

**ROTHERHAM MBC  
POLICY FOR THE INTRODUCTION OF  
20 MPH SPEED LIMITS AND ZONES**

**1.0 Introduction**

The use of 20 mph zones and 20 mph speed limits are now relatively wide-spread, with more than 2,000 schemes in operation in England. This policy sets out the different types of 20 mph scheme that Local Highway Authorities can introduce, the benefits of introducing 20 mph schemes, and establishes locally determined criteria against which potential 20 mph schemes will be assessed.

There are a number of 20 mph zones and speed limits already in place in Rotherham. The earliest 20mph zone to be introduced was that covering the East Dene and Herringthorpe area which was implemented in 1992. A table showing the location of the 20 mph schemes in Rotherham together with their effect on accidents is attached as Appendix 1.

In the last 2 to 3 years there have been several high profile national campaigns that have promoted the use of 20 mph speed limits, the most prominent of which are the "20's Plenty for Us" campaign and Living Streets' more recent "Show you love 20 mph" campaign. The campaigns are arguing for properly enforced 20 mph default speed limits for streets where people and motorised traffic mix to reduce the impacts of traffic on communities and the environment and improve conditions for pedestrians and cyclists. In addition, 20's plenty for Us are promoting a 'Total 20' policy where 20 mph is the default mandatory speed limit for all residential roads but without the cost or complexity of physical calming. Whilst it is accepted that this will result in smaller reductions in vehicle speeds than if physical calming is used it is argued the area that can be covered is 50 times greater for the same cost than if physical calming is used

In recognition of the benefits that introducing 20 mph schemes provide in January 2013 Government issued revised guidance on 'Setting local speed limits' (Department for Transport Circular 01/2013). This gives Local Highway Authorities greater flexibilities on how to introduce 20 mph schemes and is reflected in this report.

**2.0 Benefits of 20 mph zones and speed limits**

There is clear evidence of the effect of reducing traffic speeds on the reduction of collisions and casualties, as collision frequency is less at lower speeds, and where collisions do occur, there is a reduced risk of fatal and serious injury. Research shows that on urban roads with low average traffic speeds any 1 mph reduction in average speed can reduce the collision frequency by around 6%, so driving at 20 mph compared to 30 mph is likely to reduce the frequency of collisions by 60%. This reduction in speeds and collisions particularly benefits children, where collisions can be reduced by up to two-thirds, and pedestrians who have a greater chance of survival in collisions at lower speeds. There is no evidence of migration of collisions and casualties to streets outside the zone.

The majority of the 20 mph zones and speed limits that have been introduced in Rotherham were in response to an identified accident problem and include traffic calming

to make the zone/speed limit self enforcing. Before and after accident studies carried out on these schemes show that accidents have been reduced by up to 100 per cent.

In addition to improvements in road safety 20 mph schemes also:-

- Reduce social exclusion. The disproportionate threat of death and injury for pedestrians and cyclists is compounded by poverty and age. Poorer neighbourhoods disproportionately bear the brunt of road danger. Child pedestrians from poorer households are five times more likely to become road casualties than their better off counterparts.
- Restore the balance between motor traffic and communities by reducing noise and severance and increasing social interaction.
- Enable and encourage more walking and cycling which would help to cut congestion and reduce greenhouse gas emissions and fossil fuel dependence
- Offer health benefits by enabling more walking and cycling, especially by children, which would arguably do more than any other single measure to defuse the health time bomb of obesity, diabetes and coronary heart disease caused by sedentary lifestyles.

### **3.0 Funding and Cost Benefit**

The cost of each 20 mph scheme will depend on the length and number of roads covered, the number of access points and the amount of physical traffic calming measures that are to be included. Schemes will be funded from the Local Transport Plan settlement. However, in view of the cuts to Local Transport Plan funded works which started in 2010 any schemes will have to demonstrate they are a good use of increasingly scarce resources.

According to research carried out by the 20's Plenty Campaign group 20 mph zones with physical traffic calming demonstrate good cost benefit on roads where there are more than 0.7 casualties per kilometre per annum, based on a cost of introducing traffic calming of £60,000 per kilometre. Clearly, the number of casualties needed to demonstrate good value decreases if the cost of introducing traffic calming can be reduced.

### **4.0 What roads are suitable?**

Roads suitable for the introduction of 20 mph speed limits or zones include:

- Residential streets, 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.
- Shopping streets where there is significant pedestrian activity and the characteristics of the road are suitable.
- Roads through rural villages where there are shops and/or schools present which by implication attract pedestrian and cyclist activity, there is community support and the characteristics of the road are suitable.
- Roads outside schools. In situations where a road outside a school is not suitable for the introduction of a permanent 20 mph speed limit it may be appropriate to consider a part time or advisory 20 mph speed limit.

In addition, the following may be considered suitable:

- Some 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.

20 mph zones and 20 mph speed limits are successful if they are self-enforcing, i.e. the existing conditions of the road or the introduction of measures such as traffic calming or signing, and publicity lead to a mean traffic speed compliant with the speed limit. To achieve compliance there should be no expectation on the police to provide additional enforcement beyond their routine activity. Details about the different types of 20 mph scheme are set out in Appendix 2.

It is important to consider the full range of options and their benefits, both road safety and wider community and environmental benefits and costs, before making a decision as to the most appropriate method of introducing a 20 mph scheme to meet local objectives and road conditions.

## **5.0 Consultation**

A comprehensive and early consultation of all those who may be affected by the introduction of a 20 mph scheme is an essential part of the implementation process. This needs to include local residents, ward members, parish councils, the police and emergency services, public transport providers and any other relevant local groups (including for example, groups representing pedestrians, cyclists, drivers, or equestrians). In cases where 20 mph speed limits and zones include bus routes and where traffic calming is proposed we will take account of the operators views so that the optimum balance is achieved between speed reduction and the effect on bus services.

## **6.0 Criteria for introducing 20mph zones and speed limits in Rotherham**

In line with Circular Roads 01/2013 'Setting Local Speed Limits', 20 mph speed limits and zones will only be introduced in Rotherham where average vehicle speeds are already 24 mph or less. Where speeds are higher supporting traffic calming measures will be needed to make the speed limit self enforcing. The type of traffic calming will depend on measured speeds on the road(s) concerned, with speed limit roundels and repeater signs being suitable for use where speeds are in the range 25-26 mph. Above this other types of traffic calming with a greater speed reducing potential such as road humps will be used.

Where vehicle speeds are higher than 24 mph, and where traffic calming measures are not proposed, the evidence suggests that signed only 20 mph speed limits will not result in large reductions in vehicle speeds. In such situations there is a danger that 20 mph speed limits could create a false sense of security as people will be expecting vehicles to be travelling in accordance with the speed limit when they may not be.

In view of the large number of roads that would potentially benefit from the introduction of 20 mph schemes, and the funding implications if traffic calming measures are needed, a method of assessing and prioritising potential schemes is required.

It is therefore proposed to initially priorities areas/roads which have a record of injury accidents based on the most recent 3 years accident data. Those that make it through this first round of assessment will then be the subject of further study and prioritisation using a scoring system that will consider the following parameters:

- The number, causation and type of collisions
- Mean speed of traffic
- Volume of traffic
- Road environment

Details of this scoring system are provided in Appendix 3. It is proposed that areas/roads should be proactively assessed and a number of schemes be introduced each year based on the funding available and scheme costs. Those areas/roads with the highest score will receive priority for treatment.

Roads outside schools will be assessed using the same scoring system as this includes a weighting for such roads. Roads outside schools will be prioritised for assessment using the school road safety risk assessments that were originally carried out as one of the recommendations of a scrutiny review in to road safety outside schools in 2009. These risk assessments have recently been updated and refreshed.

## Appendix 1 - 20 mph speed limits in Rotherham

Location	Effect on collisions
East Dene and Herringthorpe area	70% reduction
St Ann's area	45% reduction
Holmes area	No before data available
Canklow area	No before data available
Lansbury Avenue area, Maltby	No before data available
Keble Martin Way area, Wath	No before data available
James Street area, Masbrough	No before data available
Eastwood area	50% reduction
Chestnut Avenue area, Wales	82% reduction
Baring Road area, Blackburn	70% reduction
Cliffe Road/Chapel Avenue area, Brampton Bierlow	67% reduction
Hesley Grange, Scholes	No effect
Wheatley Road area, kilnhurst	No effect
Slade Road area, Swinton	25% reduction
St Johns Road area, Swinton	25% reduction
Windsor Road, Thorpe Hesley	No effect
Church Field Lane, Wentworth	13% increase
Cherry Tree Road estate, Wales	14% increase
Ingshead Avenue/Oates Avenue, Rawmarsh	50% reduction
St Marys Avenue, Rawmarsh	100% reduction
Sough Hall Road, Thorpe Hesley	No effect
Harley area	10% increase
Rotherham Town Centre	Too early to determine

## **Appendix 2**

### **Types of scheme**

#### **20 mph zones**

20 mph zones require traffic calming measures (e.g. speed humps, chicanes) or repeater speed limit signing and/or roundel road markings at regular intervals, so that no point within a zone is more than 50 m from such a feature. In addition, the beginning and end of a zone is indicated by a terminal sign. Zones usually cover a number of roads.

20 mph zones are predominantly used in urban areas, both town centres and residential areas, and in the vicinity of schools. They can also be used around shops, markets, playgrounds and other areas with high pedestrian or cyclist traffic, though they should not include roads where motor vehicle movement is the primary function. It is generally recommended that they are imposed over an area consisting of several roads.

Evidence from successful 20 mph schemes shows that, due to the traffic calming provided, the introduction of 20 mph zones generally reduces mean traffic speed by more than is the case when a signed-only 20 mph limit is introduced.

The Department for Transport has recently made significant changes to facilitate and reduce the cost of introducing 20 mph zones. These changes mean that speed limit repeater signs and speed limit roundel road markings can now be used as traffic calming features in addition to more traditional physical traffic calming features such as road humps, narrowings and chicanes.

At least one traffic calming feature must be placed in a 20 mph zone and the features must still be placed at intervals not greater than 100 metres. The additional flexibility related to traffic calming and signing of 20 mph zones will ensure that the most appropriate measure is used to reflect the measured average speed of a road. Only where speeds are near the proposed 20 mph limit should local authorities consider placing speed limit repeater signs or roundel markings as opposed to physical features within a zone. These new arrangements should significantly reduce the requirement for traffic calming features and hence reduce implementation costs.

#### **20 mph speed limits**

20 mph speed limits are signed with terminal and at least one repeater sign, and do not require traffic calming. 20 mph limits are similar to other local speed limits and normally apply to individual or small numbers of roads but are increasingly being applied to larger areas.

Research into signed-only 20 mph speed limits shows that they generally lead to only small reductions in traffic speeds. Signed-only 20 mph speed limits are therefore most appropriate for areas where vehicle speeds are already low. This may, for example, be on roads that are very narrow, where engineering measures are already in place or where on-road car parking takes place. If the mean speed is already at or below 24 mph on a road, introducing a 20 mph speed limit through signing alone is likely to lead to general compliance with the new speed limit.

### **Variable 20 mph limits**

Variable 20 mph speed limits can be introduced that apply only at certain times of day. These are particularly relevant where for example a school is located on a road that is not suitable for a full-time 20 mph zone or limit, such as a major through road. To indicate these limits, variable message signs have to be used.

Advisory part-time 20 mph limits can also be used although currently there are no schemes of this type in Rotherham. These are indicated with flashing school warning lights and the legend '20 mph when lights flash'. Site specific approval is no longer required for the signs as they are now authorised for use by the Department for Transport. In appropriate circumstances this can be a more cost-effective solution for roads outside schools as it reduces signing requirements and the need to process a traffic regulation order. However, with this type of scheme sign maintenance can be an issue in some situations and the effect on speeds may not be as great.

### **Traffic calming measures**

Traffic calming involves the installation of measures to encourage lower traffic speeds. There are many retrofit measures available to help reduce vehicle speeds and ensure compliance with the speed limit in force. These are required at regular intervals in 20 mph zones and may be used in 20 mph limits. Measures can include road humps, pinch-points and chicanes, and as set out above, speed limit repeater signs and/or speed roundel markings can now also be used as traffic calming measures. In the case of new residential developments the principals contained in Manual for Streets for ensuring low vehicle speeds should be used.