

# BISHOPSFORD ROAD BRIDGE

DESIGN REVIEW PANEL | JULY 2020

[merton.gov.uk/bishopsfordbridge](https://merton.gov.uk/bishopsfordbridge)



# INTRODUCTION

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This document is to ask Merton's Design Review Panel for their views on the design of the new bridge at Bishopsford Road, Mitcham.

The A217 crosses the river Wandle at Bishopsford Road. Historically this was known as Mitcham Bridge, now more commonly known as Bishopsford Road Bridge. The bridge partly collapsed in a flood event in June 2019.

Over the following months the bridge was stabilised to stop any further deterioration of the structure. The council carried out surveys and other investigations to explore whether the bridge would be repaired or replaced.

Merton Council has decided to demolish the broken bridge and build a new one. Demolition has been completed on the broken bridge.

As the bridge lies within the Wandle Valley Conservation Area we are seeking planning permission to build a new bridge.

In May 2020 we sought early views via an online survey so that local residents, businesses and other organisations have an early input to the design of the new bridge. The feedback we received has been taken into account in the design presented in this document.

We have also sought ongoing feedback from the Environment Agency. The civil engineering design, particularly the dimensions of the span of the single arch, has been evolved in line with requirements to optimise the management of flood risk and the needs of the river. The street level elements of the design have been developed in line with consultation feedback to support walking and cycling as well as the necessary vehicle movement for the A217, provide a safer environment and work with the heritage and ecological setting.

The feedback we receive from the Design Review Panel will be taken into account in the design we submit for planning permission.



1. Map of the Wandle Valley Conservation Area.

## Conservation Area Guidance:

[www.merton.gov.uk/assets/Documents/0177\\_wandle\\_valley\\_sub\\_area\\_6\\_lower\\_mitcham.pdf](http://www.merton.gov.uk/assets/Documents/0177_wandle_valley_sub_area_6_lower_mitcham.pdf)

# BACKGROUND

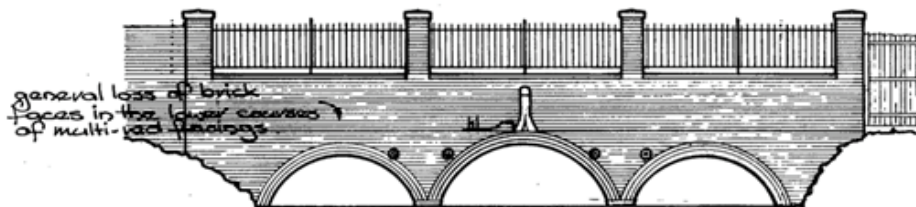


2.. Bishopsford Bridge and Ford.

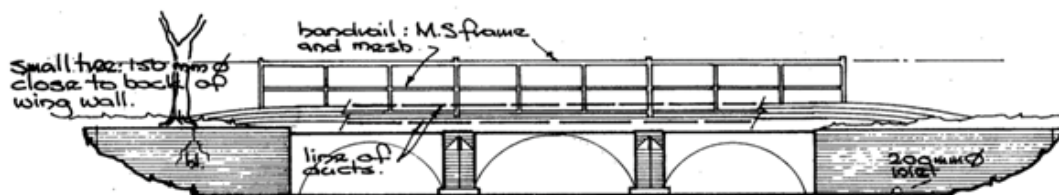
Historical records relating to Bishopsford Bridge show that this location has been a fording point since the middle ages. The three arch Bishopsford Bridge was built in the 18th century and survey records exist from 1882.

In 2010 a wooden footbridge was built downstream (West elevation) about 2.7 metres from Bishopsford Bridge in Ravensbury Park adjacent to Watermeads estate.

The upstream footbridge was built over the ford circa 1947. This was an unsympathetic addition that covered up the original arches, wholly changing the view of the bridge from upstream (East elevation).



3. West elevation.



4. East elevation.

## PREVIOUS BRIDGE - VIEW FROM THE ROAD

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Prior to demolition the bridge was not symmetrical when viewed from the road.

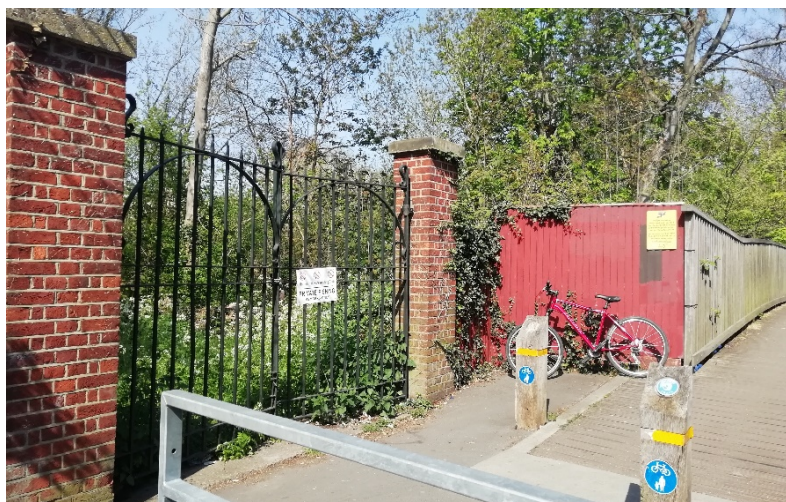
5. The upstream side parapet is a solid wall separating the road bridge from the brick footbridge added to the bridge in the 1940s (bordering the National Trust land).



6. The parapets to the downstream side (Ravensbury Park) consisted in part of three sets of metal railings and continued to the left side into a long boundary wall with Watermeads.



7. These metal railings compliment the large metal gates (locked) visible beside the entrance to the wooden footbridge from the southern side of Bishopsford Road.



## PREVIOUS BRIDGE - VIEW FROM THE BANKS

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The rectangular red brick piers and footbridge were added to the upstream side of the bridge in the late 1940s, over the former ford. The former arches were just visible beneath the footbridge.

Gas, electricity, water, telephone and broadband services ran across the bridge, either through the pipes visible here or within the bridge concrete itself.



8. Upstream side: Bishopsford Road bridge, 2016, view looking north

In 2010 a wooden footbridge was built across the Wandle from Bishopsford Road to Watermeads Park, close to the downstream side of the road bridge. The wooden footbridge is separate from the highway bridge and will not be affected by this project.

The metal railings and the pilasters of the highways bridge were visible above the footbridge railings.



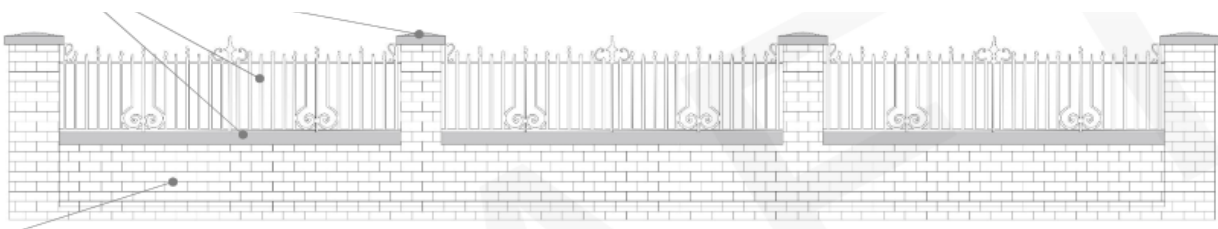
9. Downstream side, c2010, view looking north

# FEEDBACK FROM PUBLIC CONSULTATION

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An online survey was published online for two weeks in May / June 2020 seeking people's feedback on the look of the new bridge. The survey offered two parapet options and asked for general feedback on what people felt would be important for the new bridge.

A total of 260 responses were received; there was a slight preference for option 1 (ornate railings and brick) over option 2 parapet (metal railings)(31 out of 260 respondents).



10. Option 1 parapets.



11. Option 2 parapets.

## Why do you like Option 1 parapets

- Looks traditional, historic, like existing bridge
- Sense of safety
- Litter less likely to fall into river

## Why do you like Option 2 parapets

- Opens up the view of the river and surrounding natural environment
- Sense of safety
- Gives a more open feel

## Feedback from all options

- Safety was raised as an important issue, regardless of which option people voted for - safety for pedestrians, cyclists and drivers.
- Cycling and walking should be encouraged by the provision of a cycle lane and wider pavements.
- Hurry up and rebuild the bridge!

# DESIGN EVOLUTION

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## Bridge span and soffit height

- The new bridge has been designed to ensure there is no flood risk elsewhere, in close consultation with the Environment Agency on flood risk and ecology matters.
- Flood risk modelling and its quality assurance by the Environment Agency fix the parameters of the bridge span at the river level as 10 metres and the soffit height as 19.2 metres AOD to optimise flood risk management. These parameters can't be changed without having an adverse impact on flood risk elsewhere.
- The bridge and parapets are being designed to current highways and structural standards to accommodate heavier loads.

The metal railings chosen reflect the National Trust boundary railings on the eastern side of the bridge and minimise the amount of space required compared to a brick base.

There are also significant benefits in enhancing the sense of openness and views between the natural landscape in Ravensbury and Watermeads and people walking and cycling along the road. The metal railings will minimise opportunities for passing school children and other pedestrians to climb on the parapets and have advantages in speeding up construction.

## Parapets and boundary treatment

Feedback from public consultation raised issues of safety: that the new parapet should be robust to resist vehicles from breaching it in the event of an accident, should minimise opportunities for pedestrians to climb it and risk falling into river and should minimise opportunities for litter to enter river Wandle.

Consultation feedback also highlighted the importance of views of the river and the sense of openness into the surrounding natural landscape.



12. 2016 view of former bridge from upstream side / south eastern riverbank (in National Trust Land).



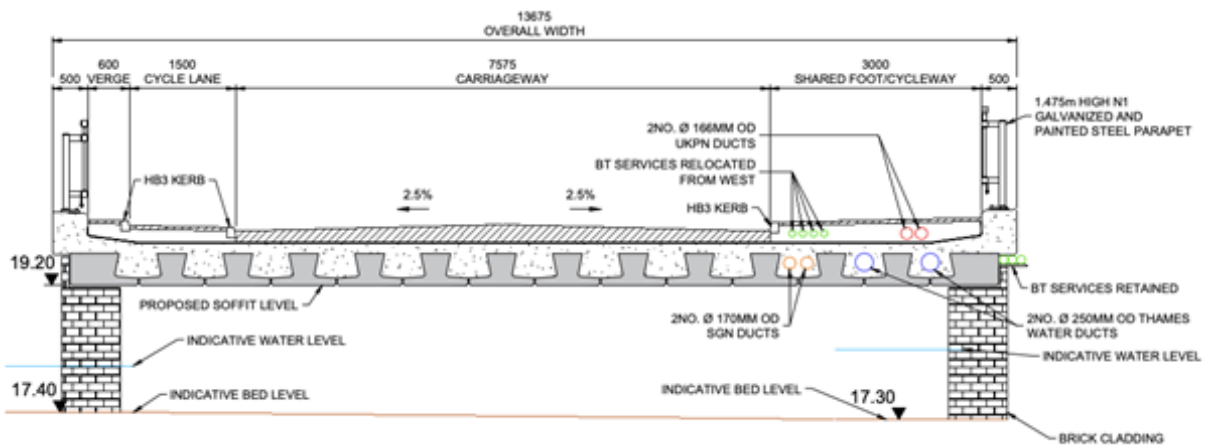
13. image of new bridge view from upstream / south eastern riverbank (in National Trust Land).

# OPTIMISE PROVISION FOR CYCLING AND WALKING

The bridge design evolved to provide more support for walking and cycling:

- a dedicated cycle lane northbound (western side),
- highways provision to safely accommodate the A217 traffic and
- a 3m wide shared surface on the southbound (eastern) side.

This requires widening the bridge by 1 metre to accommodate all of the above within current highways standards.



14. Cross section of the bridge looking northbound (from west to east).

- An optimal cycle lane is 2metres wide; the minimum standard is 1.5 metres.
- Land ownership, existing highway alignment and the presence of the wooden footbridge to the west prevents the width of the bridge being expanded more than 1 metre westwards.
- The dedicated northbound cycle lane will be 2metres wide (the optimum cycle land standard) on either side of the bridge, reducing to a minimum of 1.5 metres (minimum cycle land standards) for the 10m length of the bridge.
- Modern cycle lane safety standards require a 0.6m verge between the bridge parapet or railings and the cycle lane itself.
- Accommodating these standards requires the removal of the existing boundary wall to the north west of the bridge and a loss of open space c.1 metre into Ravensbury Park. It is proposed to replace this with metal railings similar to those opposite bordering the National Trust land to allow safer views between the natural landscape, the Wandle Trail and the road. We considered rebuilding another wall but this would prevent views into the natural landscape, does not provide a sense of safety and would harm more trees due to the impact of a wall's foundations on their root protection areas.
- In order to safely build the new bridge and northbound cycle lane vegetation and trees will have to be removed within Ravensbury Park as the scheme will affect the root protection. This area will be replanted once the bridge is rebuilt.



## DESIGN AND HISTORIC SETTING

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The bridge lies within Wandle Valley historic conservation area and an archaeological priority area. Views of the bridge have also been considered from the Wandle Trail and nearby Metropolitan Open Land, all set within the Wandle Valley Regional Park.

The new bridge will be the latest in a series of fords and bridges in this same location that have helped people cross the river Wandle since the Middle Ages. This is reflected in the Heritage Statement that will accompany the planning application.

The metal railing parapets have been chosen to reflect the existing railings in the surrounding National Trust land, to open up the view of the river and the surrounding greenspace, to allow for greater visibility and a greater sense of safety between the street, to maximise the amount of space available across the bridge for walking, cycling and other road users.

We have salvaged the Mitcham Parish boundary marker, dated 1882 inset to the downstream side of the bridge (visible from the wooden footbridge). It is intended to replace the Mitcham Parish boundary marker in the same place on the new bridge (i.e. on the western / downstream side, visible from the footbridge) as this marks the original boundary of the parish.

The wall between Ravensbury Park and the highway leading from the bridge north-west towards Mitcham town centre is also in an historic location, although the wall itself is not listed. The bridge and highway will be widened by 1 metre to safely accommodate the additional space for cycling and walking. The wall will be removed and replaced by metal railings that reflect the character of the wider setting to those that bound the National Trust Land to the south. This will open up the views between Ravensbury Park and the public highway, improving the sense of safety for pedestrians and cyclists in the area including those using the Wandle Trail.



15. Mitcham Parish boundary marker 1882.



16. Mitcham Parish boundary marker on the west facing bridge parapet.

## ACCESS, TRAVEL AND CONNECTIONS WITH SURROUNDING AREA

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The site is a key setting for crossing the river Wandle for the Wandle Trail and the A217 road. The new bridge and parapets are being designed and will be built to modern highways safety standards, improving safety for all its users and be accessible for people of all capabilities.

The new bridge will accommodate a dedicated cycle lane northbound and a shared pedestrian and cycle shared space southbound. Pedestrians moving northbound will use the wooden footbridge, which will have a greater sense of safety with the additional views afforded through the metal railings which will replace the large brick wall. Legibility of the surrounding area will be improved, including with the Wandle Trail.

The dedicated pelican crossing for pedestrians and cyclists will remain south of the bridge to safely accommodate users of the Wandle Trail.

The structural aspects of the bridge have been designed to accommodate a modern transport system such as HGVs.



17. view southbound (Google Maps, April 2018) Watermeads park to left of image.



18. new bridge view southbound. Watermeads park to left of image.

# ECOLOGY

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Bishopsford Bridge lies within a locally designated area that is important for nature conservation and is near a local nature reserve at Watermeads. The new bridge will include opportunities to enhance biodiversity, particularly in the river and its banks. The single span nature of the bridge will increase natural bed footprint of the channel which offers betterment for aquatic species.

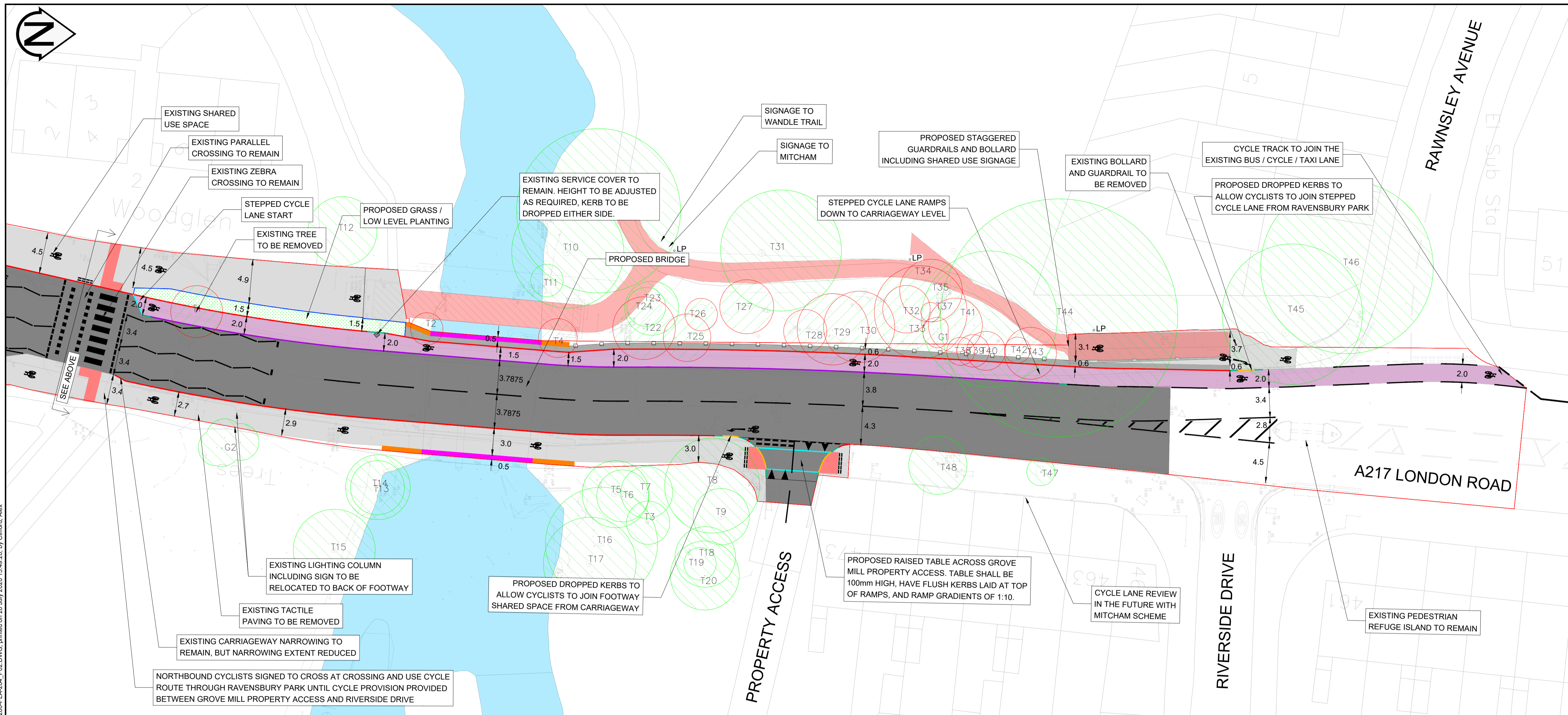


19. image of the former bridge looking north towards Mitcham Town centre April 2018.

An ecological survey of the surrounds and river and an arboriculture survey have informed the proposed design. There will be some loss of trees just within the Ravensbury park due to either their condition or the effect of the expansion of the highway 1 metre to the west into Ravensbury Park to accommodate the new cycle space. New planting is proposed to mitigate their loss.



20. view of new bridge looking north (towards Mitcham town centre).



PLAN  
SCALE 1:250



(SCALE= 1:250)



EXISTING SHARED USE PATH SHOWING WALL TO BE REMOVED AND EXISTING LAMP POST



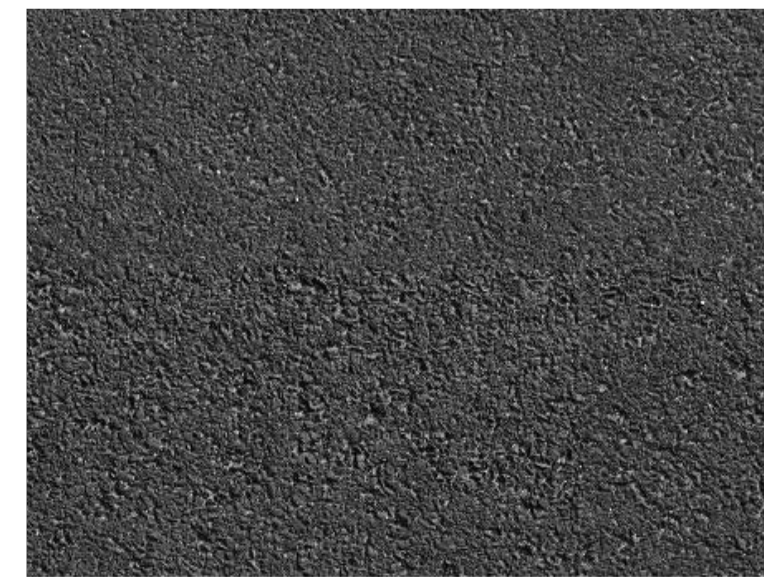
PROPOSED ADDITIONAL LOW LEVEL LIGHTING (IF REQUIRED)



PROPOSED STONE SETTS SURFACE FOR HARD VERGE



PROPOSED KERB COLOUR SWATCH



PROPOSED ASPHALT CARRIAGEWAY SURFACE COLOUR SWATCH

**DO NOT SCALE**

**NOTES:**

- ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE STATED.
- THIS DRAWING SHOULD BE PRINTED IN COLOUR.
- NO TREE TRUNKS ARE LOCATED IN THE WAY OF ANY PROPOSED WORKS.
- RISK OF DAMAGING TREE ROOTS, ARBORICULTURAL METHOD STATEMENT FOR WORKS TO BE DEVELOPED.

**KEY:**

- LP EXISTING LAMP POST
- RIVER WANDLE
- EXISTING UNSEGREGATED SHARED USE FOOTWAY / CYCLEWAY
- PROPOSED CARRIAGEWAY
- PROPOSED UNSEGREGATED SHARED USE FOOTWAY / CYCLEWAY
- PROPOSED HARD VERGE
- PROPOSED ON-CARRIAGEWAY CYCLE LANE
- PROPOSED BRIDGE PARAPET WALL
- PROPOSED BRIDGE WING WALL
- PROPOSED FULL HEIGHT KERB
- PROPOSED KERB WITH 50mm UPSTAND
- PROPOSED TRANSITION KERB
- PROPOSED DROPPED KERB
- PROPOSED KERB EDGING
- PROPOSED FLUSH KERB
- PROPOSED ROAD MARKINGS (INDICATIVE)
- PROPOSED 1.5m HIGH STEEL PARK RAILING
- ROOT PROTECTION AREA OF EXISTING TREE WHERE PROPOSED WORKS INFRINGE ON ROOT PROTECTION AREA
- TREE ROOT PROTECTION AREA OF TREE TO BE REMOVED DUE TO CONDITION OR TO FACILITATE PROPOSED WORKS


REV	DATE	BY	DESCRIPTION	CHK	APP
P02	20.07.2020	AC	CYCLE LANE AMENDED, TREE SURVEY EXTENDED	BP	ME
P01	30.06.2020	AC	FIRST ISSUE	BP	ME

DRAWING STATUS: **S3 - FOR REVIEW**

**wsp**

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SITE/PROJECT:  
**BISHOPSFORD ROAD BRIDGE**

TITLE:  
**PROPOSED HIGHWAYS GENERAL ARRANGEMENT**

SCALE @ AT:	CHECKED:	APPROVED:
AS SHOWN	BP	ME
PROJECT NO: 70066777	DESIGNED: KP	DRAWN: AC
DATE: JULY 2020		REV: P02
DRAWING NO: 70066777-200-PLA-204		
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