

Epsom Downs Improvements to equestrian facilities.

Feasibility Report

February 2018



Project Title: Epsom Downs
Improvements to Equestrian Facilities

Document Title: Feasibility Report

Client Reference: PC0862

Date: February 2018

Prepared By: Siva Kasinathan

Authorised By: Jamie Daly

Amendment List

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

CONTENTS

	Page No.
1. INTRODUCTION	3
2. SITE ANALYSIS	5
3. DATA COLLECTION	10
3.1. Statutory Authorities Plant Request	
3.2. Collision Data	
4. DISCUSSION AND LIST OF MEASURES (OPTIONS)	12
4.1. Location A: Ashley Road signalised crossing	
4.2. Location B: The Rubbing House Public House	
4.3. Location C: Langley Vale Road signalised crossing	
4.4. Location D: Headley Road warning signs	
5. RECOMMENDATION	15
6. APPENDICES	16
1) Drawings	

1. INTRODUCTION:

Epsom Downs is a Grade 1 racecourse situated in Epsom, Surrey, England. It has the capacity to accommodate 130,000 people. It has a long-running history of hosting the Derby Stakes otherwise known as 'The Derby'. The course itself is owned by the Jockey Club, who have a long standing relationship with the British Royal Family which is celebrated with the Queen's presence at the Derby.

The racecourse and the many nearby stables and training facilities are important to the local economy and generate equestrian traffic on the local highway network. A key local perceived concern is the safety of equestrian traffic ensuring access can be safely maintained between equestrian facilities and the local network of routes utilised by equestrians.

Epsom and Ewell Local Committee agreed to fund a feasibility study to investigate the improvement of conditions of existing equestrian facilities, including the review of the equestrian warning signs in Headley Road, and the potential for the upgrading of signal equipment in Langley Vale Road and Ashley Road at the existing equestrian crossing points. It was also reported that there were parking issues along the access to the Rubbing House Public House. Visitors are observed to park along both sides of the road causing congestion on event days. Also visitors are parking in this location for access to the Downs to exercise their dogs which can cause conflict with equestrians.

The purpose of this report is to assess the feasibility of providing safer and improved equestrian facilities at the locations identified by the Jockey Club.

The following documents and assessment process have been used for this study; -

- Traffic Advisory Leaflet (TAL) 3/03 Equestrian Crossings - provides details of the assessment process for crossings.
- Local Transport Notes 1/95 and 2/95 – these cover the assessment and design of pedestrian crossings providing supplementary information to TAL 3/03.
- Design Manual for Roads and Bridges (DMRB) TA57/87 Roadside Features - contains a chapter on facilities for ridden horses containing useful specifications such as speed, visibility, gradient, headroom and crossings.
- Advice from the British Horse Society giving further supplementary guidance on equestrian crossings.

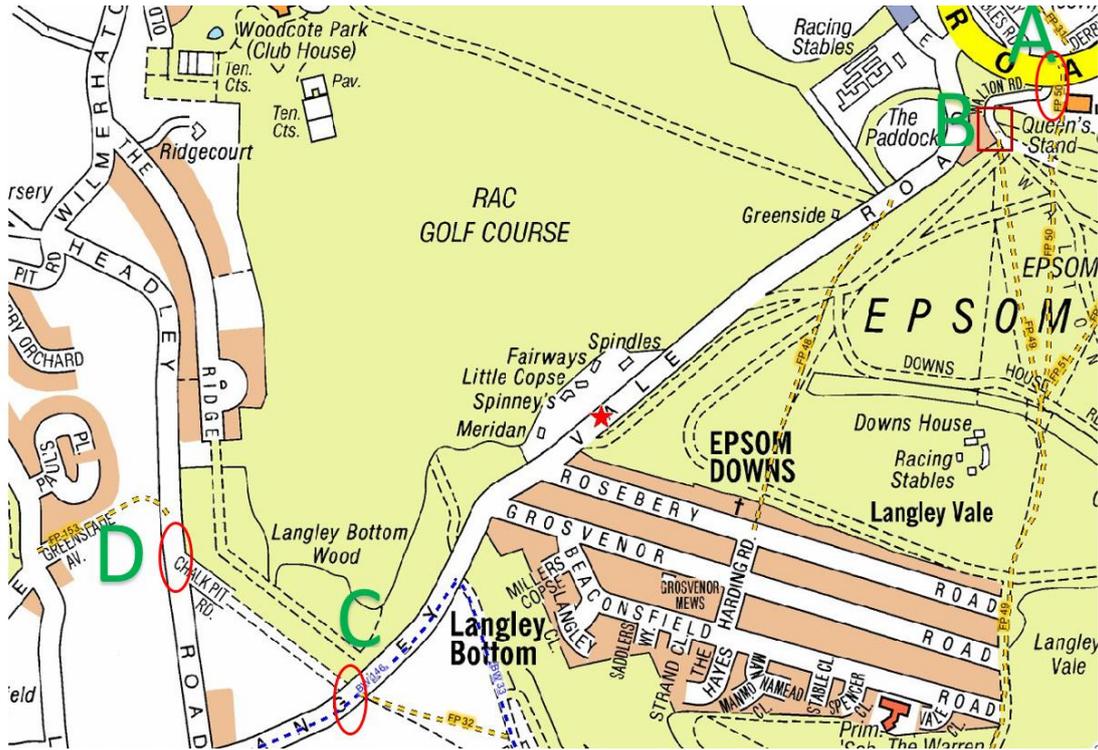


Figure-1: Location Plan showing local highway, bridleway and footpath network approaching and surrounding Epsom Racecourse

2. SITE ANALYSIS:

Location A: Ashley Road Equestrian Crossing

The main access point for equestrians in the area of the Queen's Stand is located on the southern side of Ashley Road, situated parallel to stables on the opposite side of the road. An equestrian crossing is located at the access with significant numbers of equestrians using this crossing.



Figure-2: Eastbound view of Ashley Road approaching existing Equestrian Crossing
(source of images: Google Streetview)

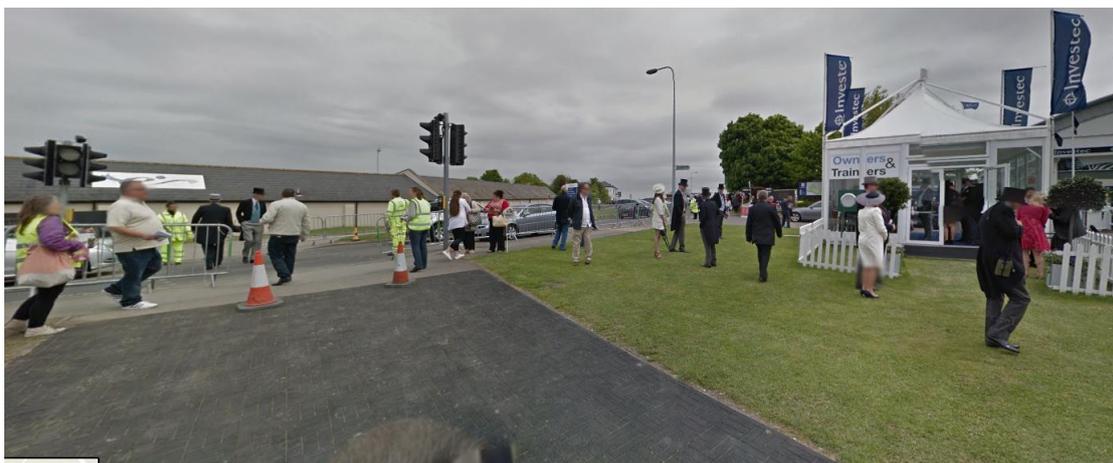


Figure-3: View to Equestrian Crossing in Ashley Road

B290 Ashley Road is a distributor of local traffic to the local towns of Epsom, Tadworth, Ashted and Leatherhead. Through traffic from a wider area also uses the road linking routes such as the A24, A217 and providing access to the M25. Due to this volume of traffic and speed of vehicles, equestrian riders can sometimes experience difficulties as horses require an adequate margin of separation from vehicles.

Ashley Road is a single carriageway road with a continuous inclination from its junction with Langley Vale Road past the racecourse. The carriageway width measures 7.6m with lane widths of 4.1m westbound and 3.5m eastbound. The road is subject to a 40mph speed limit throughout the section of Ashley Road. A system of street lighting is present and the horizontal and vertical alignments of the road provides good visibility in each direction. Bus stops are located in both directions.

Recorded personal injury collision data, between January 2012 and November 2017, has been collected for the section of the crossing points. The accident data is included in section 3.2 of this report and shows that no collisions have occurred at this location.

It is noted from observations reported by the Jockey Club that engine noise and the strong air current from passing vehicles can be distressing for horses and riders using the crossing. In accordance with normal practice push buttons have been installed for equestrian riders at a distance of approximately 20m away from the crossing allowing time for the crossing to activate and vehicles to stop as equestrians approach and cross Ashley Road.

Location B: Rubbing House PH access Road

The Rubbing House PH is located approximately 75m away from the racecourse accessed by vehicle from Langley Vale Road.



Figure-4: Access Road leading to Rubbing House PH

The access road leading to the Rubbing House PH is approximately 100m in length with a width of 5.6m for two way traffic. Approximately 40 parking spaces are provided in the PH car park at the end of the access. No waiting or loading restrictions exist on the access road.

The access road is used regularly on a daily basis by equestrians to access training facilities and a network of equestrian trails. Similarly, dog walkers also use the access road for parking to access the Downs and it is reported that conflict between the two user groups does occur due to the unexpected nature of movements and noises. The narrow width of the access road can result in congestion when parking overflows from the PH car park.

Location C: Langley Vale Road Equestrian Crossing



Figure-5: Equestrian crossing located in Langley Vale Road

Langley Vale Road is a single carriageway road with a continuous inclination from north east to south west running between Ashley Road at its northern end and the junction of Downs Road / Farm Lane / Headley Road at its southern end. The road links to the residential roads of Rosebery Road and Grosvenor Road and provides access to a neighbouring farm.

The carriageway width measures 7.8m with lane widths of 3.8m in a northeastwards direction and 4.0m in southwestwards direction. Along the section subject of this report, the speed limit is 30 mph. The access road to the Rubbing House PH is located towards the north end of Langley Vale Road and an equestrian crossing is located to the north of the junction with Headley Road, at the southern end of a no-through road named Chalk Pit Road.

Chalk Pit Road is located north-west of Langley Vale Road. Entry to vehicular traffic at its southern end has been restricted with bollards installed approximately 12m back from the carriageway edge and controlled crossing

facilities provided. A bridleway on the southern side of Langley Vale Road gives access to Langley Bottom Farm.

Holding areas are present at the crossing. Trees and hedges planted alongside the carriageway generally line this section of Langley Vale Road with a short length of verge present on the north side of the road approaching the crossing. Due to few residential properties, and no shops or public services being within close proximity of the location, the level of crossing movements by users other than equestrians is low.

On the northbound approach to the crossing there is a slight bend and a mature tree located approximately 36m south west of the crossing which restricts visibility to the absolute minimum requirements. Visibility to the crossing in a southwest direction exceeds desirable standards.

Four street lighting columns are provided on the south side of Langley Vale Road to illuminate the crossing point. Road signs warning other road users of the accompanied horses or ponies likely to be in or crossing the road are present on both approaches to the crossing. These are supplemented with 'slow' road markings laid on red surfacing. Vegetation has overgrown a warning sign and a defunct vehicle activated sign (VAS). Existing road markings at the crossing no longer comply with current regulations.

The carriageway forms a curvature nature in two locations, south-west to the crossing and North-East to Rosebery Road junction. Eight personal injury accidents were recorded between January 2012 and November 2017. The accident data shows that no pedestrian or equestrian related collisions have occurred at this location. The collisions that have occurred in Langley Vale Road, mostly travelling south west bound, have been between vehicles making overtaking movements or vehicles losing control due to contributory factors such as skidding or speeding on the bend road section.

Location D: Headley Road junction with Chalk Pit Road



Figure-6: Headley Road junction with Chalk Pit Road

Headley Road commences outside Ashtead Park Garden Centre at its junction with Pleasure Pit Road and Wilmerhatch Lane, running southwards to its junction with Langley Vale Road south. Woodruffe Stables are located to the west and a Golf course and Chalk Pit stables lie to the east.

Vehicular access to Chalk Pit Road, which runs between Headley Road and Langley Vale Road, is restricted beyond residential properties at its southern end. This link road is therefore mainly used by equestrian riders.

Headley Road is a single carriageway road with the traffic volume being relatively low compared to the other two locations. The carriageway width measures 6.5m with lane widths of 3.2m northbound and 3.3m southbound. The speed limit is 40 mph throughout this section and one personal injury accident has been recorded in the last five years. Trees and hedges of varying size and condition with canopies overhanging the carriageway generally line Headley Road. The existing carriageway surface is considered to be in a reasonable condition. A single lamp column is present at the entrance to Woodruffe stables.

The junction of Chalk Pit Road and Headley Road is an acute angle junction. A 1.1m wide hatch marking is laid from the kerb edge each side of the junction enabling the give way lines to be moved forward for improved visibility of approaching vehicles from within the junction.

Wig Wag warning lights on each approach to the junction have been out of order for some time. These lights were activated by equestrians near the junction with Chalk Pit Road and Woodruffe Stables. 'Slow' road markings are present on both approaches to the junction with Chalk Pit Road.

3. DATA COLLECTION:

3.1 Statutory Authorities Plant Request

The following Statutory Authorities were approached with a level C2 Preliminary Enquiry on November 2017. It should be noted C2 enquiries are preliminary enquiries only and that depth of cover and possible costs of diversion are not investigated at this stage. A C3 Budget Estimate notice would need to be submitted to any affected authority as part of the detailed design stage, with a C4 Detailed Estimate being necessary prior to construction. The following Statutory Authorities have been contacted: -

1. Virgin Media
2. Scotia Gas Networks
3. British Telecom
4. UK-Power-Networks-Ltd (Electricity)
5. Traffic Signal layout (Surrey CC)
6. Thames Water
7. Linesearch (petroleum and high pressure gas)

An initial reference to Statutory Authority plans indicates diversionary work may be required for any works at Location A (Ashley Road) where services within the verge could be affected if a scheme to widen the crossing were to be progressed.

3.2 Collision Data

Collision details 2012-2017, as recorded by Surrey Police, as follows:

Ashley Road

The recorded accident data shows that no recorded pedestrian, pedal cyclist or equestrian accidents have occurred in the past 5 years at this location.

Outside Rubbing House PH Langley Vale Road

2015	<u>1 Slight injury accident involving 2 vehicles</u> V1 and V2 heading N- S. Waiting to go ahead-held up, driver of V2 has driven straight at the driver of V1 and left the scene.
------	---

Langley Vale Road

2013	<u>1 Slight injury accident involving 2 vehicles</u> Location: Langley Vale Road 167m East of Headley Road V1 and V2 travelling in opposite directions and for unknown reason V2 crossed centreline and collided with V1.
2015	<u>1 Slight injury accident involving 2 vehicles</u> Location: Langley Vale Road 200m East of Headley Road V1 and V2 heading south west. V1 has failed to see V2 a pedal cyclist and hit rear of V2
2016	<u>1 Slight injury accident involving 1 vehicle</u> Location: Langley Vale Road V1 heading south west and lost control and collided.
2016	<u>1 Serious injury accident involving 1 vehicle</u> Location: Langley Vale Road outside 'Condover Stables' V1 heading south west and lost control and hit a tree.

Headley Road at junction with Chalk Pit stables

2013	<u>1 Serious injury accident involving cyclist</u> Pedal cyclist suddenly braked for unknown reason causing rider to fall over handlebars.
------	---

4. DISCUSSION AND OPTIONS:

The purpose of this report is to identify measures that could be delivered for equestrian improvements around the network approaching Epsom Downs Racecourse. The following paragraphs contain a summary of measures that could be delivered at each location, along with estimated costs.

4.1 LOCATION A: Ashley Road signalised crossing

- Remove existing 3no. equestrian push buttons located approximately 20m away from the crossing point and install new user-friendly (equestrian) buttons. At the time of writing, discussions are ongoing with specialist suppliers with regards to replacement buttons that are compatible with the existing equipment as well as suitable for the needs of equestrians.
Cost to be confirmed
- Provision of Horse warning signs on the approaches to the crossing. This will ensure motorists are aware of the crossing and should anticipate equestrians to be crossing the carriageway.
Cost included in civil work.
- Widen the existing signal crossing from 3.5m to 6.5m, including relocation of signal poles and the provision of additional equestrian signal heads. The crossing widths could be widened up to a maximum width of 10 metres however this would attract significant additional expenditure to relocate a controller cabinet and other services.
Cost (Signal) £7k
- These improvements would improve visibility for equestrian riders looking each way for approaching traffic and would also make riders more visible for red/green timing.
- The crossing would be maintained on the existing desire line whilst providing greater separation margins to equestrian riders to minimise distress from the engine noise and vibration from vehicles. Please refer to the drawing PC 0862_02 in Appendix 1.
Cost (civil works) £17k
- Total cost including civil works and signals (excluding replacement push buttons) £24k

4.2 LOCATION B: The Rubbing House Public House

- The Rubbing House PH is located close to the racecourse and the access road is frequently congested by parked vehicles. It is reported that the number of equestrians using this road has increased and that daily equestrian movements to reach training facilities and equestrian

trails often conflict with dog walkers and other pedestrians using the area for leisure purposes, hindering equestrian accessibility.

- It is considered that a waiting restriction to control parking on the access road may be of benefit in addressing the concerns raised. The road has been included in a forthcoming parking review with an initial site visit planned during the spring of 2018, with any subsequent proposals being brought forward for implementation during 2019. Temporary measures may also be considered for busier times.
- An additional option is to place temporary “No Parking” cones along the verge as referred on the drawing: PC 0862_02 in Appendix 1.

4.3 LOCATION C: Langley Vale Road signalised crossing

- TA 3/03 ‘Equestrian Crossing facilities for ridden horses’ indicates that in common with other crossings, such as Puffin, Pelican and Toucan crossings, zig-zag markings be used where the vehicle stops solely for those wishing to cross the carriageway. To comply with the above requirements the existing road marking layout should be amended with new Zig-Zag markings introduced. Renewal of the existing ‘high friction surface’ (HFS) to the approaches of the crossing would also be of benefit as shown on drawing PC 0862_04 in Appendix 1.
Cost (Civil work) £17k
- Replace existing 2no. equestrian push buttons located approximately 15m away from the crossing point and install new user-friendly larger buttons.
Replacement cost included in VAS.
- Cut back the vegetation to increase sightlines for the riders and install dual display VAS on the approaches to the crossing and modify existing push buttons to activate both the traffic signals and the VAS simultaneously. An additional speed limit roundel could be provided adjacent to the VAS along with ‘slow’ road markings on the 40mph to 30mph section of Langley Vale Road near to Rosebery Road. This will improve driver awareness of the crossing on each approach.
Cost (VAS) £16k
- The HFS surface treatment will address loss of control accidents.
Cost included in civil works.
- Total cost (excluding cabling) 33K

4.4 LOCATION D: Headley Road warning signs

- Decommissioning of the existing Wig Wags, warning signs and solar panel on both approaches to the junction, and the push buttons.
- Provision of VAS on the approaches to the junction with Chalk Pit Road and push buttons to activate the VAS. This will ensure motorists are provided with advance warning of equestrians near the junction.
- Renew road markings as shown on drawing PC 0862_05 in Appendix 1. Cut back vegetation to increase sightlines for equestrians.
Cost (Civil works) £2k

OTHER COST

Having discussed the nature of the locations C & D with specialist suppliers, a radio-controlled option was discounted as there is a slight curvature in the road and trees and high sided vehicles 'could' disrupt the direct line of sight of the push button and VAS. A 'wired' option should be employed for both Langley Vale Road and Headley Road. The cost implication of a permanently wired option has not been established at the time of this report. Cost to be confirmed.

5. RECOMMENDATIONS

Ashley Road signalised crossing (Location A)

This is the main focal point for equestrian access in the area of the Queen's Stand. The widening of the existing crossing requires the relocation of signals and new high friction surfaces to the approaches. It is considered that due to the significance of the crossing, this location would benefit from the implementation of both measures, as well as the replacement of equestrian push buttons.

The Rubbing House Public House (Location B)

The parking issues at the Rubbing House access road (Location B) are to be addressed separately, through the Epsom and Ewell Parking Review in 2018/19.

Langley Vale Road signalised crossing (Location C)

The existing facilities provide a safe crossing for equestrians, however, the addition of road markings would highlight the approaches. A dual VAS will further highlight the crossing to approaching drivers supplemented with 'slow' road markings laid on red patches. The removal of branches would improve visibility.

Headley Road warning signs (Location D)

The replacement of the redundant system by a modern and reliable alternative would increase driver awareness of equestrian presence on Headley Road, particularly near to Woodruffe Stables and the junction with Chalk Pit Road.

Summary

The proposals are anticipated to result in improvements for equestrians using and crossing the local highway network to access the racecourse and other local facilities of interest, and respond to the local perceived safety concerns. There are however considerable cost implications involved with implementation of the measures identified for which no budget is currently allocated. In order to progress the proposals a phased approach could be taken if necessary, with the above measures being prioritised for delivery between Surrey County Council, The Jockey Club and other relevant stakeholders.

6. **APPENDICES**

Appendix 1- Drawings

This page is intentionally left blank