

Priest Hill Close

Pedestrian Crossing Improvements

Feasibility Report
February 2019



Project Title: **Priest Hill Close (A240 Reigate Road)**
Pedestrian Crossing Improvements

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1. INTRODUCTION:

The Highways Design and Delivery Team were commissioned by the North East Area Highways Manager to undertake a study to investigate the feasibility of providing a new pedestrian refuge island on A240 Reigate Road to improve pedestrian facilities and accessibility to Priest Hill residential estate and local amenities.

This report investigates the feasible options of installing a new pedestrian crossing facility along the A240 Reigate Road, whilst ensuring the location is considered to encourage maximum pedestrian usage.

2. SITE ANALYSIS:

The A240 Reigate Road is an 'A' Class road that has been classified as a Main Distributor within the Surrey Priority Network (SPN 1). It forms part of the link between Ewell to the north and Nork and Burgh Heath to the south. It carries a high volume of traffic, including a significant proportion of commercial vehicles. This makes it potentially difficult for pedestrians, especially the elderly, those with disabilities, or children, to find suitable gaps in the traffic to cross the road without some form of assistance.

Reigate Road is a road that changes character along its entire length, but has a system of street lighting that runs throughout. To the north-west, which is at the roundabout junction with A24 Ewell By-Pass, the road is fronted by a combination of properties and businesses. Progressing south-east down Reigate Road, the character changes and the area becomes more rural in feel where Glyn School Sports Pavillion and Priest Hill Nature Reserve are set back a short distance from the carriageway. Progressing further south-east, the road continues to change character and is fronted with a variety of properties, businesses and agricultural land.

A plan showing the local road network is shown in Figure 01 below.

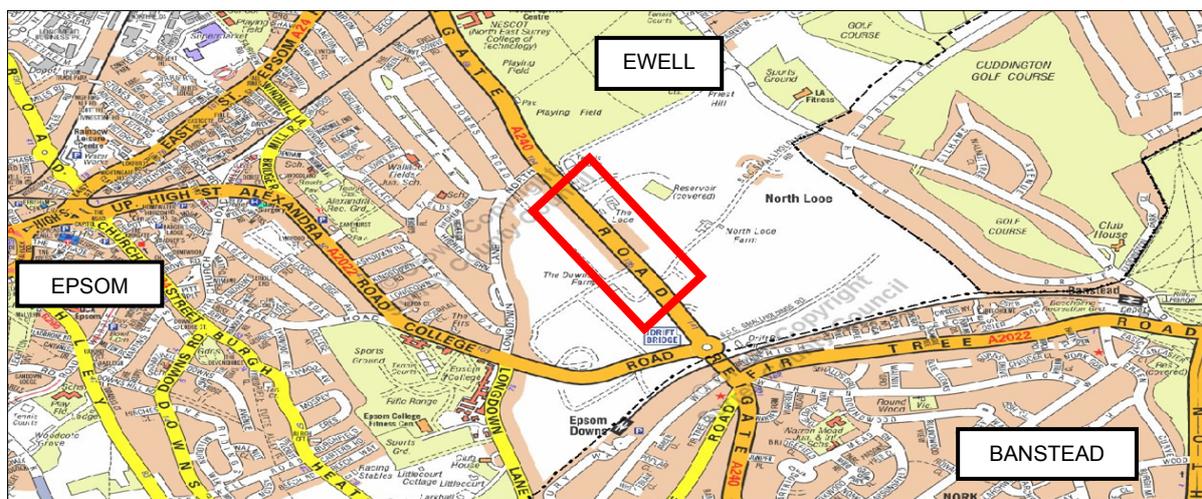


Figure 01: Local road network

The road is subject to a 30mph speed limit between its northern extent and a point approximately 110m south-east of the junction with Longdown Lane. At this point, the speed limit increases to 40mph and remains so until it changes back to 30mph at the roundabout junction with A2022 College Road. Reigate Road in the vicinity of Priest Hill Close, is a single carriageway with generally straight alignment within the 40mph speed limit. The carriageway widths to both the north-west and south-east of the junction with Priest Hill Close are approximately 7.34m, with an area of 1.1m central hatching within. There's an existing tarmac footway adjacent to the north-westbound carriageway and a large length of grass verge on the opposite side. There are currently no pedestrian crossing facilities in this vicinity, which is limiting pedestrian accessibility to Priest Hill Close and local amenities.



Figure 02: A240 Reigate Road, north-west of junction with Priest Hill Close.



Figure 03: A240 Reigate Road, junction with Priest Hill Close



Figure 04: A240 Reigate Road, south-east of junction with Priest Hill Close

See drawing PC0955_00 for details on carriageway widths and areas on the carriageway where, due to property accesses, it is not possible to add any highway measures.

3. DATA COLLECTION:

3.1 Speed Data

A manual speed survey was undertaken on 21st February 2019 between 11:00 am and 13:00pm using a hand held radar device. This was intended to provide an indicative measurement of existing speeds in free flow conditions. Speeds were measured in both directions and observations from site indicate that motorists travelling south-eastbound begin to build speed as they have just entered a 40mph speed limit area. Whereas, motorists travelling north-westbound approaching the 30mph speed limit area were not slowing down and the mean speed is high as a result.

The table below shows the average mean vehicle speed recorded.

Location & Direction	Average Mean
A240 Reigate Road (north-westbound)	36 mph
A240 Reigate Road (south-eastbound)	35 mph

Figure 05: Speed Data

3.2 Personal Injury Collisions

An assessment has been made of the personal injury collisions along the A240 Reigate Road over the last 3 years, giving the period between 1st January 2015 and 30th November 2018. During this period there were 9 recorded personal injury collisions, 7 had a severity of 'slight' and 2 'serious'.

Latest 3 year and year to date collisions (01/01/15 to 30/11/18)			
Year	Slight	Serious	Fatal
2015	2	0	0
2016	0	0	0
2017	4	1	0
2018 (Jan – Nov)	1	1	0
Total	7	2	0

Figure 06: 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 the A240 Reigate Road during this assessment period. Some collisions have a number of factors attributed to them.

Collision contributory factors (01/01/14 to (30/11/18)	
Factor	Number
Failed to look properly	6
Failed to judge other persons path or speed	5
No factors given	1
Slippery road (due to weather)	1
Disobeyed double white line	1
Dazzling sun	1
Careless/ Reckless / In a hurry	1
Poor turn or manoeuvre	3
Failed to signal	1

Figure 07: Personal Injury Collision Contributory Factors

As can be seen from the above table, there are many contributing factors to the collisions recorded along the A240 Reigate Road. Despite the lack of pedestrian crossing facilities in this location, none of the reported personal injury collisions involved pedestrians. The majority were due to the drivers failing to look properly or failing to judge the other persons path or speed. The police do not collect or hold 'damage only' collision data and therefore any such incidents are not included in this summary.

3.3 Pedestrian Desire Lines

The primary purpose of the proposed crossing is to provide a safe crossing facility to and from Priest Hill Close housing estate. As you may be able to see from Figure 08, desire lines (worn tracks along the verge) for pedestrian movements are both to the north-west and south-east of Priest Hill Close.



Figure 08: Pedestrian desire lines at junction with Priest Hill Close.

However, further site observations have indicated that the number of pedestrians accessing Priest Hill Close is low - 3 pedestrians were observed whilst officers visited site, which all approached from the south-east (relating to Option 1). If it was decided to proceed with a pedestrian refuge island, a further pedestrian count over a longer period of time or discussions with users would be required to ensure the location chosen is most appropriate to the demands and behaviour of pedestrians.

3.4 Highways Extents

The Highway Extents at Priest Hill Close and surrounding roads were obtained to understand what areas could be improved without having to acquire land. As you can see from *Figure 09* below, all of the options discussed in this report fall within the Highway boundary.



Figure 09: Highways Extent Map

3.5 Road Safety Audit

All options discussed within this report have been subject to an independent Road Safety Audit Stage 1 where no significant issues were raised. However, it should be noted that if any of the options are promoted for construction, they will be subject to an independent Road Safety Audit Stage 2. This may recommend changes or additional works.

4. DISCUSSION AND OPTIONS:

Design options have been prepared to achieve the two main objectives of the brief:

- To provide a new pedestrian refuge island on A240 Reigate Road, near to Priest Hill Close.
- To improve pedestrian access to Priest Hill Close.

A 'do nothing' option has also been included in the study.

The first two options explored within this report include for the installation of an uncontrolled pedestrian refuge facility, allowing pedestrians to cross the A240 Reigate Road in two stages. Both Option 1 and Option 2 involve localised carriageway widening on the east side to incorporate a 2.0m width central pedestrian refuge island, which would allow sufficient space for two wheelchairs to pass and also provide adequate waiting space for pedestrians to cross the carriageway. Whilst it may be possible to widen the carriageway on the west side to incorporate a 2.0m width pedestrian refuge island, this would create a considerable amount of disruption for the residents to the west of Reigate Road. However, if the east grass verge is found to need extensive or prohibitively expensive utility works, widening to the west side of the carriageway is feasible as an alternative.

The construction of a new 2.0m width footway on the existing eastern grass verge area is proposed in both Option 1 and Option 2. This will enable pedestrians to access the pedestrian refuge island by the means of a dropped kerb with tactile paving. Vegetation within the Highway Lands extents will require removal in both options to allow sufficient space for the footway construction.

The installation of a central pedestrian refuge island may create traffic calming benefits as drivers may adjust their driving style on the approaches to ensure they can manoeuvre through the carriageway running lanes, which would be approximately 3.2m wide. Central hatching road markings on both approaches to the pedestrian refuge island will be required, and the installation of 75m of red high friction surfacing within the hatched area to tie into the existing is proposed. Temporary 'New Road Layout Ahead' signs will also be required on each approach to the refuge, for a period of three months.

The visibility at the proposed locations for the pedestrian refuge islands is sufficient in both directions. Visibility of approximately 100m+ can be achieved to the north-west and south-east.

After investigating the underground services in the area, existing gas, water and electricity apparatus are currently situated beneath the grass verge both north-west and south-east of the junction with Priest Hill Close. Where proposed works could potentially affect existing utility apparatus, either necessitating diversion or protection works, further enquiries would need to be issued to the respective companies to establish the feasibility, cost and duration of such works. For that reason it is not possible to include the costs of possible utility works in each proposed option at this stage.

As a result of the Road Safety Audit Stage 1 report, it has been highlighted that the current desire lines suggest that pedestrians may use the proposed footways to gain access to the existing area of open space, Priest Hill Nature Reserve. Therefore, the proposal of an uncontrolled crossing facility, with a 2.0m width footway link to the entrance of the Nature Reserve may be advantageous. Although this would facilitate pedestrians accessing this location, this area is not part of the publicly maintainable highway.

4.1 Option 1 – Pedestrian Refuge Facility (South-East)

Refer to drawing PC0955_01

The 2.0m width pedestrian refuge island proposed within Option 1 would be installed approximately 50m south-east of the junction with Priest Hill Close.

It would not be possible to position the island further than 50m away, due to the constraints of existing access driveways at this location. Drawing PC0955_00 highlights the areas on the carriageway where due to property accesses it is not possible to add any highway measure.

In order to accommodate a 2.0m width island in this location, the proposed taper lengths will be slightly shorter, however this is not unlike other locations across Surrey.

The existing kerb at the junction with Priest Hill Close will require realignment along with the installation of a new drop kerb facility to ease pedestrian access. Likewise, to allow space for the proposed footway construction, the relocation of the existing lamp column LC47 will be required.

The total area of existing highway verge to be removed and replaced with new road construction is approximately 49m², with the widest section of road being widened by approximately 1.15m.

Guide Price £45,000 (excluding utility works, design fees, statutory procedures)

4.2 Option 2 – Pedestrian Refuge Facility (North-West)

Refer to drawing PC0955_02

Option 2 includes for the proposal of a 2.0m width pedestrian refuge island installed approximately 60m north-west of the junction with Priest Hill Close. The constraint on the location of this pedestrian island is the access driveways along the south-western side of the A240, therefore its position in terms of distance from Priest Hill Close is flexible. The position of the island shown in Option 2 is the nearest to Priest Hill Close in order to achieve the recommended taper lengths.

This option would require the relocation of an existing telegraph pole, lamp column LC45 and two sign posts to allow space for the proposed footway construction. Likewise, an existing gully would need relocating to suit the proposed carriageway widening and kerb realignment which would increase construction costs. In order to ease pedestrian access to Priest Hill Close this option also includes for the proposal of a new drop kerb facility installed at this junction.

The total area of existing highway verge to be removed and replaced with new road construction is approximately 83m², with the widest section of road being widened by approximately 1.330m.

Guide Price £75,000 (excluding utility works, design fees, statutory procedures)

4.3 Option 3 – Pedestrian Refuge Facilities (Combine Option 1 & 2)

This option is to incorporate the proposals shown in both Option 1 and Option 2, in order to provide a crossing facility on each side of Priest Hill Close. It also includes the installation of tactile paving to provide an uncontrolled pedestrian crossing across the junction of Priest Hill Close itself.

The installation of two pedestrian refuge islands in this location would significantly increase pedestrian accessibility to Priest Hill Close and local amenities approaching from both directions along the A240 Reigate Road.

Guide Price £120,000 (excluding utility works, design fees, statutory procedures)

4.4 Option 4 – Do Nothing

With no reported pedestrian injuries in the last three years, works in purely casualty reduction terms could not be justified when compared to other locations. However, there are concerns within the community regarding accessibility and safety which the options seek to address. The options support Surrey County Council's objectives of improving accessibility and encouraging sustainable travel.

5. RECOMMENDATION:

The A240 Reigate Road is a strategically important route on Surrey's highway network and carries a high volume of traffic. Consequently, this makes it difficult for pedestrians, especially those who are more vulnerable such as children, the elderly and those with visual impairment, to find suitable gaps to cross the road safely. The lack of a footway on the east side increases this difficulty for pedestrians.

Based on the likely benefits and costs Option 1 is recommended. However, it is recommended that consultation with local residents and user groups and/or a more detailed pedestrian survey would allow for the most suitable location to be determined, with consideration of potential funding.

6. APPENDICES

Drawings showing proposed options:

PC0955_00 – Existing Layout and Road Widths.

PC0955_01 – Pedestrian Refuge Facility (South-East) – Option 1

PC0955_02 – Pedestrian Refuge Facility (North-West) – Option 2