LONDON BOROUGH OF
RICHMOND UPON THAMES

ATKINS

TWICKENHAM MINI - HOLLAND

STAGE 2

LONDON BOROUGH OF RICHMOND UPON THAMES








Cycling along the Thames Towpath

CONTENTS

TWICKENHAM MINI - HOLLAND

View of the existing cycle track on the A316

LORD TRUE FOREWORD

Cllr Nicholas True

The administration welcomes the opportunity to submit a second bid for its Mini-Holland proposals. The London Borough of Richmond upon Thames provides a safe and green environment in which to cycle, and the Borough is already attracting hundreds of cyclists every week who come to enjoy cycling in Richmond upon Thames. Our Mini-Holland proposals seek to develop upon this strong foundation by proposing new major cycling infrastructure which will transform cycling in Richmond upon Thames. Importantly our proposals will not just be for cyclists; underpinning all of the Mini-Holland proposals has been an aspiration to improve the quality of streetscape along the routes and therefore the quality of journeys of all users of the proposed routes.

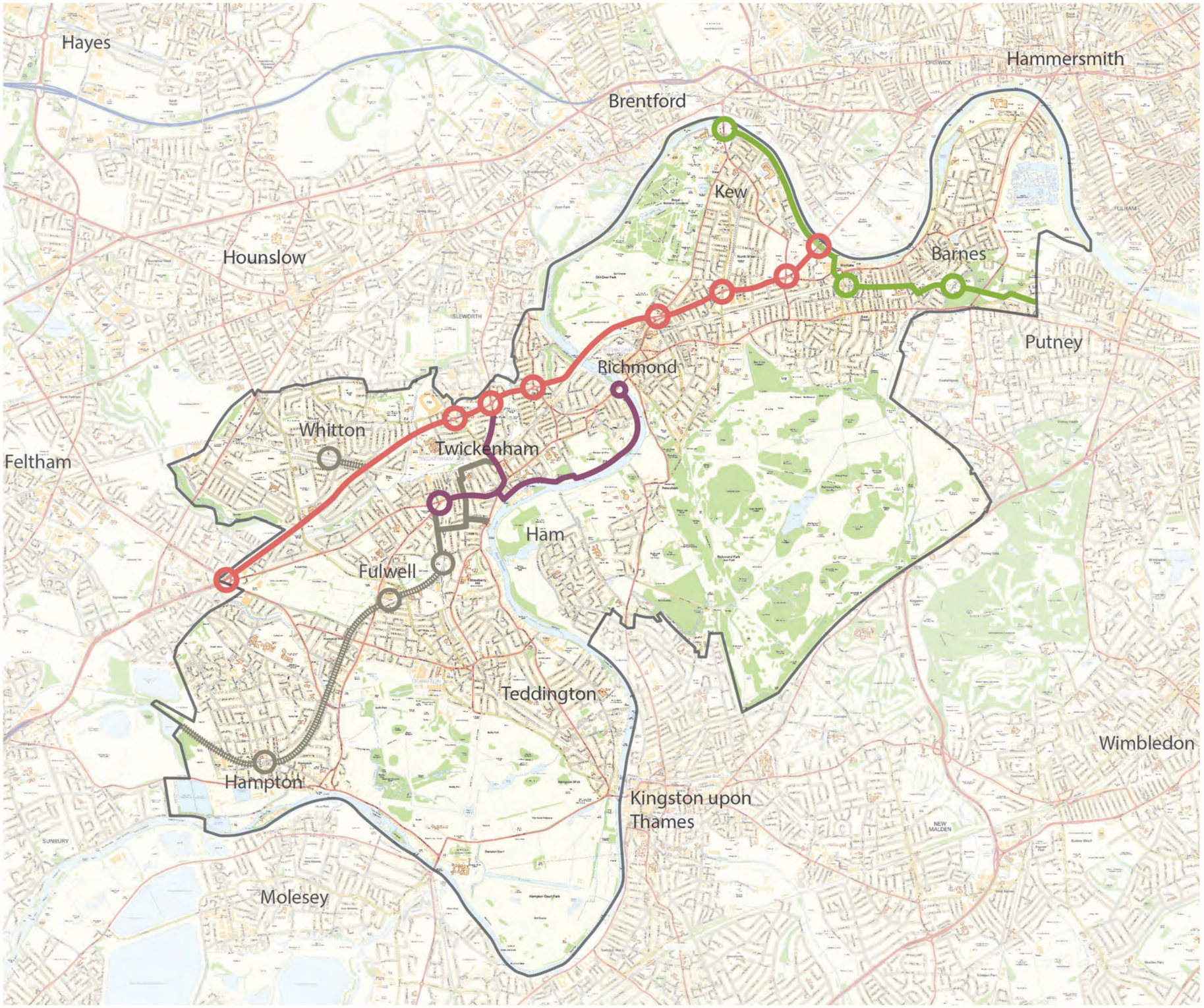
Our bid is focussed on the transformation of Twickenham into a new centre for cycling in the Borough, from which the other Mini-Holland proposals will radiate out from. I am particularly excited by the proposals for the A316 Commuter Route, the Railside Cycle Route between Hampton and Strawberry Hill, and the prospect of extending our Mini-Holland proposals beyond the Borough boundary. I look forward to working with the London Borough of Hounslow, Network Rail, Richmond Cycling Campaign, and South West Trains in the development of our proposals. Their letters of support are included in the introduction of this document.

Let us build upon the Olympic legacy:

Love Twickenham: Go Dutch!

TWICKENHAM, MINI - HOLLAND
CHAPTER 1: INTRODUCTION AND BACKGROUND

PLAN OF THE OVERALL ROUTES



The Borough's Mini-Holland bid is focussed on delivering high quality cross-Borough cycle facilities that will transform the image of cycling in Richmond upon Thames. The Borough has developed cycle routes which run 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. There are four main proposals within our Mini-Holland bid; Twickenham Town Centre sits at the centre, with the other proposals radiating out into the Borough. The figure opposite highlights the location of each of the Mini-Holland proposals and how they relate to Twickenham Town Centre.

- **Twickenham Town Centre** - The proposals for the Town Centre have concentrated on maximising cycle permeability within the town centre, specifically on radial routes out of the centre along Heath Road, London Road and the Warren Towpath.
- **A316 Commuter Route** - The proposed Commuter Route will be Richmond upon Thames' first cross-Borough segregated cycle route; ultimately it will form the beginning of a 12 mile cycle route between Hanworth in Hounslow through to Hyde Park Corner via TfL's proposed Cycle Superhighway 9. As well as improving the route for cyclists, our proposals will completely transform how the A316 feels for all users; removing street clutter, improving pedestrian comfort levels, and re-designing all 7 major junctions along the route.
- **Railside Cycle Routes** - This will create an essential connection between Twickenham Town Centre and the south-west of the Borough. Currently cyclists travelling from Hampton and Fulwell have to use heavy-trafficked roads with little protection from general traffic. The Railside Route will transform previously unused railway embankments into a new and unique 3 mile corridor for cyclists and pedestrians. The Railside route will be further improved for cyclists by doubling cycle parking facilities at all stations along the route, as well as creating a Cycle 'Super-Hub' at Twickenham Station.
- **A205 Quietway** - The Quietway will provide an alternative route for cyclists between Kew Bridge and Putney avoiding the heavily-trafficked South Circular Road (A205) and Sheen Lane (B351). The route will be an important facility for both commuter and recreational cyclists wishing to use National Cycle Network Route 4, Cycle Superhighway 8 and the proposed North Circular Quietway.

The Mini-Holland package will provide Richmond upon Thames with a package of measures that encourage all types of cyclists to get on their bikes and cycle in Richmond upon Thames, and beyond. Our proposals will ensure that all residents in the Borough will be within convenient reach of at least one quality cycle route into Twickenham Town Centre. Whilst some proposals have been focussed on specific cycling groups (e.g. Commuter cycles), the overarching vision has been to create convenient facilities that all types of cyclists will feel comfortable using. Underpinning all of the proposals has been a desire to improve the wider environment and public realm, rather than just delivering change for cyclists. All of the proposed routes will be surfaced in a buff colour to ensure design consistency across all schemes, and to maximise legibility of the facilities for cyclists. In summary, the Mini-Holland funding will:

- Create 16 miles worth of new cycle facilities within the Borough;
- Transform the public realm at all 7 major junctions on the A316;
- Upgrade 8 junctions to be cycle-friendly;
- Re-design 61 side entry junctions to give cyclists priority;
- Install 7 new cycle-friendly crossings; and
- Create at least 680 new secure cycle spaces.

TWICKENHAM MINI - HOLLAND
OVERVIEW OF MINI HOLLAND BID

RICHMOND CYCLING CAMPAIGN

32 Bolton Gardens
Teddington
TW11 9AY
Tel: 07960 193072

20 November 2013

Councillor C Harrison
Cabinet Member for Transport
London Borough of Richmond upon Thames
Civic Centre,
44 York Street,
Twickenham,
TW1 3BZ

Dear Councillor Harrison

Re Mini-Holland bid

Richmond Cycling Campaign supports the concepts in the design brief in the "Twickenham Mini Holland Stage 2 document following the meeting with Andrew Gilligan on 7 October 2013" on the basis that the work shall be specified and implemented to a high standard and that the council shall fully consult RCC during the process.

This includes ensuring that:
- those on bicycles are not put into conflict with pedestrians;
- designs at junctions ensure that the safety of those on bicycles is not compromised;
- where cycle paths cross side roads or driveways, by default those on bicycles are given priority;
- provision is for cyclists of all ages and abilities;
- the default width of cycle tracks on the A316 shall allow for two cycles to pass.

Yours sincerely

John Head

Chair Richmond Cycling Campaign

LONDON BOROUGH OF RICHMOND UPON THAMES

Public Health
Dr Dagmar Zeuner
Director of Public health
Phone: 020 8734 3013
Email: Dagmar.zeuner@richmond.gov.uk

12 December 2013

To whom it may concern,

RE: London borough of Richmond upon Thames' Mini-Holland bid

I am writing to confirm that public health welcome this exciting opportunity to extend cycling infrastructure within the borough. We strongly support this bid and local activity that will encourage more residents to take shorter journeys by bike. There is clear evidence that getting more people doing physical activity will help to improve health and this bid presents an excellent opportunity to achieve this at scale in Richmond.

Kind regards,

Dr Dagmar Zeuner

NetworkRail

Chris Smith
London Borough of Richmond upon Thames
Civic Centre
44 York Street
Twickenham
TW1 3BZ

Network Rail
Floor 6
Friars Bridge Court
41-45 Blackfriars Road
London
SE18NZ

9th December 2013

Dear Chris,

I understand that you have met with Phil Dominey and Catherine Oldham from my commercial team over your Mini-Holland bid for Richmond upon Thames.

I am happy to support in principle your Mini-Holland bid if you continue to liaise with necessary Network Rail and South West Trains contacts over the development of the scheme, addressing issues such as asset protection and the necessary land discussions which will need to take place at a later stage.

Many thanks

Sam McCarthy

Commercial Director for Network Rail and South West Trains Alliance

London Borough of Hounslow

Brendan Walsh
Environment Department

Civic Centre
Lampton Road
Hounslow TW3 4DN

Ben Fryer
Principle Transport Planner
London Borough of Richmond upon Thames
Civic Centre,
44 York Street,
Twickenham,
TW1 3BZ

Aled Richards
Direct Line: 0208 583 4961
E-Mail: Aled.Richards@hounslow.gov.uk
Our ref: Richmond Mini-Holland submission
Date: 10 December 2013

Dear Ben,

I write on behalf of the London Borough of Hounslow to express our support for the mini-Holland funding submission that the London Borough of Richmond upon Thames have prepared for TfL. As a neighbouring borough we appreciate the collaborative approach taken by Richmond's transport planning team in developing the funding bid and the opportunities they have provided for us to have our input and discuss projects that would span the boundary between the two boroughs.

We are especially supportive of the proposals to improve cycle facilities along the A316, and have a high quality cycle route continue over Chiswick Bridge and connect up with the A315 (Chiswick High Road). Our own ambitions for cycling improvements within the borough are to provide improved cycle facilities on the A315 route and this dovetails neatly with Richmond's proposals and would provide a high quality cycle route all the way to Hammersmith.

If funded by TfL the A316 route and related Quietway links will be of great benefit to Hounslow residents, particularly those living in Hanworth and Chiswick. We lend our support to your mini-Holland submission and wish you good luck.

Kind Regards

Aled Richards

Aled Richards
Assistant Director - Community Safety, Environment and Regulatory Services

Cycling down Chestnut Avenue in Bushy Park

Currently, a majority of the Borough's residents have reasonably good access to a mix of cycle quietways, advisory routes, and off-road recreational tracks. Recreational facilities within the major parks in Richmond upon Thames are a particular strong point of the Borough's cycling network, and synonymous with the image of cycling in Richmond upon Thames.

Transport for London's (TfL) "Analysis of Cycling Potential" (2010) report found that Richmond upon Thames was second only to London Borough of Hackney in terms of realising the greatest proportion of total potential cycle trips. 20,400 cycle trips were made in Richmond upon Thames between 2005-2008, which represents 19% of the total potential cycle trips (86,900) that the report identified. The findings from TfL's paper suggest that the Borough is performing well when compared to other London Boroughs; however Richmond upon Thames still faces many challenges in order to realise more of its cycling potential. 'Analysis of Cycling Potential' also suggests that the significant uptake in cycling since 2002 is due to existing cyclists cycling more, rather than newly converted cyclists getting on their bikes. This suggests that to increase cycling levels, we will need to deliver facilities which are of a sufficient standard to specifically attract new cyclists as well as existing ones. The below headings give a brief overview of the key cycling issues which the Borough must overcome if it is to encourage more people to travel by bicycle:

- **Strategic Routes -** National Cycle Network (NCN) 4 is the only continuous cycle facility to run the width of the Borough from Hammersmith to Hampton Court Palace; however its meandering route and varying surface treatments restricts the number of cycles that are able to use the facility. These issues with NCN4 typify the challenges that currently face cycling in Richmond upon Thames; there are too few strategic routes to take cyclists conveniently and safely through the Borough to key destinations. Instead, cyclists are expected to use busy roads with little protection from general traffic, or more meandering quieter routes.
- **Inter-Borough Connectivity** - The lack of direct routes within the Borough is not only a barrier to cycle movements in Richmond upon Thames, but also for cycling into neighbouring boroughs and central London. Cycling connections with neighbouring boroughs are generally poor, particularly at major bridges such as Hammersmith and Kew bridges which are intimidating for cyclists to cross. Poor quality gateways are barriers to cycle movements, especially if Richmond upon Thames is to connect into other major cycle infrastructure such as Cycle Superhighway 8 in London Borough of Wandsworth and the proposed Cycle Superhighway 9 in London Borough of Hounslow.
- **Lack of Priority at Junctions** - Cyclists are often made to give-way at side-entry junctions, and to share footways with pedestrians at major junctions. Along the A316 for example, cyclists have to give-way at 50 side-entry junctions, and share footways with pedestrians at all 7 major junctions along the route. This undermines the consistency of cycle routes, and creates many areas of conflict between cycles and other modes, including pedestrians.
- **Inconsistent Designs** - The lack of consistent cycle design detracts from the continuity of existing cycle routes and confuses cyclists about where they can and cannot cycle, which over the course of longer cycle routes can become disorientating for cycles.
- **Recreational Facilities** - The Borough is renowned for its open spaces like Bushy and Richmond Parks, which hundreds of cyclists visit every weekend. However there is still scope to improve connections into these recreational areas and significantly increase the recreational cycling network, particularly along the Thames Towpath, and by improving quietway connections between the outdoor spaces.
- **Secure Cycle Parking** - Cycle parking is in high demand across the Borough, particularly at railway stations and town centres. At many locations, such as Twickenham Station, cyclists are forced to lock their bikes to street furniture or lampposts because the cycle parking is often already full. Cyclists are less likely to travel by bike if they are unable to find secure parking spaces; it is essential that sufficient parking spaces are provided to match demand.

TWICKENHAM MINI - HOLLAND
CYCLING IN THE BOROUGH

LONDON BOROUGH OF
RICHMOND UPON THAMES

TWICKENHAM MINI - HOLLAND

TWICKENHAM TOWN CENTRE







Warren Footpath will be resurfaced to accomodate both pedestrians and cyclists' needs

PROPOSAL OVERVIEW

Twickenham was the natural choice to be the Borough's Mini-Holland because it sits at the heart of Richmond upon Thames, and so is best positioned to evolve into a Mini-Holland. A majority of the Borough is within a comfortable 20 minute cycle from Twickenham, and importantly several other key Town Centres are within a 20 minute cycle from Twickenham including Brentford, Hounslow and Kingston.

Improvements are already taking place in Twickenham Town Centre and so the Mini-Holland proposals would seek to build upon the existing good work which is already underway. The combination of the proposed facilities and the Mini-Holland proposals will significantly increase cycle permeability in the Town Centre, and where possible give cyclists essential protection from general traffic. The key features of the Town Centre improvements are:

- Advisory cycle lanes will be installed along King Street and London Road through to Railway Approach to increase cyclists' comfort and visibility.
- A 20mph speed limit will be introduced throughout Twickenham Town Centre to further reduce the impact of vehicular traffic upon the Town Centre.
- New Quietway routes are being provided for cyclists through Holly Road which will provide less confident cyclists with an alternative route to King Street and further increase cycle permeability.
- All parking and loading bays will be recessed into footways to increase the effectiveness of the footways and to provide road users with a consistent kerb line.
- Raised tables will be installed at key junctions throughout the Town Centre to help improve pedestrian comfort and to raise the sense of pedestrian priority within the Town Centre.
- Twickenham Embankment Phase Two will enhance the cycle route to link-up with the Mini-Holland proposals for Warren Footpath, linking Twickenham and Richmond Town Centres.

The Mini-Holland proposals will build upon the Town Centre improvements by extending cycle connections along key radial routes out of the Town Centre to connect with the other Mini-Holland proposals, as well as other proposed cycle improvements such as the River Crane Quietway. A key objective of the proposals was to increase the overall visibility of cyclists in the Town Centre; this is in direct response to road safety analysis conducted on data the last 3 years in the Town Centre. Between July 2010-July 2013 there were 98 road collisions in the Town Centre, and 31 involved cyclists; a majority of which involved cyclists either not being seen by pedestrians/drivers. We are proposing that segregated facilities are installed to improve the overall visibility of cycle infrastructure along key routes into Twickenham. The Mini-Holland proposals are focussed on the main radial routes from the Town Centre: Heath Road, London Road, and Twickenham Riverside.

- **Heath Road** - this is an important connection with the west of Twickenham Town Centre; it also connects into the Hampton Railside cycle route at Pope's Avenue and Radnor Road. Parking bays will be re-aligned between Lion Road and Grove Avenue to allow the installation of cycle tracks along the inside of parking. This will provide important protection for cyclists along a stretch of Heath Road where there have been several collisions involving cyclists not being seen by drivers. The proposals will re-design the junction of Heath Road and Twickenham Green to be more cycle-friendly; advanced stop lines will be installed on all arms of the junction, and the slip lane from Heath Road onto The Green (south) will be restricted to cyclists only.
- **London Road -** this will form the key link between the A316 Commuter Route and Twickenham Station and Town Centre; therefore it is recommended that segregated facilities are provided to explicate the connection between the two routes. The relative high levels of both vehicular traffic and pedestrian footfall on London Road meant that it was important to install facilities that would be visible to all users, without reducing the wider permeability of the area. We decided that Danish-esque cycle tracks would provide the optimal facility as they would provide a segregated route from the A316 into Twickenham Town Centre without affecting the overall permeability of London Road.
- **Warren Footpath** Improving connections between King Street and the Warren Footpath on Twickenham Riverside will provide cyclists with a quietway route between Twickenham and Richmond Town Centres. The design team explored the possibility of installing cycle facilities along the Richmond Road; however narrow carriageways and bus/ parking facilities meant that it was not feasible to develop high-quality facilities.
- **Twickenham Station 'Super-hub' -**Secure Cycle spaces are already in high demand at Twickenham Station with many cyclists having to lock their cycles to railings, and street furniture close to the station. The current proposals for the station's redevelopment will install 450 secure cycle parking spaces, the Borough is seeking to double the number of spaces at the Station to 900 spaces to ensure that a genuine 'Super-Hub' is provided at Twickenham. The Twickenham 'Super-Hub' could be supplemented by the installation of a Brompton Dock at the station consisting of 20 Brompton bikes or an expansion of the Richmond cycle hire scheme; which would further increase the opportunities to cycle in Twickenham Town Centre.
- **Cycle Advance Signals -** Where feasible detection and signalling for an early release facility for cyclists will be installed at junctions throughout Twickenham Town Centre. This may take the form of an above ground infrared stop line detector to trigger cycle signal priority at signalised junctions to allow cyclists an early start. By reducing the length of the red phase when cyclists are detected, cyclists' waiting times and conflict with motorised traffic would be reduced.

TWICKENHAM MINI - HOLLAND
TWICKENHAM TOWN CENTRE

OVERVIEW OF TWICKENHAM TOWN CENTRE PROPOSALS

'Mini Holland Scheme'
A316 Commuter Route

'Mini Holland Scheme'
Railside Cycle Route

1

2

3

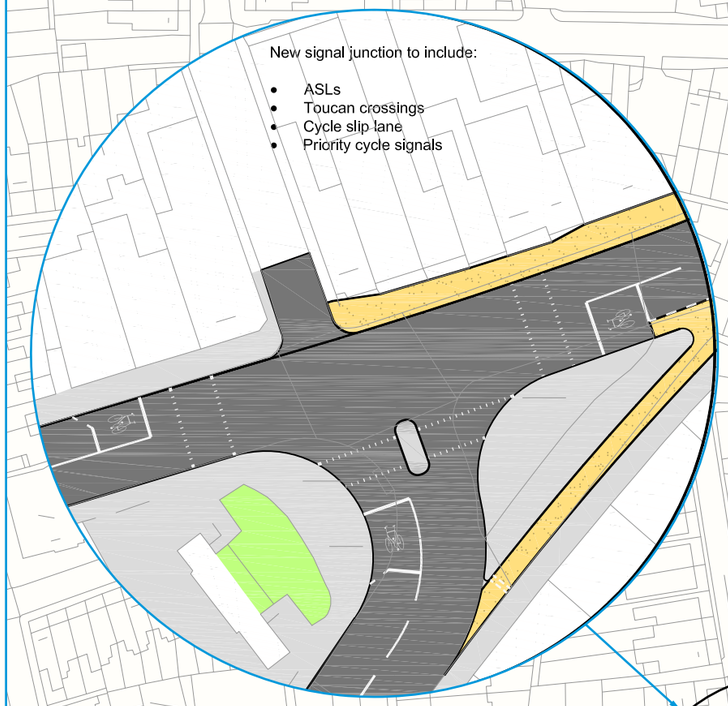
4

5

6

New signal junction to include:

- ASLs
- Toucan crossings
- Cycle slip lane
- Priority cycle signals



View of proposed crossing location

New retaining walls constructed on both sides of the road to widen the footway to accommodate proposed shared use cycle and footway

Side road entry treatment with cycle priority

East bound segregated cycle lane to feed into existing bus lane

Shared use | Segregated

Shared use | Segregated

SEE FIGURE 2

Cycle lanes to be surfaced with a buff coloured material

Existing crossing to be upgraded by removing the staggered crossing and providing a straight across Toucan crossing

Locations for cycle parking to be identified during detailed design

Connection to Pope's Avenue and Railside Cycle Route

Heath Road

The Green

GROVE AVENUE

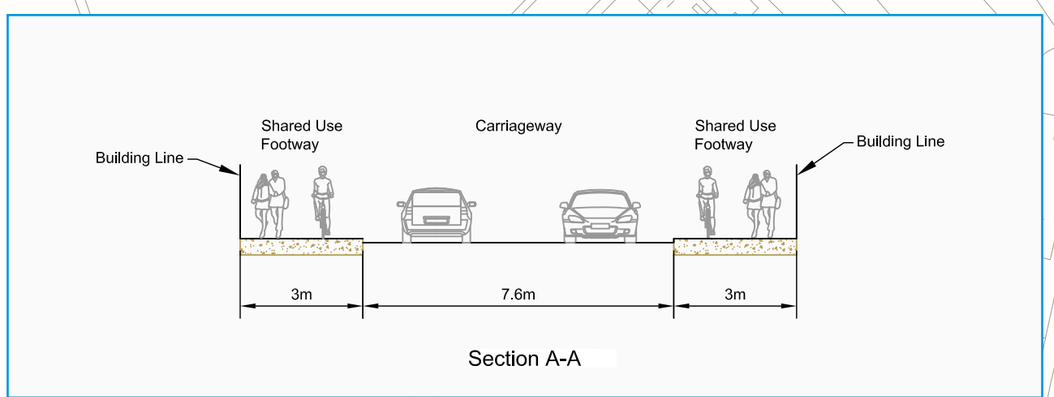
N

A

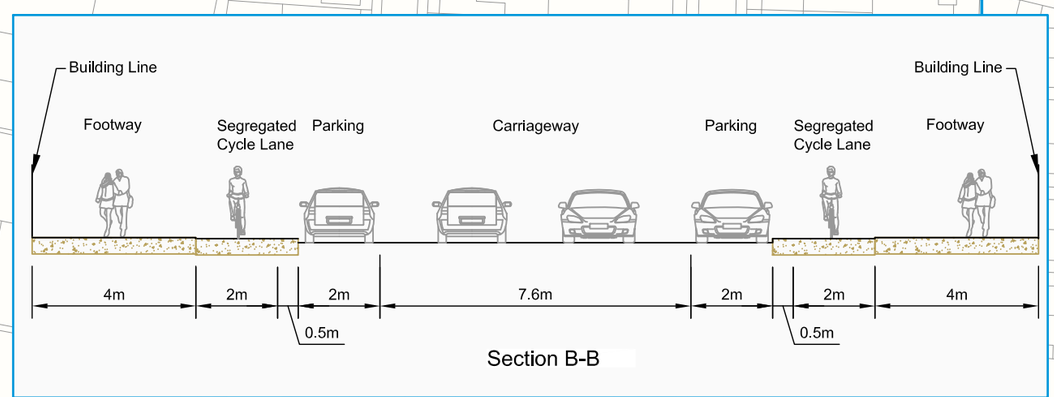
A

B

B



Section A-A



Section B-B

KEY

- Twickenham Town Centre
- TTC Cycle Facilities, either existing or proposed outside of Mini Holland
- Proposed side road entry treatment with cycle priority
- Access to Cycle Route
- Other Mini Holland Routes

Twickenham Mini Holland
Twickenham Town Centre
Figure 1

Example of a junction in Old Shoreham Road, Brighton with a side road entry treatment and cycle priority

'Mini Holland Scheme'
Railside Cycle Route - Quietway

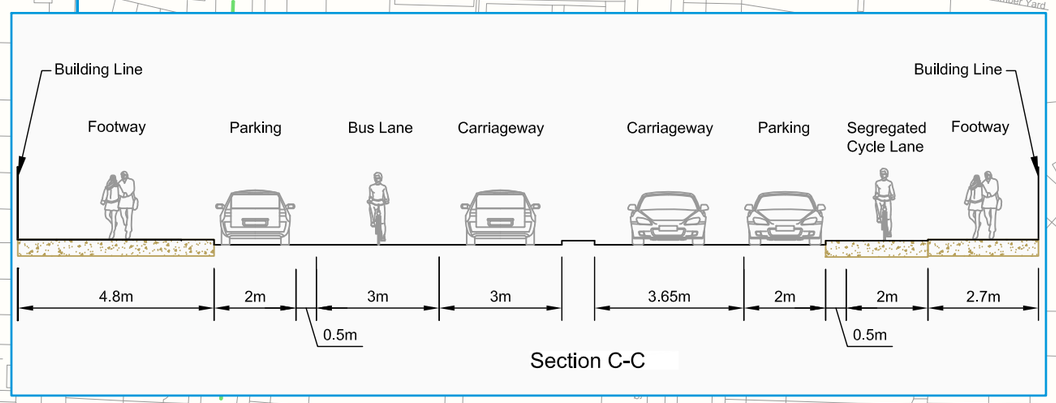
SEE FIGURE 1

SEE FIGURE 3

Segregated cycle lane

Convert existing crossing into a Toucan crossing

New bus stops in this area prevent continuation of cycle track

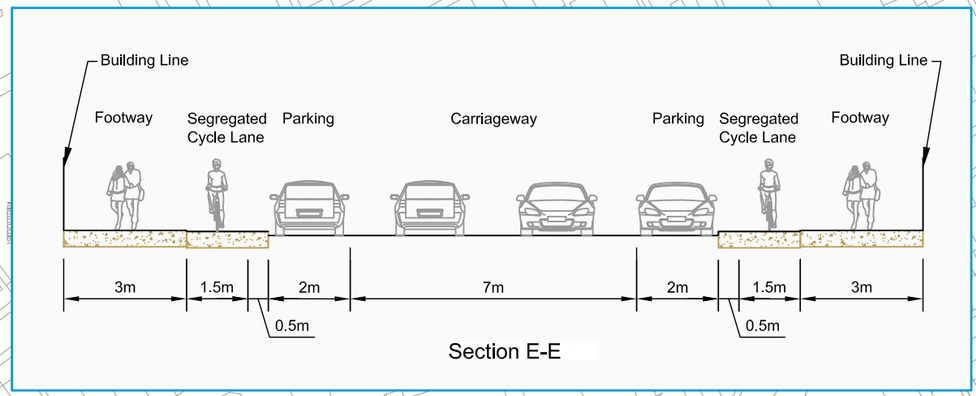


Section C-C

KEY

- Twickenham Town Centre
- TTC Cycle Facilities, either existing or proposed outside of Mini Holland
- Proposed side road entry treatment with cycle priority
- Access to Cycle Route
- Other Mini Holland Routes

Twickenham Mini Holland
Twickenham Town Centre
Figure 2



Section E-E

SEE FIGURE 2

Proposed junction to be constructed as part of the Twickenham Town Centre Scheme

As part of the Mini Holland proposals, all Twickenham Town Centre signals to have retro-fitted Cycle priority Signals

Advance cycle lane & ASL's at this junction

Contra flow cycle lane

Proposed contra flow cycle lane

Contra flow cycle lane

New Toucan crossing with shared surface to be fed by new cycle lanes on London Road

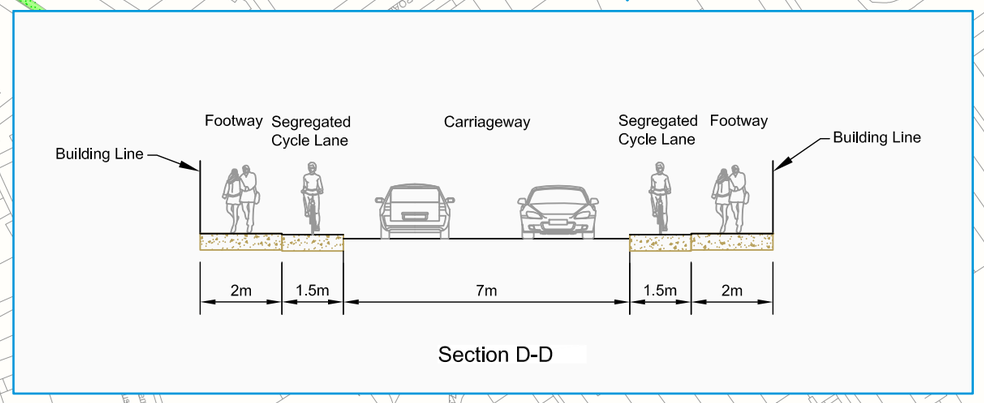
Retain existing loading bay

SEE FIGURE 4

Advance cycle lane & ASL's at this junction

Advisory cycle lanes

Improved connection to Warren footpath with a proposed contra flow cycle lane



Section D-D

KEY

- Twickenham Town Centre
- TTC Cycle Facilities, either existing or proposed outside of Mini Holland
- Proposed side road entry treatment with cycle priority
- Access to Cycle Route
- Other Mini Holland Routes

Twickenham Mini Holland
Twickenham Town Centre
Figure 3

Proposed River Crane Quietway

'Mini Hollnd Scheme' Railside Cycle Route - Quietway

Segregated cycle lanes

Advisory cycle lane & ASL's at this junction

As part of the Mini Holland proposals, all Twickenham Town Centre signals to have retro-fitted Cycle priority Signals

Bus stop to be realigned

Carriageway reduced in width to 7.6m to accommodate segregated cycle lanes on both sides of the road

Parking on both sides of the road to be re-located to adjoining roads

900 secure cycle spaces to be installed as part of Twickenham Railway Station redevelopment

Bus stop to be realigned to accommodate new cycle track

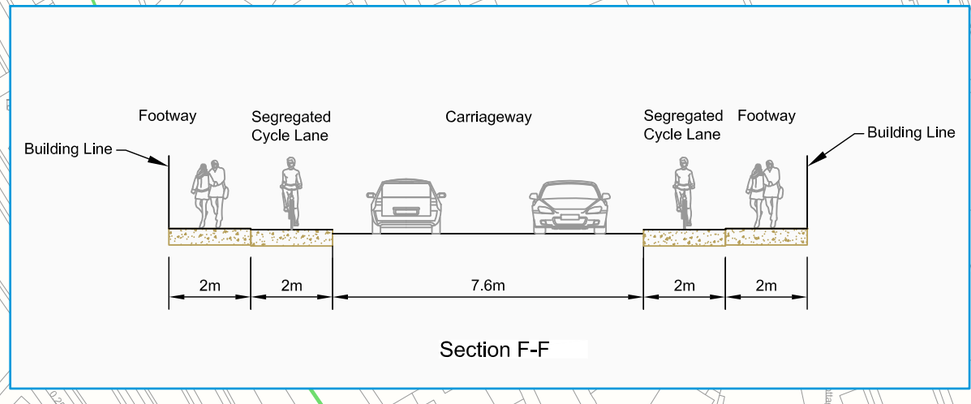
Advisory cycle lane & ASL's at this junction

Bus stop to be realigned

As part of the Mini Holland proposals, all Twickenham Town Centre signals to have retro-fitted Cycle priority Signals

SEE FIGURE 3

SEE FIGURE 5

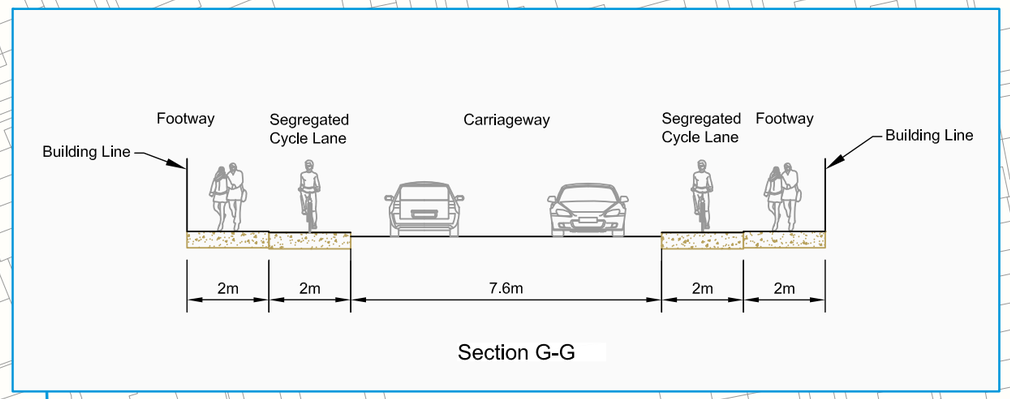


Section F-F

KEY

- Twickenham Town Centre
- TTC Cycle Facilities, either existing or proposed outside of Mini Holland
- Proposed side road entry treatment with cycle priority
- Access to Cycle Route
- Other Mini Holland Routes

Twickenham Mini Holland
Twickenham Town Centre
Figure 4



Section G-G

'Mini Holland Scheme' A316 Commuter Route

Existing traffic islands to be removed to allow for the carriageway width to be reduced

Segregated cycle lanes

Street lighting columns and other street furniture to be relocated to avoid obstructing the cycle lane

Bus stop to be realigned

LONDON ROAD

G

G

Cycle lanes to be surfaced with a buff coloured material

Scheme to tie into the proposed A316 Commuter Route

SEE FIGURE 4

- Parking controls single yellow line markings/restrictions to be replaced with double yellow line markings/restrictions
- Loading controls, limited and timed loading to be provided

Side road entry treatment with cycle priority

Example of similar junction at Old Shoreham Road Brighton

KEY

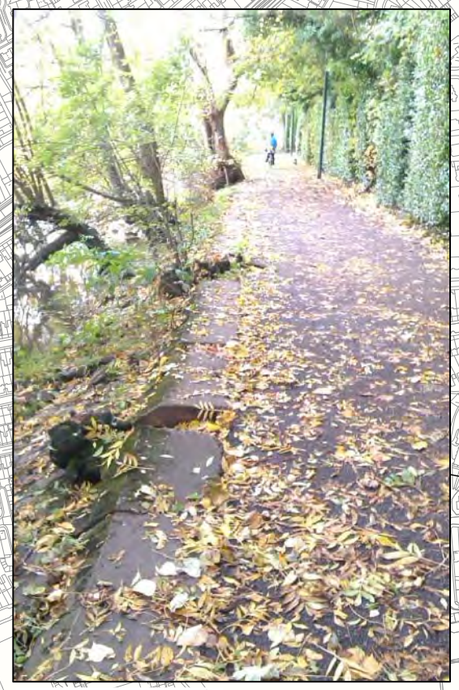
- Twickenham Town Centre
- TTC Cycle Facilities, either existing or proposed outside of Mini Holland
- Proposed side road entry treatment with cycle priority
- Access to Cycle Route
- Other Mini Holland Routes

Twickenham Mini Holland
Twickenham Town Centre
Figure 5

Mini Holland Scheme SCHEME
A316 Commuter Route

River Crane Quietway

Mini Holland Scheme
Railside Cycle Route - Quietway



Existing cycle track

Existing footpath along the River Thames between Twickenham and Richmond Town Centres to be improved

Existing Bat friendly lighting to be retained

Locations for cycle parking to be identified during detailed design

Existing cycle track to be repaired and re-surfaced with a buff coloured material

KEY

- Twickenham Town Centre
- TTC Cycle Facilities, either existing or proposed outside of Mini Holland
- Proposed side road entry treatment with cycle priority
- Access to Cycle Route
- Other Mini Holland Routes

Twickenham Mini Holland
Twickenham Town Centre
Figure 6

TWICKENHAM TOWN CENTRE: RISK REGISTER

Scheme Risk Register

Project:	Twickenham Town Centre - LBRuT Mini Holland	**Document Reference**	5103865/118/30.05.01
Design Stage:	Feasibility	**Revision No.**	2.0
Author	Dan Hardwick	**Revision Date**	10/12/2013

designoutrisk: RED AMBER & GREEN

ATKINS

	Risk Identification			Risk Reduction		Communication of Residual Risk			Notes
A	B	C	D	E	F	H	I	J	K
Ref.	Structure Element and/ or Location	Description of Risk	Type of Risk	Action to reduce or eliminate risk	Record of residual risk	Significance of Residual Risk	Means of Communicating Significant Residual Risk	Designer Initials here to verify commitments in Column I	Commentary if required/ Project Director sign off any Red Items
0001	London Road / Heath Road	Parking removed from London Road to allow introduction of segregated cycle track	Political	Parking can be reallocated to side roads or other locations where appropriate/if possible.		Red - Significant			
0002	London Road / Heath Road	Trees will have to be removed to allow for the introduction of a segregated cycle track	Political	Where trees will need to be removed they shall be replaced with new trees in a more appropriate location		Red - Significant			
0003	London Road	Bus stops to be moved to allow for the introduction of a segregated cycle track	Political	Floating bus stops to be introduced		Amber - Significant			
0004	General	Statutory undertakers plant needs to be relocated	Design & Build	Conflict with statutory undertakers plant to be designed out where possible		Amber - Significant			
0005	General	Street lighting to be relocated to suit design proposals	Design & Build	If there isnt a DNO supply where the columns need to be relocated to then options will be considered to design this problem out.		Green - Not Significant			
0006	Heath Road	Due to the width of the carriageway under the railway bridge and the lack of footway width on the southern side of the road, it will not be possible to provide two segregated cycle tracks through this section.	Political	It is proposed to provide shared use footway on both sides in this location as there is insufficient road width to provide segregated cycle tracks.		Amber- Significant			
0007	Heath Road / The Green junction	Realigning this juction may have an impact on the traffic capacity	Design & Build	Traffic surveys and traffic modeling to be undertaken to minimise any impact on the junction.		Amber - Significant			
0008	Heath Road	Retaining walls either side of railway bridge need to be widened to accomodate shared use footways	Design & Build	Retaining wall construction to allow for widened shared use footway to stop short of railway bridge to avoid possible interface with bridge.		Amber - Significant			
0009	General	Consultation - negative response from residents	Political	A structured consultaion process will need to be put in place to ensure both the negeative and positive impacts to residents is conveyed.		Red - Significant			
0010	Heath Road / The Green junction	Relocate historic water pump / lighting column on pedestrian island at junction.	Political	Liaison with all concerned parties to be undertaken to agree new location		Amber - Significant			
0011	Heath Road / The Green junction	Cycle pre signals to be installed this juction. This will require DfT approval.	Design & Build	Early liason with TfL and DfT will be undertaken to gain approval		Red - Significant			
0012	Heath Road	Existing 3m wide Eastbound bus lane to be used for the cycle route	Design & Build	Investigate the posibility to widen the bus lane.		Green - Not Significant			
0013	Riverside cycle path	Construction next to the river may have an ecological impact	Ecology	Ecological impacts to be considered prior to construction and mitigation measures to be put in place before construction.		Amber - Significant			
0014	Riverside cycle path	Construction next to the river will cause difficulties for the Contractor with regard access, storage and safety.	Design & Build	Contractor to provide method statements to cover all these risks.		Green - Not Significant			
0015	Heath Road	Westbound bus stops need to be relocated to provide a joined up cycle track from the cross deep junction.	Political	To provide the cycle track the bus stops will need to be relocated into the carriageway, which would have capacity impacts and cause London Buses operational issues. Liaison with London Buses and TfL would be required to get agreement to move these bus stops and traffic modelling would be required to prove this would not impact traffic.		Red - Significant			

The Risk Management System and Risk Register will be populated as the design progresses in future design stages (subject to funding).

TWICKENHAM TOWN CENTRE: FORM B

	Assessment based on TfL Surface Transport Outcomes	Benefit / Cost	Impact * (+3 to -3)
1	Maintaining and enhancing a reliable, accessible and high quality **bus** network and ensuring efficient **coach** service in London	Bus operating costs	0
		Impact on bus journey times and reliability	-1
		Bus passenger accessibility	0
		Legibility of bus network	1
2	Ensuring reliable operation of London's **road network** while reducing congestion	Overall traffic levels (main roads and side roads)	1
		Journey time impacts for different users	-1
		Reallocation of carriageway space	1
		Reallocation of footway space	1
		Congestion	0
		Junction operation (degree of saturation)	0
		No. of junctions forming part of scheme	15
		No. of above requiring modification	15
		Loss of car parking: resident / visitor	0
3	Continuing the downward trend in **crime** and fear of crime on London's transport networks	Quality of public realm (see objective 8)	3
		Quality of interchange	1
4	Enabling more people to **cycle**, more safely, more often	Overall traffic levels and mix	2
		Quality of N-S and E-W routes	1
		Road safety (see objective 6)	2
		Permeability and connectivity N-S and E-W	2
		Cycle parking	3
		Capacity of facilities	1
5	Supporting provision of **door-to-door** transport services including ensuring the operation of safe, reliable and accessible **taxi and private hire** and supporting services for those unable to use mainstream transport	Impact on taxi/private hire journey times	0
		Taxi/private hire user accessibility	0
6	Continuing the downward trend in **casualties** on London's roads and public transport networks	Impact on casualty levels for cyclists	2
		Impact on casualty levels for pedestrians	2
		Impact on road danger (perceived and actual)	2
7	Continuing to deliver **environmental** improvements, including improving the natural environment and air quality, and reducing CO_2 from ground based transport and impacts of noise	Overall traffic levels (main roads and side roads)	0
		Air quality exposure impacts	0
		Congestion impacts	0
8	Supporting an increase in **walking** by creating safe, attractive and accessible streets and public spaces that people can use and enjoy.	Overall traffic levels and mix of traffic	2
		Road safety (see objective 6)	2
		Footway congestion	1
		Public space provision	2
		Quality of public realm	2
		Permeability and legibility	2
		Quality of crossings (informal and formal)	3
9	Supporting more sustainable patterns of **freight** delivery and servicing	Impact on servicing and loading (provision and location)	0
		Journey time impacts	0

			Proportion %
Other	**Managing authority / landowners**	Borough public highway	75
		Strategic Road Network	0
		TLRN	0
		Private land	0
		Network Rail / TOC	0
		Open Metropolitan Space	25

LONDON BOROUGH OF
RICHMOND UPON THAMES

TWICKENHAM MINI - HOLLAND

A316 COMMUTER ROUTE

View along the A316 towards Whitton Roundabout; sections of the central reservation will be removed to maintain consistent cycle facilities.

PROPOSAL OVERVIEW

The lack of consistent, segregated facilities within Richmond upon Thames is a significant barrier not only to encouraging residents to cycle, but also to getting more visitors to cycle into the Borough. There are currently segregated cycle facilities scattered along the A316; however inconsistent designs and a lack of priority for cyclists undermines cyclists' comfort and sense of continuity along the route. The issues which currently beset the A316 cycle facilities exemplify many of the issues which currently affect cycling in Richmond upon Thames; it is imperative therefore that the existing facilities along the A316 are transformed into a Commuter Route which will set the benchmark for all future cycling facilities in the Borough.

The Commuter Route will create the first continuous cross-borough cycle route in Richmond upon Thames. It would become a landmark facility for all types of cyclists and it would not only be the Borough's first commuter route out of the Borough, but it would also act as a crucial gateway for cycling into the Borough, particularly at weekends when hundreds of extra leisure trips are made to Richmond upon Thames to enjoy its outdoor spaces. Within the Borough the proposed route would be 4.7 miles long; running from Hospital Bridge Roundabout through to Chiswick Bridge. The recommended A316 route would form part of a 12 mile continuous cycle route from Hanworth in Hounslow all the way to Hyde Park Corner, making it the longest continuous cycle route in London.

The overarching aim during the development of the Commuter Route was to 'De-Dual' the A316 and transform how it feels for all users of the route. This will mean removing a significant amount of street clutter, removing highways paraphernalia, and re-designing all 7 major junctions which the Commuter Route will run through. To reinforce the 'De-Dualling' of the A316, we are proposing major changes to A316 with a specific focus on cycle and pedestrian comfort:

- **Design Consistency** - We are proposing 3m wide bi-directional cycle facilities along both sides of the whole length of the A316, except for a short stretch between St. Margaret's Roundabout and Twickenham Bridge, and between Richmond Circus and Pagoda Avenue on the north side of the A316 where it was not feasible to install facilities because of insufficient carriageway space. In order to maintain a consistent 3m width we are recommending that sections of the central reservation are removed where necessary, and that the space is reallocated to the footways and cycle tracks. We are also proposing that buff surfacing is used throughout the A316 through all major junctions and side entries to increase the visibility and awareness of the Commuter Route. We are recommending that wayfinding is used to supplement the route's legibility, especially if the route continues on to Central London.
- **Junction Designs** - To maximise the cycling potential of the A316, it is critical that the designs for both links and junctions are consistent throughout the entire length of the route. The proposed designs for all 7 major junctions along the A316 were developed in tandem to ensure that all road users would become familiar with a standard treatment for cycle priority. The proposed designs will completely transform the public realm at all junctions along the A316; recognising the importance of these junctions as key landscape nodes along the A316 and as gateways into town centres in the Borough. Specific attention was given to the junctions of Chalkers Corner, London Road Roundabout, and Richmond Circus because of their poor road safety records for cyclists and pedestrians. Chalkers Corner and the London Road Roundabout were shortlisted for TfL's Better Junctions' programme. At Richmond Circus there were 17 collisions between July 2010 and July 2013; 7 of these involved cyclists, and there were also 6 cycle-related collisions at Chalkers Corner in the same period.
- **Link Designs** - The lack of cycle priority at side-entry junctions is a key issue for cyclists using the A316; in total there are 50 side-entry junctions along the route, with 20 junctions within a 1.1 mile stretch between Richmond Circus and Chalkers Corner. To ensure continuity we have developed a standard treatment which will provide cycle priority across all 50 side-entry junctions on the A316, whilst providing sufficient refuge for turning vehicles to turn off the A316 without impeding traffic. This will significantly improve the overall legibility of the route for cyclists, and will help to overcome one of the major issues for cyclists currently along the route.
- **Town Centre Connections** - As well as improving east-west connections, north-south links will be improved along the route, including links to Richmond, Twickenham, and Whitton Town Centres. Richmond upon Thames is also proposing the installation of a new pedestrian-cycle tunnel under the A316 to reduce delays caused by events at the Twickenham and Harlequins Stadiums and to enhance connections between Twickenham Town Centre and the A316. The tunnel would have significant benefits for the overall operation of the A316 for all road users, and would produce over £1m per annum in savings to traffic delays (TfL Report, 2012). The Borough is also proposing to replace the existing pedestrian footbridge at Old Deer Park with a new cycle-friendly structure which would provide an important crossing point for users of the park. A short Railside section will be installed between Whitton Station and Meadway to improve the connection between Whitton and Twickenham. The Borough has met with South-West Trains and Network Rail to ensure that the proposals for the re-designed Whitton Station will incorporate the Railside link.
- **Inter-Borough Connections** - The Borough has had some very positive meetings with the neighbouring London Borough of Hounslow regarding the extension of the A316 route by an extra 1.4 miles. This would extend the route east to Hogarth Roundabout in Chiswick where the A316 route would then connect into TfL's proposed Cycle Superhighway 9. To further enhance cycling connections with neighbouring boroughs; Richmond upon Thames is recommending that the A316 route is also extended west to Apex Corner in Hounslow which would add another 0.8 miles to the route. Richmond upon Thames have also agreed with London Borough of Hounslow that they will work together to connect the A316 with their cycle routes and London Borough Ealing's Quietway cycle proposals, specifically the North Circular Route from Kew Bridge to Ealing Town Centre, and a Quietway route from Whitton through to Southall Town Centre.

TWICKENHAM MINI - HOLLAND
A316 COMMUTER ROUTE

OVERVIEW OF A316 COMMUTER ROUTE PROPOSALS

'Mini Holland Scheme'
A205 Quietway

'Mini Holland Scheme'
Twickenham Town Centre

'Mini Holland Scheme'
Railside Cycle Way

1
2
3
4
6
6
7
8
9
10
11
12
13
14
15
16
17
18

Existing footway to be widened by reducing lane widths and utilising the central reservation

The A316 Commuter Route will provide a continuous cycle route across the Borough.

With the exception of a small stretch of the track near St Margaret's, it is proposed to provide a 3m wide segregated cycle track on both sides of the A316. The wide track will allow for two way cycling on both sides of the road

Mini Holland Commuter route to join into existing cycling facilities.

However; subject to London Borough of Hounslow and TfL's agreement the A316 Commuter Route can be extended to Apex Corner.

Central reservation will be maintained where possible. It may be reduced in width or removed at some locations where there is insufficient space to install the cycle lanes

The wide exit at Lincoln Avenue will be reconfigured. A side road entry treatment with cycle priority will be constructed easing cycle and a pedestrian movement across the junction

Hospital Bridge Roundabout

Proposals

- Upgrade the 3 existing Toucan Crossings to improve cycle access.
- New Toucan Crossing on east arm of roundabout
- New 3m wide segregated cycle tracks linking all arms of the roundabout.
- East arm entry reduced from 3 lanes to 2 lanes.
- South arm entry reduced from 3 lanes to 2 lanes.

Risks

- Land take required to construct new segregated track may not be possible.
- The link to Apex Corner will need to be discussed with London Borough of Hounslow.
- The proposals are subject to the results of traffic modelling and approval from TfL

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

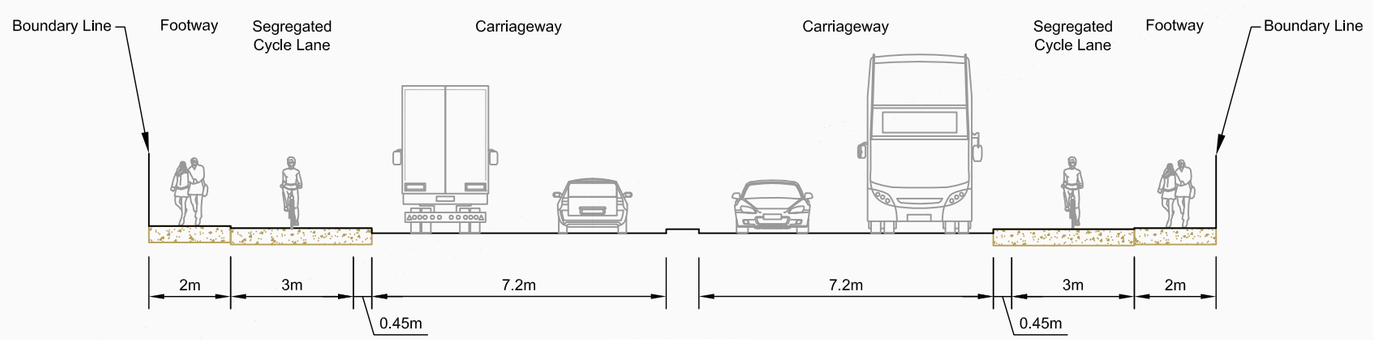
Twickenham Mini Holland
A316 Commuter Route
Figure 1

Poorly placed street furniture to be removed

Street furniture and trees will be removed or relocated if they conflict with cycle lanes. A tree survey and ecology study will be undertaken to ensure that only suitable trees are removed. A tree planting scheme forms part of the Mini Holland bid to make the route attractive to all road users

The space required for the 3m wide cycle tracks and 2m wide footway will be obtained by constructing on existing footways and verges. Where there is insufficient space on the existing footways, they will be widened by either reducing existing lane widths, reducing the width of the central reservation or removing the central reservation

The segregated cycle lane will be 3m wide and surfaced in a buff coloured surfacing. The footway is to be a minimum 2m wide and surfaced in a contrasting material, such as pre-cast concrete paving slabs. A verge of 0.45m between the cycle lane and edge of carriageway will be provided.



Section A-A

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 2

New railside route to be constructed between Whitton Station and Meadway Crossing

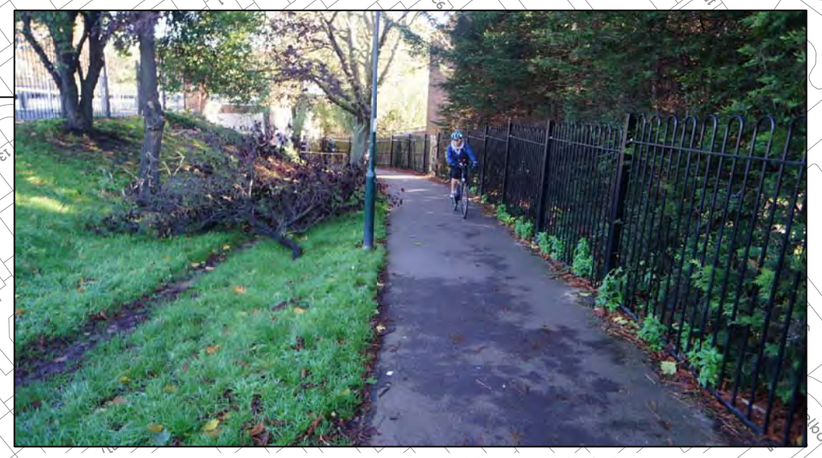
A316 Commuter Route to tie into the cycle facilities on the LCN route 37 in Jubilee Avenue

Existing Meadway Subway to be improved to match the cycle track materials palette

A316 Commuter Route to tie into the cycle facilities on the LCN route 37 in Meadway

Existing emergency access gate

Junction will be closed. Residents will use either Meadway or Lincoln Avenue as alternative routes



Meadway subway and access ramps to be upgraded to the A316 Commuter Route standards

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 3

Existing service road to be raised level with the footway and both footway and service road to be surfaced in a buff coloured material. This will provide a 4m wide shared surface.

Existing road closure to be made permanent

Existing road closure made permanent to enhance cycling continuity along the A316

Cycle track priority on side road requires vehicles to give way to cyclists

SEE FIGURE 5

SEE FIGURE 3

CHERTSEY ROAD

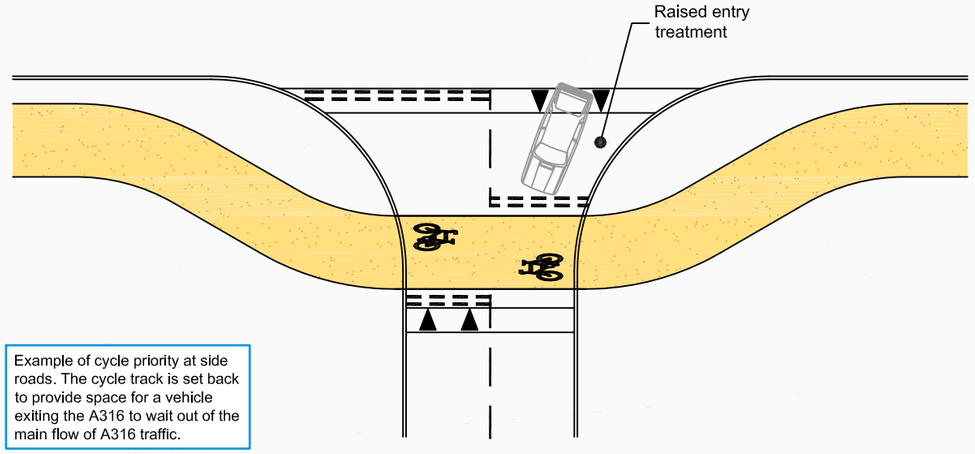
BRIDGE WAY

ROSEBINE AVENUE

GLADSTONE AVENUE

Social Centre

N



Example of cycle priority at side roads. The cycle track is set back to provide space for a vehicle exiting the A316 to wait out of the main flow of A316 traffic.

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 4

KNELLER ROAD

CHASE GARDENS

KENDREY GARDENS

ALTON GARDENS

GODFREY AVENUE

TALMA GARDENS

CHERTSEY ROAD

LANGHORN DRIVE

Option.
The construction of a subway connecting Langhorn Drive to the southern car park in Twickenham Stadium has been proposed. Discussions with the Borough, Rugby Football Union and TfL to be undertaken to establish it's viability and funding. (This is not included in the Mini Holland bid).

'Duke of Northumberland Footbridge' to be replaced by TfL at a cost of £2.5m. The construction to be completed in time for the Rugby World Cup (This is not included in the Mini Holland bid)

SEE FIGURE 4

SEE FIGURE 6

9.8m

11.3m

RM 11.78m

Playing Field

Stand

Health Club

Mast

El Sub Sta

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 5

TWICKENHAM STADIUM

Whitton Road Roundabout

Proposals
- The existing Toucan Crossings will be upgraded to improve cycle access.
- The existing shared use footways will be converted to incorporate 3m segregated cycle track by widening the footway into the roundabout carriageway.
- Central island will be modified to maintain existing lane layout.
- South arm entry reduced from 3 lanes to 2 lanes.

Risks
- The proposals are subject to the results of traffic modelling and approval from TfL
- Access to the Currie Motors site on the north side of the roundabout will have to be maintained.

Existing Toucan crossing modified to accommodate new wider cycle track

Existing road closure to be made permanent

Cycle track crossing behind existing emergency access gate on raised carriageway

Cycle track priority on side road requires vehicles to give way to cyclists

SEE FIGURE 5

SEE FIGURE 7

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 6

London Road Roundabout/Signal junction

Proposals

- Replace roundabout with a signal junction with toucan crossings on all arms.
- The existing shared use footways will be converted to 3m segregated cycle track with a 2m footway.
- East arm entry to be reduced from 3 lanes to 2 lanes.

Risks

- The proposals are subject to the results of traffic modelling and approval from TfL

Segregated cycle track to be constructed next to existing shared use facility

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 7

Footway width reduced and central hatching removed to accommodate widening on south side for parking area

Proposed road closure

The segregated cycle track will run behind the loading lay by

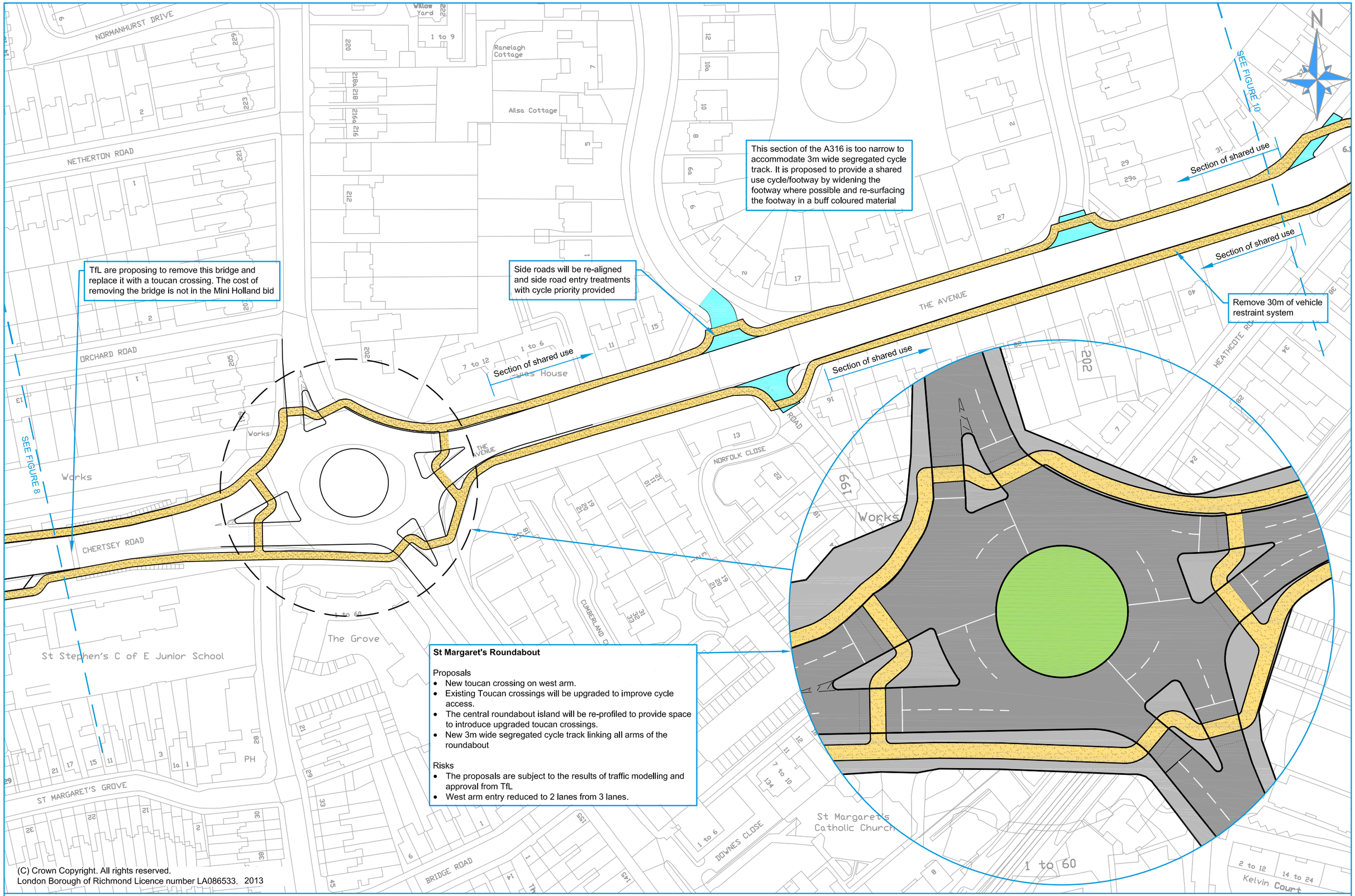
To accommodate the 3m wide cycle track the footway parking will be moved closer to the back of footway by circa 0.5m leaving a footway of circa 1.8m wide. Additionally, the kerb will be moved out into the existing carriageway by 2.5m. To offset the loss of 2.5m of carriageway, the central road markings ghost island will be removed and the oppisite footway will be reduced in width

Existing parking arrangement

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 8



KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 9

All existing lighting columns will be relocated to rear of footway

To accommodate 3m segregated cycle track on both sides of the bridge, the footways are to be widened where required. The central hatched island is to be removed to allow for footway widening

Existing segregated cycle track widened to 3m and resurfaced in a buff coloured material

Remove circa 10m of vehicle restraint system

Segregated cycle tracks to run behind existing barriers

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 10

Existing segregated cycle track will be widened to 3m and resurfaced in a buff coloured material

Existing shared use to be converted to a 3m wide segregated cycle track by widening into the existing grass verge

New cycleway links to the riverside tow path

Risk:
The Crown Estate will have to agree to cycle tracks in Old Deer Park

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 11

Carriageway narrowed, but maintained as two lanes in each direction.

Central hatching removed to accommodate cycle track construction

Minor alterations to signal junction to accommodate cycle track

Existing shared use section converted to 3m segregated track by widening into carriageway

Existing segregated cycle track will be widened to 3m and resurfaced in a buff coloured material

Existing footbridge to be replaced with new cycle friendly footbridge. This will improve connections to Richmond Town Centre and Old Deer Park

When footbridge is replaced suitable width footways and cycle ways will be provided

Existing shared use to be converted to a 3m wide segregated cycle track by widening into the existing grass verge

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 12

Exit to sports ground to be altered to provide better visibility

Existing road closure to be re-designed to remove any ambiguities with the rest of the A316 cycle route

Floating bus stop.
At bus bus stops the cycle track will pass behind the shelter

Existing central reserve realigned (or removed) to provide width for cycle track construction

Existing shared use section converted to 3m segregated track by widening footway

RIchmond CIrcus

Proposals
- Remove roundabout and replace with signalised junctions with toucan crossings on all arms.
- The existing segregated cycle tracks will be widened to 3m and extended through the reconfigured junction to connect the toucan crossings.

Risks
- The proposals are subject to the results of traffic modelling and approval from TfL.
- The presence of statutory undertakers apparatus or other services in the existing large central island will have to be ascertained. Any such presence may seriously affect design decisions.

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 13

Existing segregated cycle lanes to be widened and surfaced in a buff material

3m segregated cycle track on widened footway

To maximise space on the foot/cycleway all street furniture will be located away from the segregated cycle track

Existing Toucan crossing modified to improve cycle access

Existing segregated track widened to 3m

SEE FIGURE 13

SEE FIGURE 15

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 14

Bus stop removed from lay by to accommodate 3m wide cycle track

Existing loading bays to be relocated into side roads

SEE FIGURE 16

SEE FIGURE 14

Manor Circus

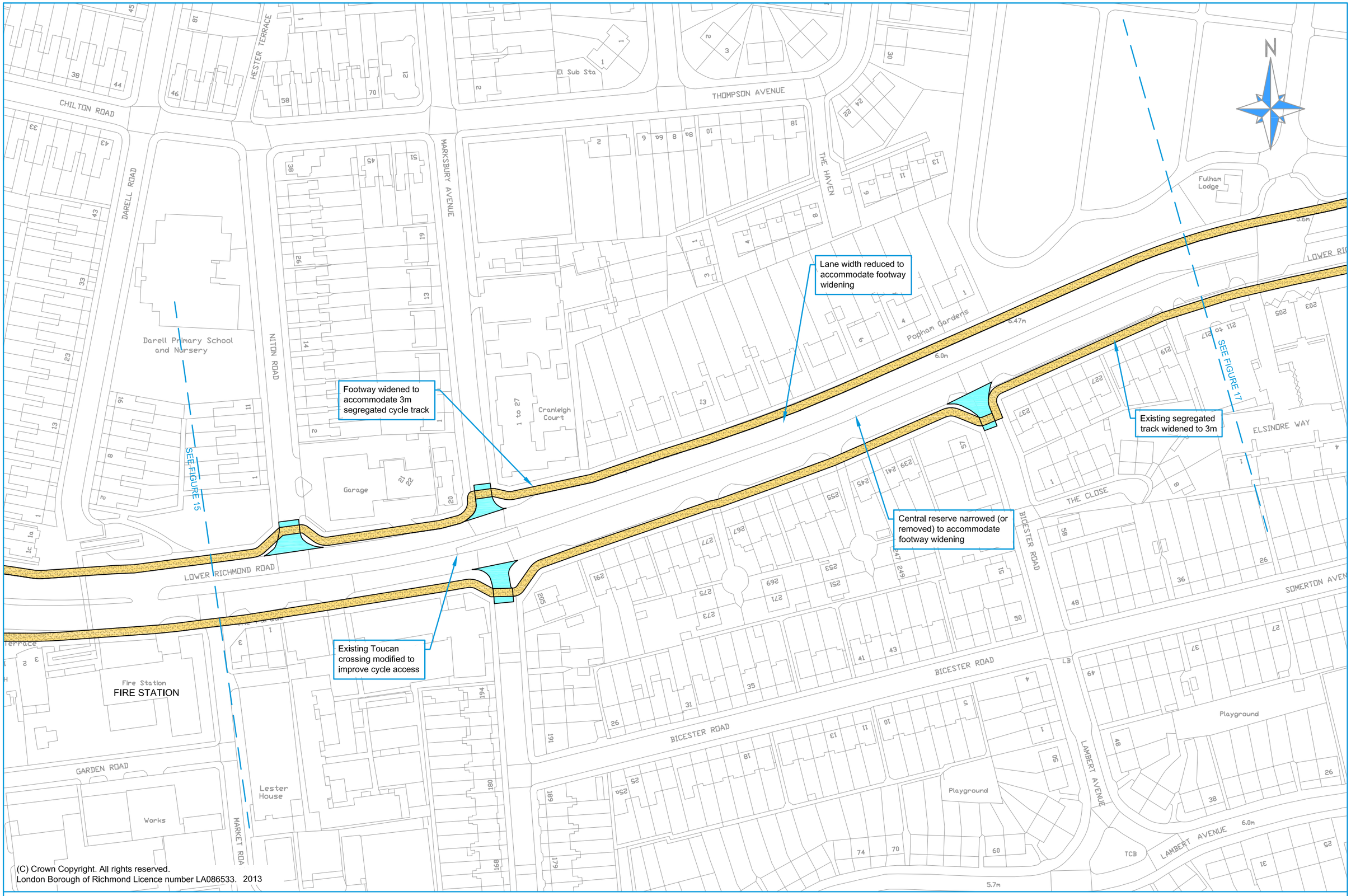
Proposals
- Remove roundabout and replace with signalised junction with toucan crossings.
- The existing segregated cycle tracks on the southern footways will be widened to 3m and extended through the reconfigured junction to connect the toucan crossings
- New 3m segregated cycle tracks will be introduced on the northern footways where possible.

Risks
- The proposals are subject to results of traffic modelling and approval from TfL.
- Access to the petrol station on the north west corner of A316/Sandycombe Road.
- Narrow footpath with limited opportunity to widen at the junction with Sandycombe Road.
- Construction on rail over bridge will involve Network Rail.

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 15



KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 16

Chalkers Corner

Option 1 (as highlighted on below plan)
- This is the Borough's preferred option to place the A316 in an underpass, with pedestrian and cycle facilities on the surface.

Risks
- This would require TfL funding, it has not been costed within the Mini Holland cost estimates

Option 2
- New pedestrian and cycle bridge or subway

Risks
- Subways are not perceived as a safe option which may deter pedestrians, and cyclists using it
- A bridge will have a large visual impact and which may cause difficulties in obtaining planning permission

Option 3 (Shown in inset figure)
- Introduce new toucan crossings on all approaches.
- Widen central islands to improve cycle access for toucan crossings.
- Introduce new diagonal crossing from A3003 Lower Richmond Road to A205 Mortlake Road on modified central island.
- The existing shared use cycle tracks will be converted and widened to segregated tracks and extended through the reconfigured junction to connect the new toucan crossings.
- Reduce A316 approaches to 2 lanes and reduce A205 approaches to 1 lane in each direction.
- Re-align A3003 Lower Richmond Road using land from car park.

Risks
- Concerns regarding capacity impact of proposals on Chalkers Corner
- Traffic modelling will need to be undertaken to confirm the functioning of the proposed changes in the configuration
- Narrow footpath with limited opportunity to widen at the junctions with A205, may require land take from private frontage and cemetry

Cost for Option 3 has been included in the Mini Holland bid.

View of Chalkers Corner Veterinary surgery. It is proposed to demolish this building to provide addition footway space

KEY

A316 Commuter Route

Other Mini Holland Routes

Side road entry treatment

Proposed A316 Underpass

Twickenham Mini Holland
A316 Commuter Route
Figure 17

View of footway to the east of Chalkers Corner, where a 3m wide segregated cycle track will be constructed. The wide footways can accommodate the infrastructure required to put the A316 in an under pass.

A316 Commuter Route to continue to Hogarth Roundabout and Central London

New link to A205 Riverside Quietway

New link to A205 Riverside Quietway

The 3m segregated cycle tracks can be accommodated within the existing footway on both sides of the road.

SEE FIGURE 17

KEY

- A316 Commuter Route
- Other Mini Holland Routes
- Side road entry treatment

Twickenham Mini Holland
A316 Commuter Route
Figure 18

A316 COMMUTER ROUTE: RISK REGISTER

Scheme Risk Register

Project:	A316 Commuter Route - LBRuT Mini Holland	**Document Reference**	5103865/118/30.05.02
Design Stage:	Feasibility	**Revision No.**	3.0
Author	Bruce Bolton	**Revision Date**	10/12/2013

designoutrisk: RED AMBER & GREEN

ATKINS

	Risk Identification			Risk Reduction		Communication of Residual Risk			Notes
A	B	C	D	E	F	H	I	J	K
Ref.	Structure Element and/ or Location	Description of Risk	Type of Risk	Action to reduce or eliminate risk	Record of Residual Risk	Significance of Residual Risk	Means of Communicating Significant Residual Risk	Designer Initials here to verify commitments in Column I	Commentary if required/ Project Director sign off any Red Items
0001	Whole route	The impact of the changes will impact on network capacity. This may not be acceptable to TfL	Political	The design is flexible enough to accommodate changes. But LBRuT are required to discuss the issue of capacity with TfL and GLA.	Scheme will require significant re-design if speed limit cannot be reduced.	Red - Significant			
0002	Duke of Northumberland Footbridge	Delays in construction due to uncertainty with subway	Political	LBRuT, TfL and RFU to decide whether the Subway is to be built. The decision to replace the footbridge will be dependant on the decision regarding the subway.		Amber - Significant			
0003	Whole route	LBRuT may not support new parking arrangements	Political	Consultation with Members and residents and other stakeholders. Parking can be reallocated to adjacent side roads, or other locations where appropriate.		Amber - Significant			
0004	Whole route	There may be areas of land required that are not under the direct ownership of the highway authority, in particular at Chalkers Corner.	Land Ownership	At preliminary design stage confirm alignment and minimise potential areas of concern.		Green - Not Significant			
0005	Whole route	Street lighting will have to be relocated	Design & Build	Early involvement of TMC to programme works.		Green - Not Significant			
0006	Whole route	Statutory undertakers apparatus will need to be diverted	Programme	C2 and C3 enquires will be carried out at the earliest opportunity to identify problem areas.		Amber - Significant			
0007	Whole route	Statutory undertakers apparatus will need to be diverted	Design & Build	C2 and C3 enquiries will identify problem areas, design may be amended to minimise or avoid.		Amber - Significant			
0008	Consultation	Consultation may not be positive	Political	Ensure public engagement is started early and the views of resident committees and Richmond Cycle group are considered in the design.		Amber - Significant			
0009	Whole route	No traffic modelling has been undertaken	Design & Build	Traffic counts will be carried out to support the required modelling at key locations	Designs may require significant will be modified to address capacity issues in line with modelling outcomes.	Red - Significant			
0010	Richmond Circus	Redesign of junction may have consequences on traffic flow	Design & Build	Traffic modelling to confirm design alignment	Design will be modified to address capacity issues in line with modelling outcomes.	Red - Significant			
0011	Not Used								
0012	Whole route	Introduction of low level cycle signals. Currently these are non standard and their introduction will require DfT approval	Legal	Continued consultation with DfT, propose that this route used as "demonstration project".	Alternative designs may be required if discussions are unsuccessful	Amber - Significant			
0013	Section between Hospital Bridge and Whitton Roundabouts	De-dualling may not be supported by TfL and / or LBRuT.	Political			Red - Significant			
0014	Whole route	Trees and planting will have to be removed to allow construction of route.	Ecology	Design will include for replacement planting. An ecology statement will be prepared at a later stage of the project.		Green - Not Significant			

The Risk Management System and Risk Register will be populated as the design progresses in future design stages (subject to funding).

A316 COMMUTER ROUTE: FORM B

	Assessment based on TfL Surface Transport Outcomes	Benefit / Cost	Impact * (+3 to -3)
1	Maintaining and enhancing a reliable, accessible and high quality **bus** network and ensuring efficient **coach** service in London	Bus operating costs	0
		Impact on bus journey times and reliability	0
		Bus passenger accessibility	0
		Legibility of bus network	0
2	Ensuring reliable operation of London's **road network** while reducing congestion	Overall traffic levels (main roads and side roads)	1
		Journey time impacts for different users	1
		Reallocation of carriageway space	3
		Reallocation of footway space	3
		Congestion	1
		Junction operation (degree of saturation)	0
		No. of junctions forming part of scheme	57
		No. of above requiring modification	57
		Loss of car parking: resident / visitor	0
3	Continuing the downward trend in **crime** and fear of crime on London's transport networks	Quality of public realm (see objective 8)	2
		Quality of interchange	2
4	Enabling more people to **cycle**, more safely, more often	Overall traffic levels and mix	2
		Quality of N-S and E-W routes	3
		Road safety (see objective 6)	3
		Permeability and connectivity N-S and E-W	3
		Cycle parking	3
		Capacity of facilities	3
5	Supporting provision of **door-to-door** transport services including ensuring the operation of safe, reliable and accessible **taxi and private hire** and supporting services for those unable to use mainstream transport	Impact on taxi/private hire journey times	0
		Taxi/private hire user accessibility	0
6	Continuing the downward trend in **casualties** on London's roads and public transport networks	Impact on casualty levels for cyclists	3
		Impact on casualty levels for pedestrians	3
		Impact on road danger (perceived and actual)	2
7	Continuing to deliver **environmental** improvements, including improving the natural environment and air quality, and reducing CO_2 from ground based transport and impacts of noise	Overall traffic levels (main roads and side roads)	1
		Air quality exposure impacts	1
		Congestion impacts	1
8	Supporting an increase in **walking** by creating safe, attractive and accessible streets and public spaces that people can use and enjoy.	Overall traffic levels and mix of traffic	2
		Road safety (see objective 6)	2
		Footway congestion	3
		Public space provision	2
		Quality of public realm	2
		Permeability and legibility	2
		Quality of crossings (informal and formal)	3
9	Supporting more sustainable patterns of **freight** delivery and servicing	Impact on servicing and loading (provision and location)	0
		Journey time impacts	0

			Proportion %
Other	**Managing authority / landowners**	Borough public highway	5
		Strategic Road Network	0
		TLRN	95
		Private land	0
		Network Rail / TOC	0
		Open Metropolitan Space	0

LONDON BOROUGH OF
RICHMOND UPON THAMES

TWICKENHAM MINI - HOLLAND

RAILSIDE CYCLE ROUTES








The footbridge across Fulwell station will be replaced by a new cycle-friendly facility

PROPOSAL OVERVIEW

The Railside Cycle Route is a unique solution to increasing cycle permeability in the Borough, and has the potential to be a precedent for many other similar landscapes across London where better use can be made of unused railway embankments. The proposed Railside Route is intended to build upon the potential for cycling in the south-west of Richmond upon Thames by developing a facility which maximises the exposure of cycling by running alongside the main railway line. Existing cycle parking facilities are already well used along the line which suggests that large numbers of cyclists are already travelling as far as their local station. The Borough is proposing to double the number of secure cycle facilities at all stations along the Railside Route, which includes significantly increasing the proposed number of spaces at Twickenham Station from 450 to 900 spaces. The total number of secure cycle parking spaces at Hampton, Fulwell and Strawberry Hill stations will be increased from 144 to 300 spaces.

Richmond upon Thames is proposing to install new cycle tracks which will run alongside the main railway line from Kempton Park (Spelthorne Borough Council) through to Strawberry Hill Station, a Quietway Route will continue from Strawberry Hill on road to Twickenham Town Centre and Twickenham Station. The quietway would split in three directions to maximise connections with Twickenham Town Centre along Grotto Road, Pope's Avenue and Radnor Road. The Borough is also proposing a shorter section of Railside Route between the A316 Commuter Route and Whitton Station; this proposal is discussed within the A316 proposal. Richmond upon Thames has already met with representatives of both Network Rail and South-West Trains to discuss these proposals and both parties were very supportive of the proposals (their letters of support are included in the introduction to the document). If successful, the Borough would work closely with Network Rail to ensure that design proposals satisfy their design standards for railside structures. We have already ensured that the proposed facilities are located at least 2.5m from the nearest live rail as requested by Network Rail. As well as benefitting cyclists, Network Rail would gain an operational benefit along the route as the designs would improve their maintenance access to the rail track.

The Railside Route will completely transform overgrown embankments into brand new public spaces which will be open to pedestrians and other non-motorised modes of transport. The route will offer the most direct connection for pedestrians and cycles between Hampton, Fulwell and Twickenham away from busier routes such as Hampton Road and Wellington Road. The route will also connect into the River Crane Quietway as part of the major redevelopment of the Post Office site in Twickenham, which will connect with Hounslow and ultimately onto Heathrow Airport.

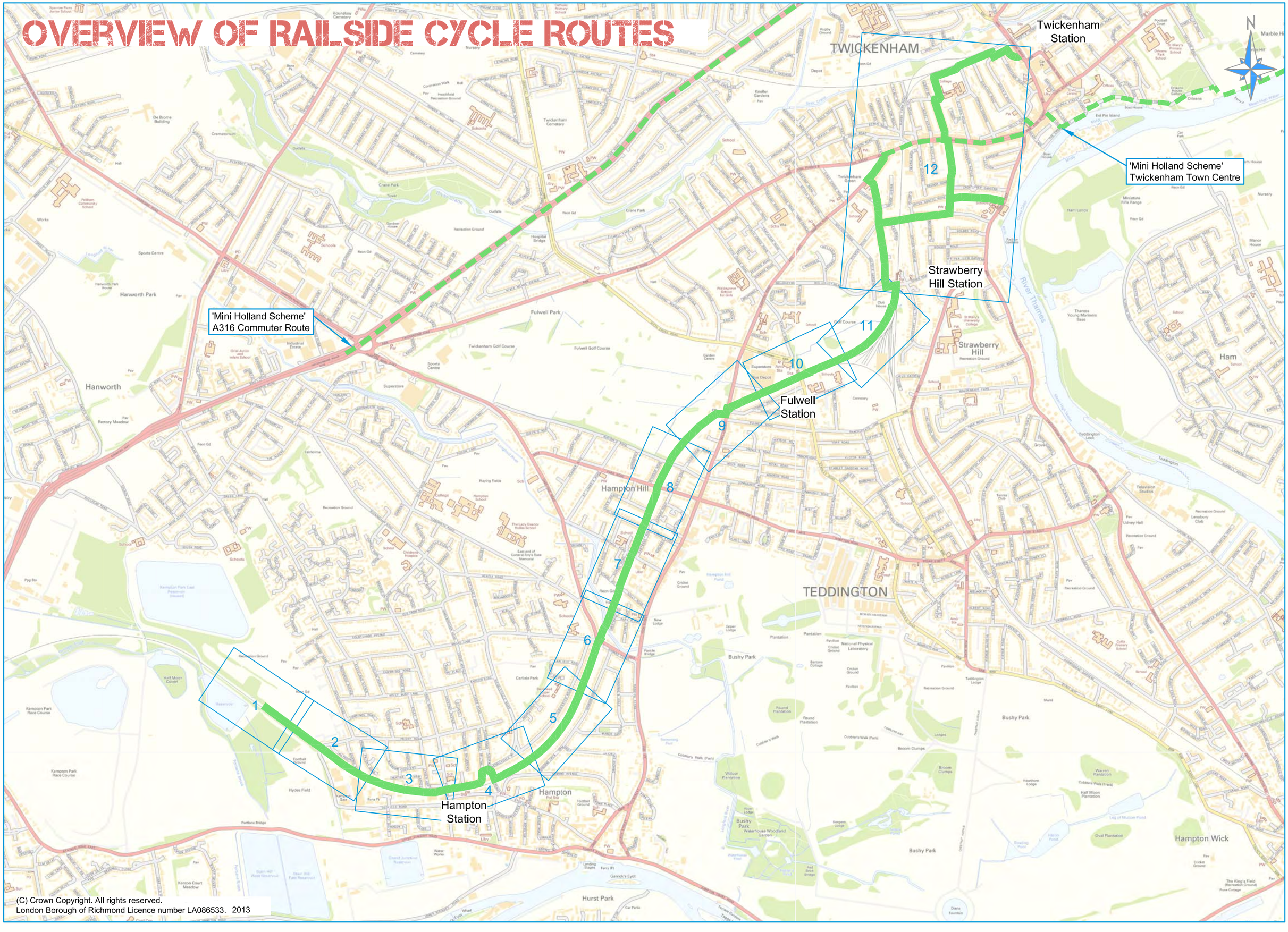
The Borough will redesign twelve junctions along the route to ensure continuity and comfort for users of the facility; this will include the use of Tiger crossings at 6 junctions between Hampton and Fulwell stations. We were conscious that pedestrians and cyclists will be approaching the junctions adjacent to moving traffic with limited visibility; we have therefore recommended the installation of Tiger Crossings at all bridge junctions. The Tiger crossings will provide Railside users with some form of priority at the junctions, whilst also raising awareness of the Railside crossings to road users. Installing Tiger Crossings along a succession of junctions would be a unique opportunity to test their effectiveness as a means of prioritising cyclists at non-signalised junctions, and also to explore the effectiveness of the facilities when used throughout a cycle scheme. As well as installing the Tiger crossings, the Borough will improve three other key junctions along the route:

- **Junction of Station Approach and Tudor Road** - the small shopping parade on Station Approach is dominated by the junction of these roads. The proposed design for the junction will increase the overall comfort and permeability of pedestrians using the area, as well as providing a direct link into the Railside Route.
- **Junction of Uxbridge Road and Broad Lane** - The proposed design will improve the roundabout for pedestrians and cyclists by providing crossings on each arm, and tightening the junction's geometry to reduce vehicles' speeds through the junction.
- **Junction of Wellington Road and Clonmel Road** - High volumes of traffic along Wellington Road dissect east-west pedestrian and cycle movements through the area, there have been two serious collisions in the last 36 months close to the junction The Railside Route will significantly increase pedestrian and cycle volumes across Wellington Road; it was important therefore that to upgrade the crossing to match future demands. The improvements will provide a unified crossing point by widening existing footways, and replacing the two uncontrolled pedestrian islands with a toucan crossing.

If successful, the Borough would undertake a significant amount of consultation to ensure that the route would not compromise the character or appearance of the embankments, and that the route would not adversely affect the ecology of the environments along the route. The Borough would request that Greenspace information for Greater London (GiGL) undertake a desk study to collate further information on designated sites within 1km of the proposed route, and any records of protected species within 500m of the route. The GiGL desk study would also establish whether there are records of animals living within close proximity to the route (specifically: badgers, bats, birds, dormice, great crested newts, otters, reptiles, and water voles). Wherever possible we would also use Sustainable Urban Drainage Systems (SUDS) to reduce the route's impact upon the rail embankments. The Borough has been in close contact with Network Rail and South-West Trains throughout the design process to ensure that they understand our proposals, through our discussions we have agreed to: install a widened cycle-friendly bridge at Fulwell Station to replace the existing narrow bridge, install cycle gutters at Mortlake Station, and to replace one of the footbridges which connect North and South Worple Way.

The Borough explored the potential for installing Railside facilities west of Whitton Station towards Hounslow Heath however initial feasibility work found that there was not sufficient space on the embankments between the existing railway lines and adjoining private properties to install a facility.

OVERVIEW OF RAILSIDE CYCLE ROUTES



Materials for the Railside Cycleway

- The surfacing shall be a buff coloured material for the entire length of the track, including on carriageway sections
- Lighting to be "Bat Friendly", similar to to the lighting used on the River Thames tow path
- Fencing to conform to Railtrack Standards

Potential to extend cycle route to Kempton Park Railway Station; subject to Surrey County Council's agreement. This extension will also connect with existing cycle facilities in Hatherop Park

Spelthorne Council & Surrey County Council

London Borough of Richmond Upon Thames

Borough Boundary

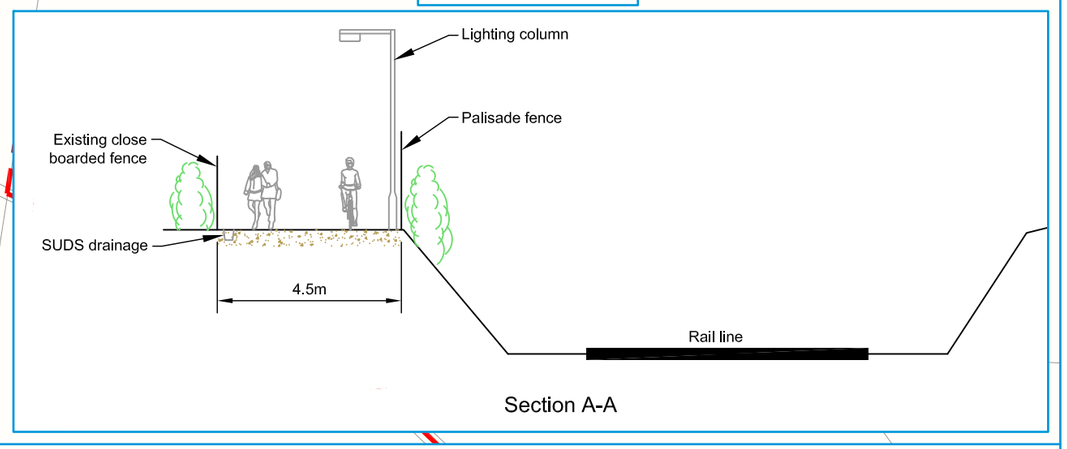
Cycle route constructed on top of embankment above railway

SEE FIGURE 2

Risk:
Surrey County Council and Spelthorne District Council may not wish to extend the track into their County/dirstrict

Reservoir

The Railside facilities are all constructed a minimum of 2.5m from the last rail in accordance with Network Rail Guidlines



Section A-A

KEY

- Railside Cycle Route
- Other Mini Holland Routes
- Lighting column
- Fence line
- Railside maintenance access point
- Access to cycle route

Twickenham Mini Holland
Railside Cycle Route
Figure 1

View of proposed bridge and access ramp location

SEE FIGURE 1

Railside cycle route to be surfaced with a buff coloured aggregate

New access ramp to cycleway from Priory Road

3.0m wide bridge adjacent to existing rail bridge

New access to cycleway from Broom Road

Risk:
Residents may object to a ramp on Priory Road

PRIORY ROA...

PRIORY GARDENS

PRIORY CLOSE

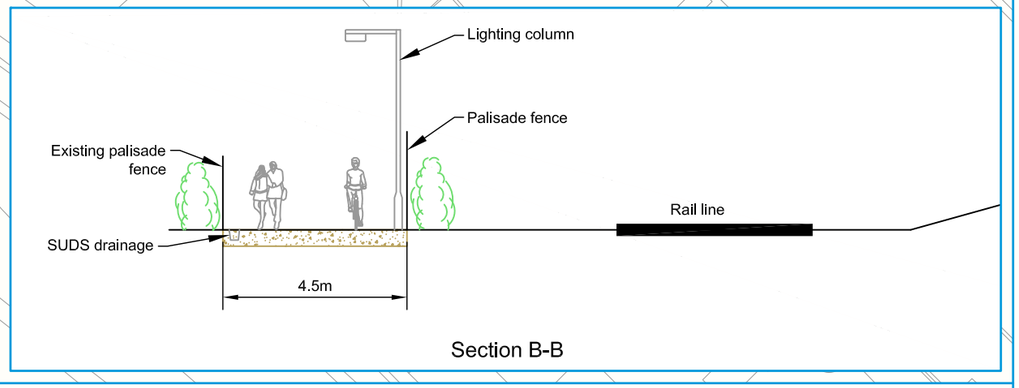
BROOME ROAD

HILL FIELD ROAD

SEE FIGURE 3

B

B



Section B-B

KEY

- Railside Cycle Route
- Other Mini Holland Routes
- Lighting column
- Fence line
- Railside maintenance access point
- Access to cycle route

Twickenham Mini Holland
Railside Cycle Route
Figure 2

A raised table and pedestrian and cyclist improvement at the junction of Ashley Road and Percy Road

PRIORY GARDENS

PRIORY CLOSE

BLOXHAM CRESCENT

SEE FIGURE 2

New access to cycle route from Heather Close subject to agreement from land owner

Risk:
As Heather Road access is on private land (albeit social housing) permission to construct access may not be granted

HEATHER CLOSE

New access to cycle route from Linden Road

LINDEN ROAD

HEMMING CLOSE

Risk:
Section of route with uncertain land ownership

NEWFIELD CLOSE

SEE FIGURE 4

N

C

C

CHANDLER CLOSE

HAMPTON STATION

Cycle route constructed on top of embankment above railway

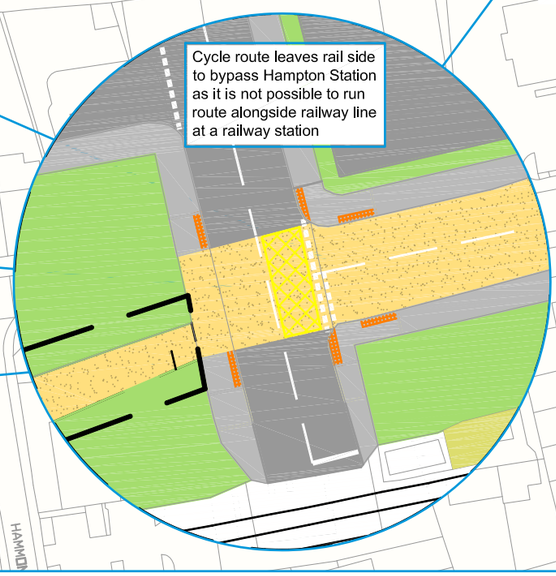
Existing level crossing

PERCY ROAD

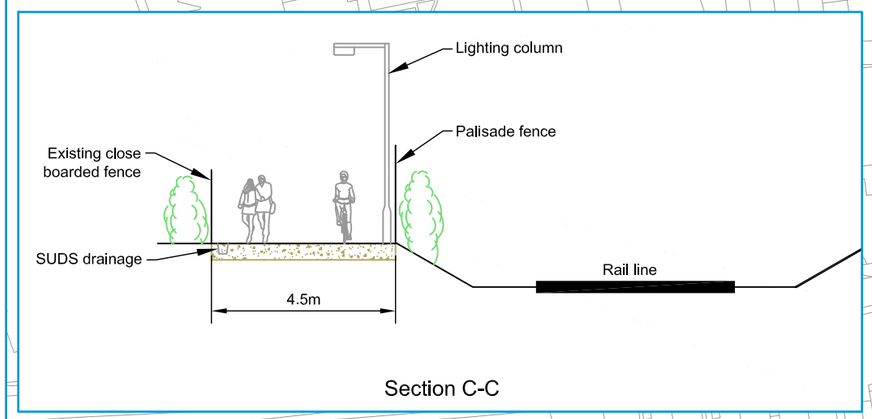
Carriagway to be re-surfaced in a buff coloured material to provided continuity of the appearance of the cycleway. This will aid cyclist in their way finding

Improved facilities at junction for both cyclists and pedestrians

Chicanes placed where the cycleway enters the public highway to slow cyclist down and to restrict larger vehicles entering the cycleway



OLDFIELD ROAD



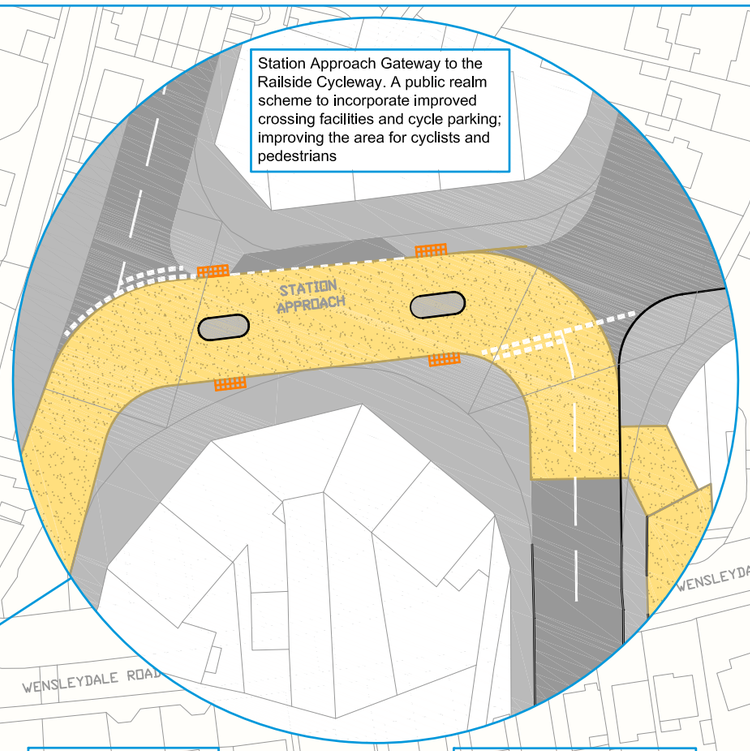
Section C-C

KEY

Railside Cycle Route
Other Mini Holland Routes
Lighting column
Fence line
Railside maintenance access point
Access to cycle route

Twickenham Mini Holland
Railside Cycle Route
Figure 3

Cycle route on Ashley Road bypassing Hampton Railway Station



SEE FIGURE 3

SEE FIGURE 5

Quietway to be surfaced with a buff coloured surfacing. This will assist cyclists way finding as well as allowing continuity of appearance throughout the entire length of railside cycleway

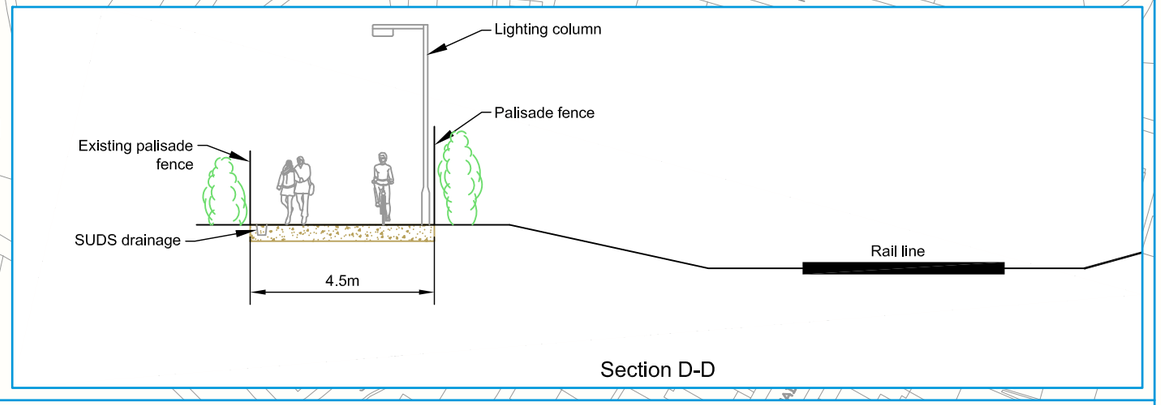
Section of cycle route to be constructed on land currently set aside for the maintenance of Thames Water main

Risk:
Thames Water's permission is required to construct the Railside cycle route. Any proposals would be designed to accommodate Thames Water maintenance requirements

HAMPTON STATION

Hampton Railway Station secure cycle parking to increase from 116 to 230

Land adjacent to railway, Thames Water main runs under this section of the proposed cycleway



Section D-D

KEY

- Railside Cycle Route
- Other Mini Holland Routes
- Lighting column
- Fence line
- Railside maintenance access point
- Access to cycle route

Twickenham Mini Holland
Railside Cycle Route
Figure 4

WENSLEYDALE GARDENS

WENSLEYDALE ROAD

NSLEYDALE ROAD

GLOUCESTER ROAD

ORMOND DRIVE

ORMOND CRESCENT

ORMOND CRESCENT

View of existing Thames Water mintenance track

SEE FIGURE 4

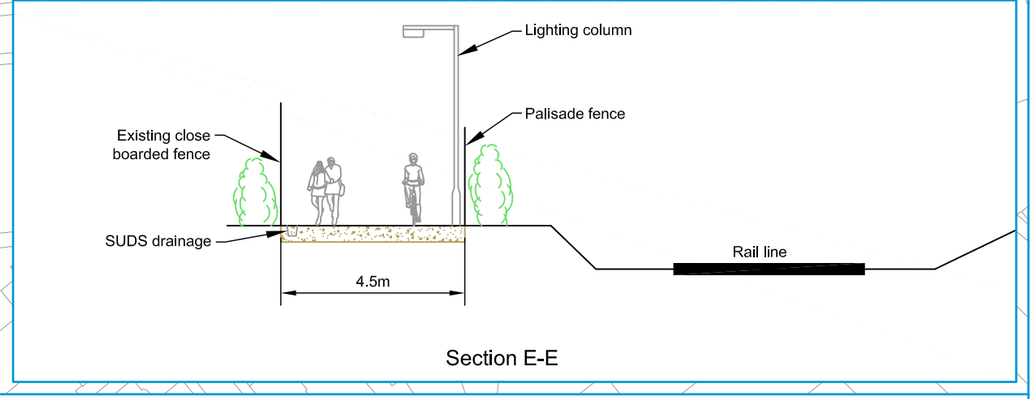
SEE FIGURE 6

Risk:
Thames Water's permission is required to construct the cycle route.

Risk:
Long section of cycle route with limited access to local network. The design will include sufficient security measures to ensure that the route feels safe to use

E

E



Section E-E

KEY

Railside Cycle Route
Other Mini Holland Routes
Lighting column
Fence line
Railside maintenance access point
Access to cycle route

Twickenham Mini Holland
Railside Cycle Route
Figure 5

New Tiger crossing to be installed across Uxbridge Road in a buff coloured material

Buff coloured surfacing to continue across the Tiger Crossing

Chicanes placed where the cycleway enters the public highway to slow cyclists down and to restrict larger vehicles entering the cycleway

Cycleway to use land set aside for water main maintenance

View of Broad Lane and Uxbridge Road Junction

Risk:
Longford River crossing may have to be realigned depending on suitable approach gradients and land ownership

View of proposed crossing location

SCOTTS DRIVE

BROAD LANE

GLOUCESTER ROAD

LONGFORD RIVER

HOWARD CLOSE

UXBRIDGE ROAD

MYRTLE ROAD

PARK PLACE

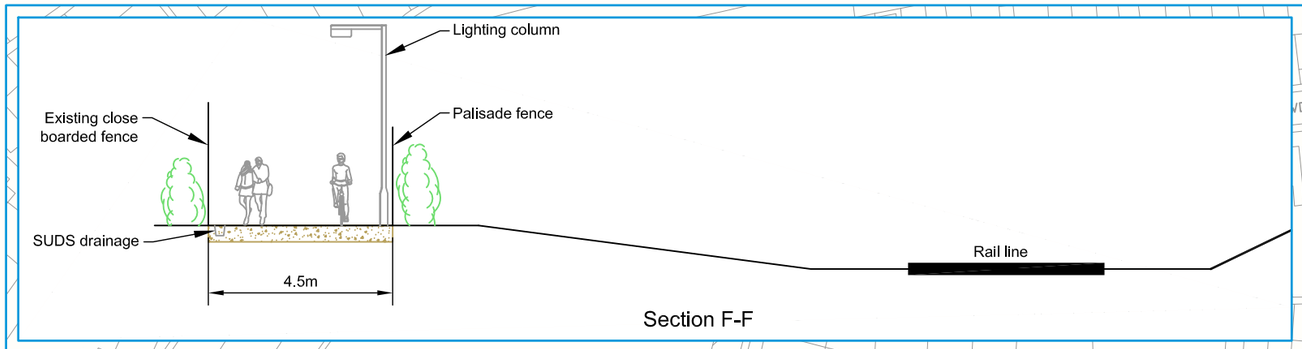
SEE FIGURE 5

SEE FIGURE 7

KEY

- Railside Cycle Route
- Other Mini Holland Routes
- Lighting column
- Fence line
- Railside maintenance access point
- Access to cycle route

Twickenham Mini Holland
Railside Cycle Route
Figure 6



Section F-F

View along Windmill Road towards proposed crossing location

SEE FIGURE 6

SEE FIGURE 8

SCHOOL ROAD AVENUE

SCHOOL ROAD

VINCENT ROW

FITZ WYGRAM CLOSE

EASTBANK ROAD

CROSS STREET

Cycle route constructed on top of embankment above railway

F

F

Buff coloured surfacing through the crossing

Chicane installed to slow cyclist down at the approach to the crossing and to restrict vehicle access to the cycleway

Tiger Crossing with buff coloured surfacing installed to give priority to cyclists as well as increasing the conspicuity to the crossing point

New tiger crossing across Windmill Road

View of approach to proposed crossing from narrow bridge, visibility of cyclists is a risk at bridges due to the solid parapet. Chicanes will be installed on the cycleway to slow cyclists down and Tiger Crossings installed to raise drivers awareness of cyclists as well as giving cyclists priority

KEY

- Railside Cycle Route
- Other Mini Holland Routes
- Lighting column
- Fence line
- Railside maintenance access point
- Access to cycle route

Twickenham Mini Holland
Railside Cycle Route
Figure 7

View of proposed crossing location on Park Road

View of entrance into Railside Route at Burton's Road

ST JAMES'S AVENUE

SEE FIGURE 7

SEYMOUR ROAD

BURTON'S ROAD

EDWARD ROAD

EDWARD CLOSE

RADCLIFF MEWS

TUDOR CLOSE

ALBERT ROAD

LINKS VIEW ROAD

SEE FIGURE 9

Risk
Cycle route to utilise the existing London Loop path. This will require the path to be widened to 4.5m from it's current width of circa 1.2m

New tiger crossing across Park Road

Buff coloured surfacing through the crossing

Tiger Crossing installed to give priority to cyclists as well as increasing the conspicuity to the crossing point

New tiger crossing across Burton's Road

KEY

- Railside Cycle Route
- Other Mini Holland Routes
- Lighting column
- Fence line
- Railside maintenance access point
- Access to cycle route

Twickenham Mini Holland
Railside Cycle Route
Figure 8

View of the existing London Loop path

Risk:
The proposed cycle route will be on "Open Metropolitan Land" and will require planning permission.

Risk;
Cycle route to utilise the existing London Loop path. This will require the path to be widened to 4.5m from it's current width of circa 1.2m

New toucan crossing across Wellington Road to improve both cyclist and pedestrian access to Fulwell Station

Footways widened on both sides of the road to accommodate shared used cycle and footway

Fulwell Railway Station cycle parking to increase from 20 to 50

Existing footbridge to be replaced by Network Rail. New bridge to include a wider deck and cycle friendly facilities.

WELLINGTON ROAD

WELLINGTON GARDENS

FULWELL STATION

SEE FIGURE 8

SEE FIGURE 10

KEY

- Railside Cycle Route
- Other Mini Holland Routes
- Lighting column
- Fence line
- Railside maintenance access point
- Access to cycle route

Twickenham Mini Holland
Railside Cycle Route
Figure 9

View of proposed crossing location, bus stop to be relocated

N

SEE FIGURE 9

SEE FIGURE 11

Bus stop to be relocated to allow tiger crossing to be installed

FULWELL STATION

New tiger crossing across Stanley Road

Existing segregated cycle track

CLONMEL ROAD

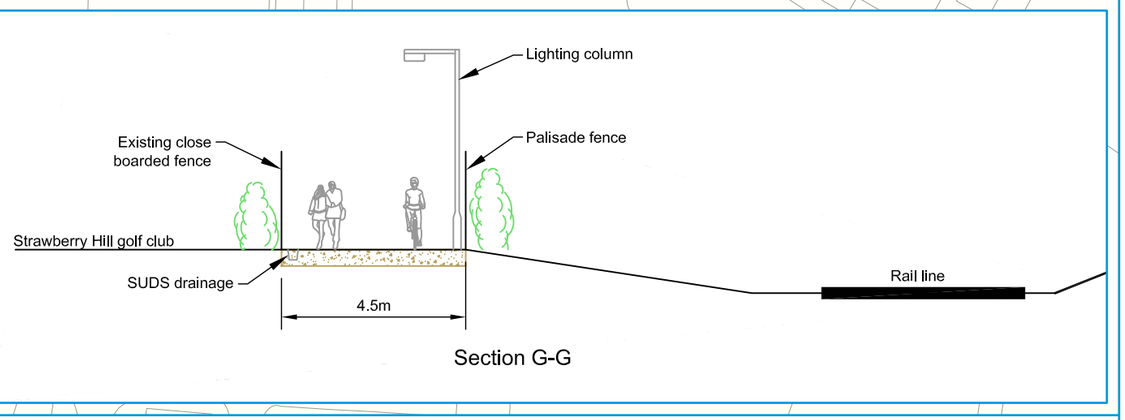
CLONMEL ROAD

STANLEY ROAD

WINCHENDON ROAD

G

G

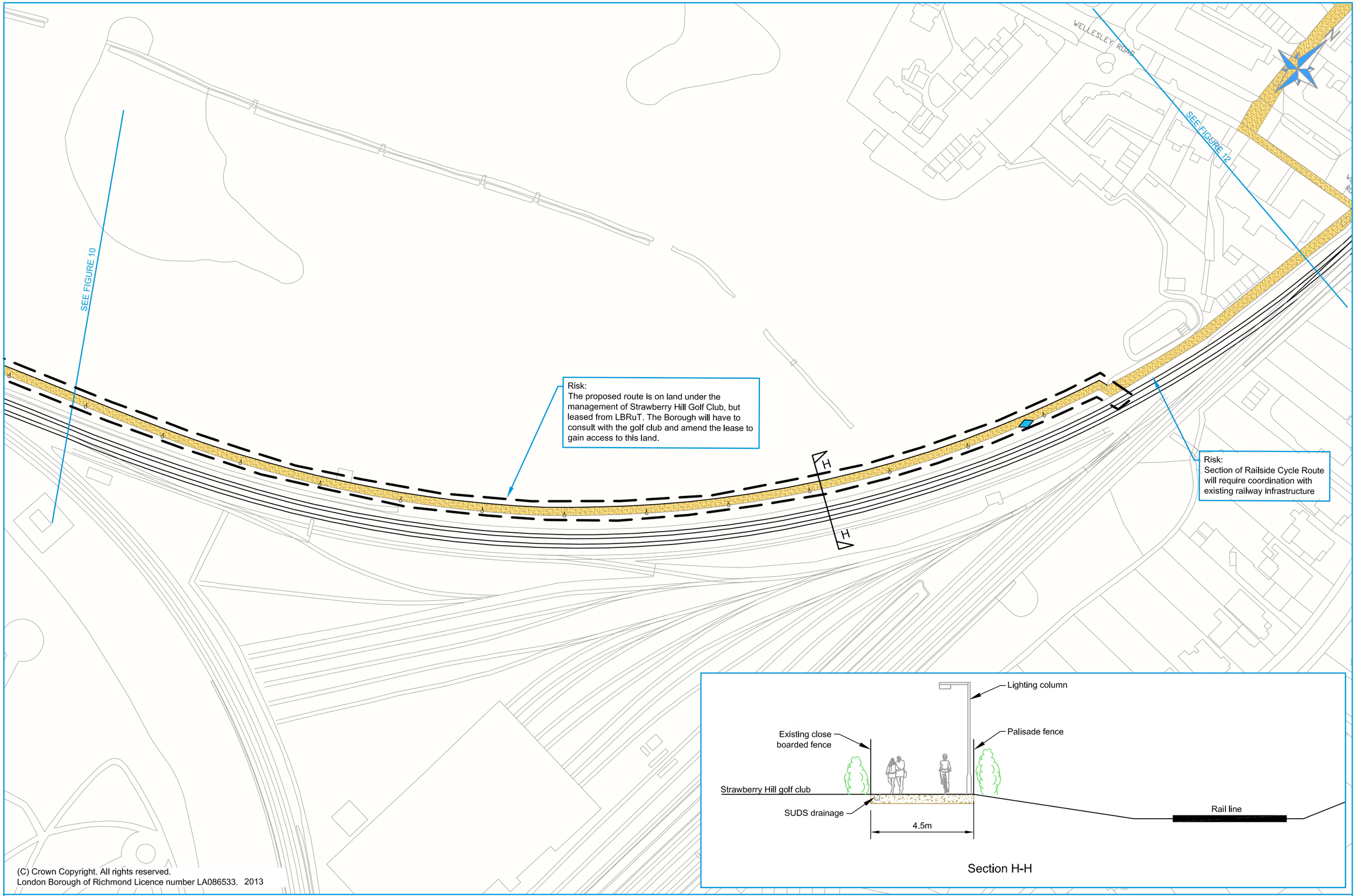


Section G-G

KEY

- Railside Cycle Route
- Other Mini Holland Routes
- Lighting column
- Fence line
- Railside maintenance access point
- Access to cycle route

Twickenham Mini Holland
Railside Cycle Route
Figure 10



KEY

- Railside Cycle Route
- Other Mini Holland Routes
- Lighting column
- Fence line
- Railside maintenance access point
- Access to cycle route

Twickenham Mini Holland
Railside Cycle Route
Figure 11

Quietway section of the Railside Commuter Route between Strawberry Hill Station and Twickenham Station

A Quietway has been proposed between Strawberry Hill Station and Twickenham Station as it was not feasible to install facilities alongside the railway tracks.

Quietway will connect with the imporved Heath Road and The Green junction.

LCN 37

SEE FIGURE 1:1

Strawberry Hill Railway Station cycle parking to increase from 16 to 50

STRAWBERRY HILL STATION

Quietway to be surfaced with a buff coloured surfacing. This will assist cyclists way finding as well as providing continuity through out the railside cyclway.

Quietway along Grotto Road will provide alternative connection between Twickenham Town Centre and the Railside Commuter Route by linking to existing facilities on Cross Deep.

Quietway Route Connecting Strawberry Hill to Twickenham

Heath Road cycle facilities to be installed as part of Mini Holland proposals for Twickenham Town Centre

KEY

- Railside Cycle Route
- Other Mini Holland Routes
- Lighting column
- Fence line
- Railside maintenance access point
- Access to cycle route

Twickenham Mini Holland
Railside Cycle Route
Figure 12

RAILSIDE CYCLE ROUTES: RISK REGISTER

Scheme Risk Register

Project:	rail side Commuter Route - LBRuT Mini Holland	**Document Reference**	5103865/118/30.05.03
Design Stage:	Feasibility	**Revision No.**	2.0
Author	Chris Christofi	**Revision Date**	10/12/2013

designoutrisk: RED AMBER & GREEN

ATKINS

	Risk Identification			Risk Reduction		Communication of Residual Risk			Notes
A	B	C	D	E	F	H	I	J	K
Ref.	Structure Element and/ or Location	Description of Risk	Type of Risk	Action to reduce or eliminate risk	Record of Residual Risk	Significance of Residual Risk	Means of Communicating Significant Residual Risk	Designer Initials here to verify commitments in Column I	Commentary if required/ Project Director sign off any Red Items
0001	Proposed cycleway bridge on priory Road	Proposed cycleway bridge and access ramp on Priory Road to be constructed adjacent to existing railway bridge in close proximity to residential area. Residents may object to a structure of this sort and may need to go to consultation.	Political	Meetings to be organised with Network Rail and residents to take place to minimise disruption and and to communicate regularly so that all parties are aware of what is going on in terms of the design of the bridge and the impact.		Red - Significant			
0002	Access to cycleway from Broome Road	New access to the cycleway from Broome Road at the end of a cul-de-sac where currently cycles and vehicles have no through access.	Political	New signage will be required along with liaison with local residents to keep them in the loop with all communications and designs.		Green - Not Significant			
0003	rail side cycleway running along the back of properties - route wide	Risk of antisocial behaviour.	Political	Lighting to be provided along the whole route and no blind spots to be designed in. An appropriate fence is to be provided of a significant height in order to prevent rubbish ending up in residents gardens from people littering along the route.	Agreement with residents as to the height of fence to be provided.	Amber - Significant			
0004	Rail side cycleway maintenance access points - route wide	Access points need to be positioned so that they can be utilised efficiently by Network Rail	End User	Meetings and workshops to be arranged with Network Rail to agree the frequency and position of all maintenance access points along the route that will require a lockable gate.		Green - Not Significant			
0005	Access to cycleway from Chandler Close	New access to the cycleway from Chandler Close at the end of a cul-de-sac where currently cycles and vehicles have no through access.	Political	New signage will be required along with liaison with local residents to keep them in the loop with all communications and designs.		Green - Not Significant			
0006	Quiet way route from Hampton station to Tudor Road	Approval and agreement of the quiet way from Richmond and TFL	End User	Liaison with all parties to confirm acceptance of the route. Signage and road markings for cycles will be introduced and lighting levels and parking will be reviewed.		Green - Not Significant			
0007	Junction improvements at Tudor Road	New crossing on Tudor Road along with junction improvements. Agreement of the new layout from Richmond.	End User	New signage for cycles and also relevant road markings and signage for the new crossing. 'New road layout' warning signage for vehicles approaching the junction.		Amber - Significant			
0008	Removal of existing landscaped areas for the rail side cycleway - route wide	Removal of landscaped areas that may house protected species such as door mice, bats, badgers, etc.	Ecology	An ecological survey is to be carried out route wide to ascertain if any protected species are present and what needs to be carried out to re-home or displace.	New landscaped areas may be required to compensate for the habitat loss.	Red - Significant			
0009	Rail side cycleway width - route wide	The rail side cycleway must be a minimum of 3.0m wide and can be as wide as 4.5m where possible.	Land Ownership	If it is not possible to obtain a 3.0m strip in areas then the rail side cycleway will need to be as wide as possible in that area and a departure from standard will need to be submitted for approval.	Approval for a below standard design	Amber - Significant			
0010	Junction improvements at Broad Road / Uxbridge Road	New crossing on Uxbridge Road along with junction improvements. Heavy volume of traffic passing through the existing junction. Agreement of the new layout from LBRuT.	End User	New signage for cycles and also relevant road markings and signage for the new crossing. 'New road layout' warning signage for vehicles approaching the junction.		Amber - Significant			
0011	Aqueduct structure in vicinity of Uxbridge Road	Access to the structure is limited and can only be gained rail side. It is not known whether there is the land adjacent to the structure to provide a cycleway in this location.	End User	Access to be gained rail side with agreement with Network Rail in order to carry out an inspection at the location of the aqueduct.		Amber - Significant			
0012	rail side cycleway between Tudor Road and Uxbridge Road	Rail side cycleway is proposed on land owned by Thames Water and agreement will need to be obtained.	Land Ownership	Liaison with Thames water to gain approval for the rail side cycleway on their land.		Red - Significant			

The Risk Management System and Risk Register will be populated as the design progresses in future design stages (subject to funding).

RAILSIDE CYCLE ROUTES: RISK REGISTER (CONTINUED)

	Risk Identification			Risk Reduction		Communication of Residual Risk			Notes
A	B	C	D	E	F	H	I	J	K
Ref.	Structure Element and/ or Location	Description of Risk	Type of Risk	Action to reduce or eliminate risk	Record of Residual Risk	Significance of Residual Risk	Means of Communicating Significant Residual Risk	Designer Initials here to verify commitments in Column I	Commentary if required/ Project Director sign off any Red Items
0013	Cycleway crossing on School Road Avenue	New crossing over School Road Avenue for the rail side cycleway.	End User	New signage to be incorporated to warn vehicles and the lighting levels are to be reviewed to ensure there is no risk to the end user to cross the road or in fact for vehicles to drive down the road.		Green - Not Significant			
0014	Cycleway crossing on Windmill Road	New crossing over Windmill Road for the rail side cycleway.	End User	New signage to be incorporated to warn vehicles and the lighting levels are to be reviewed to ensure there is no risk to the end user to cross the road or in fact for vehicles to drive down the road.		Green - Not Significant			
0015	Cycleway crossing on Park Road	New crossing over Park Road for the rail side cycleway.	End User	New signage to be incorporated to warn vehicles and the lighting levels are to be reviewed to ensure there is no risk to the end user to cross the road or in fact for vehicles to drive down the road.		Green - Not Significant			
0016	Cycleway crossing on Burtons Road	New crossing over Burtons Road for the rail side cycleway.	End User	New signage to be incorporated to warn vehicles and the lighting levels are to be reviewed to ensure there is no risk to the end user to cross the road or in fact for vehicles to drive down the road.		Green - Not Significant			
0017	Fulwell Golf Club	Possibility of land take at Fulwell Golf club if a 3.0m wide rail side cycleway cannot be achieved by widening the existing path.	Land Ownership	Liaison with Fulwell Golf Club to gain approval for the rail side cycleway on their land.		Amber - Significant			
0018	Cycleway crossing on Wellington Road	New crossing over Wellington Road for the rail side cycleway.	End User	New signage to be incorporated to warn vehicles and the lighting levels are to be reviewed to ensure there is no risk to the end user to cross the road or in fact for vehicles to drive down the road.		Green - Not Significant			
0019	Cycleway crossing on Stanley Road	New crossing over Stanley Road for the rail side cycleway. Bus stop will need to be moved in this location	End User	New signage to be incorporated to warn vehicles and the lighting levels are to be reviewed to ensure there is no risk to the end user to cross the road. Agreement with Richmond to move bus stop is to be sought.		Green - Not Significant			
0020	Strawberry Hill Golf Club	The rail side cycleway is proposed on land currently leased by Strawberry Hill Golf Club from Richmond Borough Council.	Land Ownership	Negotiations and meetings with all parties is to take place in order to satisfy the proposals and the use of the golf club.		Amber - Significant			
0021	Strawberry Hill to Twickenham rail side route	It is not possible to design and construct a rail side route from Strawberry Hill Station to Twickenham due to the vast number of properties close to the existing railway line.	End User	It is proposed to have a quiet way running from Strawberry Hill station to Twickenham in order to keep the scheme linked in with Twickenham town centre.		Green - Not Significant			
0022	Quiet way route from Strawberry Hill Station to Twickenham	Approval and agreement of the quiet way from Richmond and TFL	End User	Liaison with all parties to confirm acceptance of the route. Signage and road markings for cycles will be introduced and lighting levels and parking will be reviewed.		Green - Not Significant			
0023	Boundary of Richmond Borough and Hounslow	The proposed scheme stops at the Richmond Borough Boundary and the rail side cycleway route will need to proceed beyond this boundary in Hounslow with a rail side form or quiet way.	End User	Liaison the London Borough of Hounslow and the London Borough of Richmond along with the DfT and TFL. All parties will need to agree what happen at each boroughs termination point so that the end user has a route that has linkages.		Red - Significant			
0024	Road crossings - route wide	All road crossings, unless otherwise stated are to be tiger crossings. These are not currently an approved crossing and will need approval from all parties.	Design & Build	Approval will need to be sought from DfT, TFL and Richmond Borough Council for the use of Tiger crossings.		Red - Significant			
0025	Rail side cycleway route land take - route wide	Unless otherwise stated, all land ownership rail side is that of Network Rail. A lease for the land between National Rail and LBRuT will have to be agreed.	Land Ownership	Meetings and workshops to be arranged with Network Rail to agree the precise extents of the works and the scope of the works in those areas, in terms of clearance, design, STATS and working times.		Amber - Significant			

RAILSIDE CYCLE ROUTES: FORM B

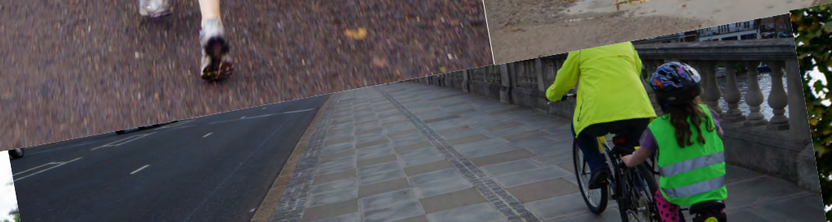
	Assessment based on TfL Surface Transport Outcomes	Benefit / Cost	Impact * (+3 to -3)
1	Maintaining and enhancing a reliable, accessible and high quality **bus** network and ensuring efficient **coach** service in London	Bus operating costs	0
		Impact on bus journey times and reliability	0
		Bus passenger accessibility	0
		Legibility of bus network	0
2	Ensuring reliable operation of London's **road network** while reducing congestion	Overall traffic levels (main roads and side roads)	0
		Journey time impacts for different users	1
		Reallocation of carriageway space	1
		Reallocation of footway space	1
		Congestion	0
		Junction operation (degree of saturation)	0
		No. of junctions forming part of scheme	12
		No. of above requiring modification	12
		Loss of car parking: resident / visitor	0
3	Continuing the downward trend in **crime** and fear of crime on London's transport networks	Quality of public realm (see objective 8)	1
		Quality of interchange	1
4	Enabling more people to **cycle**, more safely, more often	Overall traffic levels and mix	2
		Quality of N-S and E-W routes	2
		Road safety (see objective 6)	2
		Permeability and connectivity N-S and E-W	2
		Cycle parking	3
		Capacity of facilities	3
5	Supporting provision of **door-to-door** transport services including ensuring the operation of safe, reliable and accessible **taxi and private hire** and supporting services for those unable to use mainstream transport	Impact on taxi/private hire journey times	0
		Taxi/private hire user accessibility	0
6	Continuing the downward trend in **casualties** on London's roads and public transport networks	Impact on casualty levels for cyclists	2
		Impact on casualty levels for pedestrians	1
		Impact on road danger (perceived and actual)	1
7	Continuing to deliver **environmental** improvements, including improving the natural environment and air quality, and reducing CO_2 from ground based transport and impacts of noise	Overall traffic levels (main roads and side roads)	0
		Air quality exposure impacts	0
		Congestion impacts	0
8	Supporting an increase in **walking** by creating safe, attractive and accessible streets and public spaces that people can use and enjoy.	Overall traffic levels and mix of traffic	1
		Road safety (see objective 6)	1
		Footway congestion	1
		Public space provision	2
		Quality of public realm	2
		Permeability and legibility	2
		Quality of crossings (informal and formal)	3
9	Supporting more sustainable patterns of **freight** delivery and servicing	Impact on servicing and loading (provision and location)	0
		Journey time impacts	0

			Proportion %
Other	**Managing authority / landowners**	Borough public highway	30
		Strategic Road Network	0
		TLRN	0
		Private land	10
		Network Rail / TOC	55
		Open Metropolitan Space	5

LONDON BOROUGH OF
RICHMOND UPON THAMES

TWICKENHAM MINI - HOLLAND

A205 QUIETWAY



Cycling along Thames Bank towards Chiswick Bridge

PROPOSAL OVERVIEW

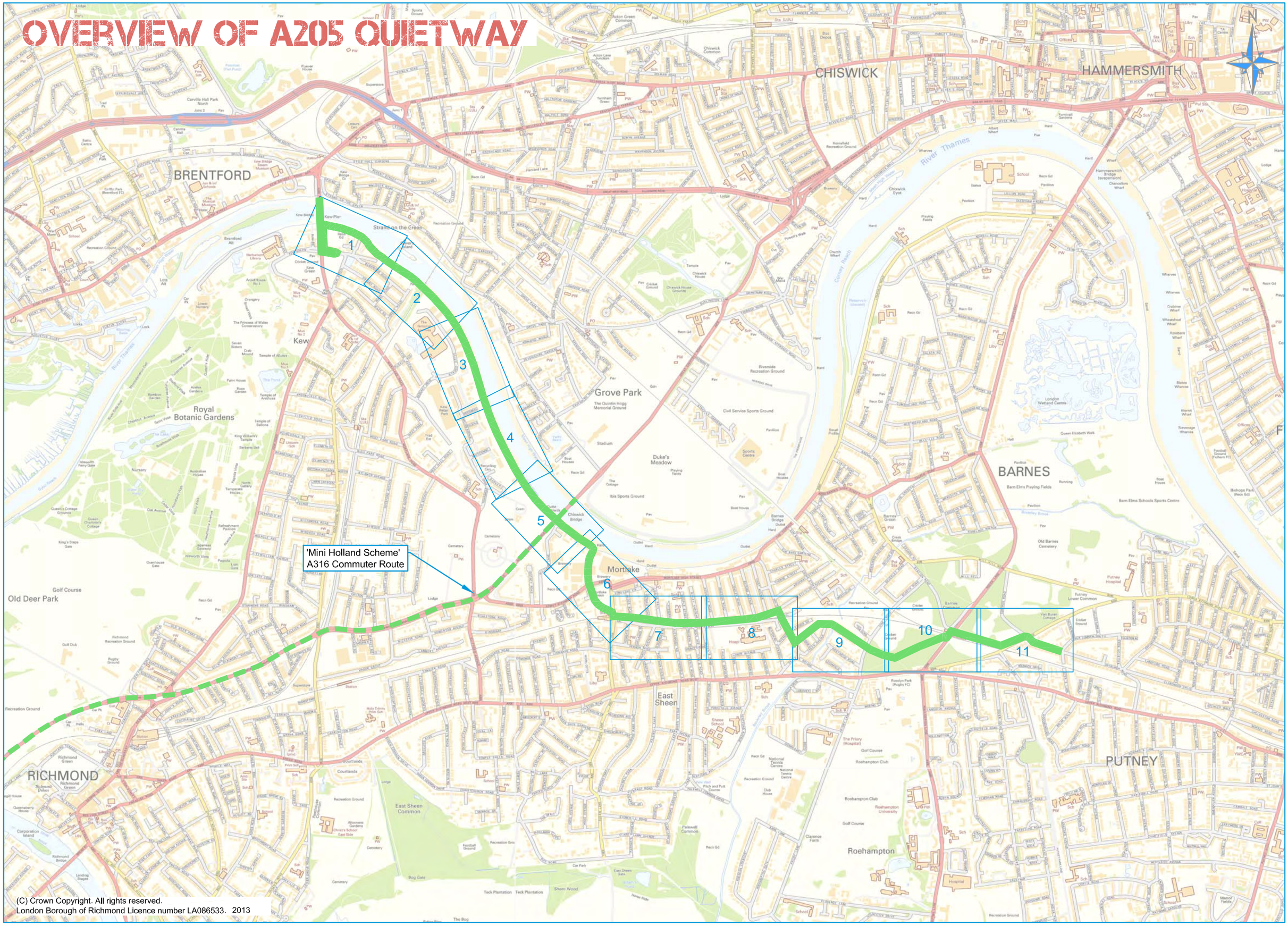
The combination of the A205 and A316 proposals will create two brand new commuter connections for cyclists into central London feeding into both Cycle Superhighway 8 and the proposed Cycle Superhighway 9. The Quietway would significantly enhance commuter routes by providing an alternative commuter route that will join up several sections of existing cycle routes to create a new, more direct route which would bypass the South Circular (A205) as well as Sheen Lane (B351). The existing eastbound routes for cyclists from Kew and Sheen into neighbouring Putney and Wandsworth are poor; cyclists are expected to either negotiate the heavily-trafficked A205 along Upper Richmond Road with little protection from general traffic, or use the River Thames towpath where cyclists are not legally allowed to cycle. The long term ambition for the Quietway is to convert the Thames Towpath to shared use for the entire length of the Borough from Hampton Court Palace through to Hammersmith Bridge. The A205 Quietway will provide impetus for the conversion of the rest of the towpath to shared use, and set a precedent for cycle-friendly design for the towpath

From a recreational perspective the Towpath route is particularly important because it provides a gateway into Richmond upon Thames from Central London. Completion of the route would enhance the Borough's recreational cycling network by improving westbound routes from Wandsworth into NCN4, providing less confident cyclists with a significantly improved entry into the Borough from Barnes and Hammersmith, it would also connect at Kew Bridge with LBH's proposed North Circular Quietway to Ealing. From a commuter perspective the eastbound connections between Richmond upon Thames and Wandsworth are important because they feed into Cycle Superhighway 8 which takes cyclists from Wandsworth through Battersea, and the towpath also ties into the proposed A316 Commuter Route at Chiswick Bridge.

The Quietway would follow the Thames Towpath from Kew Bridge until Mortlake where it would go through Mortlake Green before following a succession of quiet residential streets before joining Barnes Common and into London Borough of Wandsworth via St. Mary's Grove. To maximise the route's legibility and other road users' awareness of the route, we are recommending that a buff surfacing is used through the on-street sections of the route, which would be supplemented by repeater cycle markings when necessary. The completion of the Quietway will require the installation of several new pieces of infrastructure to increase cyclists' comfort and the overall permeability of the route:

- **Kew Bridge -** This is one of busiest routes into Richmond upon Thames for all road users, and is also an important gateway for cyclists into the Borough. Segregated cycle tracks will be installed across Kew Bridge to offer cyclists more protection from general traffic, and also to improve the connection between the Quietway and Kew Road. Importantly the Kew Bridge connections will help enhance cycle links with the proposed 'North Circular Quietway Route' which is being developed by London Boroughs of Ealing and Hounslow.
- **Chiswick Bridge Connection -** A new ramp will be installed on the north embankment of the A316 at Chiswick Bridge to connect with the Quietway; the facility would mirror the existing ramp on the south embankment between Williams Lane and the A316. This would maximise the integration of the two Mini-Holland proposals, and make the connection significantly more convenient for cyclists and pedestrians.
- **Towpath Boardwalk -** To maximise the route's durability and to ensure that the Towpath is usable year-round a boardwalk will be installed on a section between Chiswick Bridge and Ship Lane, this will keep the Towpath open when the section floods. This would be subject to discussions with Port of London Authority and the Environment Agency.
- **Mortlake Bridges -** Richmond upon Thames have already met with Network Rail and South-West Trains to discuss improvements to two bridges in Mortlake area which would allow cyclists to avoid the level crossings at Mortlake and North Sheen Stations (currently the crossings can be down for up to 42 minutes an hour during peak periods). The existing pedestrian bridge over the railway line between North and South Walpole Way will be replaced with a new cycle-friendly bridge to further enhance cycle permeability in the area, and cycle gutters will be installed at Mortlake Station to make it easier for cyclists to take their bicycles through the station.
- **Mortlake Cycle Parking -** The Borough is also proposing to double the number of secure cycle parking facilities at Mortlake Station from 92 to 184 spaces.
- **Barnes Common -** Improvements to the junction of Woodlands Road and Vine Lane will give cyclists a direct connection through into a new widened path in Barnes Common, which would follow through to Barnes Station. The Borough is proposing that cycle gutters are installed across the bridges at Barnes Station to ease cycle movements through the area.

OVERVIEW OF A205 QUIETWAY



Kew Bridge cycle lanes will tie into the proposed North Circular Quietway

Westerley Ware Recreation Ground

Playground

Tennis Court

London Borough of Hounslow

Borough Boundary

London Borough of Richmond Upon Thames

A

A

2m wide segregated cycle lane each side on Kew Bridge, with existing carriageway narrowed to 3 x 3m lanes (see section A-A for details

Tennis Courts

OLD DOCK CLOSE

Existing tow path to be improved. A wider, buff coloured cycleway will be constructured with improved lighting and the removal of unnecessary street furniture

Allotment Gardens

Bowling Green

SEE FIGURE 2

BUSHWOOD ROAD

Pinch point where design standards will be relaxed

WATERLOO PLACE

KEW GREEN

View of access to existing cycleway

Cycle gutters to be installed on existing stairs to improve cycle connection between the tow path and Kew Bridge

Risk:
Existing bus stop will require realigning

Kew Green

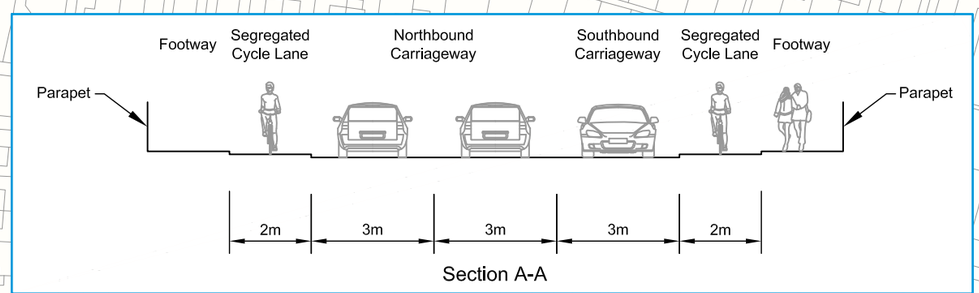
MAZE ROAD

PRIORY ROAD

Existing toucan crossing

Proposed access to towpath to be resurfaced in buff coloured material and cycle gutters installed on stairs

St Anne's Church



Section A-A

KEY

A205 Quietway

Other Mini Holland Routes

Access to Cycle Route

Twickenham Mini Holland
A205 Quietway
Figure 1

River Thames

Existing tow path to be improved. A wider, buff coloured cycleway will be constructured with improved lighting and the removal of unnecessary street furniture

Retaining wall at this location may have to be adjusted to accommodate cycleway

Bowling Green

Tennis Courts

Priory Park Club

SEE FIGURE 1

SEE FIGURE 3

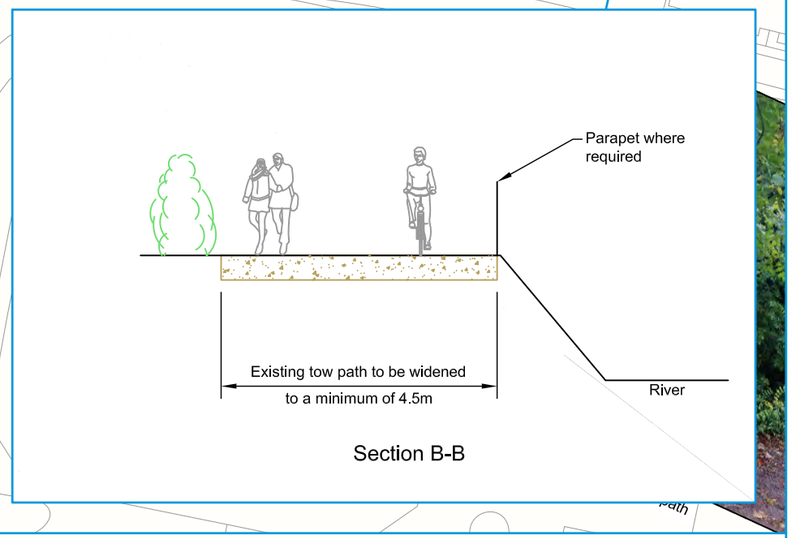
BUSHWOOD ROAD

B

B

Access to quietway to be improved for cyclists and pedestrians

The National Archives



Section B-B

KEY

A205 Quietway

Other Mini Holland Routes

Access to Cycle Route

Twickenham Mini Holland
A205 Quietway
Figure 2

Existing tow path to be improved. A wider, buff coloured cycleway will be constructured with improved lighting and the removal of unnecessary street furniture

Risk:
Modifications to the existing towpath will require planning approval. In particular considerations has to be given to the 1981 Wildlife and Countryside Act and the 1984 Cycle Track Act. Approval from the Environment Agency will also be required

River Thames

SEE FIGURE 2

SEE FIGURE 4

C

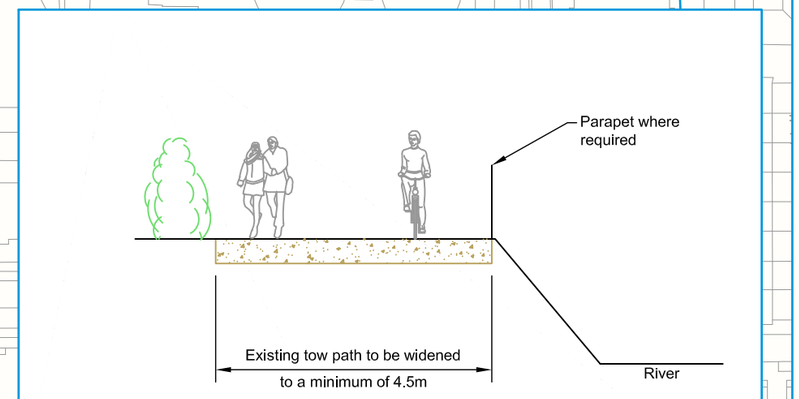
C

Sewage Purification Works

STRAND

MELLISS AVENUE

View of existing tow path



Section C-C

KEY

- A205 Quietway
- Other Mini Holland Routes
- Access to Cycle Route

Twickenham Mini Holland
A205 Quietway
Figure 3

SEE FIGURE 3

SEE FIGURE 5

Some sections of the towpath between Kew Bridge and Ship Lane are liable to flood at exceptional high tides. It is proposed to build boardwalks at these locations to ensure the Quietway is perceived to be a reliable route

Sloping masonry

D

D

Mortlake Anglian Boat Club

Allotment Gardens

Thames Tradesmen's Rowing Club

New cycle and pedestrian access to improve connection to Mortlake Road (A205)

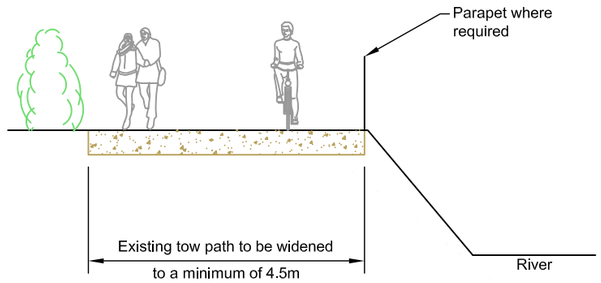
Green Link Walk

WHITCOMBE MEWS

Waste and Recycling Centre

TOWNMEAD ROAD

BARKER CLOSE



Section D-D

KEY

- A205 Quietway
- Other Mini Holland Routes
- Access to Cycle Route

Twickenham Mini Holland
A205 Quietway
Figure 4

View of existing tow path to be improved by constructing a 4.5m hard surface either with a buff coloured surfacing or a raised boardwalk

'Mini Holland Scheme'
A316 Commuter Route

View of existing access to tow path from Ship Lane

SEE FIGURE 4

SEE FIGURE 6

Risk:
To build the new access ramp a small section of land currently within the crematorium will be required

Proposed ramp on north of A316 to match existing ramp on south side

Existing access ramp to be retained and resurfaced in buff coloured material

View of existing access ramp between the Quietway and the A316 Commuter Route to be resurfaced with a buff coloured material

KEY

- A205 Quietway
- Other Mini Holland Routes
- Access to Cycle Route

Twickenham Mini Holland
A205 Quietway
Figure 5

View of existing layout of Ship Lane, to be resurfaced in a buff coloured material

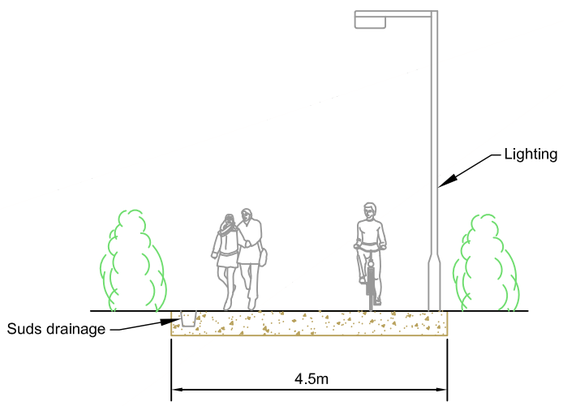
View of existing footpath through Mortlake Green to be widened

Existing path to be widened to 4.5m and resurfaced in a buff coloured material

Bridge at Mortlake station to be fitted with cycle gutters

Access to North Worpole Road to be improved

Existing sub standard cycle facilities will be replaced with an up-graded Toucan crossing to improve connection between Ship Lane and Mortlake Green



Section E-E

KEY

- A205 Quietway
- Other Mini Holland Routes
- Access to Cycle Route

Twickenham Mini Holland
A205 Quietway
Figure 6

View of existing layout of North Worple Way, to be resurfaced in a buff coloured material

Existing traffic calming to be modified for cyclists

Quietway to be re-surfaced using buff coloured surfacing. This will assist in cyclist way finding

Risk:
Existing footbridge to be replaced with a cycle friendly structure subject to Network Rail approval

View of existing footbridge

KEY

- A205 Quietway
- Other Mini Holland Routes
- Access to Cycle Route

Twickenham Mini Holland
A205 Quietway
Figure 7

Existing traffic calming to be modified for cyclists (see section F-F)

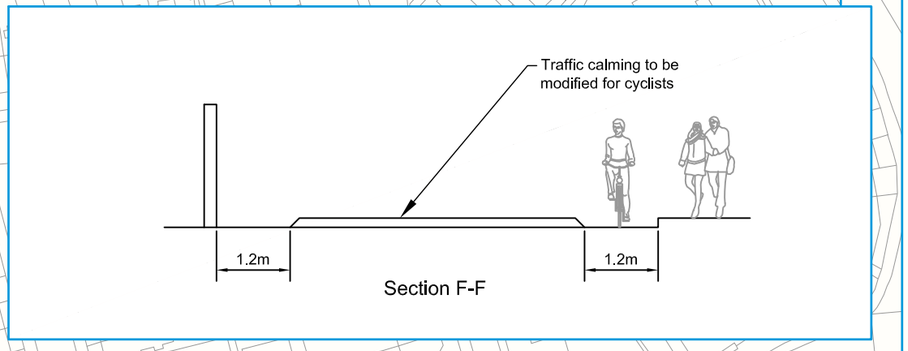
Quietway to be re-surfaced using buff coloured surfacing. This will assist in cyclist way finding

Existing raised table extended to include junction with North Worple Way to raise awareness of cycles using the Quietway

Modifications to gates at level crossing

Quietway to be re-surfaced using buff coloured surfacing. This will assist in cyclist way finding

View of the junction of North Worple Way and White Hart Lane



KEY

- A205 Quietway
- Other Mini Holland Routes
- Access to Cycle Route

Twickenham Mini Holland
A205 Quietway
Figure 8

Existing barriers between Rosslyn Avenue and Woodlands Road to be modified to improve cycle access

Quietway to be re-surfaced using buff coloured surfacing. This will assist in cyclist way finding

National Cycle Network Route 4

Raised table across Vine Road will connect the Quietway in Woodlands Road and Barnes Common

Existing path to be widened to 4.5m and resurfaced in a buff coloured material

Risk:
Modification to the existing footpath in Barnes Common will require planning approval in particular consideration has to be given to the 1967 Open Spaces Act and the 1984 Cycle Track Act

View of link between Rosslyn Avenue and Woodlands Road

View of junction of Vine Road and Woodlands Road

KEY

- A205 Quietway
- Other Mini Holland Routes
- Access to Cycle Route

Twickenham Mini Holland
A205 Quietway
Figure 9

View of existing footpath where the brick wall has to be demolished to accommodate the cycle way

Risk:
To widen accommodate the wider cycle way an existing wall will have to be demolished

Existing path to be widened to 4.5m and resurfaced with a buff coloured surfacing

Cycle gutters to be installed on existing bridge subject to Network Rail approval

QUEEN'S RIDE

Queen's Court

Court

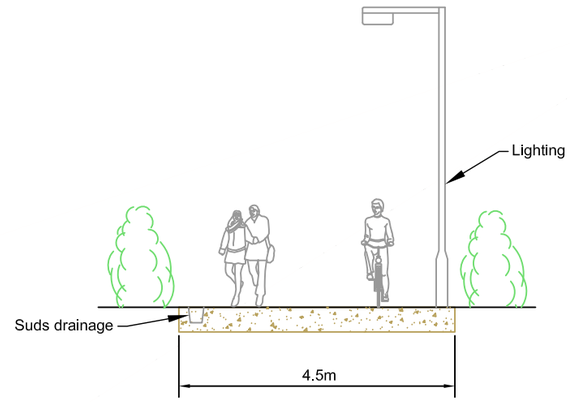
SEE FIGURE 11

SEE FIGURE 9

G

G

View of existing footpath, to be widened and resurfaced in a buff coloured material. Lighting to be consistent with Richmond upon Thames' bat friendly lighting



Section G-G

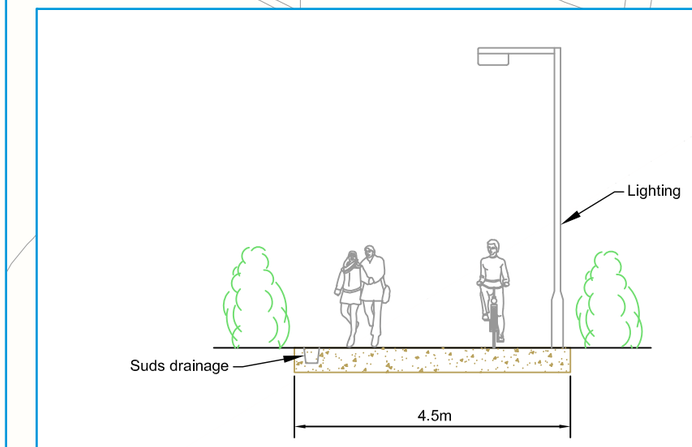
KEY

A205 Quietway

Other Mini Holland Routes

Access to Cycle Route

Twickenham Mini Holland
A205 Quietway
Figure 10



Section H-H

Existing shared use facilities will be removed at junction of Queen's Ride and Common Road to improve pedestrian comfort and help cyclists using the Quietway

View of existing junction

Existing footpath to be widened to 4.5m and resurfaced with buff coloured surfacing

Risk:
St Mary's Grove is a private road. LBRuT will have to consult with residents regarding resurfacing.

Example of bat friendly lighting to be used in Barnes Common

KEY

- A205 Quietway
- Other Mini Holland Routes
- Access to Cycle Route

Twickenham Mini Holland
A205 Quietway
Figure 11

A205 QUIETWAY: RISK REGISTER

Scheme Risk Register

Project:	A205 Quiet Way - LBRuT Mini Holland	**Document Reference**	5103865/118/30.05.04
Design Stage:	Feasibility	**Revision No.**	2.0
Author	Bruce Bolton	**Revision Date**	10/12/2013

designoutrisk: RED AMBER & GREEN

ATKINS

	Risk Identification			Risk Reduction		Communication of Residual Risk			Notes
A	B	C	D	E	F	H	I	J	K
Ref.	**Structure Element and/ or Location**	**Description of Risk**	**Type of Risk**	**Action to reduce or eliminate risk**	**Record of Residual Risk**	**Significance of Residual Risk**	**Means of Communicating Significant Residual Risk**	**Designer Initials here to verify commitments in Column I**	**Commentary if required/ Project Director sign off any Red Items**
0001	Riverside boardwalk (if required)	Planning permission may be required, local residents may object.	Legal/Political	Robust consultation and liaison will be carried out with all stakeholders and the designs will reflect the substance of the discussions. .	It may be necessary to reconsider this element of the route.	Amber - Significant			
0002	Towpath, Chiswick Bridge	Construction will require consent from Environment Agency	Legal/Political	Robust consultation and liaison will be carried out with all stakeholders and the designs will reflect the substance of the discussions. .	It may be necessary to reconsider this element of the route.	Amber - Significant			
0003	Towpath, Chiswick Bridge	Trees and planting will have to be removed, likelt objection from stakeholders	Ecology	An ecology statement will be prepared at a later stage of the project. Design will include for replacement planting.		Green - Not Significant			
0004	Dovecote Gardens	Landowner consent may not be forthcoming	Land Ownership	Robust consultation and liaison will be carried out with all stakeholders and the designs will reflect the substance of the discussions. .	The route may have to be realigned if negotiations are unsucessful	Amber - Significant			
0005	Footbridge over railway, Mortlake Station	Railtrack consent required	Legal	Robust consultation and liaison will be carried out with all stakeholders and the designs will reflect the substance of the discussions. .	The route may have to be realigned if negotiations are unsucessful	Amber - Significant			
0006	Footbridge over railway, Mortlake Station	Railtrack consent required	Legal	Designs will be undertaken in conjunction with Railtrack	The route may have to be realigned if negotiations are unsucessful	Amber - Significant			
0007	Level crossing, Whitehart Lane	Railtrack consent required	Legal	Designs will be undertaken in conjunction with Railtrack		Amber - Significant			
0008	Path between Rosslyn Avenue and Woodlands Raod	Any modifications may require the consent of Environment Agency	Legal	A robust, structured consultation will be put in place to ensure that all points of view are received and the designs are modified to reflect the consultation results.		Green - Not Significant			
0009	Vine Road crossing	The introduction of a new crossing may require the loss of parking spaces.	Political	Consultation with Members and residents and other stakeholders. Parking can be reallocated to adjacent side roads, or other locations where appropriate.		Amber - Significant			
0010	Link across Barnes Common	Comman Land Legislation may delay implementation	Legal/Political	Early consultation with LBRuT leagl team to ensure legal process to revert common land to cycle way is started at the earliest opportunity.	The route may have to be realigned if negotiations are unsucessful	Red - Significant			
0011	Whole route	TfL and / or LBRuT may not accept elements of the scheme	Design & Build	A robust, structured consultation will be put in place to ensure that all points of view are received and the designs are modified to reflect the consultation results.		Amber - Significant			
0012	Whole route	There may be areas of land required that are not under the direct ownership of the highway authority	Land Ownership	At preliminary design stage confirm alignment and minimise potential areas of concern.		Amber - Significant			
0013	Whole route	Statutory undertakers apparatus will need to be diverted	Design & Build	C2 and C3 enquiries will identify problem areas, design may be ameneded to minimise or avoid.		Green - Not Significant			
0014	Public Consultation	Results of Public Consultation may not be positive	Political	A robust, structured consultation will be put in place to ensure that all points of view are received and the designs are modified to reflect the consultation results.		Amber - Significant			

The Risk Management System and Risk Register will be populated as the design progresses in future design stages (subject to funding).

A205 QUIETWAY: FORM B

	Assessment based on TfL Surface Transport Outcomes	Benefit / Cost	Impact * (+3 to -3)
1	Maintaining and enhancing a reliable, accessible and high quality **bus** network and ensuring efficient **coach** service in London	Bus operating costs	0
		Impact on bus journey times and reliability	0
		Bus passenger accessibility	0
		Legibility of bus network	0
2	Ensuring reliable operation of London's **road network** while reducing congestion	Overall traffic levels (main roads and side roads)	1
		Journey time impacts for different users	1
		Reallocation of carriageway space	0
		Reallocation of footway space	0
		Congestion	1
		Junction operation (degree of saturation)	0
		No. of junctions forming part of scheme	2
		No. of above requiring modification	2
		Loss of car parking: resident / visitor	1
3	Continuing the downward trend in **crime** and fear of crime on London's transport networks	Quality of public realm (see objective 8)	1
		Quality of interchange	2
4	Enabling more people to **cycle**, more safely, more often	Overall traffic levels and mix	2
		Quality of N-S and E-W routes	1
		Road safety (see objective 6)	1
		Permeability and connectivity N-S and E-W	3
		Cycle parking	1
		Capacity of facilities	2
5	Supporting provision of **door-to-door** transport services including ensuring the operation of safe, reliable and accessible **taxi and private hire** and supporting services for those unable to use mainstream transport	Impact on taxi/private hire journey times	0
		Taxi/private hire user accessibility	0
6	Continuing the downward trend in **casualties** on London's roads and public transport networks	Impact on casualty levels for cyclists	1
		Impact on casualty levels for pedestrians	0
		Impact on road danger (perceived and actual)	2
7	Continuing to deliver **environmental** improvements, including improving the natural environment and air quality, and reducing CO_2 from ground based transport and impacts of noise	Overall traffic levels (main roads and side roads)	1
		Air quality exposure impacts	1
		Congestion impacts	1
8	Supporting an increase in **walking** by creating safe, attractive and accessible streets and public spaces that people can use and enjoy.	Overall traffic levels and mix of traffic	1
		Road safety (see objective 6)	1
		Footway congestion	1
		Public space provision	1
		Quality of public realm	2
		Permeability and legibility	1
		Quality of crossings (informal and formal)	2
9	Supporting more sustainable patterns of **freight** delivery and servicing	Impact on servicing and loading (provision and location)	0
		Journey time impacts	0

			Proportion %
Other	**Managing authority / landowners**	Borough public highway	60
		Strategic Road Network	0
		TLRN	0
		Private land	5
		Network Rail / TOC	5
		Open Metropolitan Space	30

LONDON BOROUGH OF
RICHMOND UPON THAMES

TWICKENHAM MINI - HOLLAND

APPENDICES









The Old Deer Park footbridge will be replaced by a new cycle-friendly facility.

APPENDIX A: FORM A

The 'Mini-Holland' Programme

Form A: Information Requirements

Borough	London Borough of Richmond Upon Thames

Contact details	
Name	Chris Smith
Position	Integrated Transport Planning Manager
Telephone no.	020 8891 7341
E-mail address	C.smith@richmond.gov.uk
Date of submission	13th December 2013

Freedom of Information

All submissions are deemed to be public documents and therefore available through Freedom of Information Requests. Please advise if there are any exceptions to this requirement contained in this submission.

1: Background & context	
Overview of Mini-Holland bid	The Borough's Mini-Holland bid is focussed on delivering high quality cross-borough cycle facilities that will transform the image of cycling in Richmond upon Thames. The Borough has deliberately developed cycle routes which run alongside some of the busiest road and rail links within the Borough on the basis that this will significantly increase exposure to cycling, and therefore offer the best chance of encouraging more trips by bicycle. There are four main proposals within the Mini-Holland bid; Twickenham Town Centre sits at the centre out of the bid, with the other proposals radiating out from the centre. • Twickenham Town Centre • A316 Commuter Route • Railside Cycle Routes • A205 Quietway
Problems , opportunities & issues	Currently, a majority of the Borough's residents have reasonably good access to a mix of quietways, advisory routes, and off-road recreational tracks. Recreational facilities within the major parks in Richmond upon Thames are a particular strong point of the Borough's cycling network, and synonymous with the Borough's cycling image. National Cycle Network 4 is the only continuous facility to run the width of the Borough from Hammersmith to Hampton Court; however its meandering route and varying surface treatments restricts the number of cycles that are able to use the facility. These issues with NCN4 typify the challenges that currently face cycling in Richmond upon Thames. Whilst there are plentiful recreational facilities, it is often difficult to reach these facilities without negotiating busy and congested roads with little protection from general traffic. This combined with an absence of convenient and direct strategic routes; serve to undermine the appeal of cycling. The findings from TfL's Analysis of Cycling Potential (2010) found that residents of Richmond upon Thames made the second highest number of cycle journeys between 2005-08, and that overall the Borough's cyclists had realised 19% of its total cycling potential. The findings from TfL's paper suggest that the Borough is performing well when compared to other Boroughs, however Richmond upon Thames still faces many challenges before it can fulfil it's cycling potential.
Benefits expected from the programme	The Borough expects there to be direct benefits from the Mini-Holland programme as more cyclists are attracted to a commuter route from the outer London boundary in London Borough of Hounslow through Richmond upon Thames and London Borough of Hammersmith and Fulham into central London. Similarly an off road towpath and residential side road quietway should attract more cyclists to use this route as an alternative to the A205 South Circular Road. As a large number of A205 journeys are less than 5 miles in this part of London this quietway should be a catalyst for mode change and more routes in neighbouring boroughs. Use of Railside routes will become attractive to those residents in the south-west of the Borough where cycle permeability is limited. Well used cycle parking at local train stations suggests that many people are

	already cycling to their local station, the Railside facilities will encourage cyclists to extend their journeys beyond their local station. Twickenham town centre will become the focus for cycling in the borough with radiating cycle routes to other district centres and neighbouring boroughs, links to the towpath both sides of the river and the Commuter Route into central London. Cycle parking will be greatly enhanced in the town centre and the current Town Centre scheme will evolve with better cycle facilities throughout with more routes introduced and greater segregation on approach roads to the town. The health benefits in improving fitness, reducing obesity along with a reduction in the risks of strokes, coronary heart disease, certain types of cancer, diabetes and osteoporosis are well known. Encouraging people to walk and cycle under the NICE guidance will help the borough meet its new public health objectives as colleagues from the NHS join the Authority. The Council's combined work on cycle provision is expected to deliver a whole raft of measures to encourage the growth in cycling both in the Borough and also trips on cycles out of the Borough. The Council has a full programme of LIP funded cycle schemes and also provides a large amount of training in schools for school children. Among the Borough's LIP3 five Strategic Performance Indicators we have a target of "Mode Share". This indicator measures the proportion of personal travel made by cycle and we have set both short term and long term targets: Long term target: 7% cycling mode share by 2025/2026; and Short term target: 6.25% cycling mode share by 2016/17. Between now and 2016/17 we have set a trajectory of modal share: **2013** | **2014** | **2015** | **2016** 5.5% | 5.75% | 6% | 6.25% The Borough has a network of cycle counters around the Borough which are counting the number of cyclists 24 hours a day, 365 days a year. This can be analysed to see how cycling across the Borough is performing. Data on the level of cycling is also provided by the London Travel demand Survey provided by TfL. The schemes delivered through the Mayor's Cycling Vision, both the Mini-Holland and "Quietways" initiatives and increases to cycle training, will be additional to the LIP funded schemes and training, giving cyclists a major boost in high quality cycling facilities around the Borough. The Borough is currently beginning to put together its draft cycling strategy which is being informed by the Mayor's Cycling Vision. The result of the bid will help inform the final version of the draft strategy before it goes to public consultation.

Programme objectives	The Mini-Holland programme will provide a significant boost in helping the Borough overcome the current issues which beset cycling in Richmond upon Thames. The new routes will be the Borough's first major pieces of cycle infrastructure and will represent a significant shift in how cycling is designed in the Borough; moving away from piecemeal solutions to major strategic routes. The facilities will not only benefit the Borough's cyclists, it will have major benefits for visitors cycling into the Borough. The A316 route in particular will help stitch together several other cycle routes within Richmond upon Thames and also routes from London Borough Hounslow and London Borough Ealing. The programme will not only benefit Richmond upon Thames, its benefits will extend further afield into Hounslow, Kingston, Hammersmith and Fulham all of which will be incorporated into the Richmond upon Thames Mini-Holland proposals.
Programme vision	If successful, the Mini-Holland package will transform the image of cycling across the Borough, and provide Richmond upon Thames with a package of measures that encourage all types of cyclists to get on their bikes and cycle in Richmond upon Thames, and beyond. All residents in the Borough will be within convenient reach of at least one quality cycle route into Twickenham Town Centre. In total, the Mini-Holland's funding will create 16 miles worth of new cycle facilities within the Borough, and extending the A316 route into LB Hounslow and the proposed Cycle Superhighway 9 will form the basis of a 12 mile cycle route from Hyde Park Corner to Hanworth. Whilst some proposals have been focussed on specific cycling groups (e.g. Commuter cycles), the overarching vision has been to create convenient facilities that all types of cycles will feel comfortable using. Running proposals parallel to busy commuter routes will increase the general public's exposure to cycling, making cycling a more normal part of the Borough's landscape. Underpinning all of the proposals has been a desire to improve the wider environment and public realm, rather than just delivering change for cyclists. The proposals will significantly improve the wider quality of the environment along all of the proposed routes.

A substantial redesign of the main Town Centre to make it genuinely excellent for cyclists.	Twickenham was the natural choice to be the Borough's Mini-Holland because it sits at the heart of the Borough. A majority of Richmond upon Thames is within a 20 minute cycle from Twickenham which means that it is best positioned to evolve into a Mini-Holland. Improvements are already taking place in Twickenham Town Centre; which are focussed on reducing the impact of general traffic upon the Town Centre, whilst also significantly improving the quality of Twickenham's public realm. Specific cycle improvements within the existing Town Centre improvements include segregated cycle track outside of Twickenham Station, and the installation of a contraflow cycle lane on Holly Road. The Mini-Holland proposals would seek to build upon the existing works which are already underway in the Town Centre, ensuring that the Mini-Holland proposals connect into the Town Centre. • **Heath Road:** Segregated cycle facilities will be installed between Grove Avenue and the railway bridge, and new cycle facilities will be installed at the junction of Heath Road and The Green. • **London Road:** Segregated cycle tracks will be installed along London Road which will ensure that cycles have a segregated route from the new A316 Commuter Route all the way down to Twickenham Station. • **Warren Footpath:** The existing towpath will be upgraded to provide cyclists with a more comfortable quietway route between Richmond and Twickenham Town Centres, avoiding busier roads like Richmond Road and York Street. • **More on-street Quietways from the south** as the Railside route is unable to enter Twickenham along side the railway a network of quietways on residential roads will be established to enter the Town Centre from various locations.
Redesigns of some of the secondary Town Centres.	Hampton and Whitton centres will benefit from significantly improved connections into the Railside route and A316 Commuter Route. **Hampton Centre:** The junction of Tudor Road/Station approach is dominated by through-traffic which has a detrimental impact upon the quality of public realm along the shopping parade. The proposals for the junction will significantly reduce the impact of traffic upon the shopping parade, improve pedestrians' comfort, and most importantly provide a clear gateway into the Railside cycle route. **Whitton Centre:** A Railside link will be installed between Whitton High Street and the Meadway/A316 junction to allow cyclists to travel on a traffic-free route from Whitton to Twickenham Station. The proposals for Richmond upon Thames's River Crane Quietway and LB Ealing/Hounslow's North Circular to Kew Bridge Quietway mean that it is essential to provide a connection between Whitton and Twickenham centres. Richmond upon Thames have already had meetings with Network Rail and South-West Trains to discuss how the cycle route would be incorporated into the proposals for the re-design of Whitton Station.

Addressing severance, where this is a problem: new cycle and pedestrian crossings of major roads, railway lines or waterways.	Each of the Mini-Holland proposals will address severance; in total the bid will improve over 70 junctions throughout the Borough for cyclists and other non-motorised users. The aim of these junction improvements will be to improve the junctions not only for cyclists, but for all users of those junctions. The proposals for the Railside route will create new cycle facilities at 9 junctions between Hampton and Strawberry Hill, the A316 Commuter Route will re-design 6 major junctions along the route, and Twickenham Town Centre will create new cycle facilities at the junction of Heath Road and The Green. Specific attention has been paid to the below junctions because of their poor road safety records for the period between July 2010-July 2013: • **Richmond Circus:** There were 13 collisions at the junction, 7 of which involved cycles. • **London Road/A316 Roundabout:** This junction was included in Transport for London's top 100 'Better Junctions' locations. • **Wellington Road and Clonmel Road:** There were 3 collisions in 36 months; two of which were serious and involved pedestrians and cycles. As well as addressing severance at junctions, the bid will target links/stretches of roads which also cause severance. For example there were 20 collisions on Heath Road between The Green and King Street; 8 collisions involved cycles and two involved pedestrians.
A network of good cycle routes radiating out from the main town centre, and secondary centres, to other parts of the borough, paralleling all the main local travel routes. Redesigns of problem junctions where they are used by cyclists.	A requirement of all of the Mini-Holland proposals was that they would improve cycle connections into and out of Twickenham Town Centre; the result is a set of routes which all radiate out into the Borough and beyond. Improvements to Twickenham Town Centre are already underway; these improvements will significantly improve the quality of the public realm throughout the Town Centre, installing a 20mph limit will help to shift the feel of the Town Centre away from traffic dominance, and create a more comfortable environment for cycles. The Mini-Holland proposals will ensure that the improvements made for cyclists in the Town Centre extend into a wider catchment area, and that the other Mini-Holland proposals are integrated into the Town Centre. The proposals are focussed on three key radial routes into Twickenham: Heath Road, London Road, and Warren Footpath. .
At least one good commuter route from the borough to central London.	The proposed A316 Commuter Route will span the full width of the Borough; connecting existing segregated facilities to the west in LB Hounslow through Richmond upon Thames and onto central London via Cycle Superhighway 9. The A316 route would become a landmark cycle facility for south-west London creating a continuous route from Hospital Bridge Road to Hyde Park Corner. Importantly the A316 will be a route for all types of cyclists; our aim has been to develop a design that is convenient, legible and safe for all cyclists, not just commuters. The proposals are intended to completely transform the feel of the A316 for all users; this includes re-designing all 7 major junctions along the A316, removing much of the paraphernalia and highways infrastructure that remains from when the A316 had a 60mph speed limit, and also improving connections with other adjoining cycle routes.

Significant numbers of short local car journeys, within the borough and nearby, replaced by bicycle journeys.	The Borough has developed routes which adjoin or run parallel to the busiest commuter routes within the Borough; specifically the A316 and the Hampton to Strawberry Hill Railside route. This will significantly increase the general public's exposure to the new cycling infrastructure, and we believe this is best means of raising awareness of the new facilities and encouraging potential cyclists to substitute their current means of transport for cycling.
Cycle Superhubs providing large amounts of secure cycle parking, at local railway station(s).	Having significantly improved the A316 and Railside facilities that encourage cycling to Twickenham Station and Town Centre, it is imperative that a Super-Hub is installed at the station that is able to accommodate the increased demand for secure cycle facilities. Spaces are already in high demand at the station, with tens of cyclists having to use railings and various other bits of street furniture around the station, in the absence of sufficient facilities. The latest designs for the regeneration of Twickenham Station propose the installation of a Super-Hub consisting of 450 cycle spaces; Richmond upon Thames is proposing to double the number of spaces at Twickenham to 900 spaces. As well as increasing the number of secure cycle parking spaces at Twickenham, the Borough would seek to introduce a Brompton Dock, or extend the Richmond cycle hire scheme at the station. Once registered, cyclists would be able to hire a Brompton bike from the station for 24 hours and return it to any other station in the country which has a Brompton dock. The creation of the Railside route will significantly increase cycling volumes between Hampton and Strawberry Hill, it is essential therefore that cyclists have somewhere secure to leave their bicycles. Richmond upon Thames has agreed with Network Rail and South-West trains to double the amount of secure cycle facilities at Hampton, Fulwell and Strawberry Hill stations to over 290 spaces. The Borough have also agreed to work with Network Rail to replace the existing footbridge at Fulwell station (which is scheduled for replacement in 2016/17) with a new cycle-friendly facility.
Significant local marketing and promotional efforts.	**Richmond upon Thames Website** Update the 'Twickenham Rediscovered' web pages to include information about the Mini Holland proposals, including sign posting to the consultation. **Twickenham E-Newsletter** Include regular articles and sign-posting in the Council resident newsletters to keep **Stakeholder Letters** Letters to be sent to residents in Twickenham regarding various elements of the programme. **Posters and Leaflets** Send an updated Twickenham Rediscovered booklet to all residents in Twickenham – with summary of current status of activity and promoting the consultation activity. **Media** Put together a media plan promoting key milestones in the development, including interviews with key stakeholders and case studies with local residents, businesses & community groups.

	Social / Digital Media The use of social media can allow us to engage with residents in real-time to gauge their reactions to ongoing works, interact with them and participate in any community discussions taking place – e.g. through hyper-local websites such as the 'Twickerati' blog. Other digital media such as pictures, video and audio could be used to create a 'project diary' showcasing the improvements to residents as and when they happen.
Targeted efforts to increase cycling by key demographic groups in your borough who cycle less than average	Twickenham Mini-Holland will build on Richmond upon Thames's multi-pronged approach to targeting increases in cycling. A key target group for increased cycling are workers aged 25-65. According to the 2011 census data 4.64% of households in the Twickenham village area already travel to work by bicycle compared to 23.42% who travel by car or van. Richmond upon Thames is committed to educating future generations in both road safety and sustainable travel arenas and, at 93%, trains the highest percentage of eligible year 6 children in London to ride on the roads. Improvements to the cycling infrastructure and continuing education aims to shift the modal share in favour of cycling. Adult training courses provided by Richmond upon Thames take steps to target and reach a high proportion of underrepresented groups in cycling. These include those ages over 65, female groups and ethnic minorities. Although the Borough has a relatively low population of ethnic minorities, aims to target this group have been successful. The percentage of adults trained who are both female and consider themselves as belonging to an ethnic minority group consistently exceeds 60%.
Ensuring that all new developments and projects are genuinely cycle-friendly.	Richmond upon Thames are committed to taking necessary steps to ensure that all new developments and projects undertaken within the borough consider the needs of cyclists and are cycle friendly. Conditions of new developments will include the provision of secure and covered cycle parking facilities and, in larger developments, the inclusion of new cycle paths which join to existing cycling infrastructure. Additionally, Richmond upon Thames will continue to reserve a proportion of Section 106 funding for the improvement of cycling routes and parking as part of the local infrastructure.

2: Estimated Scheme Costs & Funding

Twickenham Town Centre		**£ k**
a) Design & development		
Data collection		10
Feasibility & initial design		120
Detailed design & consultation		160
Sub-Total		**290**
b) Build cost		
Scheme implementation		1,500
Contingency (% & £)	20%	300
Fees		65
Sub-Total		**1,865**
Total Development & Delivery Cost		**2,155**

A316 Commuter Route **Hospital Bridge Roundabout to Chiswick Bridge (Borough Boundary)**	**£ k**
a) Design & development	
Data collection	350
Feasibility & initial design	1,075
Detailed design & consultation	1,425
Sub-Total	**2,850**
b) Build cost	
Scheme implementation	14,800
Contingency (% & £)	10% 1,480
Fees	720
Sub-Total	**17,000**
Total Development & Delivery Cost	**19,850**

N.B. Total figure includes the below severance figures

Severance: junctions & crossings **Junction of Hospital Bridge Road and Chertsey Road (A316)**	**£ k**
a) Design & development	
Data collection	0
Feasibility & initial design	48
Detailed design & consultation	64
Sub-Total	**112**
b) Build cost	
Scheme implementation	635
Contingency (% & £)	10% 63
Fees	32
Sub-Total	**730**
Total Development & Delivery Cost	**842**

Severance: junctions & crossings **Junction of Whitton Road and Chertsey Road (A316)**	**£ k**
a) Design & development	
Data collection	0
Feasibility & initial design	45
Detailed design & consultation	63
Sub-Total	**108**
b) Build cost	
Scheme implementation	634
Contingency (% & £)	10% 63
Fees	32
Sub-Total	**729**
Total Development & Delivery Cost	**837**

Severance: junctions & crossings **Junction of London Road and Chertsey Road (A316)**	**£ k**
a) Design & development	
Data collection	0
Feasibility & initial design	47
Detailed design & consultation	63
Sub-Total	**110**
b) Build cost	
Scheme implementation	634
Contingency (% & £)	10% 63
Fees	32
Sub-Total	**729**
Total Development & Delivery Cost	**839**

Severance: junctions & crossings **Junction of St. Margaret's Road and Chertsey Road (A316)**	**£ k**
a) Design & development	
Data collection	0
Feasibility & initial design	50
Detailed design & consultation	67
Sub-Total	**117**
b) Build cost	
Scheme implementation	674
Contingency (% & £)	10% 67

Fees		34
Sub-Total		**775**
Total Development & Delivery Cost		**892**
Severance: junctions & crossings **Richmond Circus (Junction of Twickenham Road and Mortlake Road)**		**£ k**
a) Design & development		
Data collection		0
Feasibility & initial design		72
Detailed design & consultation		95
Sub-Total		**167**
b) Build Cost		
Scheme implementation		954
Contingency (% & £)	10%	95
Fees		48
Sub-Total		**1,097**
Total Development & Delivery Cost		**1,264**
Severance: junctions & crossings **Manor Circus (Junction of Manor Road, Lower Richmond Road and Sandycombe Road)**		**£ k**
a) Design & development		
Data collection		0
Feasibility & initial design		54
Detailed design & consultation		71
Sub-Total		**125**
b) Build cost		
Scheme implementation		714
Contingency (% & £)	10%	71
Fees		36
Sub-Total		**821**
Total Development & Delivery Cost		**946**
Severance: junctions & crossings **Chalkers Corner (Junction of Mortlake Road, Lower Richmond Road and Clifford Avenue)**		**£ k**
a) Design & development		
Data collection		0
Feasibility & initial design		125
Detailed design & consultation		167
Sub-Total		**292**

b) Build cost		
Scheme implementation		1,675
Contingency (% & £)	10%	168
Fees		84
Sub-Total		**1,927**
Total Development & Delivery Cost		**2,219**

Railside Cycle Routes **Kempton Park (Borough boundary) to Twickenham Station**		**£ k**
a) Design & development		
Data collection		120
Feasibility & initial design		400
Detailed design & consultation		520
Sub-Total		**1,040**
b) Build cost		
Scheme implementation		5,140
Contingency (% & £)	20%	1,028
Fees		312
Sub-Total		**6,480**
Total Development & Delivery Cost		**7,520**
N.B. Total figure includes the below cycle hub figures		
Cycle hub **Hampton Station**		**£ k**
a) Design & development		
Data collection		0
Feasibility & initial design		5
Detailed design & consultation		7
Sub-Total		**12**
b) Build cost		
Scheme implementation		70
Contingency (% & £)	20%	14
Fees		4
Sub-Total		**88**
Total Development & Delivery Cost		**100**
Cycle hub **Fulwell Station**		**£ k**
a) Design & development		
Data collection		0
Feasibility & initial design		1
Detailed design & consultation		2
Sub-Total		**3**

b) Build cost		
Scheme implementation		14
Contingency (% & £)	20%	3
Fees		1
Sub-Total		**18**
Total Development & Delivery Cost		**21**

Cycle hub Strawberry Hill Station	**£ k**
a) Design & development	
Data collection	0
Feasibility & initial design	1
Detailed design & consultation	2
Sub-Total	**3**
b) Build cost	
Scheme implementation	14
Contingency (% & £)	20% 3
Fees	1
Sub-Total	**18**
Total Development & Delivery Cost	**21**

Cycle hub Mortlake Station	**£ k**
a) Design & development	
Data collection	0
Feasibility & initial design	3
Detailed design & consultation	5
Sub-Total	**8**
b) Build cost	
Scheme implementation	42
Contingency (% & £)	20% 8
Fees	2
Sub-Total	**52**
Total Development & Delivery Cost	**60**
NB: Twickenham Station not included as this is part of the station re-development	

A205 Quietway Kew Bridge to St Mary's Grove	**£ k**
a) Design & development	
Data collection	100
Feasibility & initial design	325
Detailed design & consultation	430
Sub-Total	**855**
b) Build cost	
Scheme implementation	4,500
Contingency (% & £)	20% 900
Fees	220
Sub-total	**5,620**
Total Development & Delivery Cost	**6,475**

Total Estimated Costs (i – vii):	**£ k**
Design and Development	5,035
Build	30,965
Total	**36,000**

Funding (i-vii): (Richmond upon Thames)	**£ k**
Funding sought from mini-Holland programme (% & £)	To be agreed*
Complementary funding:	To be agreed*
Borough resources	
Developer contributions	£250k for 2014/15
Business improvement districts	To be agreed*
LIP / other GLA	To be agreed*
Network rail / TOC	To be agreed*
EU or other grant	To be agreed*
other	
Total	

*Sums outside of Mini Holland funding to be agreed between the Borough and TfL. There is possible funding from:

- The Rugby Football Union for works in proximity to Twickenham Stadium;
- LIP funding
- Additions Developer Contributions
- Major scheme monies from Twickenham Town Centre.

Funding profile	2014/15 £ k	2015/16 £ k	2016/17 £ k	2017/18 £ k
Requirement	5,239	10,853	14,288	5,620

3: Indicative programme *please provide a summary drawn from the programme Gantt chart showing the earliest start & end dates for the key programme activities identified below*	Start (month / year)	End (month / year)
Data collection	April 2014	January 2015
Feasibility & initial design	July 2014	October 2015
Detailed design & consultation	January 2015	July 2016
Contract award & implementation	September 2015	August 2017

4: Complementary activity — *Please provide a summary of other programmes or schemes that might support or complement the delivery of your mini-Holland programme – the list below is not exhaustive*

	Scheme	Cost	Delivery
Local Implementation Plan	1. Cycle Training	£120k	14/15 to 16/17
	2. Hampton Court Road off-road route	£120k	16/17
	3. Safer Urban Driver Training	£3k	14/15 to 16/17
	4. Cycle Tracks Act – Towpath	£75k	14/15 to 16/17
	5. Cycle Parking	£30k	14/15 to 16/17
	6. Cycle Direction Signing	£15k	14/15 to 16/17
	7. Route 75 Contribution	£50k	14/15 to 16/17
	8. Cycle Contra flow Streets/footpaths	£45k	14/15 to 16/17
	9. Cycle to School Partnerships	£30k	14/15 to 16/17
	10. Better Bridges - Cycle Ramps	£15k	14/15 to 16/17
	11. Bike It (Sustrans)	£15k	14/15 to 16/17
	12. British Cycling Partnership Contribution	£9k	14/15 to 16/17
	13. Kingston to Hampton Court Cycle Links	£20k	14/15 to 15/16
	14. Teddington Cycle Lane Review	£30k	14/15 to 16/17
	15. Cycle Quietways	£80k	14/15 to 16/17
	16. Barnes Common Cycle Conversion	£20k	14/15 to 15/16
		£677k	
Borough Cycling Programme	**Cycle Parking** Richmond enjoys the highest cycle mode share of all Outer London Boroughs but lacks safe and secure parking in many locations. Large numbers of racks are needed at all the Borough's stations and many of our local centres also would benefit from more racks, albeit carefully positioned. What is required are standard Sheffield type stands. Particular locations for new bike racks would be local centres to encourage many more people to travel to their local centre to buy goods. Barnes, Hampton, Kew, Whitton, Teddington, Hampton, Hampton Hill and Hampton Wick are in particular need of new cycle stands. They mostly are served by rail and so this also encourages good interchange and commuters. Money has recently been invested in a number of these centres to improve their environments and this continues with further LIP funding. Parking in residential areas is mainly where people live in flats who don't have room fro their bikes and so enclosed parking areas would benefit these people. These are more expensive and need more room to be installed. We have been working with Richmond Housing on providing more secure cycle parking for residents and this extra funding would enable us to provide more communal parking. We will through the development control process encourage developers to provide cycle parking and we will provide other cycle stand on the public highway whilst sites are developed. **Cycle School Partnerships** We have engaged with Barnes Infant School, East Sheen Primary School, St Mary Magdelen Primary School, St Osmans Primary School and Richmond Park Academy to develop a Cycle to School Partnership. These are all in and around Barnes and East Sheen and Barnes Infant School has assumed lead school for this project. There schools are all STAR accredited or are well on their way to being so. A quick summing up of the sorts of infrastructure includes, a 20mph around the schools, the opening up of alley ways to cyclists, some lighting may be needed here to make them safe during the hours of darkness, new cycle parking at the schools, early indications of a bike hire scheme for both teachers and parents administrated by Barnes Primary school, laying out of practice roads at one if not more schools involved. At present evidence of community support is being collected. **School Cycle Grants** We will contact the schools in our Borough throughout the rest of this autumn term to see what interest there is for this extra funding. It is envisaged that this will be new cycle parking or improvements to existing parking facilities such as covering. Extra time and resources may be put into adding to their curriculums work on the health benefits of cycling and being part of a more active lifestyle. The Borough has had some good success in this area with pro-active schools benefiting from Bike Clubs, maintenance courses and events to encourage more cycling within their school community. This funding has also been historically targeted too at schools that may benefit more from expanding the number of cyclists they currently have. **Cycle Training** Richmond upon Thames offers cycle training to 100% of children at local authority schools and has a proud record of casualty reduction. LIP funding subsidises revenue funding for cycle training. Key targets are Level 3s in secondary schools as this can have the most impact on modal shift and addressing a spike in adult cyclist casualties. An extra £10,000 on top of the existing LIP3 programme would be able to extend this to cover training in the Borough's secondary school which at present have very little training provided. We already have a good working relationship with many of the schools in the Borough and we would build on this. Our Junior Citizens events twice a year provides a good platform to promote this work. Further marketing would involve more frequent contact with the schools. Where we can we will recruit extra cycle trainers to help in delivering this extra training.		

	New money will enable us to target direct marketing at businesses as well as schools in cycle training and maintenance of bike at the workplace. Dr Bike like scheme, going direct to places where there are potentially a large number of bikes. This extra funding would allow our trainers to train an extra 700 secondary school children to be trained together with up to 100 staff who could then take over further training in future years. **Staff Resource** With the potential for a lot more work in the planning the installation of new cycle parking, development of Quietways and a possible Mini-Holland to design and build, an additional extra officer would bring great benefits in delivery. A project manager with experience in the delivery of cycle schemes would be ideal. This resource would sit within the Transport Policy team and would be charged with turning concepts into deliverable schemes and to manage their implementation. We believe, particularly if we get major funding from the Mini Holland that there will be alot for the Project Manager to undertake. They would be available to represent the Borough at any meetings regarding this initiative. They would need to be able to engage with stakeholders, particularly during consultation on these schemes and of course TfL officers involved. During their time with the council they would be expected to set up a monitoring regime in order that after they finish officers will be able to continue to monitor and report on progress, in particular on progress to meeting our LIP3 Target for cycling across the Borough. We envisage this will cost £50,000 a year to fund. **Local Cycle Strategy** Richmond has begun to draft a new Cycling Strategy which reflects the new Mayor's Cycling Vision and to cover the authority's new responsibilities in the area of health. This is taking officer time and we are undertaking a thorough consultation on it. Working with our Cycle Liaison Group and other internal stakeholders we will consult and improve the Strategy to meet and support the Mayor's Vision for Cycling. If we are lucky enough to be awarded Mini Holland status we will amend the Strategy to reflect this. This will also increase our recently agreed LIP3 Cycling Targets. We have undertaken the bulk of the drafting this financial year, preparing the draft strategy in readiness for consultation and next financial year we will complete this once we have consulted and taken into account all the new initiatives that have been announced as part of the Mayor's Cycle Vision and we are at the beginning of the new LIP3 period. Once the Strategy has been formally adopted it will be reviewed on a yearly basis and amendment made if thought applicable particularly if our targets are exceeded. **Monitoring** Along with the new schemes delivered we will be setting up a monitoring regime and add to our existing cycle counters that we have around the Borough. The appointed project manager discussed below will be charged with extending what we presently have and refining it to make it as useful as possible. As part of the Mini Holland bid we will collect cycle counts numbers to feed into this bid.
Other GLA / TfL funded	**Mayors Air Quality Fund** The Greater London Authority has made £6m worth of match-funding available for innovative schemes which seek to tackle transport related air pollution. Richmond upon Thames believe that the Mini-Holland proposals for the A316 are a fantastic opportunity to promote significant mode shift towards more sustainable modes and therefore reduce levels of air pollution. The A316 proposals would include the Chalker's Corner junction which is one of TfL's 'Air Quality Focus Areas'.
Other	**Twickenham Rail Station** Twickenham Rail Station currently has planning permission to be redeveloped and as part of this new development the developers will provide a lot more cycle parking spaces. It is anticipated that this will generate more journeys by bike. Officers have spoken to Brompton Docks about setting up a Brompton Dock at the station and this received a very positive response. The company has said that they will work with ourselves and SW Trains to install a Brompton Dock at both Richmond Station and Twickenham Station. The basic cost of installing a Brompton Dock is in the region of £25,000. We have a very good working relationship with SW Trains and have successfully delivered cycle parking at stations across the Borough. Currently together we have plans with SW trains to develop parking at Whitton Station, we are in the early stages of working up a scheme with them and SW Trains are also bringing funding to improve general accessibility at the station.

5: Programme performance indicators *please provide a summary drawn from the programme benefit strategy showing key performance indicators (output & outcome) to be used to monitor the success of the programme*	Target	Milestones
Richmond upon Thames will continue monitoring cycle traffic using the 8 permanent cycle counters installed in April 2010 and located at key points across the borough. The Borough will also carry out a review of existing counters with a view to install additional cycle traffic counters at key locations. This will allow us to measure the direct impact of the scheme. Localised targets will be established in consultation with TFL.	To see a long term increase in cycle traffic in areas affected by the Mini-Holland scheme as well at existing traffic counters. Specific targets to be established in consultation with TFL.	Baseline: 2014 Intermediate target: 2020 Long-term target: 2025
Delivery of Local Implementation Plan 2014/15 targets which aims to increase cycle modal share.	Realisation of long-term LIP target to achieve cycle modal share of 7%	Short-term target of 6.25% by 2016/16. Long-term target of 7% by 2025/26.
Increase in proportion of Richmond Upon Thames population who travel to work by bicycle as indicated by census data. Particular focus on the level of households who travel to work by bicycle in the Twickenham village area. Figures from the 2011 census show that 4.45% of households in Richmond upon Thames travel to work by bicycle.	2021 census to show an increase in proportion of households who travel to work by bicycle. Levels in Twickenham village areas to increase and to meet the	4.4% baseline from 2011 survey. 2021 census as medium-term milestone.

	level of highest performing village areas.	
Produce an estimation of the reduction of mortality and cost saving as a result of increased cycling activity using The World Health Organization's Health Economic Assessment Tool for cycling and walking.	Tied with targets of an increase of cycling in the borough.	
N.B. At a more detailed design stage, specific targets for each of the schemes will be created in consultation with TFL.		

6: Programme risks
Please provide below a summary drawn from the programme risk register identifying the key risks / issues and potential and /or planned mitigations

Risk / issue	Description	Probability (high/med/low)	Impact (high/med/low)	Status (RAG)	Mitigation
Finance					
Programme	Gaining approval to install Tiger Crossings will take time	med	med	Amber	Early start Good communications with DfT Within the bid costs a sum has been set aside to deal with this issue
Political (e.g. cross-party support)	Removal of Parking will be a contentious issue, and with the approach to the local elections it may become a topic of political discussion.	med	low	Amber	Design the parking removal as early as possible to avoid local elections. Ensure designs provide suitable alternative parking.
Technical	A316 Vissim Model. To build this model a significant amount of work is required and will be subject to rigorous review and approval by TfL	high	high	Red	Good communications with TfL and build the model with their input and involvement. Start as soon as possible.
Environmental	There will be a significant amount of tree, grass and hedge removal. This will have a negative impact.	med	med	Amber	Undertake an ecology/environmental assessment. Agree a replacement planting scheme that improves on the existing situation

7: Consultation
please provide below a summary drawn from the programme consultation strategy identifying the key stakeholders and consultees, engagement to date and planned and the outcome of engagement (and, where appropriate, planned mitigations)

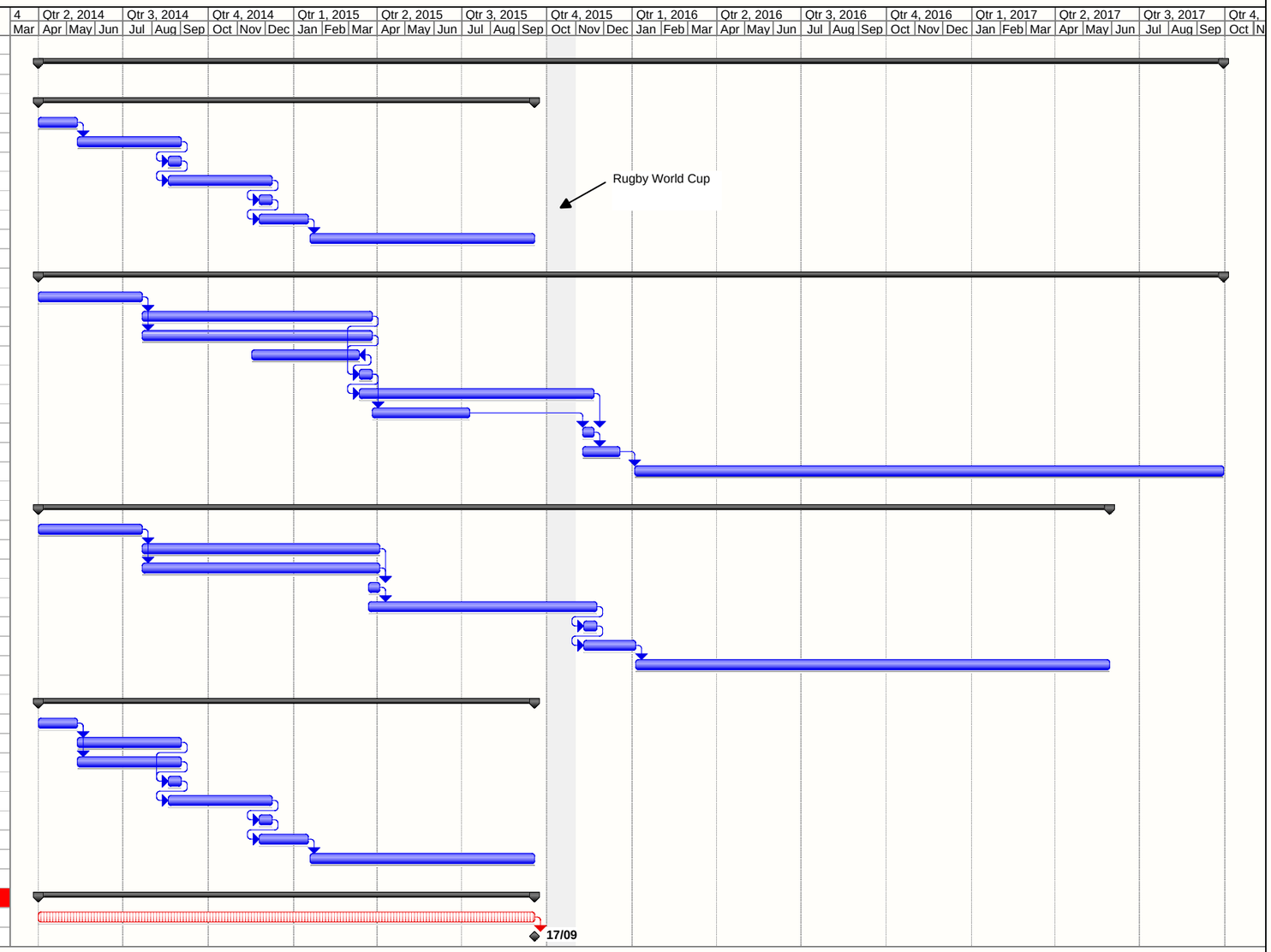
Consultee / stakeholder	Description / identity	Consulted? (date)	To be consulted? (date)	Support / oppose?	Mitigation
Local 'champion'	Richmond upon Thames has had two meetings with its 'Cycle Liaison Group, which includes representatives of Richmond Cycling Campaign to discuss the Mini-Holland proposals.	November/December 2013		Support (letter included)	Richmond upon Thames will continue to work with RCC if the Borough's bid is successful.
Residents	If successful, the Borough will arrange full public consultation on all Mini-Holland proposals as detailed in the 'Communications and Consultation Strategy'	N/A	January-June 2016 2015	TBC	The Borough would undertake full public consultation as detailed in the Communication and Consultation Strategy.
Businesses	If successful, the Borough will arrange specific stakeholder events which will include local businesses, as detailed in the 'Communications and Consultation Strategy'	N/A	January-June 2016 2015	TBC	The Borough would organise stakeholder events as detailed in the Communication and Consultation Strategy.
Ward members (indicate cross-party support)	Richmond upon Thames has met twice with its 'Cycle Liaison Group, which includes the relevant local members for cycling, transport, and environment. to discuss the Mini-Holland proposals.	November/December 2013		Support	Borough officers will continue to work with members throughout the delivery of the Mini-Holland proposals (if successful).

APPENDIX B: WORK PROGRAMME

Twickenham Mini Holland

ATKINS

ID	Task Name
1	
2	**Twickenham Mini - Holland**
3	
4	**Twickenham Town Centre**
5	Data collection
6	Feasability and initial design
7	Design review by LBRuT & TFL
8	Detailed design and consultation
9	Design review by LBRuT & TFL
10	Detailed design incorporating comments
11	Contract award and implementation
12	
13	**A316**
14	Data collection
15	Feasability and initial design
16	Land ownership consents
17	TFL modelling
18	Design review by LBRuT & TFL
19	Detailed design and consultation
20	TFL modelling
21	Design review by LBRuT & TFL
22	Detailed design incorporating comments
23	Contract award and implementation
24	
25	**Rail Side Routes**
26	Data collection
27	Feasability and initial design
28	Land ownership consents
29	Design review by LBRuT, TFL & Network Rail
30	Detailed design and consultation
31	Design review by LBRuT, TFL & Network Rail
32	Detailed design incorporating comments
33	Contract award and implementation
34	
35	**A205**
36	Data collection
37	Feasability and initial design
38	Land ownership consents
39	Design review by LBRuT & TFL
40	Detailed design and consultation
41	Design review by LBRuT & TFL
42	Detailed design incorporating comments
43	Contract award and implementation
44	
45	**RFU Bridge**
46	Design & construction by TFL
47	Start of Rugby World Cup 2015

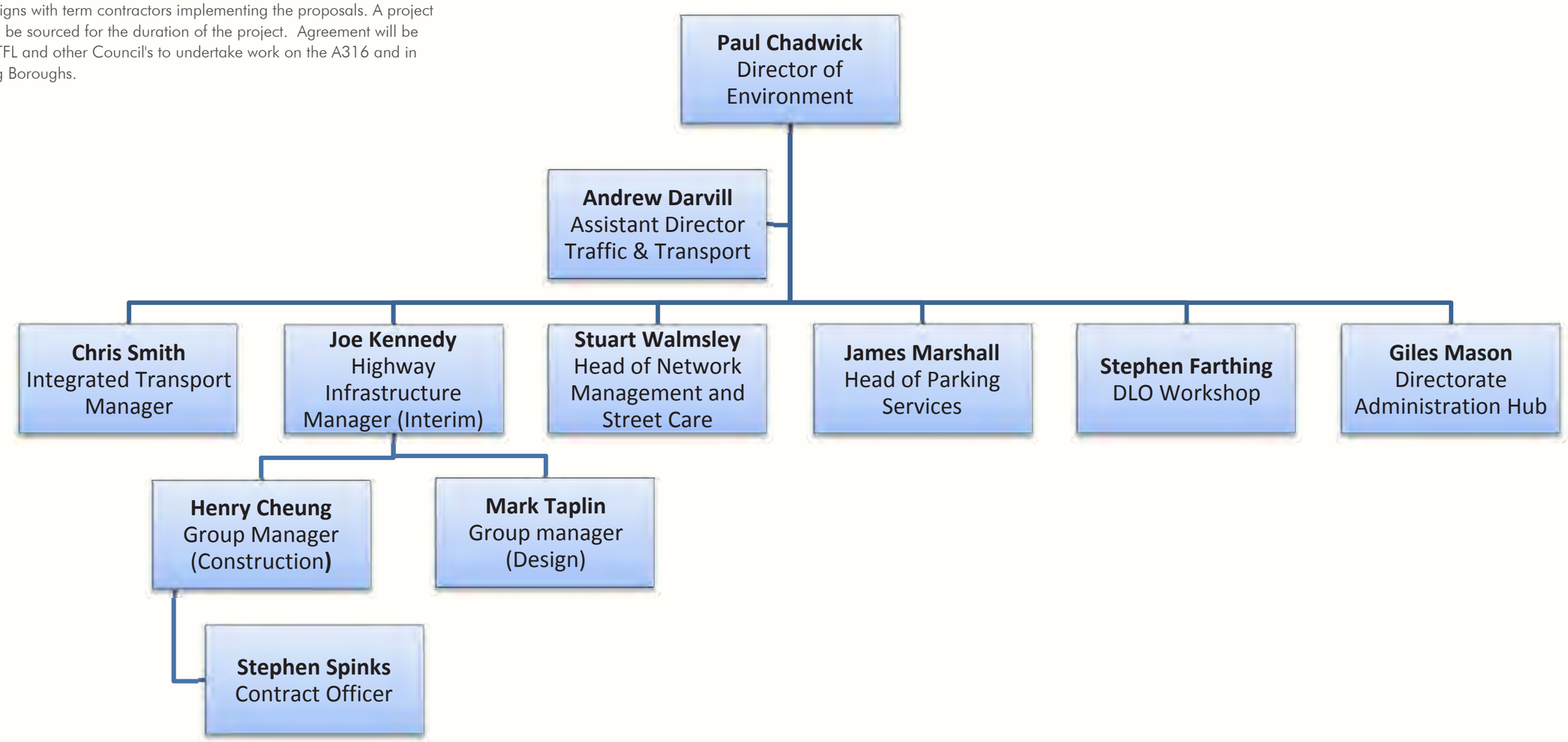


Project: Mini Holland Programme
Date: Wed 11/12/13

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

APPENDIX B: GOVERNANCE / PROGRAMME MANAGEMENT STRUCTURE

The Environment Department is headed by Director, Paul Chadwick with Andrew Darvill as Assistant Director responsible for Highways and Transport with an annual capital budget in excess of £10m. Richmond upon Thames project programming and delivery is renowned with 100% spend on Highways and LIP spend of 99.5% in 2012/13, a track record that could be confirmed by Borough Partnerships. Recent restructuring has integrated design and implementation teams to produce seamless transition of projects from detailed design, consultation through to implementation. Use of framework consultants complements the in-house team on large projects and we envisage a tender process to be undertaken to secure delivery of "Mini-Holland" designs with term contractors implementing the proposals. A project manager will be sourced for the duration of the project. Agreement will be sought with TFL and other Council's to undertake work on the A316 and in neighbouring Boroughs.



APPENDIX B: CHANGE CONTROL LOG

Project:	LBRuT Mini Holland	**Document Reference**	5103865/118/30.04.01
Design Stage:	Feasibility	**Revision No.**	1.0
Author	Nick Diamond	**Revision Date**	05/12/2013

ATKINS

Ref.	**Identification**					**Effect of Change**			
A	B	C	D	E	F	G	H	I	J
Ref.	Section	Location	Atkins Change Owner	Date	Description of Change Item	Cost	Programme	Quality	Confirm change has been agreed with LBRuT (Date and Name)
0001	Twickenham	Twickenham to Ham Bridge	N Diamond	01/11/2013	Proposed bridge removed from bid at the request of LBRuT	N/A	N/A	N/A	N/A
0002	Twickenham	River Crane	N Diamond	01/11/2013	Proposals removed from bid at the request of LBRuT (to be included in LIP funding application and S106 funding))	N/A	N/A	N/A	N/A
0003	Railside Route	Kingston to Twickenham	N Diamond	01/11/2013	Proposals removed from bid at the request of LBRuT	N/A	N/A	N/A	N/A
0004	Railside Route	Whitton to Twickenham	N Diamond	01/11/2013	Proposals removed from the bid as the available space adjacent to the railway track is insufficient for a viable cycle track	N/A	N/A	N/A	N/A
0005	Better Bridges	Hampton Court Bridge	N Diamond	01/11/2013	Proposals removed from bid at the request of LBRuT (to be included in LIP funding application)	N/A	N/A	N/A	N/A
0006	Better Bridges	Kew Bridge	N Diamond	01/11/2013	Proposals removed from bid at the request of LBRuT (to be included in LIP funding application)	N/A	N/A	N/A	N/A
0007	Better Bridges	Old Deer Park	N Diamond	01/11/2013	Proposals removed from bid at the request of LBRuT (to be included in LIP funding application)	N/A	N/A	N/A	N/A
0008	Better Bridges	Richmond Lock	N Diamond	01/11/2013	Proposals removed from bid at the request of LBRuT (to be included in LIP funding application)	N/A	N/A	N/A	N/A
0009	Better Bridges	Teddington Lock	N Diamond	01/11/2013	Proposals removed from bid at the request of LBRuT (to be included in LIP funding application)	N/A	N/A	N/A	N/A
0010	Better Bridges	Nelson Rd and Hanworth Rd	N Diamond	01/11/2013	Proposals removed from bid at the request of LBRuT (to be included in LIP funding application)	N/A	N/A	N/A	N/A
0011	A316	Hounslow to Whitton Rd	B Bolton	09/11/2013	Proposed removal of the central reservation to be added to the bid. The removal of the central reservation will allow additional road space to be given as segregated cycle lanes.	+	+	+	Chris Smith 09/11/13
0012	A316	Hounslow to Richmond	B Bolton	09/11/2013	It is proposed to reduce the speed limit from 40mph to 30mph, making the A316 30mph for it's entire length in LBRuT.	/	/	+	Chris Smith 09/11/13
0013	Railside Route	Whitton to Twickenham	B Bolton	14/11/2013	Section from Whitton Station to be retained and incorporated into the A316 proposals. Whitton Station will be redeveloped in the near future and these proposals will be included in the station master plan.	+	+	+	Chris Smith 09/11/13
0014	Railside Route	Hampton to Twickenham	C Christofi	14/11/2013	Proposals to increase the length of the track from Hampton Station to reach Kempton Park Station to be included in the bid. This will require the agreement of Surrey County Council.	+	+	+	Chris Smith 14/11/13
0015	Railside Route	Hampton to Twickenham	C Christofi	14/11/2013	The route between Strawberry Hill and Twickenham Station cannot be constructed due to insufficient land adjacent to the railway. An alternative Quietway is proposed for this section.	-	-	+	Chris Smith 14/11/13
0016	Railside Route	Hampton to Twickenham	C Christofi	14/11/2013	At the request of South Western Trains, track access points to be included at regular intervals. The provision shall allow maiantenenace and emergency vehicles access to the trackside.	+	-	+	Chris Smith 14/11/13
0017	Twickenham	Twickenham to Richmond Riverside	D Hardwick	14/11/2012	Proposals to improve existing route added to the bid. This will included resurafcing the path to match the other Mini Holland schemes, signage and improved lighting, and parking facilities. Upgrading this existing cycle track will improve connectivity into Twickenham.	+	-	+	Chris Smith 14/11/13
0018	A316	Whole Scheme	B Bolton	21/11/2013	Proposed Dutch style roundabouts removed from the bid. Early indictaions from the trial at TRL would suggest this style of roundabout is not suitable for type of road where there are two lane entry and exit onto a roundabout.	-	-	+	Chris Smith 21/11/13
0019	A316	Whole Scheme	B Bolton	28/11/2013	Proposed Tiger Crossings to be added to the bid to allow for cycle priority along the route. Currently Tiger Crossing are not permissable, this will require obtaining DfT approval.	+	+	+	Chris Smith 28/11/13
0020	Twickenham	Heath Rd/ The Green Junction + Twickenham Town Centre	D Hardwick	02/12/2013	Proposed early release cycle signals and cycle detection added to the bid. These will require approval from both the DfT and TfL.	+	+	+	TBC

A quantified assessment of changes will be undertaken in future design stages (subject to funding). Existing

Heath Road: Cycle lanes are proposed to run along the inside of existing parking bays

APPENDIX C: COMMUNICATIONS STRATEGY

Should the Council be successful in our bid for funding, the below outlines the proposed communications and engagement activity required.

OBJECTIVES

- To maximise awareness of the Mini-Holland proposals amongst it's residents
- To engage with all relevant groups and organisations within the Borough
- To ensure that all Borough residents, and local groups and organisations understand the Mini-Holland proposals

TARGET AUDIENCE FOR ENGAGEMENT

- Borough residents
- Cycling groups and key cycling representatives
- Local businesses
- Local groups and organisations following a full local stakeholder review. To include all local business / trader / community / resident associations and groups.
- Partners and local service providers / agencies

IMPLEMENTATION

CONSULTATION

Exhibition in the Civic Centre
Coordinate an exhibition for 3 days in the Civic Centre in Twickenham – displaying the proposals. Invite residents and key stakeholders to come and have their say. Event will be staffed by Council officers and consultants.

Semi-permanent library display
Create a static display and 'post-box' for residents to feedback their thoughts and ideas throughout the process via the questionnaire – at Twickenham library.

Online survey
Utilising the Twickenham Rediscovered pages to promote context for the Mini Holland programme, present the plans and invite residents to have their say online. Consultation to be hosted on the online consultation finder.

Targeted stakeholder workshops
To ensure that a wide range of ages have the opportunity to participate in the consultation and engagement – particularly from hard to reach groups – hold a series of targeted workshops. The workshops would be tailored to the target audiences e.g. cyclists, local residents.

On-Site consultation
Mini consultations would be held at sites along the proposed routes to help raise awareness of the changes to those who are actually using the routes

PUBLICITY

Website
Update the Twickenham Rediscovered web pages to include information about the Mini Holland proposals – sign posting to the consultation.

Twickenham E-Newsletter
Include regular articles and sign posting in the Council resident newsletters.

Stakeholder Letters
Letters to be sent to residents in Twickenham regarding various elements of the programme.

Posters and Leaflets
Send an updated Twickenham Rediscovered booklet to all residents in Twickenham – with summary of current status of activity and promoting the consultation activity. Posters would also be posted along the proposed Mini-Holland routes to further raise awareness of the proposals to users of the routes.

Media
Put together a media plan promoting key miles stones in the development, including interviews with key stakeholders and case studies with local residents, businesses & community groups.

Social / Digital Media
The use of social media can allow us to engage with residents in real-time to gauge their reactions to ongoing works, interact with them and participate in any community discussions taking place – e.g. through hyper-local websites such as the Twickerati blog.

Other digital media such as pictures, video and audio could be used to create a 'project diary' showcasing the improvements to residents as and when they happen.

INTERNAL COMMUNICATIONS

As numerous members of Council staff are also residents of this borough and because staff are the Councils biggest advocates in the community, it is important to keep them abreast of these developments. Even those who are not residents will benefit from these improvements as they are still employed in the area and a Council that listens to its people is one anyone should be proud to be part of.

The internal communications strategy would be to remain closely aligned with external communications and communicate developments to staff just before external announcements so they feel involved and informed.

Tools would include a wide range from regularly used mediums such:

- Staff views on Twickenham developments featured in staff newsletter published every two months
- Weekly staff e-briefings
- Fortnightly senior managers briefings
- New and improved staff notice boards across Council buildings

A more detailed internal communications will be developed closer to the time with a monthly breakdown of activity corresponding with external communications and technical milestones.

A STATEMENT OF INTENT TO COMPLETE EQUALITY IMPACT ASSESSMENTS.

Throughout the design, construction and operation of Twickenham Mini-Holland, LBRuT will endeavour to ensure that the scheme does not discriminate against any individual or community and where possible promotes equality for all, in line with The Equality Act 2010 and subsequent Public Sector Equality Duty. This will include the completion of an Equality Impact Needs Assessment (EINA) in the early stages of the detailed design process in order to ensure that equalities issues are embedded in scheme's design and to demonstrate intended benefits to local communities. The above steps operate as part of LBRuT's wider Equality Policy with states the need to "to identify, understand and work to eliminate barriers to equality of access, equality of treatment and equality of outcome (to meet the diverse needs of all who live, work and use the services of the borough) and to provide accessible information about services".

APPENDIX D: BENEFIT STRATEGY

The below table sets out the key targets which the Borough is proposing to assess its Mini-Holland schemes against. The Mini-Holland proposals are intended to transform cycling in Richmond upon Thames, we have decided therefore to develop our targets based around cycling mode share across the whole borough. We believe that if the Mini-Holland schemes are genuinely successful that they will inspire hundreds of extra cycle journeys in the Borough and that this will be reflected in the cycle counts across Richmond upon Thames. Adults in the borough are already relatively active and healthy; 67.6% of adults in Richmond upon Thames complete at least 150 minutes of physical activity a week, which is the highest percentage of all the London boroughs, and 11.6% above the national average which suggests we already have a good benchmark. One of the challenges for Mini-Holland therefore is to build upon this benchmark by delivering cycle facilities that will increase activity levels even further.

Monitoring of the scheme will be very important in judging the success of Mini-Holland schemes in the months and years after they have been built. Richmond upon Thames has for some time been undertaking monitoring of cycle use across the Borough with the use of eight permanent cycle counters. These were installed sometime ago and as a first measure their positions will be reviewed and a decision will be made over whether they need to be relocated and if we require any additional counters. Also the existing counters are being checked for accuracy and for condition so that they will be as reliable as reasonably possible. Traditionally rivers and railway lines have been used as screen lines and in the case of Richmond; there are both the River Thames and several rail lines running through the Borough. A number of counters are already on these potential screen lines and so we will look to see if it is on these lines we wish to relocate cycle counters. The below table summarises the total monthly counts for July across the 8 cycle counters between 2010-2013:

Once the Borough has decided upon the location of counters, and the potential installation of new counters; we will devise a set of local targets and indicators to use to measure the impact and effectiveness of the Mini Holland schemes. These will be decided upon in consultation with Transport for London. 2014 will form the baseline for the targets and we will have an intermediate target for 2020 and a long term target for 2025. As well as these targets Richmond upon Thames has recently produced its new Local Implementation Plan 2014/15 to 2016/17 Delivery Plan which included its own targets; it includes a long term cycle mode share target of 7% by 2025/26 and a short term target of 6.25% by 2016/17 (see below). Table 1: LIP Mandatory Target: Cycling Mode Share

Key Performance Indicators	Target	Milestones
LBRuT will continue monitoring cycle traffic using the 8 permanent cycle counters installed in April 2010 and located at key points across the borough. The Borough will also carry out a review of existing counters with a view to install additional cycle traffic counters at key locations. This will allow us to measure the direct impact of the scheme. Localised targets will be established in consultation with TFL.	To see a long term increase in cycle traffic in areas affected by the Mini-Holland scheme as well at existing traffic counters. Specific targets to be established in consultation with TFL.	Baseline: 2014 Intermediate target: 2020 Long-term target: 2025
Delivery of Local Implementation Plan 2014/15 targets which aims to increase cycle modal share.	Realisation of long-term LIP target to achieve cycle modal share of 7%	Short-term target of 6.25% by 2016/16. Long-term target of 7% by 2025/26.
Increase in proportion of Richmond Upon Thames population who travel to work by bicycle as indicated by census data. Particular focus on the level of households who travel to work by bicycle in the Twickenham village area. Figures from the 2011 census show that 4.45% of households in Richmond upon Thames travel to work by bicycle.	2021 census to show an increase in proportion of households who travel to work by bicycle. Levels in Twickenham village areas to increase and to meet the level of highest performing village areas.	4.4% baseline from 2011 survey. 2021 census as medium-term milestone.

Location	Total cycle trips (n)				Percentage Difference between 2010-2013 Count (%)
	July 2010	July 2011	July 2012	July 2013	
Barnes Bridge	38,824	31,771	32,420	44,838	+15.5%
Cross Deep	32,359	29,351	Missing	Missing	-9.3% (between 2010-2011)
Ham Towpath	17,231	23,211	13,403	19,006	+10.3%
Hampton Court Road	4,770	8,472	9,123	Incomplete	+81.3% (between 2010-2013)
Richmond Riverside	33,482	32,807	28,538	34,643	+3.5%
Richmond Road	Missing	23,504	24,057	25,953	+10.4% (between 2011-2013)
Sheen Road	30,515	29,671	32,001	Missing	+4.9% (between 2010-2012)
Teddington Lock	34,701	30,172	33,136	Missing	-4.6% (between 2010-2012)

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Cycling along Twickenham Riverside