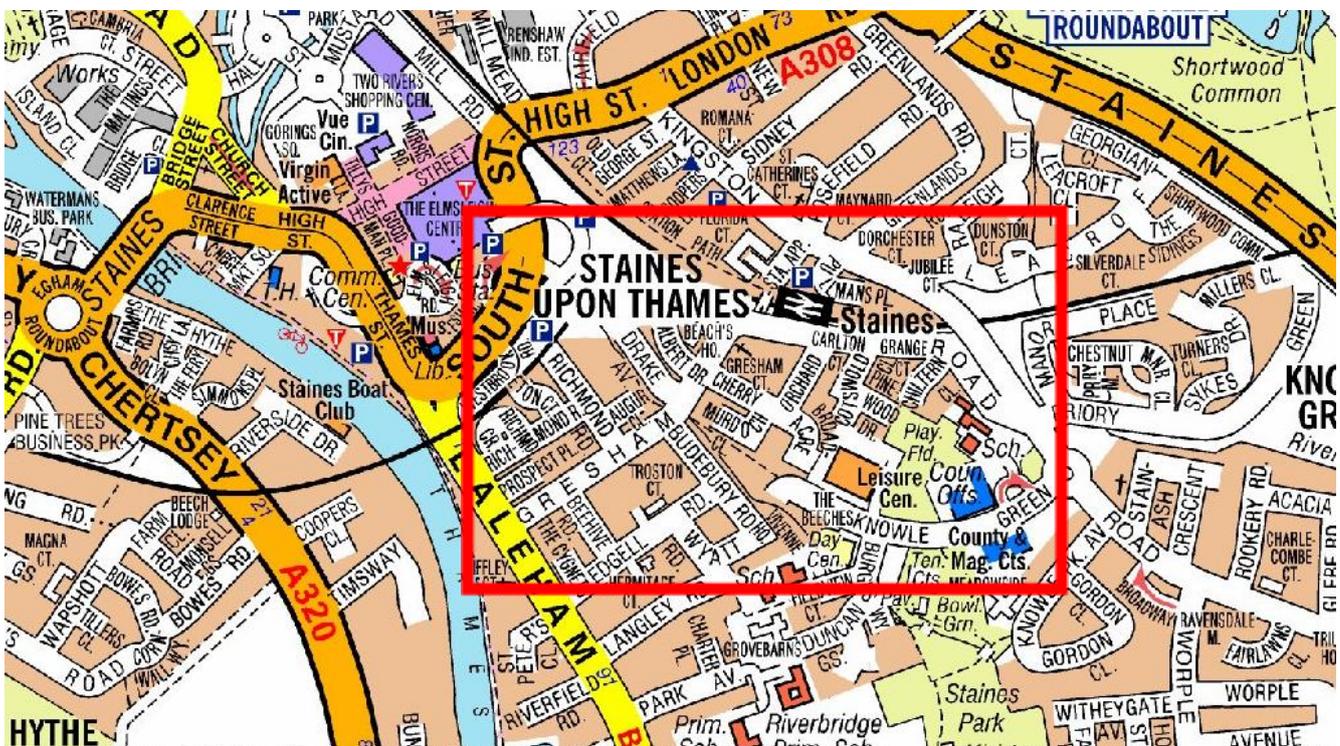


Gresham Road, Staines

Traffic, Parking and Speed Management Improvements

Feasibility Report
April 2020



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Traffic, Parking and Speed Management
Improvements

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1. INTRODUCTION:

Surrey County Council received a petition in 2018, which was the second within 2 years regarding concerns about vehicle speeds, congestion and road safety along Gresham Road, Staines. In particular, speeds around the school and taxi rank to Staines Train Station.

This report investigates the feasible options in which vehicle speeds and driver behaviour can be managed along Gresham Road.

2. SITE ANALYSIS:

Gresham Road is a 'C' Class road that is approximately 1.8 miles in length, providing a link between (C248) Kingston Road to the east and (B376) Laleham Road to the west. Gresham Road has been given a Surrey Priority Network (SPN) classification code of 4a, which helps to establish the priority levels for maintenance purposes. More information on Highway Network Hierarchy can be found online at the following address:

https://www.surreycc.gov.uk/_data/assets/pdf_file/0007/34549/SCC-Highway-Hierarchy-Definition-Policy-Dec-2018.pdf

Gresham Road is a road that changes character along its entire length but has a system of street lighting that runs throughout, supporting the existing 30mph speed limit. There are currently a series of speed cushions and road tables along the entire length of Gresham Road, however it should be noted that the slightly worn speed cushions are probably not as effective as they could be as a traffic calming feature. Situated at the eastern end of Gresham Road is Staines Preparatory School, where the road meets a 'no left turn' junction with Kingston Road. Equally, vehicles travelling south down Kingston Road are unable to make a right turn into Gresham Road due to a build up a congestion at this location during peak hours. Situated towards the middle of Gresham Road is pedestrian access to Staines Train Station, with the provisions of an onsite carpark, taxi rank and private shuttle pick up point for employees. Situated to the west of the station entrance is a plumber merchants, with an industrial estate located further south along Gresham Road in Drake Avenue. Situated south-west from this point, Gresham Road is heavily residential with a combination of on street parking and a system of double yellow lines. Gresham Road then meets a junction with Laleham Road to the west which gets heavily congested during peak hours.



Figure 01: South-western end of Gresham Road, junction with Laleham Road.



Figure 02: Middle of Gresham Road, by Staines Train Station.



Figure 03: Eastern end of Gresham Road, junction with Kingston Road.

3. DATA COLLECTION:

3.1 Speed Data

An Automatic Traffic Count (ATC) loop survey was undertaken over a week period, from 4th-10th June 2019, in order to get an understanding of the vehicle speeds along the entire length of Gresham Road. Speeds were measured in both direction at four separate locations. The location of these loop surveys can be seen in drawing PC1003_06 in the appendix.

The table below shows the average mean vehicle speed and average 85thile speed recorded during this time.

Location of Survey	Direction of Travel	Average Mean Speed	Average 85 th ile Speed
Site 1 LC25, Gresham Road	Eastbound	15.3mph	19.3mph
	Westbound	15.9mph	19.9mph
Site 2 TG Pole, Gresham Road	Northbound	23.6mph	29.1mph
	Southbound	24.1mph	29.5mph
Site 3 TG Pole, Gresham Road	Eastbound	21.3mph	27.3mph
	Westbound	24.1mph	29.4mph
Site 4 LC02, Gresham Road	Northbound	23.9mph	29.4mph
	Southbound	23.1mph	28.6mph

Figure 04: Speed Survey Results

The 85th percentile is a measurement that reflects the speed that 15% of drivers are exceeding. However, Surrey County Councils speed limit policy uses the average mean speeds as the assessment mechanism.

3.2 Personal Injury Collisions

An assessment has been made of the personal injury collisions along Gresham Road over 3 full years, giving the period between 1st January 2015 and 31st August 2018. During this period there were seven recorded personal injury collisions, six had a severity of 'slight' and one 'serious'.

Collision data (01/01/15 to 31/08/18)			
Year	Slight	Serious	Fatal
2015	1	1	0
2016	1	0	0
2017	4	0	0
2018 (Jan – August)	0	0	0
Total	6	1	0

Figure 05: Personal Injury Collision Data

When the police attend personal injury collisions they assess and log the contributory factors that lead to the collision. The table below shows all the factors that led to a collision that have been recorded along Gresham Road during this assessment period. Some collisions have a number of factors attributed to them.

Collision contributory factors (01/01/15 to (31/08/18)	
Factor	Number
Passing too close to cyclist	2
Defective lights or indicators	1
Failed to look properly	1
Failed to judge other persons path or speed	1
No factors given	1
Aggressive driving	1
Dangerous action in carriageway	1
Disobeyed give way/stop signs or markings	1
Failed to signal	1

Figure 06: Personal Injury Collision Contributory Factors

3.3 Highways Extents

The Highway Extents at Gresham Road and surrounding roads were obtained to understand what areas could be improved without having to acquire land.



Figure 07: Highways Extent Map

3.4 Road Safety Audit

The options produced and discussed within this report are commonplace on the public highway but it should be noted that if any of the options are promoted for construction they will be subject to an independent Road Safety Audit of the detailed design that may recommend changes or additional works.

4. DISCUSSION AND OPTIONS:

4.1 Option 1 – 20mph Limit – Refer to drawing PC1003_01

The results from the speed surveys show that the speed limit along Gresham Road can be reduced to 20mph, in line with the Surrey County Councils 'Setting Local Speed Limits' Policy. This policy states that if the mean speed of the road is already at or below 24mph (see Figure 04 in Section 3.1), introducing a 20mph speed limit through signing is likely to lead to general compliance and have the attraction of being relatively inexpensive to implement. Consultation would be required with Surrey Police Road Safety and Traffic Management Team, who would need to support the decrease in speed limit to 20mph. A Traffic Order would be required for this option.

The price for the changes in PC1003_01 will cost approximately £15,000.

4.2 Option 2 – 20mph Zone – Refer to drawing PC1003_02

A 20mph Zone should typically be used in instances where a speed reduction to 20mph is desirable and where traffic calming measures are required to ensure that speeds are at or below 20mph. As there are already a series of speed cushions and road tables along the entire length of Gresham Road, together with the indication that the speed limit can be reduced to 20mph from the speed surveys, a 20mph Zone could be introduced. In instances where the existing traffic calming features are more than 100m apart, speed limit roundels have been introduced to enhance compliance throughout the suggested 20mph Zone. The 20mph Zone that this option explores includes the entire length of Gresham Road, Cherry Orchard and Chiltern Close. Consultation would be required with Surrey Police Road Safety and Traffic Management Team, who would need to support the decrease in speed limit to a 20mph Zone. A Traffic Order would be required for this option. As the existing speeds are low enough to meet Surrey County Council's Speed Limit Policy, a 20mph Zone may not be necessary however a feasible option has been developed to make use of the existing traffic calming features.

The price for the changes in PC01003_02 will cost approximately £15,000.

4.3 Option 3 – Speed Cushions – Refer to drawing PC1003_03

Speed cushions and road tables are the most widely used traffic calming measure as they are proven to have the largest impact on speed reduction, flow and injury collisions, whilst also being suitable for most road layouts. As there are already a series of existing speed cushion and road tables along the entire length of Gresham Road, this option involves the installation of replacement speed cushions to the north of Gresham Road which appear to be slightly worn and are therefore not as effective as they could be. This options also includes the installation of additional speed cushions directly outside Staines Preparatory School, property No. 39 and Beaches House to encourage vehicles to slow down throughout Gresham Road.

Although increasing the geometry of the speed cushions in the existing locations will increase the degree of discomfort experienced by road users and therefore encourage them to slow down, it should be noted that this option may increase the current noise and vibration levels produced from the cushions themselves. This may cause a significant increase due to a high volume of large vehicles along this road, which may become a nuisance for the surrounding residential properties.

Although the existing speed limit would be retained in this option, it can also be done in combination with option 1 or 2. and drainage would not be affected due to the design of the speed cushions. Although this is not a cheap option to consider, drainage would not be affected and overall it could have a positive impact on reducing vehicles speed travelling in both directions over a long distance on Gresham Road.

The price for the changes in PC1003_03 will cost approximately £80,000.

A separate option to install the single pair of speed cushions outside Staines Preparatory School on Gresham Road would be more cost effective than replacing the existing speed cushions as mentioned above and should encourage vehicles to reduce their speeds when entering the road from this direction.

The price for the changes of this element shown in PC1003_03 will cost approximately £15,000.

4.4 Option 4 – One-way System – Refer to drawing PC1003_04 & 05

Reducing a section of Gresham Road to one-way traffic entering from Kingston Road would help reduce any issues with congestion around the entrance to Staines Station, whilst also removing any issues vehicle may currently have pulling out at the junction with Kingston Road. The one-way system explored within this option is proposed to start at the eastern end of Gresham Road at the junction with Kingston Road, extending to the existing roundabout junction with Budebury Road.

In addition to the one-way system, this option includes the proposal of a cycle contra-flow system along this entire section of Gresham Road, where cyclist are able to enter the system travelling northbound from the roundabout junction with Budebury Close. This also incorporates a 3.0m wide shared footway over approximately 100m by Staines Preparatory School and approximately 200m across the entrance to Staines Station. The existing footway in both locations will require widening to ensure a consistent 3.0m width is achieved throughout, which will also involve drainage improvements. Additionally, the dropped kerbs in these areas have been altered to allow pedestrian right of way across the access driveways. An informal crossing point with 2.0m wide dropped kerbs outside Staines Preparatory School has also been included within the proposals of this option to allow cyclist to safely cross the carriageway and join the proposed shared footpath.

The on-carriageway cycle contraflow system proposed within this option is 2.0m in width, with areas of 1.0m tapered central hatching to separate it from the main carriageway, which would be approximately 4.0m in width throughout. Within the area of central hatching, cycle by-pass islands have been proposed in locations adjacent to the speed cushions to ensure drivers remain in the allocated carriageway. Due to the proposed changes to the road layout, many of the existing speed cushions along this section of Gresham Road would need to be removed and reconstructed in new locations to suit, encouraging vehicles to slow down.

The existing pedestrian crossing facility located to the south of the proposed one-way system would require reconstructing to ensure access is not possible for vehicles travelling northbound on Gresham Road. This facility will include 2.0m wide dropped kerbs to improve pedestrian accessibility, and will also be an indication to the start of the 2.0m wide cycle contra-flow system, alongside variation signs and road markings. This option also involves an extension to the areas allocated to the existing taxi rank located outside Staines Station and the on-street parking facilities to the west of Cotswold Close. The single yellow lines will be replaced with double yellow lines throughout the extents of the proposed one-way system. Additional signage and road markings will also be required to suit the new road layout, however this would be reviewed during a detailed design.

Although this option may have a positive impact on congestion along Gresham Road, rearranging the current layout as proposed in this option to only allow one-way traffic entering from Kingston Road could potentially have a negative effect on

vehicle speeds and may also increase the number of vehicles on Kingston Road itself. In addition, this option requires a lot of drainage works to be undertaken due to the large amount of footway widening outside Staines Station and Staines Preparatory School which will significantly impact the cost of this option.

Vehicle tracking has been successfully carried out to identify the accessibility of the driveways outside Staines Station in the vicinity of the taxi rank, however it should be noted that this will need to be confirmed if promoted to detailed design. A traffic order also would be required for this option.

The price for the changes in PC1003_04 and PC1003_05 will cost approximately £200,000.

4.5 Option 5 – Do Nothing

Whilst doing nothing is an option, which in theory should not affect the current pedestrian personal injury collisions, it does not improve vehicle speeds, congestions and road safety along Gresham Road.

5. RECOMMENDATION:

That options 1 & 4 are progressed for detailed designed.

6. APPENDICIES

Drawings showing proposed options:

PC1003_01 – Option 1 – 20mph Limit.

PC1003_02 – Option 2 – 20mph Zone.

PC1003_03 – Option 3 – Road Cushions.

PC1003_04 – Option 4 – One-way System.

PC1003_05 – Option 4 – One-way System.

PC1003_06 – ATC Survey Locations