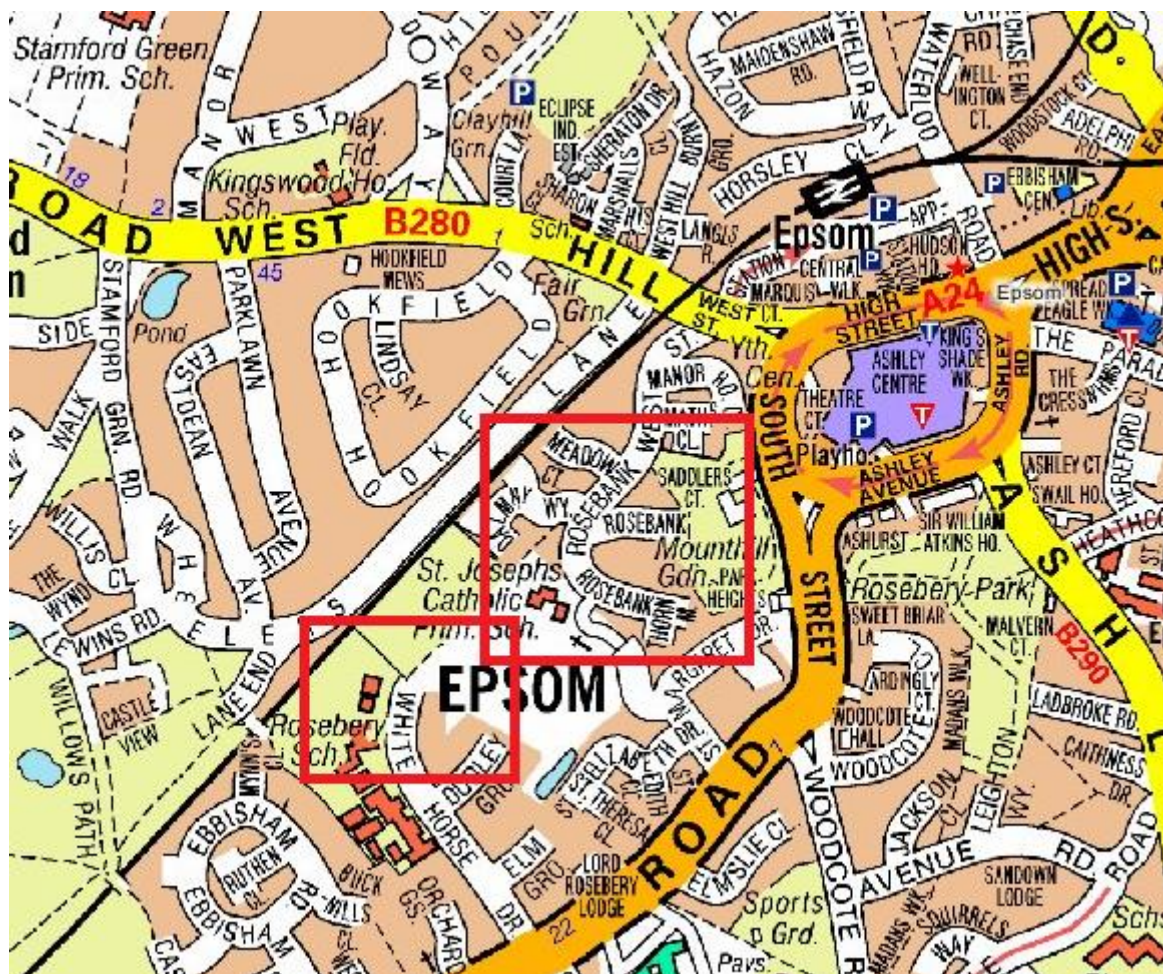




St Joseph's School, Epsom Safety Outside School Improvements

**Feasibility Report
September 2020**



Project Title: St Joseph's School, Epsom
Safety Outside School Improvements

Document Title: Feasibility Report

Client Reference: PC1028

Date: September 2020

Prepared By: Timothy Cox

Authorised By: Donna Selby

Amendment List

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

File path: I:\EA\PC all\Resource Pool\Projects\NE Epsom & Ewell\PC1028 St Josephs School\4. Reports

CONTENTS

	Page No.
1. INTRODUCTION	3
2. SITE ANALYSIS AND DATA COLLECTION	4
3. DISCUSSION AND OPTIONS	
3.1. Design and Road Safety Audit	8
3.2. Option 1 Do Nothing	8
3.3. Option 2 Pedestrian Improvements	9
3.4. Option 3 Parking Improvements – south of exit from St Joseph’s School	10
3.5. Option 4 Parking Improvements – north of junction with Dalmeny Way	12
3.6. Option 5 Cycle Access Improvements	13
3.7. Option 6 New Footway around turning circle -Whitehorse Drive	13
3.8. Option 7 New Uncontrolled pedestrian crossing point – Whitehorse Drive	14
4. RECOMMENDATION	14

1. INTRODUCTION:

St Joseph's Catholic Primary School has 425 pupils with a wide catchment area from Epsom, Ewell, Tadworth and Ashted.

The access arrangements to St Joseph's School changed in October 2018. Previously, part of the school community accessed the school via St Margaret's Drive, a private road across Abelea Green, and the car park at St Joseph's Church. This access route was closed to the school community in October 2018, which resulted with Rosebank and Whitehorse Drive being the only approach routes to St Joseph's School.

Since this change, road safety concerns have been raised in both Rosebank and Whitehorse Drive. These concerns have been expressed by the head teacher, others within the St Joseph's School community, and residents of Whitehorse Drive. These concerns were the subject of two petitions presented to Epsom and Ewell Local Committee in December 2018.

In response, site audits in accordance with the County Council's "Road Safety Outside Schools" policy were completed. Visits to both Rosebank and Whitehorse Drive during the school run were conducted in April and June 2019 involving county council's Road Safety Team, Safer Travel Team, Local Highway Engineers and Surrey Police.

The Road Safety Outside School Report was presented to Epsom and Ewell's Local Committee in June 2019 with the following recommendations:

- minor highway improvements such as tactile paving with dropped kerbs, bollards to prevent footway parking and improved signing and accessibility for cyclists.
- Engineering measures to be investigated further by means of a feasibility study.

This report considers the existing conditions at the site and evaluates seven possible options to improve road safety and accessibility for pedestrians and cyclists accessing St Joseph's School from both Rosebank and Whitehorse Drive.

2. SITE ANALYSIS AND DATA COLLECTION:

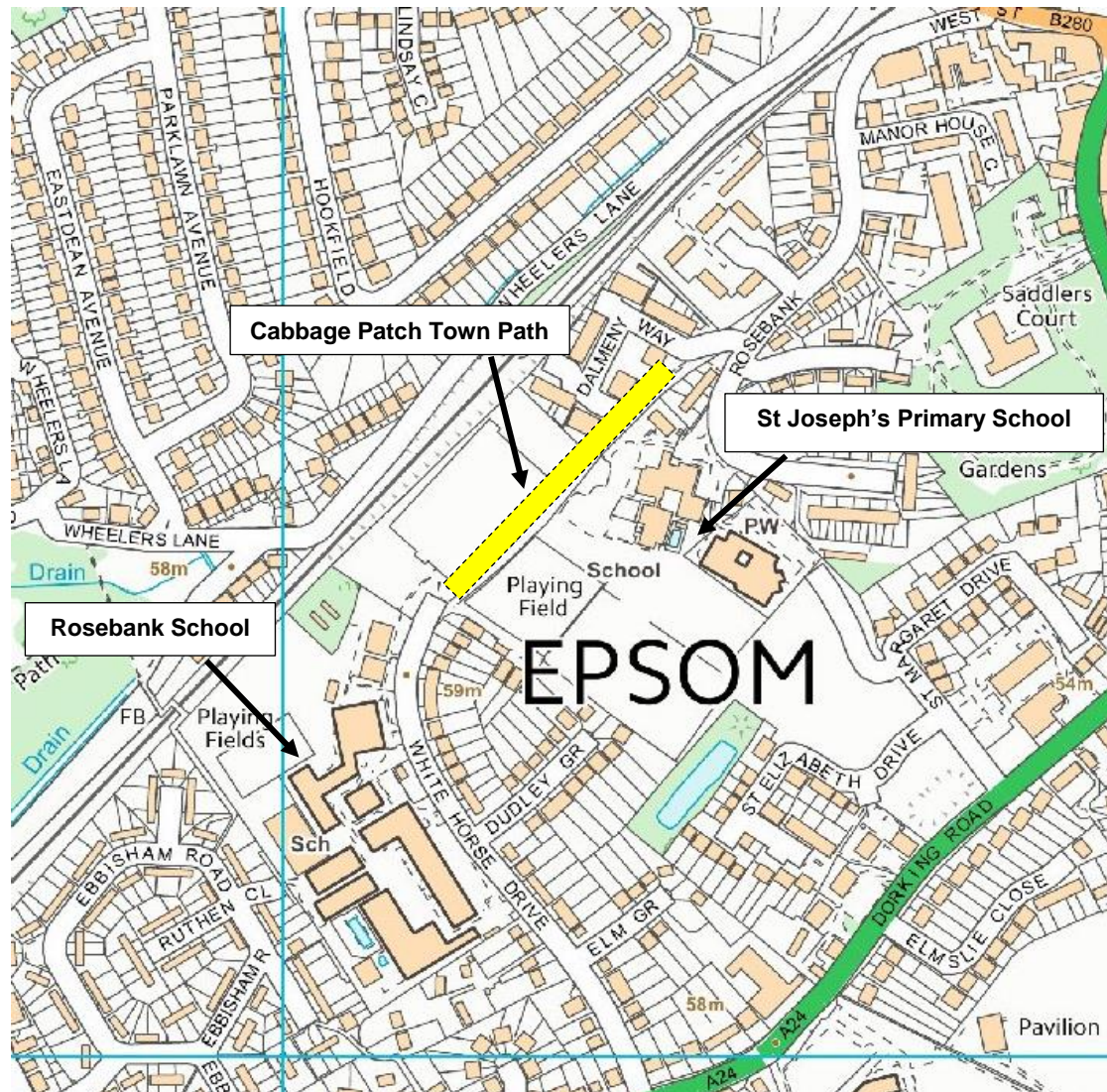


Figure 1 – Location Plan

Rosebank and Whitehorse Drive serve three educational institutions: Rosebery Secondary School, St Joseph's Primary School, and The Kindergarten Nursery. The morning arrival time for Rosebery and St Joseph's students are staggered. This means that all the Rosebery students are in before any St Joseph's start to arrive. It must be noted that both schools have made impressive efforts to encourage children to travel to school sustainably, with a wide proportion of children and parents walking to the schools. However, St Joseph's serves a wide catchment area meaning cars are the only transport option for travel for many parents.

Rosebank

Rosebank is a cul-de-sac, subject to a speed limit of 30mph which can be entered from the signalised junction with West Street. It is a mostly residential road of approximately 550m length, with St Joseph's School 400m into Rosebank. The vertical alignment of the road increases uphill towards the school where there is an entry / exit system allowing vehicles to enter and exit the school at separate points. The width of the carriageway outside St Joseph's School is 5.1m. there are parking restrictions throughout most of Rosebank with dedicated parking bays. Due to both the width of the road and parking bays, there is a section near to the school gates where only one-way traffic is possible. During the school drop off and pick up times this can result in congestion and gridlock between drivers exiting the school gates and drivers trying to access the schools drop off facility.



Picture 1: Point of Rosebank where congestion is a problem.



Picture 2: Narrow footway to pedestrian entrance of St Josephs. The verge and footway (outlined in red) belong to Epsom and Ewell Borough Council

The following observations were recorded during the Road Safety Outside Schools Audits;

- A number of pedestrians crossed the road immediately opposite the school's car park exit – this is one of the busiest points on the road due to the way the afternoon pick up system is operated. This is the most natural desire line for pedestrians approaching the school through Mount Hill Gardens to cross Rosebank.
- Most pedestrians approached the school on the same side of the road as the school. The majority of pedestrians cross the road along the length of Rosebank, rather than a particular spot. There is no natural desire line.
- There are no dropped kerbs across the junction with Meadow Court
- Several drivers mounted the footway to get enable cars to pass.
- In Dalmeny Way and other side roads drivers were observed to be parking on double yellow lines and on footways.
- The operation of the pick-up and drop off system, and the interaction of the resulting circulating queue of vehicles with pedestrians crossing the road is the most significant safety hazard.
- In the afternoon, drivers circulate continuously while waiting for their children to emerge from the school building. This results in a continuously moving circular queue of vehicles snaking between the school car park and Rosebank. This moving queue crosses the footway twice – at the entry and exit points of the car park.
- Both the footway and carriageway at the entry and exit points are in poor condition. The footway uncontrolled pedestrian crossings do not comply with current standards.
- The pedestrian footway to the school gates, is narrow and at times become quite congested. A wider footway would help create a safer and comfortable environment for school parents and children.
- There is poor visibility between the exit from the school car park and the approach up the hill along Rosebank, through the single file section formed by the parking bay adjacent to the school exit. This means that drivers approach the school up the hill and get stuck in the circulating queue, which fills both the school car park and the section of road between the car park entrance and exit. This means that any driver trying to exit the car park to move away from the school down the hill cannot proceed, as they are blocked by the stuck vehicle trying to approach up the hill. The result is gridlock, which can only be resolved

by drivers reversing down the hill through the single file section. The head teacher reported that she often has to intervene personally to unlock this gridlock, by requesting drivers to reverse back down the hill.

- In the morning drivers trying to use the drop off point in the school car park were observed to be obstructed from pulling off Rosebank, as drivers within the car park stopped part way through to drop off their children, rather than stopping as far forward as they could before reaching the car park exit.
- The cabbage patch town path is a designated cycle route, which is easily accessible for cyclists at the Whitehorse Drive end, but which has no easy access for cyclists at the Rosebank/Dalmeny Way end.

Whitehorse Drive;

Whitehorse Drive is also a cul-de-sac with a 30mph speed limit and is accessed from Dorking Road. This is a residential road of 400m length with Rosebery school along the west of the road. There are parking restrictions on only the west side of Whitehorse Drive for most of its length, and vehicles park along the east side. The carriageway is approximately 6m wide and there is a turning circle at the end. White Horse Drive is connected to Dalmeny Way (Rosebank) via the cabbage patch town path which is a shared footway / cycleway. Along this town path there is a gate which St Joseph's School use as a second point of access for their pupils. Parents use the turning circle in Whitehorse Drive as an ad-hoc 'kiss and drop' facility. The turning circle is monitored by a member of St Joseph's staff.



Picture 3: Turning Circle, Whitehorse Drive leading to Cabbage Patch Town Path

Collision Data

Within the last five-year period there have been no recorded collisions causing personal injury on either Rosebank or Whitehouse Drive.

3. DISCUSSION AND OPTIONS:

3.1 Design and Road Safety Audit

Design options have been prepared to achieve the main objective of the brief.

- To investigate options to improve road safety and accessibility for pedestrians and cyclists accessing St Joseph's School from both Rosebank and Whitehorse Drive.

The feasibility designs are based Ordnance Survey mapping. Detailed design would determine the exact highway widths available via topographical surveys as necessary. This would allow for confirmation of turning movements and available highway space.

An independent road safety audit has been undertaken on a number of the options where changes to the highway layout are proposed. Comments are included within the discussion of the options. Further independent safety audits would take place on any options that were to be progressed

3.2 Option 1 – Do Nothing

This option looks at carrying out no works.

Estimated Cost: £0

Conclusion

Based on the lack of recorded evidence of collisions involving pedestrians which have resulted in personal injury, measures could not be justified in terms of casualty reduction when compared to other locations. 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. These types of measures may also enhance the environment for residents and road users, and potentially encourage increased travel by sustainable methods such as walking or cycling.

3.3 Option 2 – Pedestrian Improvements – Drawing PC1028_01

Location A – Entrance and Exit to St Joseph's School.



The pedestrian crossing at the entrance / exit to St Joseph's School are not compliant with current guidance. There are no tactile paving to aid the visually impaired and the kerb upstand at the dropped kerb is higher than 0mm – 6mm. The carriageway between the crossing points is also in poor condition which could result in ponding or cause a trip hazard. It is recommended here that tactile paving is provided and new kerbs installed at the

correct upstand. There is a need for remedial work to be carried out on the carriageway to make the crossing safe for pedestrians.

Location B – Pedestrian Footway to entrance of St Joseph's School



The footway at the back of the grass verge is Epsom and Ewell Borough Council (EEBC) land. The footway leads to the pedestrian entrance to St Josephs and can become quite congested. The width of the footway is approximately 1.5m wide and in places has a fairly steep cross-fall gradient. It is recommended here that the footway be widened to 2m and the cross-fall adjusted so that the gradient is not so steep.

This will be safer for pedestrians, especially if conditions are icy.

The Chief Operating Officer at Epsom and Ewell Borough has advised that that he has no objection in principal to the release of the grass verge and footway to enable these recommended improvements.

Location C – Junction with Meadow Court.

Currently, there are no dropped kerbs at the junction of Meadow Court. As the majority of pedestrians use this side of Rosebank to walk up to St Joseph's School, the lack of dropped kerbs here creates a barrier for pedestrians, especially children with scooters/bikes and parents with pushchairs.



Picture 4: Meadow Court junction with Rosebank

A new uncontrolled crossing facility with associated tactile paving is proposed at this junction. This will benefit all pedestrians, especially those who are visually impaired and/or wheelchair/pushchair users

Guide Price £16,000

Conclusion

These three low cost options provide pedestrian improvements which would benefit both pedestrians accessing St Joseph's School and the residents of Rosebank and Meadow Court. These in turn will encourage parents and children to walk and cycle to school. Promoting sustainable transport options, through local schemes is a priority for Surrey County Council, and opportunities should be taken.

3.4 Option 3 – Parking Improvements – south of exit from St Joseph's School – Drawing PC1028_02

At this location there is currently an on-street parking bay which allows for two cars to park on Rosebank just south of the exit from St Joseph's School. When cars are parked here, the traffic is reduced to single file. This results in grid lock of the pick-up and drop off facility. This option proposes using the grass verge adjacent to the parking bay to construct a lay-by which would result in an unrestricted carriageway with vehicles being able to travel in both directions.



Picture 5: Parking bay south of the exit from St Joseph's School

The Grass area behind the existing footway is EEBC land. The Chief Operating Officer at EEBC has advised that that he has no objection in principal to the release of the grass verge to enable these recommended improvements.

There are a number of utilities below the footway and grass verge including SGN low pressure main, UKPN cables and BT. The exact depth of these utilities are unknown and it is recommended that trial pits be excavated to determine the depths. This would allow for the feasibility of this option to be fully assessed. The footway will also need to be diverted around the back of the new lay-by which would require for a lighting column to be relocated to the back of the new footway alignment

Guide Price £42,000 There may be additional cost involved with utility diversions for this option. This cannot be fully assessed without excavating trial holes to establish the depths. The guide price for trial pits to be excavated here would be approximately £1000.

Conclusion

This option provides the only workable solution to the main safety issue recorded in the Road Safety Outside School Audits. By creating a lay-by for the parked cars, the carriageway width will enable two-way traffic at this section. The operation of the schools in-and-out system will function considerably more safely due to the on-street parking being relocated. There will also be no loss of parking for the residents.

It is recommended to carry out trial holes to determine the exact depths of the utilities in the grass verge to determine if the overall cost would be viable.

3.5 Option 4 – Parking Improvements – North of Rosebank junction with Dalmeny Way - Drawing PC1028_03



Picture 6: Parking bay north of Rosebank junction with Dalmeny Way.

There is a second on street parking bay which allows for two more cars to park on the carriageway restricting access and egress to and from St Joseph's school. An additional parking lay-by can be constructed using the highway verge 10m to the south of the on-street parking. To allow for construction of this lay-by items of street furniture including a lighting column sign posts and post & rail fence require relocation to the back of the new footway.

Guide Price £32,000. There may be additional cost involved with utility diversions for this option. This cannot be fully assessed without excavating trial pits to establish the depths. The guide price for trial pits to be excavated here would be £1000.

Conclusion

Together with Option 2 the additional carriageway space will enable two-way traffic flow, removing the main safety concerns raised during the Road Safety Outside School Audits. There will also be no loss of parking for the residents. It is recommended to carry out trial holes to determine the exact depths of the utilities in the grass verge to determine if the overall cost would be viable

3.6 Option 5 – Cycle Access – Drawing PC1028_04

There is a desire to make the Cabbage Patch town path more accessible for cyclists at the Dalmeny Way end of the path. This can be achieved by introducing a dropped kerb in a suitable location which will allow cyclists to easily exit the carriageway and join the path.



The existing cycleway signage is obscured by vegetation. It is recommended that vegetation clearance be undertaken to reveal the signage for pedestrians / cyclists and also new signage to be installed on the bollards at the entrance to the path.

There is a persistent issue of vehicles parking along the footway along Dalmeny Way. This can be addressed by placing bollards along the edge of the footway to prevent vehicles being able to mount the kerb

Guide Price £6,000

Conclusion

This option will benefit both cyclists using this town path to access Rosebank School and residents in the surrounding roads who use cycling as their mode of transport. The improvements will encourage more people to use sustainable modes of transport.

The bollards on the footway will deter motorists from parking on the footway, creating a safer environment for both cyclists and pedestrians.

3.7 Option 6 – Footway around Whitehorse Drive turning circle – Drawing PC1028_05

The current layout at Whitehorse Drive outside Rosebery School requires that pedestrians traveling towards the Cabbage Patch town path access to St Joseph's School, must walk along the carriageway. By constructing a footway around the turning circle at the end of Whitehorse Drive this could be prevented. Vehicle tracking has shown that this would still allow vehicles to manoeuvre about the turning circle with a 2m footway.

Guide Price £20,000

Conclusion

Pedestrians approaching the Rosebery side of the road are obliged to cross the road to access the Cabbage Patch town path. There is a risk of a vehicle and pedestrian conflict, especially as it was observed that vehicles were reversing within the turning circle. A new footway around the end of the turning area would reduce this risk considerably and help promote walking to school as an option.

It must be noted that pedestrians may still choose to walk across the carriageway.

3.8 Option 7 –Whitehorse Drive New Uncontrolled Pedestrian Crossing with build out – Drawing PC1028_06

An alternative to the option of a footway around the turning circle at the end of Whitehorse Drive is uncontrolled pedestrian crossing with a build out to allow pedestrians to cross the road away from the turning circle. Associated tactile paving will be used to benefit pedestrians who are visually impaired. There is also the option to construct the new crossing without the build out, which would be low-cost alternative.

Guide Price £8,000/ £3,000

Conclusion

These low-cost options provide an alternative to Option 6 but with the same benefits for pedestrians. To cross the road without having to walk across/in the turning circle.

4. Recommendations

The response to any request for action needs to be proportional to the recorded facts. In this instance the facts relate to the recorded personal injury collisions involving pedestrians. Whilst the recorded data does not support the introduction of any measures, it is recognised that both the school community and parents have asked for changes to be made, and that these options would both improve road safety for pedestrians and cyclists and encourage the community to use walking and cycling as their preferred mode of transport.

Road safety, anti-social driving, obstructive parking, congestion and poor air quality are a prime concern of parents/carers on the school journey. It is also a prime concern for residents living near to schools.

The following Options are therefore recommended as they encourage sustainable methods of transport and will reduce the need for parents to use their vehicles for the school journey.

Option 2; Pedestrian Improvements (£16,000) Additional costs may be incurred due to the presence of utilities, and it is recommended that trial holes are done to ascertain the scope of the work needed.

Option 5; Cycle Access Improvements (£6,000)

Option 6; New Footway around the turning circle Whitehorse Drive (£ 20,000)