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A316 Chertsey Road Cycle Review

Richmond Circus to Hospital Bridge Road Roundabout

Feasibility Report

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C15 Jubilee Avenue to Redway Drive
C16 Junction with Redway Drive
C17 Chertsey Road service road
(northwest side, Redway Drive to Chase Gardens)
C18 Chase Gardens to Kendrey Gardens

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1. Introduction

1.1 The section of the A316 Chertsey Road referred to in the brief is between Richmond Circus and Hospital Bridge Road Roundabout. The route under review is approximately 5km long.

History

1.2 The need for improvements for cyclists along the A316 between Richmond Circus and Hospital Bridge was identified in the A316 2006 Cycle Route Inspection stakeholder Plan (CRISP) report. Many of the recommendations made in this report were taken on board and are already completed or being progressed. These include schemes at major junctions along the route i.e. London Road, Phase1 and improvement schemes at side roads, such as Alisa Road.

Objective

1.3 TfL Road Space Management Sponsorship's (RSMS) primary objective is to provide improvements for cyclists on the links between these junctions. These include improvements to the surfacing and dropped kerbs, as well as addressing obstacles for relocation/removal such as street furniture and trees. The proposals also include a review of existing cycle signage and wayfinding with a view to improving and de-cluttering.

Stakeholders

1.4 Representatives from the Richmond Cycling Campaign (RCC) and other customers have corresponded with Transport for London (TfL) requesting cycle facilities to be provided along this route, which are of a similar nature to the Cycle Superhighways in other London boroughs. A site meeting was held with representatives from RSMS, Outcome Design Engineering (ODE) ,the London

Borough of Richmond upon Thames (LBRuT) and the Richmond Cycling Campaign whereby the route was cycled and issues highlighted in the CRISP report as well as further issues affecting cyclists along the route were observed and discussed.

1.5 The outcome of this meeting was that whilst the RCC stated its support for the localised measures, it favoured the provision of segregated cycle facilities. The reasoning being that segregated cycle facilities encourage more inexperienced cyclists and reduces potential conflicts with pedestrians. The RCC also stated the need for cycle priority across the junctions.

1.6 The general feedback from the RCC is bullet pointed below:

- A316 cycle route is a major cycle route to and from Central London and should be afforded a similar status to Cycle Superhighways.
- At side roads, cyclists using the footway on the main road should be given priority.
- A similar strategy applies to driveway accesses; albeit the solution to affording priority to cyclists is likely to be different.
- Facilities for crossing the A316 i.e. for local north-south cyclists require improvement.
- Cycle paths should be wide enough for two cyclists to pass without undue hazard.
- Cycle paths should be provided on grass verges where necessary. There is considerable scope for this.
- Consideration should be given to the acquisition of land where appropriate.
- Existing cycle signage is intermittent in places. The status of some footways i.e. whether shared use, is unclear at many locations. Signage therefore requires improvement.

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1.7 RSM Sponsors i proceeded to investigate development of the scheme adopting a strategic approach, focussing on the provision of segregation and shared-use where appropriate.

Mini Holland Bid

1.8 In 2014 the London Borough of Richmond's Twickenham Mini Holland bid outlined at high level, the provision of cycle facilities along the A316 and through each of the junctions between Hospital Bridge Road and Chiswick Bridge (the full extents of the Borough boundary). The proposals included removal of the A316 central reserve (affecting permissible turning movements/right turn pockets) and overall speed reduction along the A316. The borough's primary proposals were on the TLRN and, whilst the bid was unsuccessful, Mini Holland funding has been allocated for their non-TLRN proposals.

1.9 The borough has provided input and feedback into the proposals being developed by TfL.

Objective

1.10 The objective of the scheme design developed by ODE and SRMS is:

- To provide where possible segregated off-road cycle tracks on the A316 between Richmond Circus and Hospital Bridge Road roundabout.
- Where segregation is not feasible, substantial off-road shared use facilities should be provided.
- Identify obstacles to the provision of sufficient segregated and shared use facilities, such as lamp columns and trees,
- Use of private land should be investigated.
- Utilisation of adjacent grass land should be considered. It should be noted that the route is located within a conservation area.

- Identification of all other obstacles and issues along the route which may prevent the development of a substantial cycle and pedestrian route.

1.11 The route is approximately 5km long and has been developed as Phases A, B and C.

- Phase A: Richmond Circus to St Margaret's Road Roundabout
- Phase B: St Margaret's Road Roundabout to Langhorn Drive
- Phase C: Langhorn Drive to Hospital Bridge Road Roundabout

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2. Traffic Data

Traffic Counts

2.1 Traffic counts collated to-date monitored the volume of cyclists **over a 12 hour period 07:00-19:00 on a weekday** at key junctions along the route. The following tables represent a summary of the number of cyclists. [Note that updated traffic data is to be acquired using video monitoring].

2.2 Traffic counts collated to-date monitored the volume of cyclists over a 12 hour period on a weekday at key junctions along the route. The following tables represent a summary of the number of cyclists. [Note that updated traffic data is to be acquired using video monitoring].

Twickenham Bridge – north side of river			
Down north steps	Up north steps	Down south steps	Up north steps
30	11	18	15

Twickenham Bridge – south side of river			
Down north steps	Up north steps	Down south steps	Up north steps
22	31	21	25

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St George's Road											
Cycles on road West to East	Cycles on road East to West	Cycles on north pavement West to East	Cycles on north pavement East to West	St Georges Rd left onto north pavement	St Georges Rd left onto road	St Georges Rd right onto north pavement	St Georges Rd right onto road	The Ave (W) north pavement left into St Georges Rd	The Ave (W) road left into St Georges Rd	The Ave (E) north pavement right into St Georges Rd	The Ave (E) road right into St Georges Rd
98	41	153	126	7	0	8	0	10	0	1	1

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Ailsa Road

92	Cycles on road West to East
97	Cycles on north pavement West to East
29	Cycles on north pavement East to West
14	Ailsa Rd left onto north pavement
5	Ailsa Rd left onto road
1	Ailsa Rd right onto north pavement
2	Ailsa Rd right onto road
6	The Ave (W) north pavement left into Ailsa Rd
6	The Ave (W) road left into Ailsa Rd
3	The Ave (E) north pavement right into Ailsa Rd
0	The Ave (E) road right into Ailsa Rd

Cassilis Road

57	Cycles on road West to East
78	Cycles on south pavement West to East
47	Cycles on south pavement East to West
5	Cassillis Rd left onto south pavement
3	Cassillis Rd left onto road
2	Cassillis Rd right onto south pavement
0	Cassillis Rd right onto road
1	The Avenue (E) south pavement left into Cassillis Rd
19	The Avenue (E) road left into Cassillis Road
1	The Avenue (W) south pavement right into Cassillis Rd
0	The Avenue (W) road right into Cassillis Rd

The Avenue

Cycles on north pavement West to East	Cycles on north pavement East to West	The Ave left onto north pavement	The Ave left onto road	The Ave right onto north pavement	The Ave right onto road	The Avenue (W) north pavement left into The Ave	The Avenue (W) road left into The Ave	Twickenham Rd (E) north pavement right into The Ave	Twickenham Rd (E) road right into The Ave		
155	90	36	31	17	3	3	4	22	2		

Heathcote Road

Cycles on road West to East	Cycles on road East to West	Cycles on south pavement West to East	Cycles on south pavement East to West
21	26	105	97

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Brook Road

Cycles on road West to East	Cycles on road East to West	Cycles on south pavement West to East	Cycles on south pavement East to West	Brook Road left onto south pavement	Brook Road left onto road	Brook Road right onto south pavement	Brook Road right onto road	Chertsey Rd (E) pavement left into Brook Road	Chertsey Rd (E) road left into Brook Road	Chertsey Rd (W) south pavement right into Brook Rd	Chertsey Rd (W) road right into Brook Rd
28	25	61	69	0	1	9	0	0	5	8	0

Cavendish House

Cycles					Vehicles	
Cycles on road West to East	Cycles on road East to West	Cycles on south pavement West to East	Cycles on south pavement East to West		Entering	Exiting
21	26	105	97		24	12

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Whitton Road Roundabout – east arm					
Cycles on north pavement West to East	Cycles on north pavement East to West	Cycles on south pavement West to East	Cycles on south pavement East to West	Cycles using the crossing South to North	Cycles using the crossing North South
125	97	39	34	58	81

Whitton Road Roundabout – west arm					
Cycles on north pavement West to East	Cycles on north pavement East to West	Cycles on south pavement West to East	Cycles on south pavement East to West	Cycles using the crossing South to North	Cycles using the crossing North South
83	108	53	59	63	41

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Cole Park Road

Cycles on road West to East	28
Cycles on road East to West	29
Cycles on south pavement West to East	88
Cycles on south pavement East to West	105
Cole Park Rd left onto south pavement	21
Cole Park Rd left onto road	3
Cole Park Rd right onto south pavement	10
Cole Park Rd right onto road	0
Chertsey Rd (E) pavement left into Cole Park Rd	16
Chertsey Rd (E) road left into Cole Park Rd	0
Chertsey Rd (W) south pavement right into Cole Park Rd	13
Chertsey Rd (W) road right into Cole Park Rd	1
Cycles on north pavement West to East	74
Cycles on north pavement East to West	57

Langhorn Drive

Cycles on road West to East	0
Cycles on road East to West	14
Cycles on south pavement West to East	88
Cycles on south pavement East to West	63
Langthorn Rd left onto south pavement	11
Langthorn Rd left onto road	2
Langthorn Rd right onto south pavement	12
Langthorn Rd right onto road	0
Chertsey Rd (E) pavement left into Langthorn Rd	14
Chertsey Rd (E) road left into Langthorn Rd	0
Chertsey Rd (W) south pavement right into Langthorn Rd	9
Chertsey Rd (W) road right into Langthorn Rd	0

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2.3 More comprehensive traffic data information is to be collated imminently. The surveys will be undertaken using video monitoring over a 12 hour, 7 day period.

2.4 Cycle, pedestrian and vehicular movements will be collated using video equipment to determinetraffic volume and turning count data.. The specification of the traffic movements surveyed in shown in Appendix D.

The speed of vehicles along the route will also be monitored to determine the85th percentile speeds.
[85th percentile speed limits to be confirmed from surveys].

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Collision Data

2.5 Collision data obtained in November 2012 showed that 114 collisions resulting in Personal Injury Collisions (PICs) occurred along over a 36 month period along Chertsey Road between Richmond Circus and Hospital Bridge Road. 22 of these collisions involved cyclists, which represents 19%. This is below the comparative rate for the London Borough of Richmond of 24.9%. [Note: Updated collision Data is to be provided].

2.6 To date, there has been one fatal collision along Phase A of the route at the junction of Twickenham Road and St John's Grove. This involved a cyclist and a refuge lorry both travelling eastbound on the A316. The cyclist using the segregated cycle track crossed the road at the same time as the refuge vehicle turned left into St John's Grove. The cyclist braking heavily, came off the bicycle and suffered fatal head injuries upon colliding with the vehicle.

2.7 Two options have been designed to improve safety for cyclists at this junction. Refer to Options 1 and 2 in Figures 1.1 and 1.2. This report recommends progressing with Option 1.

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FIGURE 1.1: ST JOHN'S GROVE – OPTION ONE

FIGURE 1.2: ST JOHN'S GROVE – OPTION TWO

Speed Limit

2.8 The speed limit along this section of the A316, between Richmond Circus and Old Deer Park Car Park is 30mph. The speed limit along the remainder of the route i.e. between Old Deer Park Car Park, is 40mph. Refer to the Figure 2.1.

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FIGURE 2.1 SPEED LIMITS ALONG ROUTE

3. Development of Design

Stakeholders

3.1 As part of the review of the cycle facilities along this section of the A316 a site visit was undertaken by representatives from:

- London Borough of Richmond upon Thames;
- Richmond Cycle Campaign;
- Road Space Management Sponsorship, and
- Outcome Design Engineering

3.2 The route was cycled and issues referred to in the CRISP study were observed. Further issues for cyclists were also discussed. The main observations being that many of the existing cycle facilities are of insufficient standard.

3.3 Richmond Cycle Campaign (RCC) stated its support for localised measures to improve facilities for cyclists; the RCC favoured the provision of segregated cycle facilities.

3.4 The proposals for this scheme have been developed by TfL ODE and will consider input from key stakeholders including LBRUT before engaging externally.

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Interface schemes

3.5 Interface schemes are being progressed at junctions along the route. These are referred to within this report at the relevant sections along the route. Many of the interface schemes in progress originated from the CRISP report (e.g. London Road Phase 1)

Land Use / Route Description

3.6 The eastern section of the route in Phase A is predominantly open parkland, with Richmond Circus at the eastern extent and Old Deer Car Park located on the south side. Pools On the Park Leisure Centre is located west of Richmond Circus and the Pools in the Park footbridge provides a pedestrian crossing over the A316. Phase A of the route continues west over Twickenham Bridge and continues into a residential area east of St Margaret's Road Roundabout.

3.7 Phase B of the route commences west of St Margaret's Road Roundabout and the St Margaret's Footbridge provides a pedestrian crossing over the A316. This section of the route has residential properties on both sides of the highway. There are wide areas of grass verge between the footways and the carriageway. Twickenham Stadium is located on the north side of the route. The main vehicular access is via the northern arm of Whitton Road Roundabout. Three Informal crossings have recently been implemented along the A316 in Phase B to meet rugby match day pedestrian volume requirements. These crossings are only open for use on Twickenham Event match days. There is a staggered signalised crossing at the junction with Chudleigh Road. This crossing is re-arranged to a straight across, wider crossing of 12m on Twickenham Event match days to accommodate the match day pedestrian volume in the area.

3.8 The Duke of Northumberland footbridge provides a pedestrian crossing over the A316 as Phase B continues up to the junction with Langhorn Drive. Langhorn

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Drive is subject to third party design studies as part of the Richmond College Development.

3.9 Phase C of the route commences west of Langhorn Drive. This section of the route is predominantly residential on both sides with service roads running parallel to the A316 making up the infrastructure of the highway. Twickenham Stadium Event Car Park is located on southeast side; either side of Rosebine Car Park. Richmond College is also located on the southeast side, which can be accessed via Egerton Drive.

Conservation Area

3.10 The north east section of the route from St Margaret's Road Roundabout to Richmond Circus is located within a conservation area. Refer to Figure 3.1. Therefore, proposed measures aim to minimise the impact on the environment.

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FIGURE 3.1 EXTENT OF CONSERVATION AREA

Highway Resurfacing

3.11 The proposals include resurfacing many sections of footway. The development of this scheme is therefore being progressed in conjunction with the footway re-surfacing programme being managed by the TfL Asset Management team. Many proposals include realigning the kerb layout and reallocating carriageway lane widths. It is being recommended that these proposals are implemented in conjunction with the highway re-surfacing programme.

Arboriculture Issues

3.12 Proposals along the route have engaged the TfL Arboriculture Officer within the Highways Operation Team. The feedback is summarised in 7.1

Drainage Issues

3.13 There are sections along the footways where drainage or ponding issues were observed. For this reason re-surfacing is recommended along the majority of the route. Many proposals also include re-profiling of the footway to improve levels.

Review of Pedestrian Guardrail (PGR)

3.14 A review of the guardrail was undertaken along the A316 by Engineers within ODE. The requirement for PGR is undertaken in consultation with the Metropolitan Police; checks are also undertaken using a road safety audit.

PGR is being retained at the majority of locations. This is largely due to high pedestrian volumes on Twickenham Event match days.

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Street Lighting

3.15 Following site visits it is observed that street furniture such as lamp columns reduce the effective width of the footway at many locations. A review of the street lighting along the A316 is being project managed by TfL Asset Management. The proposals within this scheme include recommendations to relocate lamp columns.

Cycle Signage

3.16 The scheme proposals include improvements to cycle signage along the route. The objective being to ensure that existing and proposed shared-use area footway are clearly indicated, whilst ensuring that proposed signage does not contribute towards street clutter. Consideration is also being given to ensure that existing local and national cycle routes are clearly indicated along the route.

Twickenham Bridge

3.17 Twickenham Bridge is a Grade II listed structure. Listed building consent is required in order to construct any cycle facilities on the structure. Preliminary enquiries have been undertaken in conjunction with the London Borough of Richmond upon Thames Borough Conservation Officer and Heritage Advisors at the Greater London Authority. ODE is proposing to install wheeling ramps on the stairs of the bridge.

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4. Issues along the route and proposed traffic measures

Phase A: Richmond Circus to St Margaret's Road Roundabout

4.1 With reference to the location plan shown in Figure 4.1, the following issues were highlighted and observed along Phase A of the route.

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Figure 4.1: Phase A: Richmond Circus to St Margaret's Road Roundabout

KEY

Road
A

Junction/Landmark
Issues/proposed traffic measures

A1	Richmond Circus to jw Parkshot
	 Image A1
	Issues Segregated cycle track is 2 metres wide, which is narrow for 2-way cycle facility.
	Proposal Remove outer segregation marking. Review street furniture such as use of posts on which signs are mounted. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H

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A2	jw Parkshot
	 Image A2
	Issues No cycle facility across side road junction.
	Proposal Provide cycle facility across raised entry treatment Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H

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A3	jw st John's Grove
	 Image A3
	Issues Cycle track continues either side of junction. Following recent cycle fatality, there is a requirement for an improved, safer junction.
	Proposal Review geometry of junction i.e. reduce radius of kerbs. Improve segregated cycle facility. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H

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A4	Twickenham Road, east of Richmond Athletics Ground
	 Image A4
	Issues 1 metre wide cycle track is insufficient.
	Proposal Widen segregated cycle facility by removing outer marking. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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A5	**Twickenham Road (south side), adjacent to Footbridge Structure**
	 Image A5
	Issues Shared-use footway between structure and guardrail is 2.5 metres wide, which is narrow for a shared-use footway adjacent to physical boundaries.
	Proposal Widen footway onto adjacent private land. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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A6	Twickenham Road (north side, adjacent to footbridge)
	 Image A6
	Issues Shared-use footway between the bridge structure and verge is narrow at 1.7 metres.
	Proposal Widen footway onto verge adjacent to the guardrail. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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A7	Old Deer Car Park (south side of Twickenham Road)
	 Image A7
	Issues Crossing facility at central refuge at entrance to the car park is narrow at 2-metres wide, which is insufficient for shared-use.
	Proposal is proposed to widen the footway either side of the car park entrance. The central crossing waiting area should also be widened. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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A8	Twickenham Road (south side)
	 Image A8
	Issues Shared-use footway is 2 metres wide and is of insufficient width for combined use by pedestrians and cyclists.
	Proposal Relocate fence and widen footway. Convert verge adjacent to carriageway into footway. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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A9	Twickenham Road (north side)
	 Image A9 (i) Image A9 (ii)
	Issues There is a segregated cycle track on the north side of the route from Twickenham Bridge to a point 100 metres southwest of the entrance to Old Deer Park Car Park. The current width of the cycle track is 1.7 metres. Refer to Image A9 (i) The segregated cycle track and footway continues on the north side of the route to Twickenham Bridge. The cycle track is 1.75 metres wide and the footway is 1.4 metres. Refer to Image A9 (ii)
	Proposal Widen cycle track onto verge. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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A10	Twickenham Bridge (south side)
	 Image A10
	Issues The footway on the south side of the bridge is currently a shared-use area for pedestrians and cyclists and is 2.9 metres wide. The lamp columns are set back 1.5 metres from the kerb.
	Proposal Provide segregated cycle facility on the footway. Relocate lamp columns to rear of footway. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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A11	Twickenham Bridge (north side)
	 Image A11
	Issues Twickenham Bridge (north side).
	Proposal Improve width of cycle facility by removing outer segregated marking. Relocate lamp columns to rear of footway. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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A12	Twickenham Bridge - step
	 Image A12 (i)
	There are steps on both sides of the road leading to the Thames Cycle Towpath on the north side if the river.
	 Image A12 (ii)
	Issue Cyclists are currently required to carry bicycles up and down the steps. Accessibility for cyclists should be improved on the steps.
	Proposal Investigate installation of cycle ramps to assist cyclists, Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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A13	Twickenham Bridge to Heathcote Road – south side
	 Image A13
	Issues The footway on the south side of the route is currently a shared use area. The effective width is 2.9 metres wide.
	Proposal The segregated footway and cycle track proposed on Twickenham Bridge should be continued along the route. Relocate the lamp columns to rear of footway. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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A14	Twickenham Bridge to Heathcote Road – north side
	 Image A14
	Issues The cycle track between Twickenham Bridge and The Avenue is narrow at 1.0 metre wide, which is of insufficient standard.
	Proposal Widen cycle track by removing outer segregation marking. Relocate the lamp columns to rear of footway. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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A15	The Avenue junction with Heathcote Road	
	 Image A15 (i)	
	Issue Vehicle Restraint System (VRS) is installed on the south side of The A316 junction with Heathcote Road. Barrier results in narrow shared use footway. [TfL Asset Management has advised that the barrier does not meet current standards].	
	Proposal Investigate removal of VRS – consider replacing with standard barrier system. Relocate traffic signs and widen footway into verge.	
	 Image A15 (ii)	
	Issue Street furniture and foliage reduce effective width of footway.	**Issue**
	Proposal Relocate lamp column. Remove section of shrubbery. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.	

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A16	Heathcote Road to Cassilis Road (south side)
	 Image A16
	Issue Bollards are installed along the southern footway between Heathcote Road and St Margaret's Road roundabout. Effective width of the southern footway is 2.8 metres.
	Proposal Investigate removal of bollards. Investigate acquisition of private land. Consider re-design/construction of staggered height kerb to prevent obstructive parking on the footway. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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A17	**Tree Pits**
	 Image A17
	Issue Tree pits reduce effective width of footway.
	Proposal Install Aboresin in tree pits to enable footway users to comfortably use tree base. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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A18	Heathcote Road to Cassilis Road (north side)
	 Image A18
	Issue Bollards installed along northern footway between Heathcote Road and St Margaret's Road Roundabout reduce effective width of the footway to approximately 1.4 metres.
	Proposal Investigate removal of bollards. Investigate acquisition of private land. Consider re-design/construction of staggered height kerb to prevent obstructive parking on footway. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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A19	Junction with Cassilis Road (south side)
	 Image A19
	Issue
	Direction sign located on the west side of the junction with Cassalis Road provides an obstruction along shared-use footway. There is scope to widen the footway by reducing the width of the raised grassed area.
	Proposal
	Remove section of raised verge to widen footway. Relocate the posts and sign towards rear of footway. Refer to Drawing no. TDE.TS.058.3003320.ID.01 REV H.

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Phase B – St Margaret's Road roundabout to Langhorn Drive

4.2 With reference to the location plan shown in Figure 4.2, the following issues were highlighted and observed along Phase B of the route.

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Figure 3.2: Phase B: St Margaret's Road Roundabout to Langhorn Drive

Road

A

Junction/Landmark
Issues/proposed traffic measures

B1 St Margaret's Road roundabout – Interface Scheme

4.3 St Margaret's Road roundabout is a signalised junction. A traffic improvement scheme is being developed at this site. Refer to the set of drawings at:

"S:\TDE\Scheme Information\South Area\28 TS058 A316 Corridor TDE\Current\TS.058.2000329 St Margarets A316 Crossings and footbridges unit 3\Drawings\TDE Drawings".

4.5 The proposals for St Margaret's Road roundabout include an option to replace the footbridge on the western arm of the roundabout with an at-grade crossing facility. The design for this scheme is currently being reviewed by the Cycle Commissioner.

DRAFT

B2	St Margaret's Road roundabout to junction with Brook Road
	 Image B2
	Issues On the western arm of St Margaret's Road Roundabout there is a segregated cycle facility on the southern footway. The segregated cycle track continues west of the footbridge towards residential properties and parking bays between St Margaret's Road Roundabout and Brook Road. Parked vehicles can overhang onto the pavement. This section of the route would be more suitable as a shared-use footway or a Do Max option of tree and residential parking removal.
	Proposal Remove segregation marking to make footway shared use. Re-surface footway. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B3	Junction with Brook Road
	 Image B3
	Issues The side road provides a non-continuity of the highway profile along the cycle route.
	Proposal Provide a raised entry treatment at the side road. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B4	Brook Road to Cole Park Road
	 Image B4
	Issues The segregated cycle facility continues west of the junction with Brook Road. However the cycle track is in need of maintenance.
	Proposal Re-surface cycle track. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B5	Cavendish House
	 Image B5
	Issues Existing cycle give way markings at vehicular entrances/exits to Cavendish House do not promote continuity along the cycle route. Priority should be given to cyclists.
	Proposal Remark give way markings on motorised vehicle path. Raise profile of accesses to improve route for cyclists. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B6	Junction with Cole Park Road (south arm)
	 Image B6
	Issues Existing cycle track converges with footway on east side of the westbound approach to the junction. There is a risk of conflict between cyclists and pedestrians at this location. Consideration was given to off-setting the cycle track from the main road. However this would result in the cycle track being diverted around trees, which should be preserved. The cycle track should not be deviated excessively from the existing route layout.
	Proposal Widen shared use area to improve the width of footway for combined use. Install raised entry treatment to improve profile for cyclists and pedestrians crossing side road. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

B7 - London Road Roundabout

4.5 London Road roundabout is a priority controlled junction. A traffic improvement scheme is being developed at this site. Refer to the set of drawings at appendix:

S:\TDE\Scheme Information\South Area\28 TS058 A316 Corridor TDE\Current\TS.058.3005240 london Road Roundabout\Drawings\Junction options

DRAFT

B8	London Road Roundabout to Whitton Road Roundabout
	Image B8 (i) Image B8 (ii)
	Issues West of London Road roundabout the footway along this section of the highway continues as a shared use area for pedestrians and cyclists. However the footway is of limited width at 2 metres.
	Proposal Provide separate cycle track along verge. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B9	'All Hallows' Church (east of London Road Roundabout)
	 Image B9
	Issues There are motorised vehicular accesses to the church. Cyclists are current required to giveway to vehicles entering and exiting the church grounds. Priority at the accesses should be given to cyclists.
	Proposal Provide give way markings on motorised vehicle path. Raise profile of accesses to improve route for cyclists. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B10	East arm of Whitton Road roundabout, south side
	 Image B10
	Issues Excessive cycle signage.
	Proposal Reduce the number of shared use signs to reduce street clutter Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B11 Whitton Road Roundabout– interface scheme

A traffic improvement scheme is being undertaken at Whitton Road roundabout. Refer to the set of drawings at:

S:\TDE\Scheme Information\South Area\28 TS058 A316 Corridor TDE\Current\TS.058.3002826 Whitton Roundabout Remedial Works\Drawings

The proposals for Whitton Road roundabout include alterations to the western arm of Marlow Crescent.

DRAFT

B12	Whitton Road Roundabout to Egerton Road (I)
	 Image B12
	Issues Existing cycle route END marking. Use of these signs/markings do not support Mayor's strategy to promote cycling.
	Proposal Re-surface footway. Do not reinstate END marking. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B13	Whitton Road Roundabout to Egerton Road (II)
	 Image B13
	Issues The footway on the south side of the route is shared use. The footway is of limited width at 2 metres wide. The footway is adjacent to property boundaries i.e. masonry wall and wooden fencing. This restricts space for cyclists and pedestrians. Consideration was given to providing a cycle track along the verge. However, provision of a cycle track of a sufficient width is constrained by the guardrail. (The majority of PGR is to be retained along this route). Furthermore, TfL Aborticultural officer highlighted issues for tree roots of a cycle facility being constructed in close proximity to the trees. or the removal of these specific types of tree, which should be preserved.
	Proposal The trees on the western side of Whitton roundabout limit the level of service for cycle provision that be provided. Consideration needs to be given as to whether they are retained and narrow footways remain or they are removed and wider facilities for pedestrians and cyclists provided. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

B14	Junction with Chudleigh Road
	Image B14 (i) Image B14 (ii)
	Issues Shared use cycle facility continues at shared use crossing.
	Proposal Review signage at crossing to provide clearer indication that footway is shared use. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B15	Junction with Egerton Road
	 Image B15
	Issues There is a lack of cycle facilities at this side road junction.
	Proposal Widen the diagonal footway (refer to plan drawing no.....) to enable cyclists to cross the side road an offset distance from where traffic enters the side road. Install street furniture (improve urban design) such as planters and seating area on existing footway to encourage pedestrians to use the footway at the rear of the highway. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B16	Egerton Road to Langhorn Drive (I)
	 Image B16
	Issues The footway is just over 2 metres wide and is currently shared use for cyclist and pedestrians.
	Proposal The proposed shared use footway offset and widened back from the A316 carriageway should be continued on the west side of the junction. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B17	Egerton Road to Langhorn Drive (II)
	 Image B17
	Issues There is an existing shared use footway between Egerton Road and Langhorn Drive. However the footway is of limited width at just over 2 metres.
	Proposal Install cycle track adjacent to the footway. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B18	Opposite Langhorn Drive to Whitton Road Roundabout
	 Image B18
	Issues East of the junction with Langhorn Drive the highway on the north side of the route is composed of a 2 metre wide footway with a grass verge adjacent to the carriageway. The footway is bounded by a timber fence and guardrail.
	Proposal Re-surface footway with blacktop finish. Wooden fencing could be relocated. However, this would only be practical if trees were also removed. There is also potential to widen the footway towards the carriageway, tying in to Chudleigh Road. **See C18** Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B19	Junction with Chudleigh Road (north side)
	 Image B19
	Issues This junction is closed to traffic. However the profile of the footway has not been modified for the benefit of footway users. Refer to the route description for details of the signalised crossing at this location.
	Proposal Build the carriageway of the side road up to the level of the footway to improve the route for cyclists and pedestrians. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B20	Chudleigh Road to Whitton Road Roundabout
	 Image B20
	Issues East of the junction with Chudleigh Road the footway is bordered by a timber fence on the north side and trees on verge side. The footway is too narrow to safely use as a shared use route.
	Proposal Provide a cycle track along the verge between the trees and the guard rail or a Do Max option of tree removal towards Whitton Roundabout Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B21	Whitton Road Roundabout (north side)
	 Image B21
	Issue Telephone box on the north side of the roundabout reduces the effective width of the footway, which is currently shared use for cyclists and pedestrians.
	Proposal Telephone box relocation would cost in the region of £15k. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B22	Marlow Crescent (Dual Junction)
	Image B22 (i) Image B22 (ii)
	Issue There are cycle give way markings either side of the east and west arms. These markings do not afford priority to cyclists or promote cyclist as per the Mayor's strategy. Improvements to the western junction are proceeding as part of separate works at Whitton Roundabout.
	Proposal Improve the continuity of the cycle route by removing the cycle give way markings. Raise the level of the carriageway up to the footway to improve the route for cyclist and pedestrians. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.
	 Image B23 (iii)
	Issue The footway between the east and west arms of Marlow Crescent is 2 metre wide. Whilst there are no psychical barriers to restrict the effective width, it is feasible to utilise the grass verge to provide a segregated cycle track for cyclists, which would also improve safety for pedestrians.
	Proposal Provide cycle track along verge adjacent to the carriageway. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B23	Marlow Crescent to London Road Roundabout
	 Image B23
	Issue Existing share-use footway adjacent to River Crane is narrow at just over 2 metres.
	Proposal Provide a cycle track along the grass verge to promote segregation and improve safety for cyclists and pedestrians. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B24	Junction with Cole Park Road (north arm)
	 Image B24
	Issue A new traffic scheme has been implemented at this junction. However, there is limited signage for cyclist who may wish to travel on adjacent cycle routes.
	Proposal Provide cycle signage to direct cyclists to local and national nearby cycle routes. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

DRAFT

B25	Cole Park Road to St Margaret's Road Roundabout
	 Image B25
	Issue The existing share-use footway is narrow at just over 2 metres.
	Proposal Provide a cycle track along the grass verge to promote segregation and improve safety for cyclists and pedestrians. Impact to mature tree to be minimised. Refer to Drawing no. TDE.TS.058.3003320.ID.02 REV H.

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Phase C – Langhorn Drive to Hospital Bridge Road Roundabout

4.5 With reference to the location plan shown in Figure 4.3, the following issues were highlighted and observed along Phase C of the route.

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Figure 3.3: Phase C: Langhorn Drive to Hospital Bridge Road

Junction/Landmark

Issues/proposed traffic measures

Road

A

C1 – Langhorn Drive

4.5 Langorn Drive is subject to third party design studies as part of the Richmond College Development.

DRAFT

4.5

C2	Langhorn Drive to Meadway (I)
	 Image C2 (i) Image C2 (ii)
	Issue Southwest of the junction with Langhorn Drive the footway continues as shared-use for pedestrians and cyclists and is approximately 2.5 metres wide. The land adjacent to the footway between Langhorn Drive and the railway bridge is leased to Twickenham Rugby Club and is used as car park for match days at Twickenham Stadium.
	Proposal Option 1: Widen the footway to improve the safe use of the shared use footway. Reallocate the A316 carriageway lane widths. Option 2: Utilise the land used as a car park by installing an access for cyclists into the car park. Provide a cycle track approximately 1/2km in length adjacent to the vehicular car park track. This option would require agreement with the Twickenham Event organisers. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

C3	Junction with Rosebine Avenue
	 Image C3
	Issue There is scope for improvements at this junction. The refuge island should be widened and the dropped kerbs re-built. This will improve the safe use of the junction by pedestrians and cyclists.
	Proposal Widen the refuge crossing facility. Re-build the dropped kerbs either side of the junction. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

C4	Langhorn Drive to Meadway (II)
	 Image C4
	Issue The footway continues as shared use alongside the car park. However there are obstructions which reduce the effective footway width as illustrated.
	Proposal Investigate whether it is feasible to relocate the speed camera. Widen the footway to improve the safe use of the shared use footway. Reallocate the carriageway lane widths. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

C5	Junction with Meadway
	Image C5 (i) facing east Image C5 (ii) facing west
	Issue At the junction with Meadway cyclists currently have two options for continuing along Chertsey Road: Option 1: Continue along the footway on southeast side of Chertsey Road. This option presents the more direct route along the A316. However this route retains the risk of conflict with pedestrians. Option 2: Use signed cycle route along the service road. There are parked vehicles along the service road. However cyclists are able to progress along the A316 footway at a higher speed. The service road is also an existing signed cycle route on the London Cycle Network.
	Proposal Review the signage to improve the service road as the primary route for cyclists. Direct cyclists around the grassed area (shown in Image C5(i) away from the mouth of the junction were motorised vehicles are entering the side road from A316. This proposed route will also encourage cyclists to use the service road. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

C6	Junction with Gloucester Road
	 Image C6
	Issue Cycle route along service road passes the side road junction at Gloucester Road. Motorists emerging from the side road may be expecting the majority of traffic to be travelling on the main A316, which may be hazardous for cyclists.
	Proposal Provide raised entry treatment at side road junction. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

C7	Chertsey Road service road
	 Image C7
	Issue There is an area of the service road cordoned off from motorised vehicle. Accessibility for cyclists could be improved at this location.
	Proposal Improve accessibility for cyclists by removing the kerb. Improve the space between the bollards to improve the route for cyclists. Relocate the cycle logo. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

C8	Junction with Lincoln Avenue
	 Image C8
	Issue At the southwest end of the service road is the junction with Lincoln Avenue. The existing layout of the junction requires cyclists to exit the service road, travel across Lincoln Avenue and join the footway on the opposite side of the junction. This junction could be more cycle 'user-friendly'.
	Proposal Install a dropped kerb to enable cyclists to access the footway on the service road prior to Lincoln Avenue. Install a raised entry treatment to improve the profile of the carriageway to make crossing the side road more comfortable and safer for cyclists. Widen the 'diagonal' footway on the west side of the junction to improve the width of the shared use footway for combined use. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

C9	Lincoln Avenue to Hospital Bridge Road Roundabout
	 Image C9
	Issue The width of the shared-use footway is approximately 2.5 metres, which is of insufficient standard for combined use.
	Proposal Widen the footway to improve the safe use of the shared use footway. Reallocate the carriageway lane widths. Relocate street furniture i.e. lamp columns to improve effective width of shared path. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

C10	Hospital Bridge Road Roundabout to Ross Road
	 Image C10
	Issue The width of the shared-use footway is approximately 2.5 metres, which is of insufficient standard for combined use.
	Proposal Widen the footway to improve the safe use of the shared use footway. Reallocate the carriageway lane widths. Relocate street furniture i.e. lamp columns to improve effective width of shared path. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

C11	Footbridge at northeast end Ross Road
	 Image C11
	Issue Cyclists are guided around the footbridge structure by markings on the footway. The footway at this location is x-metres wide. The cycle track markings adjacent to the footbridge are worn.
	Proposal Re-surface the footway. Refresh the longitudinal marking guiding cyclists around the bridge structure. The existing cycle give way markings should not be replaced. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

C12	'Winning' Post public house
	 Image C12
	Issue There is a public car park at this establishment. Cycle signage is provided at the vehicular entrance to indicate that the shared use footway. However it does not appear to be sufficient. There are also existing signs to indicate the car park entrance and exit. However these signs do not appear conspicuous enough for a safe cycle route across the entrance/exit of the car park. Observations on site suggest that traffic entering/exiting the car park is dominant over footway users.
	Proposal Install cycle give way markings at the entrance/exit of the car park to improve safety for cyclists. Propose an entry and exit signing system for motorised vehicles i.e. improved signage and one way in, one way out ENTRY/EXIT ONLY road markings. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

C13	Chertsey Road service road (northwest side)
	 Image C13
	Issue There is a service road located between the Winning Post public house and the junction with Jubilee Avenue. The route is signed as a London Cycle Network route. Whilst many cyclists are unlikely to deviate from the shared-use footway, this alternative route should be clearly indicated.
	Proposal Widen the entry to the service road by removing sections of the timber fence. Improve the location of the cycle logo to make the cycle entry to the service road more conspicuous. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

C14	Junction with Jubilee Avenue
	 Image C14
	Issue At the junction with Jubilee Avenue, cyclists have two options for continuing along Chertsey Road: Option 1 - continue along the shared use footway. This option presents the more direct route along the A316. However this route retains the risk of conflict with pedestrians. Option 2 – the London Cycle Network is signed along the service road. Whilst cyclists are unlikely to deviate from the more direct route along the footway, using the footway retains the risk of conflict with pedestrians. Cyclists are able to progress along the A316 service road at a higher speed. Whilst there are parked vehicles along the service road, vehicles speeds are unlikely to be high.
	Proposal The junction with Jubilee Avenue has recently been upgraded. However, a dropped kerb should be provided for cyclists to comfortably exit the footway onto the service road. Furthermore, improved cycle signage should be provided at this junction to clearly indicate adjacent routes towards the London and National Cycle Networks. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

C15	Jubilee Avenue to Redway Drive
	 Image C15
	Issue The shared use footway along this section of the route is approximately 2 metres wide, which is of insufficient standard for combined use. The effective width of the footway is reduced by the vehicle barrier system shown in the image.
	Proposal Consideration should be given to widening the footway and reducing the A316 lane widths. The A316 can accommodate a 0.6 to 1.0m footway widening at this location, however to provide a smooth alignment, the extents of the footway widening is Xm long . This would also entail repositioning the existing vehicle crash barriers that protect the Meadway subway. A Do Minimum option would consist of resurfacing the existing footway and reviewing the shared use signage Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

C16	Junction with Redway Drive
	 Image C16
	Issue Cycle facilities at the junction with Redway Drive should be reviewed to promote cycling along the service road.
	Proposals Relocate bollards to improve cycle accessibility at dropped kerb. Relocate cycle route signage. Amend cycle road markings on Redway Drive. Provide raised entry treatment to improve profile of carriageway for cyclists. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

C17	**Chertsey Road service road, northwest side (Redway Drive to Chase Gardens)**
	 Image C17
	Issue The service road that continues from Redway Drive is currently sign posted for cyclists' use. The road surface could be improved to provide a more comfortable route for cyclists.
	Proposal Re-surface service road that continues from Redway Drive. Review the cycle signage to ensure it is sufficient to promote cycling along the service road. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

C18	Chase Gardens to Kendrey Gardens
	 Image C18
	Issue The shared use footway is narrow at just under 2.5 metres. The footway is bounded by fencing and guard rail.
	Proposal Consideration given to widening footway either towards the carriageway or to the back of the highway boundary (potential location for tree removal).. Pedestrian guardrail is not to be removed along this section of the A316. A Do Minimum option of resurfacing the shared use footway would provide a low level of service. Refer to Drawing no. TDE.TS.058.3003320.ID.03 REV H.

DRAFT

5. Stakeholder Engagement

The proposals within this scheme have been development with input from stakeholders. Refer to Table 5.1.

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6. Cost Estimates

Table 6.1 provides a summary of the proposals and the associated cost of the proposed traffic measures.

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7. Conclusion and Recommendations

7.1 As stated in this report, there are existing cycle facilities along this section of the A316 Chertsey Road. However, the existing facilities for cyclists are blighted by poor continuity, poor signage, street furniture clutter and poor quality of footways and service roads.

7.2 A CRISP study undertaken in 2008 identified where improvements to the route could be made. This study, combined with site observations made by Richmond Cycle Campaign, London Borough of Richmond upon Thames and Transport for London, has contributed towards the recommendations made within this report to improve the A316 for cyclists, between Richmond Circus and Hospital Bridge Road Roundabout.

7.3 The Mayor's Transport Strategy (MTS) refers to the 'Cycle Revolution', which supports improvements to infrastructure to make it easier and safer to travel by bike, and 'mainstreaming' cycling as a transport mode making it more attractive to a wider range of people. The aim of the MTS is to achieve a five per cent modal share for cycling (currently two per cent) by 2026, which equates to an approximate 400 per cent increase compared to 2000.

7.4 Richmond's Mini Holland bid was focused on delivering high quality cycle facilities to transform the image of cycling in the borough of Richmond upon Thames. The borough developed cycle routes, which ran alongside some of its busiest road and rail links on the basis that it will significantly increase exposure to cycling and therefore offer the best chance of encouraging more trips by bicycle.

7.5 Further to section 1.5 of this report, the Richmond Cycle Campaign stated its support for cycle improvements along the A316, with particular emphasis on

segregated cycle routes. Requests to improve the route have been made by Richmond Cycle Campaign.

Outcome of the Cycle Review

7.6 A three phased approach has been adopted for this cycle review. Phase A is between Richmond Circus and St Margaret's Road Roundabout, where the highest level of cycling is observed. Phase B extends from west of St Margaret's Road Roundabout to the junction with Langhorn Drive. Phase C extends from west of Langhorn Drive to the junction with Hospital Bridge Road Roundabout.

7.7 There are some areas where the desired widths of footway is not achievable as boundaries cannot be relocated and there is no scope to take carriageway space.

7.8 A primary pinch-point has been identified along Phase A of the route. This exists on both sides of the A316 between Heathcoat Road and St Margaret's Roundabout. Significant land take, or Compulsory Purchase Order (CPO), would be necessary to provide footways of an acceptable width to promote this scheme of the route as shared use.

7.9 The northern end of the route is within a conservation area. Therefore any tree removal/relocation may be contentious. The proposals recommended within this report should be progressed through the design stages with minimal impact on the environment.

7.10 Along the route a large number of lamp columns will need to be relocated to improve the effective width of the footways for combined use. Proposals to relocate lamp columns are being combined with the TfL Asset Management project to upgrade street lighting. [It should be noted that the street lighting upgrade scheme currently extends from Twickenham Bridge to London Road roundabout – discussions are being held with the Asset Management street

lighting assessment team as to whether the extend of the lighting review can be extended].

7.11 Where the route passes through areas where there are a high number of residential dwellings. There can be an increase for potential collisions between pedestrians and cyclists. Where there is an increase in the number of vehicle accesses, there can be an increase for potential collisions between motorised vehicles and cyclists. Correspondence has been received from residents along the A316 between St Margaret's Road Roundabout and London Road Roundabout regarding cyclist conflict.

7.12 Traffic Orders will be required where a change in the use of the footway is required i.e. new shared use footways, and also for where waiting restrictions are proposed at dropped kerbs.

7.13 The proposals referred to in this report are likely to significantly change the character/environment of this section of the A316. Some mature trees and green asset removal, whilst kept to a minimum, will be required.

7.14 The TfL Arboroculturist highlighted the following:

- Upon proposing the removal of green asset (green estate), leaving small strips of green between pedestrian and cycle facilities should be avoided. The maintenance of such areas should be balanced against the cost of removal.

- Trees left in situ would need to be treated with care; the roots of larger trees need to breathe. Construction of flexible footways in close proximity to trees may affect their health.

- Action is already underway to relocate recently planted trees where proposed cycle tracks are proposed along verges. Further planting has also been put on hold along the route until proposals to develop the cycle route are developed.

Recommendations

7.15 It is recommended that the traffic measures proposed along Phases A, B and C of the route are designed in conjunction with the interface schemes at the major junctions. These cycle and pedestrian improvements should also be developed in conjunction with the TfL re-surfacing programme and the upgrade of street lighting.

7.16 ODE recommends that the proposals be implemented in phases with Phase A going to site first followed by Phase B and then Phase C. Such an approach is likely to speed up construction because whilst Phase A is under construction, designs for Phase B and Phase C will be in progress.

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Appendices

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Appendix A - Traffic Flow Diagram

1) Link to the Traffic Flow Diagram

S:\TDE\Scheme Information\South Area\28 TS058 A316 Corridor TDE\Current\TS.058.3003320 A316 Chertsey Road cycle review\Reports\Route Report\APPENDIX A traffic flow diagram

2) Link to initial cycle count data

S:\TDE\Scheme Information\South Area\28 TS058 A316 Corridor TDE\Current\TS.058.3003320 A316 Chertsey Road cycle review\Reports\Route Report\APPENDIX A traffic flow diagram\Initial Cycle Count Data

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Appendix B – Collision Data

Link to the Collision Data

S:\TDE\Scheme Information\South Area\28 TS058 A316 Corridor TDE\Current\TS.058.3003320 A316 Chertsey Road cycle review\Reports\Route Report\APPENDIX B collision data

DRAFT

Appendix C – Collision Plot

Link to the Collision Plot

S:\TDE\Scheme Information\South Area\28 TS058 A316 Corridor TDE\Current\TS.058.3003320 A316 Chertsey Road cycle review\Reports\Route Report\APPENDIX C collisions plot

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Appendix D – Traffic Speeds along route and extent of Conservation Area

Link Plan illustrating speed limit / conservation area

S:\TDE\Scheme Information\South Area\28 TS058 A316 Corridor TDE\Current\TS.058.3003320 A316 Chertsey Road cycle review\Reports\Route Report\APPENDIX D traffic speed survey_conservation area

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Appendix E – Consultation Summary

Link to consultation summary

S:\TDE\Scheme Information\South Area\28 TS058 A316 Corridor TDE\Current\TS.058.3003320 A316 Chertsey Road cycle review\Reports\Route Report\APPENDIX E consultation summary

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Appendix F – Lighting Survey

Link to lighting survey

S:\TDE\Scheme Information\South Area\28 TS058 A316 Corridor TDE\Current\TS.058.3003320 A316 Chertsey Road cycle review\Reports\Route Report\APPENDIX G lighting survey

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Appendix G – Utility Investigations

S:\TDE\Scheme Information\South Area\28 TS058 A316 Corridor TDE\Current\TS.058.3003320 A316 Chertsey Road cycle review\Reports\Route Report\APPENDIX H utility investigations

C2 Plans
C3 Investigations

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Appendix H – Proposed Plans

Phase A

Drawing no.: TDE.TS.058.3003320.ID.01 REV G.

Link:
S:\TDE\Scheme Information\South Area\28 TS058 A316 Corridor TDE\Current\TS.058.3003320 A316 Chertsey Road cycle review\Reports\Route Report\APPENDIX I proposed plans\Phase A

Phase B

Drawing no.: TDE.TS.058.3003320.ID.02 REV I

Link:
S:\TDE\Scheme Information\South Area\28 TS058 A316 Corridor TDE\Current\TS.058.3003320 A316 Chertsey Road cycle review\Reports\Route Report\APPENDIX I proposed plans\Phase B

Phase C

Drawing no.: TDE.TS.058.3003320.ID.03 REV H

Link:
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