



Report to:	Sutton South, Cheam and Belmont Local Committee	Date:	2 July 2015
Report title:	Proposed Traffic Calming - Grange Road & Worcester Road		
Report from:	Mary Morrissey, Strategic Director of Environment, Housing and Regeneration		
Ward/Areas affected:	Sutton South; Belmont; Sutton West		
Chair of Committee/Lead Member:	Councillor Tony Shields		
Author(s)/Contact Number(s):	Edward Quartey, Traffic Engineer 020 8770 6260		
Corporate Plan Priorities:	<ul style="list-style-type: none"> • An Open Council • A Green Council • A Fair Council • A Smart Council 		
Open/Exempt:	Open		
Signed:		Date:	19 June 2015

1. Summary

- 1.1 This report informs Members of the results of an investigation into implementing traffic calming measures on Grange Road and Worcester Road in Belmont, as shown in Appendix A.
- 1.2 As the result of the proposed traffic calming measures on Grange Road and Worcester Road, most of the roads in the area bounded by Mulgrave Road, Cornwall Road (excluded), York Road, Overton Road, Ventnor Road and the railway will have traffic calming measures. Given that these roads are also used by school children walking to Overton Grange School, possibilities of making the area a 20mph zone as shown in Appendix D, have also been looked at and evaluated for consideration by the Local Committee.
- 1.3 The report demonstrates that making the proposed area a 20mph zone is cost effective and will have an improved safety impact over a larger area.

2. Recommendations

It is recommended that the committee approves the following:

- 2.1 A proposed traffic calming measures in Grange Road and Worcester Road, as shown in Appendix D of this report to reduce driver speeds and improve road safety.
- 2.2 To implement the proposed 20mph zone to cover the area bounded by Mulgrave Road, Cornwall Road (excluded), York Road, Overton Road, Ventnor Road and the railway line, as shown in Appendix D of this report.
- 2.3 Agree for suitable funding to be investigated and identified in order to carry out the necessary detailed design, consultations and the implementation of the scheme. This is likely to be funded from the LIP allocation and to be added to the reserve list for the 2016/17 and will be put forward for funding for 2017/18 LIP programme.



3. Background

- 3.1 In September 2014, it was agreed by the Local Committee; following a request by Belmont Ward Councillors to investigate implementing traffic calming measures in Grange Road and Worcester Road to reduce driver speeds. A budget of £4K was allocated by the Local Committee at its meeting of 29 January 2015 to carry out the necessary investigatory work and a report to be presented to the Local Committee with recommendations.
- 3.2 Worcester Road and Grange Road are mainly residential roads, running east – west with no traffic calming provisions. Both roads are included in the Sutton Controlled Parking Zone (CPZ), implemented to provide parking for residents and pay & display parking bays for visitors to the area. A small section of the western part of both roads falls outside the CPZ area and provides free parking which are available to all road users. The ‘At any time’ waiting restrictions have been implemented at all of the junctions along both roads to improve sightlines and safety for drivers approaching these junctions. Overton Grange School, which is located in Stanley Road, is approximately 250 metres to the south of Grange Road.
- 3.3 Mulgrave Road which runs parallel north of these roads is the only road which has vertical traffic calming measures, implemented to reduce driver speeds. The vertical traffic calming measures on this road are spaced approximately 70 metres from each other and its effectiveness may be encouraging some drivers to avoid Mulgrave Road and instead use Worcester Road and Grange Road, where they can drive faster.
- 3.4 The junction of York Road and Grange Road has an existing mini-roundabout to control traffic movement through this junction.

4. Issues

Traffic Volume and Speed Surveys

- 4.1 Traffic volume and speed surveys were carried out on some roads within the area from 25 - 31 March 2015 to determine the speeds at which drivers travel on these roads. A summary of the survey results is shown in Table 1 of this report, with the complete results for each location in **Appendix B**.

Table 1 - Summary of Traffic Volume / Speed Analysis					
	Average Daily Volume (veh/day) - one direction	Average 85%ile Speed (mph)	Average Speed (mph)	Highest Recorded Speed (mph)	No. of Veh. at Highest Speed
Worcester Road	928	31	25	51 – 56	1
Grange Road	1562	31	25	>56	2
York Road	2153	31	27	>56	2
Overton Road	327	26	20	>56	30
Stanley Road	381	28	23	>56	8
Total	1070	29	24		

- 4.2 The traffic surveys recorded an average speed of 24mph and 85%ile speed (speed at which 85 out of 100 vehicles surveyed travelled at) of 29mph. Although both of these speeds are within the speed limit of 30mph, Worcester Road, Grange Road and York Road individually recorded 85%ile speeds of 31mph and average speed of approximately 25mph.



- 4.3 Overton Road recorded 30 vehicles travelling in excess of 56mph. Considering the residential nature of this road with narrow carriageway width and parking on both sides, a collision at this speed with a child will be serious if not fatal.
- 4.4 The survey results also showed that York Road carried the highest average daily traffic volume. A contributing factor being the school run traffic to Sutton Grammar School located in Grove Road with the most used access being through the railway bridge in York Road.

Accident Records

- 4.5 In the 36 months period up to 31 October 2014, there were 12 recorded personal injury collisions (Appendix C) within the area, of which one was a serious injury collision and the others were slight injury collisions. Table 2 shows the analysis of the collisions whilst Table 3 shows the different classifications of collisions within the area.
- 4.6 Table 2 shows that 83% of the collisions in the area occurred at road junctions and 17% were in-between junctions. Worcester Road recorded 50% of all the collisions in the area, of which 42% occurred at junctions off Worcester Road and 8% between junctions. York Road also recorded 42% of all the collisions in the area, but 17% of its collisions, which occurred at its junctions has been included in the analysis for Worcester Road and Grange Road.
- 4.7 Most of the collisions at the junction involved drivers/riders turning right and colliding with other drivers travelling ahead. Contributing factors to collisions of this nature are sightlines being obscured or drivers travelling too fast. Since all of the junctions in the area have 'at any time' waiting restrictions implemented, the collisions cannot be attributed to sightlines being obscured; therefore travelling too fast could be the likely cause of the accidents.

Table 2 – Collision Analysis				
	At Junctions		In-Between Junctions	
	No.	%	No.	%
Collisions within boundary	10	83	2	17
Worcester Road	5	42	1	8
Grange Road	2	17	-	-
York Road	3	25	-	-
Camborne Road	-	-	1	8

- 4.8 8% of the collisions that occurred between junctions cannot be included in the analysis as it happened when a branch of a tree fell on a motorcyclist during a storm. The other 8% involved a driver moved from a parked position without looking properly and collided with an oncoming motorcyclist.



Table 3 - Collision Classification										
	At Junctions				Between Junctions				All Locations	
	Pedal cycles		Motorcycles		Pedal cycles		Motorcycles		Vehicle to Vehicle	
	No.	%	No.	%	No.	%	No.	%	No.	%
Worcester Road	-	-	-	-	-	-	1	8	5	42
Grange Road	-	-	1	8	-	-	-	-	1	8
York Road	3	25	-	-	-	-	-	-	0	
Camborne Road	-	-	-	-	-	-	1	8	0	
TOTAL	3	25	1	8	-	-	2	16	6	50

- 4.9 Table 3 shows that there were no recorded collisions involving pedestrians within the boundary, however both pedal cycles and motorcycles were involved in 25% each, of the total collisions in the area. All the pedal cyclist collisions were slight injury collisions and have occurred at the junction of Mulgrave Road/York Road. All the vehicles involved were exiting York Road when they collided with the pedal cyclists.
- 4.10 A serious recorded motorcycle collision, which occurred at the junction of York Road / Grange Road, was due to the motorcyclist slipping on the dome of the mini-roundabout during wet conditions and colliding with a vehicle.
- 4.11 The highest recorded traffic volume of 4306 veh/day (both directions) in York Road and the corresponding highest 85%ile speed of 31mph are believed to be contributing factors for the five collisions on this road.
- 4.12 Investigations into the traffic calming measures in Grange Road and Worcester Road concluded that a proposed 20mph zone will be appropriate for this area as it will only involve 8 entry/exit signs as oppose to over 30 ‘hump’ warning signs for the proposed traffic calming measures on its own.

Proposals

- 4.13 Based on the traffic volume/speed surveys and collisions records within the area, a 20mph zone is proposed within the area bounded by Mulgrave Road, Cornwall Road (excluded), York Road, Overton Road, Ventnor Road and the railway line with the proposed traffic calming measures at the following location:

Worcester Road

- i) A raised junction table in Worcester Road at its junctions with York Road, Overton Road, Stanley Road
- ii) Sinusoidal road humps within the vicinities of nos. 8, 36, 58a and 82a Worcester Road. A Sinusoidal road hump (Appendix E) is similar to a round-top hump however extends across the entire width of the carriageway. They were developed to provide a more comfortable ride for cyclists in traffic calmed areas. It has a shallower initial rise to reduce noise levels but overall very effective at reducing driver speeds.



Grange Road

- i) A raised junction tables in Grange Road at its junctions with York Road, Overton Road (southern arm), Stanley Road and Camborne Road.
- ii) A sinusoidal road humps within the vicinities of 2, 20, 39 and 63 Grange Road.

Camborne Road

- i) A raised junction table in Camborne Road at its junction with Overton Road.

York Road

- i) A raised entry treatment in York Road at its junction with Mulgrave Road
- ii) A sinusoidal road hump within the vicinity of 22 York Road.

Advantages of the proposed traffic measures

- i) 20mph zone are self-enforcing and do not need enforcement by the police.
- ii) The severity and number of collisions within a 20mph zone are reduced.
- iii) Improves walking and cycling due to reduced speeds at which drivers travel.
- iv) The vertical traffic calming measures are very effective at reducing driver speeds.
- v) The vertical traffic calming measures provides safe crossing points for pedestrians, especially vulnerable road users.
- vi) They are preferred by bus operators.

Disadvantages of the proposed traffic calming measures

- i) Expensive to construct these measures.
- ii) Temporary road/lane closures may be required to construct these measures.
- iii) Can generate noise and vibrations when drivers go over these features.
- iv) May generate higher rate of vehicle emissions as lower speeds involves a high proportion of acceleration and deceleration.
- v) May cause discomfort to vehicle occupants.
- vi) May be visually intrusive to the local environment.

5. Impacts and Implications

Financial

- 5.1 Currently there is no funding available to progress any of the proposals further and it is not on the approved LIP list. Worcester Road and Grange Road are not on the list of roads that have been identified as roads with highest number of accidents in need of road safety improvement measures to reduce accidents.
- 5.2 The estimated budget cost for the following options are:
 - a) Provisions of Traffic Calming measures along Worcester Road and Grange Road only
The estimated budget cost = £185 K
 - b) Introduction of a 20mph zone with traffic calming measures that also include the provisions in (a) above. The estimated cost is = £205 K

Legal

- 5.3 There are no specific legal implications arising from this scheme. The requirements of the Traffic Signs Regulations and General Directions (TSRGD 2015); Design Manual for Roads and Bridges (DMRB); Manual for Streets; and CDM Regulations apply.



Risks

- 5.4 The proposals may not be popular with all the residents. The impact on parking has not been assessed at this stage, although loss of parking is not anticipated. Funding provision is yet to be found and agreed.

6. Appendices and Background Documents

Appendix Letter	Title
A	Proposed Traffic Calming Measures – Grange Road Worcester Road.
B	Traffic Volume and Speed Surveys and Data
C	Collision Data – 1/11/2011 _ 31/10/2014.
D	Proposed 20 mph Zone Traffic Calming Proposals
E	Sinusoidal road hump

Background Documents
<p>Department for Transport Documents</p> <ul style="list-style-type: none"> • Minutes of SSCB Local Committee meeting on 29 January 2015 • DfT Local Transport Note 1/07 - March 2007 • Traffic Advisory Leaflet 01/12 The Traffic Signs (amendment) (No.2) Regulations and General Directions 2011. – February 2012 • Circular 01/23 Setting Local Speed Limits – January 2013

Audit Trail		
Version	Final	Date: 19 June 2015
Consultation with other officers		
Officer	Comments Sought	Comments checked by
Finance	No	N/A
Legal	No	N/A