious	0.2	0 x Serious	0.0
4 x Slight	0.8	0 x Slight	0.0

Hill View - Initial Rank 13 / Proposed Rank 5			
Collision Data 2005 / 09 (5 yrs)	Annual Average	Collision Data 2010 / 12 (3 yrs)	Annual Average
0 x Fatal	0.0	0 x Fatal	0.0
0 x Serious	0.0	0 x Serious	0.0
2 x Slight	0.4	0 x Slight	0.0

Oxclose Initial Rank 14 / Proposed Rank 5			
Collision Data 2005 / 09 (5 yrs)	Annual Average	Collision Data 2010 / 12 (3 yrs)	Annual Average
0 x Fatal	0.0	0 x Fatal	0.0
0 x Serious	0.0	0 x Serious	0.0
0 x Slight	0.0	0 x Slight	0.0

Hall Farm - Initial Rank 15 / Proposed Rank 5			
Collision Data 2005 / 09 (5 yrs)	Annual Average	Collision Data 2010 / 12 (3 yrs)	Annual Average
0 x Fatal	0.0	0 x Fatal	0.0
1 x Serious	0.2	0 x Serious	0.0
2 x Slight	0.4	0 x Slight	0.0