

**A244 Chertsey Road, junction with  
Cadbury Road, Sunbury on Thames,  
Spelthorne, TW16 7NW.**

**Inclusion of Controlled Pedestrian  
Crossing Facilities**

**Feasibility Report**

**November 2015**

Project Title: A244 Chertsey Road, junction with  
Cadbury Road, Sunbury on Thames,  
Spethorne – Inclusion of controlled  
pedestrian facilities at the existing signal  
controlled junction

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Prepared By: Print Jamie Daly

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## 1. INTRODUCTION:

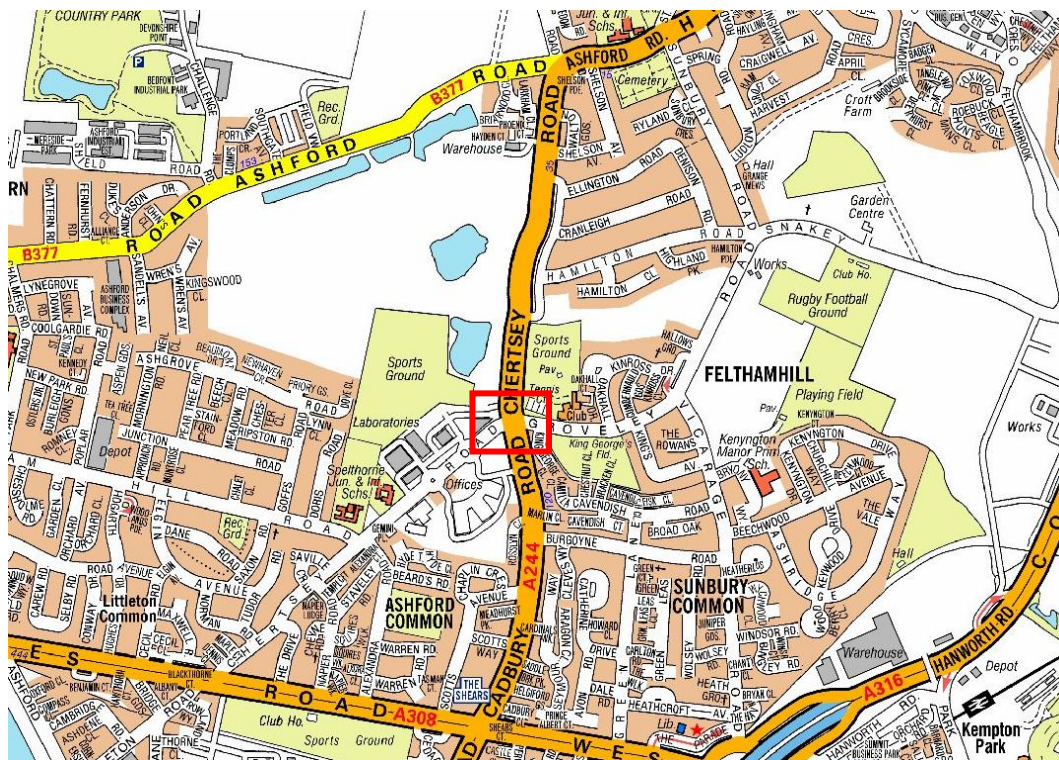
Cadbury Road and Chertsey Road run north to south linking the A308 Staines Road West, Sunbury on Thames with Ashford Road, Feltham in the London Borough of Hounslow.

Both Cadbury Road and Chertsey Road are single carriageway roads with one lane in each direction, and are subject to a speed limit of 30mph. They are both illuminated by a continuous system of street lighting.

These two roads meet at an existing signal controlled junction with Groveley Road entering from the east and Chertsey Road from the west.

Currently, there are no controlled pedestrian crossing facilities across either Cadbury Road or Chertsey Road so pedestrians crossing these arms of the junction must make their own judgement as to when it is safe to cross the road, by observing traffic movement across the junction and waiting for a safe opportunity.

The purpose of this report is therefore to assess the feasibility of providing pedestrian phases into the existing junction.



## **2. HISTORICAL INFORMATION:**

In response to demand from BP staff crossing Chertsey Road just north of the signalised junction a pedestrian crossing refuge was constructed late in 2014. This provided a safer crossing facility for BP staff to move between the main campus and the leisure facilities based on the eastern side of Chertsey Road.

## **3. SITE ANALYSIS:**

Uncontrolled pedestrian crossing points exist on all four arms of the signal controlled junction, in the form of pedestrian islands but in some cases it is necessary to negotiate four different lanes in order to cross, which could be considered confusing for pedestrians and or cyclists, particularly as they need to assess vehicle movements from a number of directions.

Cadbury Road, approaches from the south and the road width generally varies between 6m and 7m but this widens to circa 16m at the traffic signals at Chertsey Road / Groveley Road.

The section of Chertsey Road north of the signal controlled junction splits BP's Meadhurst Sports Complex from the main BP buildings. This is the location of the pedestrian refuge referred to in section 2. At the signal controlled junction Chertsey Road is approximately 14m wide, which is made up of a 7m wide northbound lane and two 3.5m southbound lanes. The two southbound lanes gradually merge back into one as the overall carriageway width reduces the further north you travel. The overall width eventually reduces to around 6.5m.

The section of Chertsey Road approaching from the west measures approximately 8m wide but widens to over 30m wide, which consists of a left turn slip lane controlled by give way only, one straight ahead lane, one right turn lane, both signal controlled and one opposing entry lane for vehicles travelling in a westerly direction.

Groveley Road enters from the east and consists of a straight ahead and left turn lane along with a short dedicated right turn lane. These total around 5.5m in width and both are signal controlled. The opposing lane for vehicles travelling eastbound is approximately 3.5m wide as it enters Groveley Road.

Shared use cycle facilities are present on all approaches to this junction apart from on the northern arm but they are disjointed and there does not appear to be a clear link between any of them so this is something that requires addressing.

#### **4. DATA COLLECTION:**

##### **4.1 Statutory Authorities Plant Request;**

An evaluation of the Statutory Authorities plant was undertaken in 2014 so it is known that the following utility companies have apparatus at this junction.

- 1 SGN Gas
- 2 BT
- 3 Scottish and Southern (electricity)
- 4 Thames Water
- 5 Virgin Media
- 6 Traffic Signals (SCC)

It should be noted that this is based on a C2 enquiries, which is a preliminary enquiries only and that depth of cover and possible costs of diversion would have to be established at the detailed design stage, prior to construction. Referring to the Statutory Authority plans, there could potentially be diversionary or protective works required for most if not all of these companies so consideration of this has led the feasibility design to focus on utilising as much of the existing layout as possible. Ultimately, any conflict would be identified at detailed design stage and further designed out if possible. The cost for any remaining diversionary or protective works can only be identified at the detailed design stage.

##### **4.2 Collision Data;**

The recorded collision data shows that there were 12 collisions during the period 4 year period 2011 to 2014. These are broken down as follows;

- 2011 – Total 2 (all slight injury, no pedestrians or cyclists involved)
- 2012 – Total 4 (one serious and three slight injury, two involving pedestrians and none involving cyclists)
- 2013 – Total 2 (all slight injury, no pedestrians or cyclists involved)
- 2014 – Total 4 (one serious and three slight injury, one involving a cyclist and none involving pedestrians)

### 4.3 Pedestrian/Cyclist Survey Analysis;

Officers have previously undertaken a relatively detailed study of this junction, which included establishing the peak times for pedestrian and cyclist movements across this junction. This data as set out in the tables below provides a useful insight into the usage and therefore has been used to inform the feasibility design

<b>Survey 1 – Lunch time</b>		
	<b>Pedestrians</b>	<b>Cyclists</b>
Northern Arm	32	0
Eastern Arm	3	0
Southern Arm	30	0
Western Arm	4	0

<b>Survey 2 – am peak</b>		
	<b>Pedestrians</b>	<b>Cyclists</b>
Northern Arm	6	1
Eastern Arm	2	0
Southern Arm	12	1
Western Arm	6	1

The first thing that is apparent is the lack of cyclists that use this junction. This could be that they deem it unsafe or that the lack of a joined up system of off road facilities means they choose to take a different route.

Secondly, it is clear that the northern and southern arms take the majority of pedestrians, whereas the demand to cross eastern and western arms was low. That said, BP have recently expanded their campus on the south west corner of this junction so that may generate additional usage on the western arm.

## **5. DISCUSSION AND OPTIONS:**

As can be seen from the pedestrian survey results there is clearly a demand from pedestrians wishing to cross both the northern and southern arms in particular. At present, there are dropped kerbs with tactile paving on all approaches and these do assist with crossing however pedestrians are forced to wait for a suitable gap in traffic before crossing. This is further hindered by the number of different vehicular movements taking place at the junction.

It would seem logical therefore to provide facilities across the northern and southern arms, but as noted in section 4.3 the expansion of BP's campus on the south west corner of this junction may generate additional demand for the western arm too and it should also be considered that at present, people are required to negotiate 4 separate traffic flows in order to cross the western arm, which is more than any other arm. Demand for crossing the eastern arm is low and the layout at this location is far more standard with one lane to cross north of the pedestrian refuge and just two south of that so in order to minimise the potential impact on the capacity of this junction, the eastern arm could remain un-controlled but it may be prudent to consider the inclusion of the western arm within the provision of improved facilities.

As there are shared cycle facilities either side of the junction it would make sense to introduce Toucan facilities within any alterations if possible. Current guidance states that the minimum width of a Toucan crossing (the gap between the two roads of studs) should ideally be 4m but in order to achieve this significant works would be required on all approach footways, the triangular islands and central refuges. Having said that, Toucan crossings with a reduced width of 2.8m have been proposed elsewhere in Surrey and accepted on safety grounds, so on that basis this becomes more of a feasible option. This reduced criteria of crossing width also means that working within the existing layout becomes more possible, which has the benefit of reducing the likelihood of conflicts with underground utility apparatus.

### **5.1 Option 1 – Do nothing;**

This is a feasible option but it would not contribute to enhancing Surrey County Council's road infrastructure and would not proactively seek to improve safety and reduce accidents so it is not recommended.

Estimated guide price £zero



## **5.2 Option 2 – Retro fit pedestrian phases into the existing signal controlled junction;**

Having established the volume of underground utility apparatus at this junction it would certainly be logical to work with the existing layout as much as possible.

Introducing pedestrian and / or cycle facilities to a signal controlled junction will inevitably be to the detriment of vehicular flow so with that in mind and taking on board the crossing demands discussed in section 5.0 it is proposed to exclude the eastern arm across Groveley Road.

The existing dropped kerb locations would need to be widened to accommodate a 2.8m width of tactile paving. This could be achieved with minimal alterations to existing inspection covers and street furniture on the approach footways but more extensive modifications would still be required to the triangular and pedestrian refuge islands. Traffic signals equipment and associated inspection chambers as well as illuminated bollards would require relocation and it is likely that a new controller configuration would also have to be written to allow for pedestrian phases.

The entire junction would benefit from the introduction of Toucan facilities, which would link up the existing shared cycle facilities and this is feasible on all of the approaches that currently benefit from shared cycle / pedestrian facilities.

The left turn slip lane from the C233 Chertsey Road onto the A244 Chertsey Road would need to be upgraded so it is included within the signal control in order to provide a network of consistent facilities for crossing both the northern and western arms. The central pedestrian refuge islands on the A244 Cadbury Road, C233 Chertsey Road and A244 Chertsey Road would be retained but become straight through facilities i.e. pedestrians or cyclists would no longer be required to stop and wait for a suitable gap in traffic.

The existing high friction surfacing is worn and the carriageway is beginning to fail the carriageway throughout the junction would benefit from being resurfaced.

Estimated guide price £400,000 to £450,000

**6.0 RECOMENDATION:**

The addition of Toucan crossing facilities at this signal controlled junction as discussed in Section 5.2 offers an improvement that would be beneficial to BP staff as well the wider community and may go some way towards encouraging more sustainable modes of transport such as cycling.

It is therefore recommended that option 2 as described in section 5.2 is progressed.

**7.0 APPENDICIES:**

- A) Drawing PC0563-02 Proposed controlled pedestrian facilities junction layout
- B) Drawing - Junction Diagram (traffic signals)
- C) Drawing PC0563-03 Cycle facility linkage