

High Street, Shepperton Pedestrian & Parking Improvement Options

**Feasibility Report
March 2020**



Project Title: High Street, Shepperton
Pedestrian Improvements

Document Title: Feasibility Report

Client Reference: PC0987

Date: March 2020

Prepared By: Tim Cox

Authorised By: Jamie Daly

Amendment List

Issue / Rev	Issue / Rev Date	Removed		Inserted	
		Page	Issue / Rev	Page	Issue / Rev

File path: I:\EA\PC all\Resource Pool\.....

CONTENTS

1. INTRODUCTION	3
2. SITE ANALYSIS	4
3. DATA COLLECTION	9
3.1 Personal Injury Collision Data	9
3.2 Highway Extent	10
4. DISCUSSION AND OPTIONS	11
4.1 Option 1 – Existing zebra crossing upgrades	11
4.2 Option 2 – Existing zebra crossing upgrades with build out	12
4.3 Option 3 – Existing zebra crossing upgrades with Road Table	12
4.4 Option 4 –Signalised Crossing	12
4.5 Option 5– Additional Pedestrian Crossing	14
4.6 Option 5a Uncontrolled crossing with build out –	15
4.7 Option 5b– Uncontrolled crossing with build out	15
4.8 Option 5c – Uncontrolled crossing with pedestrian refuge island	16
4.9 Option 6 – Pedestrian access improvements	16
4.10 Option 7 – Parking Improvements	17
4.11 Option 8 – Do Nothing	20
5. RECOMMENDATION	20

1. INTRODUCTION:

Concerns have been raised by local residents regarding pedestrian safety along the High Street, Shepperton. Incidents of vehicles failing to stop at the existing Zebra Crossing have also been reported. The Joint Committee for Spelthorne, agreed to a feasibility study to identify potential improvements to highlight the existing zebra crossing facility to motorists. Other road safety and pedestrian improvements have also been explored.

In this report pedestrian safety and parking improvement options have been explored for High Street, Shepperton. Three options have been identified for improving the existing zebra crossing and another three options have been identified for a new uncontrolled pedestrian crossing outside of the public library. The parking improvements have been considered in zones along the high street, with different recommendations for each zone.

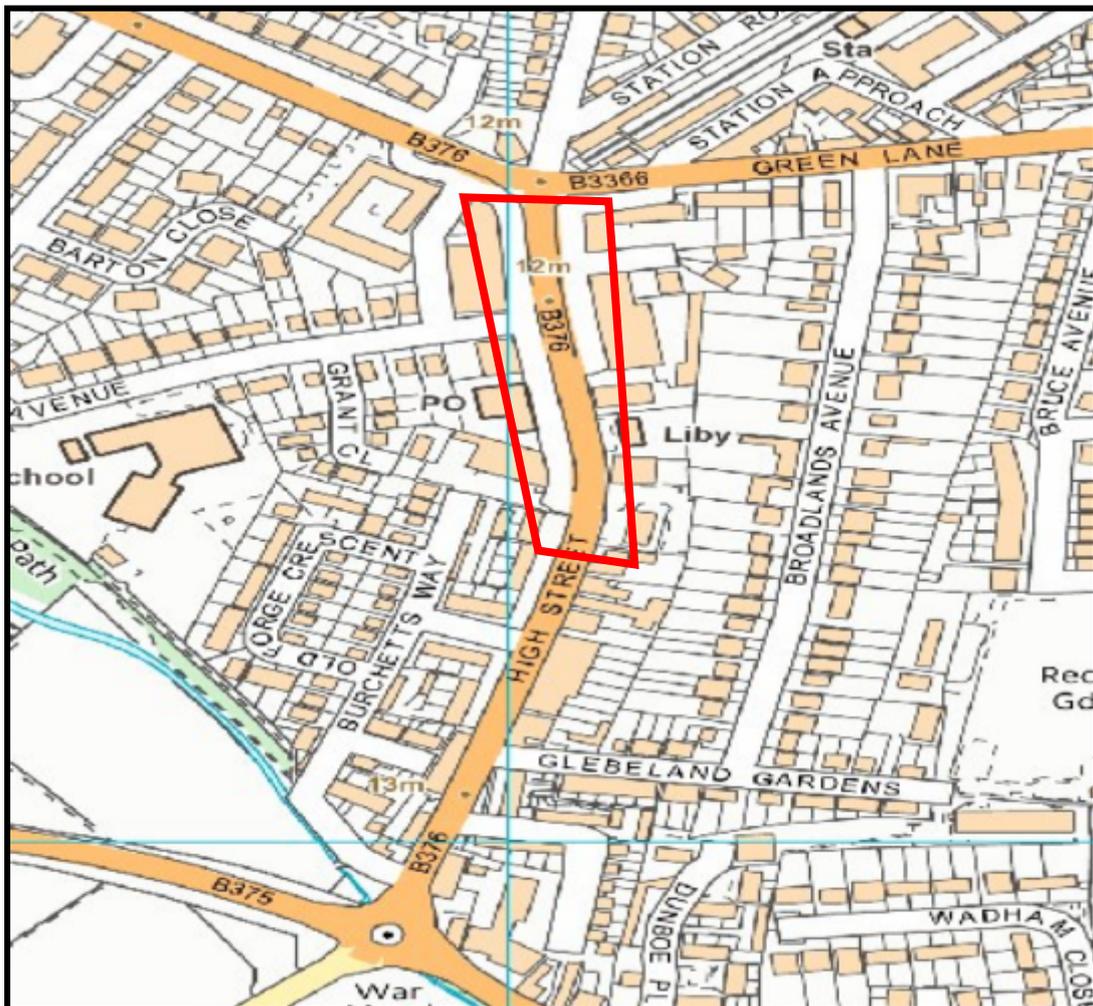


Fig 1. Location plan

2. SITE ANALYSIS:

This report will focus on the northern section of the High Street where both the existing zebra crossing and service roads are located. This is a busy pedestrian area which is dominated by vehicle traffic and on street parking. Fig 1 illustrates the study area.

The High Street is a traditional high street with two medium size supermarkets, village hall, post office, library, shops, a range of restaurants, and several cafes. There is a railway station to the north, providing direct access to London as well as surrounding towns and villages. Shepperton has excellent transport links with the M3 close by and the M25 only a couple of miles away

The High Street is a B class road which has been classified as a Secondary Distributor road (SPN 3) and is subject to a speed limit of 30mph. The road is 0.3 miles long and is primarily home to shops/businesses with some residential properties adjoined. Towards the north end of the High Street, there are service roads fronting parades of shops on each side of the carriageway.

There is also a regular bus service to nearby areas of Sunbury and Staines. Bus stops are located to the southern end of the High Street. Passenger Transport Group have confirmed that there are two services that use the High Street.

- 555—service running seven days a week from 04.40am to 22:00
- 557 Service runs Monday to Saturday between 06:45 -19:45

There are two pedestrian refuge islands to aid pedestrians across the road to the south of the high street and a signalised pedestrian crossing at the junction with Green Lane.

There are on street parking spaces, marked in bays along lengths of the High Street, which although help with slowing traffic down, their presence within such a busy traffic environment adds to the risk of conflict between pedestrians and vehicles.



Photo 1. Existing Zebra Crossing Facility

The zebra crossing has been in place since 2005 and is positioned well in order to maximise its use. On site observations confirmed that it was well used and remains the desire line for most pedestrians wishing to cross the High Street. However, the zebra crossing has restricted visibility to the south as a result of on street parking which is marked by parking bays as shown in photo 2. Proposals to remove this on street parking will be discussed in more detail within the options. There is a good system of street lighting throughout. This will illuminate the approaches to any proposed crossing facility, and illuminate the existing zebra crossing.



Photo 2. On street parking near to the south of the zebra crossing



Photo 3. Desire line for pedestrian's to cross on the High Street

Other on-site observations highlighted the following:

- An additional desire line for pedestrians to cross the High Street approximately 80 metres to the north of the zebra crossing outside the public library and opposite one of the supermarkets. As shown in photo 3
- The on street parking also restricts visibility at the proposed uncontrolled crossing outside of the library.
- The tactile paving at the zebra crossing does not comply with current guidance.
- There are several crossing points along the High Street/service roads which could benefit from tactile paving to assist the visually impaired. See photos 4 – 7



Photo 4. Location A – No tactile paving present



Photo 5. Location B – No tactile paving present



Photo 6. Location C – No tactile paving present



Photo 7. Location D – No tactile paving present

- The existing parking arrangements on both service roads makes it very difficult for cars to safely travel due to the narrow width and arrangement of parking bays. This is especially apparent when there is a HGV delivery to one of the shops. Reports from businesses state there are regular damage only incidents with vehicles.



Photo 8. The north west service road

- There is evidence of kerb strikes/damaged kerbs at the bell-mouths as drivers turn to enter and exit the service roads, potentially placing pedestrians using the footway at risk of conflict.

3. DATA COLLECTION:

3.1 Personal Injury Collisions

An assessment has been made of the personal injury collisions as recorded by Surrey Police for the High Street for the period between 1st January 2016 and 31st May 2019. During this period there have been ten recorded collisions resulting in injury along the High Street. All ten had a severity of 'slight'. Over half of these incidences have involved motorised vehicles colliding with other motorised vehicles. There have been three incidences involving pedestrians all of which occurred at different locations along the High Street as a result of the pedestrians trying to cross the road. Half of the recorded collisions occurred at the junctions with other roads, three with Laleham Road and two with Green Lane. There are no recorded personal injury collisions in the vicinity of the Zebra Crossing.

Last three year and year to date collisions (01/01/16 to 31st May 2019)			
Year	Slight	Serious	Fatal
2016	5	0	0
2017	3	0	0
2018	2	0	0
2019 (Jan to May)	0	0	0
Total	10	0	0

Fig 02. 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 High Street during this assessment period. Some collisions have a number of factors attributed to them.

Collision Contributory Factors	
Factor	Number
Failed to look properly	2
Stationary or parked vehicle	1
Passing too close to cyclist, horse rider or pedestrian	1
Loss of control	1
Inexperienced or learner driver/rider	1
Failed to judge other persons path or speed	1
Careless/reckless/in a hurry	1
Disobeyed double white line	1

Fig 03. Personal Injury Collision Contributory Factors

As you can see from the above table, there are many contributing factors to the recorded collisions along the High Street. The table shows that speed is not the primary cause of the accidents in the area. Therefore, the main focus of this report has been to consider the feasible options to improve the zebra crossing and other pedestrian facilities

3.2 Highway Extents

The Highway Extents on the High Street and surrounding roads were obtained to understand what areas could be improved without having to acquire land.

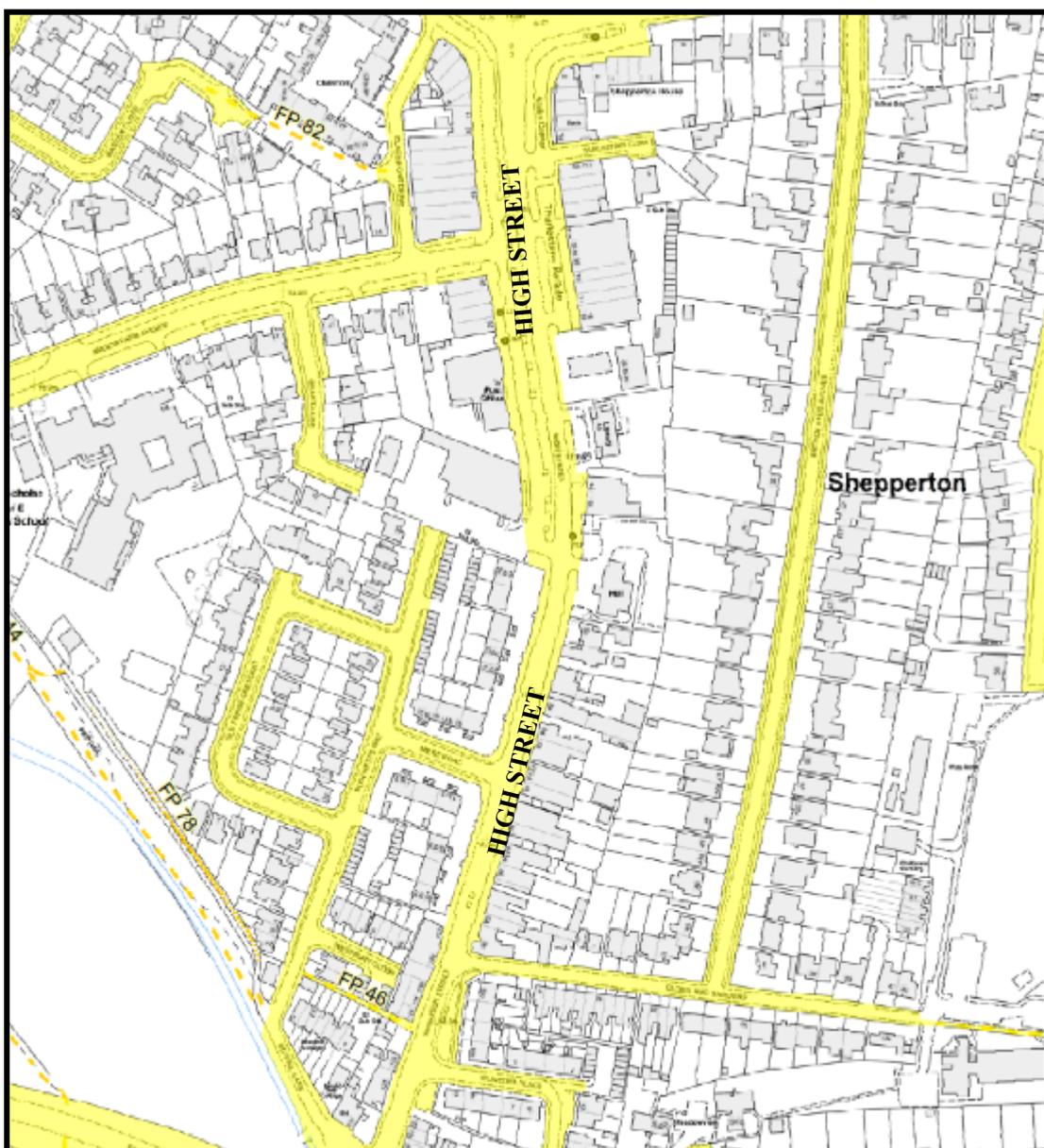


Fig 04. Extent of Publicly Maintainable Highway

4. DISCUSSION AND OPTIONS:

Design options have been prepared to achieve the three main objectives:

- Improving the existing zebra crossing facility
- Improving pedestrian safety and accessibility
- Improving the on street parking facilities

There are a number of different options explored below. All of the below options are within Surrey's Highway Extents and all drawings have been subject to independent Stage 1 Safety Audit. Comments from the Road Safety Audit have been included within each option where appropriate. Further independent safety audits would take place on any option that were to be progressed.

4.1 Option 1 - Upgrade existing zebra crossing features (see drawing see drawing PCO987-01

This option looks at improving the existing zebra crossing features. Currently the tactile paving at the zebra crossing does not comply with current guidance, and the road markings are faded and would benefit from being refreshed. The existing beacons at the zebra are outdated, replacing these with the more efficient Zebrite beacons would offer the main benefit of increasing the visibility of the crossing to motorists. .

Other benefits of Zebrites include:

- The LED lights automatically dim at night, so that vehicle drivers are not dazzled. This also reduces unwanted light pollution.
- Vandal resistant cast aluminium construction.
- Lower maintenance costs due to 100,000 hour LED lamp life.

Guide Price £30,000

Conclusion

Making all three improvements to the zebra crossing will benefit both pedestrians and motorists. Recommended as a lower cost option to provide improved awareness of the zebra crossing to road users. This option could be scaled back to further reduce cost.

.

4.2 Option 2 – Existing zebra with upgrades and a west side build out (see drawing PC0987_02)

Due to the existing on street parking to the west of the zebra crossing, visibility for and of pedestrians is slightly restricted.

This option involves building out the kerb line to the west side of the zebra crossing by 1.2m. The build out will improve the visibility, thus the pedestrians can see and be seen by motorists. The build outs will also reduce the crossing width for pedestrians from 7.4m to 6.2m.

The design includes for bollards with reflective banding to be installed on the build out to make motorists more aware of the change in alignments of the road. Road markings will also be altered to match the new alignments.

This option includes the improvements recommended from option 2

Advantages of a kerb build out:

- Crossing pedestrians become more visible to motorists
- Visibility for pedestrians crossing from the west, will no longer be restricted due the on street parking
- Reduced crossing width for pedestrians which will benefit vulnerable pedestrians including people with disabilities.
- Encourage lower traffic speed for north bound traffic

Disadvantages of a kerb build out:

- Additional drainage required

Guide Price £35,000

Conclusion

Combining all the improvements from Option 2 with the kerb build out will benefit both pedestrians and motorists. Recommended as a lower cost option to provide improved awareness of the zebra crossing to road users.

4.3 Option 3 – Existing zebra crossing with upgrades and install road table (see drawing PC0987_03)

This option involves constructing a raised table at the existing zebra crossing. Raised tables are effective at reducing vehicle speeds, which will therefore create a safer environment for pedestrians crossing the road as vehicles will be travelling at their slowest at the same point where pedestrians are crossing

Advantages of a raised table -

- Crossing pedestrians become more visible to motorists
- Safer and easier for pedestrians with disabilities.

Disadvantages of a raised table –

- Additional drainage required
- Emergency vehicles will need to reduce their speed
- Some traffic could transfer onto alternative routes
- Potential discomfort for cyclists and bus passengers
- Noise and vibration experienced by residents/businesses close to the table.

A longer ramp and gradient would be required as the High Street is on a bus route. The table will be a total of 10.5m long with 7.5m long flat top and 1.5m long ramps.

This option includes the improvements recommended from option 2

Guide Price £50,000

Conclusion

Based on the recorded evidence of collisions which have resulted in personal injury this is not recommended due to the low potential cost/benefit.

4.4 Option 4 – Signalised Crossing Drawing (see drawing PC0987_04)

A traffic signalised crossing enables pedestrians to cross the road on demand whilst motorists are held under a red signal. These facilities are most often situated where there is a high demand of pedestrian crossing movements – in town centres, near to schools etc. A Puffin or Ped-X crossing is considered to be the most appropriate type of signalised pedestrian crossing facility for this location.

Advantages of a signalised crossing -

- Pedestrians are given a clear signal when to cross
- Motorists are given a clear signal when to stop for pedestrians
- Crossing times are automatically extended for slower pedestrians (e.g. elderly and disabled)
- Can help maintain traffic flow in busy pedestrian areas when a zebra crossing could cause traffic delays

Disadvantages of a signalised crossing –

- Puffin/Ped –x crossings are the most expensive crossing type
- Pedestrians must wait for the signal before crossing. It may take considerably less time to cross at a zebra crossing
- Expensive to maintain

Guide Price £125,000

Conclusion

On site observations and comments received from residents suggest that an additional crossing facility would be more beneficial to the community rather than replacing the zebra crossing with a signalised crossing.

Based on the recorded evidence of collisions which have resulted in personal injury this is not recommended due to the low potential cost/benefit.

4.5 Option 5 - Additional Pedestrian Crossing Facility

As observed whilst on site, there is an additional desire line for pedestrians wanting to cross the road near to the public library and opposite one of the local supermarkets. This option looks at three feasible options for providing an additional crossing facility on this desire line.

The carriageway width at this location is 7.4m with 3.7m lanes, however the northbound lane has parking spaces 2.2m wide which reduce the available carriageway width down to 5.2m width when vehicles are parked here. This means that vehicles traveling north must straddle the centre line and large vehicles may have to informally give way to each other due to the restricted width. The carriageway alignment here is straight to the north of the proposed crossing options, to the south the alignment curves towards the west which reduces visibility for pedestrians who are to cross from the supermarket's side of the carriageway towards the library.

Therefore in the proposed options it is recommended that at least some of the on street parking be removed and parking restrictions introduced to allow for sufficient pedestrian visibility. The removal of on street parking will improve the flow of vehicles along the high street as the width will no longer be restricted by parked cars.

4.6 - Option 5a – Additional Crossing facility – Uncontrolled crossing with build out (see drawing PC0987_05a)

This option includes a 1m kerb build out on the northbound lane within the extents of the existing on street parking. The 1m build out features a dropped kerb with tactile paving and bollards to increase visibility of the build out for motorists. Hatching has been included on the approach and away from the build out to guide motorists.

In order to achieve the desirable minimum visibility of 65m it is recommended that all on street parking is removed to the south of the crossing and double yellow line parking restrictions installed

To the north of the crossing it is recommended that all on street parking be removed and double yellow line parking restrictions installed, however it would be possible to only remove a 21m length of parking here to achieve sufficient visibility. It would be possible for parking to remain beyond 21m from the

crossing however this would result in a pinch point when cars are parked and vehicle flow would be restricted.

Guide Price £15,000

Conclusion

Recommended as a lower cost option which would provide an additional crossing facility for pedestrians. The Road Safety Audit noted that the removal of the on street parking is likely to affect the flow and speed of traffic especially in northbound traffic. This could result in an increased risk of conflict with crossing pedestrians. The Road Safety Audit recommended retaining sections of on street parking that will not affect the line of sight for pedestrians. Consultation would be required with the local businesses due to the loss of on street parking

4.7 - Option 5b – Uncontrolled crossing with pedestrian refuge (see drawing PC0987_05b)

This option includes a pedestrian refuge island central to the carriageway. This would enable pedestrians to stop in the centre of the road, so they can split the crossing into two stages for each direction of traffic. The width of the carriageway allows only for a 1.3m wide island which is the minimum allowable width. Hatching has been included on the approaches to the island to guide motorists around the island and a keep left bollard is required for both approaching directions. In order to achieve the desirable minimum visibility of 65m it is recommended that all on street parking is removed to the south of the crossing and double yellow line parking restrictions installed.

To the north of the crossing it is recommended that on street parking be removed and double yellow line parking restrictions installed, however it would be possible to only remove a 28m length of parking here to achieve sufficient visibility. It would be possible for parking to remain beyond 28m from the crossing however this would result in a pinch point when cars are parked and vehicle flow would be restricted.

Guide Price £15,000

Conclusion

The Road Safety Audit noted that pedestrians waiting at the island to cross in two movements are at risk of conflict with passing vehicles due to the narrow width of the island. Not recommended as an option as it is not possible to construct a wider island due the constraints of the road layout.

4.8 - Option 5c– Dropped kerbs and tactile paving (see drawing PC0987_5c)

This option keeps the existing carriageway width with only the introduction of an uncontrolled crossing with dropped kerbs and tactile paving. In order to achieve the desirable minimum visibility of 65m it is recommended that all on street parking is removed to the south of the crossing and double yellow line parking restrictions installed.

To the north of the crossing it is recommended that all on street parking be removed and double yellow line parking restrictions installed, however it would be possible to only remove a 28m length of parking here to achieve sufficient visibility. It would be possible for parking to remain beyond 28m from the crossing however this would result in a pinch point when cars are parked and vehicle flow would be restricted.

Guide Price £15,000

Conclusion

Recommended as a lower cost option which would provide an additional crossing facility for pedestrians. The Road Safety Audit noted that the removal of the on street parking is likely to affect the flow and speed of traffic especially in northbound traffic. This could result in an increased risk of conflict with crossing pedestrians. The Road Safety Audit recommended retaining sections of on street parking that do not affect the line of sight for pedestrians.

Consultation would be required with the local businesses due to the loss of on street parking

4.9 - Option 6 - Pedestrian access improvements (see drawing PC0987_06)

There are several uncontrolled crossing points along both the High Street and service roads which could benefit from tactile paving to assist the visually impaired. Layouts of all pedestrian areas should be simple, logical and consistent to make it easier and safe for visually impaired pedestrians to move around. Currently, there is an inconsistency with the provision of tactile paving on the uncontrolled crossing points throughout the High Street

Guide Price £20,000

Conclusion

Recommended as a lower cost option which would improve accessibility for all visually impaired pedestrians.

4.10 - Option 7 – Parking Improvements (see drawing PC0987_07)

The parking along Shepperton High Street and the adjacent service roads has been grouped into zones shown on the drawing. On both stretches of the service roads, there is the facility for vehicles to park for free for up to 3 hours. During busy times it can be very difficult for cars to safely travel along the service roads due to the narrow width and arrangement of parking bays.

At several points, vehicles are using the footway to half park on due to the narrowness of the remaining running carriageway.

Footway parking causes hazards and inconvenience to pedestrians. It creates particular difficulties for blind or partially sighted people, disabled people and older people or those with pushchairs.

There is also a maintenance liability due to the damage to the kerb, the footway and the services underneath.

This option looks at each zone in turn, and recommending adjustments to the layout of the parking bays to improve the safety for both pedestrians and motorists.

Zone A – Remove 3 Parking Spaces to the west

The diagonal parking bays outside of Sainsbury's result in restricted visibility for parked cars as the alignment of the bays encourages front in parking. The parallel parking bay on the west side of the service road is narrow (less than 2m wide), it is recommended that the parking on the west side is removed and double yellow line parking restrictions installed. This would improve the visibility for motorists reversing out of the diagonal spaces and create additional space for vehicles to manoeuvre safely.



Photo 9. Zone A

Zone B – Removal of 1 Parking Bay and relocation of 1 Disabled Bay

Directly outside of the Co-op shop there is a disabled bay on the east of the service road and single parking space on the west. Both of these spaces cause difficulty for vehicles turning into the service road, it is recommended that they both be removed and replaced with double yellow line parking restrictions. The disabled bay could be relocated elsewhere along the service road.



Photo 10. Zone B

Zone C – Removal of on street parking (east side)

This section of the service road incurs a number of vehicles using the footway to half park. There is also a pinch point where the road narrows towards the west of the service road (outside the Nail Salon). When cars are parked on both sides of the road, it is very difficult for cars to manoeuvre through this pinch point.

It is recommended that all parking on the east along the service road is removed and replaced with double yellow line parking restrictions. A length of parking on the west of the service road directly outside of the Nail Salon should be removed so that there is no longer a pinch point where the road narrows for the crossing point.



Photo 11. Zone C

Zone D – Removal of on street parking (west)

It is recommended that parking on the west of this service road be removed and replaced with double yellow line parking restrictions. This will improve ease with which vehicles can pass through the service road as the width is restricted by the parking.



Photo 12. Zone D

Conclusion

All of the above suggested improvements would create a more pleasant environment for pedestrians using this busy high street. By removing some of the on street parking, vehicles would be able to manoeuvre through the service roads with more space and be at less risk of damaging other vehicles.

However, consultation with the local shop owners would be required, as the removal of on street parking could be contentious.

All measures could be considered through the next Parking Review.

4.11 - Option 8 Do Nothing

It can be argued that with no pedestrian personal injuries recorded in the vicinity of the existing zebra crossing, doing nothing should in theory not affect this record. However, we recognise the public's desire for improvements and as the Highway Authority Surrey County Council should be actively looking to provide improvements to the Highway network that could help to reduce personal injury collisions. Improvements can also encourage sustainable travel and enhance the environment.

5. RECOMMENDATION

Based on the recorded evidence of collisions which have resulted in personal injury, measures could not be justified in terms of casualty reduction when compared with other locations. This will however not address the original concern raised by local residents and Councillors.

Should measures be considered for progression, the following are recommended:

Option 2 – Zebra crossing upgrades and improvements

To improve the visibility for crossing pedestrians.

Estimated cost: £30,000 (could be scaled down to suit priorities and budgets).

Option 3 – Zebra crossing upgrades with kerb build out

To improve the visibility for and of the pedestrians crossing the road.

Estimated cost: £60,000 (could be scaled down to suit priorities and budgets)

Option 6 – Pedestrian access improvements

To improve accessibility for pedestrians who are visually impaired.

Estimated cost: £20,000

Option 7 – Parking improvements

Only recommended if the consultation process showed support for these measures.

This page is intentionally left blank