

Buckland Primary School

Pedestrian safety improvements

**Options Report
November 2020**



SURREY

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Pedestrian Safety Improvements

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1. INTRODUCTION:

Surrey County Council have been asked to investigate the options for improving pedestrian safety around Buckland Primary School in Berryscroft Road, Laleham, Staines Upon Thames. The school caters for approximately 420 children from Reception Year up to Year 6 of their education, which is in general an age range of 4 to 10. With this age range in mind, children will generally either walk (accompanied by an adult) or be dropped off by car. The surrounding area is generally residential with roads subject to a 30mph speed limit and a high level of on street parking. The level of on street parking and wide nature of some of the junction bellmouths make it harder to feel safe when crossing in the vicinity of the schools.

This report therefore focuses in particular on the area in the vicinity of the school in terms of the options for providing pedestrian improvements, including dropped kerbs crossing facilities that are as safe as possible.

2. SITE ANALYSIS:

Both the infants and Juniors Schools sit on the same campus located on Berryscroft Road, between the B376 Staines Road to the west and The B377 Ashford Road to the East. Refer to *figure 1* for the site location.

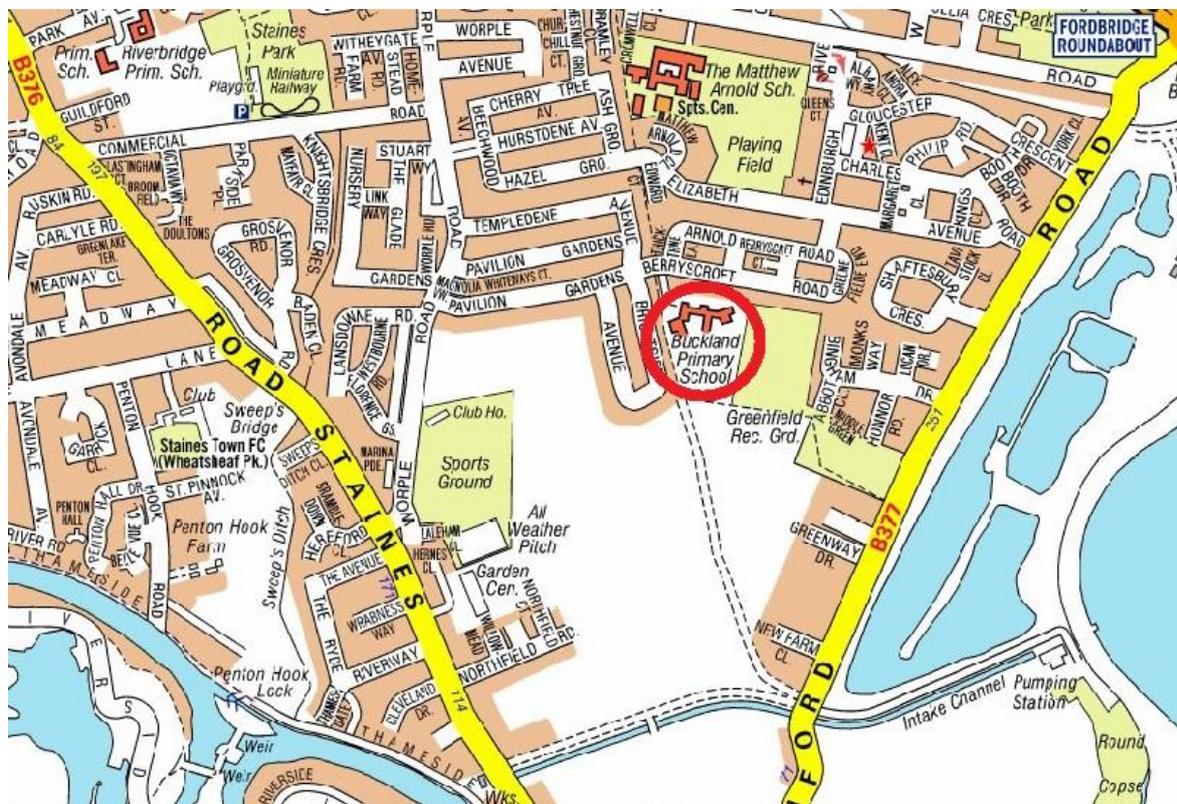


Figure 1 – site location

Buckland Primary School is located on Berryscroft Road, which is a single carriageway D classification road with one lane in each direction that is subject to a speed limit of 30mph. Vehicles can access Berryscroft Road from the north via Arnold Road and the west via Pavillion Gardens. Both of these are D classification roads that are similar in nature to Berryscroft Road but at the western end of Pavillion Gardens is Worple Road, which is a busier C classification Road.

The area surrounding the school and along Pavillion Gardens generally has residential properties both sides of the road but Worple Road, whilst still residential is a wider road accommodating a higher volume of cars. It is known that pedestrians walk across Worple Road in order to access the school along Pavillion Gardens so whilst slightly remote from the school itself, this report will also look at improvements near to the junction of Pavillion Gardens and Worple Road.

3. DATA COLLECTION:

3.1 Personal Injury Collisions

An assessment has been made of the personal injury collisions in this area covering a period of three years from 2017 to 2019. The area assessed covered Berryscroft Road, Arnold Road, Thickthorne Lane, Green Fielde End, Pavillion Gardens and the length of Worple Road from Pavillion Gardens to the existing speed cushions just south of Lansdowne Road.

During this period there were zero recorded personal injury collisions.

Personal Injury Collisions 2016 to 2018			
Year	Slight	Serious	Fatal
2017	0	0	0
2018	0	0	0
2019	0	0	0
Total	0	0	0

Figure 2 - Personal injury collision data

The police only record personal injury collisions, so these statistics do not capture any damage only incidents where the police do not often attend.

3.2 Highways Extents

The road and footway network in Berryscroft Road (around Buckland Primary School) is maintained as Highway by Surrey County Council as represented by the yellow coloured areas on the plan below.

The options for improvements in this area sit within the Highway Boundary.

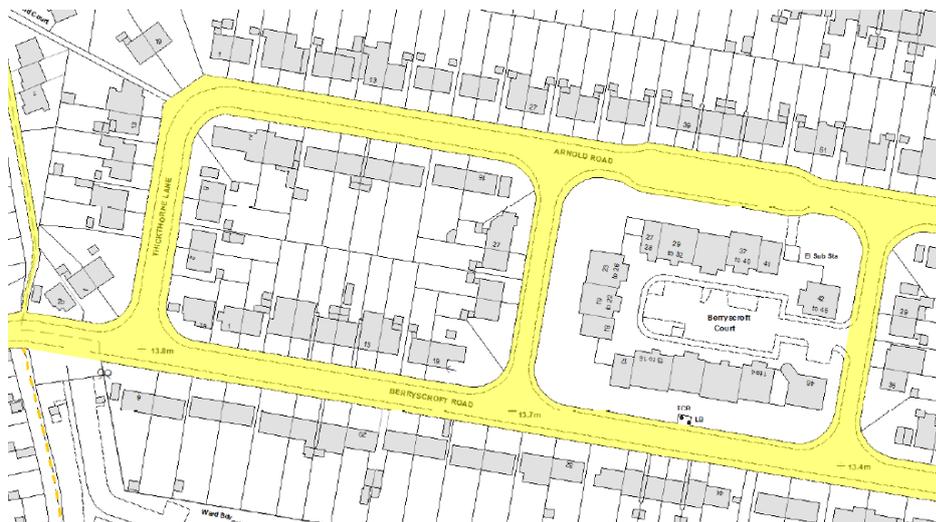


Figure 3 – Berryscroft Road Surrey County Council Highway

The road, footway network and adjacent verges around the junction of Worple Road and Pavillion Gardens are maintained as Highway by Surrey County Council as represented by the yellow coloured areas on the plan below.

The options for improvements in this area sit within the Highway Boundary.

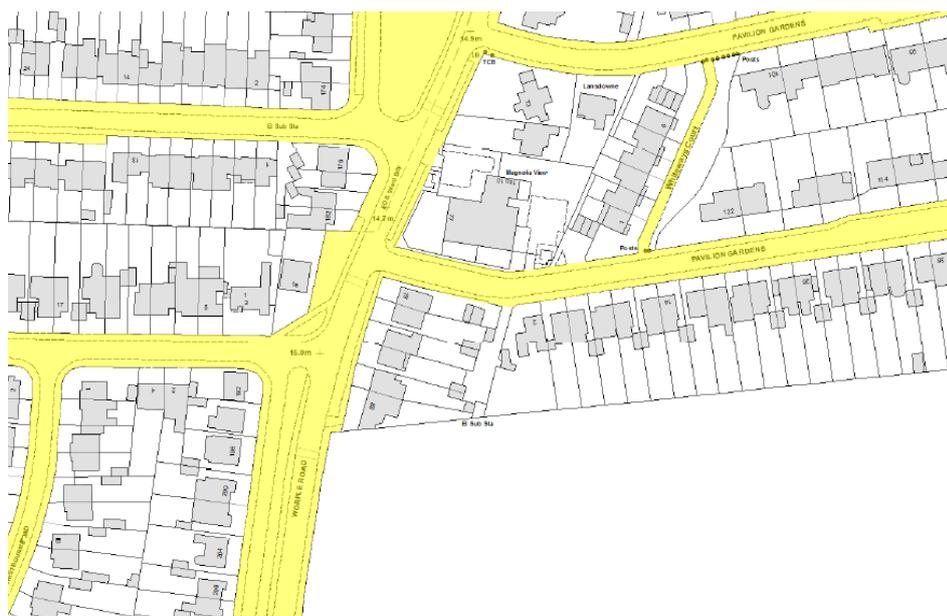


Figure 4 – Worple Road junction with Pavillion Gardens Surrey County Council Highway

3.3 Road Safety Audit

Those options deemed feasible were submitted for an initial (stage 1) Road Safety Audit but unfortunately the COVID-19 lockdown restrictions were introduced before this could be undertaken. The Road Safety Team therefore undertook a desktop study instead, the comments from which have been included within this report.

It must be noted that should any of the options be favoured, they would be subject to a full stage 2 Road Safety Audit, which would include a site visit. This is particularly important to note as the comments received so far have been based on a desktop survey only so the Stage 2 audit may raise issues not previously mentioned.

4. DISCUSSION AND OPTIONS:

A number of options have been investigated, which could offer a safer highway environment for all users. These are discussed below;

4.1 Location 1 option (a) - dropped kerbs near numbers 46 and 48 Berryscroft Road (refer to drawing PC1005_04)

Taking into account the bus stop on the northern side of Berryscroft Road (adjacent to Berryscroft Court Community Centre), this option is to provide a set of pedestrian dropped kerbs across Berryscroft Road, just west of its junction with Thickthorne Lane. There are currently no crossing facilities along this length of Berryscroft Road for pedestrians to get to and from the bus stop so providing a clear location for this to happen would be a positive step.

Pro's

- Would provide a clear location for people to cross the road to and from the bus stop.
- Improved accessibility for those with wheelchairs, pushchairs and the like to and from the bus stop.
- All works are within the Public Highway so no affect on private land.

Con's

- Would require some of the existing on street parking to be removed in order to provide the facility and ensure visibility can be achieved. This is likely to be opposed by the residents as parking appears to be limited in this area.
- The proposed yellow lines would be required to clearly indicate the length of road to be kept free of parking, but enforcement is likely to be limited so there could be times when parking does occur, particularly at peak school times for example.

Guide Price £9,500.00

4.2 Location 1 option (b) - dropped kerbs with build out near numbers 46 and 48 Berryscroft Road (refer to drawing PC1005_05)

Similarly to 4.1, this option is to provide a set of pedestrian dropped kerbs across Berryscroft Road, just west of its junction with Thickthorne Lane but this option shows a kerb build out on the southern side. This would shorten the crossing distance for pedestrians and could have a slightly reduced impact on parking over option (a).

Pro's

- Would provide a clear location for people to cross the road to and from the bus stop.
- Improved accessibility for those with wheelchairs, pushchairs and the like to and from the bus stop.
- The build out shortens the crossing distance and therefore time for pedestrians.
- All works are within the Public Highway so no affect on private land.

Con's

- Would require some of the existing on street parking to be removed in order to provide the facility. This is likely to be opposed by the residents as parking appears to be limited in this area.
- The proposed yellow lines would be required to clearly indicate the length of road to be kept free of parking, but enforcement is likely to be limited so there could be times when parking does occur, particularly at peak school times for example.

Guide Price £11,000

4.3 Location 2 option (b) – Junction narrowing with pedestrian dropped kerb improvements opposite number 20 Berryscroft Road (refer to drawing PC1005_07)

The bellmouth of this junction is wider than you would usually expect in a residential area. An option to provide a central pedestrian crossing island within the bellmouth of this junction was investigated but the turning movements analysis concluded that it would not work for a refuse vehicle so this option is to build out the kerb radius on either side and provide upgraded pedestrian dropped kerbs. This options also seeks to provide an additional pedestrian dropped kerb across the Berryscroft Road to assist people going to and from the school.

Pro's

- Reduced crossing distance for pedestrians wishing to continue along the northern footway of Berryscroft Road.
- Improved visibility for pedestrians looking into the side road and also for drivers to be able to see people trying to cross.
- In theory, vehicle speeds should be reduced as the junction mouth would be a tighter turn.
- An additional crossing point for the main length of Berryscroft Road.
- All works are within the Public Highway so no affect on private land.

Con's

- The proposed yellow lines would be required to ensure the junction and pedestrian dropped kerbs were clear of parked vehicles, but this is likely to displace an element of on street parking. This is likely to be opposed by the residents as parking appears to be limited in this area.
- Enforcement of any new parking restrictions is likely to be limited so there could be times when parking does occur, particularly at peak school times for example.

Guide Price £21,500

4.4 Location 3 option (b) - Junction narrowing with pedestrian dropped kerb improvements at the Thickthorne Lane junction (refer to drawing PC1005_09)

As with location 2, the bellmouth of the junction with Thickthorne Lane is also wider than you would usually expect in a residential area. An option to provide a central pedestrian crossing island within the bellmouth of this junction was also investigated but again, the turning movements analysis concluded that it would not work for a refuse vehicle. This option is therefore to build out the kerb radius on either side and provide upgraded pedestrian dropped kerbs. An additional pedestrian dropped kerb across the Berryscroft Road itself is also included in order to assist people going to and from the school.

Pro's

- Reduced crossing distance for pedestrians wishing to continue along the northern footway of Berryscroft Road.
- Improved visibility for pedestrians looking into the side road and also for drivers to be able to see people trying to cross.
- In theory, vehicle speeds should be reduced as the junction mouth would be a tighter turn.
- An additional crossing point for the main length of Berryscroft Road.
- All works are within the Public Highway so no affect on private land.

Con's

- There has been an issue with vehicles crossing the footway to park within the frontage of the adjacent property, which is in direct conflict with the pedestrian dropped kerb locations so any works at this location would need to ensure that could not happen.

Guide Price £21,500

4.5 Location 4 - dropped kerbs just west of the Primary School entrance (refer to drawing PC1005_10)

Taking into account the footpath than runs down between the houses from Edward Court just to the north, this option shows the provision of new pedestrian dropped kerbs near the main entrance to the school site, where the path meets Berrycroft Road. These would need to be located just east of the existing vehicular access but the area is already covered by on street parking restrictions so this could be a simple improvement.

Pro's

- Would provide a clear location for people to cross the road to and from the bus stop.
- Improved accessibility for those with wheelchairs, pushchairs and the like to and from the school.
- The existing parking restrictions should ensure visibility is retained at all times.
- All works are within the Public Highway so no affect on private land.

Con's

- None.

Guide Price £8,500

4.6 Location 5 options (a) and (b) – raised table and pedestrian crossing island in Worple Road, just south of Pavillion Gardens

At this location, replacing the existing speed cushions with a raised table that doubles up as a pedestrian crossing facility would usually be a good option but on the eastern side, the verge and footway already fall backwards towards the properties. Raising the level of the crossing point to match the top of a raised table would therefore exacerbate this with the potential to create a gradient that is difficult for the elderly or that is slippery during the winter.

Another common solution to improving pedestrian crossing facilities would be a central pedestrian refuge island and the existing central hatching lends itself to this but again, there are issues. The existing hatching measures 1.35m wide but Surrey's standard for pedestrian islands is to target a width of 2m with a minimum. Whilst islands narrower than 2m have been provided in the past they cannot accommodate as many people waiting and can leave users with pedal bikes for example feeling exposed. Widening the road at this location in order to provide a 2m island also presents some difficulties due to the presence of two telecoms cabinets on the western side and the slope down from the road to the footway on the eastern side so this has not been considered further.

For these reasons and because there appears to be an alternative solution, these have not been considered further.

4.7 Location 5 option (c) – carriageway narrowing with dropped kerbs on Worple Road just south of Pavillion Gardens (refer to drawing PC1005_13)

An alternative to the ideas discussed in 4.6 would be to narrow the width of the road for pedestrians wishing to cross. It would be logical to do this by building out on the eastern side so it could be tied into the junction radius of Worple Road and the opportunity could also be taken to try and reduce the likelihood of over-run of the verge from larger vehicles turning left out of Worple Road. Building out the eastern side could also provide an opportunity to reduce the gradient of the footway link up from the existing footway to the new feature.

The central hatching would be tapered down to a centre line at the crossing facility providing a shorter crossing distance. Immediately after the narrowing, the eastern kerb would return to meet the existing to ensure the existing southbound bus stop is unaffected.

To ensure there is no break in the series of existing vertical traffic calming features and to provide the best opportunity for speeds to be reduced near to this feature, the proposal is to remove all three of the existing speed cushions but replace them with one cushion on each approach to the dropped kerbs. This will provide a consistent feature on both approaches.

Guide Price £19,500

4.8 Location 6 – raised table across the full width of Worple Road just south of Lansdowne Road (refer to drawing PC1005_14)

Vertical deflection is already established in this location due to the set of three speed cushions so in order to provide pedestrian dropped kerbs it seems logical to try and replace them with something that combines the two. The proposal for this location therefore consists of a raised table that also incorporates pedestrian dropped kerbs. This will ensure there is no loss of traffic calming features whilst providing a facility that will serve pedestrians wishing to walk in many different directions. Providing dropped kerbs at a raised table has the benefit that speeds should be better controlled than locations between features.

Worple Road is a bus route so in accordance with Surrey County Council's guidance, the flat top will need to be 7.5m long and the ramps 1.5m long.

The suggested location is further south than the existing speed cushions for two specific reasons;

- 1) the road is very flat and observations during a heavy period of rainfall indicate that water collects in the channels but does not obviously flow in any one direction. It is therefore advisable to ensure there are gullies at each corner to ensure surface water has a mechanism to get away. Locating the feature south would utilize two existing gullies, hence the proposal only requires two new gullies as opposed to four.
- 2) there is an existing street light immediately adjacent to the start of the proposed raised table that should prove beneficial in helping to illuminate the area.

Guide Price £33,500

4.9 Area wide one way option – covering Thickthorne Lane, Arnold Road and Berryscroft Road (refer to drawing PC1005_15)

This option is for a short one way system around the residential roads just east of the school entrance. Vehicles travelling eastbound past the school on Berryscroft Road would be diverted into Thickthorne Lane and Arnold Road, both of which would become one way. Where Arnold Road then meets the first Berryscroft Road link section, vehicles would be required to give way because traffic on the section of Arnold Road beyond that point would still be subject to two way flow as they are at present. Having given way, vehicles could continue straight along Arnold Road as normal or turn right into the Berryscroft Road link section (which would also become one way in a southbound direction). The section of Berryscroft Road, which then runs westbound back towards the school entrance would remain two way apart from a very short section just east of Thickthorne Lane, which would be narrowed to ensure westbound vehicles could not enter.

Physical measures as well as signing and road markings would be required to make it clear which direction vehicles are permitted to travel in and to try and ensure motorists were not tempted to disobey the signs. The eastbound bus stop currently adjacent to Berryscroft Court would need to be relocated north onto Arnold Road to ensure passengers could still board or alight within this neighborhood. The physical measures shown would also provide opportunities for the provision of improved pedestrian crossing facilities.

There is a significant level on street parking that already occurs on the roads affected so making some of them one way could in fact reduce congestion, particularly around school drop off and pick up times. With any new one way system there is a risk that vehicle speeds increase but in this instance the amount of on street parking could mitigate that to some extent.

Pro's

- Could reduce traffic congestion at peak times.
- Has the potential to provide additional / improved pedestrian dropped kerb facilities at various locations.
- All works are within the Public Highway so no affect on private land.

Con's

- There is the potential for vehicle speeds to increase.
- Re-locating the bus stop from Berryscroft Road to Arnold Road may inconvenience bus users and / or generate some concerns from residents.
- Would introduce inconvenience to some residents in terms of access / egress from certain directions but that may be outweighed by some of the benefits.

Guide Price £60,000

5. RECOMMENDATION:

The options discussed throughout Section 4 of this report are those that could be promoted but there is no real distinction between them in terms of being able to prioritise one over another. The options should therefore be considered as a palette of improvements from which to choose from should there be a desire, public pressure and budget to do so.

6. APPENDICIES

Drawings showing proposed options:

PC1005_04 – Location 1 (option a) dropped kerbs

PC1005_05 – Location 1 (option b) dropped kerbs and build out

PC1005_07 – Location 2 (option b) narrowing at junction

PC1005_09 – Location 3 (option b) narrowing at junction

PC1005_10 – Location 4 dropped kerbs

PC1005_13 – Location 5 (option c) narrowing on Worple Road

PC1005_14 – Location 6 raised table on Worple Road

PC1005_15 – One way system