| | |
|---|---|
| **From:** | [redacted] |
| **To:** | [redacted]@london.gov.uk; [redacted]@london.gov.uk; [redacted]; [redacted]@londonlegacy.co.uk; [redacted]; [redacted]@Hackney.gov.uk |
| **Cc:** | [redacted]@tfl.gov.uk; [redacted]@tfl.gov.uk; [redacted]@sustrans.org.uk; [redacted]@sustrans.org.uk; [redacted]@sustrans.org.uk |
| **Subject:** | H10 minutes & actions |
| **Date:** | 01 August 2014 09:21:30 |
| **Attachments:** | 1407_H10 minutes.doc |

Dear All,

Please find attached brief minutes and actions for the H10 bridge meeting on Monday. Let me know of any errors/emissions.

The key action is for LLDC to provide an indicative design, programme and cost for a 1:9 ramp. We said this was due in 2 months. Given 28/9 is a Sunday, can I suggest that we meet to discuss the design, programme and cost on Friday 26/9?

[redacted] – if you need any support from Sustrans in this work please let [redacted] or myself know.

Thanks

[redacted]

[redacted]
Sustrans
70 Cowcross Street
London EC1M 6EJ

Direct Line: [redacted]
Office: 020 7017 2350
Mobile: [redacted]
Twitter: @sustranslondon

Sustrans today. www.sustrans.org.uk

sustrans
JOIN THE MOVEMENT

London
70 Cowcross Street
Farringdon
London EC1M 6EJ
T: 020 7336 8203
F: 020 7336 8204
Information: 0845 113 0065
www.sustrans.org.uk

# Aldgate to Hainault Quietway - H10

## Minutes

**Location:** LLDC, 1 Stratford Place.

**Date:** 28/7/14

**Attendance:** [redacted] both GLA, [redacted], [redacted], all LLDC, [redacted] LB Hackney, [redacted] Sustrans

**Actions Summary:**

| *Action* | *Lead* | *Due* |
|---|---|---|
| LLDC to provide indicative ramp design, cost and programme for the short term option of a 1:9 ramp (see item 5 below). | [redacted] | 28/9/14 |
| LLDC to arrange meeting to review above docs. For 26/9/14 | [redacted] | 8/08/14 |

**Minutes**

| Item | Discussion |
|---|---|
| 1 | The meeting was called to discuss options to improve cycle access to the H10 bridge from the west (Hackney Wick) side. The Aldgate-Hainault Quietway, one of the first Quietway routes, will use this crossing. The route will be opened by March 2016 – it must be possible to cycle up both approaches to H10 by that date. |
| 2 | **Long term solution**: 1:12.5 ramp, to be delivered as part of the Hackney Wick master plan work, likely delivery date 2020. |
| 3 | **Short term solution**: 1:9 to 1:9.5 ramp. The ramp will start at the end of the bridge deck (ie to the east of the point where the steps start) and will, at carriageway level, extend for approx. 33m (24.4m on LLDC land and 8.7m on Hackney land – measurements from DS). This will extend to the edge of LB Hackney's highway boundary and will reduce the width of the mouth of Wallis Road at Main Yard Studios |

| | |
|---|---|
| | by 2 – 2.5 m. Must be delivered by March 2016. |
| **4** | LLDC will maintain the ramp, at least in the short term. |
| **5** | Gainsborough Bridge, to the north of H10, is currently close but will be opened for ped access – LLDC to confirm opening date. |
| **6** | Planning permission for the ramp will be required. |
| **7** | Sustrans is able to provide details for Royal Haskoning if LLDC require engineering support. |
| **8** | The GLA ([redacted] Specifically) is the client for feasibility work on the bridge. Sustrans to be consulted as study develops. |

**From:** [redacted]
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 presentation
**Date:** 19 November 2014 08:57:08
**Attachments:** image001.png
Wallis Road Bridge (H10) Ramp Presentation (Draft) 141117.pdf

---

Hi [redacted]

Please see attached presentation from Monday's meeting.

Kind regards,

[redacted]

**Queen Elizabeth Olympic Park**
London Legacy Development Corporation
Level 10
1 Stratford Place, Montfichet Road
London
E20 1EJ

DDI: [redacted]
Mobile: [redacted]
Email: [redacted]@londonlegacy.co.uk

**Queen Elizabeth Olympic Park is now open. For more information please visit**
www.QueenElizabethOlympicPark.co.uk

---

**From:** [redacted]
**Sent:** 18 November 2014 22:30
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 presentation

Hi [redacted]

Yes we can. My colleague, [redacted] will send over a pdf of the slides that we presented yesterday and we are also getting updated costs in place to circulate.

Regards
[redacted]

---

**From:** [redacted] [mailto:[redacted]@london.gov.uk]
**Sent:** 18 November 2014 17:37
**To:** [redacted]
**Subject:** H10 presentation

Hi [redacted]

Thanks again for yesterday, [redacted] was really pleased with the work.

Would you be able to send me a copy of presentation?

Many thanks,

[redacted]

[redacted]
[redacted]
Greater London Authority
City Hall, The Queen's Walk, London SE1 2AA
Tel: [redacted] Mob: [redacted]

# WALLIS ROAD BRIDGE (H10)
# TEMPORARY CYCLE RAMP PROPOSAL

**Monday 17th November 2014**

LONDON LEGACY DEVELOPMENT CORPORATION

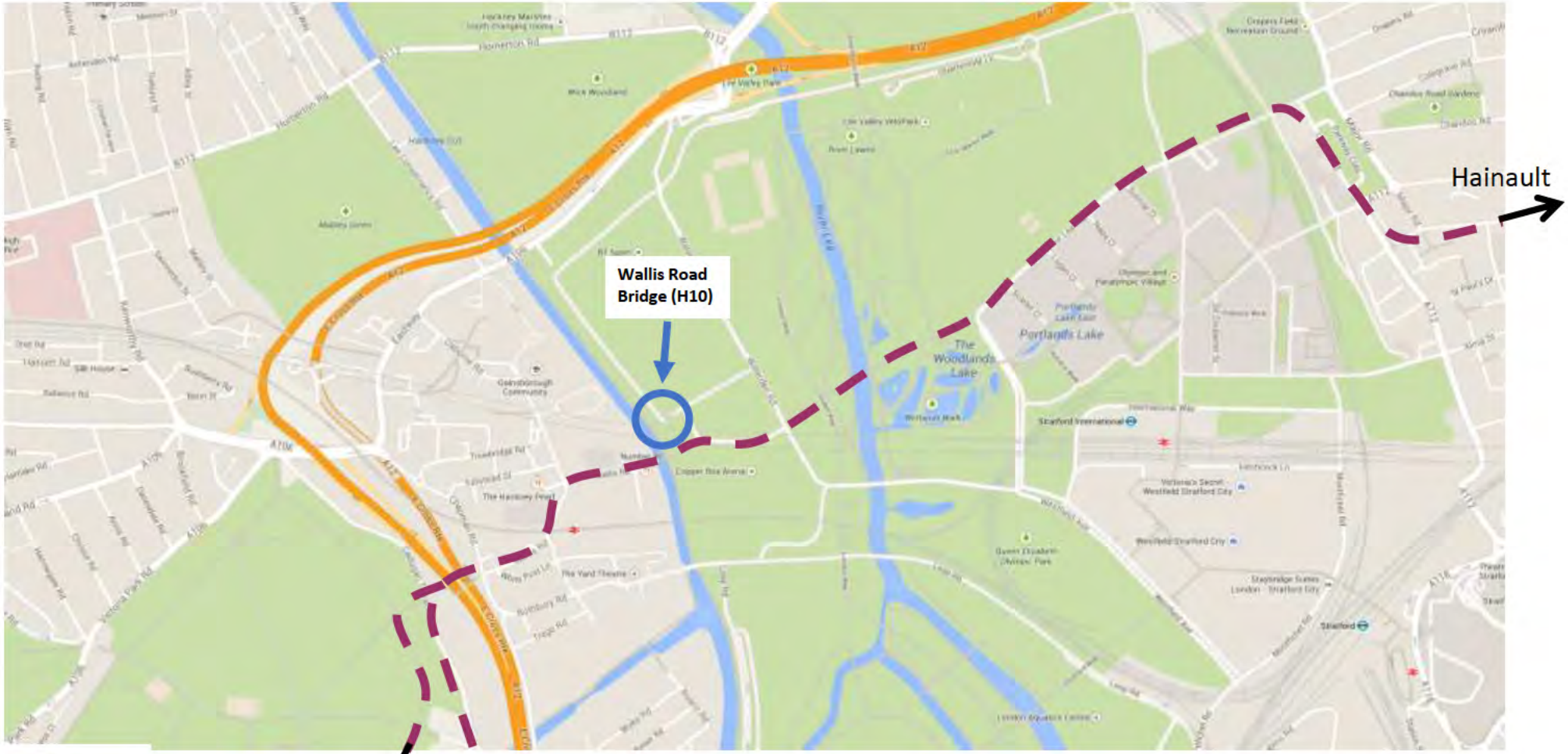
# Contents



LONDON LEGACY DEVELOPMENT CORPORATION

# Proposed Quietways Route

• As part of the Quietways scheme, we have been asked to consider ways to provide cyclists with a continuous cycling route through Queen Elizabeth Olympic Park (QEOP) over the Wallis Road Bridge (H10). This is being led by [redacted].

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# Wallis Road Bridge (H10)

• As part of the transformation works post-Games, Wallis Road Bridge (H10) was built to connect QEOP to Hackney Wick. Access on the Hackney Wick side is by a stair and lift.

• The current bridge is DDA compliant and accessible for cyclists.

• Current cyclist access to QEOP is either by use of the lift or a cycle channel alongside the stairs.

Stairway with wheeling channel

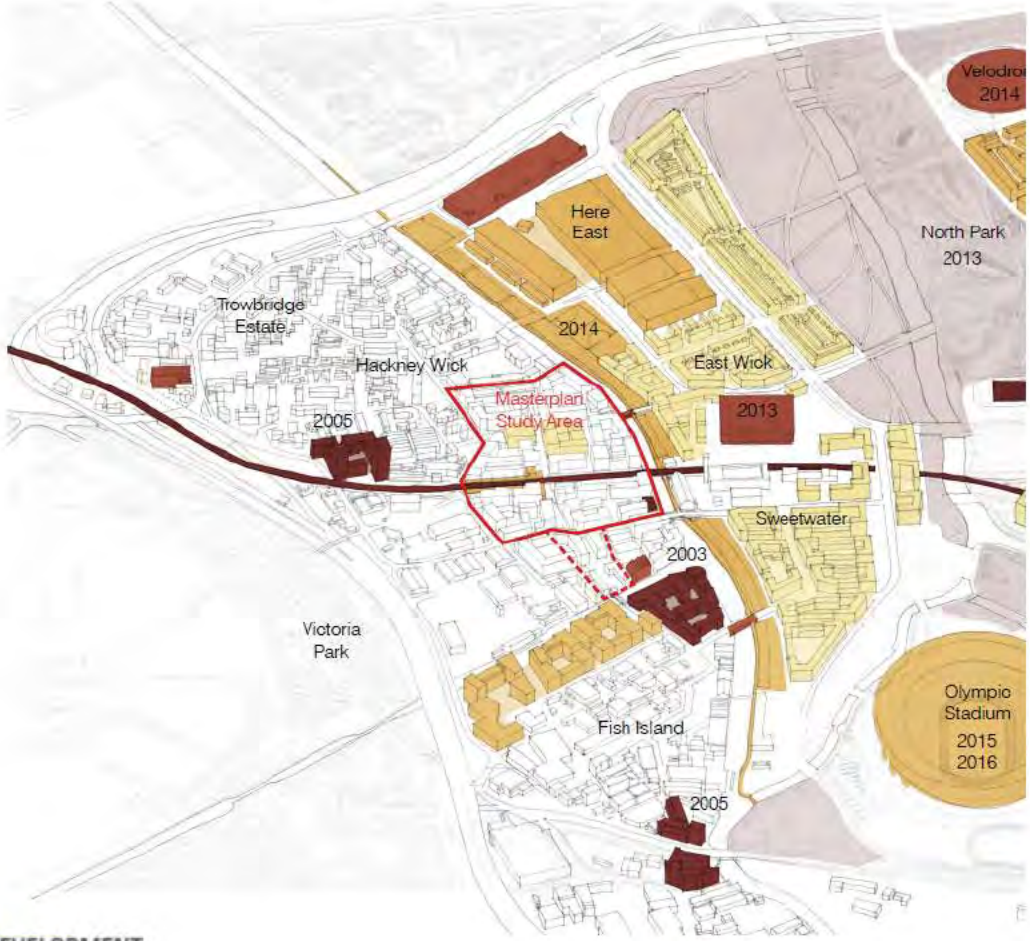
Eastern approach to Wallis Road Bridge (H10) lift

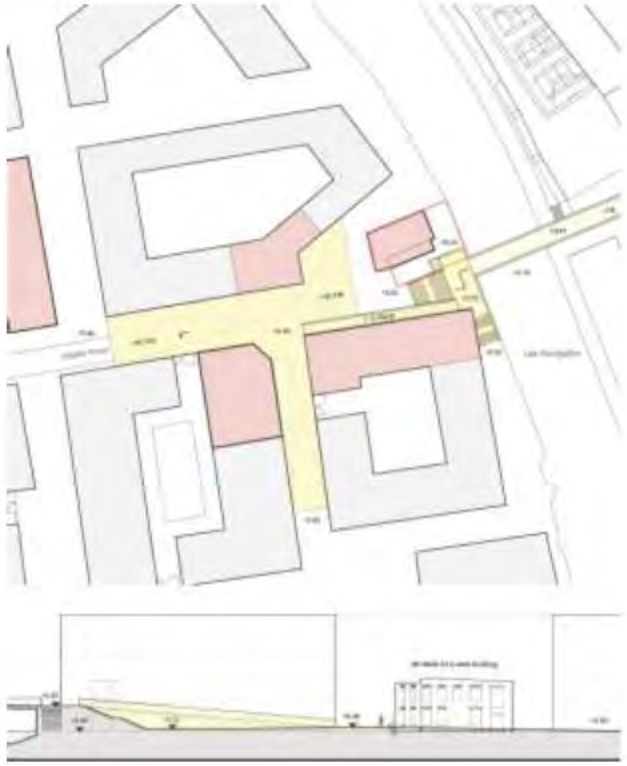
Eastern approach of Wallis Road Bridge (H10)

Western approach of Wallis Road Bridge (H10)

# Hackney Wick Masterplan

• LLDC are leading the development of a masterplan for Hackney Wick which includes improved access to Wallis Road Bridge (H10) and a better link across the canal by changes to the public realm. This will include improved cycle access via a ramp.



# Temporary Ramp Brief

- We have been asked to consider a temporary ramp solution that can be developed to provide an interim improved cycle offer.

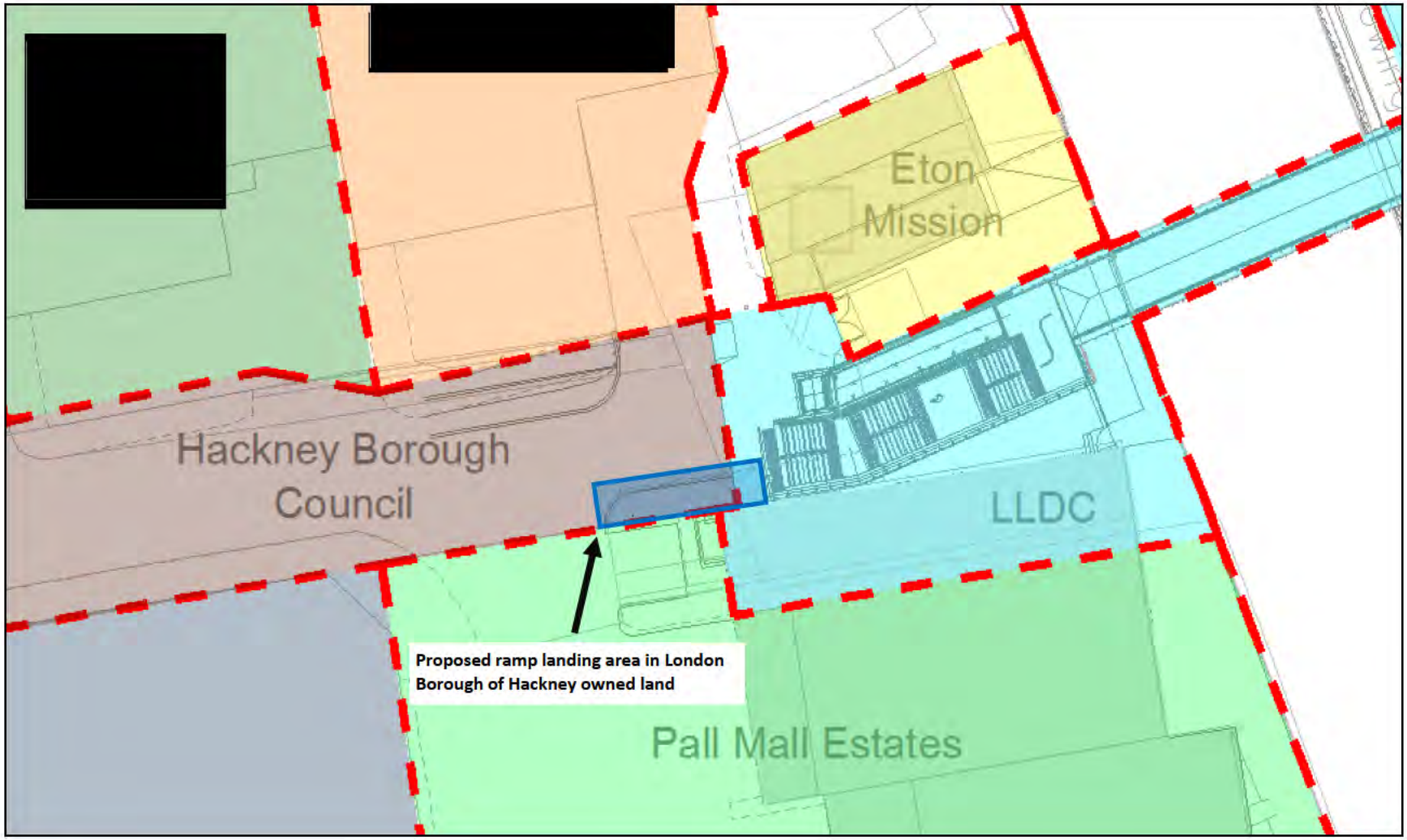
- Any proposal would have to avoid interfering with access to neighbouring private land and provide the best possible solution within the existing boundaries and site constraints.

- An option that could be considered is a temporary ramp solution for the western approach of Wallis Road Bridge (H10). The aim of the ramp would be to imrove cycle access across H10.

- Due to site constraints, the best possible option does not meet cycling standards neither in terms of gradient nor width for two way traffic.

- Funding would need to be found as none is currently available.

# Land Ownership

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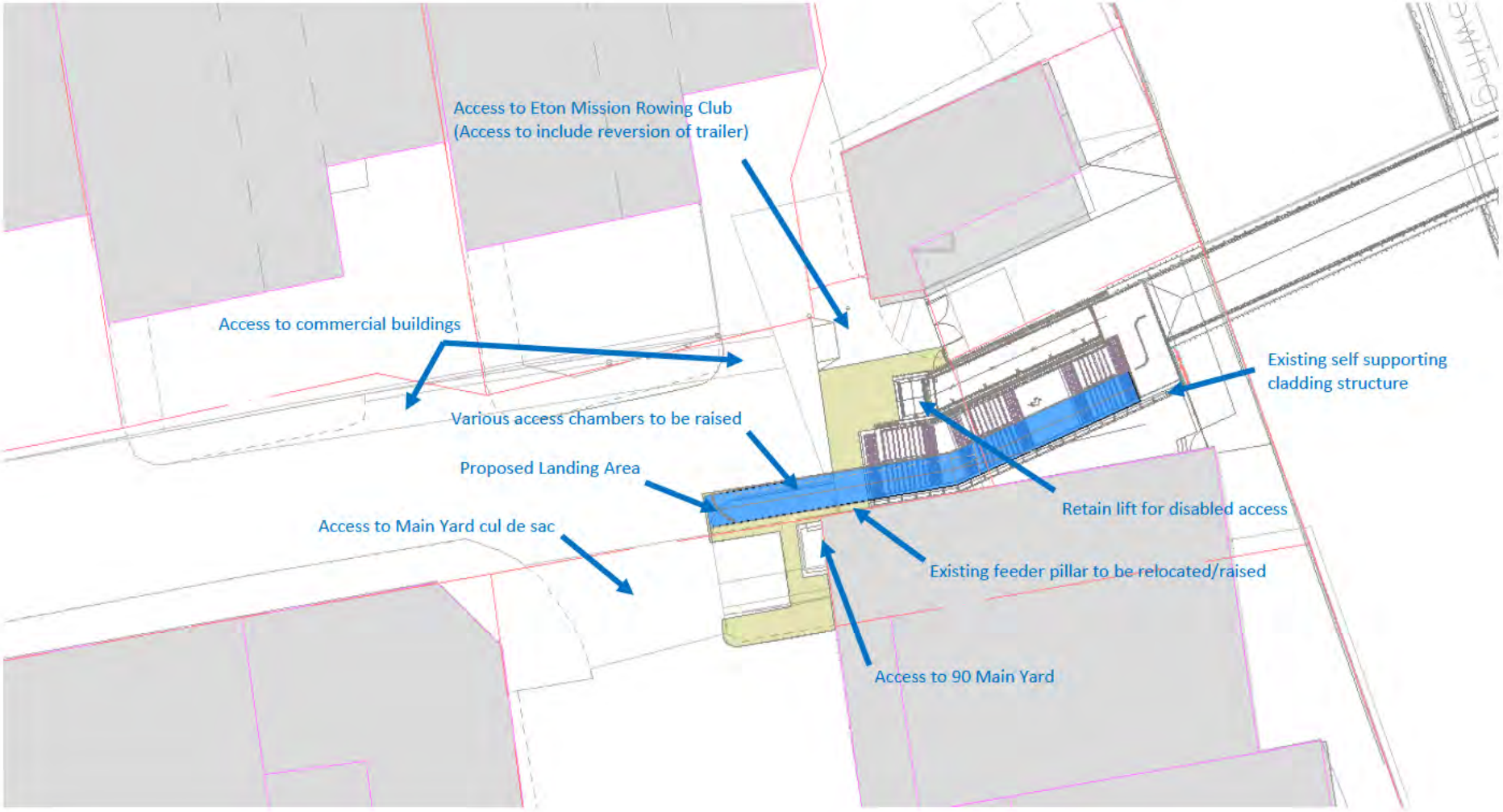
# Neighbouring Access


The proposal would require relocating the access to 90 Main Yard.

# Site Constraints



# Cycling Standards

| | **Standards** (LTN2/08 & London Cycling Design Standards) |
|---|---|
| **Gradient** | 7% (1:14.3) for over 30m length ramp |
| **Minimum Width** | 2.45m – One directional traffic<br>3m – Two way traffic |

• LTN/2/08 & London Cycling Design Standards is guidance and not a legal requirement.

•If a ramp does not meet this standard, a departure will need to be submitted and approved that will cover both the ramp gradient and width.

•In addition to the Departure, two Approval in Principles (AIPs) will be required for:

- The assessment of the changes to the existing structure
- The assessment of the proposed design

•Both the Departure and the AIP's will need approval from the Olympic Infrastructure Technical Approval Authority (OITAA) who have a contracted response period of 10 working days.

• Given the site constraints the best possible achievable gradient is 1 in 7.47. This differs from the 1 in 14.3 standard.

• This is based on the existing stairway being split  to provide both ramped and stair access.

• However various options have been tested that look at ramps at 1 in 7.5.

# Project Group

| Stakeholder | Title | First Project Meeting 21st August 2014 | Second Project Meeting 2nd September 2014 |
|---|---|---|---|
| Greater London Authority | | Yes | Yes |
| [redacted] | [redacted] | | |
| London Borough of Hackney | | Yes | Yes |
| [redacted] | [redacted] | | |
| LLDC | | Yes | Yes |
| [redacted] | [redacted] | | |
| TfL | | No | Yes |
| [redacted] | [redacted] | | |
| Sustrans | | Yes | Yes |
| [redacted] | [redacted] | | |
| Atkins | | Yes | Yes |
| [redacted] | [redacted] | | |

# Planning

- Early consultation with LLDC PPDT has been carried out.

- The temporary ramp will need planning permission

- Concerns over the achievable gradient.

- H10 is within the Hackney Wick conservation area.

- The proposal needs to address the issue of the steep gradient to ensure that there are no safety issues with potential speeds going down, or concerns going up that will put cyclists off from using it.

- The ramp that connects Regents Canal towpath and the adjacent Prince Albert Road has a similar gradient to the proposal. However, the towpath ramp differs significantly from the proposed Bridge H10 ramp on at least two counts:

  - The canal towpath ramp is shared use and has barriers whereas the Bridge H10 ramp would be for cyclists only, allowing cyclists to go fast down the ramp (unless slowed down by barriers)

  - The Bridge H10 ramp would land on a footway with arguably more pedestrians than the canal towpath.

# Wheelchair Access

- Primary concern is that members of the public mistake this ramp as being intended for pedestrian use. This is potentially dangerous given the steep gradient required.

- In particular, wheelchair users coming from the Park may assume that this ramp is accessible, and not realise otherwise until they are on it.

- Concerns about pedestrians and cyclists clashing at the top of the stairs.

- Suggested mitigation measures include:

    - Make it abundantly clear that this ramp is for cyclists only

    - This should include ground markings, appropriate tactile paving and signage

    - Signage to indicate what the gradient actually is may also be beneficial

    - Installation of new handrail to ramp side of stairs

    - Sight lines must be as clear as possible and the area should have clear signage.

# Temporary Ramp Proposal

- Three options were considered. None of the options met the cycling standards in terms of gradient or width for two way traffic.

- The stair width would be reduced to 1.9m.

- Delivery for early 2016.

- The three options involve a ramp that would be constructed over existing structure. Ground at foot of stairs to be re-profiled so as to tie in with the proposed ramp base. This would reduce cost and construction time.

- Ramp would be a timber pre-fabricated construction methodology and materials selected to reduce operational impact and complement the existing bridge structure.

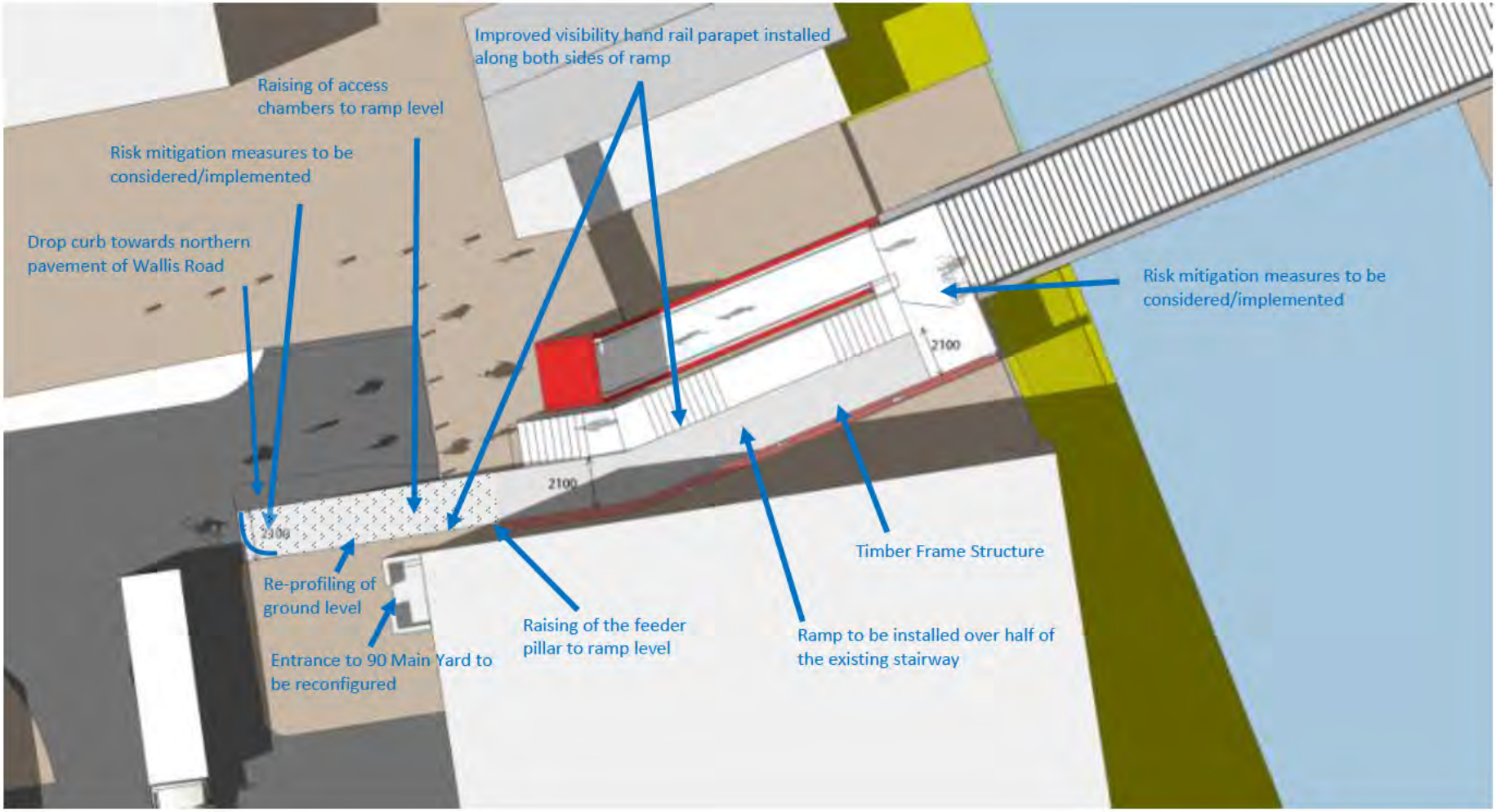
- Lift's Feeder Pillar would need to be raised or relocated and any existing access chambers shall be re-set to ensure a flush finish with the re-profiled section of the ramp proposal.

- All proposed ramp designs to include Health and Safety risk mitigation measures, such as transparent handrails designed to provide improved visibility.

- Ramp design and construction material have been chosen to cause as little disruption as possible and be in keeping with surroundings.

# Option 1

# Option 1


Improved visibility hand rail parapet installed along both sides of ramp
Raising of access chambers to ramp level
Risk mitigation measures to be considered/implemented
Drop curb towards northern pavement of Wallis Road
Risk mitigation measures to be considered/implemented
2100
2100
2300
Timber Frame Structure
Re-profiling of ground level
Raising of the feeder pillar to ramp level
Ramp to be installed over half of the existing stairway
Entrance to 90 Main Yard to be reconfigured

# Option 1

| | Option 1 | Standards |
|---|---|---|
| **Gradient** | 13.48% (1:7.42) | 7% (1:14.3) for over 30m length ramp |
| **Minimum Width** | Top 2.1m | 2.45m – One directional traffic<br>3m – Two way traffic |
| | Middle 2.1m | |
| | Bottom 2.1m | |
| **Ramp Length** | 30.05m | |
| **Pros** | Enhanced cycling access & experience | |
| **Cons** | Does not meet minimum width and gradient standards;<br>Pedestrian stairway will be reduced in width;<br>End of ramp visibility poor | |
| **Project Cost** | £395,000 | |

# Option 1

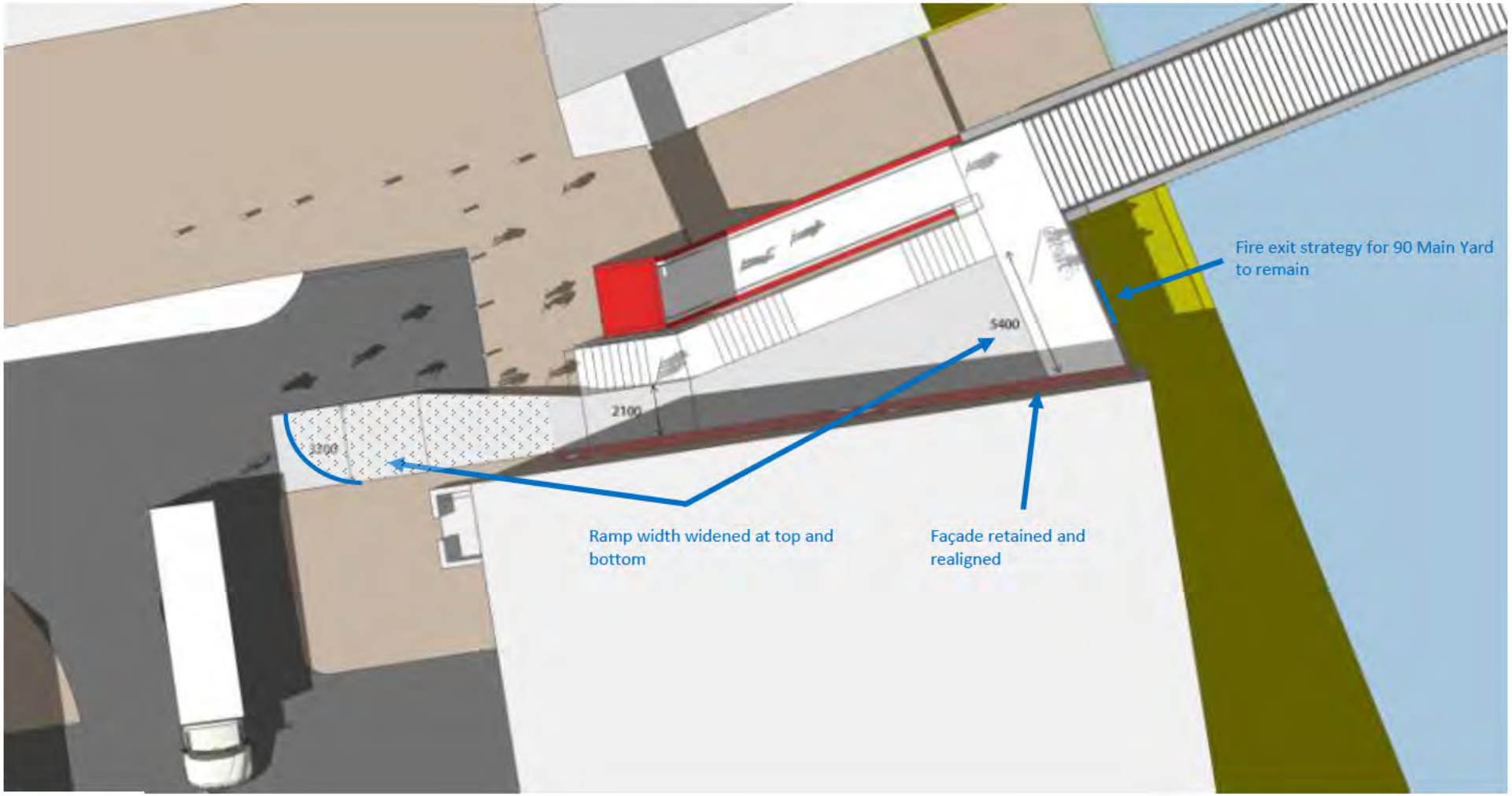
| Description | Total (£) |
|---|---|
| Construction | 104,570 |
| Preliminaries | 20,914 |
| Contractor's OH+P | 12,548 |
| RISK - Design Development | 34,508 |
| RISK - Construction Contingency | 25,881 |
| Inflation - 3Q 2014 to 3Q 2015 @ 5.6% | 11,112 |
| Rounding for Reporting Purposes | 467 |
| **Total Estimated Construction Cost (excl VAT)** | **£ 210,000** |
| Detailed Design Fees (Atkins) | 25,200 |
| Supervision | 9,408 |
| Project Management | 76,000 |
| CDMC Fees | 6,412 |
| OPEX Maintenance (10 Year Period) (LLDC) | 15,000 |
| Site Investigations & Surveys | 10,000 |
| Technical Approval and Safety Audits | 21,121 |
| Feasibility Design & Investigations (Atkins) | 20,000 |
| Rounding for Reporting Purposes | 1,858 |
| **Total Estimated Project Cost (excl VAT)** | **£ 395,000** |

# Option 2A

## Ramp Widened at Top and Bottom

# Option 2A

## Ramp Widened at Top and Bottom

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# Option 2A

## Ramp Widened at Top and Bottom

| | Option 2A | Standards |
|---|---|---|
| **Gradient** | 13.42% (1:7.45) | 7% (1:14.3) for over 30m length ramp |
| **Minimum Width** | Top 5.4m | 2.45m – One directional traffic<br>3m – Two way traffic |
| | Middle 2.1m | |
| | Bottom 3.2m | |
| **Ramp Length** | 30.18m | |
| **Pros** | Enhanced cycling access & experience | |
| **Cons** | Does not meet minimum width and gradient standards;<br>Pedestrian stairway will be reduced in width;<br>End of ramp visibility poor | |
| **Project Cost** | £450,000 | |

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# Option 2A

## Ramp Widened at Top and Bottom

| Description | Total (£) |
|---|---|
| Construction | 126,630 |
| Preliminaries | 25,326 |
| Contractor's OH+P | 15,196 |
| RISK - Design Development | 41,788 |
| RISK - Construction Contingency | 31,341 |
| Inflation - 3Q 2014 to 3Q 2015 @ 5.6% | 13,456 |
| Rounding for Reporting Purposes | 1,264 |
| **Total Estimated Construction Cost (excl VAT)** | **£ 255,000** |
| Detailed Design Fees (Atkins) | 30,600 |
| Supervision | 11,424 |
| Project Management | 76,000 |
| CDMC Fees | 7,460 |
| OPEX Maintenance (10 Year Period) (LLDC) | 15,000 |
| Site Investigations & Surveys | 10,000 |
| Technical Approval and Safety Audits | 24,329 |
| Feasibility Design & Investigations (Atkins) | 20,000 |
| Rounding for Reporting Purposes | 186 |
| **Total Estimated Project Cost (excl VAT)** | **£ 450,000** |

# Option 2B

## Ramp Widened at Top and Bottom (Façade Removed)

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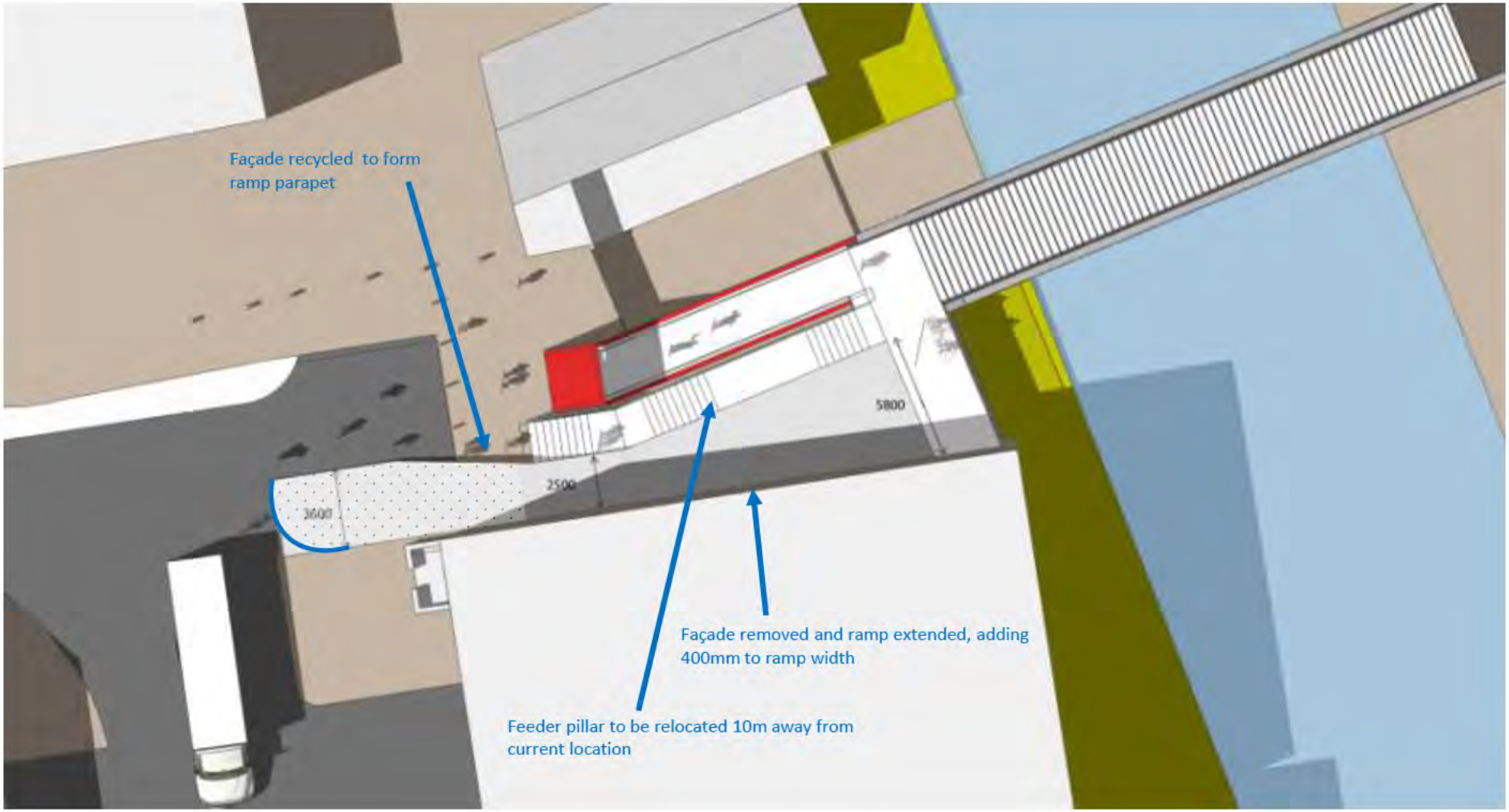
# Option 2B

## Ramp Widened at Top and Bottom (Façade Removed)



# Option 2B

## Ramp Widened at Top and Bottom (Façade Removed)

| | Option 2B | Standards |
|---|---|---|
| **Gradient** | 13.39% (1:7.47) | 7% (1:14.3) for over 30m length ramp |
| **Minimum Width** | Top 5.8m | 2.45m – One directional traffic<br>3m – Two way traffic |
| | Middle 2.5m | |
| | Bottom 3.6m | |
| **Ramp Length** | 30.24m | |
| **Pros** | Meets the width standard requirement for one way traffic;<br>Enhanced cycling access & experience | |
| **Cons** | Does not meet minimum width and gradient standards;<br>Pedestrian stairway will be reduced in width;<br>End of ramp visibility poor | |
| **Project Cost** | £520,000 | |

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# Option 2B

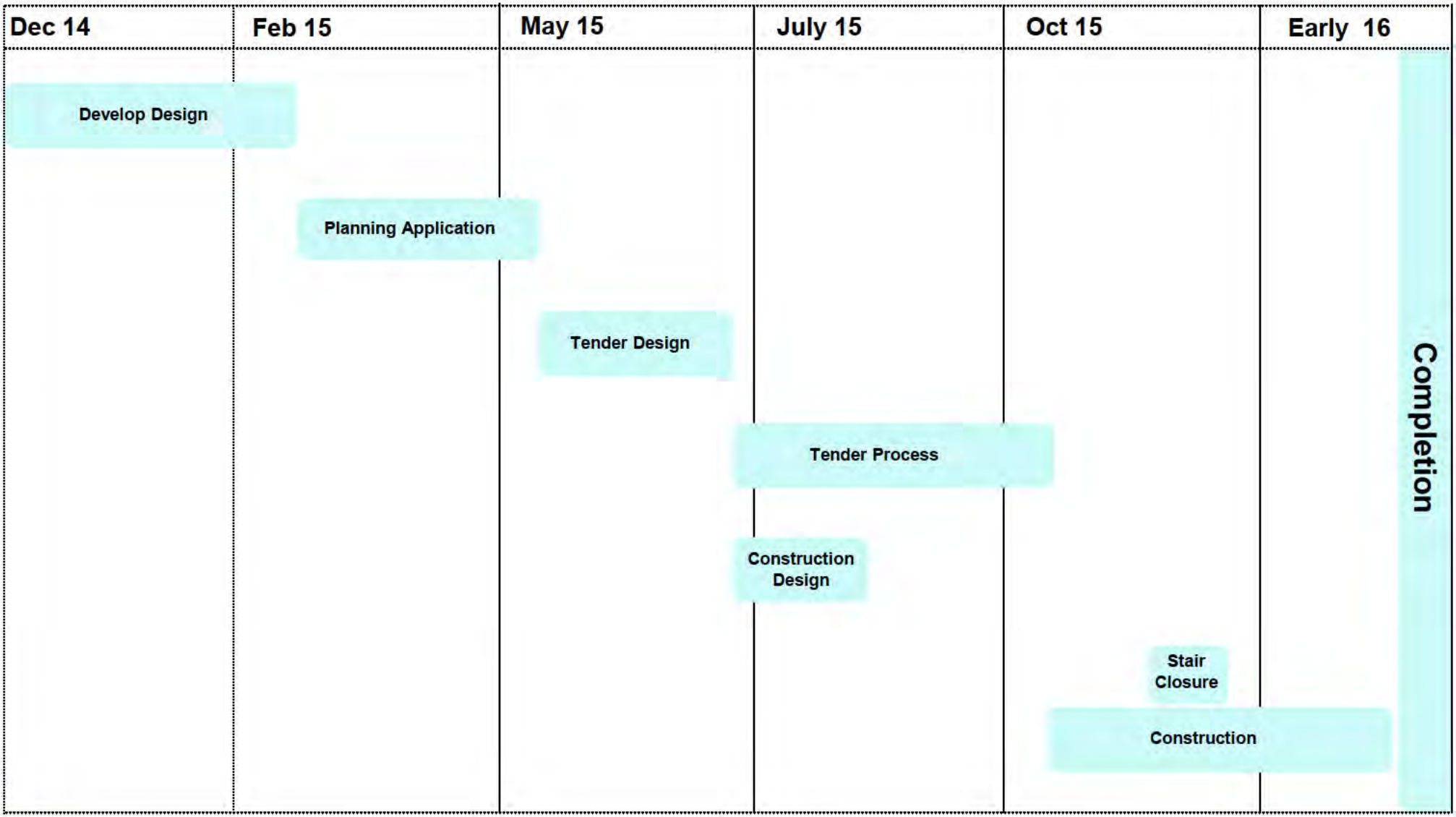
## Ramp Widened at Top and Bottom (Façade Removed)

| Description | Total (£) |
|---|---|
| Construction | 154,700 |
| Preliminaries | 30,940 |
| Contractor's OH+P | 18,564 |
| RISK - Design Development | 51,051 |
| RISK - Construction Contingency | 38,288 |
| Inflation - 3Q 2014 to 3Q 2015 @ 5.6% | 16,438 |
| Rounding for Reporting Purposes | 18 |
| **Total Estimated Construction Cost (excl VAT)** | **£ 310,000** |
| Detailed Design Fees (Atkins) | 37,200 |
| Supervision | 13,888 |
| Project Management | 76,000 |
| CDMC Fees | 8,742 |
| OPEX Maintenance (10 Year Period) (LLDC) | 15,000 |
| Site Investigations & Surveys | 10,000 |
| Technical Approval and Safety Audits | 28,250 |
| Feasibility Design & Investigations (Atkins) | 20,000 |
| Rounding for Reporting Purposes | 921 |
| **Total Estimated Project Cost (excl VAT)** | **£ 520,000** |

# Summary

| Design Option | **Standards** (LTN2/08 & London Cycling Design Standards) | Option 1 | Option 2A | Option 2B |
|---|---|---|---|---|
| **Gradient** | 7% (1:14.3) for over 30m length ramp | 13.48% (1:7.42) | 13.42% (1:7.45) | **13.39% (1:7.47)** |
| **Minimum Width** | 2.45m – One directional traffic<br>3m – Two way traffic | 2.1m | 2.1m | 2.5m |
| **Ramp Length** | | 30.05m | 30.18m | **30.24m** |
| **Pros** | | Enhanced cycling access & experience | Enhanced cycling access & experience | Meets the width standard requirement for one way traffic;<br>Enhanced cycling access & experience |
| **Cons** | | Does not meet minimum width and gradient standards<br>Pedestrian stairway will be reduced in width<br>End of ramp visibility poor | Does not meet minimum width and gradient standards<br>Pedestrian stairway will be reduced in width<br>End of ramp visibility poor | Does not meet gradient standards<br>Pedestrian stairway will be reduced in width<br>End of ramp visibility poor |
| **Ramp Material** | | Timber | | |
| **Project Cost**<br>**(includes Detailed Design, Project management, CDMC, OPEX, Site investigation & Feasibility study)** | | £395,000 | £450,000 | £520,000 |
| **Conclusion** | | ✘ | ✘ | ? |

# Potential Programme



# Buildability

- The installation of the ramp will require the stair to be closed for a minimum of two weeks.

- Potential for temporary access to the bridge to be located on Eton Mission Rowing Club land, which has been included in the project estimates.

# Road Safety Audit Conclusions

- A Road Safety Audit has been carried out on Option 2B. This has raised a number of problems:
    - Risk of ramp users losing control due to excessive gradient and absence of intermediate landings
    - Risk of pedestrians falling on the staircase
    - Risk of conflict between ramp users and vehicles/pedestrians in the vicinity of the ramp base
    - Risk of cyclist unable to cycle up steep gradient and losing control
    - Risk of wheelchair/mobility scooter users using the ramp and losing control due to steep ramp gradients
    - Risk of injury due to unintended use by skateboarders, BMX riders etc
    - Risk of Westbound cyclists riding down the steps

- The audit recommended that the gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges (Highways Agency, 2004). The generally preferred gradient is 5% (1:20) with an 8% absolute maximum (1:12). It also recommended that suitable staggered barrier/bollards should be provided at the top and bottom of the stair/ramp.

- As part of Phase 2– Detailed design, risk mitigating measures would be developed to address the concerns raised within the Road Safety Audit.

# Risk Mitigation Measures To Be Considered

- Rough surface texture to be used to assist with braking and manoeuvrability;
- Footway markings i.e. “SLOW”;
- Priority give way system;
- Visual and physical speed calming measure;
- Transparent parapet railing to maximise visibility;
- Staggered barriers to reduce speeds at the top and bottom of ramp;
- Measures at the ‘T’ junction of Wallis Road and Main Yard;
- Signs warning pedestrians of cyclists;
- A minimum of 2.3m height clearance to all obstructions on building wall;
- Suitable illumination of the ramp
- Granite sets at eastern approach.

# Precedents

- A steep ramp located on the canal network at Hackney Marshes with a gradient of 20% (1:5);
- Used by confident cyclists- run up is required on ascent;
- Steeper than Option 2B;

- An existing cycle and pedestrian ramp in Camden linking Regents Canal towpath to the adjacent Prince Albert Road;
- Used by cyclists;
- Similar maximum gradient to the proposed Option 2B being 14% (1:7).

# Conclusion

- No option meets standards in terms of gradient and width.

- Option 2B provides the best possible option for delivery of a temporary ramp.

- Funding would have to be obtained before the project could proceed.

# Next Steps

- Decision on option, if any, to progress.
- Obtain funding.
- Confirm land ownership and transfer requirement
- Stakeholder considerations to be incorporated into proposal
- Check impact on current and future pedestrian flows by reducing stair width to 1.9m.
- Engage consultants for Phase 2
- Develop design to mitigate any Road Safety Audit concerns in the detailed design stage;
- Departure from standards process—Submit an application for a departure of standards for both the gradient and ramp width, this shall then be progressed toward the Agreed In Principal (AIP) stage which is carried out by the Olympic Infrastructure Technical Approval Authority (OITAA);
- Management and maintenance strategy to be developed.

**From:** [redacted]
**To:** [redacted]@london.gov.uk"; [redacted]; [redacted]@tfl.gov.uk"; [redacted]@tfl.gov.uk"; [redacted]@london.gov.uk"; [redacted]@london.gov.uk"; [redacted]
**Subject:** Re: Meeting last week on Bridge H10
**Date:** 24 November 2014 07:10:54

---

Thanks [redacted]

Its also worth noting that your clear expectation was that the issues we discussed, and which you identify below, will be captured in a Business case, that will make the case for funding in accordance with TfL's normal approach, and subject to that being approved, funding would be provided by TfL from their cycling budgets .

[redacted]

----- Original Message -----
From: [redacted] [mailto:[redacted]@london.gov.uk]
Sent: Monday, November 24, 2014 03:01 AM
To: [redacted]; [redacted]; [redacted]@tfl.gov.uk [redacted]@tfl.gov.uk>; , [redacted]@tfl.gov.uk>; [redacted]@london.gov.uk>; [redacted]@london.gov.uk>; [redacted]
Subject: Meeting last week on Bridge H10

[redacted]

Please could you circulate this to the LLDC attendees at Monday's meeting.
Many thanks.

Dear all

Thank you very much for for all the work you have done on Bridge H10 – I am very pleased with the outcome.

As you know, the bridge will be part of one of our flagship “first seven” Quietway routes, intended for delivery in Spring 2016. To open one of these routes with a flight of steps in the middle could cause reputational damage to the programme. In addition, ramping will also address the current lack of usable cycle links into the Olympic Park, particularly important in view of the commitment to extend the Cycle Hire scheme to the Park.

My preference is for option 2B, which would widen the ramp at the top and the bottom and would remove the façade along the wall of 90 Wallis Road, providing a minimum width of 5.5m at the top, 2.5m at its narrowest, and 3.6m at the bottom, with a gradient of 1:7.47. To accommodate this the stair width would be reduced to 1.9m. The ramp would be constructed over the existing structure and made from pre-fabricated timber. The total estimated project cost for this ramp is £520,000 and it can be delivered by early 2016.

Next steps

The key next step is the provision of the feasibility work to TfL to enable them to look in detail at the benefits and disbenefits of the ramp and consider the matters arising from the Road Safety Audit. Please could you send this over to [redacted] today, if possible, if you have not already done so.

TfL will then undertake an assessment of the broader safety benefits of giving cyclists a safe alternative to the Bow roundabout, along with traffic-free links to a wide area of East London. As requested by LB Hackney, it should also incorporate an analysis of the impact of a 1.9m wide stairway on pedestrian flows. Since we have chosen the widest option, it could also include an examination of whether it would be possible to allow a wider pedestrian stair than 1.9m. The assessment will also include LB Hackney’s request for wider public realm improvements where the new ramp joins Wallis Road.

TfL will aim to complete this work by January.

I do acknowledge that there are some concerns around the gradient of the ramp. However, ramps of similar gradient, in use on the cycle network now, will be incorporated into other Quietways. The new London Cycling Design Standards, TfL's main guidance, are not prescriptive and the DfT guidance (from 2008) is advisory and states: "While it is always preferable to minimise gradients to reduce the effort required, designers should not adhere too rigidly to the recommended maxima if doing so rules out the option of providing the cycle route in the first place. A very steep route may be better than none at all."

We agreed that we would meet again as a reduced Project Group. To meet the schedule laid down by the LLDC, this meeting should take place in early January.

Thank you again.

[redacted]

Mayor's Office, City Hall, London SE1 2AA
PA: [redacted]

**From:** [redacted]
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge
**Date:** 02 December 2014 15:29:50
**Attachments:** H10 Wallis Road Concept Meeting 17 11 14 V2 SB Comments.doc

---

Hi [redacted]

Thank you for the opportunity to comment on the minutes. I attach a version with some suggested changes to the TfL relevant parts. Let me know if you'd like me to clarify.

I sat down with [redacted] earlier and we don't have any specific comments on the report apart from a couple of minor questions:

- Are the images showing the ramp options to scale?
- Can you confirm if Atkins have any other plans/drawings of the preferred option (2b) or is what is contained in the feasibility report everything they have done?

Grateful for a contact e mail address for your cycling colleague when you have a chance.

Many thanks
[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 28 November 2014 16:22
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge

Dear [redacted],

Nor have we had time to review and Ill issue together with the minutes which have been put together by the project manager. Draft here attached for your comment-( my name spelt wrongly and a few typos to start..).

I am still awaiting the last of the costs incurred to date and will forward as soon as I have them

Kind regards
[redacted]

---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 28 November 2014 13:00
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge

[redacted]

Thank you for sending this across.

I haven't had an opportunity to go through this with my technical colleagues yet but I will do

next week. I intend to tie in our comments to a response to this scheme more generally so please don't feel you have to wait for our comments ahead of issuing the final document.

Thanks
[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 25 November 2014 15:57
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge

Dear [redacted],

Just by way of an update we are pulling this information together for you.

We have received a draft report from Atkins but we have comments and need to get amended before it is sent round but am happy to share with you- see here:
https://[redacted]

The updated cost to incorporate the additional elements identified in the meeting is £640K and includes the following:

- Public realm works
- Artwork to replace the removed facade
- Heritage consultancy/advice

We are feeding comments back this week on the report so let me know if you have any.

On the costs to date I hope to have these for you by end of this week. And on the minutes- Georgia has done a first draft which she is amending this week and Ill share with you when she has finished before sending round.

Hope that's helpful
[redacted]

[redacted]

**Queen Elizabeth Olympic Park**
London Legacy Development Corporation
Level 10
1 Stratford Place, Montfichet Road
London
E20 1EJ

DDI: [redacted]
DDI: [redacted]
Website: www.QueenElizabethOlympicPark.co.uk

**From:** [redacted]
**Sent:** 18 November 2014 22:26
**To:** [redacted]
**Subject:** RE: H10 Bridge

Dear [redacted]

Yes I too have been wondering about the minutes of that meeting! Don't worry we will run them past you before issue ( probably next week)

We will get you the rest of the info asap.

[redacted]

---

**From:** [redacted] [mailto:[redacted]tfl.gov.uk]
**Sent:** 18 November 2014 17:53
**To:** [redacted]
**Subject:** H10 Bridge

[redacted]

Thank you for the meeting yesterday and the useful discussion afterwards. To build on a couple of points we covered:

To help with our discussions at TfL it would be useful if you can send me a copy of Atkins feasibility report and any other plans/strategies you have for cycling access to and within the QEOP. I appreciate you are updating the cost for option 2b to incorporate the public realm works on Wallis Road. Do you know when Atkins expect to have this finalised?

In addition, we agreed that TfL would cover the cost of the feasibility work undertaken to date by Atkins. If you have an invoice for this you can share that would be useful for getting payment set up.

Finally, I noticed your colleague that I was sat next to was taking a note of the meeting - I am sure there will be no issue, but given the sensitive nature of this work, I'd be grateful if you could send me the notes ahead of sharing with the wider group just to be certain that TfL's position is captured accurately.

Happy to discuss.

Kind regards
[redacted]

[redacted] | [redacted]
**Surface Strategy and Planning | Transport for London**

**Mail:** Palestra 11Y8, 197 Blackfriars Road, Southwark, London SE1 8NJ
**Phone:** [redacted]
**Email:** [redacted]@tfl.gov.uk

**********



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London Legacy Development Corporation, Level 10, 1 Stratford Place, Montfichet Road,

London, E20 1EJ.

www.queenelizabetholympicpark.co.uk

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# Wallis Road Bridge (H10) Ramp Proposal

## Feasibility Study and Investigation

London Legacy Development Corporation

**22nd December 2014**

ATKINS

Plan Design Enable

Notice:

This document and its contents have been prepared and are intended solely for London Legacy Development Corporation's information and use in relation to the Wallis Road Bridge (H10) Ramp Proposal.

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| **Job number: 5114214** | | | **Document ref: LC810-LCI-H10-CB-REP-0002** | | | |
|---|---|---|---|---|---|---|
| **Revision** | **Purpose description** | **Originated** | **Checked** | **Reviewed** | **Authorised** | **Date** |
| P01 | For Information | [redacted] | [redacted] | [redacted] | [redacted] | 24/11/14 |
| P02 | For Information | [redacted] | [redacted] | [redacted] | [redacted] | 22/12/14 |
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|---|---|
| **Client** | London Legacy Development Corporation |
| **Project** | Wallis Road Bridge (H10) Ramp Proposal |
| **Document title** | Wallis Road Bridge (H10) Ramp Proposal – Feasibility Study and Investigation |
| **Job no.** | 5114214 |
| **Document reference** | LC810-LCI-H10-CB-REP-0002 |

# Contents

# Glossary and Acronyms

| Abbreviation | Description | Abbreviation | Description |
|---|---|---|---|
| AIP | Approval in Principle | QEOP | Queen Elizabeth Olympic Park |
| TfL | Transport for London | RSA | Road Safety Audit |
| GLA | Greater London Authority | WWMA | Witherford Watson Mann Architects |
| H10 | Wallis Road Bridge | | |
| KCA | Karakusevic Carson Architects | | |
| LBH | London Borough of Hackney | | |
| LLDC | London Legacy Development Corporation | | |

# Executive Summary

Considerable development of Hackney Wick is expected to take place over the next decade and beyond. This is both associated with the Olympic Legacy land-uses and other proposals, including significant development focussed around Hackney Wick Station. Hackney Wick Station straddles the border between Tower Hamlets and Hackney, and both boroughs have ambitious plans for growth and redevelopment in the area, as outlined in their core strategies.

Due to the development of the 'Quietways' cycling route, the London Legacy Development Corporation (LLDC), on behalf of the Greater London Authority (GLA), are exploring the possibility of installing a temporary cycle ramp for the western approach of Wallis Road Bridge (H10) as the existing scenario requires cyclists to dismount prior to climbing/descending the western approach of Wallis Road Bridge (H10). The purpose of the ramp would be to provide a continuous route through the Queen Elizabeth Olympic Park (QEOP). Currently the western approach of Wallis Road Bridge (H10) provides access via a lift, which meets DDA compliance, and a staircase with an inbuilt channel for cyclists wishing to push their bicycles up/down the stairs.

Witherford Watson Mann Architects (WWMA) and Karakusevic Carson Architects (KCA) were commissioned by LLDC to develop a masterplan for Hackney Wick and Hackney Wick Neighbourhood Centre and as part of this work they investigated possible connectivity improvements between the QEOP and Hackney Wick. One aspect of the masterplan is to deliver a ramped approach to Wallis Road Bridge (H10) in the medium to long term. This report follows on from the work undertaken by WWMA and KCA by investigating possible design solutions for providing a temporary cycle ramp (10 year life span) on the southern side of the western approach of Wallis Road Bridge (H10) as outlined in WWMA' Option 4 (see Appendix A – Previous Investigations).

There is no requirement to install a ramp on the eastern approach of Wallis Road Bridge (H10) as the ground level is higher than the western approach and as such ties in with the existing bridge deck level. Options for the western approach have been investigated as part of this study and a superior option has been identified (Option 2b) and is detailed in Section 3.5.

The Option 2b proposed cycle ramp will require replacement of the existing pedestrian staircase on the western approach of Wallis Road Bridge (H10). The new staircase will need to have a reduced width to accommodate the ramp. A number of site constraints have restricted the gradient and width of the proposed ramp to 13.39% (1:7.47) and 2.5m respectively allowing for a stairway width of 1.9m. In addition to the provision of a ramp, the area in the vicinity of the lift, ramp and stairs will require redevelopment so as to separate cyclists from other Wallis Road users and provide a continuous transition from the Wallis Road Bridge (H10) ramp to the Quietway route. The access to 90 Main Yard will also require reconfiguring as part of this proposal.

Due to the limited space available in the vicinity of the western approach of Wallis Road Bridge (H10) it is difficult to provide a compliant ramp that meets the necessary design standards in terms of ramp width and gradient. The design standards (LTN2/08 & London Cycling Design Standards) recommend a minimum gradient of 7% (1:14.3) over 30m and a width of 2.45m for one directional traffic and 3m for two way traffic.

Option 2b provides significant improvements with regards to the ramp width and gradient over the other designs investigated as part of this study, however a Departure from the standards will still be required in order to be accepted. A single Departure will need to be submitted and approved that will cover both the ramp gradient and width.

In addition to the Departure two structural Approval in Principles (AIPs) will be required for:

- The assessment of the changes to the existing structure
- The assessment of the proposed design

Both the Departure and the AIP's will need approval from the Olympic Infrastructure Technical Approval Authority (OITAA) who have a contracted response period of 10 working days.

Mitigating measures designed to improve safety have been identified in Section 3.3.2.1 and will need to be included as part of Detailed Design to reduce any risk associated with the Departure.

The proposed ramp extends out of LLDC owned land and into land owned by the London Borough of Hackney (LBH). The viability of the proposed ramp design relies on the support of LBH and the use of their land. LBH have been engaged throughout Phase 1 and have expressed the need to incorporate safe measures within the design and limit the length of time the bridge is closed during construction.

The proposed project cost of the superior option (Option 2b) is anticipated to be approximately £645,000. This option is subject to further development and detailed design which will be undertaken as part of Phase 2.

# 1. Introduction

## 1.1. Study Objective

The Wallis Road Bridge (H10) was built as part of the transformation works post-Games and links Hackney Wick, over the River Lee Navigation to the QEOP. Currently the western approach of Wallis Road Bridge (H10) provides access via a lift, which meets DDA compliance, and staircase with an inbuilt channel for cyclists wishing to push their bicycles up/down the stairs.

Due to the development of the 'Quietways' cycling route, which highlights the Wallis Road Bridge (H10) as being critical to the scheme (see Figure 1), LLDC, on behalf of the GLA, are exploring the possibility of installing a temporary cycle ramp for the western approach of the bridge, as the existing scenario requires cyclists to dismount prior to climbing/descending the bridge, using either the stairs or the lift.

The purpose of the ramp will be to provide an interim improved cycling offer, allowing a continuous route through the QEOP without the need for cyclists to dismount prior to using the Wallis Road Bridge (H10). Any proposal would have to avoid interfering with access to neighbouring private land and provide the best possible solution within the existing boundaries and site constraints.

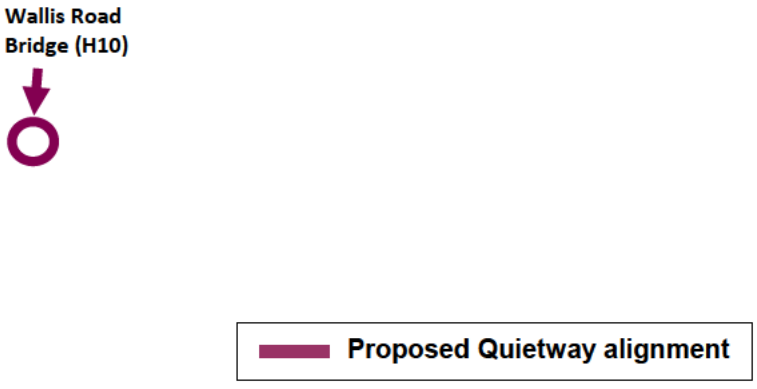



**Figure 1 Proposed Quietway scheme (Aldgate to Hainault) utilising the Wallis Road Bridge (H10)**

In August 2014, Atkins were instructed by LLDC to undertake an investigation into providing temporary ramped access to the western approach of the Wallis Road Bridge (H10). This report forms the basis of Phase 1 which summarises the possible ramp solutions investigated as part of this study, looking in particular at project costing, programming and safety. Following a review of the proposed designs the best option will be taken forward and developed as part of Phase 2.

The scheme is supported and funded by the GLA.

## 1.2. Previous Work Undertaken

WWMA and KCA were commissioned by LLDC to develop a masterplan for Hackney Wick and Hackney Wisk Neighbourhood Centre and as part of this work WWMA and KCA investigated possible connectivity improvements between the QEOP and Hackney Wick. In June 2014 LLDC instructed WWMA and KCA to undertake a high level investigation into possible ramp solutions for the H10 Bridge. From this 4 possible options were identified, which comprise:

Option 1: Retain the lift and build an integrated 10% (1:10) ramp and new stair

Option 2: Relocate the lift, build a new stair and raise Wallis Road Level to form a 8.3% (1:12) ramp

Option 3: Remove lift and build new 8.3% (1:12) ramp

Option 4: Construct a temporary ramp over existing stair

These options are included in Appendix A – Previous Investigations. After consideration of the future master plan for the area and the 4 options identified by WWMA and KCA, LLDC instructed Atkins to develop Option 4 further as part of this investigation.

In June 2014 a Stage 1 Road Safety Audit was (RSA) undertaken by Local Transport Projects Ltd (see Appendix B) which examined the safety performance of the temporary ramp option (Option 4) outlined by WWMA. Due to the limiting site constraints a number of safety issues were identified by Local Transport Projects Ltd, which Atkins have attempted to address as part of the Phase 1 design development.

## 1.3. Stakeholder Engagement

There have been three meetings to date to discuss the Wallis Road Bridge ramp proposal. The first meeting was held on the 21st August 2014 and attended by representatives from Atkins, the GLA, the LBH and the LLDC. The second meeting was held on the 2nd September 2014 and attended by representatives from Atkins, the GLA, the LLDC, Transport for London (TfL) and Sustrans. A third meeting was held on the 17th November 2014 where a presentation was given by LLDC and was attended by Atkins, the GLA, the LLDC, the London Borough of Hackney (LBH), TfL and Sustrans. A full list of attendees can be seen in Table 1.

Table 1 List of Stakeholders engaged to date

| Stakeholder | Title | First Project Meeting<br>21st August 2014 | Second Project Meeting<br>2nd September 2014 | Third Project Meeting<br>17th November 2014 |
|---|---|---|---|---|
| Greater London Authority | | Yes | Yes | Yes |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| London Borough of Hackney | | Yes | Yes | Yes |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| LLDC | | Yes | Yes | Yes |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| TfL | | No | Yes | Yes |
| [redacted] | [redacted] | | | |
| Sustrans | | Yes | Yes | Yes |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| Atkins | | Yes | Yes | Yes |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |

# 2. Site Details and Constraints

## 2.1. General Site Description

Wallis Road Bridge (H10) is located north-west of the Copper Box Arena and links Hackney Wick, over the River Lee Navigation to the QEOP. The western approach of Wallis Road Bridge (H10) is located at the 'T' junction between Wallis Road and the Main Yard cul-de-sac and currently consists of a lift and a staircase. Cyclists are able to use the lift or the wheeling channel provided on the right as you climb the staircase. The eastern approach of Wallis Road Bridge (H10) does not require a ramp or staircase as the bridge deck is level with the existing ground as shown in Figure 2. For an assortment of photographs of H10 and the surrounding areas see Appendix C – Site Photographs.

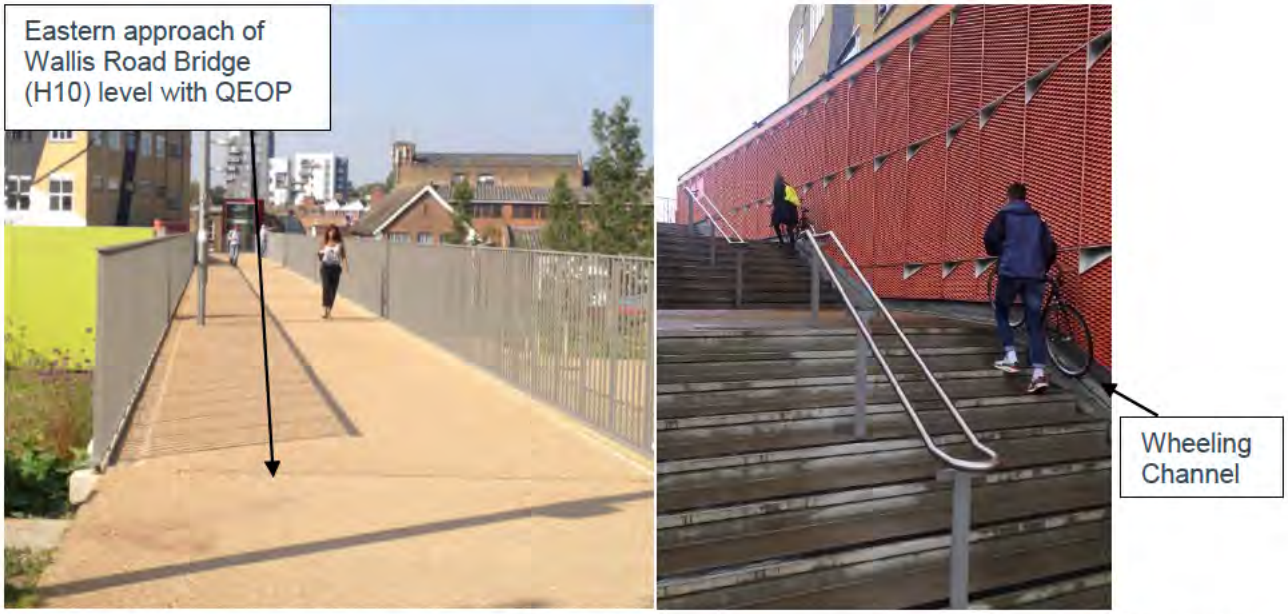



**Figure 2 Proposed Quietway scheme (Aldgate to Hainault) utilising the Wallis Road Bridge (H10)**

## 2.2. Operational Impact

### 2.2.1. Wallis Road Layout

Wallis Road branches off Chapman Road heading eastwards past Hackney Wick Station. The road turns eastwards again heading towards the River Lee Navigation before entering the Main Yard cul-de-sac (see Figure 3).

The Main Yard is home to a number of commercial properties and vehicles' are regularly parked outside these premises. Access to the Main Yard can only be obtained via Wallis Road and therefore any bridge ramp proposal should not obstruct this access route.

The Eton Mission Rowing Club is located adjacent to the western approach of H10. Any ramp proposal should not impede access to this property and the other properties along that stretch of Wallis Road both during construction and operation.

It is recognised that the construction of any of the ramp options outlined in this report will have an impact on the access in the vicinity of the works area and across Wallis Road Bridge (H10). The bridge staircase will be out of service for a period of up to two months, with lift use intermittent during this time.


**Figure 3 Wallis Road configuration and points of interest within vicinity of H10 Bridge**

## 2.2.2. Fire Evacuation of 90 Main Yard

LLDC provided Atkins with the current fire exit strategy for 90 Main Yard, which is included in Appendix D – Existing Fire Exit Strategy, and states that in the event of fire, individuals evacuating 90 Main Yard from the canal side will exit using the fire exit adjacent to the western approach of Wallis Road Bridge (H10) traveling underneath the stairs and out towards the Eton Mission Rowing Club, as shown in Figure 4. It is proposed that for all design solutions considered no alterations to the current fire evacuation strategy for 90 Main yard will be made. During the construction of the Options detailed in this feasibility report, temporary changes to the Fire Evacuation route will be required to facilitate emergency egress from 90 Main Yard.

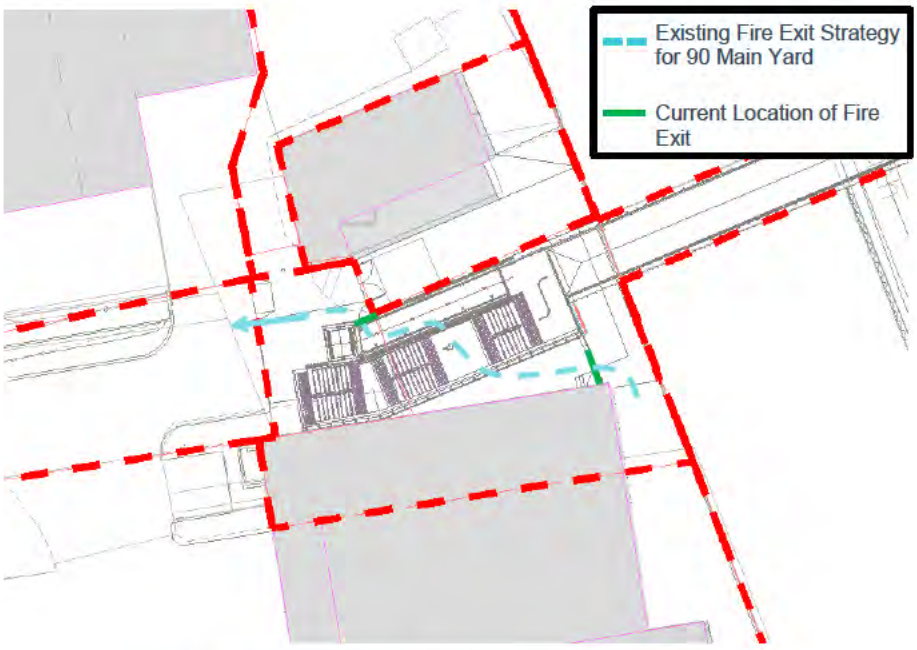



**Figure 4 90 Main Yard's current fire evacuation strategy**

### 2.2.3. Land Ownership

The LLDC ownership boundary currently encompasses all of Wallis Road Bridge (H10) western access, as shown overleaf in Figure 5 however it is anticipated that any proposed ramp option will extend out of LLDC owned land and into land owned by the LBH. The viability of the proposed ramp design relies on the support of LBH and the use of their land. LBH have been engaged throughout Phase 1 and have expressed the need to incorporate safe measures within the design and limit the length of time the bridge is closed during construction.

Stakeholder engagement was undertaken with the Eton Mission Rowing Club during the construction of Wallis Road Bridge (H10). Any further works to the western approach of the bridge will require ongoing stakeholder engagement with the rowing club as it is likely that any works within the vicinity of the rowing club will disrupted access.

Further access disruption may be caused to businesses within the Pall Mall Estates as plant and equipment will partially block the entrance to the cul-de-sac during construction. In addition the entrance to 90 Main Yard will require reconfiguring as part of the works.

It is envisaged that access to both [redacted] will not be affected both during and post construction.

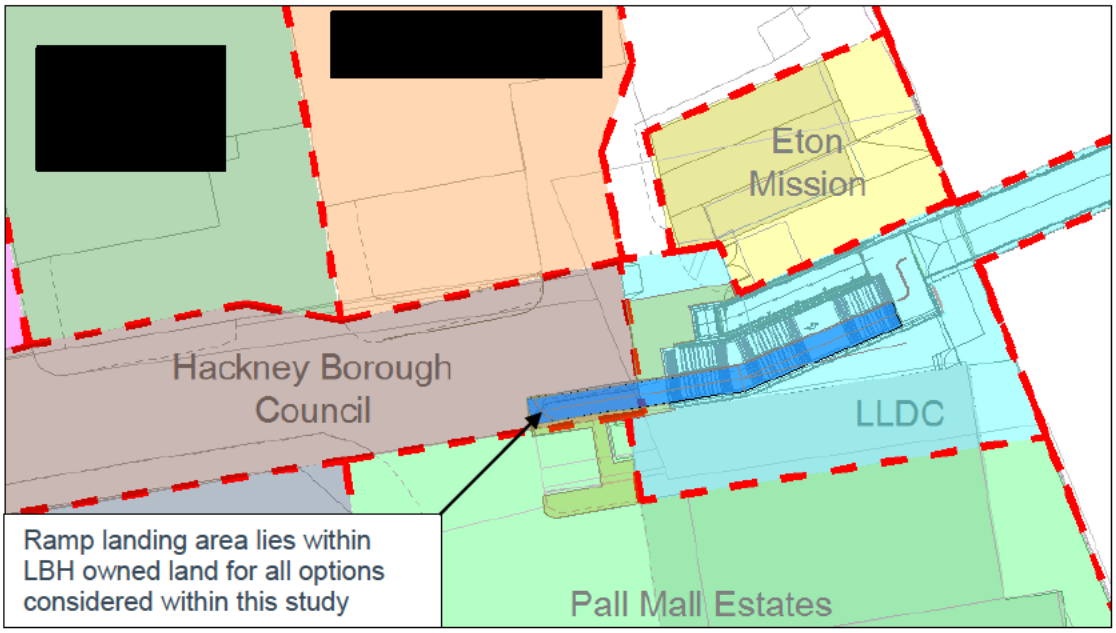



**Figure 5 Ownership boundaries on the western side of Wallis Road Bridge (H10)**

## 2.3. Topography

A historical topographical drawing was identified for the area surrounding the western approach of Wallis Road Bridge (H10). The deck level of the western section of the bridge is approximately 9.45m AOD, whereas the proposed landing area of the ramp is approximately 5.40m AOD, hence there is a level difference of approximately 4.05m between the bridge deck and the landing site. The proposed ramp landing area also has a raised curb meaning the road is approximately 100mm lower with an approximate ground level of 5.31m AOD.

The topographical drawing can be viewed in Appendix E – Topographical Drawing. It should be noted that for detailed design (Phase 2) a topographical survey maybe required.

## 2.4. Key Utilities

Historical record drawings show there are a number of utilities that lie within the vicinity of the existing Wallis Road Bridge (H10) western approach and it is likely that some form of utility diversion will be required. A full survey of the site will be required prior to any detailed design work, to determine the exact location of all utilities. It is anticipated that consideration to accommodate these utilities within the ramp design will be required as part of Phase 2 – Detailed Design.

## 2.5. Canal Description

The River Lee Navigation runs from rural Hertfordshire into the heart of London and is navigable for small river craft. A towpath, on both sides, runs parallel to the river which is extensively used by cyclists and walkers.

A minimum height clearance is required along the river. For the purposes of this study any alteration to the Wallis Road Bridge (H10) will ensure the existing scenario is maintained. Flood defence consent may be required for the project as the structure is within the Thames Region Flood Defence by-laws and could be designated as 'near'.

## 2.6. Masterplanning

Hackney Wick is set to undergo significant redevelopment in the near future with the development of the Hackney Wick and Hackney Wisk Neighbourhood Centre Masterplan which LLDC are leading. The aim of the masterplan is to create a vision for a new neighbourhood supporting a comprehensive, employment-focused, mixed-use development including a significant number of new homes complemented by new retail, leisure, food, drink and community facilities. Included as part of the Masterplan is improved access to Wallis Road Bridge (H10) and a better link across the canal by changes to the public realm. This will include improved cycle access via a ramp.

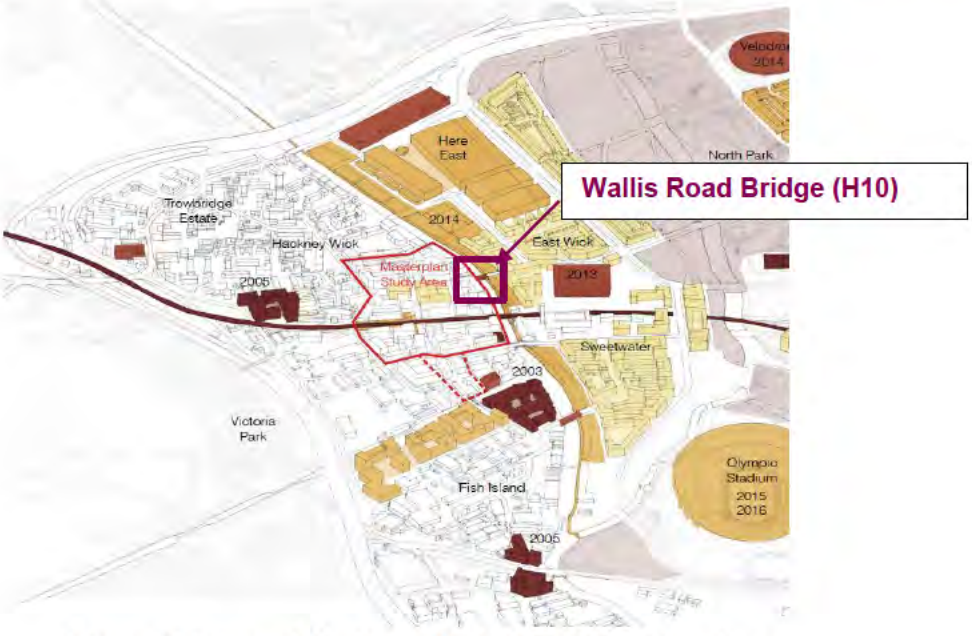



**Figure 6 Proposed Hackney Wick Masterplan Boundary**

The red line, shown in Figure 6, denotes the Masterplan boundary. It is anticipated that the Wallis Road Bridge (H10) will, in future, be developed as part of the Hackney Wick regeneration scheme so as to provide improved access between Hackney Wick and the QEOP as the bridge forms part of the Hackney Wick Masterplan, as shown in Figure 7.

LLDC are also leading a significant upgrade to Hackney Wick Station which includes, a new station entrance, ticket facilities, underpass, lift & stair access and platform canopies proposed for the Overground station. In addition a new public North-South route through the existing rail embankment unlocks development of neighbourhood centre as shown in Figure 7.

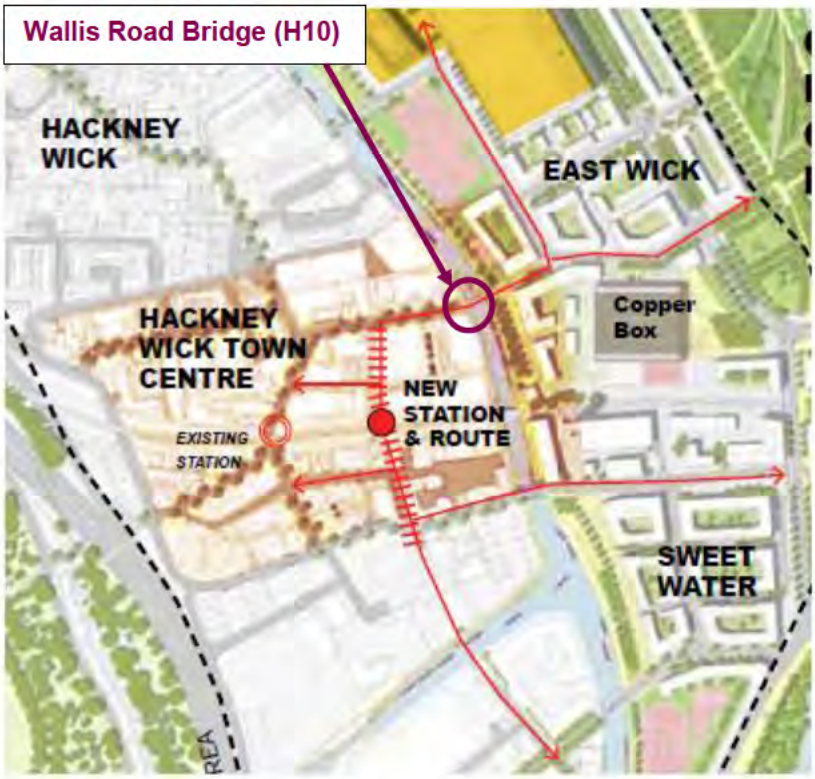



**Figure 7 Connections created by proposed Hackney Wick Station development**

# 3. Design Options

## 3.1. Initial Investigations

Upon commencing this project, Atkins undertook a high level review of possible ramp options given the limiting site constraints and presented these options to LLDC at a meeting on the 21st August 2014. Following on from this meeting LLDC instructed Atkins to develop three temporary ramp options which are to have a design life of 10 years. The following sections detail the 3 proposed ramp options with a particular emphasis on costing and safety. For details of all measures considered please refer to Appendix F – Risk Register and Appendix G - Initial Sketches.

## 3.2. Standards

Cycling standards are outlined in "The London Cycle Design Guidance" and "Local Transport Note 2/08 – Cycle Infrastructure Design". A summary of the standards is shown in Table 2.

**Table 2 Summary of Cycling Standards**

| Standards Used | The London Cycle Design Guidance and LTN2/08 |
|---|---|
| **Recommended Maximum Gradient** | • 3% (1:33.3),<br>• 5% (1:20) up to 100m,<br>• 7% (1:14.3) gradient over 30m be used |
| **Recommended Minimum Width** | • 2.45m for one directional traffic<br>• 3m for two way traffic. |

## 3.3. Ramp Option 1 – Split Existing Stairway

### 3.3.1. General

This option involves splitting the existing western stairway of Wallis Road Bridge (H10) into a stair and ramp access point.

| | |
|---|---|
| Stair Width | 1.9m |
| Gradient | 13.48% (1:7.42) |
| Minimum Width | Top 2.1m |
| | Middle 2.1m |
| | Bottom 2.1m |
| Ramp Length | 30.05m |
| Cost | £470,000 |

**Figure 8 Model of Option 1**

The existing stairway is 3.8m wide with an additional 200mm wheeling channel for cyclists to push their bicycles up/down the staircase. It is proposed that the ramp will descend down the southern half of the existing stairway, ensuring a width of 2.10m. The remaining 1.9m stairway and lift will be retained to provide access for both pedestrians and users with accessibility requirements.

The proposed ramp will descend down the southern half of the existing stairway beginning to fall approximately 1m prior to the first step at the top of the stairs. The ramp will follow the stairway, falling at a gradient of approximately 13.48% (1:7.42) extending past the foot of the stairs, landing in the raised pavement area to the north-west of 90 Main Yard as shown in Figure 8 and overleaf in Figure 9.

The proposed ramp will be constructed using timber for the frame and platform. A bituminous type material will form the wearing surface of the structure so as to reduce both cost and noise. It will also allow for faster construction, ensuring the bridge will be out of service for the shortest period possible.

It is proposed that the existing façade will be retained as part of the design. A transparent parapet will run along both sides of the ramp to prevent possible collisions, allowing increased visibility to users.

Cyclists traveling down the ramp will also be encouraged to exit the ramp towards the northern pavement of Wallis Road by dropping the curb, rounding the end of the ramp in that direction as well as using floor markings. In addition it is intended that signage would provide warning to motorists of the presence of possible cyclists and pedestrians.

### 3.3.2. Safety

Given the significant site constraints it is not possible to develop a ramp design that conforms to the regulations and hence a departure from the standards will be required for both the ramp width and gradient. The proposed ramp has a gradient of 13.48% (1:7.42) which is significantly steeper than the maximum gradient outlined in the relevant standards. The London Cycle Design Guidance and LTN2/08 recommend a maximum gradient of 3% (1:33.3), 5% (1:20) up to 100m or a 7% (1:14.3) gradient over 30m. It is however not unusual for a cycling ramp to be steeper i.e. 10-15% but this may present possible safety concerns which will need to be addressed and limited as part of the detailed design (Phase 2).

Visibility is poor for both cyclists joining Wallis Road at the bottom of the ramp and for drivers leaving the Main Yard joining Wallis Road. As The Yard is effectively the end of the Wallis Road cul-de-sac, drivers would assume priority not expecting cyclists to emerge from behind the building, creating a conflict point at the junction. In addition the increased ramp gradient may make it difficult for cyclists traveling down to stop abruptly should the need arise.

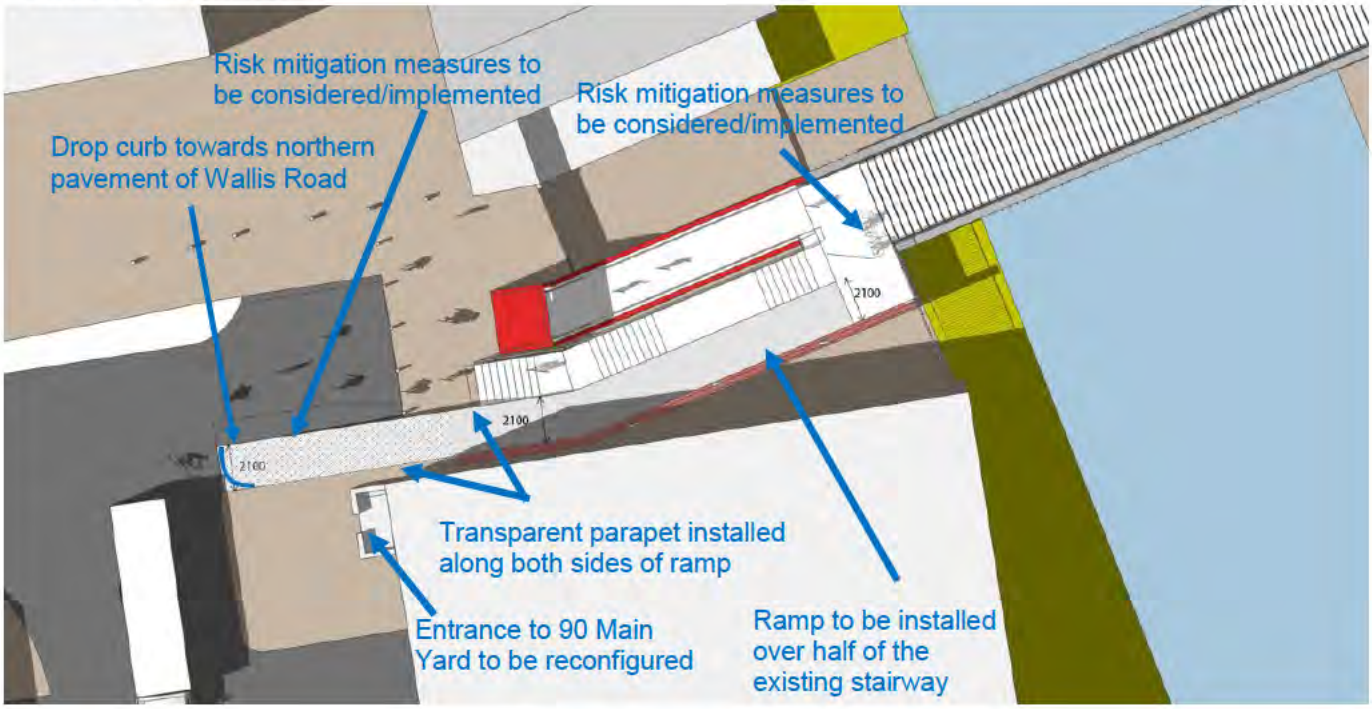



**Figure 9 Option 1 detailing**

It is proposed that the ramp will accommodate two-way traffic however the standards require a minimum of 3.0m for a two-way cycle scheme. The maximum width that can be achieved by splitting the stairway is 2.1m which is significantly lower than what is recommended in the standards and will present a number of safety concerns.

Typically bicycles are 650mm wide (with wider available) and downhill cyclists will ideally require a 500mm gap either side to avoid vertical obstructions (i.e. parapet). With a 650mm wide bike travelling over 7mph the London Cycle Design Standard (2014 update) identifies a 200mm deviation by the front wheel. This would mean cyclists would need 1.85m absolute minimum to cycle comfortably down the ramp (500mm gap either side, plus 650mm width of bike and 200mm front wheel deviation) in one direction. Cyclists climbing the slope at lower speeds on their bikes are prone to wobbling and deviation of 0.8m at 3mph (LTN2/08, Fig 2.1). To maintain balance, cyclists would require an absolute minimum of 2.45m width (500mm either side plus 650mm width of cycle and 800mm front wheel deviation) in one direction.

Pedestrians may also choose to wheel/walk their bike up the 13.48% gradient. Assuming a pedestrian is 750mm wide (Manual for Streets, figure 6.8), the width required for wheeling a bike up the ramp (without front wheel deviation) is 2.4m (500mm either side plus 650mm bike width and 750mm cyclist width) in one direction. It should be noted the above does not take into account wider cycles, trailers, tandems, tricycles and disabled people using hand cranked machines.

The volume and profile of cyclists using the ramp should also be considered. Leisure cyclists will be more vulnerable as they may be younger/older than a typical commuter, and less experienced in controlling their bicycle, especially in confined spaces and on steep slopes. In addition if there is an increase in the ramp use due to an event at QEOP then this could cause possible congestion and increased risk of injury to ramp users, given the steep slope and limited width available.

There is a need to investigate the installation of a bollard to deter non-cycle users from using the ramp. However, in the event of the lift being out of service, pedestrians with buggies and wheelchair users may choose to use the ramp. This may increase the risk of conflicts between cyclists and other users.

In summary, providing a width below those recognised in standards may increase the risk of incidents such as catching handlebars, collision with walls/parapets and collisions with other users. The confined nature and steepness of the ramp may increase the seriousness of the injuries sustained by a cyclist/other ramp users.

#### 3.3.2.1. Mitigating Measures

As it is not possible to provide the ramp requirements set out in guidance, i.e. LTN2/08 and London Cycle Design Standards, then the following could be considered to reduce/limit the safety concerns raised in Section 3.3.2:

- Rougher surface texture to be used on ramp to assist braking and manoeuvrability (London Cycle Design Standards, 20mm);
- Signs i.e. warning users of narrow width and steep gradient (both non-standard);
- Footway markings i.e. “SLOW”;
- Priority give way system to cyclists climbing the ramp;
- Visual and physical speed calming measure such as granite setts;
- A transparent parapet railing to maximise visibility;
- Street furniture or staggered barriers to reduce speeds at the top and bottom of ramp to manage entry and exit speeds. It should be noted the inclusion of a physical barrier may not be suitable where a high level of cycling is expected. Any physical barrier inclusion will need to be risk assessed to reduce the risk of conflicts with ramp users;
- Measures at the ‘T’ junction of Wallis Road and Main Yard to define priority, reduce cycle speeds into the junction, and increase cyclist’s visibility;
- Pedestrian warning of cyclists (signs and tactile surfaces);
- A minimum of 2.3m height clearance to all obstructions on building wall, i.e. flower baskets;
- No handrail along the wall of building 90 Main Yard; and
- Suitable illumination of the ramp.

Note: This list is by no means exhausted and further consideration will be given to risk mitigation within Phase 2 – Detailed Design.

### 3.3.3. Costing

The estimated projects cost for this option is £470,000. For full details please refer to Appendix H – Costing Estimates.

### 3.3.4. Summary

This option would require a departure from the standards both in terms of ramp gradient and width and whilst this is not uncommon within the industry and there are reasonable risk mitigation measures which could be implemented, based on the significant safety considerations highlighting within Section 3.3.2, this option has been discounted as it poses an unnecessary risk to ramp users.

## 3.4. Ramp Option 2a – Ramp Widened at Top and Bottom

### 3.4.1. General

Option 2a involves halving the existing stairway with the proposed ramp descending down the southern half of the new stairway, falling at a gradient of approximately 13.42% (1:7.45). The pedestrian staircase will have a reduced width of 1.9m. The existing pre-cast staircase will be removed and a new staircase of reduced width will be built/installed. The ramp will therefore extend past the foot of the stairs, landing in the raised pavement area to the north-west of 90 Main Yard as shown in Figure 10. Cyclists traveling down the ramp will be encouraged to exit the ramp towards the northern pavement of Wallis Road by dropping the curb in that direction as well as rounding it and using floor markings.

| | |
|---|---|
| Stair Width | 1.9m |
| Gradient | 13.42% (1:7.45) |
| Minimum Width | Top 5.4m |
| | Middle 2.1m |
| | Bottom 3.2m |
| Ramp Length | 30.18m |
| Project Cost | £520,000 |

**Figure 10 Proposed structure for Option 2a**

Option 2a differs from Option 1 in the fact that the ramp widens out at both the top and bottom, to provide a maximum ramp width of 5.40m and 3.20m respectively. Due to the site constraints the maximum width that can be achieved in the middle section of the ramp is 2.1m, as shown overleaf in Figure 11.

It is proposed that the existing façade will be retained and realigned to follow the southern edge of the ramp, with a new transparent parapet running along the northern edge of the ramp separating pedestrians and cyclists, as shown previously in Figure 10. A further transparent parapet will run along the south-west ramp edge.

The ramp will be constructed using timber for the frame and platform, to reduce both cost and noise. A bituminous type surface will form the wearing surface of the structure. It will also allow for faster construction, ensuring the bridge will be out of service for the shortest period possible.

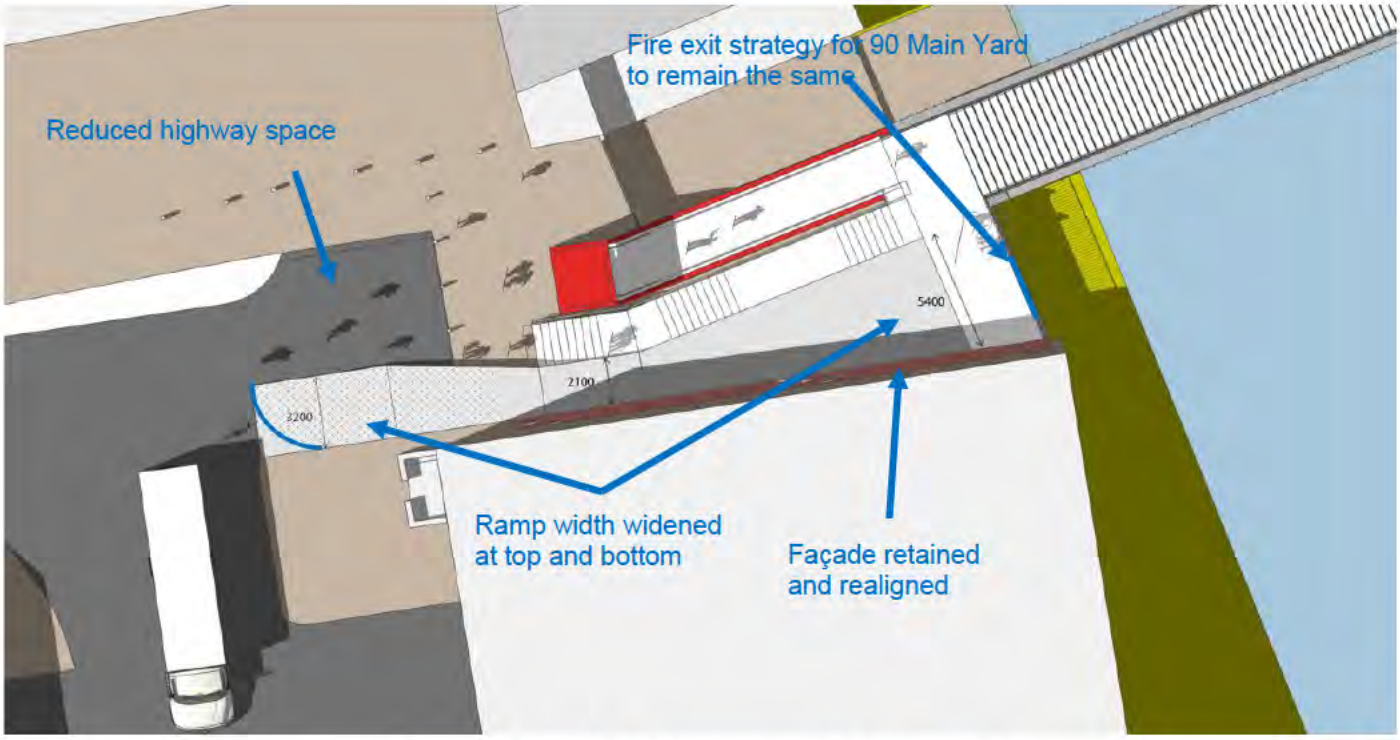



**Figure 11 Option 2a measurements & Proposals**

### 3.4.2. Safety (differences from Section 3.3.2)

Option 2a, although similar to Option 1, aims to alleviate some of the safety risks highlighted in Section 3.3.2. By increasing the ramp width at the top and bottom it will allow for greater space between passing cyclists. The narrow section of the ramp will act as a form of traffic calming with priority given to those traveling up the ramp. The widened landing will make exiting the bridge easier and safer. The mitigating measures for the temporary ramp are outlined in Section 3.3.2.1.

### 3.4.3. Costing

The estimated projects cost for this option is £520,000. For full details please refer to Appendix H – Costing Estimates.

### 3.4.4. Summary

The widening of the ramp at the top and bottom results in increased safety for all users, however, despite the improvements from Option 1, Option 2a will still require a departure from the standards both in terms of ramp gradient and width. It is concluded that this option would result in unnecessary safety concerns and has thus been discounted.

## 3.5. Ramp Option 2b – Ramp Widened at Top and Bottom (Façade Removed)

### 3.5.1. General

Option 2b is an extension of Option 2a, as the general layout and configuration are the same, however it is proposed that the existing façade be removed from the southern edge, recycled and used as part of the new structure. This will allow the ramp to be widened by 400mm and results in the maximum width at the top, middle and bottom of the ramp is 5.80m, 2.50m and 3.60m respectively, as shown in Figure 12. As per Option 2a, the existing staircase will be removed and replaced. As a replacement for the façade it is proposed that a mural will be designed and installed on 90 Main Yard wall.

| | |
|---|---|
| Stair Width | 1.9m |
| Gradient | 13.39% (1:7.47) |
| Minimum Width | Top 5.8m |
| | Middle 2.5m |
| | Bottom 3.6m |
| Ramp Length | 30.24m |
| Cost | £645,000 |

**Figure 12 Proposed structure for Option 2b**

The ramp will maintain the 13.39% (1:7.47) gradient and extend past the foot of the stairs, landing on the raised pavement area to the north-west of 90 Main Yard as shown in Figure 12 and Figure 13.

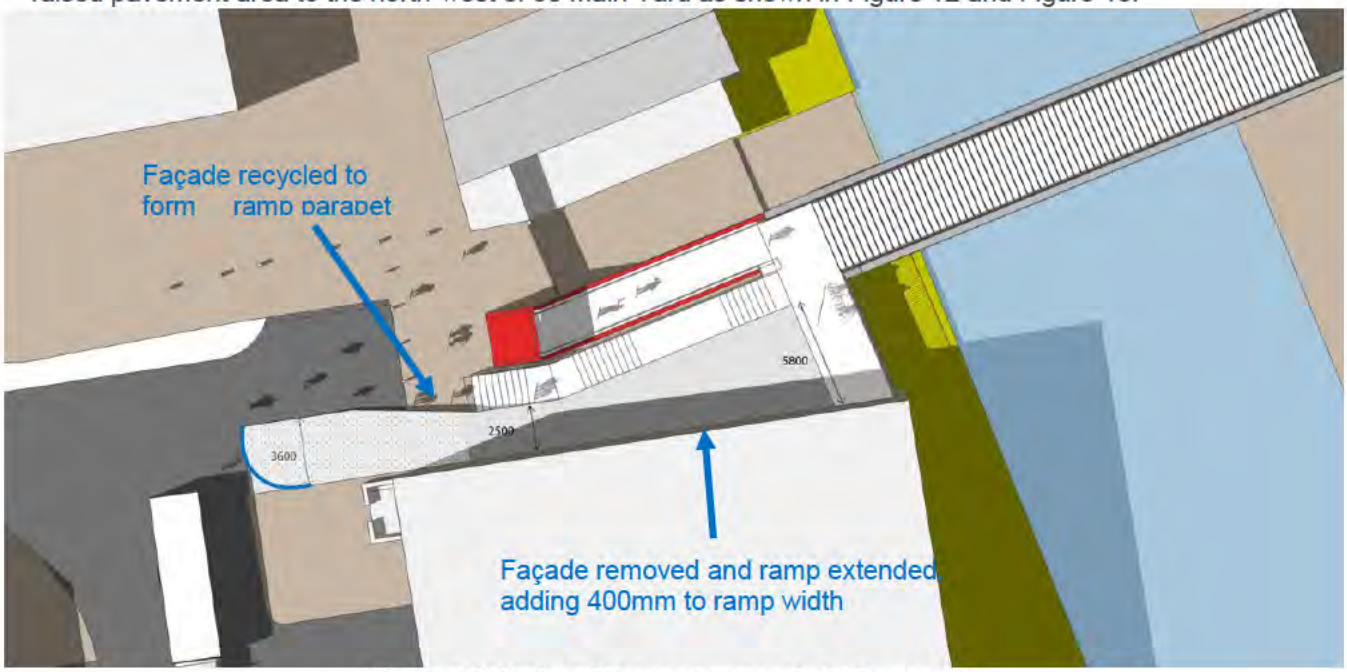



**Figure 13 Option 2b measurements & Proposals**

Cyclists traveling down the ramp will be encouraged to exit the ramp towards the northern pavement of Wallis Road, by dropping the curb in that direction, as well as, rounding the edge and using floor markings. As aforementioned, this shall be further developed in Phase 2 – Detailed Design along with the public realm for shared space design for the approach of the ramp.

The ramp will be constructed using timber for the frame and platform, to reduce both cost and noise. A bituminous type surface will form the wearing surface of the structure. It will also allow for faster construction, ensuring the bridge will be out of service for the shortest period possible.

### 3.5.2. Safety (differences from Section 3.3.2)

By increasing the ramp width to a minimum of 2.50m it will allow for greater space between passing cyclists. It surpasses the recommended 2.45m width for cyclists climbing at lower speeds in one direction (LTN2/08, Fig 2.1), and thus it provides the greatest width possible given the limiting site constraints. A priority system for cyclists traveling up the ramp would be required within the middle section to provide a form of traffic calming and reduce the risks of collision and injury. The mitigating measures for the temporary ramp are outlined in Section 3.3.2.1.

### 3.5.3. Costing

The estimated projects cost for this option is £645,000. For full details please refer to Appendix H – Costing Estimates.

### 3.5.4. Summary

Atkins have identified that this option is superior to the other options considered, given the limiting site constraints. The development of this option mitigates some of the noted risks, however residual risks remain.

The removal of the façade allows for its reuse within the design. This will need to be explored further in the Phase 2 - Detailed Design. The gradient of the ramp continues to represent an inherent risk caused by the strict site constraints, but as mentioned in the LTN2/08 “a very steep route may be better than none at all” (p.44, para 8.7.3), and thus Option 2b is judged the superior option given the constraints imposed on the design.

As this is the superior option to be taken forward as part of Phase 2 – Detailed Design, a Stage 1 RSA was undertaken for this design and is included in Appendix I – Stage 1 RSA for Option 2b.

## 3.6. Stage 1 Road Safety Audit

A RSA was carried out on the 23rd September 2014 and can be found in Appendix I – Stage 1 RSA for Option 2b. The following conclusions were found from the report:

- RSA noted design improvements from previous temporary option investigated;
- A number of issues were identified relating to the ramp width and gradient and are as follows:
    - Risks to ramp users losing control and falling due to excessive gradient and absence of intermediate landings.
    - Risk of pedestrians falling on the staircase.

- Risk of conflict between ramp users and vehicles / pedestrians in the vicinity of the ramp base.
- Risk of cyclist unable to cycle up steep gradient losing control.
- Risk of wheelchair / mobility scooter users experiencing difficulty and losing control due to steep ramp gradient.
- Risk of injury due to unintended use by skateboarders, BMX riders etc.
- Risk of westbound cyclists riding down steps.

As part of Phase 2 – Detailed Design, risk mitigating measures will be developed so as to address the concerns raised within the RSA shown above. A Stage 2 RSA will be undertaken after Phase 2 - Detailed Design with a third and final Stage 3 RSA being undertaken post construction.

## 3.7. Departure Process

Due to the limited space available in the vicinity of the western approach of Wallis Road Bridge (H10) it is difficult to provide a compliant ramp that meets the necessary design standards in terms of ramp width and gradient. The design standards (LTN2/08 & London Cycling Design Standards) recommend a minimum gradient of 7% (1:14.3) over 30m and a width of 2.45m for one directional traffic and 3m for two way traffic.

Option 2b provides significant improvements with regards to the ramp width and gradient over other designs investigated as part of this study, however a Departure from the standards will still be required in order to be accepted. A single Departure will need to be submitted and approved that will cover both the ramp gradient and width.

In addition to the Departure two Approval in Principles (AIPs) will be required for:

- The assessment of the changes to the existing structure
- The assessment of the proposed design

Both the Departure and the AIP's will need approval from the Olympic Infrastructure Technical Approval Authority (OITAA) who have a contracted response period of 10 working days.

## 3.8. Precedents

Following on from Option 2b a number of similar examples were identified so as to provide a precedent for ramps with narrow widths and steep gradients.

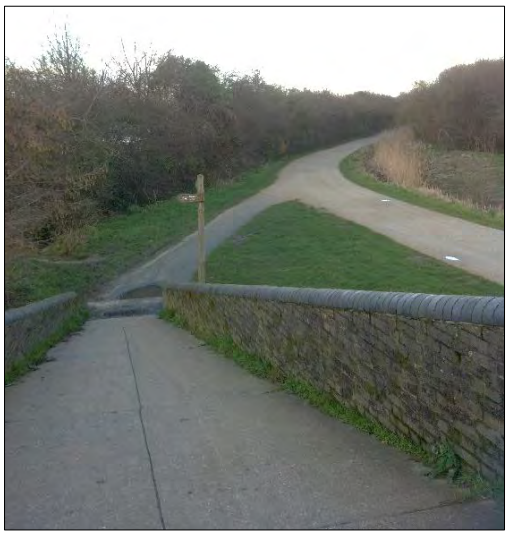


**Figure 14 Steep ramp located at Hackney Marshes**

The first example, shown previously in Figure 14, is a steep ramp located on the canal network at Hackney Marshes with a gradient of 20% (1:5). Currently it is used for cycling purposes however it is noted that a “run up” is required to climb the ramp.

The second example is an existing canal and pedestrian ramp located in Camden, linking Regents Canal towpath to the adjacent Prince Albert road, shown in Figure 15. The maximum gradient of this ramp is 14% (1:7) which is steeper than the gradient proposed in any of the 3 options.

**Figure 15 Ramp located in Camden**

## 3.9. Public Realm Redevelopment

The area in the vicinity of the lift, ramp and stairs will be used by a number of different users and will therefore require redevelopment so as to ensure conflicts are mitigated. It is anticipated that a continuous transition from the Wallis Road Bridge (H10) ramp to the “Aldgate to Hainault Quietway route” will be provided, as this will provide cyclists with clear direction and separate them from other Wallis Road users.

The public realm with be developed as part of Phase 2 – Detailed Design to address the shared use of the approach space between pedestrians, cyclists and vehicles. The public realm development is to be funded by the GLA as part of the wider Quietway scheme.

# 4. Programme, Planning & Construction Sequence

## 4.1. Feasibility Programme

A feasibility programme has been developed for the project and is shown overleaf. An estimated completion time is shown and stated currently as early 2016.

## 4.2. Planning

Planning approval will be required. Suitable design information will be collated and submitted for planning approval. This submission is anticipated for February 2015. It must be noted and included within the planning application that the Wallis Road Bridge (H10) lies within the Hackney Wick conservation area.

## 4.3. Construction Sequence

The construction sequence detailed below provides a brief overview however a more detailed construction sequence will be planned in Phase 2 – Detailed Design.

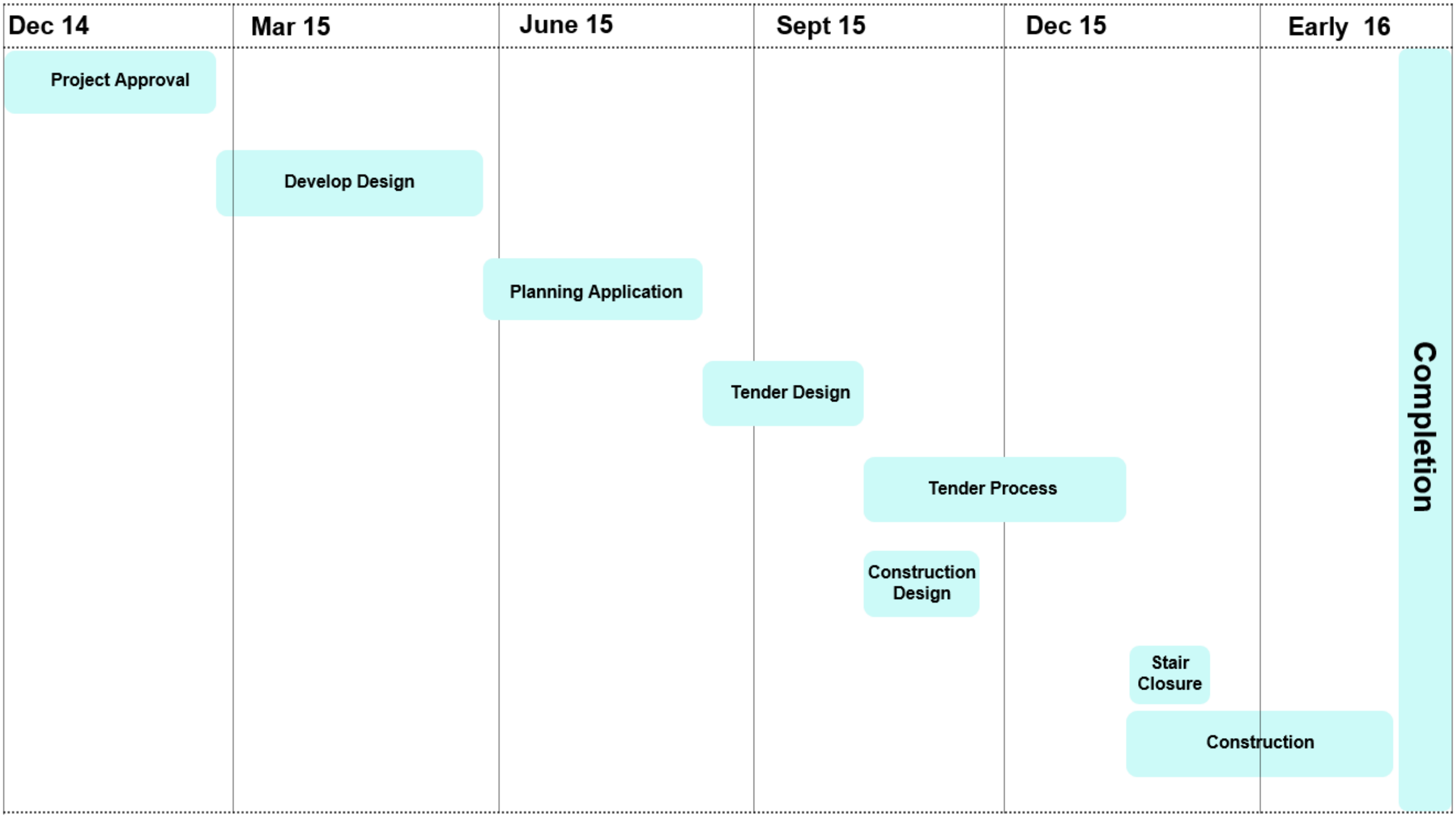
1. Removal of existing handrail on stairs and any bollards blocking access to stairs;
2. Protection provided to the existing lift;
3. Deconstruction and removal of the existing stairs;
4. Prefabrication/installation of new staircase of reduced width (1.9m), which will require lift operation;
5. Raising of the pillarbox located on the site adjacent to the stairs;
6. Prefabrication/installation of new timber ramp, which will require lift operation;
7. Re-profiling of the lower section of the new ramp, raising of existing access chambers to ensure a flush finish with new ramp;
8. Installation of new hand railing to ramp;
9. Implementation of any mitigation measures on the ramp.
10. Reinstallation of existing bollards.

Both Option 2a and Option 2b would also require deconstruction of the existing metal façade after stage 2 in the above construction sequence. This façade would then need to be reinstalled as per the plan views illustrated earlier in this report. This reinstallation phase would occur after stage 7 for Option 2a, and after stage 9 for Option 2b.

Stage 5 would differ for Option 2b as the pillarbox would need to be relocated 10m towards the river from its current location.

For the construction sequence above there will need to be a closure of the existing stair area lasting 3 weeks. This could be reduced further if the construction of the timber frame was prefabricated and therefore just installed on site. This would minimise both the time it takes to erect on site and minimise potential risks involved with installation.

# Programme Proposal



# 5. Conclusion

Three design proposals have been considered in this report for a new temporary ramp over the existing stairway on the western section of the Wallis Road Bridge (H10). Given the limiting site constraints for the area all investigated options have inherent safety concerns, for which mitigation measures have been investigated.

**Table 3 Option Comparison**

| Design Option | Standards (LTN2/08 & London Cycling Design Standards) | Option 1 | Option 2a | Option 2b |
|---|---|---|---|---|
| Gradient | 7% (1:14.3) for over 30m length ramp | 13.48% (1:7.42) | 13.42% (1:7.45) | 13.39% (1:7.47) |
| Minimum Width | 2.45m – One directional traffic<br>3m – Two way traffic | 2.1m | 2.1m | 2.5m |
| Ramp Length | | 30.05m | 30.18m | 30.24m |
| Pros | | Enhanced cycling access & experience | Enhanced cycling access & experience | Meets the width standard requirement for one way traffic;<br>Enhanced cycling access & experience |
| Cons | | Does not meet minimum width and gradient standards;<br>Pedestrian stairway will be reduced in width;<br>End of ramp visibility poor | Does not meet minimum width and gradient standards;<br>Pedestrian stairway will be reduced in width;<br>End of ramp visibility poor | Does not meet gradient, nor two way traffic width standards;<br>Pedestrian stairway will be reduced in width;<br>End of ramp visibility poor |
| Ramp Material | | Timber | | |
| Project Cost (includes Detailed Design, Project management, CDMC, OPEX, Site investigation & Feasibility study) | | £470,000 | £520,000 | £645,000 |
| **Option(s) to be taken forward as part of Phase 2 – Detailed Design** | | ✗ | ✗ | ✓ |

As Table 3 identifies, Option 1 and 2a are viable from a physical construction perspective but have considerable residual risks for ramp users, and divert widely from accepted standards. Option 2b improves significantly from Option 1/2a and has been identified as the superior option considering the limitations placed on the design and is to be taken forward as part of the Detailed Design Stage (Phase 2).

A recommended construction material of timber for the frame and platform is to be used to construct the temporary ramp. The viability of recycling of the existing façade will be investigated during Phase 2 - Detail Design.

# Appendix A – Previous Investigations

# 9.2 Wallis Road pedestrian and cycle bridge

**Challenges and issues**
The main challenges associated with the delivery of a pedestrian and cycling bridge in this location are to some extent similar to the vehicular bridge. The available width between 90 Main Yard and the Eton Mission Rowing Club means space is severely restricted for a new bridge deck at this location, although the current H10 bridge of approximately 5m width (4m deck and 1m construction) can be accommodated. Figure 9.7 below shows the existing bridge deck.

Figure 9.7 Wallis Road pedestrian bridge deck

A significant issue for consideration is access arrangements for Wallis Road businesses. Under a ped/cycle bridge option it is not possible to utilise a secondary vehicle ramp for access into Main Yard, so primary access for vehicles into Main Yard from Wallis Road needs to be maintained. Another consideration is the impact that any ramp landing on Wallis Road has on access to properties to the north side of the road. With this in mind it is likely that a relatively narrow ped/cycle ramp will need to be provided to enable continued access to both Main Yard and properties at the eastern end of Wallis Road.

**Review of design and structural issues**
The current footbridge arrangement based on a 4 metre width and has been the subject of some challenge as to its suitability for a fully accessible cycle usage.

The existing H10 bridge does not have a slope but steps and a lift. As the existing bridge been considered as sub-standard for cycling use it is likely that ramps will be required in order to make the bridge more accessible to all users including cyclists and people with restricted mobility. The same issues as identified with slope gradient and ramp length for the vehicular bridge may be relevant to a pedestrian and cycling bridge. The ramp gradient is likely to be more of an issue for users of the pedestrian and cycling bridge ramps when compared to motor vehicles using the vehicular bridge ramps. The previous analysis in the vehicle bridge section suggests that whilst DMRB national guidance on ramps for pedestrians and cycling bridges ideally seeks 1:20 gradients, there is scope for provision of at 1:15, but that pedestrian landings should be provided..

The "as built" information indicates that deck thickness of the bridge is 600mm. It is considered it may be possible to achieve a small reduction in construction depth, but it would require a completely new deck. Any reduction would also only be in the order of 100mm. For a slope of 1:20 a 0.3 metre difference between the footbridge deck thickness and a road bridge deck thickness would only give a reduction in ramp length of 6m.

Given the marginal reduction in the overall ramp length given by such a small reduction at this stage it has been discounted.

As identified above, given the limited space between the buildings and the requirement for space to construct and maintain a replacement wider structure, the available width for the bridge construction which appears to be viable is a maximum of approximately 9 metres.

We recommend that if replacement of the existing bridge is to be considered a viable proposition, in addition to the provision of ramps, a wider bridge deck is also provided. However replacement of the bridge deck would be a costly exercise and might not represent value for money given the bridge has only recently been constructed. We recommend that a better option would be to maintain the existing bridge deck but consider providing ramps.

Options for ped/cycle bridges are shown in the table on page 13

**Ramp lengths and slopes**
The commentary in the previous section on ramp lengths and gradients is also relevant to this section. Whilst a standard 1:20 ramp providing a length of c75m, extending beyond the junction of Wallis Road and Main Yard is desirable in gradient terms, it will have a major impact on access for businesses on Wallis Road. We therefore recommend that any new ramp for a pedestrian / cycling bridge has a ramp of no steeper than 1:15 on Wallis Road and considers provision of landings for pedestrians. Ramps with landings are considered as part of the options analysis table on page 13. Images of the main ramp options for a ped/cycle bridge at Wallis Road are shown in figure 9.6 and in figures 9.9 - 9.12.

On the QEOP side of the canal there is no requirement for a ramp as the landing will be on the level as per the existing situation shown in figure 9.8 below.

Figure 9.8 - Existing H10 landing in QEOP showing level approach

**Programme**
As the location already has a structure in place and some of this will need to be removed to permit the new structure to be constructed and the lift may need to be retained for some considerable time to ensure access for some users. This stage demolition process may take 3 months and general bridge and retaining wall construction approximately 9 months with some overlap of operations

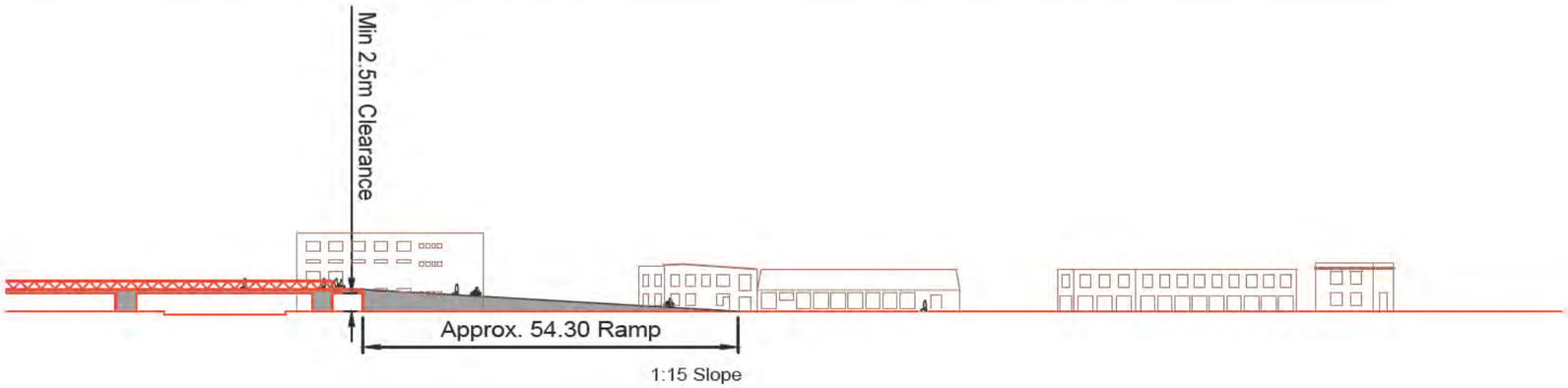
**Next steps and recommendations**
Our recommendation is that options F and G (Figures 9.11 and 9.12) be taken forward. This is based on retaining the existing bridge deck with new ramped access.

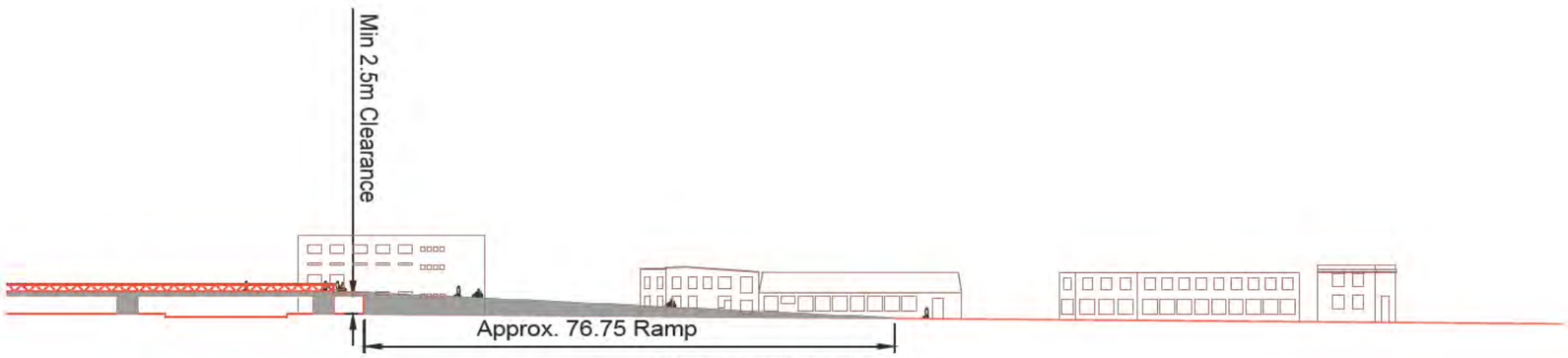
Another key feature of options F and G is the relatively narrow (4m or 3m) ramps down into Wallis Road. It should be highlighted that whilst option F is feasible and the ramp arrangement is preferred, it would require a significant alteration in access arrangements for properties on the north side of Wallis Road. We understand that potential future re-development of this area may make alterantive acces arrangements possible at this location.

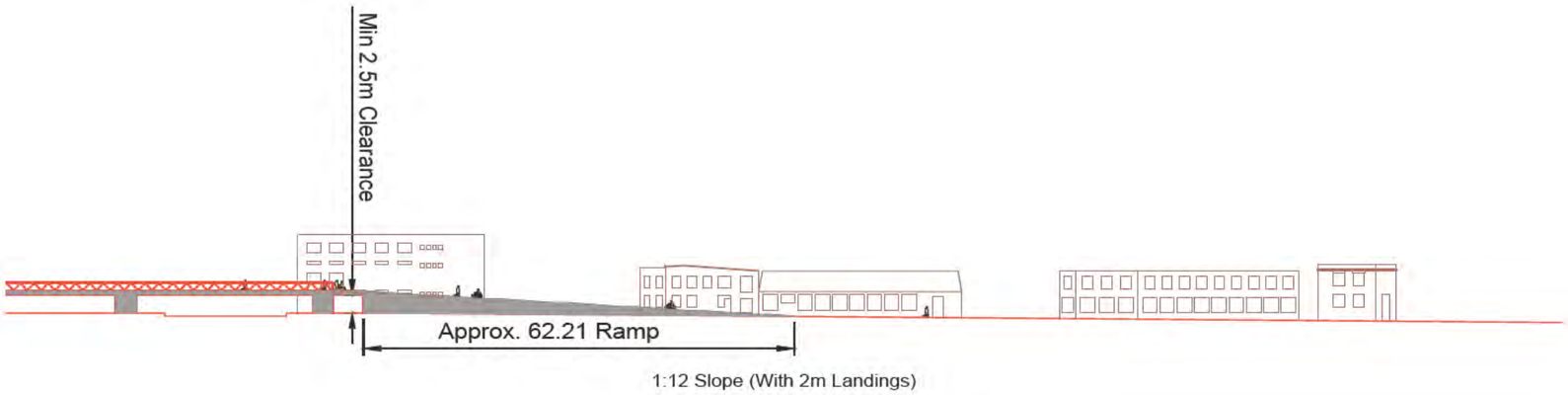
| Wallis Road Pedestrian and Cycle Bridge | Option D<br>New bridge deck construction (5m) with new 5m shared use ped/cycle ramp (5m) | Option E<br>Existing bridge deck (4m) with new 4m ramp | Option F<br>Existing bridge deck (4m) with new 2m ped ramp with landings and adjacent 2m cycle ramp | Option G<br>Existing bridge deck (4m) with new 3m ramp |
|---|---|---|---|---|
| **Key elements of design / structural specification** | 1 x 2m footway<br>1x3m cycleway<br>2 x.0.5m construction edge<br>• Bridge deck width 5.0m, total bridge width 6.0m<br>• Building clearance of 1.5m required either side of bridge meaning total space requirement is 9m<br>• Ramp Gradient recommended at no greater than 1:15 for all users.<br>• 30m span | 1x4m shared use footway/cycleway<br>2x0.5m construction edge<br>• Total bridge width 5m as per existing<br>• 4.0m wide shared use ramp at 1:15 proposed<br>• Total ramp length c55m<br>• 30m bridge span | 1x4m shared use footway/cycleway<br>2x0.5m construction edge<br>• Total bridge width 5m as per existing<br>• 30m bridge span<br>• 1x2m ramp with landings at 1:15 for pedestrians<br>• 1x2m adjacent standard ramp at 1:17 for cyclists.<br>• Ramp width is 4.5m including construction edge<br>• Total ramp length 76m (with landings) | 1x4m shared use footway/cycleway<br>2x0.5m construction edge<br>• Total bridge width 5m as per existing<br>• 30m bridge span<br>• 1x3m ramp at 1:15 for shared use<br>• Total ramp width 3m (3.5m with construction edge)<br>• Total ramp length 55m |
| **Advantages** | • Enhanced pedestrian and cycling experience due to a wider bridge deck and ramps.<br>• A ramp for cyclists and pedestrians on the Wallis Road side | • Enhanced pedestrian and cycling access and experience with a new ramp.<br>• Maintaining existing bridge deck has benefits of minimising disruption and considerable cost savings | • Enhanced pedestrian and cycling access and experience with a new ramp.<br>• Maintaining existing bridge deck has benefits of minimising disruption and considerable cost savings<br>• Ramps with landings are fully DDA compliant<br>• Separate ped and cycle ramps reducing scope for collisions | • Enhanced pedestrian and cycling access and experience with a new ramp.<br>• Maintaining existing bridge deck has benefits of minimising disruption and considerable cost savings |
| **Disadvantages** | • Doubt whether replacing the existing 4m bridge deck with a 5m deck represents value for money.<br>• 1:15 ramp is starting to get steep for some pedestrians and it is unclear whether a lift can also be accommodated under this arrangement.<br>• 1:15 ramp still has serious impacts on Main Yard and Wallis Road property access unless a narrower 3m ramp provided.<br>• Minimal width enhancements when compared to 'as built'. | • 1:15 ramp is starting to get steep for some pedestrians and it is unlikely that a lift can be accommodated under this arrangement. In response to this option F has been developed.<br>• 1:15 ramp still has serious impacts on Main Yard and Wallis Road property access<br>• There will be a requirement to alter access arrangements to the properties on the north side of Wallis Road | • 1:15 ramp still has serious impacts on Main Yard and Wallis Road property access<br>• There will be a requirement to alter access arrangements to the properties on the north side of Wallis Road unless new development proposals and access arrangements are secured. | • 1:15 ramp is not fully compliant and may be steep for some users<br>• Narrow ramp is not ideal for pedestrian / cyclist shared use. Risk of collision.<br>• Whilst access to properties on Main Yard and Wallis Road is maintained, footways will need to be narrowed. |
| **Costs** | Bridge £992,800<br>Wallis Rd Bridge ramp £390,000<br><br>**Total £1,382,000** | Wallis Rd bridge ramp £584,000<br><br>**Total £584,000** | Wallis Rd ramp £768,000<br><br>**Total £768,000** | Wallis Rd ramp £510,000<br><br>**Total £510,000** |
| **Commentary/ Recommendation** | Whilst this option is feasible and provides an enhanced pedestrian and cycling experience due to a wider bridge deck and ramps, there is some doubt whether replacing the existing 4m bridge deck with a 5m deck represents value for money. The 1:15 ramp recommended on Wallis Road would also impact on access to Main Yard and properties at the eastern end of Wallis Road. The alternative would be to provide a narrower 3m ramp and enable vehicles to access Main Yard. For these reasons the option is not recommended for further consideration. | This option maintains the existing foot/cycle bridge deck and adds a new ramp on the Wallis Road side. There is no requirement for a ramp on the QEOP side as the levels are the same.<br><br>The main benefits of this option are economy due to not requiring the bridge deck to be replaced and improved cycling / ped access arrangements. The main downside of this option is the 1:15 ramps and 4m ramps which are not DDA compliant unless landings are added extending the overall ramp length. Access to properties in both Main Yard and the north side of Wallis Road is also a major issue unless alternative access arrangement can be made. We understand there is potential for the redevelopment of properties on the north side of the road. Subsequent options F and G are sub-options of option E with different ramps. | This option is essentially a sub-option of option E. The main difference is the introduction of two x 2 m wide separate but adjacent ramps, one for pedestrians at 1:15 with landings and the equivalent length standard ramp for cyclists, with a gradient of 1:17. This has the result of extending the overall length of the ramps from 55m in Option E to 76m in Option F. The major downside of this option is the impact on access to properties on the north side of Wallis Road. Whilst the 4.5m ramp width (including construction width) can be accommodated and allows continued access to Main Yard for vehicles an alternative access arrangement for properties on the north side of Wallis Road needs to be found. This requires using private land for access and losing parking and loading space on forecourts. We understand there is potential for the redevelopment of properties on the north side of the road. | This option is also a sub-option of option E but enables vehicular access to both Main Yard and Wallis Road properties to be maintained on either side of the bridge landing. The main benefit of this option is that traffic can access the businesses on the north side of Wallis Road without a requirement for significant land take from the business forecourts.<br><br>The 3m access ramp (full width 3.5m with construction edge) will be shared use for pedestrian and cyclists. This generates some issues in terms of collision risk between pedestrians and cyclists and it may be necessary to install safety measures or require cyclists to dismount.<br><br>Whilst this 3m ramp option is workable we think the wider 4m ramp option (split into 2x2m ramps) is preferable. |
| **Summary recommendation** | ✗ | ✗ | ✓ | ✓ |

# Figure 9.6 - Wallis Road pedestrian & cycling bridge - ramp options

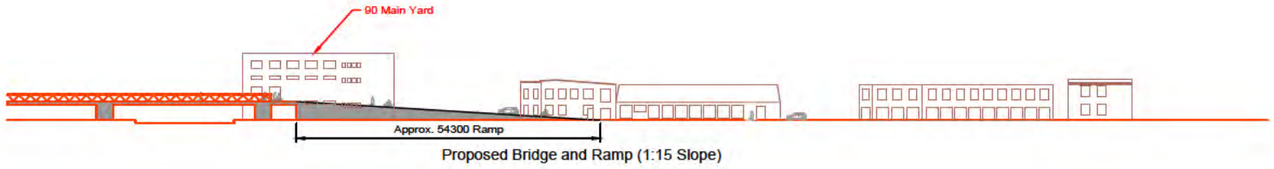




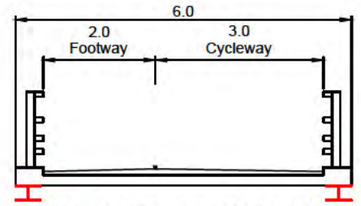



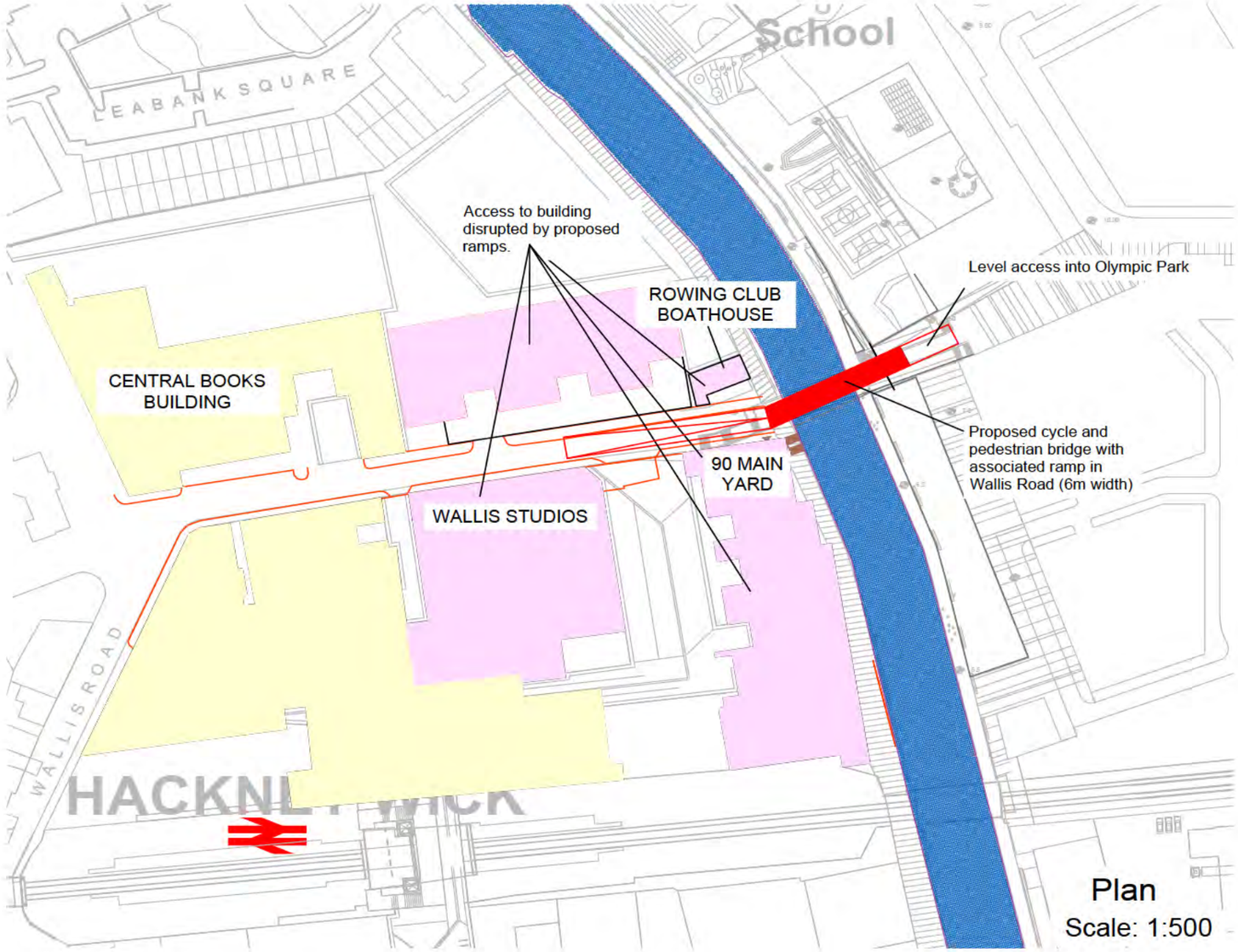
# Figure 9.9 - Wallis Road ped/cycle bridge Option D




Proposed Bridge and Ramp (1:15 Slope)




Typical Section Footway & Cycleway Only

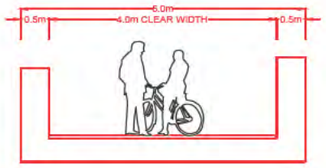



Plan
Scale: 1:500

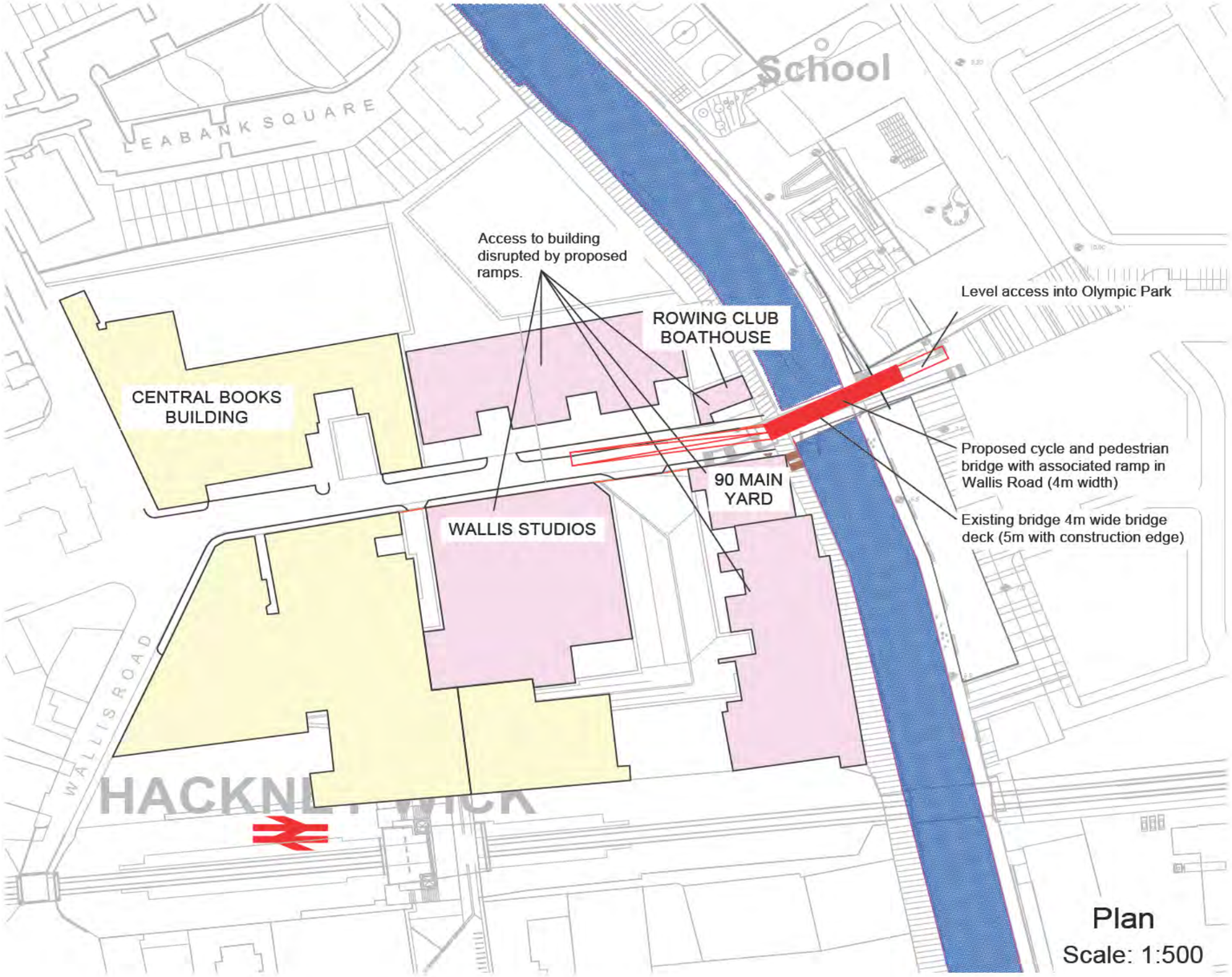
# Figure 9.10 - Wallis Road ped/cycle bridge Option E

ATKINS


Proposed Bridge and Ramp (1:15 Slope)

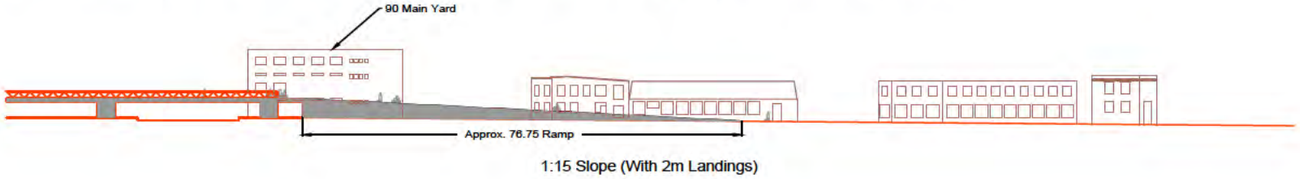



Typical Section at Bridge



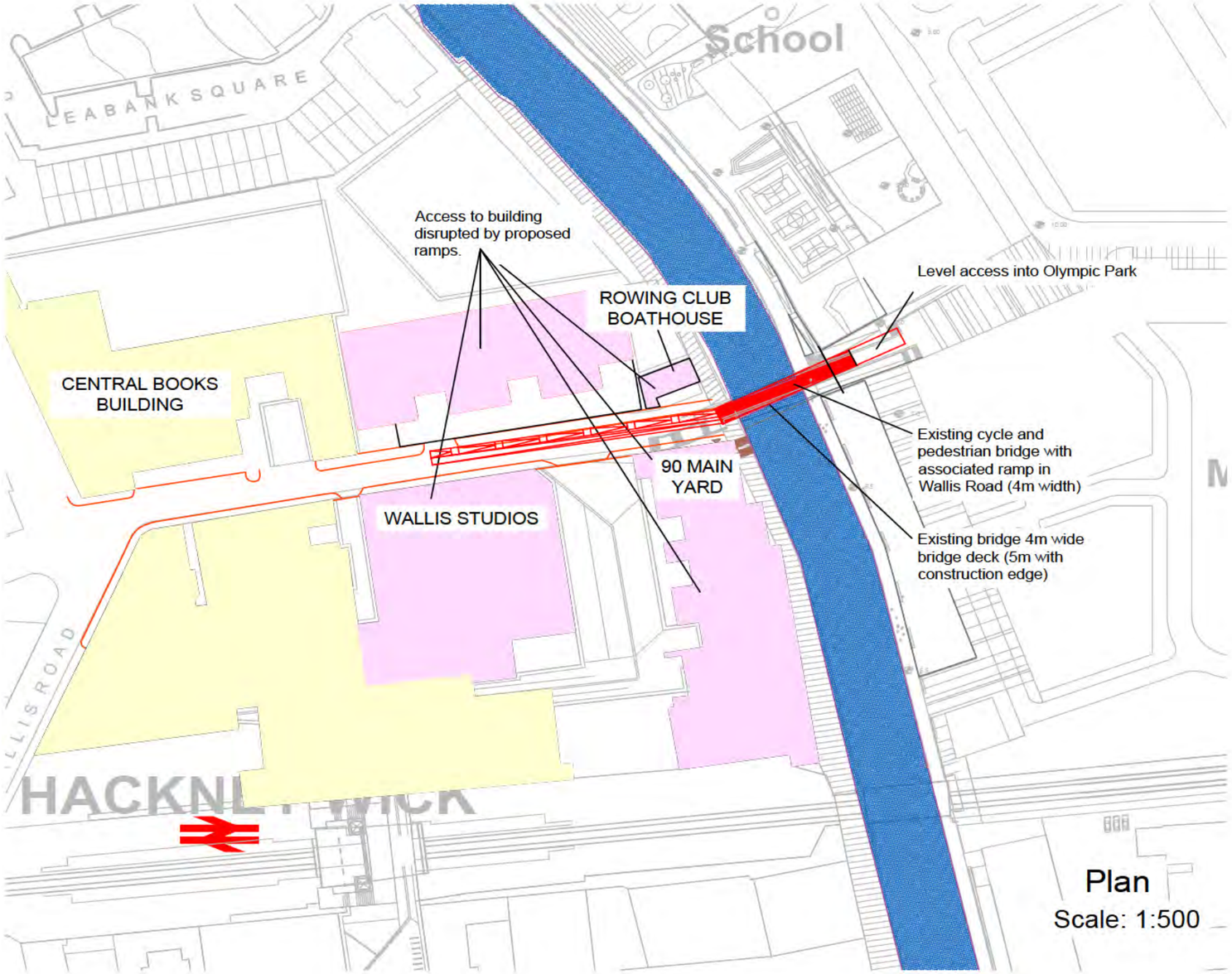

Plan
Scale: 1:500

# Figure 9.11 - Wallis Road ped/cycle bridge Option F



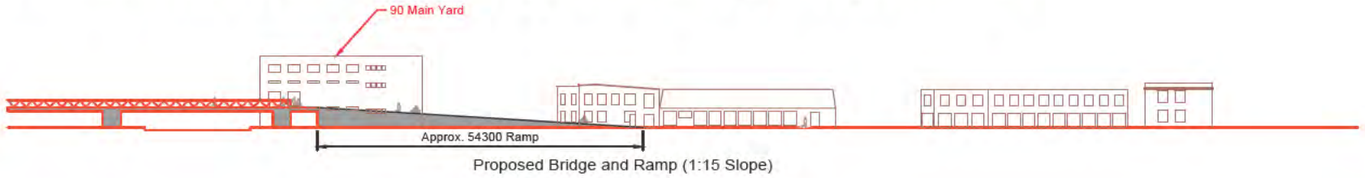

1:15 Slope (With 2m Landings)


Typical Section at Bridge



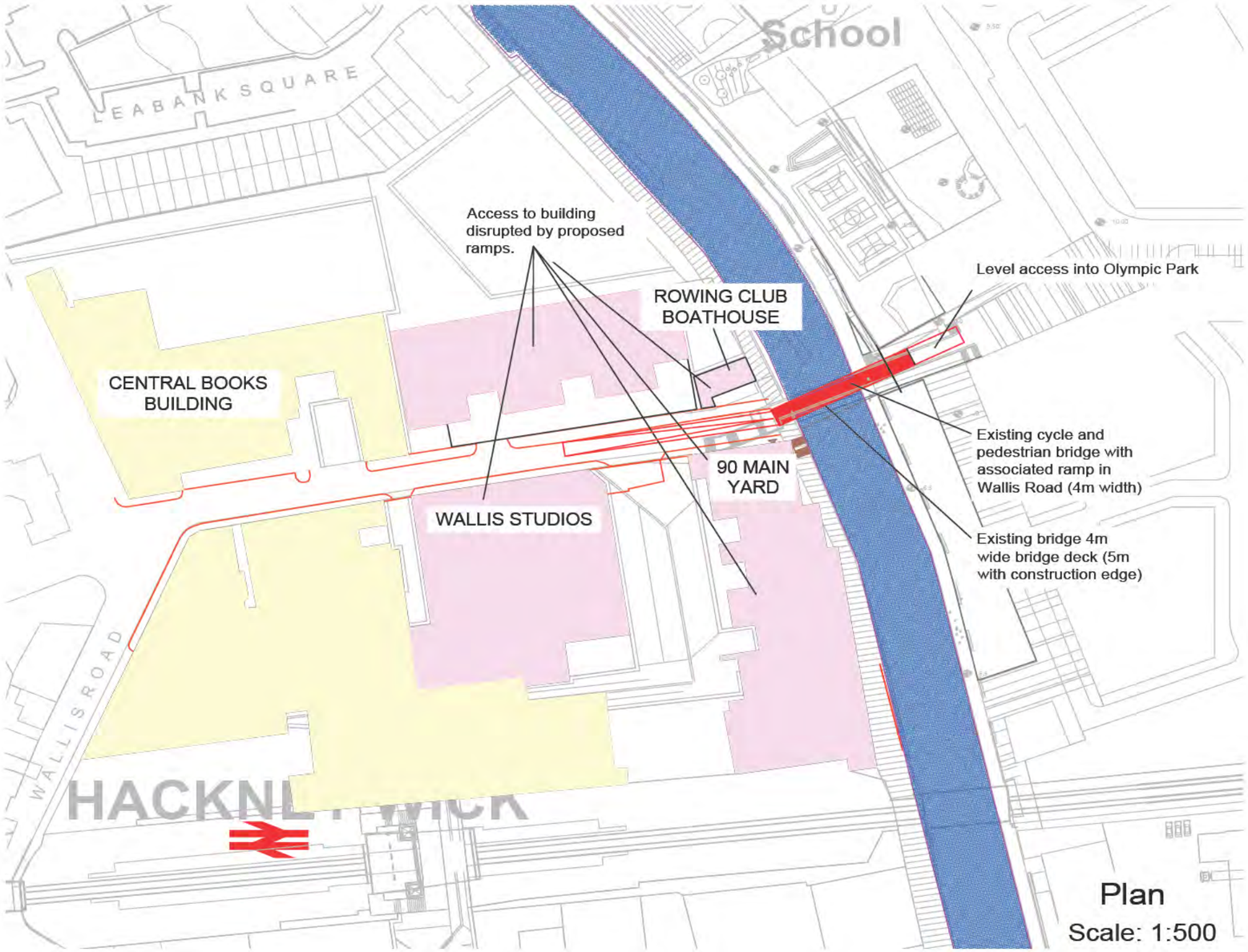
# Figure 9.12 - Wallis Road ped/cycle bridge Option G






Proposed Bridge and Ramp (1:15 Slope)


Typical Section at Bridge




Plan
Scale: 1:500

Figure 9.13 - Cross section of Wallis Road adjacent to Wallis Studios showing approximate dimensions


The images on this page provide some appreciation of the likely affect on Wallis Road of the potential pedestrian/cycle ramp options in terms of access to properties and visual impact. Figure 9.13 shows a cross section of Wallis Road just to the west of Main Yard. Total width of Wallis Road at this location is approximately 12.2m including footways and carriageways with a further privately owned business frontage of approximately 6m. We propose enabling continued vehicular access to Main Yard through a single carriageway of approximately 4m. This may require the footway on the south side of Wallis Road to be narrowed. Two potential ramp options are shown in the images below.

Figure 9.14 shows the 4m ramp option (seperate but adjacent pedestrian ramp with landings at 1:15 and a cycle ramp at the equivalent 1:17). This option would require vehicular access to the properties on the north side of Wallis Road beyond the start of the ramp to be via the privately owned frontages. The alternative might be for a strip of land to be acquired along this frontage to enable the construction of an access road for these businesses.

An image showing our recommended 3m ramp is shown in figure 9.15. This ramp would enable continued vehicular access on both sides of the ramp, although on the north side the footway would be lost and there would still likely be a requirement to secure a strip of land from the frontage for a replacement footway. At 2.5m there is insufficent headroom between the ramp where it meets the bridge deck and Wallis Road, for an underpass as an alternative means of vehicular access for the boathouse.



Figure 9.14 - Approximate location and size of 2m wide ped ramp with landings & adjacent 2m cycle ramp for option F


Figure 9.15 - Approximate location and size of 3m wide shared use ped/cycle ramp for option G


-

# H10 Bridge and Wallis Road

# Retain the lift and build an integrated 1:10 ramp and a new stair






## Pro's / Cons

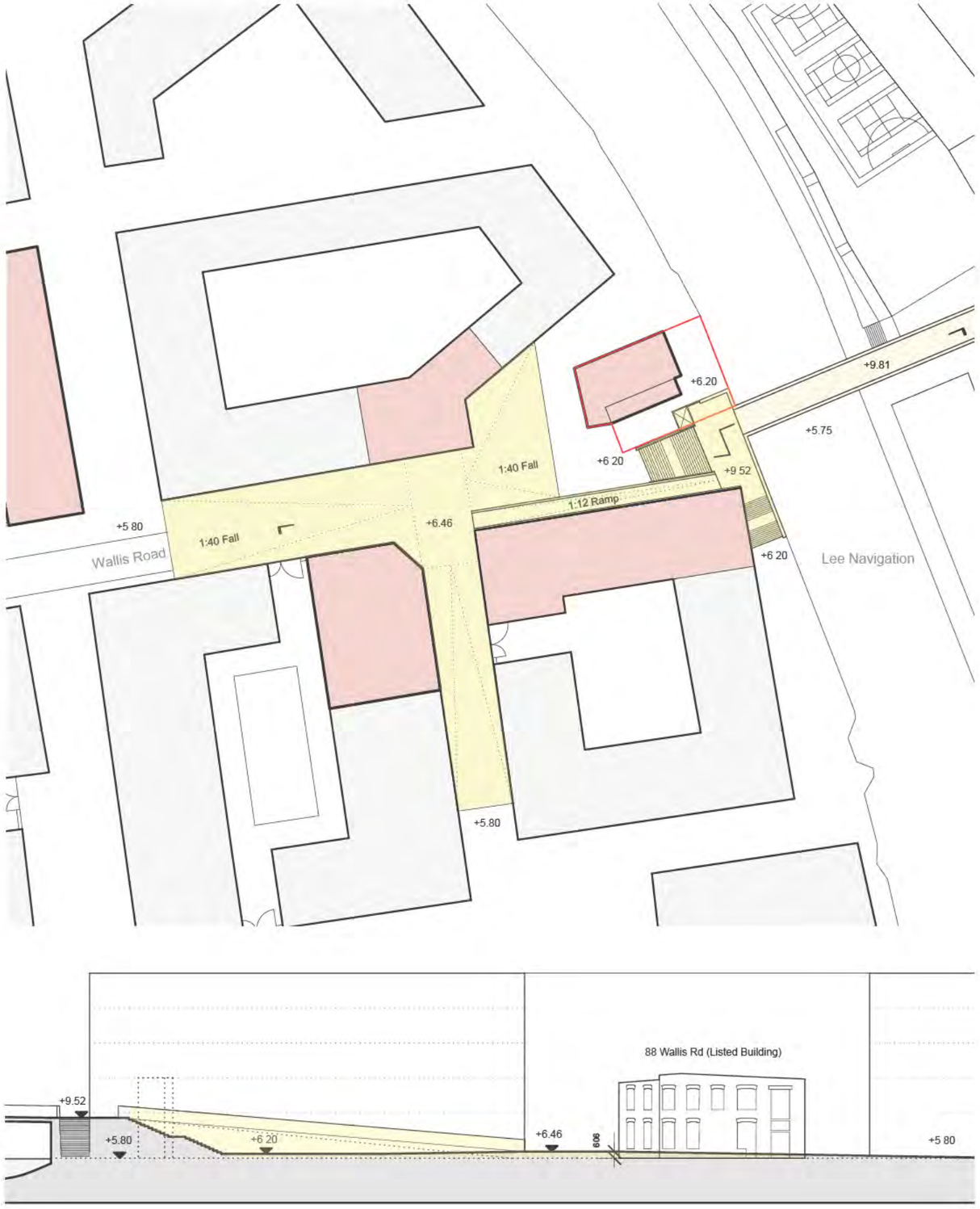
- New ramp integrates well with proposed masterplan
- No CPO required
- No change to width of vehicle access to Boat House
- No impact on 88 Wallis Road
- Legible and clear choices for all crossing options

- Lift is required as ramp gradient is non-compliant for wheelchair users
- Requires masterplan buildout in order to be delivered
- Requires negotiation for 1:10 only cycle ramp

## Cost

**£450k**

# Relocate the lift, build a new stair and raise Wallis Road level to form a 1:12 ramp







## Pro's / Cons

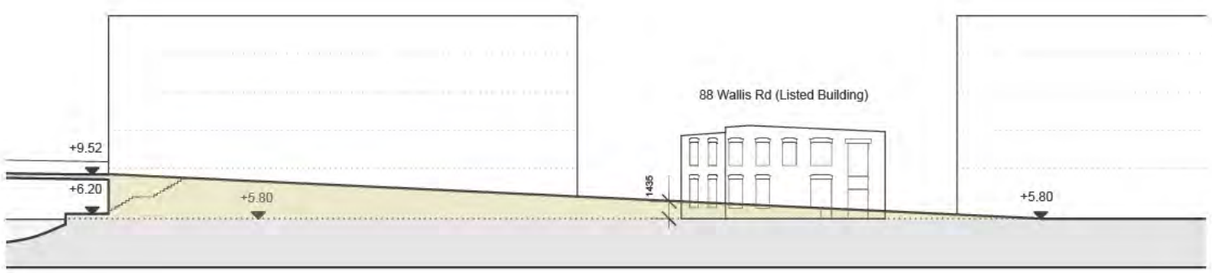
- New ramp integrates well with proposed masterplan
- Generous stair

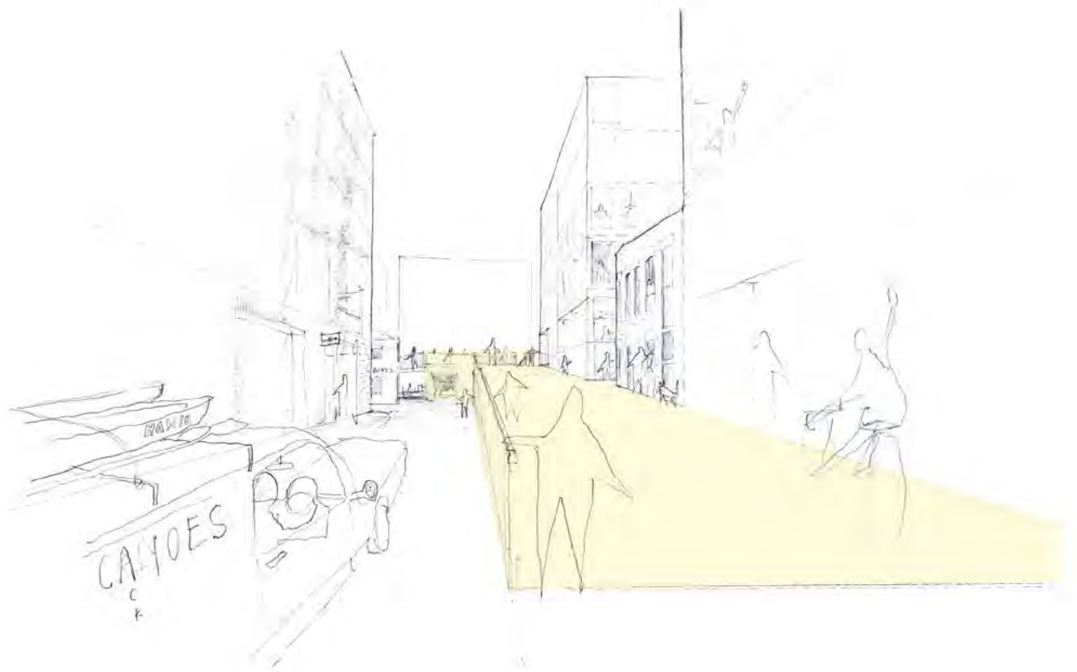
- CPO required on Boat House (9 months & £600k costs)
- Lift required as ramp gradient is non-compliant
- Requires lift to be relocated
- Requires levels to be raised along Wallis Road by 600mm
- Impacts on ground floor of listed 88 Wallis Road
- Requires masterplan buildout in order to be delivered
- Requires negotiation for 1:12 only cycle ramp

## Cost

**£850k (+£600k for CPO)**

# Remove lift and build new 1:21 ramp


## Pro's / Cons

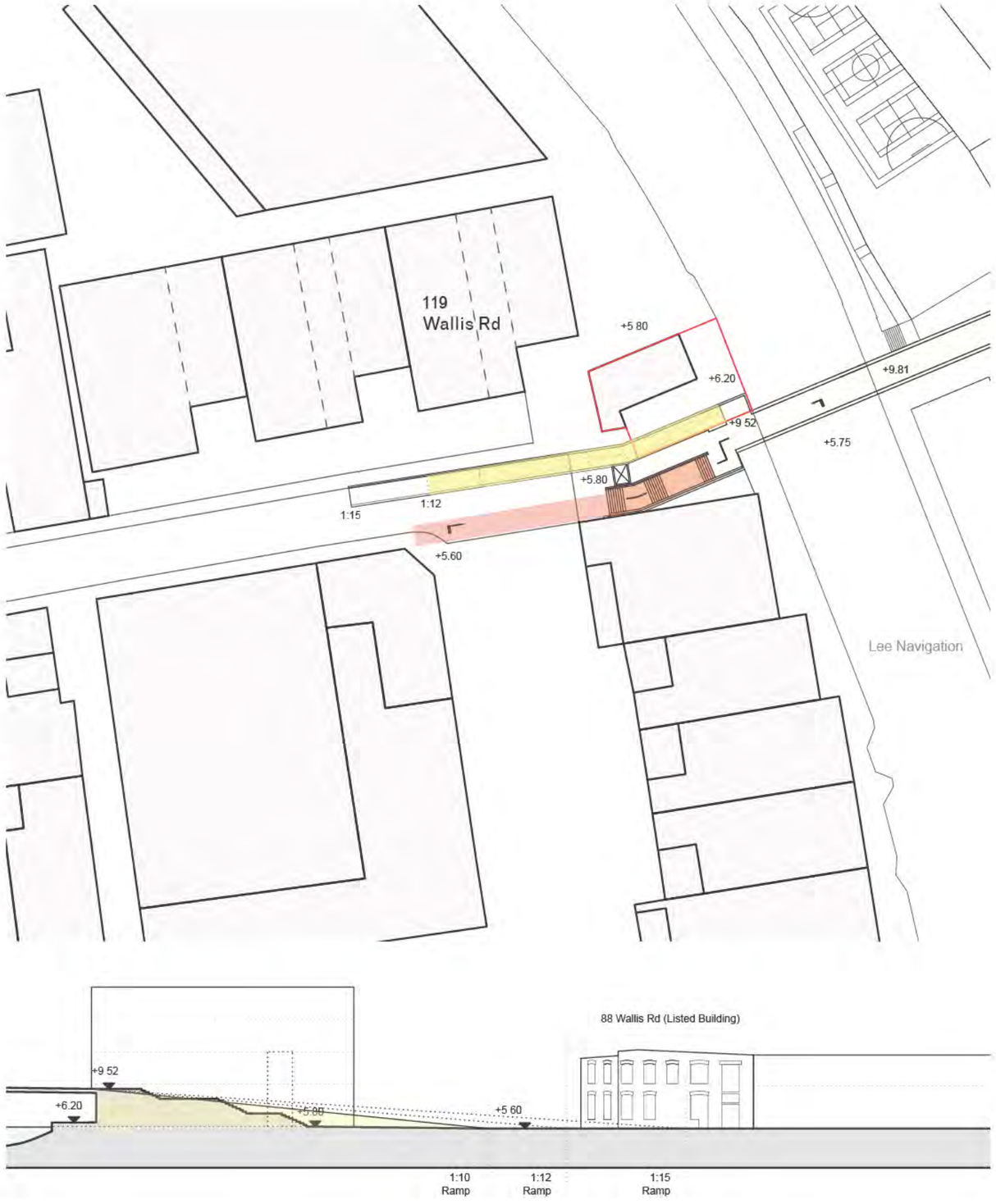
- No lift required
- Fully compliant access for all users
- Retains vehicle access to Boat House
- No CPO required

- Requires splitting of Wallis Road - bad for informal connectivity
- Impacts on ground floor of listed 88 Wallis Road
- Requires masterplan buildout in order to be delivered

## Cost

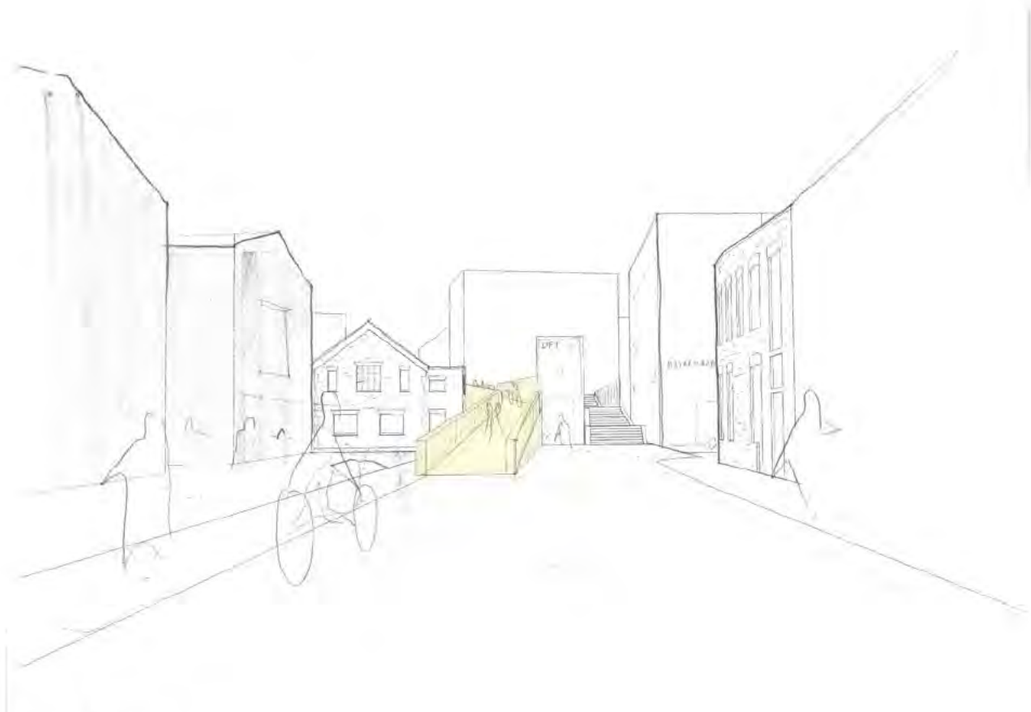
## £2.275m

# Construct a temporary ramp









## Pro's / Cons

- No adjustment to existing arrangement required
- Can be constructed immediately
- Not dependant on masterplan build out
- No impact on 88 Wallis Road
- Works with either 1:12 or 1:15 gradients (subject to consultation)

- CPO required on Boat House (9 months £600k)
- CPO unlikely to be successful given lack of regeneration benefit
- Compromised vehicle access to Boathouse
- Compromised Access to 199 Wallis Road
- Option for ramp over existing stair blocks access to Main Yard (red)

## Cost

**£150k (+£600k CPO)**

# Appendix B – Stage 1 Road Safety Audit

local transport projects

*traffic engineering and transport planning*

Sustrans

# Hackney Wick, Wallis Road Bridge Ramp
# Stage 1 Road Safety Audit

June 2014

22, Trinity Lane,
Beverley,
East Riding of Yorkshire.
HU17 0DY.

01482 679 911

info@local-transport-projects.co.uk

www.local-transport-projects.co.uk

*Registered No. 5295328*

Sustrans

# Hackney Wick, Wallis Road Bridge Ramp

# Stage 1 Road Safety Audit

June 2014

| Client Commission | | | |
|---|---|---|---|
| Client: | Sustrans | Order No: | |
| Commissioned By: | [redacted] | Date Commissioned: | June 2014 |

| LTP Quality Control | | | | | |
|---|---|---|---|---|---|
| Job No: | LTP/14/1871 | | File Ref: | London Wallis Road Bridge Ramp RSA1 Draft v2.docx | |
| Issue | Revision | Description | Originated | Checked | Date |
| 1 | 0 | Report | [redacted] | [redacted] | 03/06/14 |
| | | | Authorised for Issue: | | |

## LTP PROJECT TEAM

*As part of our commitment to quality the following team of transport professionals was assembled specifically for the delivery of this project. Relevant qualifications are shown and CV's are available upon request to demonstrate our experience and credentials.*

| Team Member | LTP Designation | Qualifications |
|---|---|---|
| [redacted] | [redacted] *(Project Manager)* | *BA(Hons) MSc CMILT MCIHT FSoRSA* |
| [redacted] | [redacted] | *CEng BSc(Hons) MICE MCIHT* |

# Hackney Wick, Wallis Road Bridge Ramp
# Stage 1 Road Safety Audit

## CONTENTS

# 1.0 INTRODUCTION

1.1 Local Transport Projects Ltd. (LTP) has been commissioned by Sustrans (ref. [redacted]) to carry out a Stage 1 Road Safety Audit on a scheme to provide a new ramp for the use of cyclists to the west side of Wallis Road Bridge, Hackney Wick. Wallis Road Bridge (Bridge H10, London Legacy Development Corporation), links Hackney Wick, over the River Lea Navigation to the Queen Elizabeth Olympic Park. The existing west side staircase has a wheeling channel for cycles on the right hand side (for climbers).

1.2 The proposed ramp would be fitted to the right hand side (for climbers) of the existing stair case to the west side of the bridge. The proposed ramp is on a continuous gradient (1 in 4.7 - lower section and 1 in 7.2 - upper section). It would halve the existing staircase width to approximately 1.8m.

1.3 The audit was carried out between 20th June and 3rd July 2014 and was based on an examination of the information identified with the audit instruction, as described on the slides within PowerPoint presentation, "*H14 A+M sketches 2013*", dated 25/6/13 and issued by the London Legacy Development Corporation.

1.4 No Personal Injury Collision (PIC) data for the highway in the vicinity of the bridge approaches was made known to the Audit Team. A search on the publically available Crashmap website (http://www.crashmap.co.uk/Search) revealed no personal injury collisions on Wallis Road in the vicinity of the existing steps within the 5 year period Jan 2008 to Dec 2012.

1.5 A site inspection was carried out on Wednesday 25th June 2014, between 15.50 and 16.30. The weather was fine and dry at the time of the site visit.

1.6 The audit team comprised the following people:

- [redacted], BA(Hons) MSc CMILT FIHE MCIHT FSoRSA (Audit Team Leader)
- [redacted] BSc CEng MICE MCIHT (Audit Team Member)

1.7 The audit was carried out with reference to HD19/03 "Road Safety Audit" (The Highways Agency, DMRB Volume 5, Section 2, Part 2), and the IHT Road Safety Audit Guidelines 2008, (Third Edition).

1.8 No Departures from Standards were made known to the Audit Team.

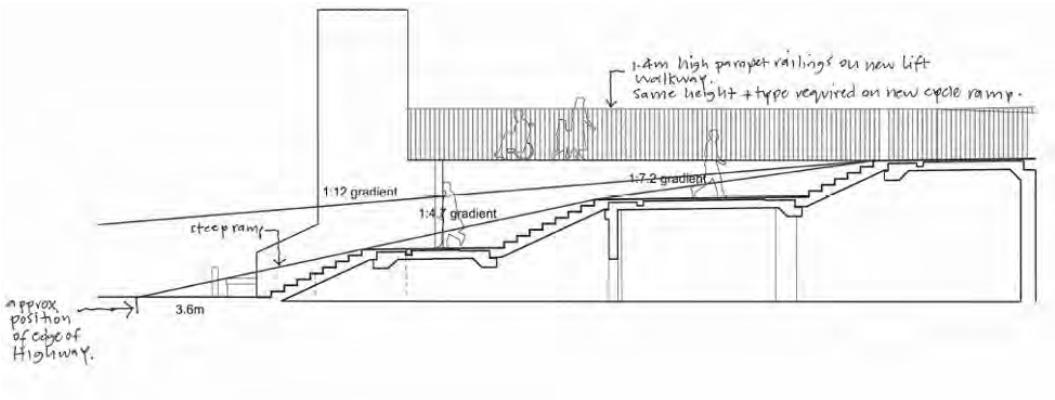
1.9 The audit team has examined and reported only on the road safety implications of the scheme using the information provided and has not examined or verified the compliance of the design to any other criteria.

1.10 The problems identified in this report are considered by the audit team to require action in order to improve safety and reduce the risk of collisions occurring.

# 2.0 ITEMS RAISED BY THIS SAFETY AUDIT

## 2.1 Problem

**Risk of ramp users losing control and falling due to excessive gradient and absence of intermediate landings**. The proposed ramp has a steep gradient on a continuous descent with no rest areas (landings). Users travelling down the ramp may build up speed as they descend and be unable to stop - increasing their risk of falling from their bike or coming into conflict with other ramp users.

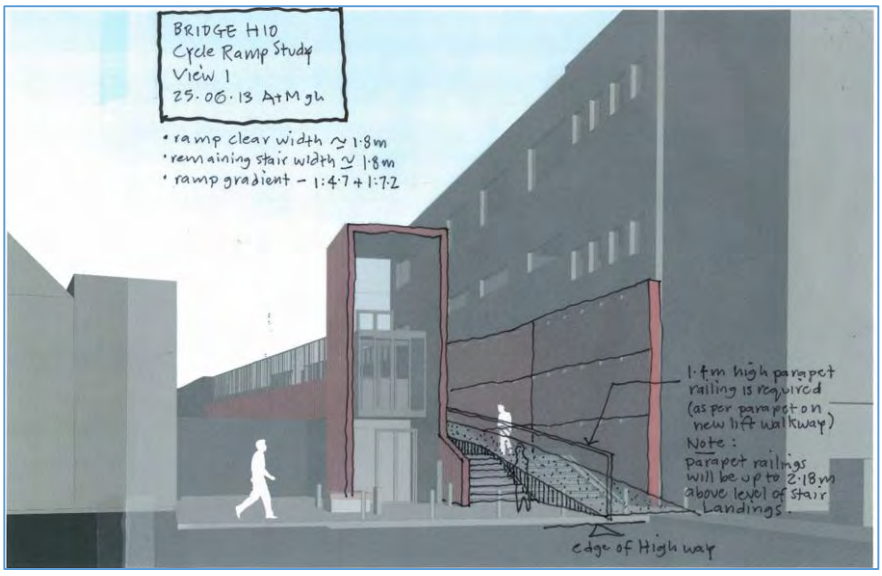



### Recommendation

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004).

## 2.2 Problem

**Risk of pedestrians falling on the staircase**. The existing staircase is approximately 3.6m wide. If it has been designed for a capacity pedestrian loading, then halving its width will increase pedestrian density and the risk of conflict between pedestrians.

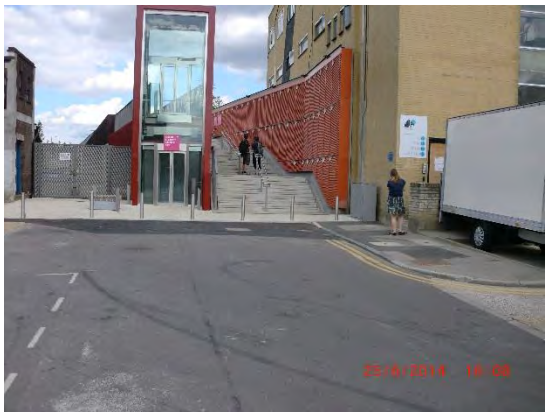


**Recommendation**

The width of the proposed staircase should be adequate for expected usage. This requirement may not be consistent with the proposal to provide a bridge ramp in this location.

2.3 **Problem**

**Risk of conflict between ramp users and vehicles / pedestrians in the vicinity of the ramp base**. The steep gradient of the ramp and absence of landings may lead to cyclists reaching high speeds on the down slope. Visibility in the area around the base of the ramp, particularly of pedestrians emerging from the adjacent doorway access and vehicles travelling northbound from the parking area to the south, is restricted, leading to potential collisions.



**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004). Suitable staggered barrier / bollards should be provided in the area around the base of the ramp to reduce the speed of cyclists. It may also be possible to relocate the pedestrian access to the adjacent building to exit westwards, removing a parking space to accommodate, subject to negotiation with the building owner. However this would not completely remove the risk of pedestrian / cycle conflict in this area, only the risk associated with pedestrians exiting the building at this point.

2.4 **Problem**

**Risk of cyclist unable to cycle up steep gradient losing control.** The proposed ramp gradients are 1:4.7 on the lower section and 1:7.2 on the upper section. Recommended gradients are 1:20 or 1:12 maximum in exceptional circumstances - DMRB BD 29/04, (Highways Agency 2004). As such, less able cyclists may struggle to remain mounted when cycling up the ramps as their bike becomes less stable at low speed. They may lose control and fall from their cycle, with potential for injury.

**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004).

2.5 **Problem**

**Risk of wheelchair / mobility scooter users experiencing difficulty and losing control due to steep ramp gradients**. It is understood that the existing lift would remain in place for wheelchair / mobility scooter users with the proposed ramp arrangements. However they would not be physically prevented from gaining access to the ramp (to do so would likely prevent convenient cycle access also). This could lead to a situation where a wheelchair or mobility scooter user enters the top section of ramp and loses control on the steep downward gradient, with no intermediate landings, leading to injury.

**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004).

2.6 **Problem**

**Risk of collision between cyclists on ramp**. The proposed ramp is shown as 1.8m wide, (it is assumed that two-way use is envisaged). This is below the absolute minimum width of 2.0m (or 3.0m with the additional 0.5m recommended for each side of a track that is bounded by a wall or railings as in this case) for a two-way cycle track as outlined in the London Cycling Design Standards (TfL 2005) and also the London Cycling Design Standards Consultation Draft (TfL 2014 para 3.1.15). This increases the risk of collisions between cyclists travelling in opposite directions and cyclists overtaking other cyclists, particularly in the downward direction where speeds are likely to be higher.

**Recommendation**

The width of any ramps provided for cyclists in this location should be in accordance with the LCDS (TfL, 2005) or London Cycling Design Standards Consultation Draft, TfL 2014.

2.7 **Problem**

**Risk of injury due to unintended use by skateboarders, BMX riders etc.** There is a risk that groups for which the scheme was not designed may use the facility in an unintended way, for example to practice stunt riding on the ramp. Not only may this present a risk to those taking part in such activities, but it may also present a hazard to other legitimate users of the ramp should a collision take place. Although such a risk may be present to some extent with any ramp scheme, the steep nature of the proposals in this case may increase the likelihood of such groups congregating around the ramp, increasing the risk of injury.

**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004).

2.8 **Problem**

**Risk of westbound cyclists riding down steps**. The alignment of the steps with the proposed arrangement would mean that they were almost in a straight line from the edge of the bridge parapet railings for westbound cyclists, with cyclists having to make a sharp movement to the left in order to access the ramp. There is a risk that a westbound cyclist travelling at speed could ride down the steps of the pedestrian facilities, resulting in injury.

**Recommendation**

Provide suitable staggered barrier / bollard arrangement at top of steps to prevent cyclists riding straight down steps.

## 3.0 AUDIT TEAM STATEMENT

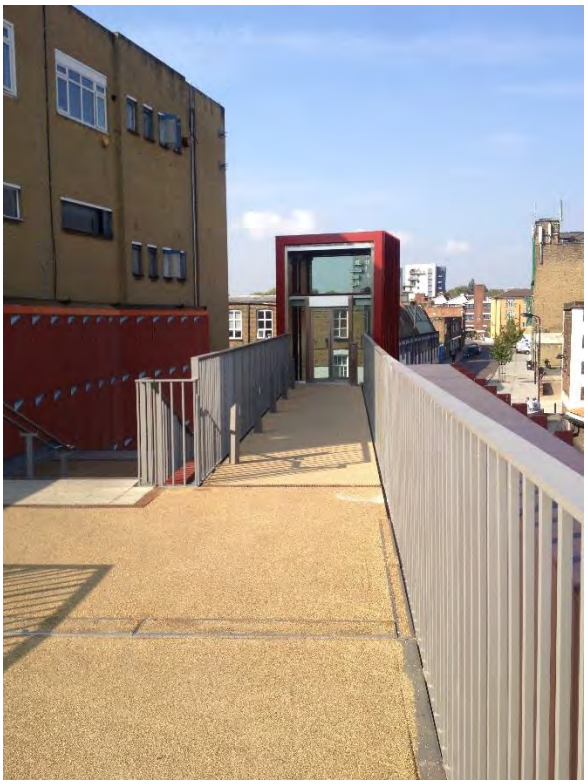
3.1 I certify that this audit has been carried out in accordance with HD 19/03.

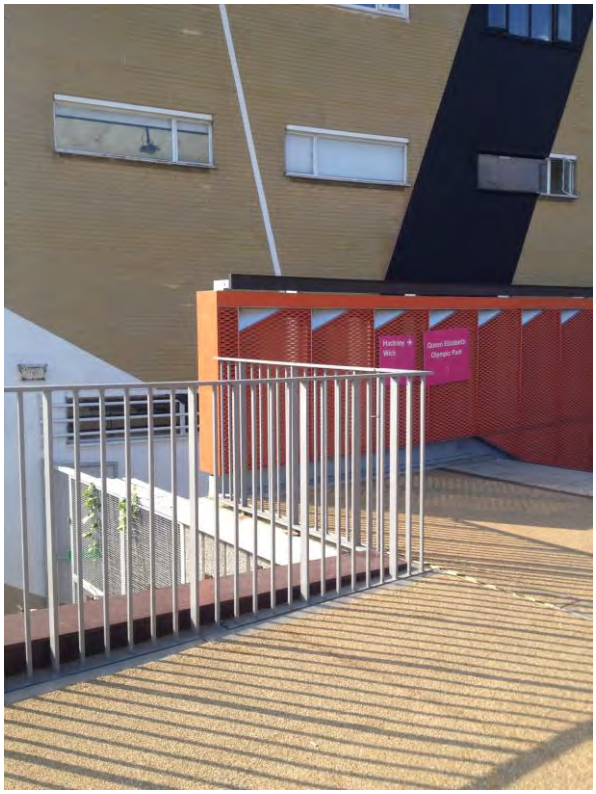
| Audit Team Leader | | | |
|---|---|---|---|
| **Name:** | [redacted] | **Signed:** | |
| **Position:** | [redacted] | **Date:** | |
| **Organisation:** | **Local Transport Projects Ltd.** | | |
| **Address:** | **22 Trinity Lane, Beverley, East Riding of Yorkshire. HU17 0DY** | | |

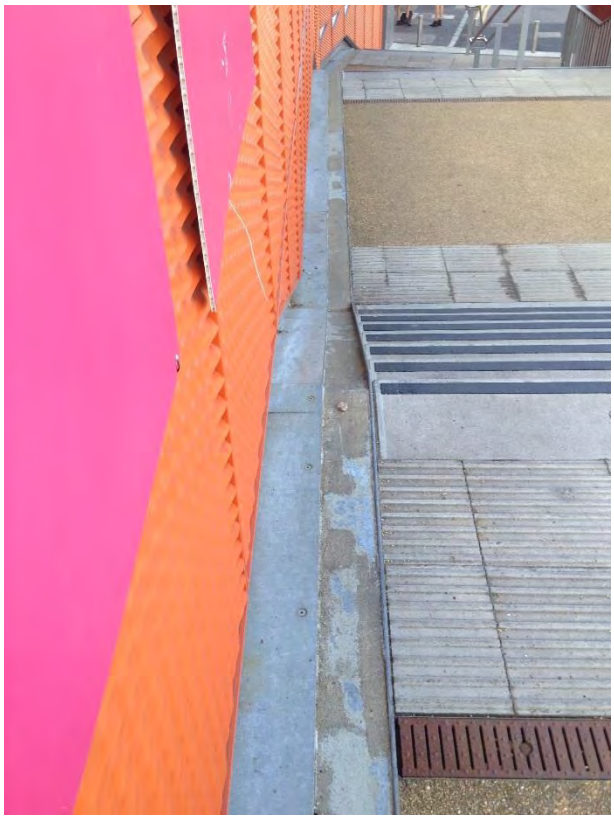
| Audit Team Member | | | |
|---|---|---|---|
| **Name:** | [redacted] | **Signed:** | |
| **Position:** | [redacted] | **Date:** | |
| **Organisation:** | **Local Transport Projects Ltd.** | | |
| **Address:** | **22 Trinity Lane, Beverley, East Riding of Yorkshire. HU17 0DY** | | |

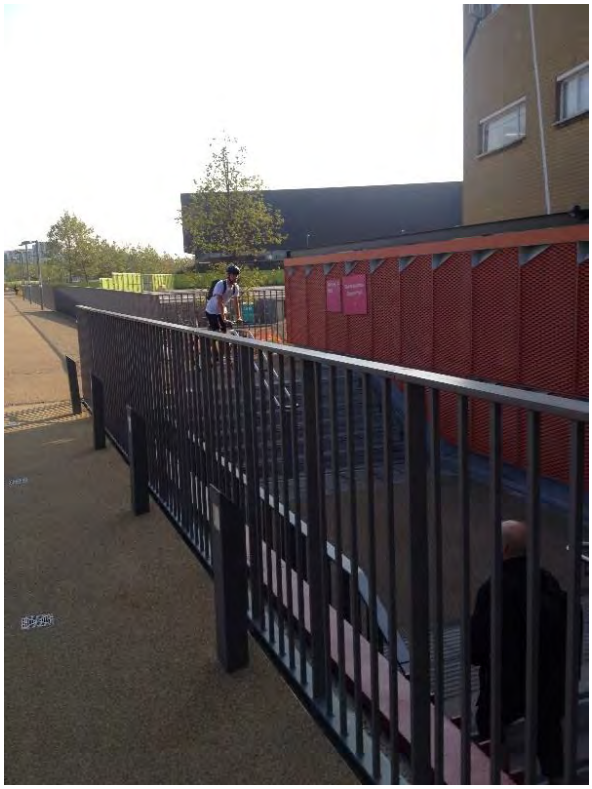
# Appendix C – Site Photographs


TC376

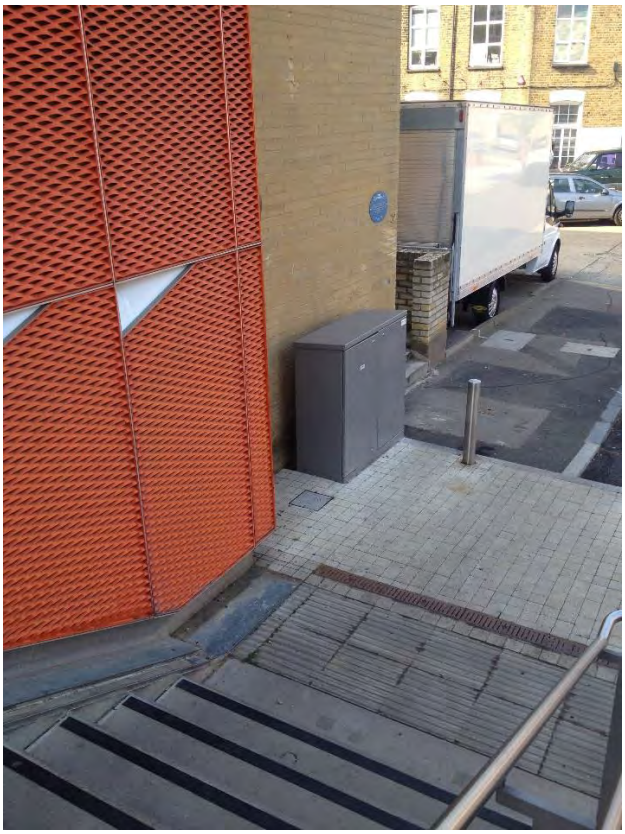






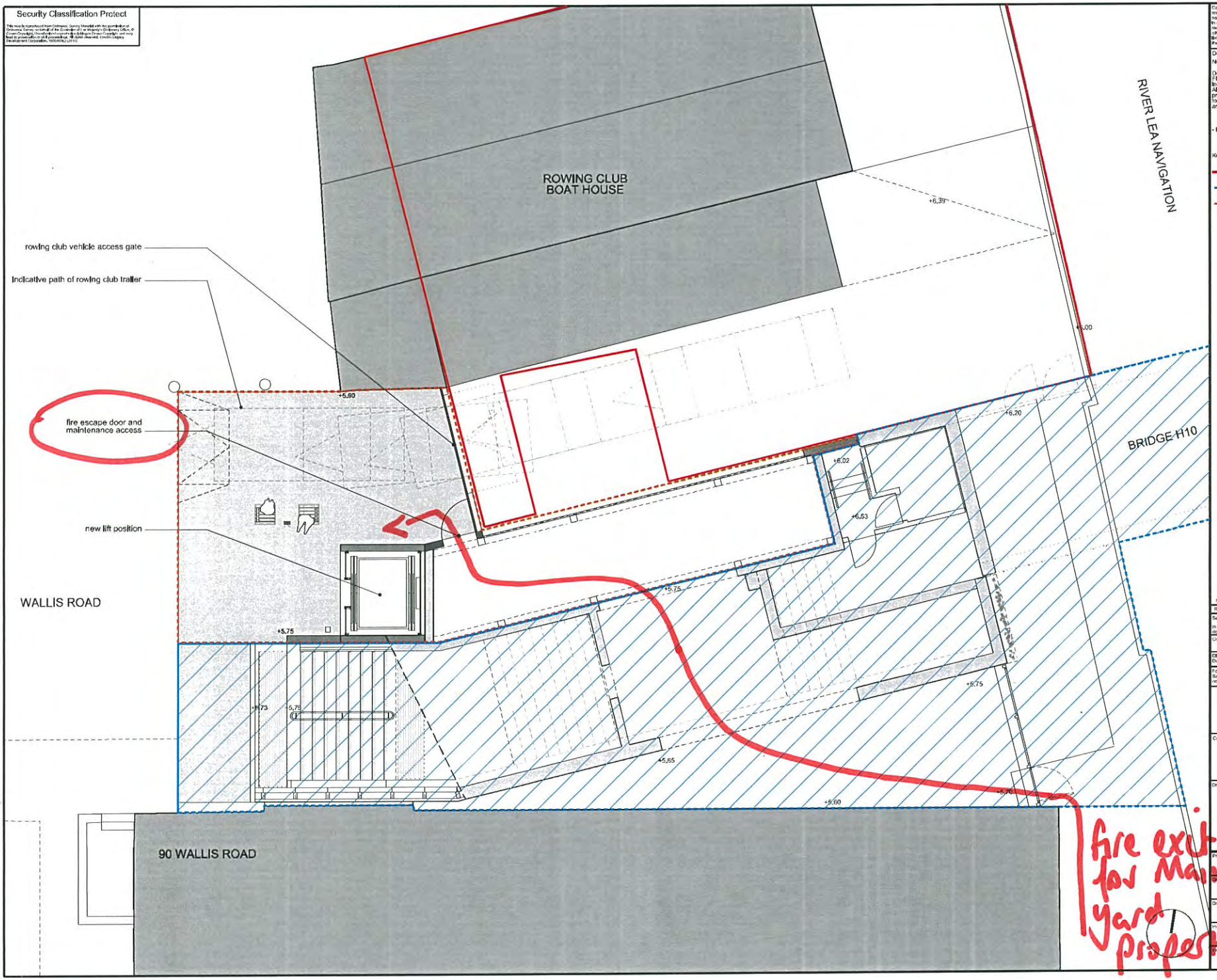



Queen Elizabeth Olympic Park



# Appendix D – Existing Fire Exit Strategy

Security Classification Protect




fire exit for Main Yard proposed



Do not scale this drawing.

Notes:

Do not scale from this drawing. Use figured dimensions only. Figured dimensions are in millimetres unless otherwise indicated. All levels are in metres unless otherwise indicated. All dimensions and levels shall be verified on site before proceeding with works. Detailed site survey to be carried out to verify positions and level relationships with site features and ordnance survey.

- Background shown indicative only, refer to as built orgs.

Key:

- Rowing Club disputed boundary
- Existing H10 approach boundary
- New area of H10 approach

| Rev | Description | Drawn | Chkd | Date |
|---|---|---|---|---|
| P1 | For Information | HG | ISH | 11.02.13 |

Safety, Health and Environment Information

In addition to the hazards / risks normally associated with the types of work detailed on this drawing, note the following risks and information:

Construction

Dismantling
Demolition (Future)

For information relating to Use, Cleaning and Maintenance see the Health and Safety File. It is assumed that all works will be carried out by a competent contractor/welding, where appropriate, in an approved method statement.

Creator

Prepared by
ALLIES AND MORRISON ARCHITECTS
on behalf of the LLDC

Drawing Title

General Arrangement
Plan
Lower level

Project Title

Wallis Road Bridge Approach

| Drawn | Checked | Approved |
|---|---|---|
| | | |

| Date | Scale | Size |
|---|---|---|
| 11.02.13 | 1:100 | A3 |

| Purpose of Drawing | Suitability |
|---|---|
| For Information | S2 |

Drawing No. | Rev.
P1

FILENAME: $FILENAME
PLOT DATE: $PLOTDATE
PLOT TIME: $PLOTTIME

# Appendix E – Topographical Drawing

Security Classification





Do not scale this drawing.

Notes:

PLOT DATE: 01/10/2014 PLOT TIME: 2:50 PM

FILENAME: P:\GBEMP\Civil Infrastructure\Jobs\5114143 LLDC Projects\03 CAD\0301 WIP\LC81f0\LC1H10\CB\DGA\LC81D-LCI-H10-CB-DGA-0001.dwg


| 01 | For Information | JST | RS | 01/10/14 |
|---|---|---|---|---|
| Rev | Description | Drawn | Chk'd | Date |

Safety, Health and Environment Information

In addition to the hazards / risks normally associated with the types of work detailed on this drawing, note the following risks and information:

| | |
|---|---|
| Construction | Cc<br>Ca<br>Ce |
| Dismantling / Demolition (Future) | Dt<br>Da<br>Dh |

For information relating to Use, Cleaning and Maintenance see the Health and Safety File. It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement.

Creator

Prepared by
Atkins
On behalf of the LLDC

Drawing Title

Topography

Project Title

Project

| Drawn | Checked | Approved |
|---|---|---|
| | | |

| Date | Scale | Size |
|---|---|---|
| 01/10/14 | NTS | A1 |

| Purpose of Drawing | Suitability |
|---|---|
| For Information | S2 |

| Drawing No. | Sheet. | Rev. |
|---|---|---|
| ####-XXX-XXX-X-XXX-#### | ## | 01 |

# Appendix F – Risk Register

| PROJECT<br>HEALTH & SAFETY DESIGN RISK REGISTER | | | | | | | | | | Doc Ref/Rev: | LC810-LCI-H10-CB-RIS-0001 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Issue Date: | 23rd September 2014 |
| Project: Queen Elizabeth Olympic Park H10 Bridge Ramp Proposal | | | Package or Element: Bridge Ramp | | | | | | | Reviewed By: | [redacted] |
| Project/Design Phase: Options Study | | | Prepared by: [redacted] | | | | | | | Authorised By: | [redacted] |

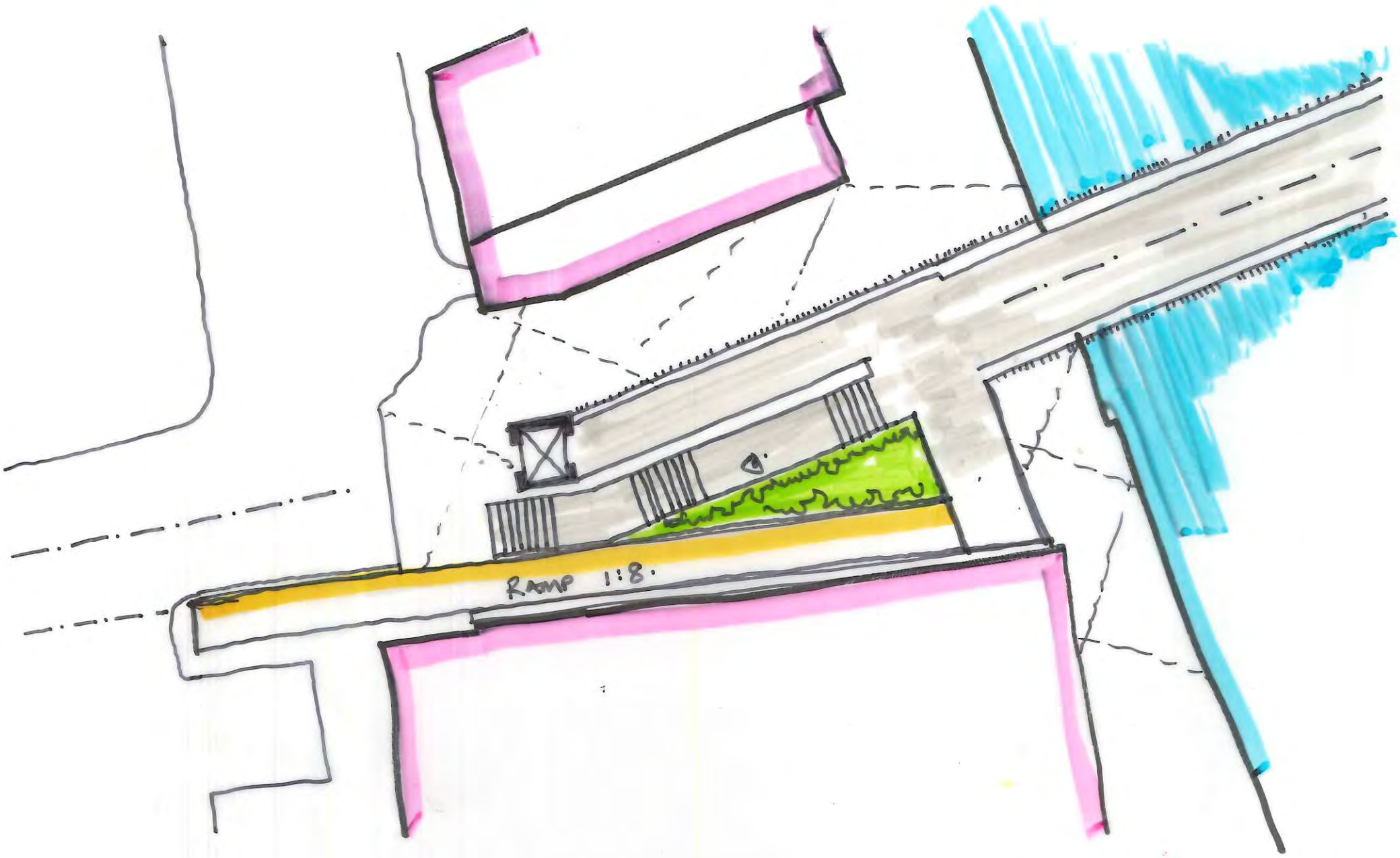
| Item No | Activity | Hazard/Other H&S Issue relating to building/constructing, use, cleaning & maintaining, altering and dismantling & demolition. | Stage Affected | Priority Issue | Measures Taken by Designer - Hazard Elimination and Risk Reduction | Design Risk Owner | By When | Information Needed by Others | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Including:<br>• Critical design assumptions<br>• Significant remaining risks<br>• Suggested work methods/sequences<br>• Other controls | Needed by who | Include in:<br>SHE Box<br>Design doc<br>H&S File<br>Project Risk | Cross Reference<br>Detailed ref to Doc or Drg containing the information |
| 1 | Groundworks | Working in close proximity to river. Danger of operatives falling in. Possbility of drowning or injury. | Build | | Where applicable hoarding and edge protection to be used. | Designer/ Contractor | Construction | Site inductions to be given to all new operatives on site. Contractor to produce and implement method statement for safe working near an open body of water. | Contractor | SHE Box | Detail Design Drawings Ref ## |
| 2 | Groundworks | Risk of injury or drowning caused by the presence of groundwater in excavations if the water table is high. | Build | | Ground investigations are being carried out to identify the water table level. Excavation work kept to a minimum where poss ble. | Designer/ Contractor | Construction | Contractor to produce and implement method statement for temporary pumping of ground water from excavations if necessary. | Contractor | SHE Box | Detail Design Drawings Ref ## |
| 3 | Groundworks | Risk of hitting live unknown existing services. | Build | | Advise contractor, review data on existing services. | Contractor | Construction | Contractor to obtain all records of buried services. CAT scans to be used on site prior to any excavations. Hand digging may be required. | Contractor | SHE Box | Detail Design Drawings Ref ## |
| 4 | Site access | Injury to users of Wallis Road resulting from shared usage by construction traffic, pedestrians and other road users. | Build | | Semi-prefabricated design option considered to reduce time dependancy of deliveries and keep access clear at peak times. | Designer/ Contractor | Construction | Contractor to produce and implement site traffic management plan.<br>Deliveries of construction materials and removal of waste materials, where possible, to be scheduled outside peak times.<br>A banksman to be used for reversing large vehicles. | Contractor | SHE Box | Detail Design Drawings Ref ## |
| 5 | Ramp usage | Injury resulting from collision between cyclists due to ramp width. | Use | | Various design options considered. Significant site constraints acknowledged. A max. ramp width of TBC can be achieved. The following measures considered to alleviate risk:<br>• A rough surface texture on ramp to assist braking and manoeuvrability (London Cycle Design Standards, 20mm)<br>• Signs i.e. warning users of narrow width, and steep gradient;<br>• Footway markings;<br>• A priority give way system;<br>• Visual and physical speed calming measures, i.e. granite setts. The setts to be flush and not polished to present a slip hazard;<br>• Planting/street furniture/staggered barriers to manage exit and entry speeds;<br>• Minimum 2.3m height clearance to all obstructions on building wall;<br>• No handrail along the wall of building 90 Main Yard; and<br>• Suitable illumination of the ramp. | Lead Designer and LLDC | Operation | Advise LLDC Operations as cannot be designed out and seek approval for departure from standards*. LLDC to agree and accept ownership of the non compliance. | Operator | H&S File | H&S File Ref ## |
| 6 | Ramp usage | Injury resulting from collision between cyclists due to ramp gradient. | Use | | Various design options considered. Significant site constraints acknowledged. A max. ramp gradient of TBC can be achieved. Please see item no.5 for a list of measures taken by the designer to alleviate the risk associated with a steeper gradient. | Lead Designer and LLDC | Operation | Advise LLDC Operations as cannot be designed out and seek approval for departure from standards*. LLDC to agree and accept ownership of the non compliance. | Operator | H&S File | H&S File Ref ## |
| 7 | Ramp usage | Injury resulting from collision between cyclists and Pedestrians. | Use | | Various design options considered. Significant site constraints acknowledged. The following measures considered to alleviate risk:<br>• Separation of pedeastrian from cyclists.<br>• A transparent parapet railing to maximise visibility;<br>• Planting/ streetfurniture or staggered barriers to manage exit and entry speeds;<br>• Measures at the junction of Wallis Road and Main Yard to define priority, reduce cycle speeds into the junction, and increase cyclists visibility;<br>• Warning pedestrian of cyclists (signs and tactile surfaces); | Lead Designer and LLDC | Operation | Advise LLDC Operations as cannot be designed out and seek approval for departure from standards*. LLDC to agree and accept ownership of the non compliance. | Operator | H&S File | H&S File Ref ## |
| 8 | Ramp usage | Injury to users of Wallis Road resulting from shared usage by pedestrians, cyclists and motorists. | Use | | Various design options considered. Significant site constraints acknowledged. The following measures considered to alleviate risk:<br>• A transparent parapet railing to maximise visibility;<br>• Planting/ street furniture or staggered barriers to manage exit and entry speeds;<br>• Measures at the junction of Wallis Road and Main Yard to define priority, reduce cycle speeds into the junction, and increase cyclists visibility; | Lead Designer and LLDC | Operation | Advise LLDC Operations as cannot be designed out Seek approval for departure from standards*. LLDC to agree and accept ownership of the non compliance. | Operator | H&S File | H&S File Ref ## |
| 9 | Ramp usage | Ramp Gradient | Use | | List Measures considered and implemented<br><br>1. Extending Ramp in to HBC Land - Implemented in all options<br>2. Intermediate platforms - Not used due to…….<br>3. Further extension of the ramp on the western side – dismissed due to the site constraints and would block the Main Yard cul-de-sac & Wallis Road junction therefore bad for informal connectivity, impacts on ground floor of listed 88 Wallis Road | Lead Designer and LLDC | Operation | | Operator | H&S File | H&S File Ref ## |
| 10 | Ramp usage | Ramp Width | Use | | List Measures consider and implemented<br><br>1. Widening top and bottom - Implemented in two options<br>2. Removal of façade - Implemented in Option 2b<br>3. Demolishing the rowing club building – this was but dismissed due to high costs and the need to obtain a CPO, also this building is currently in use.<br>4. Installing a new ramp over the rowing club building – this was dismissed as it would block access to adjacent buildings, it would encroach on multiple ownership boundaries and again the need to obtain a CPO<br>5. Removal of staircase completely – dismissed as this impacts on the ground floor of listed 88 Wallis Road, also requires a master plan build out in order to be delivered and thus is more of a permanent solution than the required temporary one<br>6. Relocate lift – dismissed due to high costs associated, encroach on space near boat house, need to obtain a CPO<br>7. Alternative form of cycle path location – dismissed as would not fit with the Quietways master plan | Lead Designer and LLDC | Operation | | Operator | H&S File | H&S File Ref ## |
| 11 | Ramp usage | Ramp configuration | Use | | Various options were considered but it for ease of congestion and reduction of associated risks the options were proposed | Lead Designer and LLDC | Operation | | Operator | H&S File | H&S File Ref ## |
| 12 | | | | | | | | | | | |

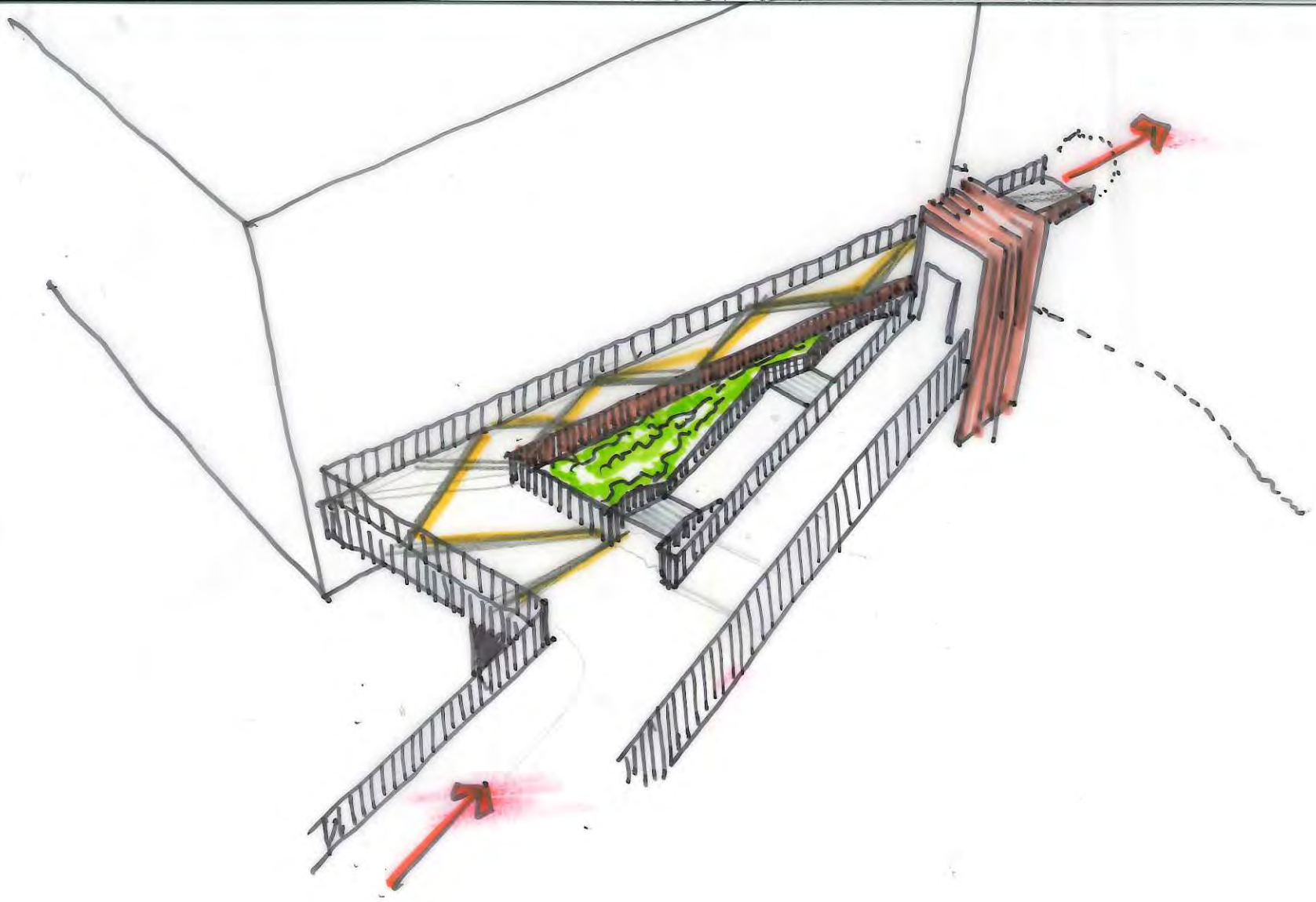
**Hazard:** the potential to do harm, e.g. work at height **Priority:** Mark for priority attention all Red Amber Green List items applicable to the design and any other key project-specific hazards/other H&S issues. **Hazard Elimination and Risk Reduction:** All hazards, including those normal to the type of work, should be eliminated and/or remaining risks reduced by altering the design (following the principles of protection) so far as is reasonably practicable (i.e. unless when compared to the hazard/risk, it is grossly disproportionate in terms of time, cost and effort to do so) and taking into account other relevant design considerations (e.g. cost, fitness for purpose, aesthetics, build ability, maintainability and environmental impact). Reduce overall risk by reducing likelihood of harm (i.e. injury or adverse effect on health), potential severity of harm, number of people exposed to the harm and frequency or duration of exposure to harm **Information Needed by Others:** Information other designers or contractors are likely to need to identify and manage remaining risks. A remaining risk is 'significant' only if it is not likely to be obvious to competent contractor or other designer, is unusual or likely to be difficult to manage effectively **Include (Information) in:** For construction related information include in SHE (safety, health & environment) Box, i.e. notes on drawings - preferred, and/or include in other design documents; for information on workplace use or cleaning & maintenance etc., include in H&S File and/or in documented strategies etc.; include dismantling/demolition related information in SHE Box notes on drawings and/or in H&S File; for issues likely to have a major project impact also include in Project Risk register **Further Guidance:** Refer to PS3000 'Summary Guide to Design for H&S in Construction' or PS 300 'A Manual of Design for Health and Safety in Construction'.

*To get a departure a designers risk assessment must identify why the width and gradient problem cannot be addressed. It is then up to the client to either agree the non compliance and accept ownership of it or reject it

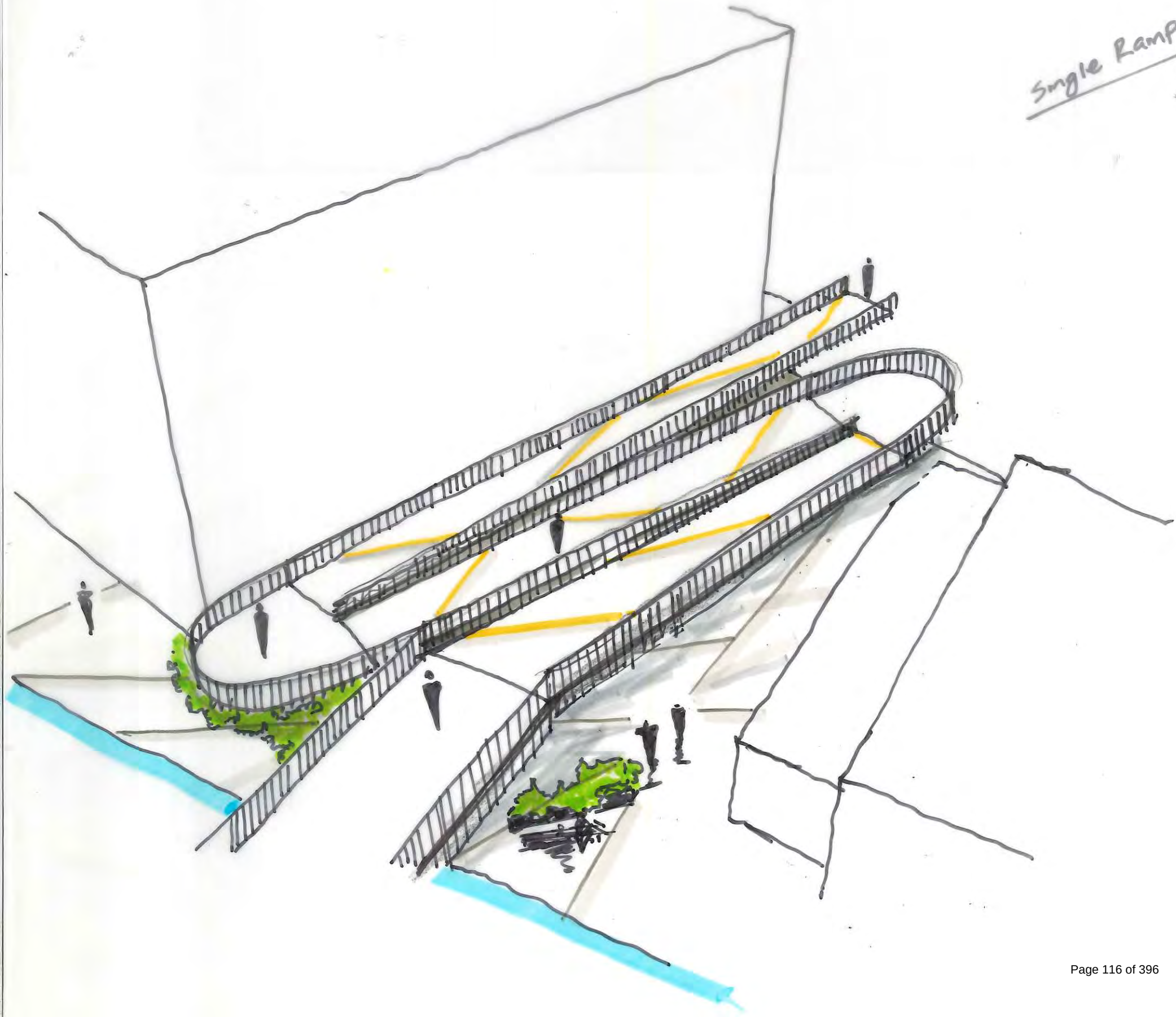
# Appendix G - Initial Sketches

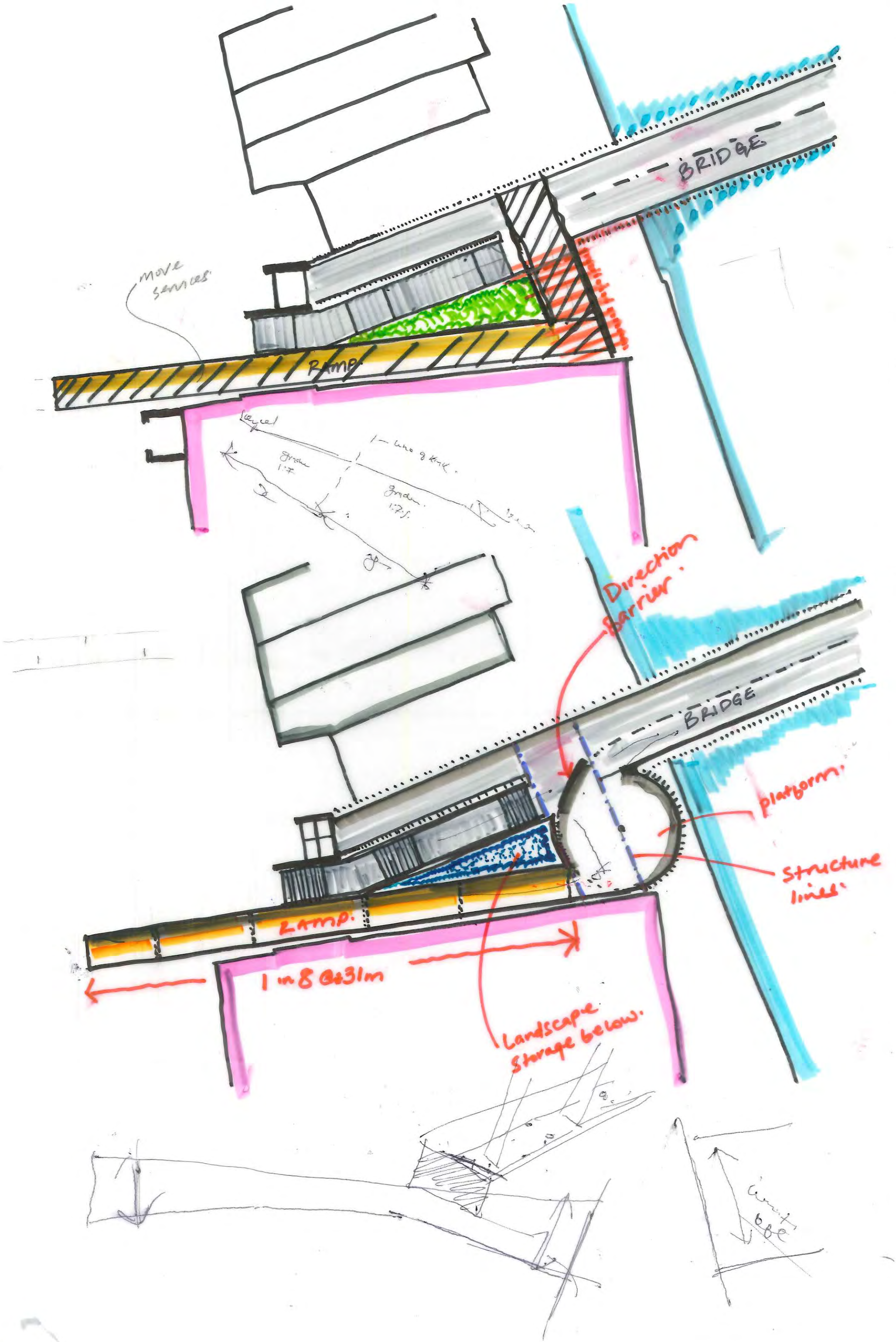

RAMP 1:20
RAMP 1:20
RAMP. 1:20
BRIDGE
BRIDGE
RAMP 1:7

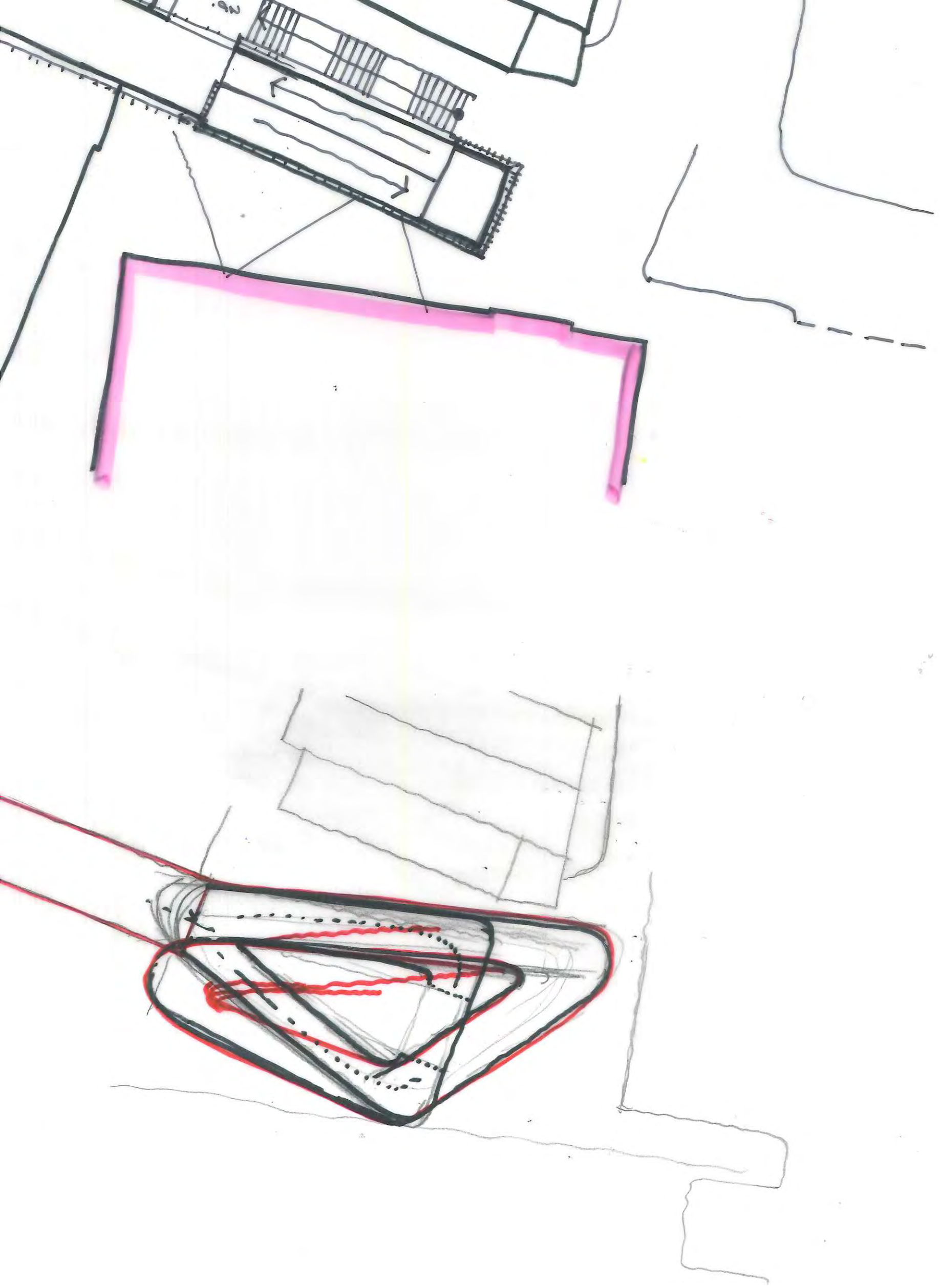

RAMP 1:8.

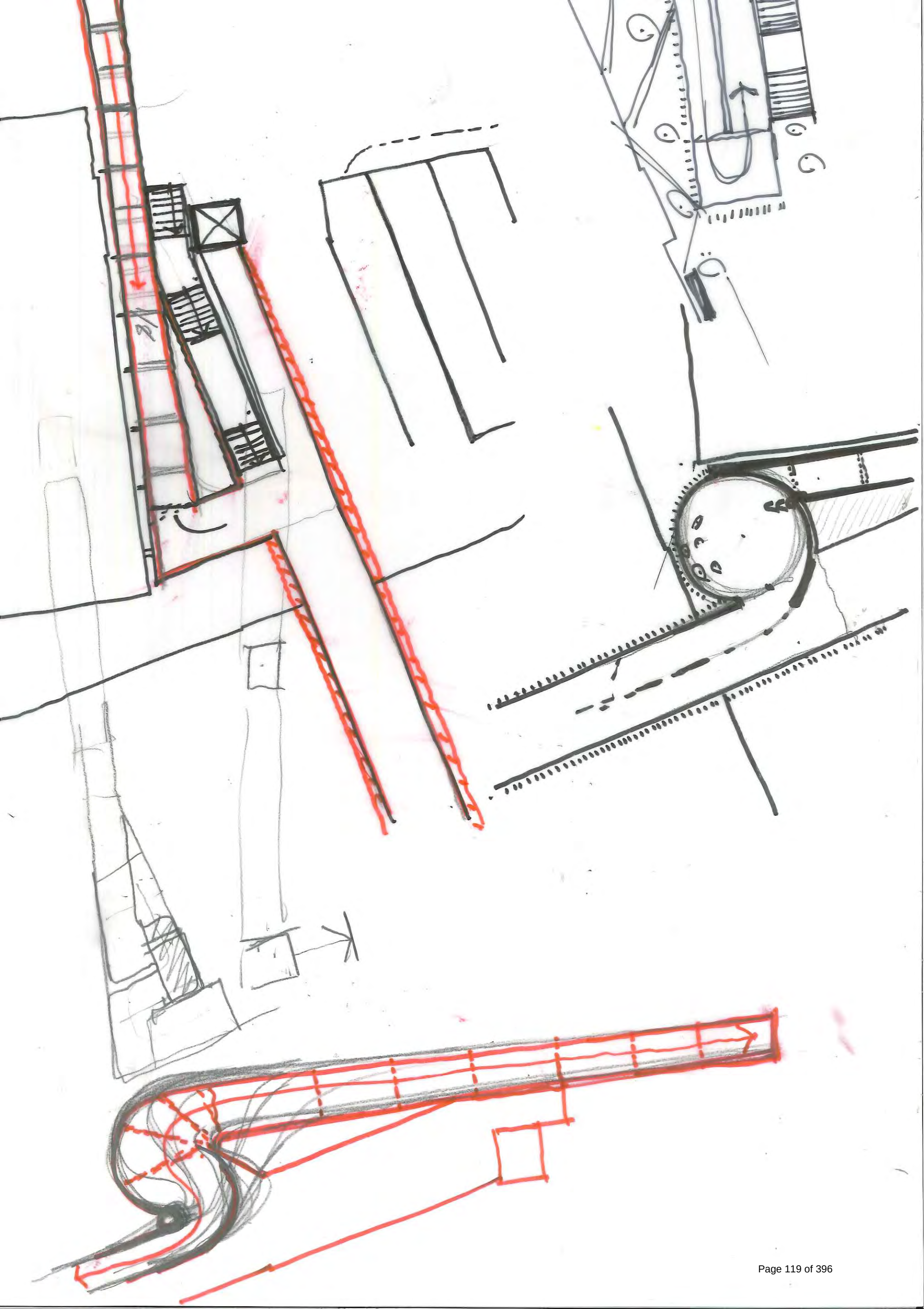


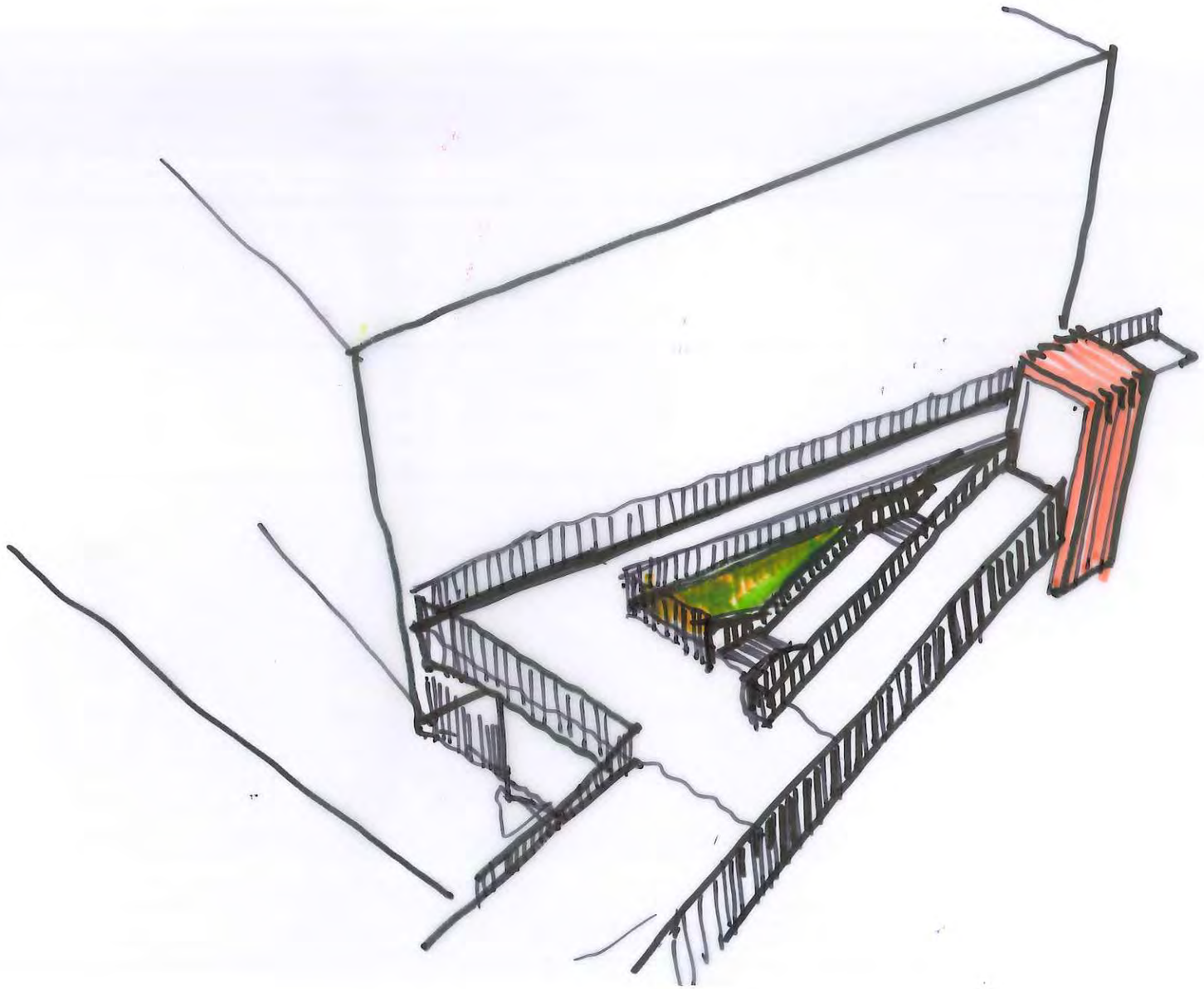
Single Ramp




move services
Ramp
BRIDGE
Level
1 – 1no @ Kink.
Grade 1:7
Grade 1:7
Direction Barrier.
BRIDGE
platform
structure lined
Ramp.
1 in 8 @ 31m
Landscape Storage below.







# Appendix H – Costing Estimates

LONDON LEGACY DEVELOPMENT CORPORATION

# Wallis Road Bridge (H10) Ramp Proposal

## Feasibility Study and Investigation

Revision 8

19th December 2014

FGOULD.COM

FAITHFUL GOULD

## AUDIT AND CHECKING & VERIFICATION PAGE

| DOCUMENT STATUS | | | | | |
|---|---|---|---|---|---|
| Revision | Date | Status or comment | Prepared by | Checked by | Authorised by |
| | | | | | |
| 0 | 17.09.14 | First Issue | [redacted] | [redacted] | [redacted] |
| 1 | 18.09.14 | | [redacted] | [redacted] | [redacted] |
| 2 | 22.09.14 | | [redacted] | [redacted] | [redacted] |
| 3 | 22.09.14 | | [redacted] | [redacted] | [redacted] |
| 4 | 05.11.14 | | [redacted] | [redacted] | [redacted] |
| 5 | 07.11.14 | | [redacted] | [redacted] | [redacted] |
| 6 | 13.11.14 | | [redacted] | [redacted] | [redacted] |
| 7 | 21.11.14 | | [redacted] | [redacted] | [redacted] |
| 8 | 19.12.14 | | [redacted] | [redacted] | [redacted] |

| FAITHFUL+GOULD | | |
|---|---|---|
| VERIFICATION | | |
| Job Nr: 511 4214 | Initial | Date |
| Technical | [redacted] | 19.12.14 |
| Arithmetical | [redacted] | 19.12.14 |
| Spreadsheet Formulae | [redacted] | 19.12.14 |
| Type/Page | [redacted] | 19.12.14 |
| Authorised for Issue | [redacted] | 19.12.14 |

Faithful+Gould
Woodcote Grove
Epsom
Surrey
KT18 5BW

Tel: 01372 752659

| Item | Description | Quantity | Unit | Rate (£) | Total (£) |
|---|---|---|---|---|---|
| | **Option 1 - Over stair ramp** | | | | |
| 1 | Allowance to break out existing flights of stairs (Provisional Sum) | 1 | PS | 5,000 | 5,000 |
| 2 | Remove existing handrails and dispose off site | 1 | Item | 1,000 | 1,000 |
| 3 | Protection to existing lift | 1 | Item | 500 | 500 |
| 4 | Remove existing bollards, set aside for re-use | 3 | nr | 150 | 450 |
| 5 | Construct new concrete steps (half width) | 1 | Item | 4,000 | 4,000 |
| 6 | Construct new ramp; assumed timber frame, with timber framing to the junction between the ramp and existing steps | 47 | m2 | 70 | 3,290 |
| 7 | Construct lower section of ramp, built up from hardcore type 1 subbase; assumed average depth of 300mm | 5 | m3 | 70 | 350 |
| 8 | Allowance for additional ramp edge / balustrade support | 40 | m | 100 | 4,000 |
| 9 | Allowance for demolition of low level wall and steps and rebuild to new formation (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 10 | Allowance for channel drain to bottom of ramp, assumed 'Aco' drain or similar | 30 | m | 130 | 3,900 |
| 11 | Allowance for connections to existing drainage (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 12 | Allowance to raise existing access chambers to ensure a flush finish with the ramp surface (Provisional Sum) | 1 | PS | 5,000 | 5,000 |
| 13 | Allowance to raise existing pillar box to ensure a flush finish with the ramp surface (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 14 | Allowance metal wall cladding for junction between new ramp and existing steps | 26 | m2 | 130 | 3,380 |
| 15 | Allow for bituminous type surface (cycle standard) to ramp | 47 | m2 | 75 | 3,525 |
| 16 | Granite setts as speed calming measure including sub base etc | 5 | m2 | 75 | 375 |
| 17 | Stainless steel handrailing with glass infills to ramp | 40 | m | 1,000 | 40,000 |
| 18 | Stainless steel handrail mounted off existing metal wall cladding | 22 | m | 250 | 5,500 |
| 19 | Reinstall existing bollards | 3 | nr | 200 | 600 |
| 20 | Allowance for ramp illumination (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 21 | Allowance for making good to surrounding hard landscape to tie in new layout etc (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 22 | Allowance for public realm improvements; incl cycle lane, zebra crossing etc '(Provisional Sum) | 1 | PS | 25,000 | 25,000 |
| 23 | Allowance for planting, including planters; assumed timber (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 24 | Allowance for street furniture, assumed benching & litter bins (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 25 | Allowance for signs, i.e. warning users of narrow width and steep gradient (Provisional Sum) | 1 | PS | 1,000 | 1,000 |
| 26 | Allowance for adjustments to existing road signage, markings etc for new ramp access configuration (Provisional Sum) | 1 | PS | 500 | 500 |
| 27 | Allowance for surface markings, i.e. SLOW (Provisional Sum) | 1 | PS | 200 | 200 |
| 28 | Allowance for temporary light duty staircase, incl removal on completion (Provisional Sum) | 1 | PS | 7,500 | 7,500 |
| | Sub-total | | | | 130,570 |
| | Preliminaries | 20 | % | | 26,114 |
| | Contractor's OH+P | 10 | % | | 15,668 |
| | RISK - Design Development | 25 | % | | 43,088 |
| | RISK - Construction Contingency | 15 | % | | 32,316 |
| | Inflation - 3Q 2014 to 3Q 2015 @ 5.6 % | 5.6 | % | | 13,874 |
| | Rounding for reporting purposes | | | | 3,369 |
| | **Total Estimated Construction Cost (excl VAT)** | | | | **265,000** |
| | Detailed Design fees (Atkins) | 12 | % | | 31,800 |
| | Supervision | 4 | % | | 11,872 |
| | Project Management | | | | 76,000 |
| | CDMC Fees | 2 | % | | 7,693 |
| | Heritage Consulting | | | | 5,000 |
| | OPEX Maintenance (10 Year Period) (LLDC) | | | | 15,000 |
| | Site Investigations and Surveys | | | | 10,000 |
| | Technical Approval and Safety Audits | 6 | % | | 25,342 |
| | Feasibility Design and Investigations (Atkins) | | | | 20,000 |
| | Rounding for reporting purposes | | | | 2,293 |
| | **Total Estimated Project Cost (excl VAT)** | | | | **470,000** |

| Item | Description | Quantity | Unit | Rate (£) | Total (£) |
|---|---|---|---|---|---|
| | **Option 2a - Ramp widened at top and bottom** | | | | |
| 1 | Allowance to break out existing flights of stairs (Provisional Sum) | 1 | PS | 5,000 | 5,000 |
| 2 | Remove existing handrails and dispose off site | 1 | Item | 1,000 | 1,000 |
| 3 | Protection to existing lift | 1 | Item | 1,000 | 1,000 |
| 4 | Remove existing bollards, set aside for re-use | 3 | nr | 150 | 450 |
| 5 | Allow to deconstruct the existing metal facade, setting aside the panels for re-use | 1 | Item | 5,000 | 5,000 |
| 6 | Construct new concrete steps (half width) | 1 | Item | 4,000 | 4,000 |
| 7 | Construct new ramp including widening the top; assumed timber frame, with timber framing to the junction between the ramp and existing steps | 107 | m2 | 70 | 7,490 |
| 8 | Construct lower section of ramp, built up from hardcore type 1 subbase; assumed average depth of 300mm | 8 | m3 | 70 | 560 |
| 9 | Allowance for additional ramp edge / balustrade support | 40 | m | 100 | 4,000 |
| 10 | Allowance for demolition of low level wall and steps and rebuild to new formation (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 11 | Allowance for channel drain to bottom of ramp, assumed 'Aco' drain or similar | 35 | m | 130 | 4,550 |
| 12 | Allowance for connections to existing drainage (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 13 | Allowance to raise existing access chambers to ensure a flush finish with the ramp surface (Provisional Sum) | 1 | PS | 5,000 | 5,000 |
| 14 | Allowance to raise existing pillarbox to ensure a flush finish with the ramp surface (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 15 | Construct existing metal wall panelling against existing wall | 1 | Item | 5,000 | 5,000 |
| 16 | Allowance metal wall cladding for junction between new ramp and existing steps | 26 | m2 | 130 | 3,380 |
| 17 | Stainless steel handrailing with glass infills to ramp | 40 | m | 1,000 | 40,000 |
| 18 | Stainless steel handrail mounted off existing metal wall cladding | 30 | m | 250 | 7,500 |
| 19 | Allow for bituminous type surface (cycle standard) to ramp | 107 | m2 | 75 | 8,025 |
| 20 | Granite setts as speed calming measure including sub base etc | 5 | m2 | 75 | 375 |
| 21 | Reinstall existing bollards | 3 | nr | 200 | 600 |
| 22 | Allowance for ramp illumination (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 23 | Allowance for making good to surrounding hard landscape to tie in new layout etc (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 24 | Allowance for public realm improvements; incl cycle lane, zebra crossing etc (Provisional Sum) | 1 | PS | 25,000 | 25,000 |
| 25 | Allowance for planting, including planters; assumed timber (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 26 | Allowance for street furniture, assumed benching & litter bins (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 27 | Allowance for signs, i.e. warning users of narrow width and steep gradient (Provisional Sum) | 1 | PS | 1,000 | 1,000 |
| 28 | Allowance for adjustments to existing road signage, markings etc for new ramp access configuration (Provisional Sum) | 1 | PS | 500 | 500 |
| 29 | Allowance for surface markings, i.e. SLOW (Provisional Sum) | 1 | PS | 200 | 200 |
| 30 | Allowance for temporary light duty staircase, incl removal on completion (Provisional Sum) | 1 | PS | 7,500 | 7,500 |
| | Sub-total | | | | 152,630 |
| | Preliminaries | 20 | % | | 30,526 |
| | Contractor's OH+P | 10 | % | | 18,316 |
| | RISK - Design Development | 25 | % | | 50,368 |
| | RISK - Construction Contingency | 15 | % | | 37,776 |
| | Inflation - 3Q 2014 to 3Q 2015 @ 5.6 % | 5.6 | % | | 16,218 |
| | Rounding for reporting purposes | | | | -834 |
| | **Total Estimated Construction Cost (excl VAT)** | | | | **305,000** |
| | Detailed Design fees (Atkins) | 12 | % | | 36,600 |
| | Supervision | 4 | % | | 13,664 |
| | Project Management | | | | 76,000 |
| | CDMC Fees | 2 | % | | 8,625 |
| | Heritage Consulting | | | | 5,000 |
| | OPEX Maintenance (10 Year Period) (LLDC) | | | | 15,000 |
| | Site Investigations and Surveys | | | | 10,000 |
| | Technical Approval and Safety Audits | 6 | % | | 28,193 |
| | Feasibility Design and Investigations (Atkins) | | | | 20,000 |
| | Rounding for reporting purposes | | | | 1,918 |
| | **Total Estimated Project Cost (excl VAT)** | | | | **520,000** |

| Item | Description | Quantity | Unit | Rate (£) | Total (£) |
|---|---|---|---|---|---|
| | **Option 2b - Ramp widened at top and bottom (Facade removed)** | | | | |
| 1 | Allowance to break out existing flights of stairs (Provisional Sum) | 1 | PS | 5,000 | 5,000 |
| 2 | Remove existing handrails and dispose off site | 1 | Item | 1,000 | 1,000 |
| 3 | Protection to existing lift | 1 | Item | 1,000 | 1,000 |
| 4 | Remove existing bollards, set aside for re-use | 3 | nr | 150 | 450 |
| 5 | Allow to deconstruct the existing metal facade, disposing of any materials off site | 1 | Item | 7,000 | 7,000 |
| 6 | Construct new concrete steps (half width) | 1 | Item | 4,000 | 4,000 |
| 7 | Construct new ramp including widening the top; assumed timber frame, with timber framing to the junction between the ramp and existing steps | 107 | m2 | 70 | 7,490 |
| 8 | Construct lower section of ramp, built up from hardcore type 1 subbase; assumed average depth of 300mm | 9 | m3 | 70 | 630 |
| 9 | Allowance for additional ramp edge / balustrade support | 40 | m | 100 | 4,000 |
| 10 | Allowance for demolition of low level wall and steps and rebuild to new formation (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 11 | Allowance for channel drain to bottom of ramp, assumed 'Aco' drain or similar | 35 | m | 130 | 4,550 |
| 12 | Allowance for connections to existing drainage (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 13 | Allowance to raise existing access chambers to ensure a flush finish with the ramp surface (Provisional Sum) | 1 | PS | 5,000 | 5,000 |
| 14 | Allowance to reposition existing pillarbox to opposite end of ramp (Provisional Sum) | 1 | PS | 30,000 | 30,000 |
| 15 | Allowance metal wall cladding for junction between new ramp and existing steps | 26 | m2 | 130 | 3,380 |
| 16 | Stainless steel handrailing with glass infills to ramp | 40 | m | 1,000 | 40,000 |
| 17 | Stainless steel handrail mounted off existing wall | 30 | m | 250 | 7,500 |
| 18 | Allow for bituminous type surface (cycle standard) to ramp | 107 | m2 | 75 | 8,025 |
| 19 | Granite setts as speed calming measure including sub base etc | 5 | m2 | 75 | 375 |
| 20 | Concrete edging to junction between existing building facade and ramp | 35 | m | 100 | 3,500 |
| 21 | Reinstall existing bollards | 3 | nr | 200 | 600 |
| 22 | Allowance for ramp illumination (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 23 | Allowance for making good to surrounding hard landscape to tie in new 'layout etc (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 24 | Allowance for public realm improvements; incl cycle lane, zebra crossing etc (Provisional Sum) | 1 | PS | 25,000 | 25,000 |
| 25 | Allowance for planting, including planters; assumed timber (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 26 | Allowance for mural / artwork (Provisional Sum) | 1 | PS | 20,000 | 20,000 |
| 27 | Allowance for street furniture, assumed benching & litter bins (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 28 | Allowance for signs, i.e. warning users of narrow width and steep gradient (Provisional Sum) | 1 | PS | 1,000 | 1,000 |
| 29 | Allowance for adjustments to existing road signage, markings etc for new ramp access configuration (Provisional Sum) | 1 | PS | 500 | 500 |
| 30 | Allowance for surface markings, i.e. SLOW (Provisional Sum) | 1 | PS | 200 | 200 |
| 31 | Allowance for temporary light duty staircase, incl removal on completion (Provisional Sum) | 1 | PS | 7,500 | 7,500 |
| | Sub-total | | | | 200,700 |
| | Preliminaries | 20 | % | | 40,140 |
| | Contractor's OH+P | 10 | % | | 24,084 |
| | RISK - Design Development | 25 | % | | 66,231 |
| | RISK - Construction Contingency | 15 | % | | 49,673 |
| | Inflation - 3Q 2014 to 3Q 2015 @ 5.6 % | 5.6 | % | | 21,326 |
| | Rounding for reporting purposes | | | | 2,845 |
| | **Total Estimated Construction Cost (excl VAT)** | | | | **405,000** |
| | Detailed Design fees (Atkins) | 12 | % | | 48,600 |
| | Supervision | 4 | % | | 18,144 |
| | Project Management | | | | 76,000 |
| | CDMC Fees | 2 | % | | 10,955 |
| | Heritage Consulting | | | | 5,000 |
| | OPEX Maintenance (10 Year Period) (LLDC) | | | | 15,000 |
| | Site Investigations and Surveys | | | | 10,000 |
| | Technical Approval and Safety Audits | 6 | % | | 35,322 |
| | Feasibility Design and Investigations (Atkins) | | | | 20,000 |
| | Rounding for reporting purposes | | | | 980 |
| | **Total Estimated Project Cost (excl VAT)** | | | | **645,000** |

| Item | Notes, Assumptions, Risks & Exclusions |
|---|---|
| | **Notes** |
| A | Costs based upon Options Study Report provide by [redacted] (05.09.14). |
| B | All costs are at 3Q 2014, and based upon similar recent projects undertaken by F+G. |
| C | This document and its contents have been prepared and are intended solely for the Client's information and use in relation to Wallis Road Bridge (H10). Faithful+Gould assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents. |
| D | The copyright of this document is vested in Faithful+Gould. This document may not be reproduced in whole or in part without their express written permission. |
| E | No site visit has been carried out by F+G. |
| | **Key Assumptions** |
| A | No contaminated land, abnormal ground conditions, unexploded bombs or antiquities. |
| B | The site is level. |
| C | No delays in obtaining planning approval. |
| D | The works will be procured through a competitive tender with one contractor selected to carry out the works. |
| E | The contractor will have sufficient space on site for accommodation, welfare facilities etc. |
| F | No allowance has been made for use of a barge during construction. |
| G | It is assumed the construction of the ramp will be timber with a bituminous surface finish. |
| H | An allowance has been made for stainless steel handrailing with glazed infills to both sides of the ramp edges. |
| J | Design fees have been included at a rate of 12% |
| K | OPEX costs have been based on 2nr visits every 6 months by maintenance personnel to carry out cleaning works to the ramp through vandalism or graffiti over a 10 year basis. An allowance has also been made for upgrading the bituminous surface after 5 years on each option. |
| L | No allowance has been made for re-wiring the electrical pillarbox in Options 1 & 2a. An allowance has been made for trenching and associated builders work for repositioning the pillar-box in Option 2b. |
| M | The rate for the temporary stairs includes removal after the works |
| N | Project Management fee as advised by [redacted] via email on 12/11/2014 |
| P | No inclusion has been made for covering the stairs or additional lighting to the stairs. The figure indicated includes for cutting the barrier and making good upon completion |
| Q | It is assumed that craneage costs will be included within the preliminaries allowance. |
| | **Risks** |
| A | Planning approval. |
| B | Connections to and capacity of the existing incoming services, capable to cope with the proposed works. |
| C | Public safety during construction. |

| Item | Notes, Assumptions, Risks & Exclusions |
|---|---|
| D | Adverse weather conditions. |
| E | Contractor insolvency. |
| F | Disruption to local roads through construction traffic. |
| G | Ground conditions. |
| H | Site access. |
| | **Exclusions** |
| A | Land Acquisition and associated costs (CPO). |
| B | Legal and Agency Fees. |
| C | Value Added Tax. |
| D | Section 106/278 Agreements. |
| E | Out of Hours Working . |
| F | Abnormal ground conditions. |
| G | Traffic signalling equipment / systems. |
| H | Statutory charges including Thames Water. |
| I | Access alterations to existing buildings |
| J | Any works relating to the existing bridge structure and opposite approach to Wallis Road. |
| K | Licences for road closures. |
| L | Associated builders works in connection with the install of vehicular barriers |

CONSTRUCTIVE EXPERTISE

FGOULD.COM

# Appendix I – Stage 1 RSA for Option 2b

local transport projects

*traffic engineering and transport planning*

ATKINS

# Hackney Wick, Wallis Road Bridge Ramp
# Stage 1 Road Safety Audit

September 2014

22, Trinity Lane,
Beverley,
East Riding of Yorkshire.
HU17 0DY.

01482 679 911

info@local-transport-projects.co.uk

www.local-transport-projects.co.uk

*Registered No. 5295328*

ATKINS

# Hackney Wick, Wallis Road Bridge Ramp

# Stage 1 Road Safety Audit

September 2014

| Client Commission | | | |
|---|---|---|---|
| Client: | ATKINS | Order No: | |
| Commissioned By: | [redacted] | Date Commissioned: | September 2014 |

| LTP Quality Control | | | | | |
|---|---|---|---|---|---|
| Job No: | LTP/14/1935 | | File Ref: | London Wallis Road Bridge Ramp(ATKINS) RSA1 Draft v2.docx | |
| Issue | Revision | Description | Originated | Checked | Date |
| 1 | 0 | Report | [redacted] | [redacted] | 23/09/14 |
| | | | Authorised for Issue: | | |

## LTP PROJECT TEAM

*As part of our commitment to quality the following team of transport professionals was assembled specifically for the delivery of this project. Relevant qualifications are shown and CV's are available upon request to demonstrate our experience and credentials.*

| Team Member | LTP Designation | Qualifications |
|---|---|---|
| [redacted] | [redacted] *(Project Manager)* | *BA(Hons) MSc CMILT MCIHT FSoRSA* |
| [redacted] | [redacted] | *CEng BSc(Hons) MICE MCIHT* |

# Hackney Wick, Wallis Road Bridge Ramp
# Stage 1 Road Safety Audit

## CONTENTS

# 1.0 INTRODUCTION

1.1 Local Transport Projects Ltd. (LTP) has been commissioned by ATKINS (ref. [redacted]) to carry out a Stage 1 Road Safety Audit on a scheme to provide a new ramp for the use of cyclists to the west side of Wallis Road Bridge, Hackney Wick. Wallis Road Bridge (Bridge H10, London Legacy Development Corporation), links Hackney Wick, over the River Lea Navigation to the Queen Elizabeth Olympic Park. The existing west side staircase has a wheeling channel for cycles on the right hand side (for climbers).

1.2 The proposed ramp is Option 2b in the ATKINS '*Feasibility Study and Investigation (Wallis Road Bridge (H10) Ramp Proposal)*'. The proposed ramp is on a continuous gradient of 1 in 7 (14.3%) and width varying from 5.8m at the top; 2.5m near the foot of the existing stairs and 3.6m where it lands on the raised pavement area to the north west of 90 Main Yard. The width of proposed stairway is 1.9m.

1.3 The audit was carried out on 22nd/23rd September 2014 and was based on an examination of the information identified within *"Wallis Road Bridge (H10) Ramp Proposal, Feasibility Study and Investigation, London Legacy Development Corporation, 18 September 2014, ref: LC810-LC1_H10_CB-REP-0002" issued by ATKINS*.

1.4 No Personal Injury Collision (PIC) data for the highway in the vicinity of the bridge approaches was made known to the Audit Team. A search on the publically available Crashmap website (http://www.crashmap.co.uk/Search) revealed no personal injury collisions on Wallis Road in the vicinity of the existing steps within the 5 year period Jan 2008 to Dec 2012.

1.5 A site inspection was carried out on Wednesday 25th June 2014, between 15.50 and 16.30. The weather was fine and dry at the time of the site visit.

1.6 The audit team comprised the following people:

- [redacted], BA(Hons) MSc CMILT FIHE MCIHT FSoRSA (Audit Team Leader)
- [redacted] BSc CEng MICE MCIHT (Audit Team Member)

1.7 The audit was carried out with reference to HD19/03 "Road Safety Audit" (The Highways Agency, DMRB Volume 5, Section 2, Part 2), and the IHT Road Safety Audit Guidelines 2008, (Third Edition).

1.8 No Departures from Standards were made known to the Audit Team.

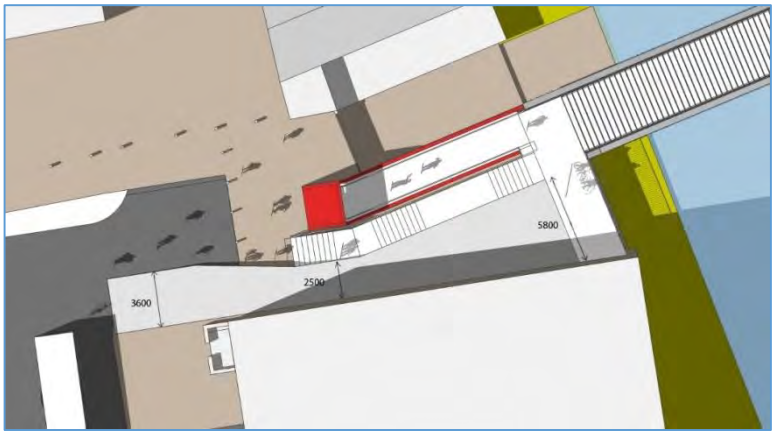
1.9 The audit team has examined and reported only on the road safety implications of the scheme using the information provided and has not examined or verified the compliance of the design to any other criteria.

1.10 The problems identified in this report are considered by the audit team to require action in order to improve safety and reduce the risk of collisions occurring.

# 2.0 ITEMS RAISED BY THIS SAFETY AUDIT

2.1 **Problem**

**Risk of ramp users losing control and falling due to excessive gradient and absence of intermediate landings**. The proposed ramp has a steep gradient on a continuous descent with no rest areas (landings). Users travelling down the ramp may build up speed as they descend and be unable to stop - increasing their risk of falling from their bike or coming into conflict with other ramp users.




**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004). See also LTN 2/08 (DfT, October 2008) – *paragraph 10.8, "The generally preferred gradient is therefore 5 per cent, with 8 per cent as the absolute maximum ……. Individual flights must not exceed 10 metres, and intermediate resting places should be at least 2 metres long"*.

2.2 **Problem**

**Risk of pedestrians falling on the staircase**. The existing staircase is approximately 3.6m wide. If it has been designed for a capacity pedestrian loading, then reducing its width to 1.9m will increase pedestrian density and the risk of conflict between pedestrians.

**Recommendation**

The width of the proposed staircase should be adequate for expected usage. This requirement may not be consistent with the proposal to provide a bridge ramp in this location.

2.3 **Problem**

**Risk of conflict between ramp users and vehicles / pedestrians in the vicinity of the ramp base**. The steep gradient of the ramp and absence of landings may lead to cyclists reaching high speeds on the down slope. Visibility in the area around the base of the

ramp, and for vehicles travelling northbound from the parking area to the south, may be restricted, leading to potential collisions.

**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004). Suitable staggered barrier / bollards should be provided in the area around the base of the ramp to reduce the speed of cyclists, giving due consideration to the needs of users of non-standard bicycles, trailers etc. It appears that the pedestrian access to the adjacent building will be relocated due to the level differences between access and ramp.

2.4 **Problem**

**Risk of cyclist unable to cycle up steep gradient losing control.** The proposed ramp gradient is 1:7. Recommended gradients are 1:20 or 1:12 maximum in exceptional circumstances - DMRB BD 29/04, (Highways Agency 2004). As such, less able cyclists may struggle to remain mounted when cycling up the ramps as their bike becomes less stable at low speed. They may lose control and fall from their cycle, with potential for injury.

**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004).

2.5 **Problem**

**Risk of wheelchair / mobility scooter users experiencing difficulty and losing control due to steep ramp gradients**. It is understood that the existing lift would remain in place for wheelchair / mobility scooter users with the proposed ramp arrangements. However they would not be physically prevented from gaining access to the ramp (to do so would likely prevent convenient cycle access also). This could lead to a situation where a wheelchair or mobility scooter user enters the top section of ramp and loses control on the steep downward gradient, with no intermediate landings, leading to injury.

**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004).

2.6 **Problem**

**Risk of injury due to unintended use by skateboarders, BMX riders etc.** There is a risk that groups for which the scheme was not designed may use the facility in an unintended way, for example to practice stunt riding on the ramp. Not only may this present a risk to those taking part in such activities, but it may also present a hazard to other legitimate users of the ramp should a collision take place. Although such a risk may be present to some extent with any ramp scheme, the steep nature of the proposals in this case may increase the likelihood of such groups congregating around the ramp, increasing the risk of injury.

**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004).

2.7 **Problem**

**Risk of westbound cyclists riding down steps**. The alignment of the steps with the proposed arrangement would mean that they were almost in a straight line from the edge of the bridge parapet railings for westbound cyclists, with cyclists having to make a sharp movement to the left in order to access the ramp. There is a risk that a westbound cyclist travelling at speed could ride down the steps of the pedestrian facilities, resulting in injury.

**Recommendation**

Provide suitable staggered barrier / bollard arrangement at top of steps to prevent cyclists riding straight down steps.

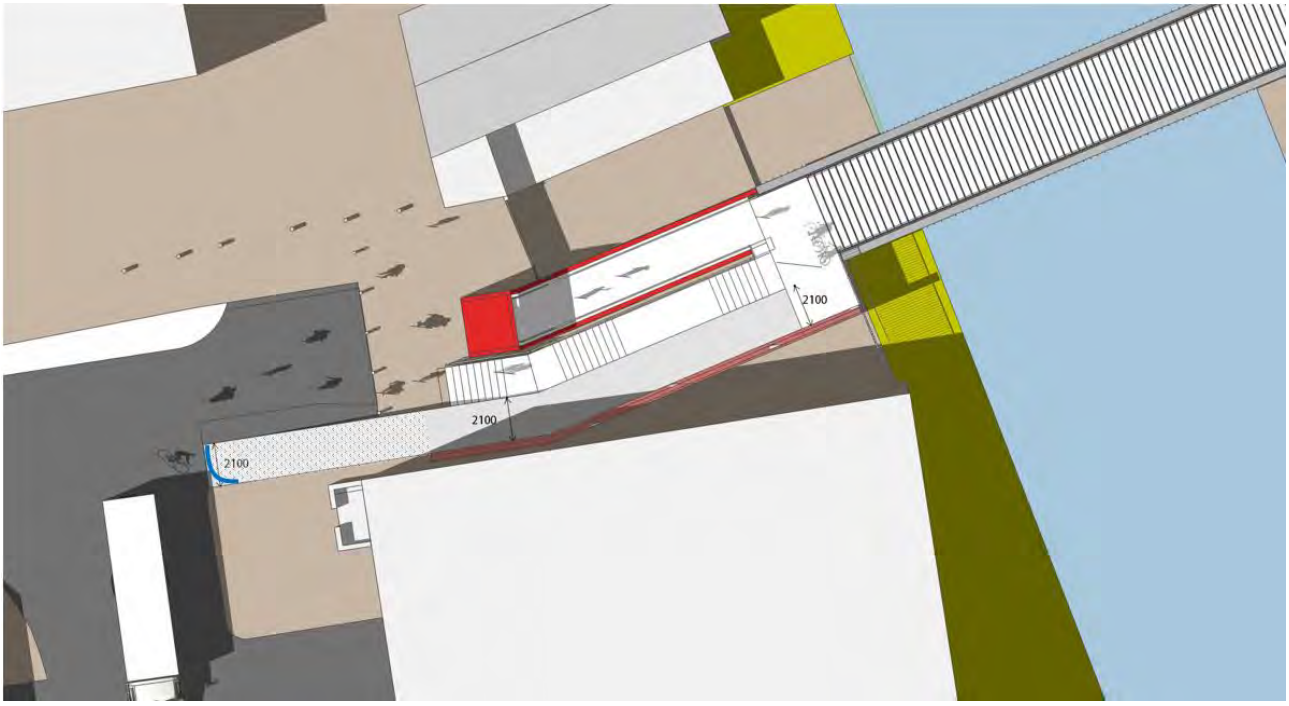
## 3.0 AUDIT TEAM STATEMENT

3.1 I certify that this audit has been carried out in accordance with HD 19/03.

| Audit Team Leader | | | |
|---|---|---|---|
| **Name:** | [redacted] | **Signed:** | |
| **Position:** | [redacted] | **Date:** | |
| **Organisation:** | **Local Transport Projects Ltd.** | | |
| **Address:** | **22 Trinity Lane, Beverley, East Riding of Yorkshire. HU17 0DY** | | |

| Audit Team Member | | | |
|---|---|---|---|
| **Name:** | [redacted] | **Signed:** | |
| **Position:** | [redacted] | **Date:** | |
| **Organisation:** | **Local Transport Projects Ltd.** | | |
| **Address:** | **22 Trinity Lane, Beverley, East Riding of Yorkshire. HU17 0DY** | | |

# Appendix J – Images of Option 1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2100
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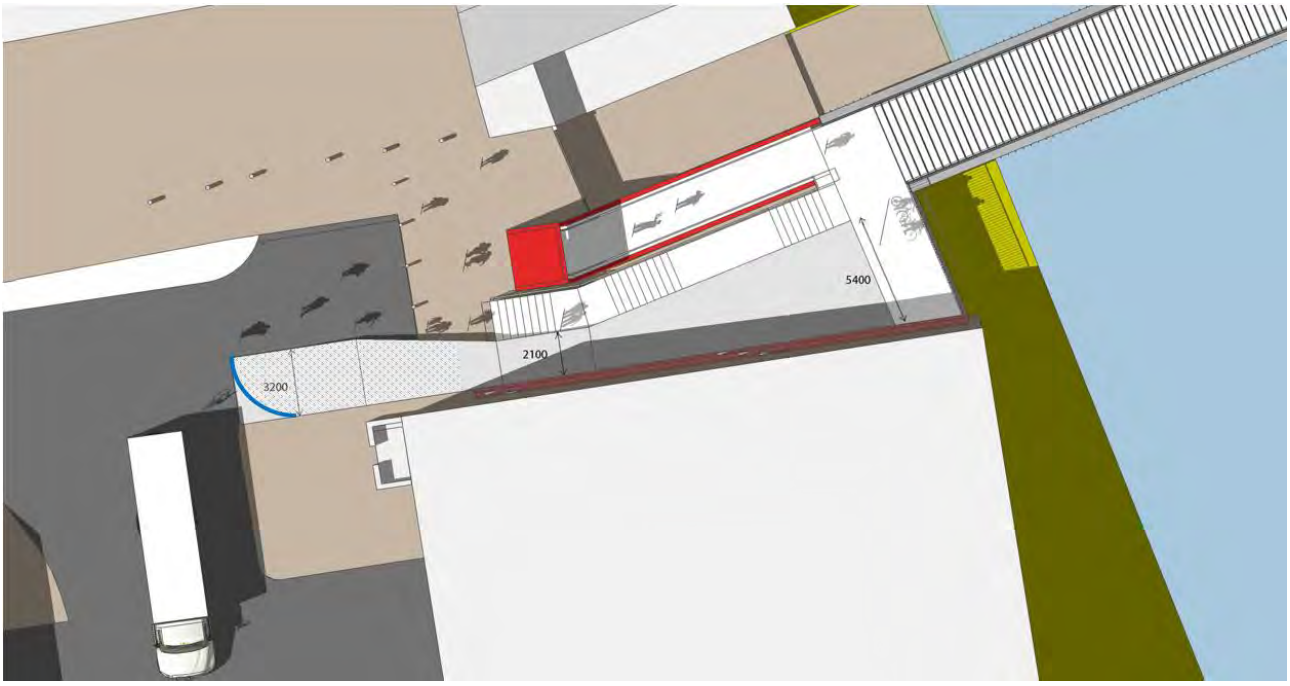
# Appendix K – Images of Option 2a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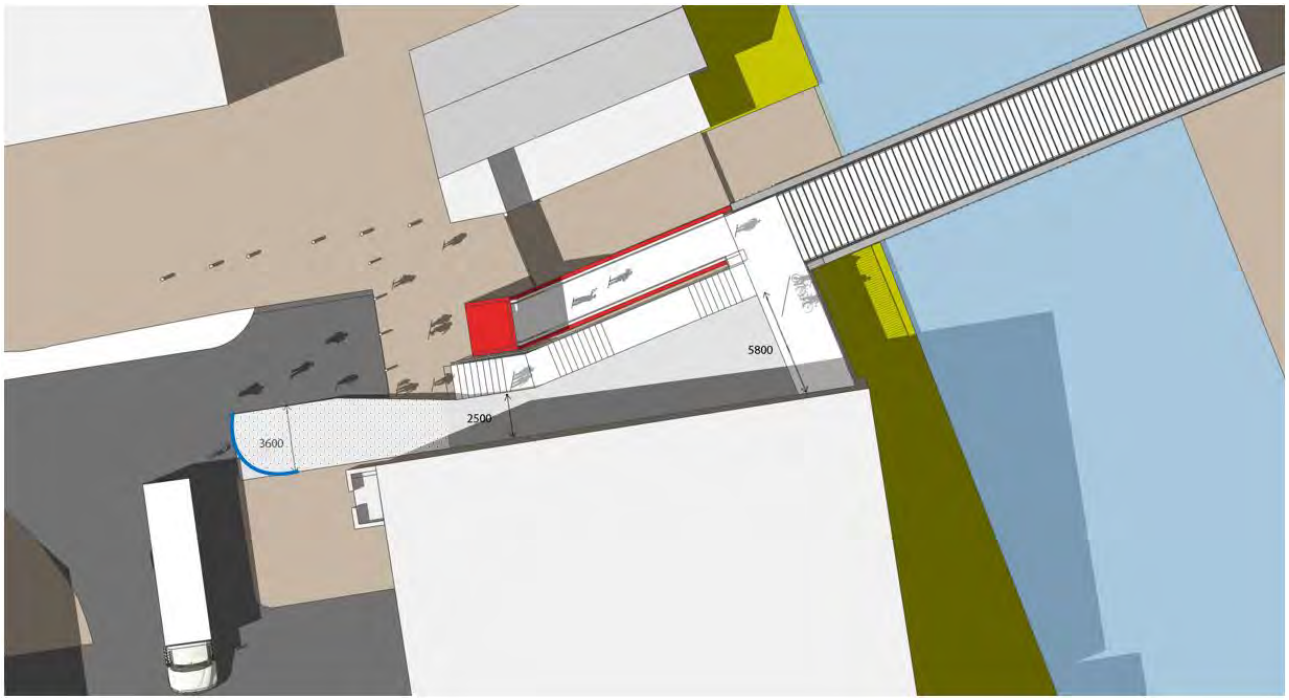
# Appendix L - Images of Option 2b


5800
2500
3600

[redacted]
Atkins
Euston Tower
286 Euston Road
London
NW1 3AT

[redacted]@atkinsglobal.com
[redacted]

**From:** [redacted]
**To:** [redacted]"; [redacted]@london.gov.uk"; [redacted]@Hackney.gov.uk"; [redacted]@sustrans.org.uk"; [redacted]; [redacted]; [redacted]; [redacted]@sustrans.org.uk"; [redacted]; [redacted]; [redacted]; [redacted]; [redacted]; [redacted]@london.gov.uk
**Cc:** [redacted]; [redacted]; [redacted]; [redacted]; [redacted]
**Subject:** H10 November 2014 Meeting
**Date:** 06 January 2015 17:44:45
**Attachments:** Wallis Road Bridge (H10) Ramp Presentation (Draft) 141117.pdf
H10 Wallis Road Concept Meeting 17 11 14 issued.pdf

---

Dear all,

Please find attached minutes of the last meeting held at LLDC offices along with the presentation from the meeting.

And below is a link to the feasibility report produced by Atkins which has been updated to include the additional costs as discussed at the meeting:

https://[redacted].

Kind regards,

[redacted]

**Queen Elizabeth Olympic Park**
London Legacy Development Corporation
Level 10
1 Stratford Place, Montfichet Road
London
E20 1EJ

DDI: [redacted]
DDI: [redacted]
Website: www.QueenElizabethOlympicPark.co.uk

www.queenelizabetholympicpark.co.uk

# WALLIS ROAD BRIDGE (H10)
# TEMPORARY CYCLE RAMP PROPOSAL

**Monday 17th November 2014**

LONDON LEGACY DEVELOPMENT CORPORATION

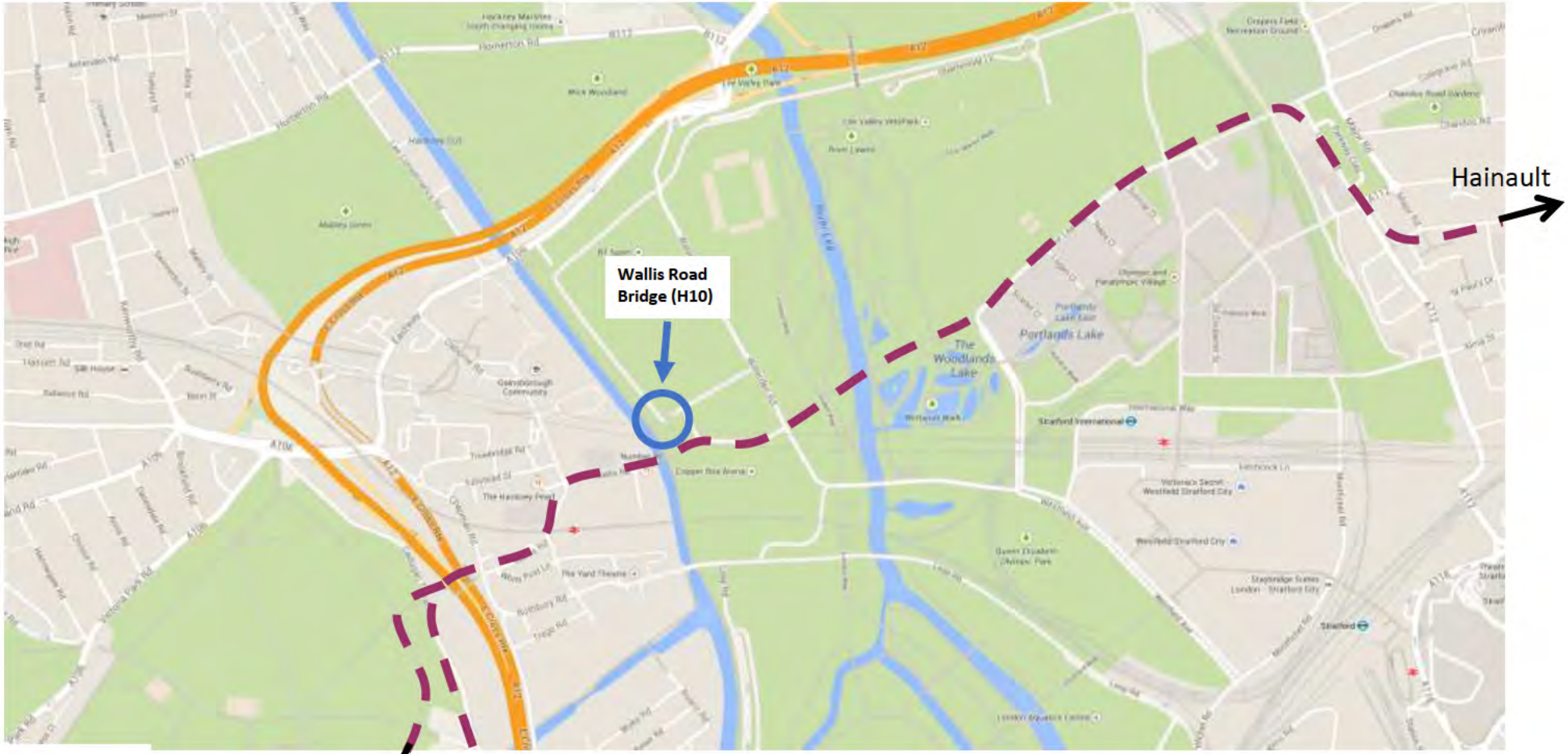
# Contents



LONDON LEGACY DEVELOPMENT CORPORATION

# Proposed Quietways Route

• As part of the Quietways scheme, we have been asked to consider ways to provide cyclists with a continuous cycling route through Queen Elizabeth Olympic Park (QEOP) over the Wallis Road Bridge (H10). This is being led by [redacted]



# Wallis Road Bridge (H10)

• As part of the transformation works post-Games, Wallis Road Bridge (H10) was built to connect QEOP to Hackney Wick. Access on the Hackney Wick side is by a stair and lift.

• The current bridge is DDA compliant and accessible for cyclists.

• Current cyclist access to QEOP is either by use of the lift or a cycle channel alongside the stairs.

Stairway with wheeling channel

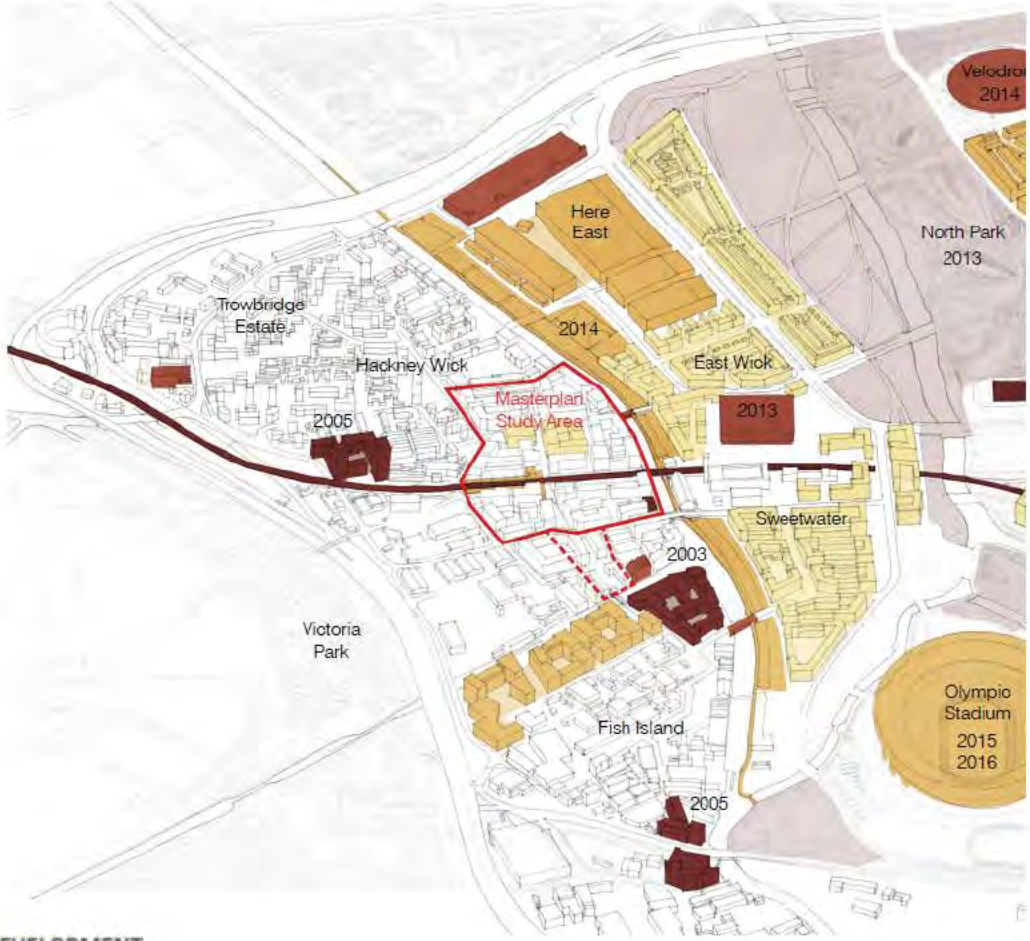
Eastern approach to Wallis Road Bridge (H10) lift

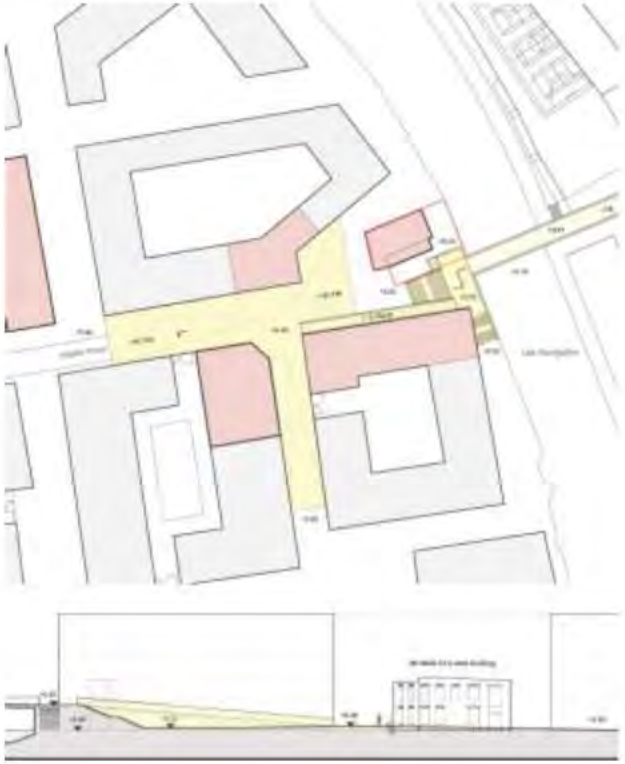
Eastern approach of Wallis Road Bridge (H10)

Western approach of Wallis Road Bridge (H10)

# Hackney Wick Masterplan

• LLDC are leading the development of a masterplan for Hackney Wick which includes improved access to Wallis Road Bridge (H10) and a better link across the canal by changes to the public realm. This will include improved cycle access via a ramp.



LONDON DEVELOPMENT CORPORATION

# Temporary Ramp Brief

- We have been asked to consider a temporary ramp solution that can be developed to provide an interim improved cycle offer.

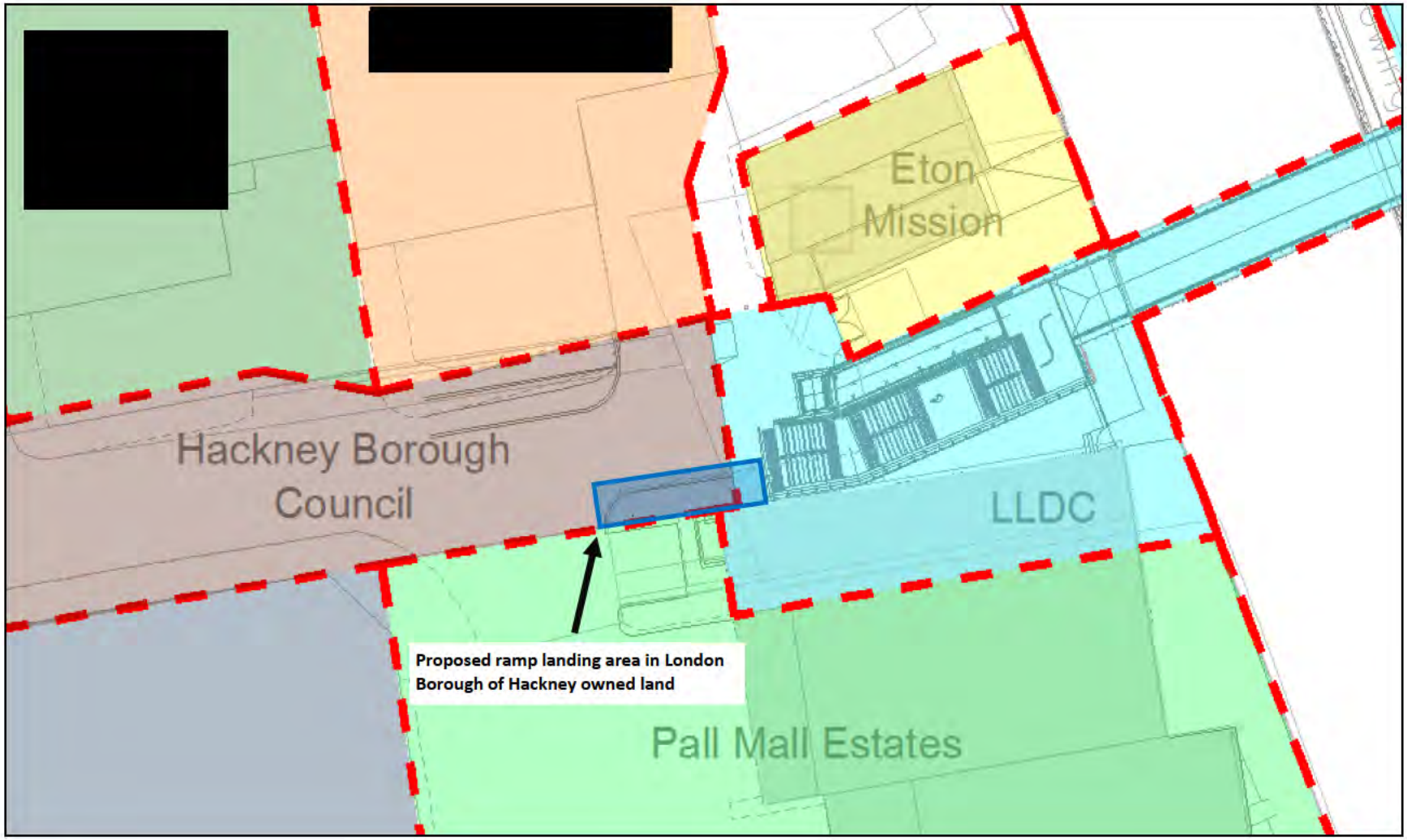
- Any proposal would have to avoid interfering with access to neighbouring private land and provide the best possible solution within the existing boundaries and site constraints.

- An option that could be considered is a temporary ramp solution for the western approach of Wallis Road Bridge (H10). The aim of the ramp would be to imrove cycle access across H10.

- Due to site constraints, the best possible option does not meet cycling standards neither in terms of gradient nor width for two way traffic.

- Funding would need to be found as none is currently available.

# Land Ownership

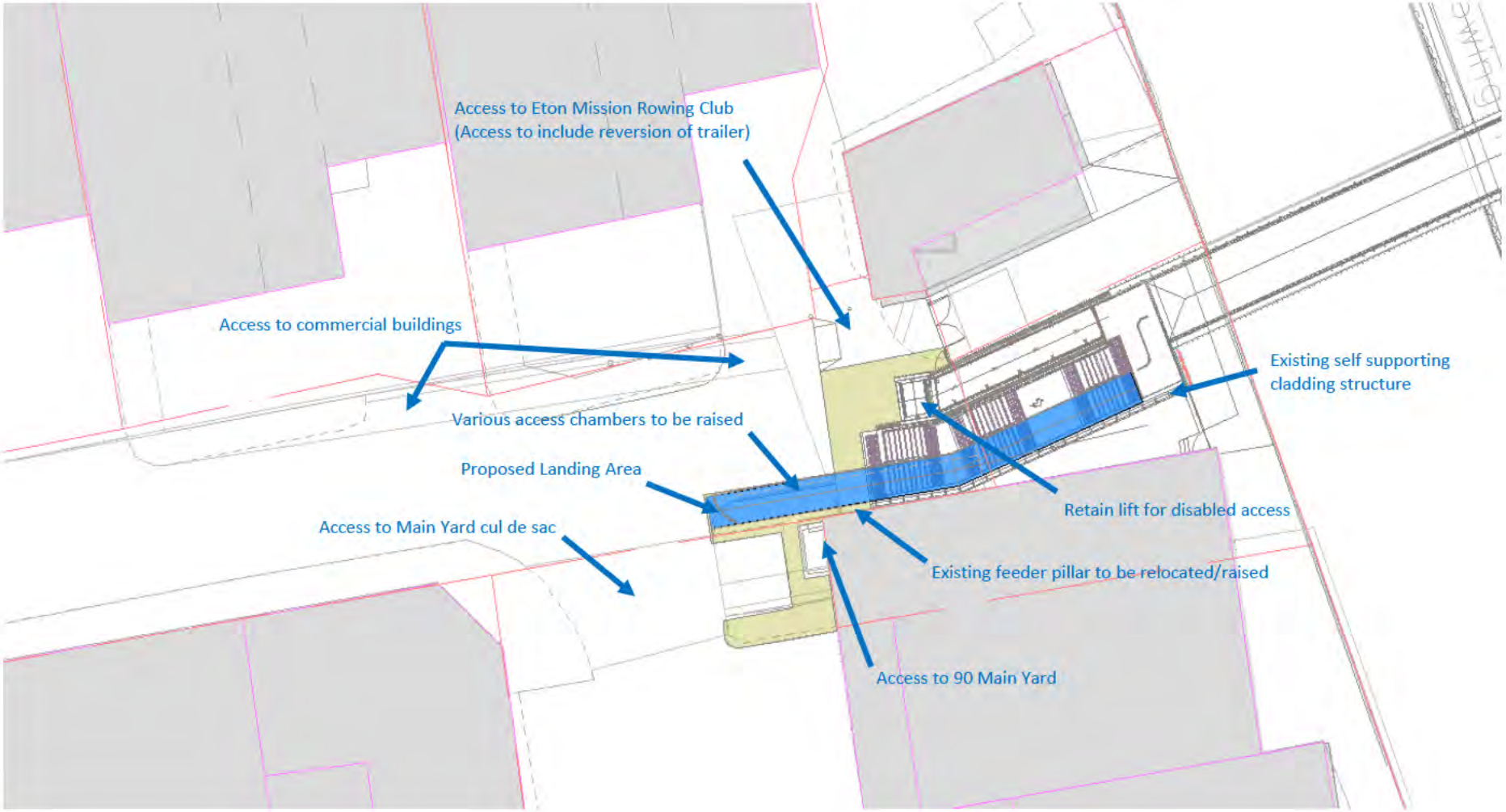



LONDON LEGACY DEVELOPMENT CORPORATION

# Neighbouring Access


The proposal would require relocating the access to 90 Main Yard.

# Site Constraints



# Cycling Standards

| | **Standards** (LTN2/08 & London Cycling Design Standards) |
|---|---|
| **Gradient** | 7% (1:14.3) for over 30m length ramp |
| **Minimum Width** | 2.45m – One directional traffic<br>3m – Two way traffic |

• LTN/2/08 & London Cycling Design Standards is guidance and not a legal requirement.

•If a ramp does not meet this standard, a departure will need to be submitted and approved that will cover both the ramp gradient and width.

•In addition to the Departure, two Approval in Principles (AIPs) will be required for:

- The assessment of the changes to the existing structure
- The assessment of the proposed design

•Both the Departure and the AIP's will need approval from the Olympic Infrastructure Technical Approval Authority (OITAA) who have a contracted response period of 10 working days.

• Given the site constraints the best possible achievable gradient is 1 in 7.47. This differs from the 1 in 14.3 standard.

• This is based on the existing stairway being split  to provide both ramped and stair access.

• However various options have been tested that look at ramps at 1 in 7.5.

# Project Group

| Stakeholder | Title | First Project Meeting 21st August 2014 | Second Project Meeting 2nd September 2014 |
|---|---|---|---|
| Greater London Authority | | Yes | Yes |
| [redacted] | [redacted] | | |
| London Borough of Hackney | | Yes | Yes |
| [redacted] | [redacted] | | |
| LLDC | | Yes | Yes |
| [redacted] | [redacted] | | |
| TfL | | No | Yes |
| [redacted] | [redacted] | | |
| Sustrans | | Yes | Yes |
| [redacted] | [redacted] | | |
| Atkins | | Yes | Yes |
| [redacted] | [redacted] | | |

# Planning

- Early consultation with LLDC PPDT has been carried out.

- The temporary ramp will need planning permission

- Concerns over the achievable gradient.

- H10 is within the Hackney Wick conservation area.

- The proposal needs to address the issue of the steep gradient to ensure that there are no safety issues with potential speeds going down, or concerns going up that will put cyclists off from using it.

- The ramp that connects Regents Canal towpath and the adjacent Prince Albert Road has a similar gradient to the proposal. However, the towpath ramp differs significantly from the proposed Bridge H10 ramp on at least two counts:

  - The canal towpath ramp is shared use and has barriers whereas the Bridge H10 ramp would be for cyclists only, allowing cyclists to go fast down the ramp (unless slowed down by barriers)

  - The Bridge H10 ramp would land on a footway with arguably more pedestrians than the canal towpath.

# Wheelchair Access

- Primary concern is that members of the public mistake this ramp as being intended for pedestrian use. This is potentially dangerous given the steep gradient required.

- In particular, wheelchair users coming from the Park may assume that this ramp is accessible, and not realise otherwise until they are on it.

- Concerns about pedestrians and cyclists clashing at the top of the stairs.

- Suggested mitigation measures include:

    - Make it abundantly clear that this ramp is for cyclists only

    - This should include ground markings, appropriate tactile paving and signage

    - Signage to indicate what the gradient actually is may also be beneficial

    - Installation of new handrail to ramp side of stairs

    - Sight lines must be as clear as possible and the area should have clear signage.

# Temporary Ramp Proposal

- Three options were considered. None of the options met the cycling standards in terms of gradient or width for two way traffic.

- The stair width would be reduced to 1.9m.

- Delivery for early 2016.

- The three options involve a ramp that would be constructed over existing structure. Ground at foot of stairs to be re-profiled so as to tie in with the proposed ramp base. This would reduce cost and construction time.

- Ramp would be a timber pre-fabricated construction methodology and materials selected to reduce operational impact and complement the existing bridge structure.

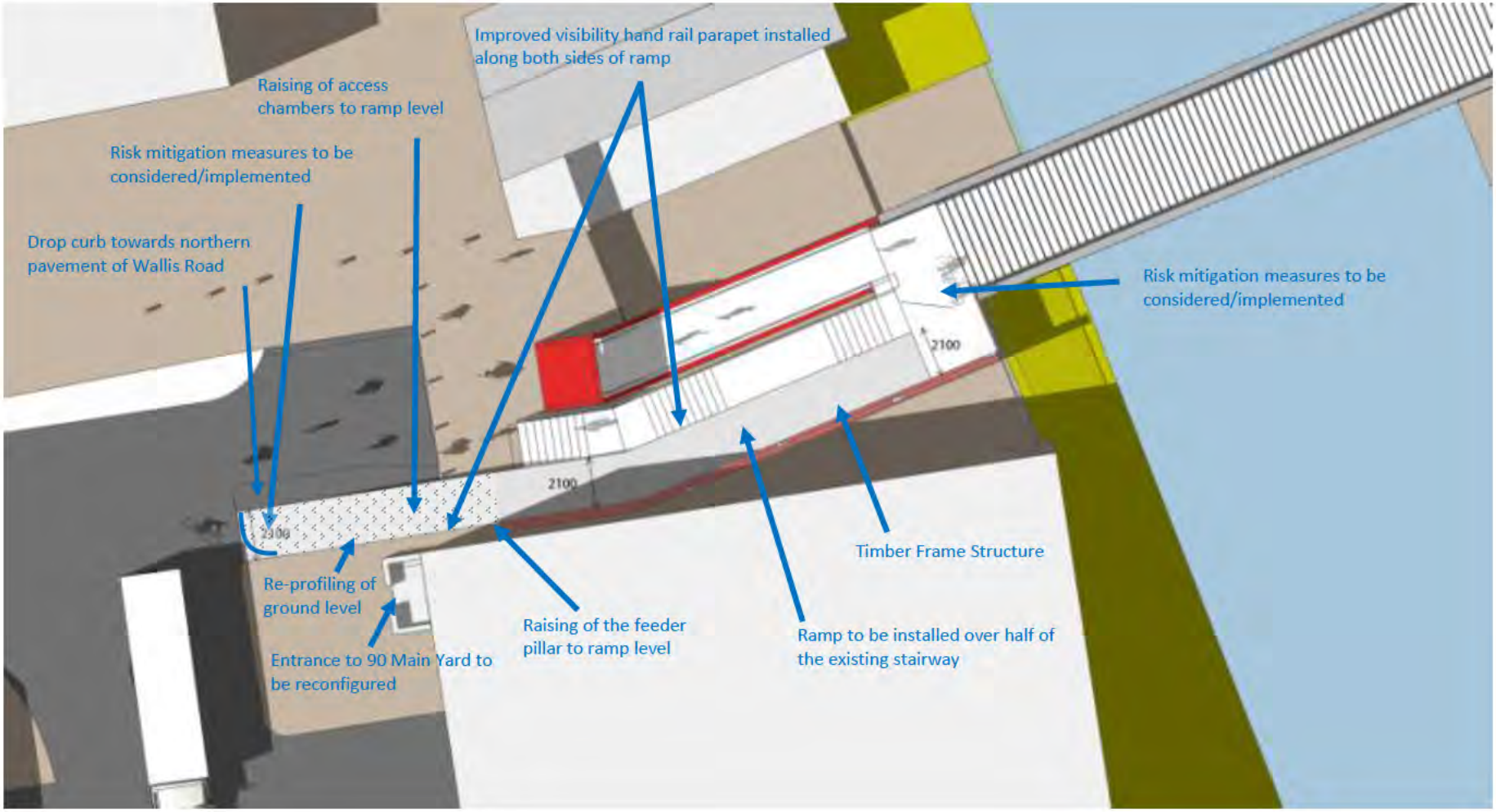
- Lift's Feeder Pillar would need to be raised or relocated and any existing access chambers shall be re-set to ensure a flush finish with the re-profiled section of the ramp proposal.

- All proposed ramp designs to include Health and Safety risk mitigation measures, such as transparent handrails designed to provide improved visibility.

- Ramp design and construction material have been chosen to cause as little disruption as possible and be in keeping with surroundings.

# Option 1

# Option 1


Improved visibility hand rail parapet installed along both sides of ramp
Raising of access chambers to ramp level
Risk mitigation measures to be considered/implemented
Drop curb towards northern pavement of Wallis Road
Risk mitigation measures to be considered/implemented
2100
2100
2300
Timber Frame Structure
Re-profiling of ground level
Raising of the feeder pillar to ramp level
Ramp to be installed over half of the existing stairway
Entrance to 90 Main Yard to be reconfigured

# Option 1

| | Option 1 | Standards |
|---|---|---|
| **Gradient** | 13.48% (1:7.42) | 7% (1:14.3) for over 30m length ramp |
| **Minimum Width** | Top 2.1m | 2.45m – One directional traffic<br>3m – Two way traffic |
| | Middle 2.1m | |
| | Bottom 2.1m | |
| **Ramp Length** | 30.05m | |
| **Pros** | Enhanced cycling access & experience | |
| **Cons** | Does not meet minimum width and gradient standards;<br>Pedestrian stairway will be reduced in width;<br>End of ramp visibility poor | |
| **Project Cost** | £395,000 | |

# Option 1

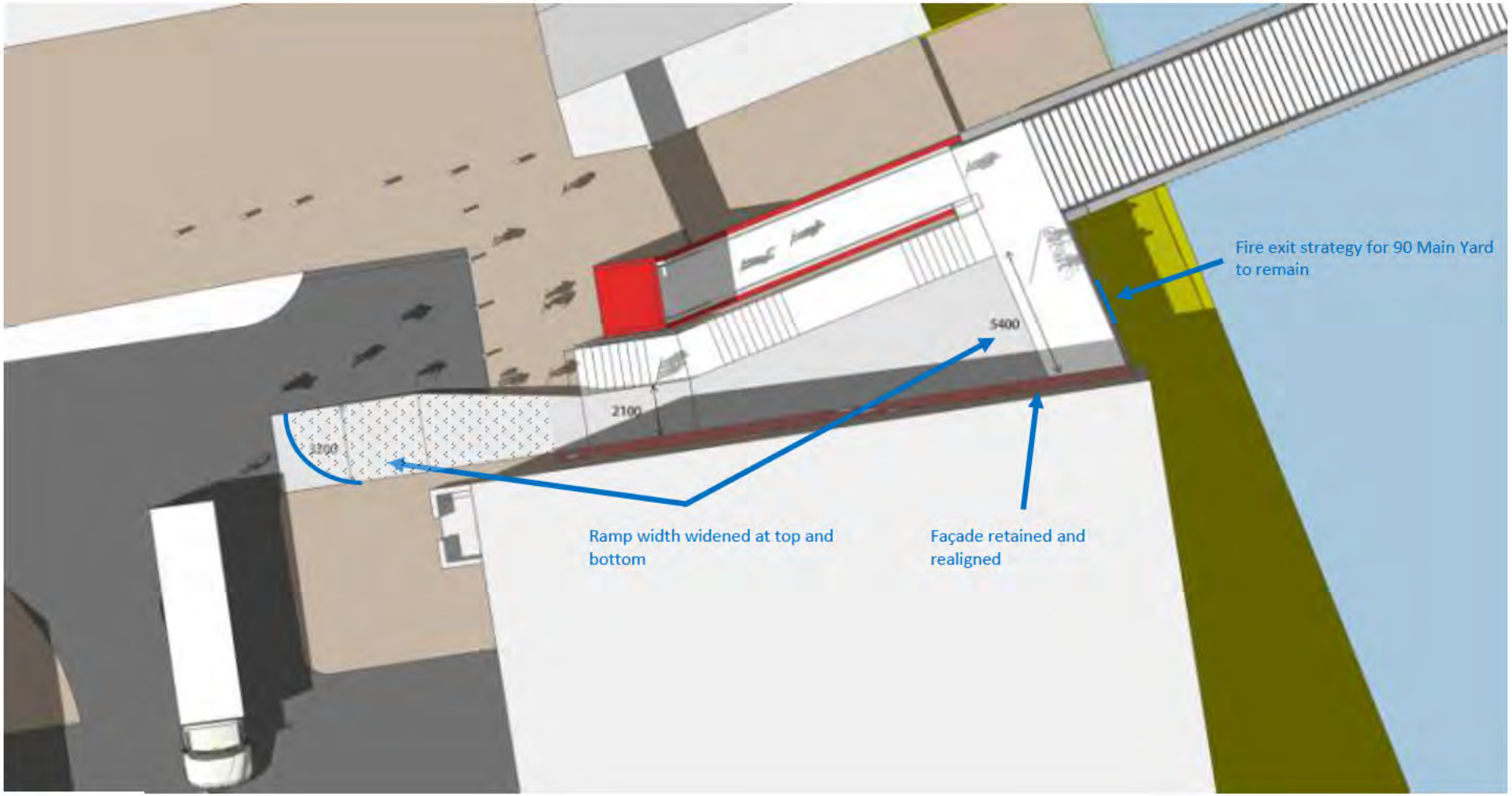
| Description | Total (£) |
|---|---|
| Construction | 104,570 |
| Preliminaries | 20,914 |
| Contractor's OH+P | 12,548 |
| RISK - Design Development | 34,508 |
| RISK - Construction Contingency | 25,881 |
| Inflation - 3Q 2014 to 3Q 2015 @ 5.6% | 11,112 |
| Rounding for Reporting Purposes | 467 |
| **Total Estimated Construction Cost (excl VAT)** | **£ 210,000** |
| Detailed Design Fees (Atkins) | 25,200 |
| Supervision | 9,408 |
| Project Management | 76,000 |
| CDMC Fees | 6,412 |
| OPEX Maintenance (10 Year Period) (LLDC) | 15,000 |
| Site Investigations & Surveys | 10,000 |
| Technical Approval and Safety Audits | 21,121 |
| Feasibility Design & Investigations (Atkins) | 20,000 |
| Rounding for Reporting Purposes | 1,858 |
| **Total Estimated Project Cost (excl VAT)** | **£ 395,000** |

# Option 2A

## Ramp Widened at Top and Bottom

# Option 2A

## Ramp Widened at Top and Bottom

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# Option 2A

## Ramp Widened at Top and Bottom

| | Option 2A | Standards |
|---|---|---|
| **Gradient** | 13.42% (1:7.45) | 7% (1:14.3) for over 30m length ramp |
| **Minimum Width** | Top 5.4m | 2.45m – One directional traffic<br>3m – Two way traffic |
| | Middle 2.1m | |
| | Bottom 3.2m | |
| **Ramp Length** | 30.18m | |
| **Pros** | Enhanced cycling access & experience | |
| **Cons** | Does not meet minimum width and gradient standards;<br>Pedestrian stairway will be reduced in width;<br>End of ramp visibility poor | |
| **Project Cost** | £450,000 | |

# Option 2A

## Ramp Widened at Top and Bottom

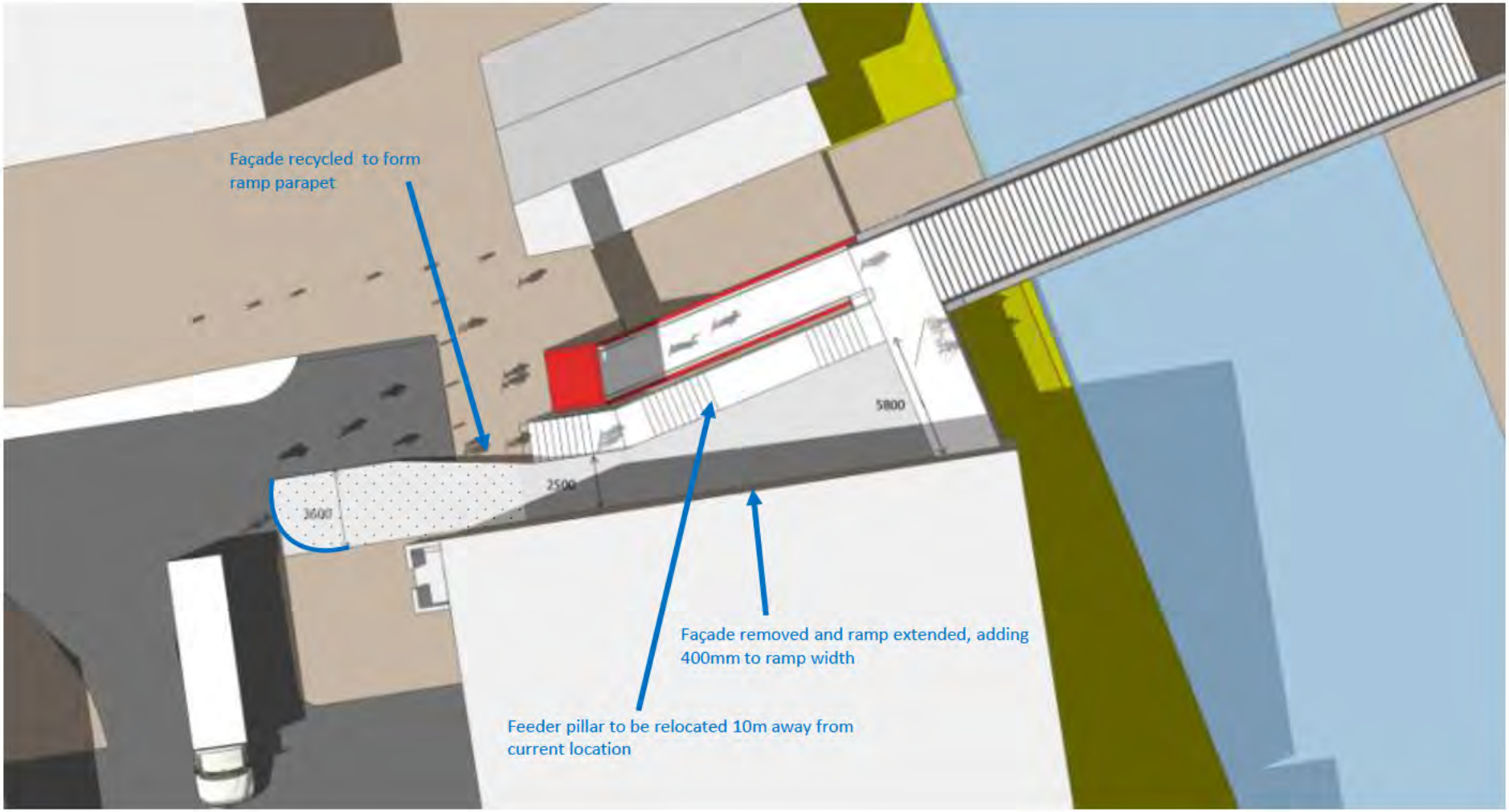
| Description | Total (£) |
|---|---|
| Construction | 126,630 |
| Preliminaries | 25,326 |
| Contractor's OH+P | 15,196 |
| RISK - Design Development | 41,788 |
| RISK - Construction Contingency | 31,341 |
| Inflation - 3Q 2014 to 3Q 2015 @ 5.6% | 13,456 |
| Rounding for Reporting Purposes | 1,264 |
| **Total Estimated Construction Cost (excl VAT)** | **£ 255,000** |
| Detailed Design Fees (Atkins) | 30,600 |
| Supervision | 11,424 |
| Project Management | 76,000 |
| CDMC Fees | 7,460 |
| OPEX Maintenance (10 Year Period) (LLDC) | 15,000 |
| Site Investigations & Surveys | 10,000 |
| Technical Approval and Safety Audits | 24,329 |
| Feasibility Design & Investigations (Atkins) | 20,000 |
| Rounding for Reporting Purposes | 186 |
| **Total Estimated Project Cost (excl VAT)** | **£ 450,000** |

# Option 2B

## Ramp Widened at Top and Bottom (Façade Removed)

# Option 2B

## Ramp Widened at Top and Bottom (Façade Removed)

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# Option 2B

## Ramp Widened at Top and Bottom (Façade Removed)

| | Option 2B | Standards |
|---|---|---|
| **Gradient** | 13.39% (1:7.47) | 7% (1:14.3) for over 30m length ramp |
| **Minimum Width** | Top 5.8m | 2.45m – One directional traffic<br>3m – Two way traffic |
| | Middle 2.5m | |
| | Bottom 3.6m | |
| **Ramp Length** | 30.24m | |
| **Pros** | Meets the width standard requirement for one way traffic;<br>Enhanced cycling access & experience | |
| **Cons** | Does not meet minimum width and gradient standards;<br>Pedestrian stairway will be reduced in width;<br>End of ramp visibility poor | |
| **Project Cost** | £520,000 | |

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# Option 2B

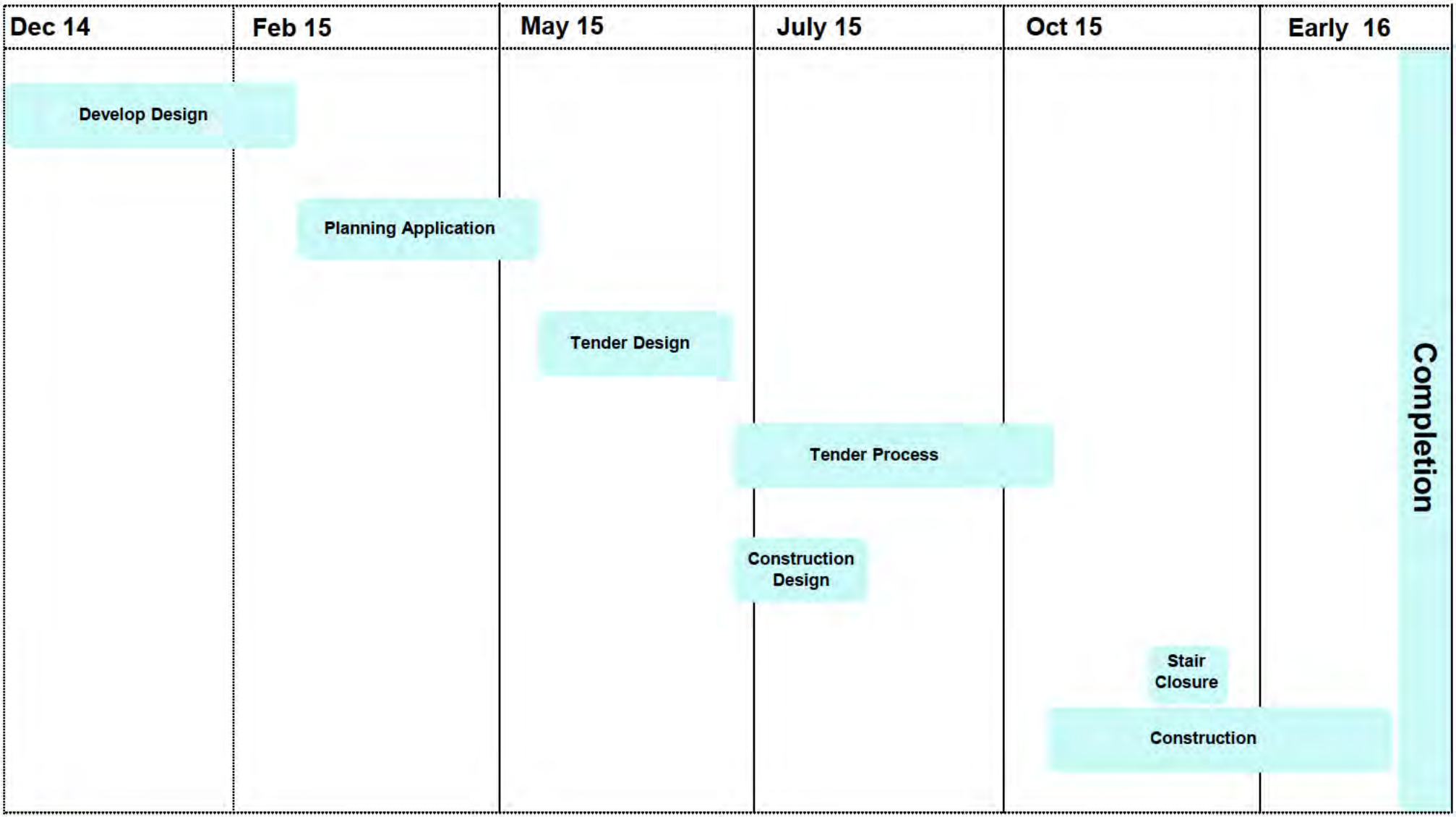
## Ramp Widened at Top and Bottom (Façade Removed)

| Description | Total (£) |
|---|---|
| Construction | 154,700 |
| Preliminaries | 30,940 |
| Contractor's OH+P | 18,564 |
| RISK - Design Development | 51,051 |
| RISK - Construction Contingency | 38,288 |
| Inflation - 3Q 2014 to 3Q 2015 @ 5.6% | 16,438 |
| Rounding for Reporting Purposes | 18 |
| **Total Estimated Construction Cost (excl VAT)** | **£ 310,000** |
| Detailed Design Fees (Atkins) | 37,200 |
| Supervision | 13,888 |
| Project Management | 76,000 |
| CDMC Fees | 8,742 |
| OPEX Maintenance (10 Year Period) (LLDC) | 15,000 |
| Site Investigations & Surveys | 10,000 |
| Technical Approval and Safety Audits | 28,250 |
| Feasibility Design & Investigations (Atkins) | 20,000 |
| Rounding for Reporting Purposes | 921 |
| **Total Estimated Project Cost (excl VAT)** | **£ 520,000** |

# Summary

| Design Option | **Standards** (LTN2/08 & London Cycling Design Standards) | Option 1 | Option 2A | Option 2B |
|---|---|---|---|---|
| **Gradient** | 7% (1:14.3) for over 30m length ramp | 13.48% (1:7.42) | 13.42% (1:7.45) | **13.39% (1:7.47)** |
| **Minimum Width** | 2.45m – One directional traffic<br>3m – Two way traffic | 2.1m | 2.1m | 2.5m |
| **Ramp Length** | | 30.05m | 30.18m | **30.24m** |
| **Pros** | | Enhanced cycling access & experience | Enhanced cycling access & experience | Meets the width standard requirement for one way traffic;<br>Enhanced cycling access & experience |
| **Cons** | | Does not meet minimum width and gradient standards<br>Pedestrian stairway will be reduced in width<br>End of ramp visibility poor | Does not meet minimum width and gradient standards<br>Pedestrian stairway will be reduced in width<br>End of ramp visibility poor | Does not meet gradient standards<br>Pedestrian stairway will be reduced in width<br>End of ramp visibility poor |
| **Ramp Material** | | Timber | | |
| **Project Cost**<br>**(includes Detailed Design, Project management, CDMC, OPEX, Site investigation & Feasibility study)** | | £395,000 | £450,000 | £520,000 |
| **Conclusion** | | ✘ | ✘ | ? |

# Potential Programme



# Buildability

- The installation of the ramp will require the stair to be closed for a minimum of two weeks.

- Potential for temporary access to the bridge to be located on Eton Mission Rowing Club land, which has been included in the project estimates.

# Road Safety Audit Conclusions

- A Road Safety Audit has been carried out on Option 2B. This has raised a number of problems:
    - Risk of ramp users losing control due to excessive gradient and absence of intermediate landings
    - Risk of pedestrians falling on the staircase
    - Risk of conflict between ramp users and vehicles/pedestrians in the vicinity of the ramp base
    - Risk of cyclist unable to cycle up steep gradient and losing control
    - Risk of wheelchair/mobility scooter users using the ramp and losing control due to steep ramp gradients
    - Risk of injury due to unintended use by skateboarders, BMX riders etc
    - Risk of Westbound cyclists riding down the steps

- The audit recommended that the gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges (Highways Agency, 2004). The generally preferred gradient is 5% (1:20) with an 8% absolute maximum (1:12). It also recommended that suitable staggered barrier/bollards should be provided at the top and bottom of the stair/ramp.

- As part of Phase 2– Detailed design, risk mitigating measures would be developed to address the concerns raised within the Road Safety Audit.

# Risk Mitigation Measures To Be Considered

- Rough surface texture to be used to assist with braking and manoeuvrability;
- Footway markings i.e. “SLOW”;
- Priority give way system;
- Visual and physical speed calming measure;
- Transparent parapet railing to maximise visibility;
- Staggered barriers to reduce speeds at the top and bottom of ramp;
- Measures at the ‘T’ junction of Wallis Road and Main Yard;
- Signs warning pedestrians of cyclists;
- A minimum of 2.3m height clearance to all obstructions on building wall;
- Suitable illumination of the ramp
- Granite sets at eastern approach.

# Precedents

- A steep ramp located on the canal network at Hackney Marshes with a gradient of 20% (1:5);
- Used by confident cyclists- run up is required on ascent;
- Steeper than Option 2B;

- An existing cycle and pedestrian ramp in Camden linking Regents Canal towpath to the adjacent Prince Albert Road;
- Used by cyclists;
- Similar maximum gradient to the proposed Option 2B being 14% (1:7).

# Conclusion

- No option meets standards in terms of gradient and width.

- Option 2B provides the best possible option for delivery of a temporary ramp.

- Funding would have to be obtained before the project could proceed.

# Next Steps

- Decision on option, if any, to progress.
- Obtain funding.
- Confirm land ownership and transfer requirement
- Stakeholder considerations to be incorporated into proposal
- Check impact on current and future pedestrian flows by reducing stair width to 1.9m.
- Engage consultants for Phase 2
- Develop design to mitigate any Road Safety Audit concerns in the detailed design stage;
- Departure from standards process—Submit an application for a departure of standards for both the gradient and ramp width, this shall then be progressed toward the Agreed In Principal (AIP) stage which is carried out by the Olympic Infrastructure Technical Approval Authority (OITAA);
- Management and maintenance strategy to be developed.

# MINUTES

**London Legacy Development Corporation**

**Meeting title:** H10 Wallis Rd Concept Design Presentation

**Meeting date:** 17.11.14

**Time:** 4:30pm

**Venue:** LLDC meeting room 05, Level 10, 1 Stratford Place, Montfichet Road, London, E20 1EJ

**Associated Documents:** Wallis Road Bridge – Feasibility Report

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**Present:**

[redacted] (LLDC)
[redacted] (LLDC PPDT)
[redacted] (LLDC)
[redacted] (LLDC)
[redacted] (LLDC)
[redacted] (LLDC)
[redacted] (Mayor's Office)
[redacted] (LBH)
[redacted] (LBH)
[redacted] (Atkins)
[redacted] (Atkins)
[redacted] (GLA)
[redacted] (TfL)
[redacted] (Sustrans)

**Apologies:** None

**Summary of agreed points:**

1. [redacted] and the GLA support the outline design for Option 2b. This Option provides a 1:7.47 ramp.

2. Further design and feasibility updates are required to capture the Wallis Road public realm design required to support the build of the ramp, allowance for a heritage consultant and for treatment to the adjacent 90 main yard wall, to the south of the ramp.

   *Post meeting note: Since the meeting the costs have been updated to include for the public realm work. The estimated increase in project cost is from £520K to £640K. Further design work would take place at the next stage.*

3. Following receipt of the feasibility study TfL will undertake an assessment of the feasibility report to review the impacts to all users of the bridge, including the benefits to cyclists. TfL will also consider the matters arising from the Road Safety Audit.

4. TfL to carry out Business Case, own VfM case and provide funding for the project if required following assessment.

5. A pedestrian and traffic study to be carried out with consideration to implementing Option 2b.

6. Noted that the construction of the ramp will cause access disruption between QEOP and Hackney Wick during construction. There will be a period of intermittent lift and no stairway access.

7. LLDC costs for works incurred to date to be reimbursed by TfL

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## 1. Introductions

1.1. [redacted] provided Quietways context, summarised the project and design development to date.

## 2. Presentation

2.1. Concept design presented by [redacted] and Atkins. See associated document : Wallis Road Bridge (H10) Ramp Presentation (Draft) V01_ RM 5

2.2. Width of stairs is 1.9m from edge to edge – not inclusive of handrail

2.3. The interface between cyclist and pedestrians at the bottom of the ramp was raised as a concern. It was agreed to develop a shared use design for the public realm Wallis Rd ramp approach.

2.4. Design life of the ramp is 10 years, main ramp material is timber.

2.5. TfL London Cycling Design Standards and Department for Transport Local Transport Note 2/08 are the guidelines considered in the design development

2.6. Review of summary table shows that all solutions depart from the guidelines.

2.7. Full width as a ramp considered but discounted because of impact on access to adjacent properties, most notably the boat club.

## 3. Post Presentation Discussion

3.1 The closure for the works of minimum 3 weeks is of concern for stakeholders. Key stakeholders identified in the meeting were

Loughborough University, Here East and the Copper Box. Lift should remain operational.

*Post meeting note: Lift use will be intermittent during lifting operations associated with construction and the stairs will be closed for a period of 6-8 weeks to allow for replacement of pre-cast stairs and ramp to be lifted in. To be clarified upon appointment of contractor.*

3.2 [redacted] supports Option 2b of 1:7.47 ramp and does not believe the ramp solution is too steep with particular consideration to precedent examples elsewhere on the Quietway routes.

3.3 TfL will review the feasibility report and assess the benefits to cyclists and impacts to all other bridge and road users in line with cycling and pedestrian design guidance.

3.4 TfL will also consider the matters arising from the Road Safety Audit, the impact on pedestrian flows and the public realm works required on Wallis Route as part of the Quietway Route Delivery Plan.

3.5 If required, a business case will be produced.

3.6 The impact of the proposal on pedestrian traffic will need to be assessed. A study will need to be carried out. Note: ARUP have carried out a HereEast review. Here East review and the ODA may have completed one for the Copper Box.

3.7 The GLA and Mayor's office note that they consider the funding required of £520K is appropriate for the project and note that they are in support of Option 2b.

3.8 LLDC to include for Wallis road ramp approach public realm design development and cost in feasibility. LLDC to provide update cost to TfL/GLA/Mayor's office.

*Post meeting note: Atkins advise that the feasibility cost of the additional cost for works to the public realm area is £120K and the total project cost is anticipated to be £640K.*

3.9 Cabinet approval to build the ramp on LBH land will be required.

3.10 LLDC to maintain ramp.

3.11 Consideration to wall treatment behind cladding required. Design and installation to be included in the feasibility.

3.12 PPDT note that the justification of 'safe in comparison to' will not be the parameters for review, the design is to be 'safe' in its own right.

3.13 Heritage consultant advice would be helpful because the proposed ramp falls within the conservation area. LLDC to have allowance included in

feasibility.

3.14 Temporary staircase not considered to be a viable access solution during stair closure because it relies on the use of non LLDC land and approval for use of land is considered a project risk.

3.15 LLDC PPDT advise that it is good practice to have a public consultation prior to the submission of the planning application.

## 4. Next Steps

4.1 TfL to review proposals in the feasibility report to assess the benefits and disbenefits and consider the matters arising from the Road Safety Audit. .

4.2 LLDC to provide updated feasibility report that includes for costs for the public realm concept design, heritage consultancy and wall treatment/artwork to south of ramp.

4.3 [redacted] notes that he will support proposal through the TfL Quietways Programme.

## 5. AOB

5.1 Cycle travelator option noted but not openly supported

5.2 LLDC Costs incurred to date to be covered by TfL. LLDC to discuss with TfL directly.

5.3 Further design review meetings to have only a key attendee from each stakeholders organisation.

**Next meeting: TBC**

# Wallis Road Bridge (H10) Ramp Proposal

## Feasibility Study and Investigation

London Legacy Development Corporation

**22nd December 2014**

ATKINS

Plan Design Enable

Notice:

This document and its contents have been prepared and are intended solely for London Legacy Development Corporation's information and use in relation to the Wallis Road Bridge (H10) Ramp Proposal.

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| **Job number: 5114214** | | | **Document ref: LC810-LCI-H10-CB-REP-0002** | | | |
|---|---|---|---|---|---|---|
| **Revision** | **Purpose description** | **Originated** | **Checked** | **Reviewed** | **Authorised** | **Date** |
| P01 | For Information | [redacted] | [redacted] | [redacted] | [redacted] | 24/11/14 |
| P02 | For Information | [redacted] | [redacted] | [redacted] | [redacted] | 22/12/14 |
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|---|---|
| **Client** | London Legacy Development Corporation |
| **Project** | Wallis Road Bridge (H10) Ramp Proposal |
| **Document title** | Wallis Road Bridge (H10) Ramp Proposal – Feasibility Study and Investigation |
| **Job no.** | 5114214 |
| **Document reference** | LC810-LCI-H10-CB-REP-0002 |

# Contents

# Glossary and Acronyms

| Abbreviation | Description | Abbreviation | Description |
|---|---|---|---|
| AIP | Approval in Principle | QEOP | Queen Elizabeth Olympic Park |
| TfL | Transport for London | RSA | Road Safety Audit |
| GLA | Greater London Authority | WWMA | Witherford Watson Mann Architects |
| H10 | Wallis Road Bridge | | |
| KCA | Karakusevic Carson Architects | | |
| LBH | London Borough of Hackney | | |
| LLDC | London Legacy Development Corporation | | |

# Executive Summary

Considerable development of Hackney Wick is expected to take place over the next decade and beyond. This is both associated with the Olympic Legacy land-uses and other proposals, including significant development focussed around Hackney Wick Station. Hackney Wick Station straddles the border between Tower Hamlets and Hackney, and both boroughs have ambitious plans for growth and redevelopment in the area, as outlined in their core strategies.

Due to the development of the 'Quietways' cycling route, the London Legacy Development Corporation (LLDC), on behalf of the Greater London Authority (GLA), are exploring the possibility of installing a temporary cycle ramp for the western approach of Wallis Road Bridge (H10) as the existing scenario requires cyclists to dismount prior to climbing/descending the western approach of Wallis Road Bridge (H10). The purpose of the ramp would be to provide a continuous route through the Queen Elizabeth Olympic Park (QEOP). Currently the western approach of Wallis Road Bridge (H10) provides access via a lift, which meets DDA compliance, and a staircase with an inbuilt channel for cyclists wishing to push their bicycles up/down the stairs.

Witherford Watson Mann Architects (WWMA) and Karakusevic Carson Architects (KCA) were commissioned by LLDC to develop a masterplan for Hackney Wick and Hackney Wick Neighbourhood Centre and as part of this work they investigated possible connectivity improvements between the QEOP and Hackney Wick. One aspect of the masterplan is to deliver a ramped approach to Wallis Road Bridge (H10) in the medium to long term. This report follows on from the work undertaken by WWMA and KCA by investigating possible design solutions for providing a temporary cycle ramp (10 year life span) on the southern side of the western approach of Wallis Road Bridge (H10) as outlined in WWMA' Option 4 (see Appendix A – Previous Investigations).

There is no requirement to install a ramp on the eastern approach of Wallis Road Bridge (H10) as the ground level is higher than the western approach and as such ties in with the existing bridge deck level. Options for the western approach have been investigated as part of this study and a superior option has been identified (Option 2b) and is detailed in Section 3.5.

The Option 2b proposed cycle ramp will require replacement of the existing pedestrian staircase on the western approach of Wallis Road Bridge (H10). The new staircase will need to have a reduced width to accommodate the ramp. A number of site constraints have restricted the gradient and width of the proposed ramp to 13.39% (1:7.47) and 2.5m respectively allowing for a stairway width of 1.9m. In addition to the provision of a ramp, the area in the vicinity of the lift, ramp and stairs will require redevelopment so as to separate cyclists from other Wallis Road users and provide a continuous transition from the Wallis Road Bridge (H10) ramp to the Quietway route. The access to 90 Main Yard will also require reconfiguring as part of this proposal.

Due to the limited space available in the vicinity of the western approach of Wallis Road Bridge (H10) it is difficult to provide a compliant ramp that meets the necessary design standards in terms of ramp width and gradient. The design standards (LTN2/08 & London Cycling Design Standards) recommend a minimum gradient of 7% (1:14.3) over 30m and a width of 2.45m for one directional traffic and 3m for two way traffic.

Option 2b provides significant improvements with regards to the ramp width and gradient over the other designs investigated as part of this study, however a Departure from the standards will still be required in order to be accepted. A single Departure will need to be submitted and approved that will cover both the ramp gradient and width.

In addition to the Departure two structural Approval in Principles (AIPs) will be required for:

- The assessment of the changes to the existing structure
- The assessment of the proposed design

Both the Departure and the AIP's will need approval from the Olympic Infrastructure Technical Approval Authority (OITAA) who have a contracted response period of 10 working days.

Mitigating measures designed to improve safety have been identified in Section 3.3.2.1 and will need to be included as part of Detailed Design to reduce any risk associated with the Departure.

The proposed ramp extends out of LLDC owned land and into land owned by the London Borough of Hackney (LBH). The viability of the proposed ramp design relies on the support of LBH and the use of their land. LBH have been engaged throughout Phase 1 and have expressed the need to incorporate safe measures within the design and limit the length of time the bridge is closed during construction.

The proposed project cost of the superior option (Option 2b) is anticipated to be approximately £645,000. This option is subject to further development and detailed design which will be undertaken as part of Phase 2.

# 1. Introduction

## 1.1. Study Objective

The Wallis Road Bridge (H10) was built as part of the transformation works post-Games and links Hackney Wick, over the River Lee Navigation to the QEOP. Currently the western approach of Wallis Road Bridge (H10) provides access via a lift, which meets DDA compliance, and staircase with an inbuilt channel for cyclists wishing to push their bicycles up/down the stairs.

Due to the development of the 'Quietways' cycling route, which highlights the Wallis Road Bridge (H10) as being critical to the scheme (see Figure 1), LLDC, on behalf of the GLA, are exploring the possibility of installing a temporary cycle ramp for the western approach of the bridge, as the existing scenario requires cyclists to dismount prior to climbing/descending the bridge, using either the stairs or the lift.

The purpose of the ramp will be to provide an interim improved cycling offer, allowing a continuous route through the QEOP without the need for cyclists to dismount prior to using the Wallis Road Bridge (H10). Any proposal would have to avoid interfering with access to neighbouring private land and provide the best possible solution within the existing boundaries and site constraints.

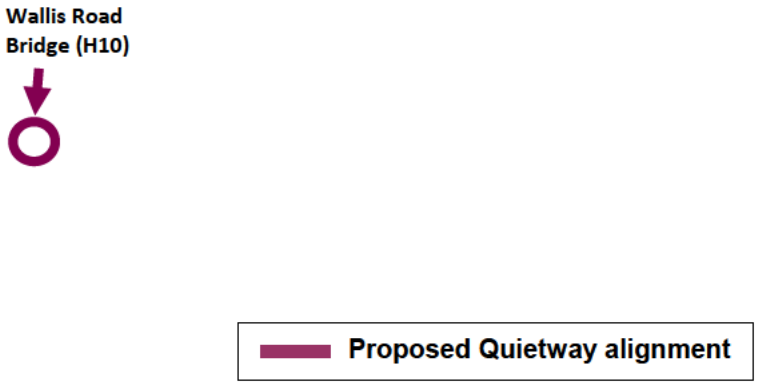



**Figure 1 Proposed Quietway scheme (Aldgate to Hainault) utilising the Wallis Road Bridge (H10)**

In August 2014, Atkins were instructed by LLDC to undertake an investigation into providing temporary ramped access to the western approach of the Wallis Road Bridge (H10). This report forms the basis of Phase 1 which summarises the possible ramp solutions investigated as part of this study, looking in particular at project costing, programming and safety. Following a review of the proposed designs the best option will be taken forward and developed as part of Phase 2.

The scheme is supported and funded by the GLA.

## 1.2. Previous Work Undertaken

WWMA and KCA were commissioned by LLDC to develop a masterplan for Hackney Wick and Hackney Wisk Neighbourhood Centre and as part of this work WWMA and KCA investigated possible connectivity improvements between the QEOP and Hackney Wick. In June 2014 LLDC instructed WWMA and KCA to undertake a high level investigation into possible ramp solutions for the H10 Bridge. From this 4 possible options were identified, which comprise:

Option 1: Retain the lift and build an integrated 10% (1:10) ramp and new stair

Option 2: Relocate the lift, build a new stair and raise Wallis Road Level to form a 8.3% (1:12) ramp

Option 3: Remove lift and build new 8.3% (1:12) ramp

Option 4: Construct a temporary ramp over existing stair

These options are included in Appendix A – Previous Investigations. After consideration of the future master plan for the area and the 4 options identified by WWMA and KCA, LLDC instructed Atkins to develop Option 4 further as part of this investigation.

In June 2014 a Stage 1 Road Safety Audit was (RSA) undertaken by Local Transport Projects Ltd (see Appendix B) which examined the safety performance of the temporary ramp option (Option 4) outlined by WWMA. Due to the limiting site constraints a number of safety issues were identified by Local Transport Projects Ltd, which Atkins have attempted to address as part of the Phase 1 design development.

## 1.3. Stakeholder Engagement

There have been three meetings to date to discuss the Wallis Road Bridge ramp proposal. The first meeting was held on the 21st August 2014 and attended by representatives from Atkins, the GLA, the LBH and the LLDC. The second meeting was held on the 2nd September 2014 and attended by representatives from Atkins, the GLA, the LLDC, Transport for London (TfL) and Sustrans. A third meeting was held on the 17th November 2014 where a presentation was given by LLDC and was attended by Atkins, the GLA, the LLDC, the London Borough of Hackney (LBH), TfL and Sustrans. A full list of attendees can be seen in Table 1.

Table 1 List of Stakeholders engaged to date

| Stakeholder | Title | First Project Meeting<br>21st August 2014 | Second Project Meeting<br>2nd September 2014 | Third Project Meeting<br>17th November 2014 |
|---|---|---|---|---|
| Greater London Authority | | Yes | Yes | Yes |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| London Borough of Hackney | | Yes | Yes | Yes |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| LLDC | | Yes | Yes | Yes |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| TfL | | No | Yes | Yes |
| [redacted] | [redacted] | | | |
| Sustrans | | Yes | Yes | Yes |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| Atkins | | Yes | Yes | Yes |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |
| [redacted] | [redacted] | | | |

# 2. Site Details and Constraints

## 2.1. General Site Description

Wallis Road Bridge (H10) is located north-west of the Copper Box Arena and links Hackney Wick, over the River Lee Navigation to the QEOP. The western approach of Wallis Road Bridge (H10) is located at the 'T' junction between Wallis Road and the Main Yard cul-de-sac and currently consists of a lift and a staircase. Cyclists are able to use the lift or the wheeling channel provided on the right as you climb the staircase. The eastern approach of Wallis Road Bridge (H10) does not require a ramp or staircase as the bridge deck is level with the existing ground as shown in Figure 2. For an assortment of photographs of H10 and the surrounding areas see Appendix C – Site Photographs.

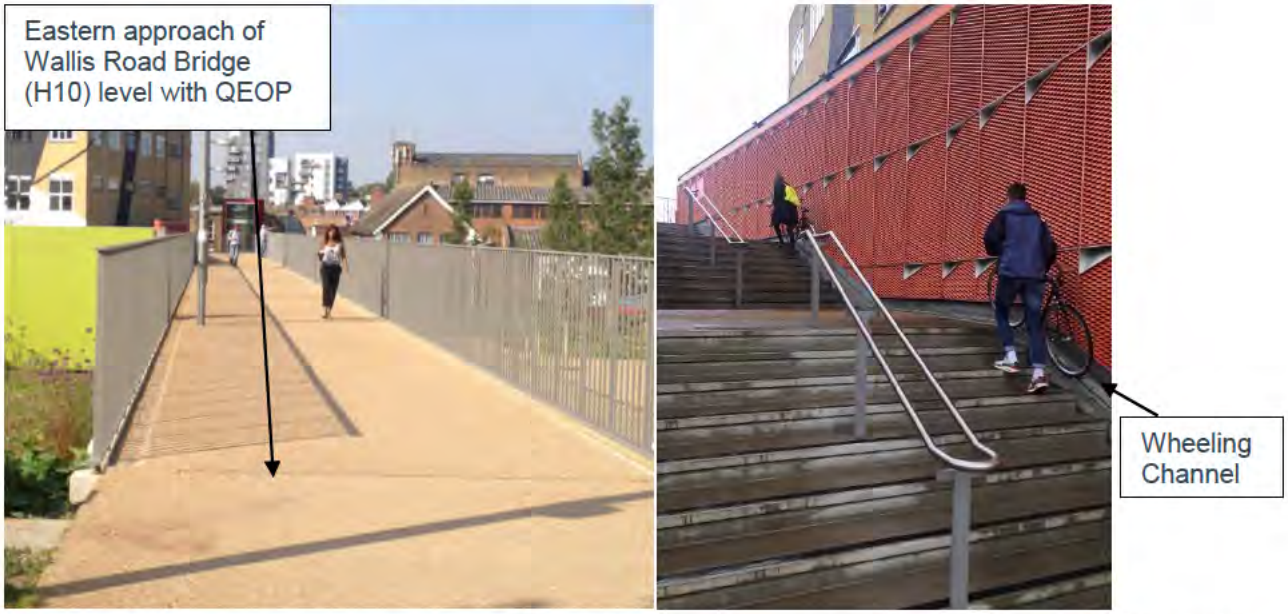



**Figure 2 Proposed Quietway scheme (Aldgate to Hainault) utilising the Wallis Road Bridge (H10)**

## 2.2. Operational Impact

### 2.2.1. Wallis Road Layout

Wallis Road branches off Chapman Road heading eastwards past Hackney Wick Station. The road turns eastwards again heading towards the River Lee Navigation before entering the Main Yard cul-de-sac (see Figure 3).

The Main Yard is home to a number of commercial properties and vehicles' are regularly parked outside these premises. Access to the Main Yard can only be obtained via Wallis Road and therefore any bridge ramp proposal should not obstruct this access route.

The Eton Mission Rowing Club is located adjacent to the western approach of H10. Any ramp proposal should not impede access to this property and the other properties along that stretch of Wallis Road both during construction and operation.

It is recognised that the construction of any of the ramp options outlined in this report will have an impact on the access in the vicinity of the works area and across Wallis Road Bridge (H10). The bridge staircase will be out of service for a period of up to two months, with lift use intermittent during this time.


**Figure 3 Wallis Road configuration and points of interest within vicinity of H10 Bridge**

## 2.2.2. Fire Evacuation of 90 Main Yard

LLDC provided Atkins with the current fire exit strategy for 90 Main Yard, which is included in Appendix D – Existing Fire Exit Strategy, and states that in the event of fire, individuals evacuating 90 Main Yard from the canal side will exit using the fire exit adjacent to the western approach of Wallis Road Bridge (H10) traveling underneath the stairs and out towards the Eton Mission Rowing Club, as shown in Figure 4. It is proposed that for all design solutions considered no alterations to the current fire evacuation strategy for 90 Main yard will be made. During the construction of the Options detailed in this feasibility report, temporary changes to the Fire Evacuation route will be required to facilitate emergency egress from 90 Main Yard.

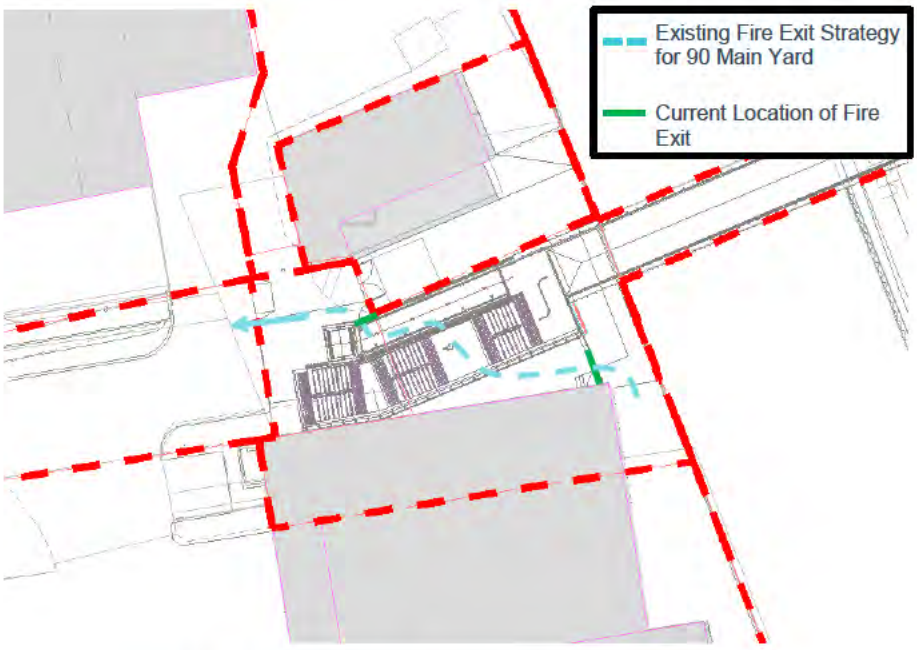



**Figure 4 90 Main Yard's current fire evacuation strategy**

### 2.2.3. Land Ownership

The LLDC ownership boundary currently encompasses all of Wallis Road Bridge (H10) western access, as shown overleaf in Figure 5 however it is anticipated that any proposed ramp option will extend out of LLDC owned land and into land owned by the LBH. The viability of the proposed ramp design relies on the support of LBH and the use of their land. LBH have been engaged throughout Phase 1 and have expressed the need to incorporate safe measures within the design and limit the length of time the bridge is closed during construction.

Stakeholder engagement was undertaken with the Eton Mission Rowing Club during the construction of Wallis Road Bridge (H10). Any further works to the western approach of the bridge will require ongoing stakeholder engagement with the rowing club as it is likely that any works within the vicinity of the rowing club will disrupted access.

Further access disruption may be caused to businesses within the Pall Mall Estates as plant and equipment will partially block the entrance to the cul-de-sac during construction. In addition the entrance to 90 Main Yard will require reconfiguring as part of the works.

It is envisaged that access to both Robert Howes and Alan Moor/Alan Norton will not be affected both during and post construction.

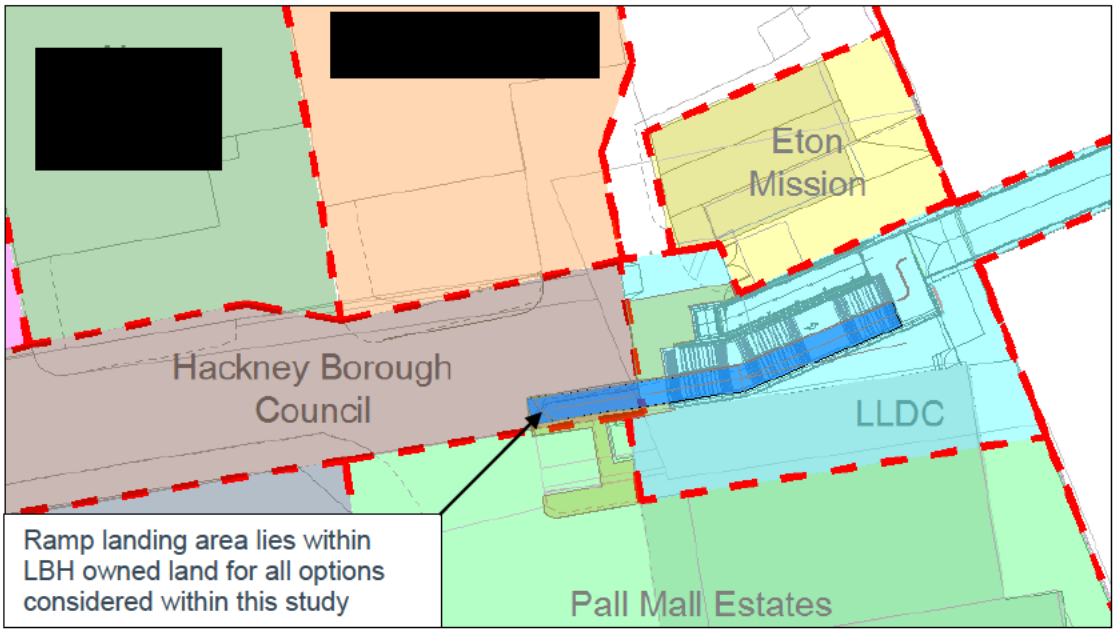



**Figure 5 Ownership boundaries on the western side of Wallis Road Bridge (H10)**

## 2.3. Topography

A historical topographical drawing was identified for the area surrounding the western approach of Wallis Road Bridge (H10). The deck level of the western section of the bridge is approximately 9.45m AOD, whereas the proposed landing area of the ramp is approximately 5.40m AOD, hence there is a level difference of approximately 4.05m between the bridge deck and the landing site. The proposed ramp landing area also has a raised curb meaning the road is approximately 100mm lower with an approximate ground level of 5.31m AOD.

The topographical drawing can be viewed in Appendix E – Topographical Drawing. It should be noted that for detailed design (Phase 2) a topographical survey maybe required.

## 2.4. Key Utilities

Historical record drawings show there are a number of utilities that lie within the vicinity of the existing Wallis Road Bridge (H10) western approach and it is likely that some form of utility diversion will be required. A full survey of the site will be required prior to any detailed design work, to determine the exact location of all utilities. It is anticipated that consideration to accommodate these utilities within the ramp design will be required as part of Phase 2 – Detailed Design.

## 2.5. Canal Description

The River Lee Navigation runs from rural Hertfordshire into the heart of London and is navigable for small river craft. A towpath, on both sides, runs parallel to the river which is extensively used by cyclists and walkers.

A minimum height clearance is required along the river. For the purposes of this study any alteration to the Wallis Road Bridge (H10) will ensure the existing scenario is maintained. Flood defence consent may be required for the project as the structure is within the Thames Region Flood Defence by-laws and could be designated as 'near'.

## 2.6. Masterplanning

Hackney Wick is set to undergo significant redevelopment in the near future with the development of the Hackney Wick and Hackney Wisk Neighbourhood Centre Masterplan which LLDC are leading. The aim of the masterplan is to create a vision for a new neighbourhood supporting a comprehensive, employment-focused, mixed-use development including a significant number of new homes complemented by new retail, leisure, food, drink and community facilities. Included as part of the Masterplan is improved access to Wallis Road Bridge (H10) and a better link across the canal by changes to the public realm. This will include improved cycle access via a ramp.

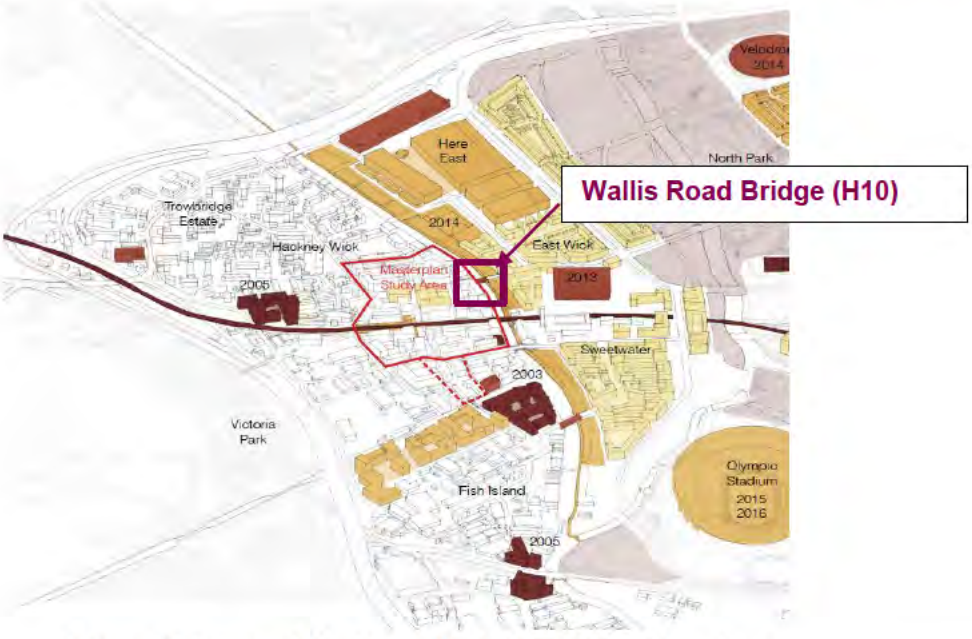



**Figure 6 Proposed Hackney Wick Masterplan Boundary**

The red line, shown in Figure 6, denotes the Masterplan boundary. It is anticipated that the Wallis Road Bridge (H10) will, in future, be developed as part of the Hackney Wick regeneration scheme so as to provide improved access between Hackney Wick and the QEOP as the bridge forms part of the Hackney Wick Masterplan, as shown in Figure 7.

LLDC are also leading a significant upgrade to Hackney Wick Station which includes, a new station entrance, ticket facilities, underpass, lift & stair access and platform canopies proposed for the Overground station. In addition a new public North-South route through the existing rail embankment unlocks development of neighbourhood centre as shown in Figure 7.

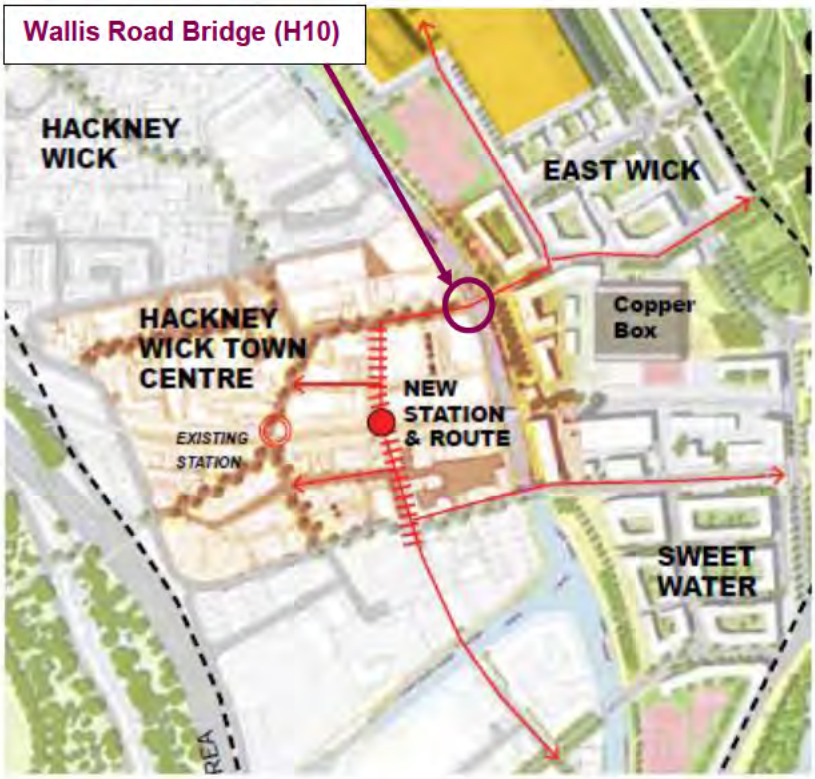



**Figure 7 Connections created by proposed Hackney Wick Station development**

# 3. Design Options

## 3.1. Initial Investigations

Upon commencing this project, Atkins undertook a high level review of possible ramp options given the limiting site constraints and presented these options to LLDC at a meeting on the 21st August 2014. Following on from this meeting LLDC instructed Atkins to develop three temporary ramp options which are to have a design life of 10 years. The following sections detail the 3 proposed ramp options with a particular emphasis on costing and safety. For details of all measures considered please refer to Appendix F – Risk Register and Appendix G - Initial Sketches.

## 3.2. Standards

Cycling standards are outlined in "The London Cycle Design Guidance" and "Local Transport Note 2/08 – Cycle Infrastructure Design". A summary of the standards is shown in Table 2.

**Table 2 Summary of Cycling Standards**

| Standards Used | The London Cycle Design Guidance and LTN2/08 |
|---|---|
| **Recommended Maximum Gradient** | • 3% (1:33.3),<br>• 5% (1:20) up to 100m,<br>• 7% (1:14.3) gradient over 30m be used |
| **Recommended Minimum Width** | • 2.45m for one directional traffic<br>• 3m for two way traffic. |

## 3.3. Ramp Option 1 – Split Existing Stairway

### 3.3.1. General

This option involves splitting the existing western stairway of Wallis Road Bridge (H10) into a stair and ramp access point.

| | |
|---|---|
| Stair Width | 1.9m |
| Gradient | 13.48% (1:7.42) |
| Minimum Width | Top 2.1m |
| | Middle 2.1m |
| | Bottom 2.1m |
| Ramp Length | 30.05m |
| Cost | £470,000 |

**Figure 8 Model of Option 1**

The existing stairway is 3.8m wide with an additional 200mm wheeling channel for cyclists to push their bicycles up/down the staircase. It is proposed that the ramp will descend down the southern half of the existing stairway, ensuring a width of 2.10m. The remaining 1.9m stairway and lift will be retained to provide access for both pedestrians and users with accessibility requirements.

The proposed ramp will descend down the southern half of the existing stairway beginning to fall approximately 1m prior to the first step at the top of the stairs. The ramp will follow the stairway, falling at a gradient of approximately 13.48% (1:7.42) extending past the foot of the stairs, landing in the raised pavement area to the north-west of 90 Main Yard as shown in Figure 8 and overleaf in Figure 9.

The proposed ramp will be constructed using timber for the frame and platform. A bituminous type material will form the wearing surface of the structure so as to reduce both cost and noise. It will also allow for faster construction, ensuring the bridge will be out of service for the shortest period possible.

It is proposed that the existing façade will be retained as part of the design. A transparent parapet will run along both sides of the ramp to prevent possible collisions, allowing increased visibility to users.

Cyclists traveling down the ramp will also be encouraged to exit the ramp towards the northern pavement of Wallis Road by dropping the curb, rounding the end of the ramp in that direction as well as using floor markings. In addition it is intended that signage would provide warning to motorists of the presence of possible cyclists and pedestrians.

### 3.3.2. Safety

Given the significant site constraints it is not possible to develop a ramp design that conforms to the regulations and hence a departure from the standards will be required for both the ramp width and gradient. The proposed ramp has a gradient of 13.48% (1:7.42) which is significantly steeper than the maximum gradient outlined in the relevant standards. The London Cycle Design Guidance and LTN2/08 recommend a maximum gradient of 3% (1:33.3), 5% (1:20) up to 100m or a 7% (1:14.3) gradient over 30m. It is however not unusual for a cycling ramp to be steeper i.e. 10-15% but this may present possible safety concerns which will need to be addressed and limited as part of the detailed design (Phase 2).

Visibility is poor for both cyclists joining Wallis Road at the bottom of the ramp and for drivers leaving the Main Yard joining Wallis Road. As The Yard is effectively the end of the Wallis Road cul-de-sac, drivers would assume priority not expecting cyclists to emerge from behind the building, creating a conflict point at the junction. In addition the increased ramp gradient may make it difficult for cyclists traveling down to stop abruptly should the need arise.

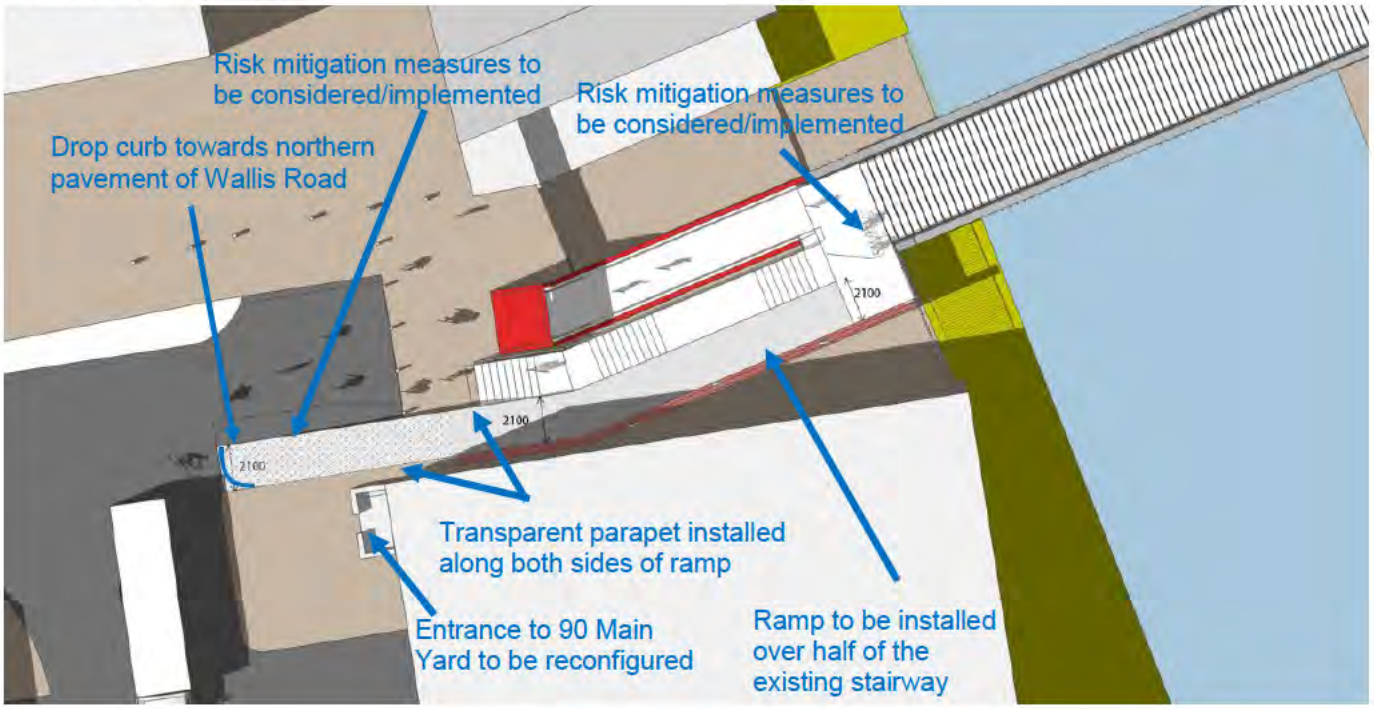



**Figure 9 Option 1 detailing**

It is proposed that the ramp will accommodate two-way traffic however the standards require a minimum of 3.0m for a two-way cycle scheme. The maximum width that can be achieved by splitting the stairway is 2.1m which is significantly lower than what is recommended in the standards and will present a number of safety concerns.

Typically bicycles are 650mm wide (with wider available) and downhill cyclists will ideally require a 500mm gap either side to avoid vertical obstructions (i.e. parapet). With a 650mm wide bike travelling over 7mph the London Cycle Design Standard (2014 update) identifies a 200mm deviation by the front wheel. This would mean cyclists would need 1.85m absolute minimum to cycle comfortably down the ramp (500mm gap either side, plus 650mm width of bike and 200mm front wheel deviation) in one direction. Cyclists climbing the slope at lower speeds on their bikes are prone to wobbling and deviation of 0.8m at 3mph (LTN2/08, Fig 2.1). To maintain balance, cyclists would require an absolute minimum of 2.45m width (500mm either side plus 650mm width of cycle and 800mm front wheel deviation) in one direction.

Pedestrians may also choose to wheel/walk their bike up the 13.48% gradient. Assuming a pedestrian is 750mm wide (Manual for Streets, figure 6.8), the width required for wheeling a bike up the ramp (without front wheel deviation) is 2.4m (500mm either side plus 650mm bike width and 750mm cyclist width) in one direction. It should be noted the above does not take into account wider cycles, trailers, tandems, tricycles and disabled people using hand cranked machines.

The volume and profile of cyclists using the ramp should also be considered. Leisure cyclists will be more vulnerable as they may be younger/older than a typical commuter, and less experienced in controlling their bicycle, especially in confined spaces and on steep slopes. In addition if there is an increase in the ramp use due to an event at QEOP then this could cause possible congestion and increased risk of injury to ramp users, given the steep slope and limited width available.

There is a need to investigate the installation of a bollard to deter non-cycle users from using the ramp. However, in the event of the lift being out of service, pedestrians with buggies and wheelchair users may choose to use the ramp. This may increase the risk of conflicts between cyclists and other users.

In summary, providing a width below those recognised in standards may increase the risk of incidents such as catching handlebars, collision with walls/parapets and collisions with other users. The confined nature and steepness of the ramp may increase the seriousness of the injuries sustained by a cyclist/other ramp users.

#### 3.3.2.1. Mitigating Measures

As it is not possible to provide the ramp requirements set out in guidance, i.e. LTN2/08 and London Cycle Design Standards, then the following could be considered to reduce/limit the safety concerns raised in Section 3.3.2:

- Rougher surface texture to be used on ramp to assist braking and manoeuvrability (London Cycle Design Standards, 20mm);
- Signs i.e. warning users of narrow width and steep gradient (both non-standard);
- Footway markings i.e. “SLOW”;
- Priority give way system to cyclists climbing the ramp;
- Visual and physical speed calming measure such as granite setts;
- A transparent parapet railing to maximise visibility;
- Street furniture or staggered barriers to reduce speeds at the top and bottom of ramp to manage entry and exit speeds. It should be noted the inclusion of a physical barrier may not be suitable where a high level of cycling is expected. Any physical barrier inclusion will need to be risk assessed to reduce the risk of conflicts with ramp users;
- Measures at the ‘T’ junction of Wallis Road and Main Yard to define priority, reduce cycle speeds into the junction, and increase cyclist’s visibility;
- Pedestrian warning of cyclists (signs and tactile surfaces);
- A minimum of 2.3m height clearance to all obstructions on building wall, i.e. flower baskets;
- No handrail along the wall of building 90 Main Yard; and
- Suitable illumination of the ramp.

Note: This list is by no means exhausted and further consideration will be given to risk mitigation within Phase 2 – Detailed Design.

### 3.3.3. Costing

The estimated projects cost for this option is £470,000. For full details please refer to Appendix H – Costing Estimates.

### 3.3.4. Summary

This option would require a departure from the standards both in terms of ramp gradient and width and whilst this is not uncommon within the industry and there are reasonable risk mitigation measures which could be implemented, based on the significant safety considerations highlighting within Section 3.3.2, this option has been discounted as it poses an unnecessary risk to ramp users.

## 3.4. Ramp Option 2a – Ramp Widened at Top and Bottom

### 3.4.1. General

Option 2a involves halving the existing stairway with the proposed ramp descending down the southern half of the new stairway, falling at a gradient of approximately 13.42% (1:7.45). The pedestrian staircase will have a reduced width of 1.9m. The existing pre-cast staircase will be removed and a new staircase of reduced width will be built/installed. The ramp will therefore extend past the foot of the stairs, landing in the raised pavement area to the north-west of 90 Main Yard as shown in Figure 10. Cyclists traveling down the ramp will be encouraged to exit the ramp towards the northern pavement of Wallis Road by dropping the curb in that direction as well as rounding it and using floor markings.

| | |
|---|---|
| Stair Width | 1.9m |
| Gradient | 13.42% (1:7.45) |
| Minimum Width | Top 5.4m |
| | Middle 2.1m |
| | Bottom 3.2m |
| Ramp Length | 30.18m |
| Project Cost | £520,000 |

**Figure 10 Proposed structure for Option 2a**

Option 2a differs from Option 1 in the fact that the ramp widens out at both the top and bottom, to provide a maximum ramp width of 5.40m and 3.20m respectively. Due to the site constraints the maximum width that can be achieved in the middle section of the ramp is 2.1m, as shown overleaf in Figure 11.

It is proposed that the existing façade will be retained and realigned to follow the southern edge of the ramp, with a new transparent parapet running along the northern edge of the ramp separating pedestrians and cyclists, as shown previously in Figure 10. A further transparent parapet will run along the south-west ramp edge.

The ramp will be constructed using timber for the frame and platform, to reduce both cost and noise. A bituminous type surface will form the wearing surface of the structure. It will also allow for faster construction, ensuring the bridge will be out of service for the shortest period possible.

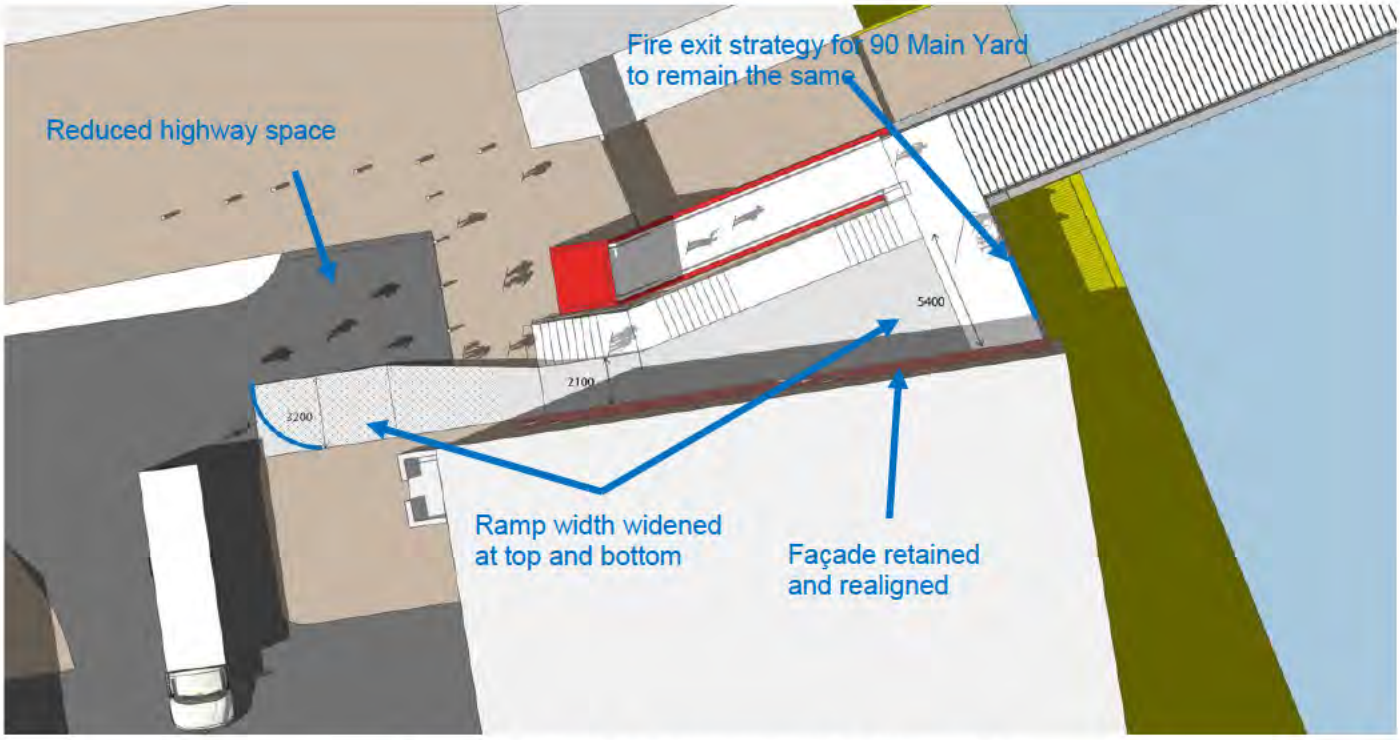



**Figure 11 Option 2a measurements & Proposals**

### 3.4.2. Safety (differences from Section 3.3.2)

Option 2a, although similar to Option 1, aims to alleviate some of the safety risks highlighted in Section 3.3.2. By increasing the ramp width at the top and bottom it will allow for greater space between passing cyclists. The narrow section of the ramp will act as a form of traffic calming with priority given to those traveling up the ramp. The widened landing will make exiting the bridge easier and safer. The mitigating measures for the temporary ramp are outlined in Section 3.3.2.1.

### 3.4.3. Costing

The estimated projects cost for this option is £520,000. For full details please refer to Appendix H – Costing Estimates.

### 3.4.4. Summary

The widening of the ramp at the top and bottom results in increased safety for all users, however, despite the improvements from Option 1, Option 2a will still require a departure from the standards both in terms of ramp gradient and width. It is concluded that this option would result in unnecessary safety concerns and has thus been discounted.

## 3.5. Ramp Option 2b – Ramp Widened at Top and Bottom (Façade Removed)

### 3.5.1. General

Option 2b is an extension of Option 2a, as the general layout and configuration are the same, however it is proposed that the existing façade be removed from the southern edge, recycled and used as part of the new structure. This will allow the ramp to be widened by 400mm and results in the maximum width at the top, middle and bottom of the ramp is 5.80m, 2.50m and 3.60m respectively, as shown in Figure 12. As per Option 2a, the existing staircase will be removed and replaced. As a replacement for the façade it is proposed that a mural will be designed and installed on 90 Main Yard wall.

| | |
|---|---|
| Stair Width | 1.9m |
| Gradient | 13.39% (1:7.47) |
| Minimum Width | Top 5.8m |
| | Middle 2.5m |
| | Bottom 3.6m |
| Ramp Length | 30.24m |
| Cost | £645,000 |

**Figure 12 Proposed structure for Option 2b**

The ramp will maintain the 13.39% (1:7.47) gradient and extend past the foot of the stairs, landing on the raised pavement area to the north-west of 90 Main Yard as shown in Figure 12 and Figure 13.

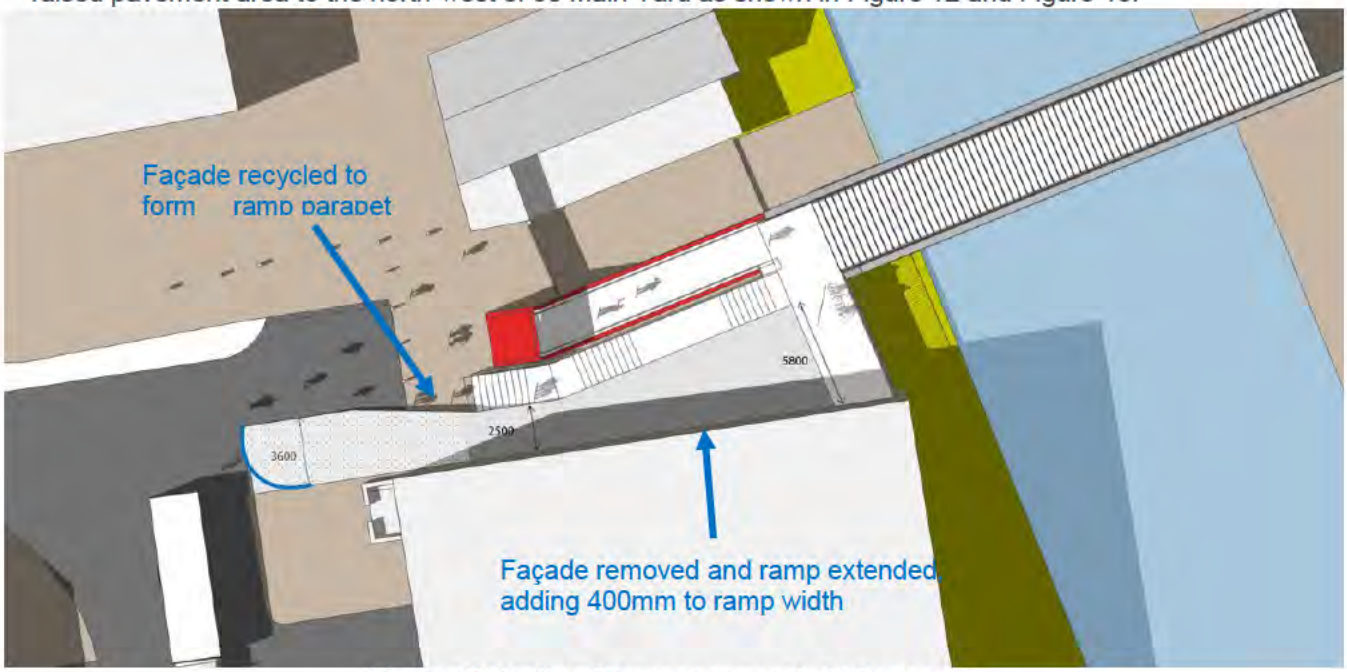



**Figure 13 Option 2b measurements & Proposals**

Cyclists traveling down the ramp will be encouraged to exit the ramp towards the northern pavement of Wallis Road, by dropping the curb in that direction, as well as, rounding the edge and using floor markings. As aforementioned, this shall be further developed in Phase 2 – Detailed Design along with the public realm for shared space design for the approach of the ramp.

The ramp will be constructed using timber for the frame and platform, to reduce both cost and noise. A bituminous type surface will form the wearing surface of the structure. It will also allow for faster construction, ensuring the bridge will be out of service for the shortest period possible.

### 3.5.2. Safety (differences from Section 3.3.2)

By increasing the ramp width to a minimum of 2.50m it will allow for greater space between passing cyclists. It surpasses the recommended 2.45m width for cyclists climbing at lower speeds in one direction (LTN2/08, Fig 2.1), and thus it provides the greatest width possible given the limiting site constraints. A priority system for cyclists traveling up the ramp would be required within the middle section to provide a form of traffic calming and reduce the risks of collision and injury. The mitigating measures for the temporary ramp are outlined in Section 3.3.2.1.

### 3.5.3. Costing

The estimated projects cost for this option is £645,000. For full details please refer to Appendix H – Costing Estimates.

### 3.5.4. Summary

Atkins have identified that this option is superior to the other options considered, given the limiting site constraints. The development of this option mitigates some of the noted risks, however residual risks remain.

The removal of the façade allows for its reuse within the design. This will need to be explored further in the Phase 2 - Detailed Design. The gradient of the ramp continues to represent an inherent risk caused by the strict site constraints, but as mentioned in the LTN2/08 “a very steep route may be better than none at all” (p.44, para 8.7.3), and thus Option 2b is judged the superior option given the constraints imposed on the design.

As this is the superior option to be taken forward as part of Phase 2 – Detailed Design, a Stage 1 RSA was undertaken for this design and is included in Appendix I – Stage 1 RSA for Option 2b.

## 3.6. Stage 1 Road Safety Audit

A RSA was carried out on the 23rd September 2014 and can be found in Appendix I – Stage 1 RSA for Option 2b. The following conclusions were found from the report:

- RSA noted design improvements from previous temporary option investigated;
- A number of issues were identified relating to the ramp width and gradient and are as follows:
    - Risks to ramp users losing control and falling due to excessive gradient and absence of intermediate landings.
    - Risk of pedestrians falling on the staircase.

- Risk of conflict between ramp users and vehicles / pedestrians in the vicinity of the ramp base.
- Risk of cyclist unable to cycle up steep gradient losing control.
- Risk of wheelchair / mobility scooter users experiencing difficulty and losing control due to steep ramp gradient.
- Risk of injury due to unintended use by skateboarders, BMX riders etc.
- Risk of westbound cyclists riding down steps.

As part of Phase 2 – Detailed Design, risk mitigating measures will be developed so as to address the concerns raised within the RSA shown above. A Stage 2 RSA will be undertaken after Phase 2 - Detailed Design with a third and final Stage 3 RSA being undertaken post construction.

## 3.7. Departure Process

Due to the limited space available in the vicinity of the western approach of Wallis Road Bridge (H10) it is difficult to provide a compliant ramp that meets the necessary design standards in terms of ramp width and gradient. The design standards (LTN2/08 & London Cycling Design Standards) recommend a minimum gradient of 7% (1:14.3) over 30m and a width of 2.45m for one directional traffic and 3m for two way traffic.

Option 2b provides significant improvements with regards to the ramp width and gradient over other designs investigated as part of this study, however a Departure from the standards will still be required in order to be accepted. A single Departure will need to be submitted and approved that will cover both the ramp gradient and width.

In addition to the Departure two Approval in Principles (AIPs) will be required for:

- The assessment of the changes to the existing structure
- The assessment of the proposed design

Both the Departure and the AIP's will need approval from the Olympic Infrastructure Technical Approval Authority (OITAA) who have a contracted response period of 10 working days.

## 3.8. Precedents

Following on from Option 2b a number of similar examples were identified so as to provide a precedent for ramps with narrow widths and steep gradients.

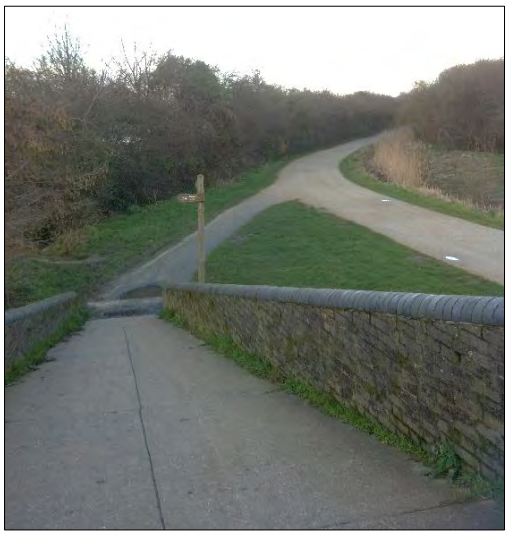


**Figure 14 Steep ramp located at Hackney Marshes**

The first example, shown previously in Figure 14, is a steep ramp located on the canal network at Hackney Marshes with a gradient of 20% (1:5). Currently it is used for cycling purposes however it is noted that a “run up” is required to climb the ramp.

The second example is an existing canal and pedestrian ramp located in Camden, linking Regents Canal towpath to the adjacent Prince Albert road, shown in Figure 15. The maximum gradient of this ramp is 14% (1:7) which is steeper than the gradient proposed in any of the 3 options.

**Figure 15 Ramp located in Camden**

## 3.9. Public Realm Redevelopment

The area in the vicinity of the lift, ramp and stairs will be used by a number of different users and will therefore require redevelopment so as to ensure conflicts are mitigated. It is anticipated that a continuous transition from the Wallis Road Bridge (H10) ramp to the “Aldgate to Hainault Quietway route” will be provided, as this will provide cyclists with clear direction and separate them from other Wallis Road users.

The public realm with be developed as part of Phase 2 – Detailed Design to address the shared use of the approach space between pedestrians, cyclists and vehicles. The public realm development is to be funded by the GLA as part of the wider Quietway scheme.

# 4. Programme, Planning & Construction Sequence

## 4.1. Feasibility Programme

A feasibility programme has been developed for the project and is shown overleaf. An estimated completion time is shown and stated currently as early 2016.

## 4.2. Planning

Planning approval will be required. Suitable design information will be collated and submitted for planning approval. This submission is anticipated for February 2015. It must be noted and included within the planning application that the Wallis Road Bridge (H10) lies within the Hackney Wick conservation area.

## 4.3. Construction Sequence

The construction sequence detailed below provides a brief overview however a more detailed construction sequence will be planned in Phase 2 – Detailed Design.

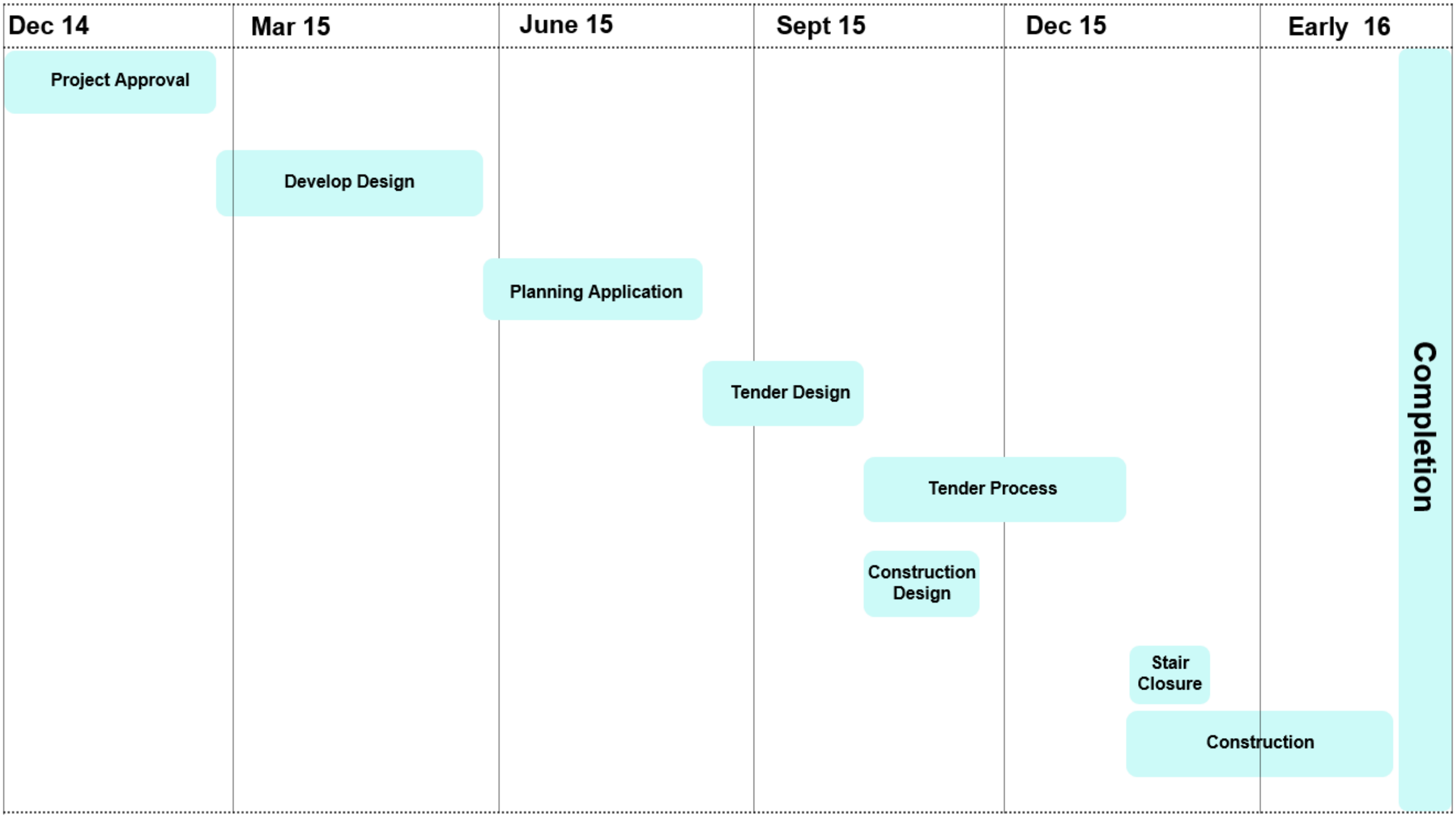
1. Removal of existing handrail on stairs and any bollards blocking access to stairs;
2. Protection provided to the existing lift;
3. Deconstruction and removal of the existing stairs;
4. Prefabrication/installation of new staircase of reduced width (1.9m), which will require lift operation;
5. Raising of the pillarbox located on the site adjacent to the stairs;
6. Prefabrication/installation of new timber ramp, which will require lift operation;
7. Re-profiling of the lower section of the new ramp, raising of existing access chambers to ensure a flush finish with new ramp;
8. Installation of new hand railing to ramp;
9. Implementation of any mitigation measures on the ramp.
10. Reinstallation of existing bollards.

Both Option 2a and Option 2b would also require deconstruction of the existing metal façade after stage 2 in the above construction sequence. This façade would then need to be reinstalled as per the plan views illustrated earlier in this report. This reinstallation phase would occur after stage 7 for Option 2a, and after stage 9 for Option 2b.

Stage 5 would differ for Option 2b as the pillarbox would need to be relocated 10m towards the river from its current location.

For the construction sequence above there will need to be a closure of the existing stair area lasting 3 weeks. This could be reduced further if the construction of the timber frame was prefabricated and therefore just installed on site. This would minimise both the time it takes to erect on site and minimise potential risks involved with installation.

# Programme Proposal



# 5. Conclusion

Three design proposals have been considered in this report for a new temporary ramp over the existing stairway on the western section of the Wallis Road Bridge (H10). Given the limiting site constraints for the area all investigated options have inherent safety concerns, for which mitigation measures have been investigated.

**Table 3 Option Comparison**

| Design Option | Standards (LTN2/08 & London Cycling Design Standards) | Option 1 | Option 2a | Option 2b |
|---|---|---|---|---|
| Gradient | 7% (1:14.3) for over 30m length ramp | 13.48% (1:7.42) | 13.42% (1:7.45) | 13.39% (1:7.47) |
| Minimum Width | 2.45m – One directional traffic<br>3m – Two way traffic | 2.1m | 2.1m | 2.5m |
| Ramp Length | | 30.05m | 30.18m | 30.24m |
| Pros | | Enhanced cycling access & experience | Enhanced cycling access & experience | Meets the width standard requirement for one way traffic;<br>Enhanced cycling access & experience |
| Cons | | Does not meet minimum width and gradient standards;<br>Pedestrian stairway will be reduced in width;<br>End of ramp visibility poor | Does not meet minimum width and gradient standards;<br>Pedestrian stairway will be reduced in width;<br>End of ramp visibility poor | Does not meet gradient, nor two way traffic width standards;<br>Pedestrian stairway will be reduced in width;<br>End of ramp visibility poor |
| Ramp Material | | Timber | | |
| Project Cost (includes Detailed Design, Project management, CDMC, OPEX, Site investigation & Feasibility study) | | £470,000 | £520,000 | £645,000 |
| **Option(s) to be taken forward as part of Phase 2 – Detailed Design** | | ✗ | ✗ | ✓ |

As Table 3 identifies, Option 1 and 2a are viable from a physical construction perspective but have considerable residual risks for ramp users, and divert widely from accepted standards. Option 2b improves significantly from Option 1/2a and has been identified as the superior option considering the limitations placed on the design and is to be taken forward as part of the Detailed Design Stage (Phase 2).

A recommended construction material of timber for the frame and platform is to be used to construct the temporary ramp. The viability of recycling of the existing façade will be investigated during Phase 2 - Detail Design.

# Appendix A – Previous Investigations

# 9.2 Wallis Road pedestrian and cycle bridge

**Challenges and issues**
The main challenges associated with the delivery of a pedestrian and cycling bridge in this location are to some extent similar to the vehicular bridge. The available width between 90 Main Yard and the Eton Mission Rowing Club means space is severely restricted for a new bridge deck at this location, although the current H10 bridge of approximately 5m width (4m deck and 1m construction) can be accommodated. Figure 9.7 below shows the existing bridge deck.

Figure 9.7 Wallis Road pedestrian bridge deck

A significant issue for consideration is access arrangements for Wallis Road businesses. Under a ped/cycle bridge option it is not possible to utilise a secondary vehicle ramp for access into Main Yard, so primary access for vehicles into Main Yard from Wallis Road needs to be maintained. Another consideration is the impact that any ramp landing on Wallis Road has on access to properties to the north side of the road. With this in mind it is likely that a relatively narrow ped/cycle ramp will need to be provided to enable continued access to both Main Yard and properties at the eastern end of Wallis Road.

**Review of design and structural issues**
The current footbridge arrangement based on a 4 metre width and has been the subject of some challenge as to its suitability for a fully accessible cycle usage.

The existing H10 bridge does not have a slope but steps and a lift. As the existing bridge been considered as sub-standard for cycling use it is likely that ramps will be required in order to make the bridge more accessible to all users including cyclists and people with restricted mobility. The same issues as identified with slope gradient and ramp length for the vehicular bridge may be relevant to a pedestrian and cycling bridge. The ramp gradient is likely to be more of an issue for users of the pedestrian and cycling bridge ramps when compared to motor vehicles using the vehicular bridge ramps. The previous analysis in the vehicle bridge section suggests that whilst DMRB national guidance on ramps for pedestrians and cycling bridges ideally seeks 1:20 gradients, there is scope for provision of at 1:15, but that pedestrian landings should be provided..

The "as built" information indicates that deck thickness of the bridge is 600mm. It is considered it may be possible to achieve a small reduction in construction depth, but it would require a completely new deck. Any reduction would also only be in the order of 100mm. For a slope of 1:20 a 0.3 metre difference between the footbridge deck thickness and a road bridge deck thickness would only give a reduction in ramp length of 6m.

Given the marginal reduction in the overall ramp length given by such a small reduction at this stage it has been discounted.

As identified above, given the limited space between the buildings and the requirement for space to construct and maintain a replacement wider structure, the available width for the bridge construction which appears to be viable is a maximum of approximately 9 metres.

We recommend that if replacement of the existing bridge is to be considered a viable proposition, in addition to the provision of ramps, a wider bridge deck is also provided. However replacement of the bridge deck would be a costly exercise and might not represent value for money given the bridge has only recently been constructed. We recommend that a better option would be to maintain the existing bridge deck but consider providing ramps.

Options for ped/cycle bridges are shown in the table on page 13

**Ramp lengths and slopes**
The commentary in the previous section on ramp lengths and gradients is also relevant to this section. Whilst a standard 1:20 ramp providing a length of c75m, extending beyond the junction of Wallis Road and Main Yard is desirable in gradient terms, it will have a major impact on access for businesses on Wallis Road. We therefore recommend that any new ramp for a pedestrian / cycling bridge has a ramp of no steeper than 1:15 on Wallis Road and considers provision of landings for pedestrians. Ramps with landings are considered as part of the options analysis table on page 13. Images of the main ramp options for a ped/cycle bridge at Wallis Road are shown in figure 9.6 and in figures 9.9 - 9.12.

On the QEOP side of the canal there is no requirement for a ramp as the landing will be on the level as per the existing situation shown in figure 9.8 below.

Figure 9.8 - Existing H10 landing in QEOP showing level approach

**Programme**
As the location already has a structure in place and some of this will need to be removed to permit the new structure to be constructed and the lift may need to be retained for some considerable time to ensure access for some users. This stage demolition process may take 3 months and general bridge and retaining wall construction approximately 9 months with some overlap of operations

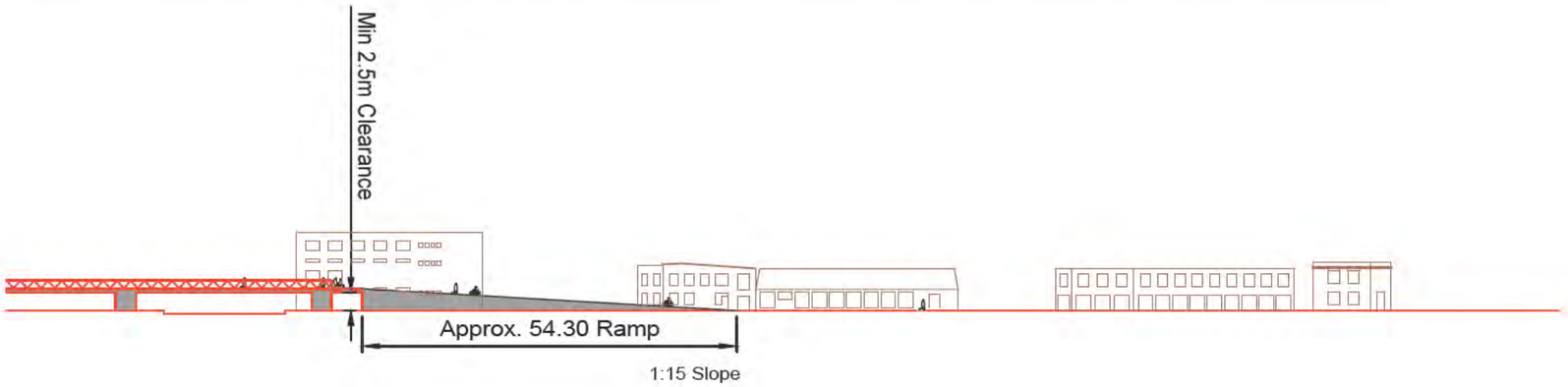
**Next steps and recommendations**
Our recommendation is that options F and G (Figures 9.11 and 9.12) be taken forward. This is based on retaining the existing bridge deck with new ramped access.

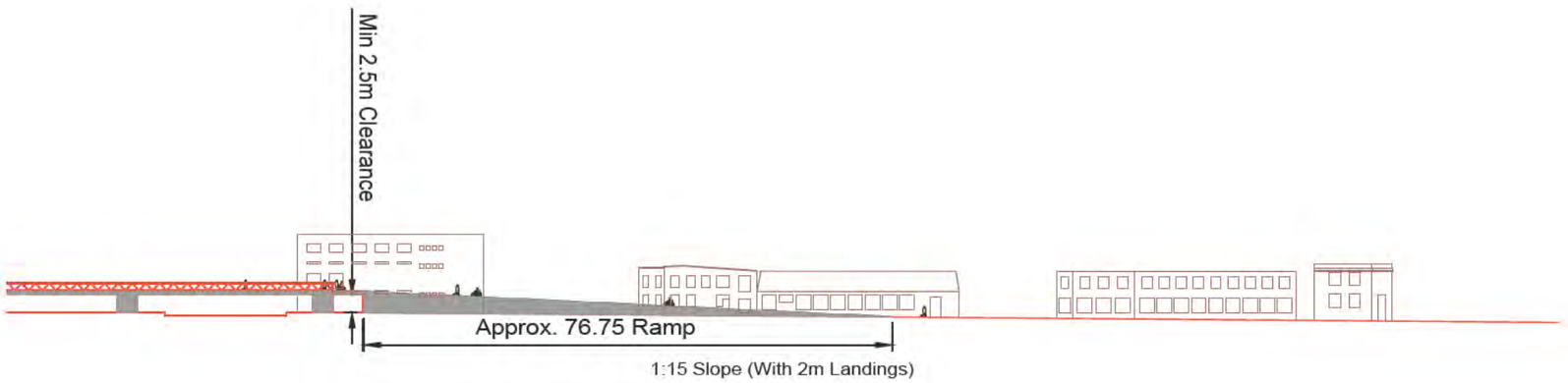
Another key feature of options F and G is the relatively narrow (4m or 3m) ramps down into Wallis Road. It should be highlighted that whilst option F is feasible and the ramp arrangement is preferred, it would require a significant alteration in access arrangements for properties on the north side of Wallis Road. We understand that potential future re-development of this area may make alterantive acces arrangements possible at this location.

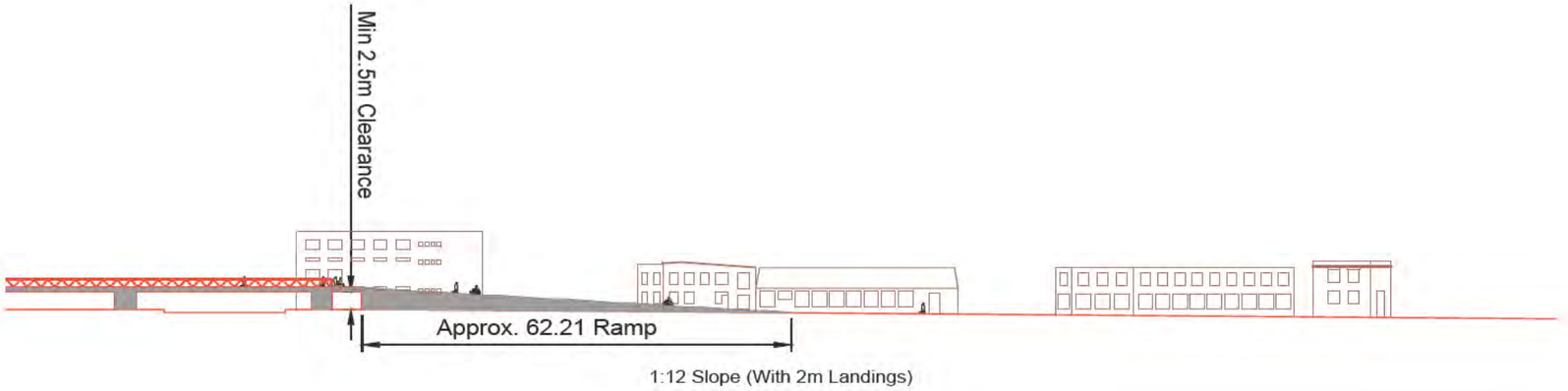
| Wallis Road Pedestrian and Cycle Bridge | Option D<br>New bridge deck construction (5m) with new 5m shared use ped/cycle ramp (5m) | Option E<br>Existing bridge deck (4m) with new 4m ramp | Option F<br>Existing bridge deck (4m) with new 2m ped ramp with landings and adjacent 2m cycle ramp | Option G<br>Existing bridge deck (4m) with new 3m ramp |
|---|---|---|---|---|
| **Key elements of design / structural specification** | 1 x 2m footway<br>1x3m cycleway<br>2 x.0.5m construction edge<br>• Bridge deck width 5.0m, total bridge width 6.0m<br>• Building clearance of 1.5m required either side of bridge meaning total space requirement is 9m<br>• Ramp Gradient recommended at no greater than 1:15 for all users.<br>• 30m span | 1x4m shared use footway/cycleway<br>2x0.5m construction edge<br>• Total bridge width 5m as per existing<br>• 4.0m wide shared use ramp at 1:15 proposed<br>• Total ramp length c55m<br>• 30m bridge span | 1x4m shared use footway/cycleway<br>2x0.5m construction edge<br>• Total bridge width 5m as per existing<br>• 30m bridge span<br>• 1x2m ramp with landings at 1:15 for pedestrians<br>• 1x2m adjacent standard ramp at 1:17 for cyclists.<br>• Ramp width is 4.5m including construction edge<br>• Total ramp length 76m (with landings) | 1x4m shared use footway/cycleway<br>2x0.5m construction edge<br>• Total bridge width 5m as per existing<br>• 30m bridge span<br>• 1x3m ramp at 1:15 for shared use<br>• Total ramp width 3m (3.5m with construction edge)<br>• Total ramp length 55m |
| **Advantages** | • Enhanced pedestrian and cycling experience due to a wider bridge deck and ramps.<br>• A ramp for cyclists and pedestrians on the Wallis Road side | • Enhanced pedestrian and cycling access and experience with a new ramp.<br>• Maintaining existing bridge deck has benefits of minimising disruption and considerable cost savings | • Enhanced pedestrian and cycling access and experience with a new ramp.<br>• Maintaining existing bridge deck has benefits of minimising disruption and considerable cost savings<br>• Ramps with landings are fully DDA compliant<br>• Separate ped and cycle ramps reducing scope for collisions | • Enhanced pedestrian and cycling access and experience with a new ramp.<br>• Maintaining existing bridge deck has benefits of minimising disruption and considerable cost savings |
| **Disadvantages** | • Doubt whether replacing the existing 4m bridge deck with a 5m deck represents value for money.<br>• 1:15 ramp is starting to get steep for some pedestrians and it is unclear whether a lift can also be accommodated under this arrangement.<br>• 1:15 ramp still has serious impacts on Main Yard and Wallis Road property access unless a narrower 3m ramp provided.<br>• Minimal width enhancements when compared to 'as built'. | • 1:15 ramp is starting to get steep for some pedestrians and it is unlikely that a lift can be accommodated under this arrangement. In response to this option F has been developed.<br>• 1:15 ramp still has serious impacts on Main Yard and Wallis Road property access<br>• There will be a requirement to alter access arrangements to the properties on the north side of Wallis Road | • 1:15 ramp still has serious impacts on Main Yard and Wallis Road property access<br>• There will be a requirement to alter access arrangements to the properties on the north side of Wallis Road unless new development proposals and access arrangements are secured. | • 1:15 ramp is not fully compliant and may be steep for some users<br>• Narrow ramp is not ideal for pedestrian / cyclist shared use. Risk of collision.<br>• Whilst access to properties on Main Yard and Wallis Road is maintained, footways will need to be narrowed. |
| **Costs** | Bridge £992,800<br>Wallis Rd Bridge ramp £390,000<br><br>**Total £1,382,000** | Wallis Rd bridge ramp £584,000<br><br>**Total £584,000** | Wallis Rd ramp £768,000<br><br>**Total £768,000** | Wallis Rd ramp £510,000<br><br>**Total £510,000** |
| **Commentary/ Recommendation** | Whilst this option is feasible and provides an enhanced pedestrian and cycling experience due to a wider bridge deck and ramps, there is some doubt whether replacing the existing 4m bridge deck with a 5m deck represents value for money. The 1:15 ramp recommended on Wallis Road would also impact on access to Main Yard and properties at the eastern end of Wallis Road. The alternative would be to provide a narrower 3m ramp and enable vehicles to access Main Yard. For these reasons the option is not recommended for further consideration. | This option maintains the existing foot/cycle bridge deck and adds a new ramp on the Wallis Road side. There is no requirement for a ramp on the QEOP side as the levels are the same.<br><br>The main benefits of this option are economy due to not requiring the bridge deck to be replaced and improved cycling / ped access arrangements. The main downside of this option is the 1:15 ramps and 4m ramps which are not DDA compliant unless landings are added extending the overall ramp length. Access to properties in both Main Yard and the north side of Wallis Road is also a major issue unless alternative access arrangement can be made. We understand there is potential for the redevelopment of properties on the north side of the road. Subsequent options F and G are sub-options of option E with different ramps. | This option is essentially a sub-option of option E. The main difference is the introduction of two x 2 m wide separate but adjacent ramps, one for pedestrians at 1:15 with landings and the equivalent length standard ramp for cyclists, with a gradient of 1:17. This has the result of extending the overall length of the ramps from 55m in Option E to 76m in Option F. The major downside of this option is the impact on access to properties on the north side of Wallis Road. Whilst the 4.5m ramp width (including construction width) can be accommodated and allows continued access to Main Yard for vehicles an alternative access arrangement for properties on the north side of Wallis Road needs to be found. This requires using private land for access and losing parking and loading space on forecourts. We understand there is potential for the redevelopment of properties on the north side of the road. | This option is also a sub-option of option E but enables vehicular access to both Main Yard and Wallis Road properties to be maintained on either side of the bridge landing. The main benefit of this option is that traffic can access the businesses on the north side of Wallis Road without a requirement for significant land take from the business forecourts.<br><br>The 3m access ramp (full width 3.5m with construction edge) will be shared use for pedestrian and cyclists. This generates some issues in terms of collision risk between pedestrians and cyclists and it may be necessary to install safety measures or require cyclists to dismount.<br><br>Whilst this 3m ramp option is workable we think the wider 4m ramp option (split into 2x2m ramps) is preferable. |
| **Summary recommendation** | ✗ | ✗ | ✓ | ✓ |

# Figure 9.6 - Wallis Road pedestrian & cycling bridge - ramp options

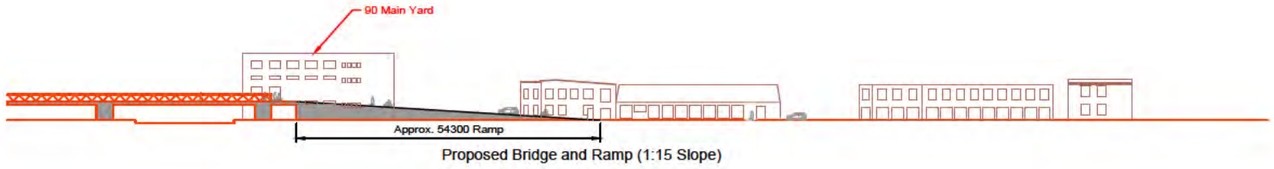




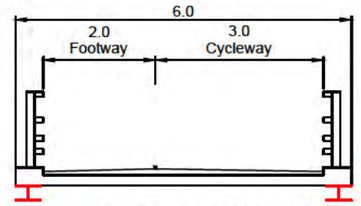



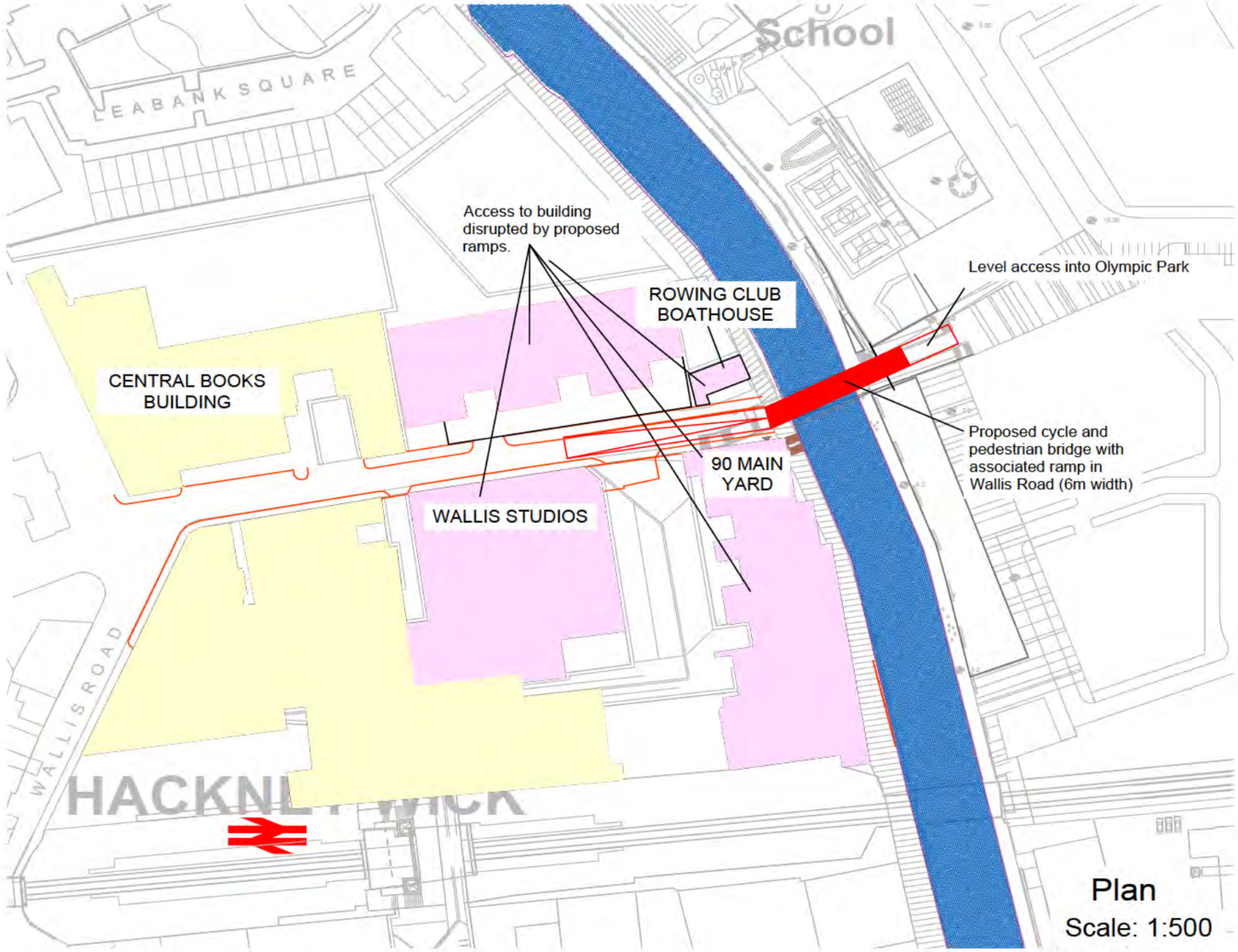
# Figure 9.9 - Wallis Road ped/cycle bridge Option D




Proposed Bridge and Ramp (1:15 Slope)



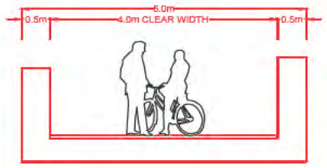

Typical Section Footway & Cycleway Only



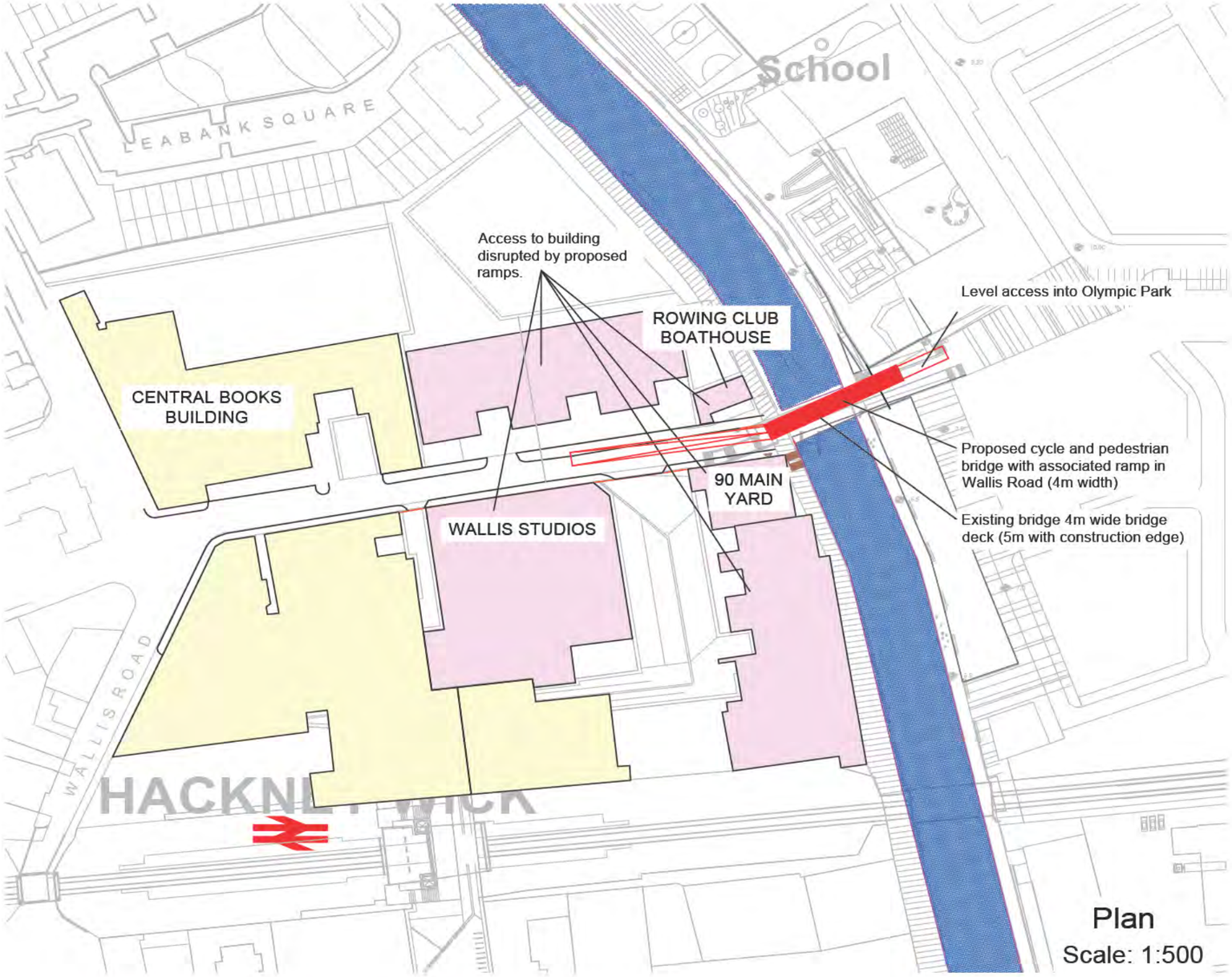

Plan
Scale: 1:500

# Figure 9.10 - Wallis Road ped/cycle bridge Option E


Proposed Bridge and Ramp (1:15 Slope)




Typical Section at Bridge




Plan
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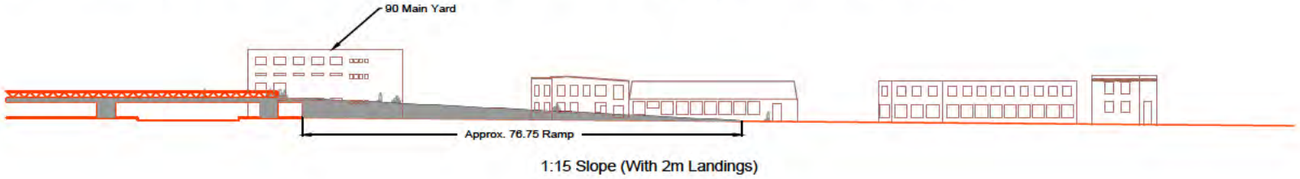
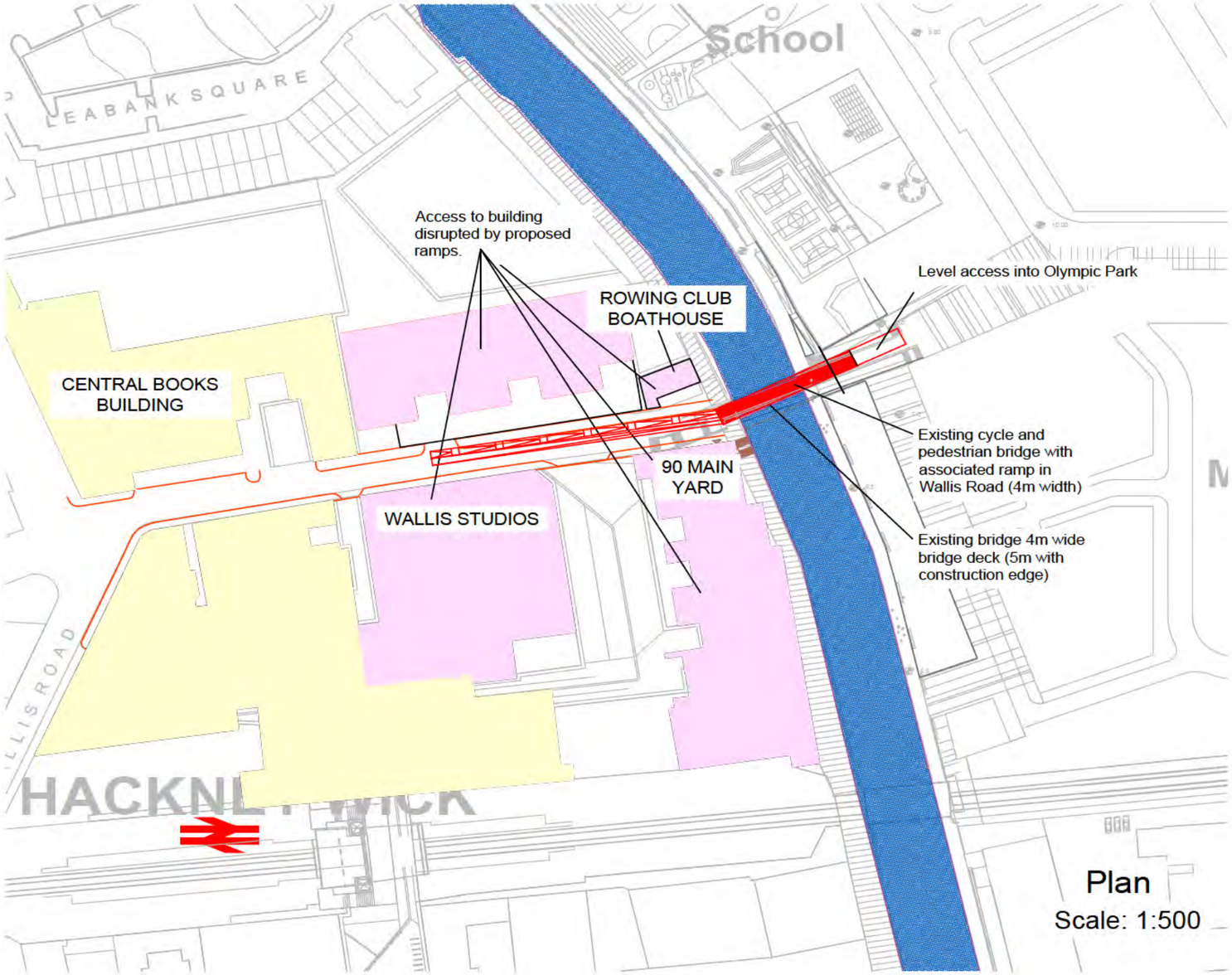
# Figure 9.11 - Wallis Road ped/cycle bridge Option F



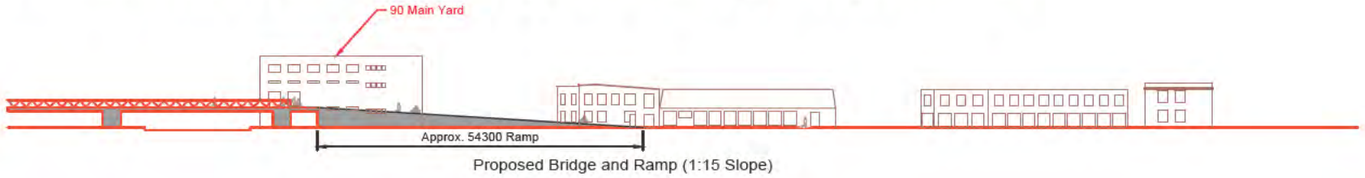

1:15 Slope (With 2m Landings)


Typical Section at Bridge




Plan
Scale: 1:500

# Figure 9.12 - Wallis Road ped/cycle bridge Option G




Proposed Bridge and Ramp (1:15 Slope)


Typical Section at Bridge

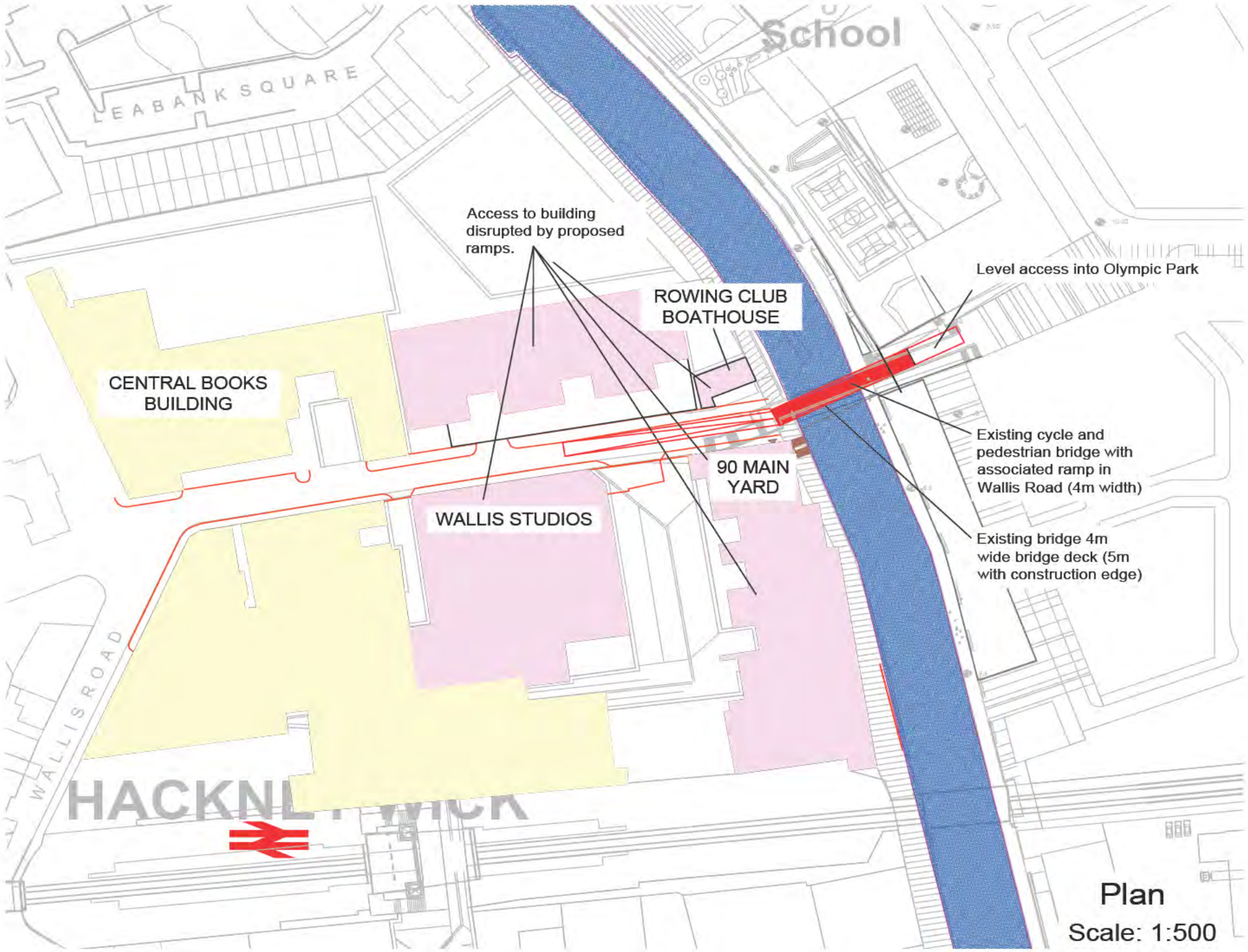


Figure 9.13 - Cross section of Wallis Road adjacent to Wallis Studios showing approximate dimensions


The images on this page provide some appreciation of the likely affect on Wallis Road of the potential pedestrian/cycle ramp options in terms of access to properties and visual impact. Figure 9.13 shows a cross section of Wallis Road just to the west of Main Yard. Total width of Wallis Road at this location is approximately 12.2m including footways and carriageways with a further privately owned business frontage of approximately 6m. We propose enabling continued vehicular access to Main Yard through a single carriageway of approximately 4m. This may require the footway on the south side of Wallis Road to be narrowed. Two potential ramp options are shown in the images below.

Figure 9.14 shows the 4m ramp option (seperate but adjacent pedestrian ramp with landings at 1:15 and a cycle ramp at the equivalent 1:17). This option would require vehicular access to the properties on the north side of Wallis Road beyond the start of the ramp to be via the privately owned frontages. The alternative might be for a strip of land to be acquired along this frontage to enable the construction of an access road for these businesses.

An image showing our recommended 3m ramp is shown in figure 9.15. This ramp would enable continued vehicular access on both sides of the ramp, although on the north side the footway would be lost and there would still likely be a requirement to secure a strip of land from the frontage for a replacement footway. At 2.5m there is insufficent headroom between the ramp where it meets the bridge deck and Wallis Road, for an underpass as an alternative means of vehicular access for the boathouse.



Figure 9.14 - Approximate location and size of 2m wide ped ramp with landings & adjacent 2m cycle ramp for option F


Figure 9.15 - Approximate location and size of 3m wide shared use ped/cycle ramp for option G


-

# H10 Bridge and Wallis Road

# Retain the lift and build an integrated 1:10 ramp and a new stair






## Pro's / Cons

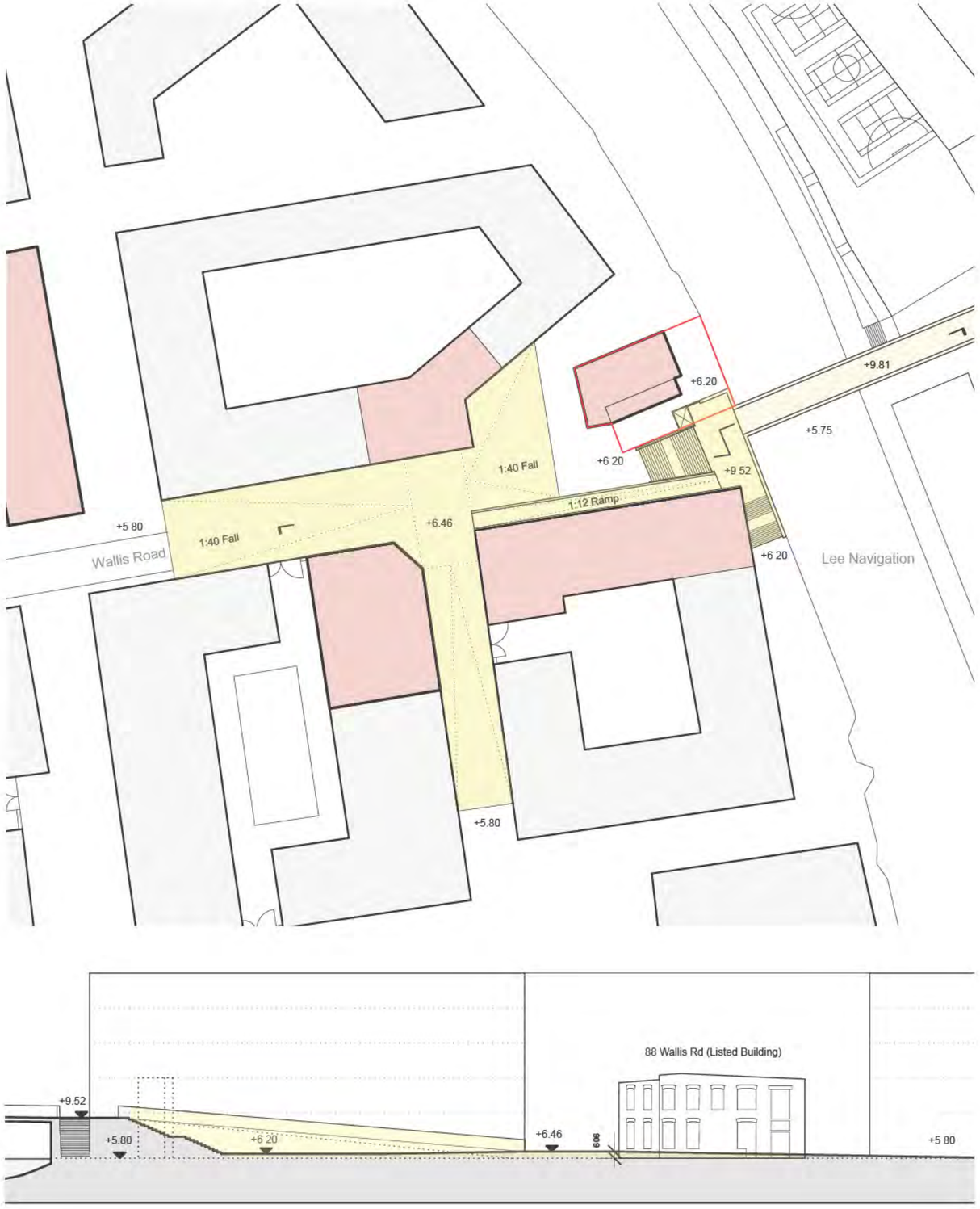
- New ramp integrates well with proposed masterplan
- No CPO required
- No change to width of vehicle access to Boat House
- No impact on 88 Wallis Road
- Legible and clear choices for all crossing options

- Lift is required as ramp gradient is non-compliant for wheelchair users
- Requires masterplan buildout in order to be delivered
- Requires negotiation for 1:10 only cycle ramp

## Cost

**£450k**

# Relocate the lift, build a new stair and raise Wallis Road level to form a 1:12 ramp







## Pro's / Cons

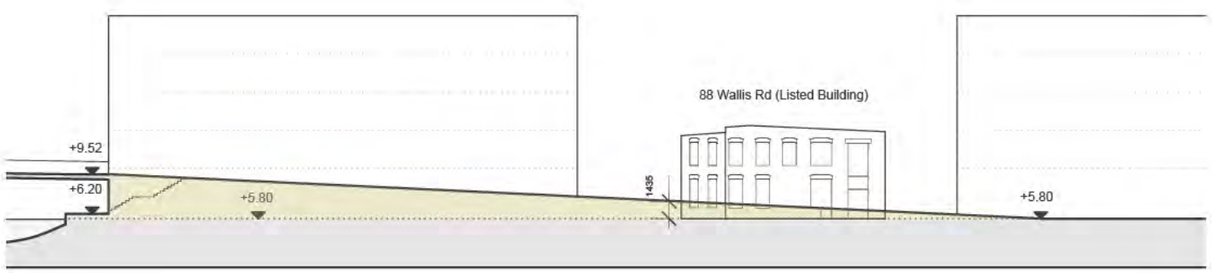
- New ramp integrates well with proposed masterplan
- Generous stair

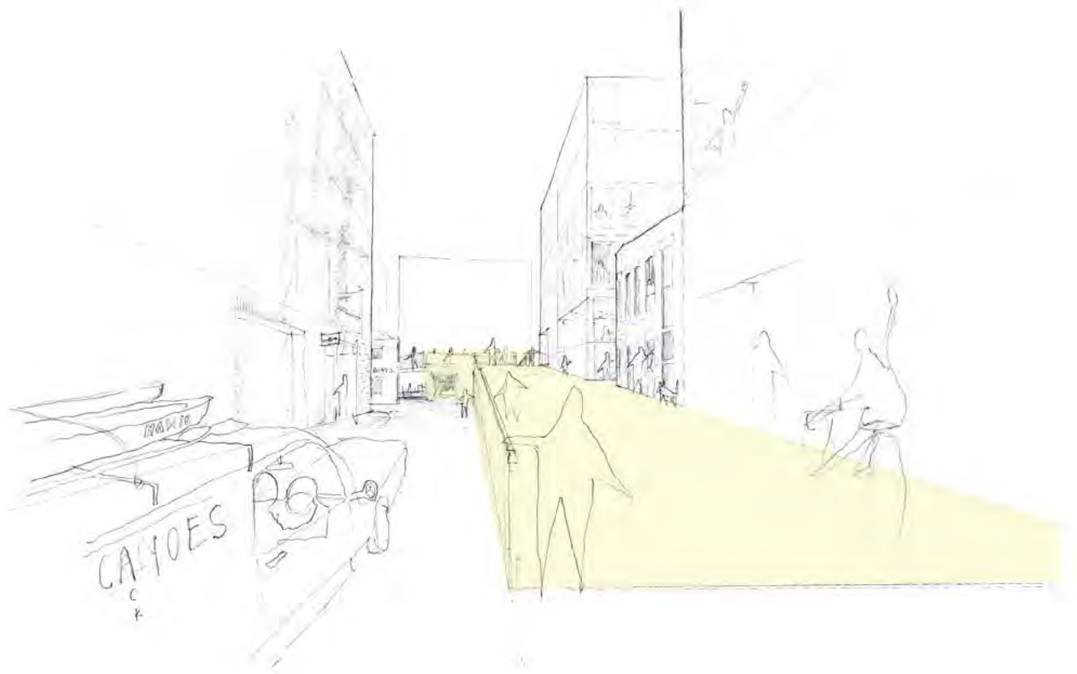
- CPO required on Boat House (9 months & £600k costs)
- Lift required as ramp gradient is non-compliant
- Requires lift to be relocated
- Requires levels to be raised along Wallis Road by 600mm
- Impacts on ground floor of listed 88 Wallis Road
- Requires masterplan buildout in order to be delivered
- Requires negotiation for 1:12 only cycle ramp

## Cost

**£850k (+£600k for CPO)**

# Remove lift and build new 1:21 ramp


## Pro's / Cons

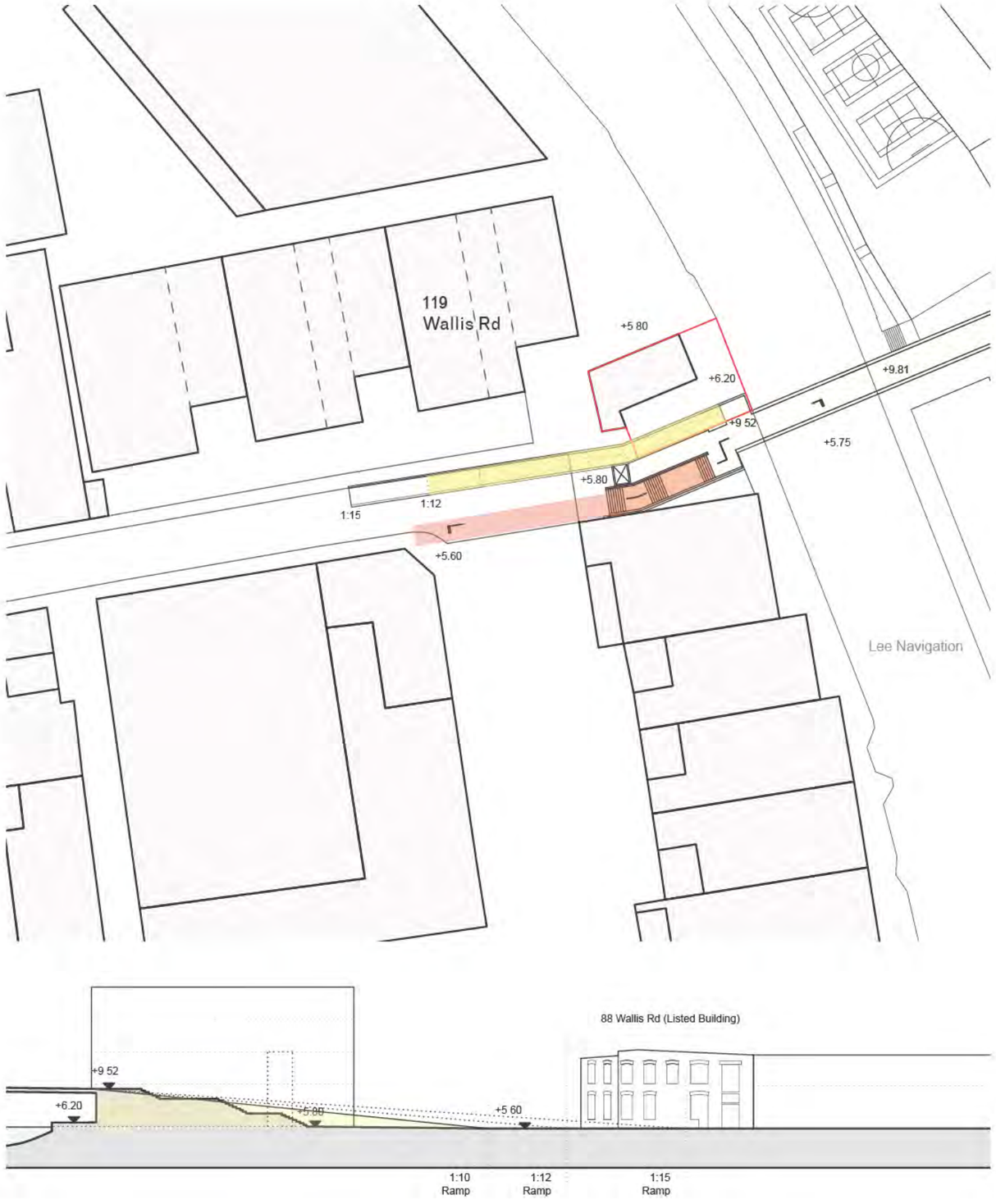
- No lift required
- Fully compliant access for all users
- Retains vehicle access to Boat House
- No CPO required

- Requires splitting of Wallis Road - bad for informal connectivity
- Impacts on ground floor of listed 88 Wallis Road
- Requires masterplan buildout in order to be delivered

## Cost

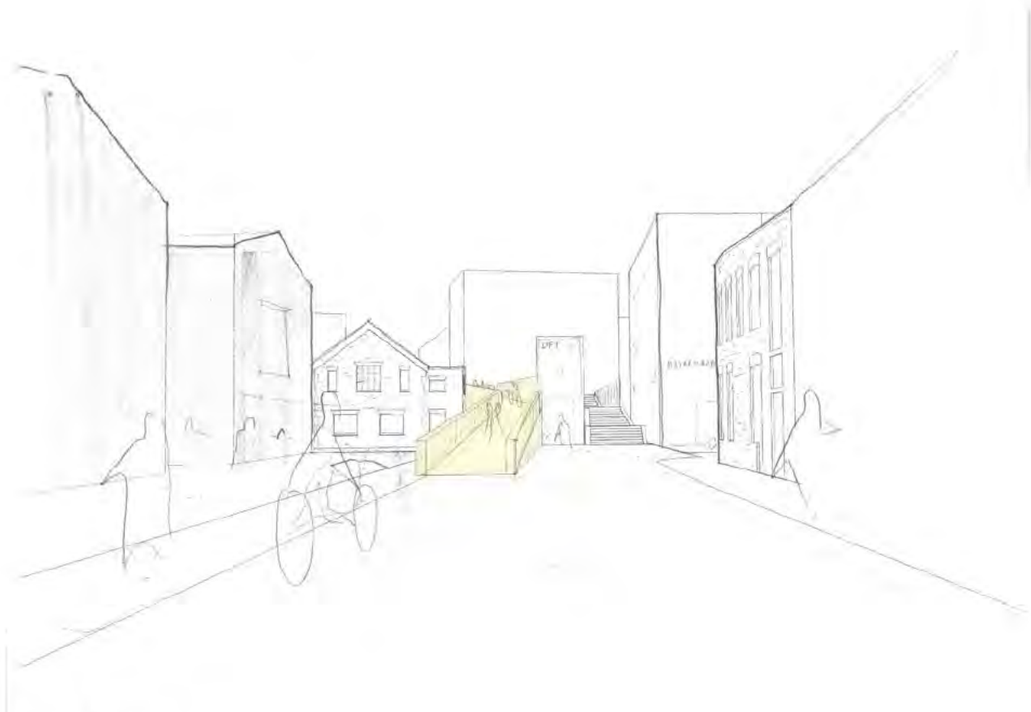
## £2.275m

# Construct a temporary ramp









## Pro's / Cons

- No adjustment to existing arrangement required
- Can be constructed immediately
- Not dependant on masterplan build out
- No impact on 88 Wallis Road
- Works with either 1:12 or 1:15 gradients (subject to consultation)

- CPO required on Boat House (9 months £600k)
- CPO unlikely to be successful given lack of regeneration benefit
- Compromised vehicle access to Boathouse
- Compromised Access to 199 Wallis Road
- Option for ramp over existing stair blocks access to Main Yard (red)

## Cost

## £150k (+£600k CPO)

# Appendix B – Stage 1 Road Safety Audit

local transport projects

*traffic engineering and transport planning*

Sustrans

# Hackney Wick, Wallis Road Bridge Ramp
# Stage 1 Road Safety Audit

June 2014

22, Trinity Lane,
Beverley,
East Riding of Yorkshire.
HU17 0DY.

01482 679 911

info@local-transport-projects.co.uk

www.local-transport-projects.co.uk

*Registered No. 5295328*

Sustrans

# Hackney Wick, Wallis Road Bridge Ramp

# Stage 1 Road Safety Audit

June 2014

| Client Commission | | | |
|---|---|---|---|
| Client: | Sustrans | Order No: | |
| Commissioned By: | [redacted] | Date Commissioned: | June 2014 |

| LTP Quality Control | | | | | |
|---|---|---|---|---|---|
| Job No: | LTP/14/1871 | | File Ref: | London Wallis Road Bridge Ramp RSA1 Draft v2.docx | |
| Issue | Revision | Description | Originated | Checked | Date |
| 1 | 0 | Report | [redacted] | [redacted] | 03/06/14 |
| | | | Authorised for Issue: | | |

## LTP PROJECT TEAM

*As part of our commitment to quality the following team of transport professionals was assembled specifically for the delivery of this project. Relevant qualifications are shown and CV's are available upon request to demonstrate our experience and credentials.*

| Team Member | LTP Designation | Qualifications |
|---|---|---|
| [redacted] | [redacted] *(Project Manager)* | *BA(Hons) MSc CMILT MCIHT FSoRSA* |
| [redacted] | [redacted] | *CEng BSc(Hons) MICE MCIHT* |

# Hackney Wick, Wallis Road Bridge Ramp
# Stage 1 Road Safety Audit

## CONTENTS

# 1.0 INTRODUCTION

1.1 Local Transport Projects Ltd. (LTP) has been commissioned by Sustrans (ref. [redacted]) to carry out a Stage 1 Road Safety Audit on a scheme to provide a new ramp for the use of cyclists to the west side of Wallis Road Bridge, Hackney Wick. Wallis Road Bridge (Bridge H10, London Legacy Development Corporation), links Hackney Wick, over the River Lea Navigation to the Queen Elizabeth Olympic Park. The existing west side staircase has a wheeling channel for cycles on the right hand side (for climbers).

1.2 The proposed ramp would be fitted to the right hand side (for climbers) of the existing stair case to the west side of the bridge. The proposed ramp is on a continuous gradient (1 in 4.7 - lower section and 1 in 7.2 - upper section). It would halve the existing staircase width to approximately 1.8m.

1.3 The audit was carried out between 20th June and 3rd July 2014 and was based on an examination of the information identified with the audit instruction, as described on the slides within PowerPoint presentation, "*H14 A+M sketches 2013*", dated 25/6/13 and issued by the London Legacy Development Corporation.

1.4 No Personal Injury Collision (PIC) data for the highway in the vicinity of the bridge approaches was made known to the Audit Team. A search on the publically available Crashmap website (http://www.crashmap.co.uk/Search) revealed no personal injury collisions on Wallis Road in the vicinity of the existing steps within the 5 year period Jan 2008 to Dec 2012.

1.5 A site inspection was carried out on Wednesday 25th June 2014, between 15.50 and 16.30. The weather was fine and dry at the time of the site visit.

1.6 The audit team comprised the following people:

- [redacted], BA(Hons) MSc CMILT FIHE MCIHT FSoRSA (Audit Team Leader)
- [redacted] BSc CEng MICE MCIHT (Audit Team Member)

1.7 The audit was carried out with reference to HD19/03 "Road Safety Audit" (The Highways Agency, DMRB Volume 5, Section 2, Part 2), and the IHT Road Safety Audit Guidelines 2008, (Third Edition).

1.8 No Departures from Standards were made known to the Audit Team.

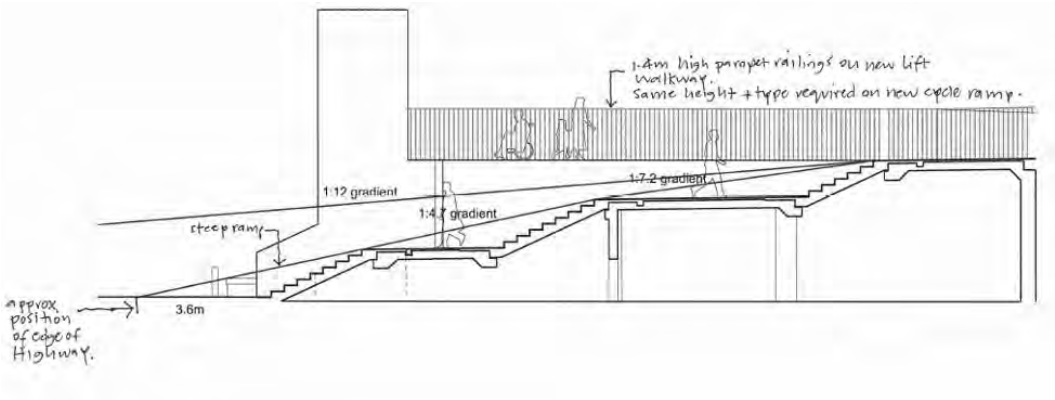
1.9 The audit team has examined and reported only on the road safety implications of the scheme using the information provided and has not examined or verified the compliance of the design to any other criteria.

1.10 The problems identified in this report are considered by the audit team to require action in order to improve safety and reduce the risk of collisions occurring.

# 2.0 ITEMS RAISED BY THIS SAFETY AUDIT

## 2.1 Problem

**Risk of ramp users losing control and falling due to excessive gradient and absence of intermediate landings**. The proposed ramp has a steep gradient on a continuous descent with no rest areas (landings). Users travelling down the ramp may build up speed as they descend and be unable to stop - increasing their risk of falling from their bike or coming into conflict with other ramp users.

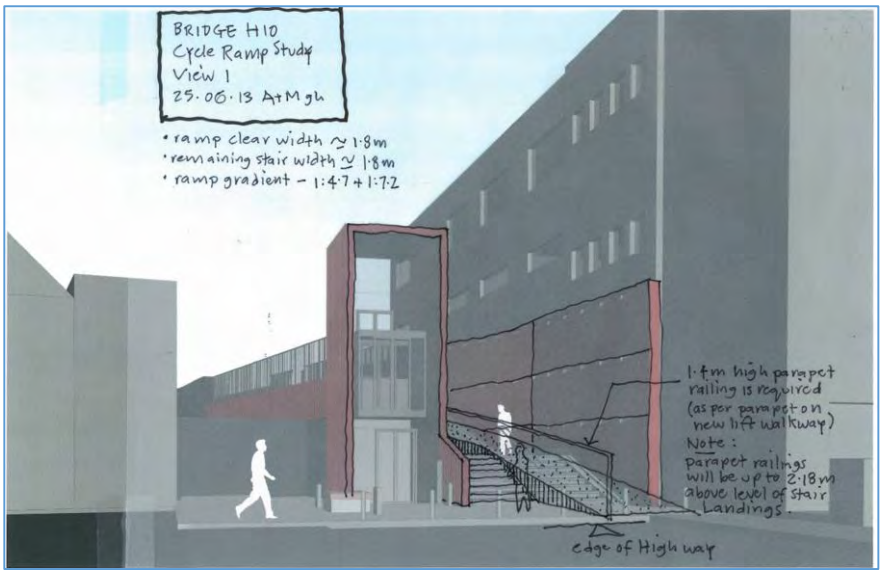



### Recommendation

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004).

## 2.2 Problem

**Risk of pedestrians falling on the staircase**. The existing staircase is approximately 3.6m wide. If it has been designed for a capacity pedestrian loading, then halving its width will increase pedestrian density and the risk of conflict between pedestrians.

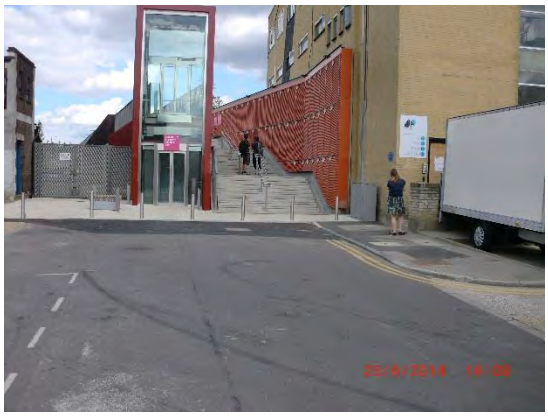


**Recommendation**

The width of the proposed staircase should be adequate for expected usage. This requirement may not be consistent with the proposal to provide a bridge ramp in this location.

2.3 **Problem**

**Risk of conflict between ramp users and vehicles / pedestrians in the vicinity of the ramp base**. The steep gradient of the ramp and absence of landings may lead to cyclists reaching high speeds on the down slope. Visibility in the area around the base of the ramp, particularly of pedestrians emerging from the adjacent doorway access and vehicles travelling northbound from the parking area to the south, is restricted, leading to potential collisions.



**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004). Suitable staggered barrier / bollards should be provided in the area around the base of the ramp to reduce the speed of cyclists. It may also be possible to relocate the pedestrian access to the adjacent building to exit westwards, removing a parking space to accommodate, subject to negotiation with the building owner. However this would not completely remove the risk of pedestrian / cycle conflict in this area, only the risk associated with pedestrians exiting the building at this point.

2.4 **Problem**

**Risk of cyclist unable to cycle up steep gradient losing control.** The proposed ramp gradients are 1:4.7 on the lower section and 1:7.2 on the upper section. Recommended gradients are 1:20 or 1:12 maximum in exceptional circumstances - DMRB BD 29/04, (Highways Agency 2004). As such, less able cyclists may struggle to remain mounted when cycling up the ramps as their bike becomes less stable at low speed. They may lose control and fall from their cycle, with potential for injury.

**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004).

2.5 **Problem**

**Risk of wheelchair / mobility scooter users experiencing difficulty and losing control due to steep ramp gradients**. It is understood that the existing lift would remain in place for wheelchair / mobility scooter users with the proposed ramp arrangements. However they would not be physically prevented from gaining access to the ramp (to do so would likely prevent convenient cycle access also). This could lead to a situation where a wheelchair or mobility scooter user enters the top section of ramp and loses control on the steep downward gradient, with no intermediate landings, leading to injury.

**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004).

2.6 **Problem**

**Risk of collision between cyclists on ramp**. The proposed ramp is shown as 1.8m wide, (it is assumed that two-way use is envisaged). This is below the absolute minimum width of 2.0m (or 3.0m with the additional 0.5m recommended for each side of a track that is bounded by a wall or railings as in this case) for a two-way cycle track as outlined in the London Cycling Design Standards (TfL 2005) and also the London Cycling Design Standards Consultation Draft (TfL 2014 para 3.1.15). This increases the risk of collisions between cyclists travelling in opposite directions and cyclists overtaking other cyclists, particularly in the downward direction where speeds are likely to be higher.

**Recommendation**

The width of any ramps provided for cyclists in this location should be in accordance with the LCDS (TfL, 2005) or London Cycling Design Standards Consultation Draft, TfL 2014.

2.7 **Problem**

**Risk of injury due to unintended use by skateboarders, BMX riders etc.** There is a risk that groups for which the scheme was not designed may use the facility in an unintended way, for example to practice stunt riding on the ramp. Not only may this present a risk to those taking part in such activities, but it may also present a hazard to other legitimate users of the ramp should a collision take place. Although such a risk may be present to some extent with any ramp scheme, the steep nature of the proposals in this case may increase the likelihood of such groups congregating around the ramp, increasing the risk of injury.

**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004).

2.8 **Problem**

**Risk of westbound cyclists riding down steps**. The alignment of the steps with the proposed arrangement would mean that they were almost in a straight line from the edge of the bridge parapet railings for westbound cyclists, with cyclists having to make a sharp movement to the left in order to access the ramp. There is a risk that a westbound cyclist travelling at speed could ride down the steps of the pedestrian facilities, resulting in injury.

**Recommendation**

Provide suitable staggered barrier / bollard arrangement at top of steps to prevent cyclists riding straight down steps.

## 3.0 AUDIT TEAM STATEMENT

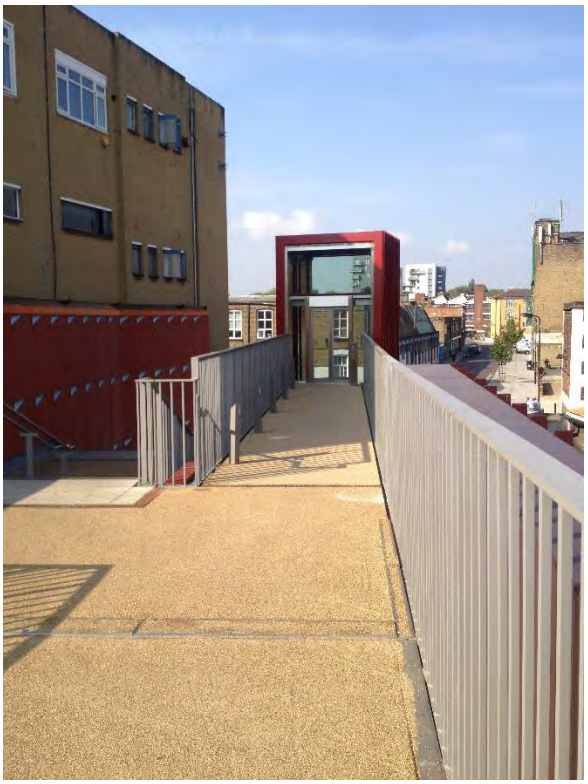
3.1 I certify that this audit has been carried out in accordance with HD 19/03.

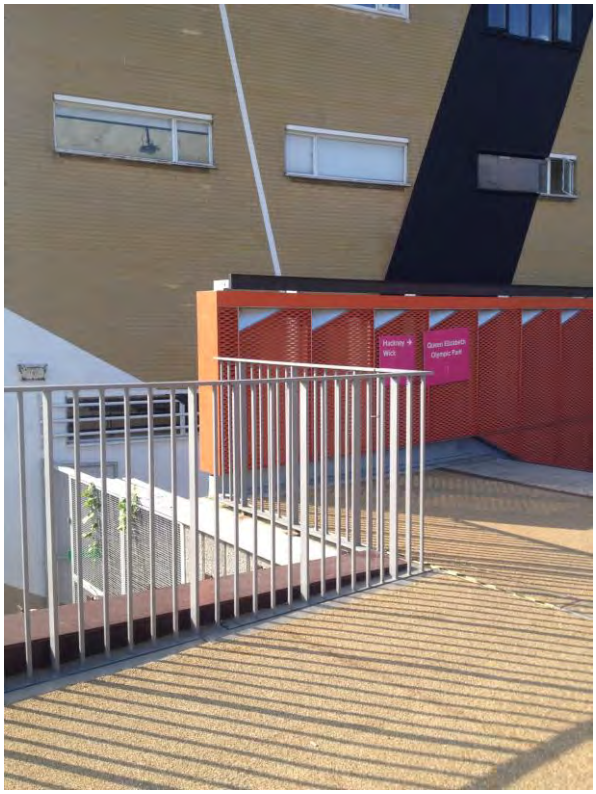
| Audit Team Leader | | | |
|---|---|---|---|
| **Name:** | [redacted] | **Signed:** | |
| **Position:** | [redacted] | **Date:** | |
| **Organisation:** | **Local Transport Projects Ltd.** | | |
| **Address:** | **22 Trinity Lane, Beverley, East Riding of Yorkshire. HU17 0DY** | | |

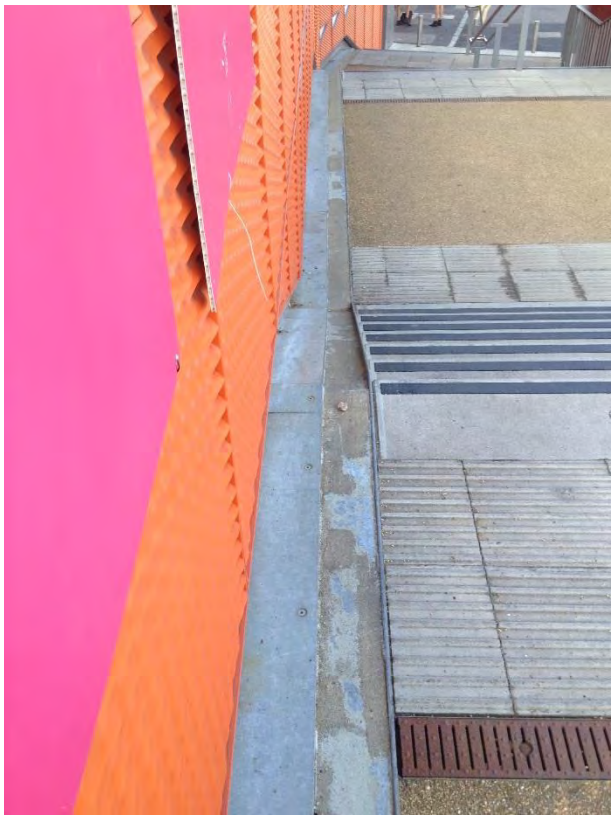
| Audit Team Member | | | |
|---|---|---|---|
| **Name:** | [redacted] | **Signed:** | |
| **Position:** | [redacted] | **Date:** | |
| **Organisation:** | **Local Transport Projects Ltd.** | | |
| **Address:** | **22 Trinity Lane, Beverley, East Riding of Yorkshire. HU17 0DY** | | |

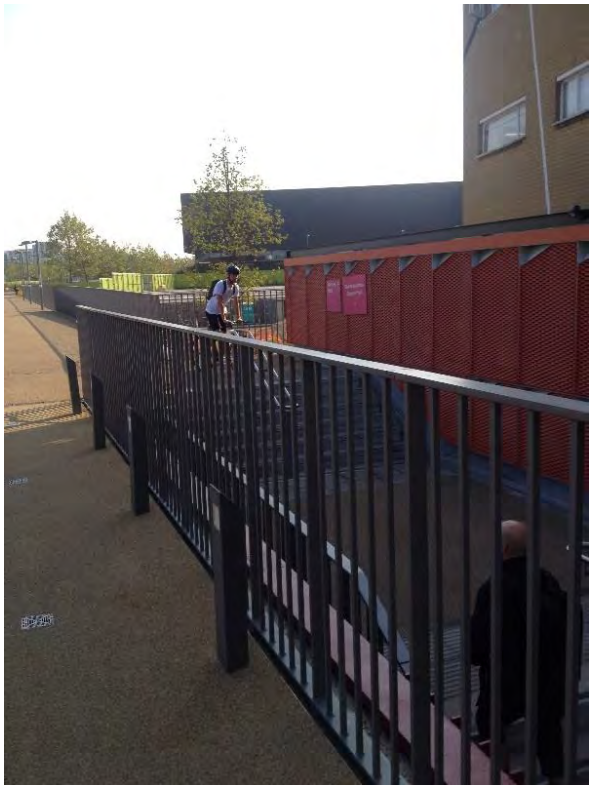
# Appendix C – Site Photographs


TC376

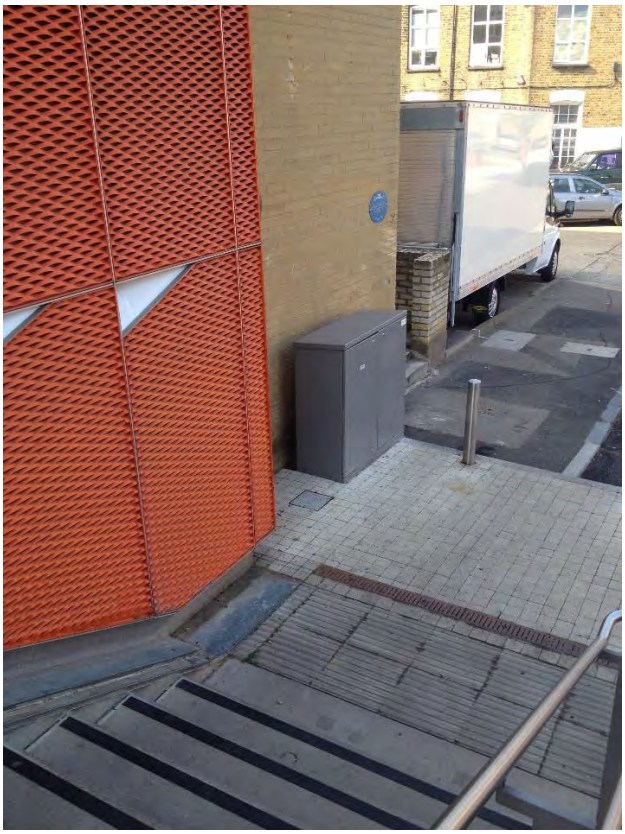




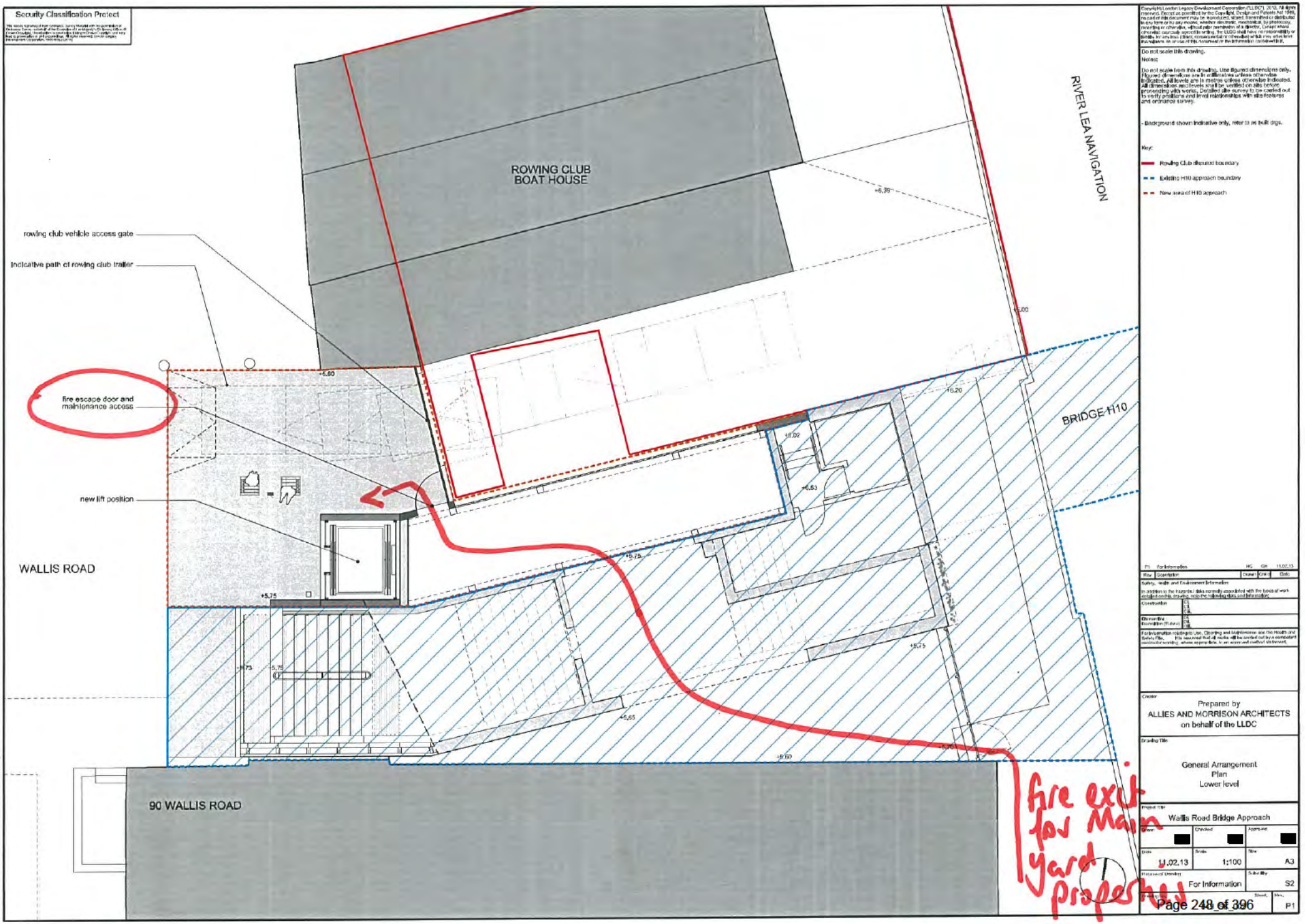





Queen
Elizabeth
Olympic
Park



# Appendix D – Existing Fire Exit Strategy


Security Classification Protect
ROWING CLUB BOAT HOUSE
RIVER LEA NAVIGATION
rowing club vehicle access gate
Indicative path of rowing club trailer
fire escape door and maintenance access
new lift position
WALLIS ROAD
BRIDGE H10
90 WALLIS ROAD
+6.39
+6.00
+5.80
+6.20
+6.02
+6.63
+5.75
+5.73
+5.65
+5.60
+5.70
Do not scale this drawing.
Notes:
- Background shown indicative only, refer to as built dgns.
Key:
Rowing Club disputed boundary
Existing H10 approach boundary
New area of H10 approach
Prepared by
ALLIES AND MORRISON ARCHITECTS
on behalf of the LLDC
General Arrangement
Plan
Lower level
Wallis Road Bridge Approach
11.02.13
1:100
A3
For Information
S2
P1
fire exit for Main Yard proposed

# Appendix E – Topographical Drawing

Security Classification






Do not scale this drawing.

Notes:

| Rev | Description | Drawn | Chk'd | Date |
|---|---|---|---|---|
| 01 | For Information | JST | BS | 01/10/14 |

Safety, Health and Environment Information

In addition to the hazards / risks normally associated with the types of work detailed on this drawing, note the following risks and information:

| | |
|---|---|
| Construction | Cc<br>Ca<br>Ce |
| Dismantling / Demolition (Future) | Dc<br>Da<br>De |

For information relating to Use, Cleaning and Maintenance see the Health and Safety File. It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement.

Creator

Prepared by
Atkins
On behalf of the LLDC

Drawing Title

Topography

Project Title

Project

| Drawn | Checked | Approved |
|---|---|---|
| | | |

| Date | Scale | Size |
|---|---|---|
| 01/10/14 | NTS | A1 |

| Purpose of Drawing | Suitability |
|---|---|
| For Information | S2 |

| Drawing No. | Sheet. | Rev. |
|---|---|---|
| ####-XXX-XXX-X-XXX-#### | ## | 01 |

PLOT DATE: 01/10/2014 PLOT TIME: 2:50 PM

FILENAME: P:\GBEMP\Civil Infrastructure\Jobs\5114143 LLDC Projects\03 CAD\0301 WIP\LC810LC810H10\CBD\GAIL\C810-LCI-H10-CB-DGA-0001.dwg

# Appendix F – Risk Register

| PROJECT<br>HEALTH & SAFETY DESIGN RISK REGISTER | | | | | | | | | | Doc Ref/Rev: | LC810-LCI-H10-CB-RIS-0001 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Issue Date: | 23rd September 2014 |
| **Project: Queen Elizabeth Olympic Park H10 Bridge Ramp Proposal** | | | **Package or Element: Bridge Ramp** | | | | | | | **Reviewed By:** | [redacted] |
| **Project/Design Phase: Options Study** | | | **Prepared by:** [redacted] | | | | | | | **Authorised By:** | [redacted] |

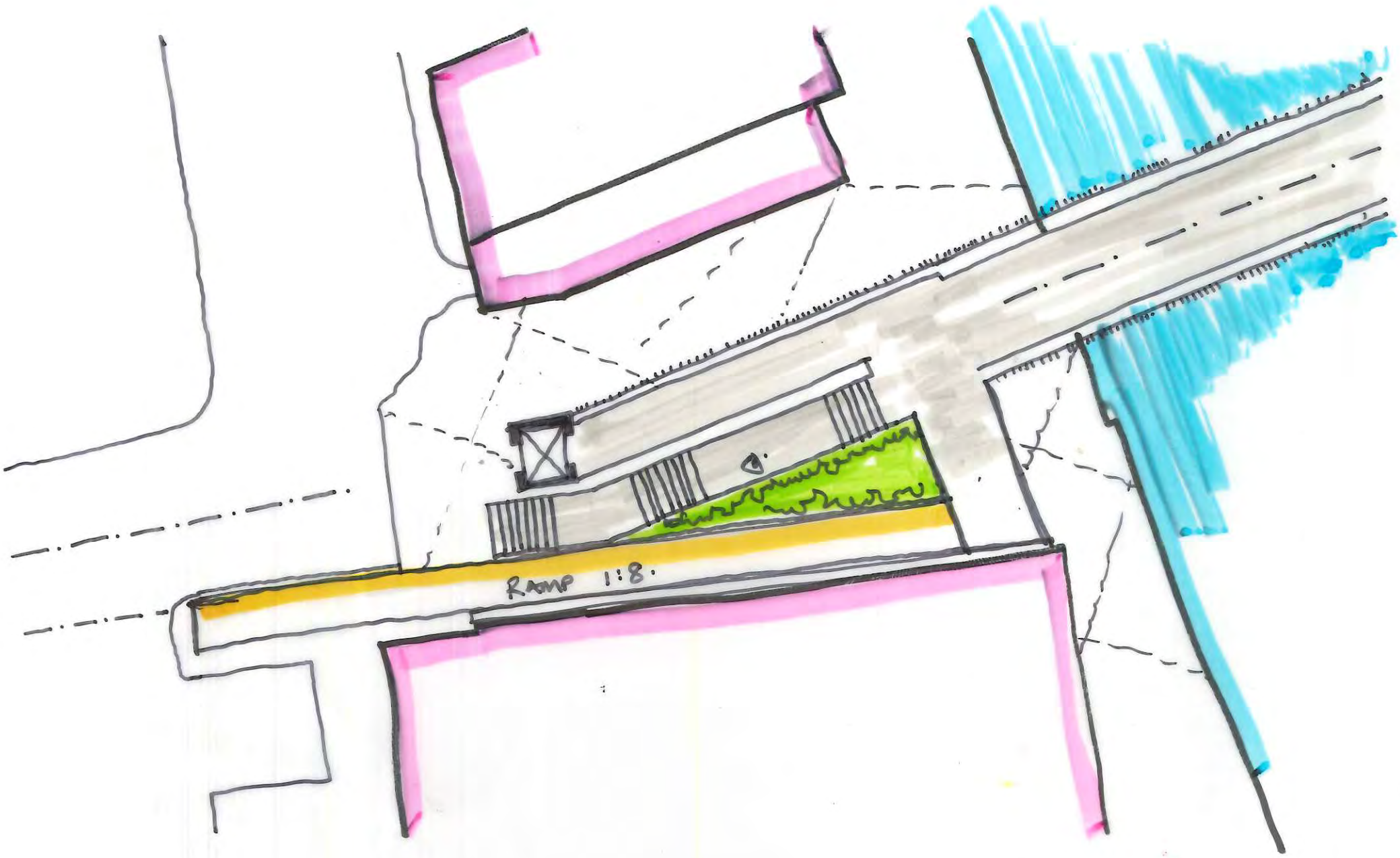
| Item No | Activity | **Hazard/Other H&S Issue** relating to building/constructing, use, cleaning & maintaining, altering and dismantling & demolition. | Stage Affected | Priority Issue | **Measures Taken by Designer** - Hazard Elimination and Risk Reduction | Design Risk Owner | By When | **Information Needed by Others** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | **Including:**<br>• Critical design assumptions<br>• Significant remaining risks<br>• Suggested work methods/sequences<br>• Other controls | **Needed by who** | **Include in:**<br>SHE Box<br>Design doc<br>H&S File<br>Project Risk | **Cross Reference**<br>Detailed ref to Doc or Drg containing the information |
| 1 | Groundworks | Working in close proximity to river. Danger of operatives falling in. Possbility of drowning or injury. | Build | | Where applicable hoarding and edge protection to be used. | Designer/ Contractor | Construction | Site inductions to be given to all new operatives on site. Contractor to produce and implement method statement for safe working near an open body of water. | Contractor | SHE Box | Detail Design Drawings Ref ## |
| 2 | Groundworks | Risk of injury or drowning caused by the presence of groundwater in excavations if the water table is high. | Build | | Ground investigations are being carried out to identify the water table level. Excavation work kept to a minimum where poss ble. | Designer/ Contractor | Construction | Contractor to produce and implement method statement for temporary pumping of ground water from excavations if necessary. | Contractor | SHE Box | Detail Design Drawings Ref ## |
| 3 | Groundworks | Risk of hitting live unknown existing services. | Build | | Advise contractor, review data on existing services. | Contractor | Construction | Contractor to obtain all records of buried services. CAT scans to be used on site prior to any excavations. Hand digging may be required. | Contractor | SHE Box | Detail Design Drawings Ref ## |
| 4 | Site access | Injury to users of Wallis Road resulting from shared usage by construction traffic, pedestrians and other road users. | Build | | Semi-prefabricated design option considered to reduce time dependancy of deliveries and keep access clear at peak times. | Designer/ Contractor | Construction | Contractor to produce and implement site traffic management plan.<br>Deliveries of construction materials and removal of waste materials, where possible, to be scheduled outside peak times.<br>A banksman to be used for reversing large vehicles. | Contractor | SHE Box | Detail Design Drawings Ref ## |
| 5 | Ramp usage | Injury resulting from collision between cyclists due to ramp width. | Use | | Various design options considered. Significant site constraints acknowledged. A max. ramp width of TBC can be achieved. The following measures considered to alleviate risk:<br>• A rough surface texture on ramp to assist braking and manoeuvrability (London Cycle Design Standards, 20mm)<br>• Signs i.e. warning users of narrow width, and steep gradient;<br>• Footway markings;<br>• A priority give way system;<br>• Visual and physical speed calming measures, i.e. granite setts. The setts to be flush and not polished to present a slip hazard;<br>• Planting/street furniture/staggered barriers to manage exit and entry speeds;<br>• Minimum 2.3m height clearance to all obstructions on building wall;<br>• No handrail along the wall of building 90 Main Yard; and<br>• Suitable illumination of the ramp. | Lead Designer and LLDC | Operation | Advise LLDC Operations as cannot be designed out and seek approval for departure from standards*. LLDC to agree and accept ownership of the non compliance. | Operator | H&S File | H&S File Ref ## |
| 6 | Ramp usage | Injury resulting from collision between cyclists due to ramp gradient. | Use | | Various design options considered. Significant site constraints acknowledged. A max. ramp gradient of TBC can be achieved. Please see item no.5 for a list of measures taken by the designer to alleviate the risk associated with a steeper gradient. | Lead Designer and LLDC | Operation | Advise LLDC Operations as cannot be designed out and seek approval for departure from standards*. LLDC to agree and accept ownership of the non compliance. | Operator | H&S File | H&S File Ref ## |
| 7 | Ramp usage | Injury resulting from collision between cyclists and Pedestrians. | Use | | Various design options considered. Significant site constraints acknowledged. The following measures considered to alleviate risk:<br>• Separation of pedeastrian from cyclists.<br>• A transparent parapet railing to maximise visibility;<br>• Planting/ streetfurniture or staggered barriers to manage exit and entry speeds;<br>• Measures at the junction of Wallis Road and Main Yard to define priority, reduce cycle speeds into the junction, and increase cyclists visibility;<br>• Warning pedestrian of cyclists (signs and tactile surfaces); | Lead Designer and LLDC | Operation | Advise LLDC Operations as cannot be designed out and seek approval for departure from standards*. LLDC to agree and accept ownership of the non compliance. | Operator | H&S File | H&S File Ref ## |
| 8 | Ramp usage | Injury to users of Wallis Road resulting from shared usage by pedestrians, cyclists and motorists. | Use | | Various design options considered. Significant site constraints acknowledged. The following measures considered to alleviate risk:<br>• A transparent parapet railing to maximise visibility;<br>• Planting/ street furniture or staggered barriers to manage exit and entry speeds;<br>• Measures at the junction of Wallis Road and Main Yard to define priority, reduce cycle speeds into the junction, and increase cyclists visibility; | Lead Designer and LLDC | Operation | Advise LLDC Operations as cannot be designed out Seek approval for departure from standards*. LLDC to agree and accept ownership of the non compliance. | Operator | H&S File | H&S File Ref ## |
| 9 | Ramp usage | Ramp Gradient | Use | | List Measures considered and implemented<br><br>1. Extending Ramp in to HBC Land - Implemented in all options<br>2. Intermediate platforms - Not used due to…….<br>3. Further extension of the ramp on the western side – dismissed due to the site constraints and would block the Main Yard cul-de-sac & Wallis Road junction therefore bad for informal connectivity, impacts on ground floor of listed 88 Wallis Road | Lead Designer and LLDC | Operation | | Operator | H&S File | H&S File Ref ## |
| 10 | Ramp usage | Ramp Width | Use | | List Measures consider and implemented<br><br>1. Widening top and bottom - Implemented in two options<br>2. Removal of façade - Implemented in Option 2b<br>3. Demolishing the rowing club building – this was but dismissed due to high costs and the need to obtain a CPO, also this building is currently in use.<br>4. Installing a new ramp over the rowing club building – this was dismissed as it would block access to adjacent buildings, it would encroach on multiple ownership boundaries and again the need to obtain a CPO<br>5. Removal of staircase completely – dismissed as this impacts on the ground floor of listed 88 Wallis Road, also requires a master plan build out in order to be delivered and thus is more of a permanent solution than the required temporary one<br>6. Relocate lift – dismissed due to high costs associated, encroach on space near boat house, need to obtain a CPO<br>7. Alternative form of cycle path location – dismissed as would not fit with the Quietways master plan | Lead Designer and LLDC | Operation | | Operator | H&S File | H&S File Ref ## |
| 11 | Ramp usage | Ramp configuration | Use | | Various options were considered but it for ease of congestion and reduction of associated risks the options were proposed | Lead Designer and LLDC | Operation | | Operator | H&S File | H&S File Ref ## |
| 12 | | | | | | | | | | | |

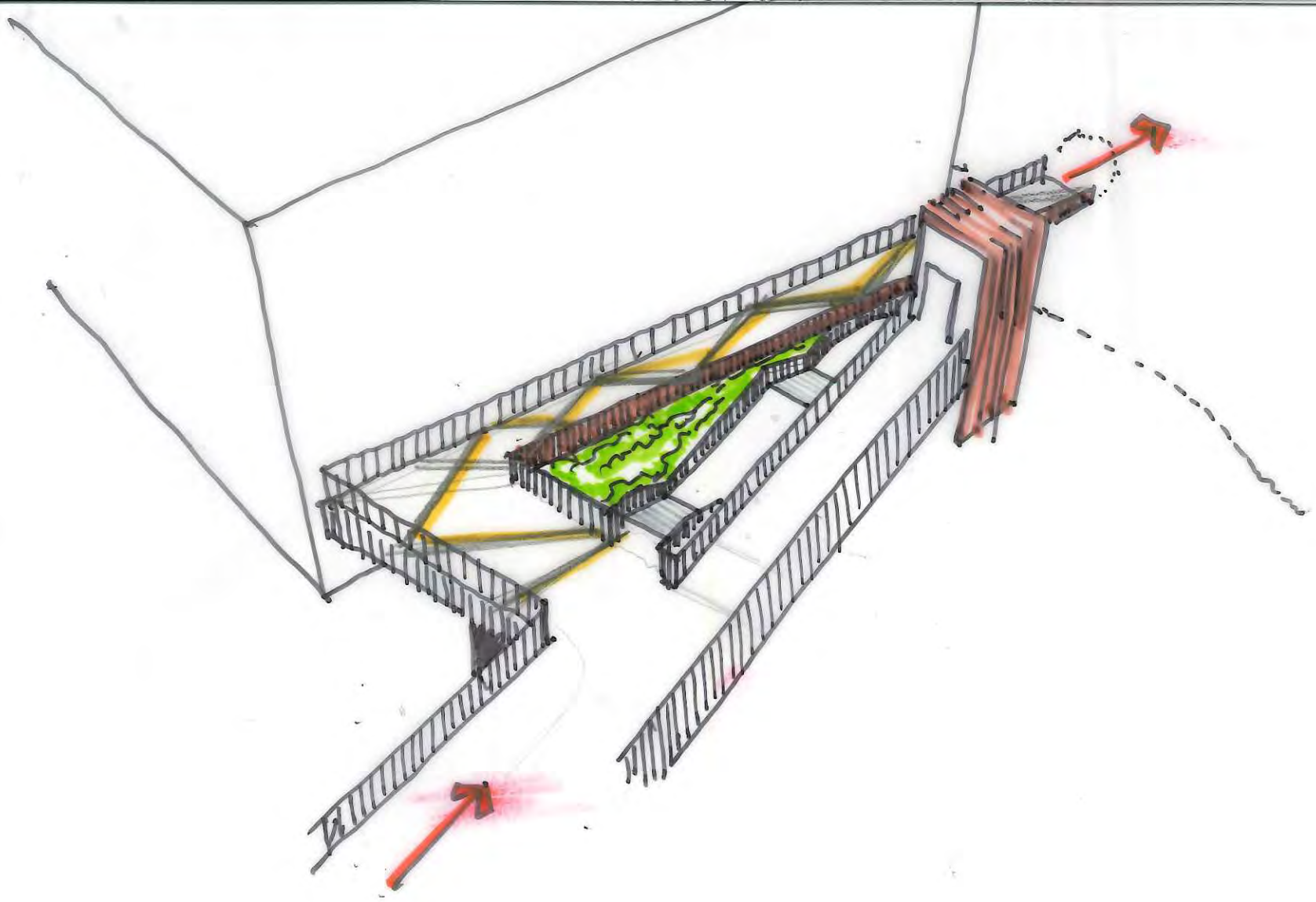
**Hazard:** the potential to do harm, e.g. work at height **Priority:** Mark for priority attention all Red Amber Green List items applicable to the design and any other key project-specific hazards/other H&S issues. **Hazard Elimination and Risk Reduction:** All hazards, including those normal to the type of work, should be eliminated and/or remaining risks reduced by altering the design (following the principles of protection) so far as is reasonably practicable (i.e. unless when compared to the hazard/risk, it is grossly disproportionate in terms of time, cost and effort to do so) and taking into account other relevant design considerations (e.g. cost, fitness for purpose, aesthetics, build ability, maintainability and environmental impact). Reduce overall risk by reducing likelihood of harm (i.e. injury or adverse effect on health), potential severity of harm, number of people exposed to the harm and frequency or duration of exposure to harm **Information Needed by Others:** Information other designers or contractors are likely to need to identify and manage remaining risks. A remaining risk is 'significant' only if it is not likely to be obvious to competent contractor or other designer, is unusual or likely to be difficult to manage effectively **Include (Information) in:** For construction related information include in SHE (safety, health & environment) Box, i.e. notes on drawings - preferred, and/or include in other design documents; for information on workplace use or cleaning & maintenance etc., include in H&S File and/or in documented strategies etc.; include dismantling/demolition related information in SHE Box notes on drawings and/or in H&S File; for issues likely to have a major project impact also include in Project Risk register **Further Guidance:** Refer to PS3000 'Summary Guide to Design for H&S in Construction' or PS 300 'A Manual of Design for Health and Safety in Construction'.

*To get a departure a designers risk assessment must identify why the width and gradient problem cannot be addressed. It is then up to the client to either agree the non compliance and accept ownership of it or reject it

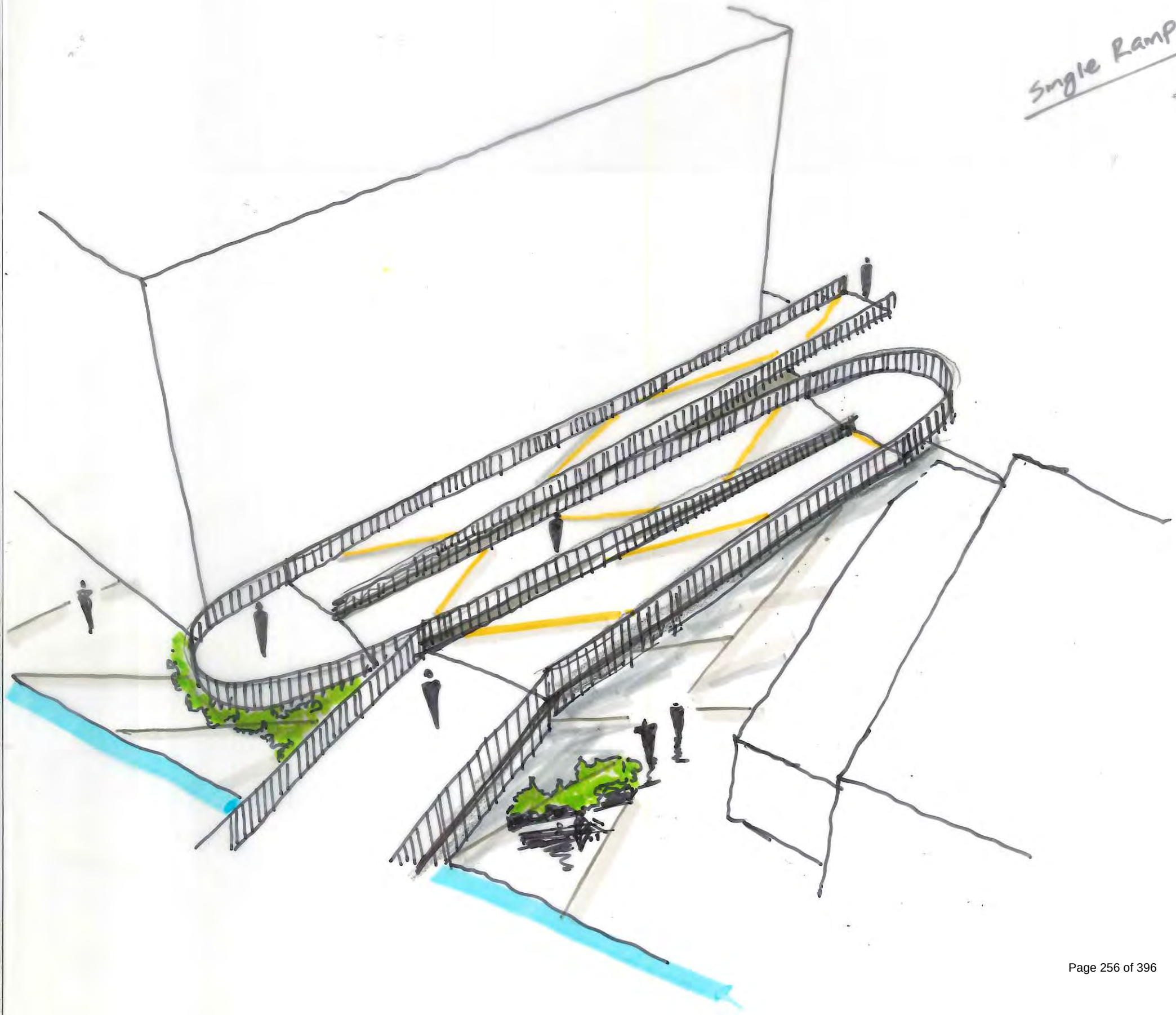
# Appendix G - Initial Sketches

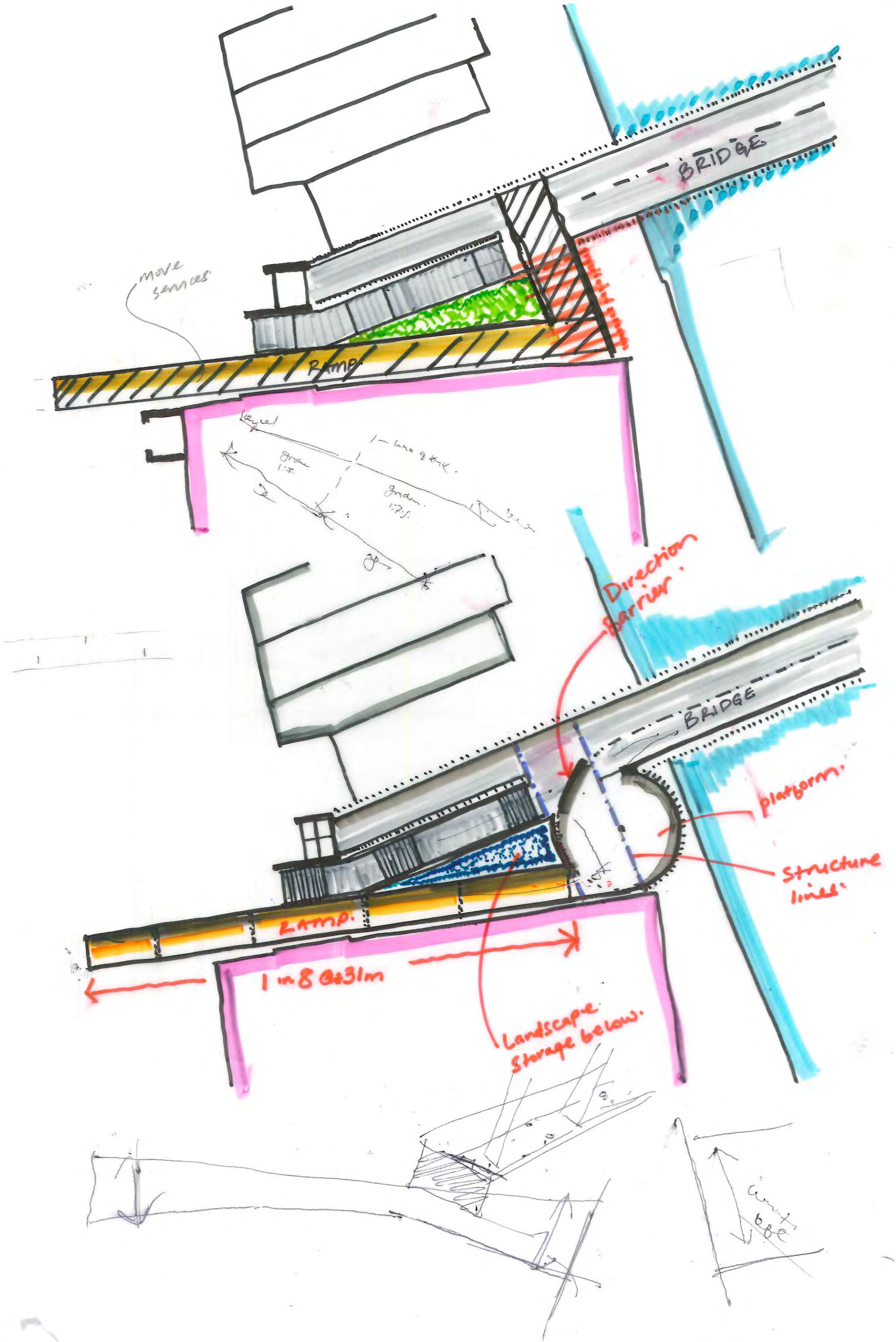

RAMP 1:20
RAMP 1:20
RAMP. 1:20
BRIDGE
BRIDGE
RAMP 1:7

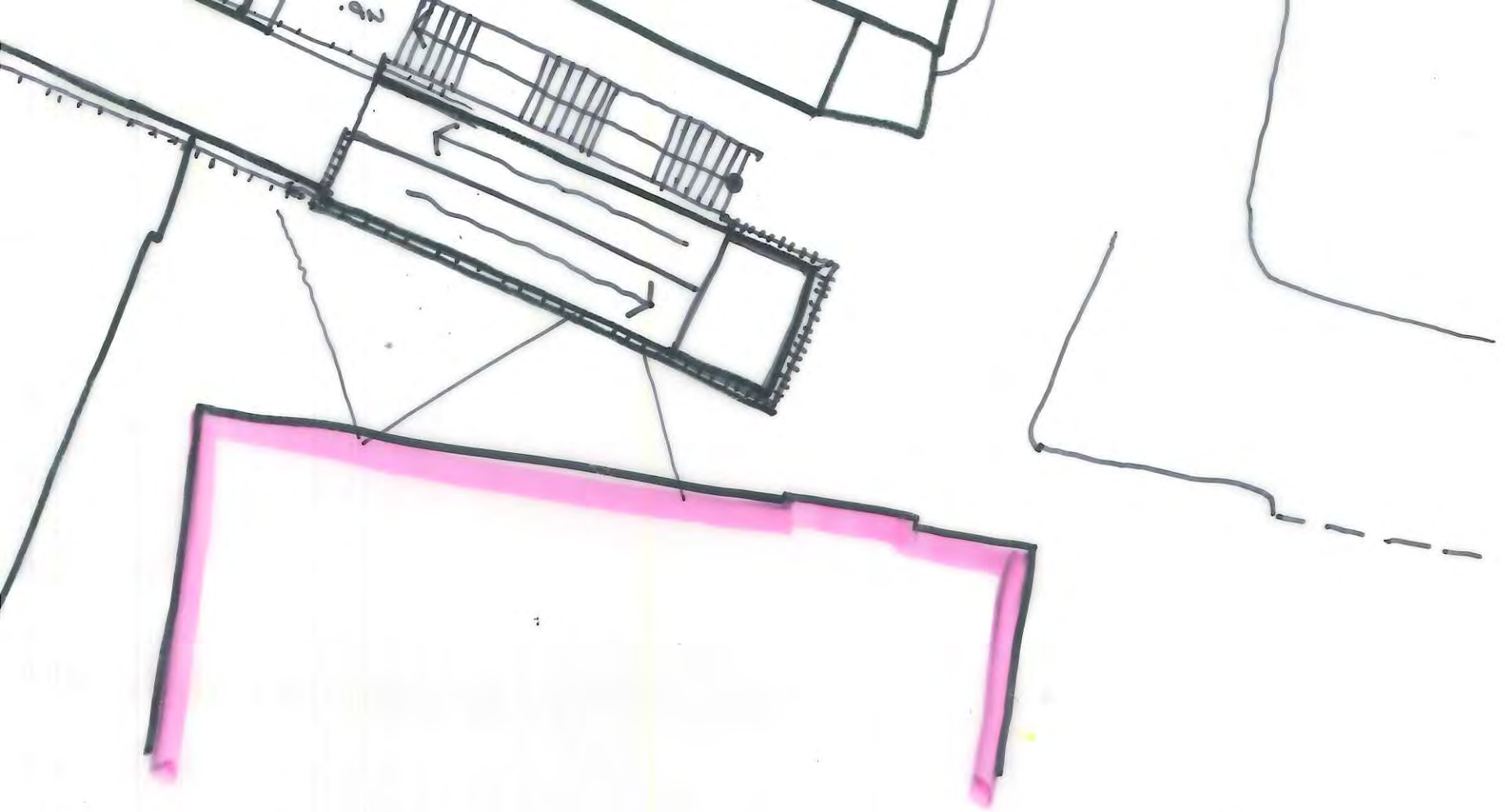

RAMP 1:8.

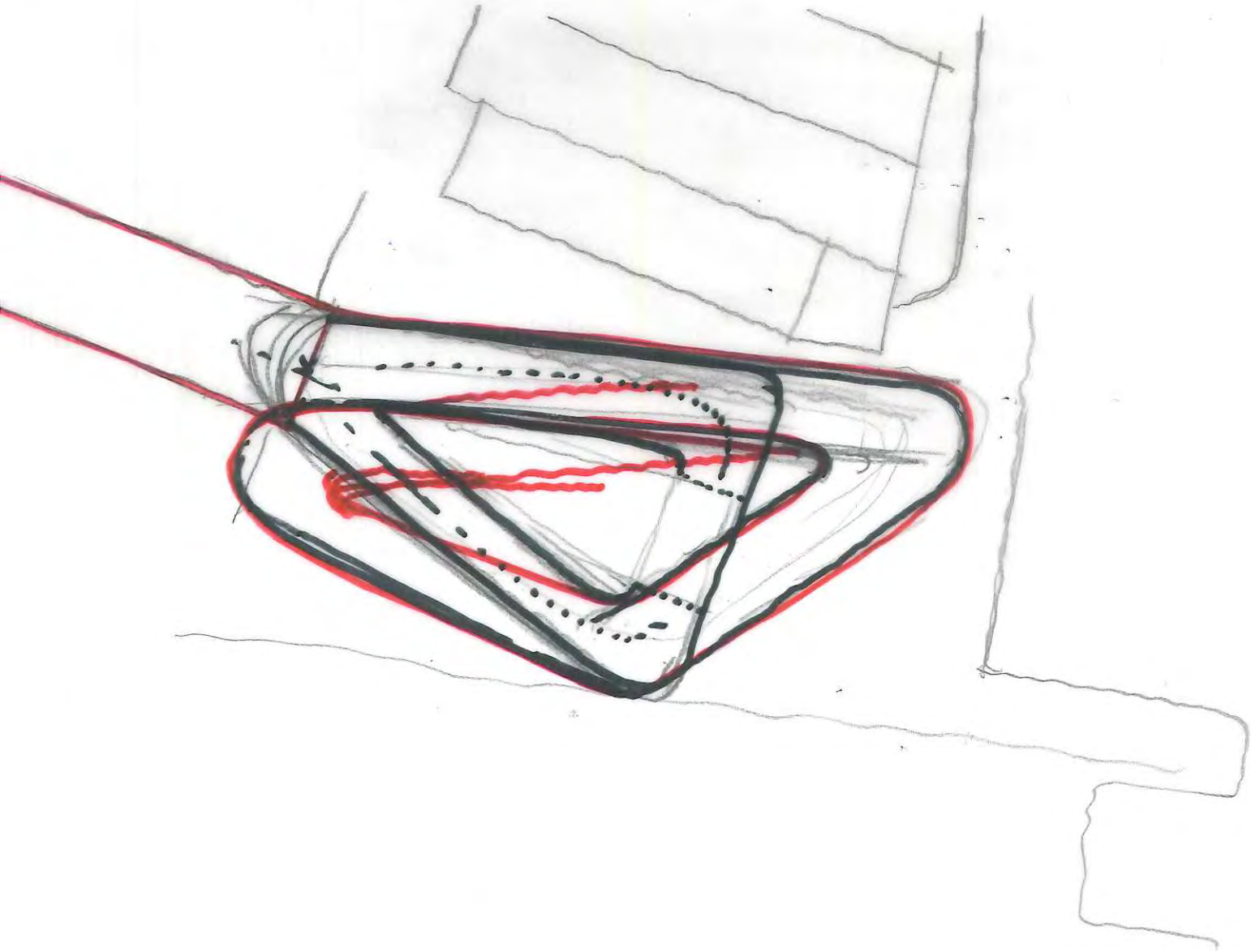


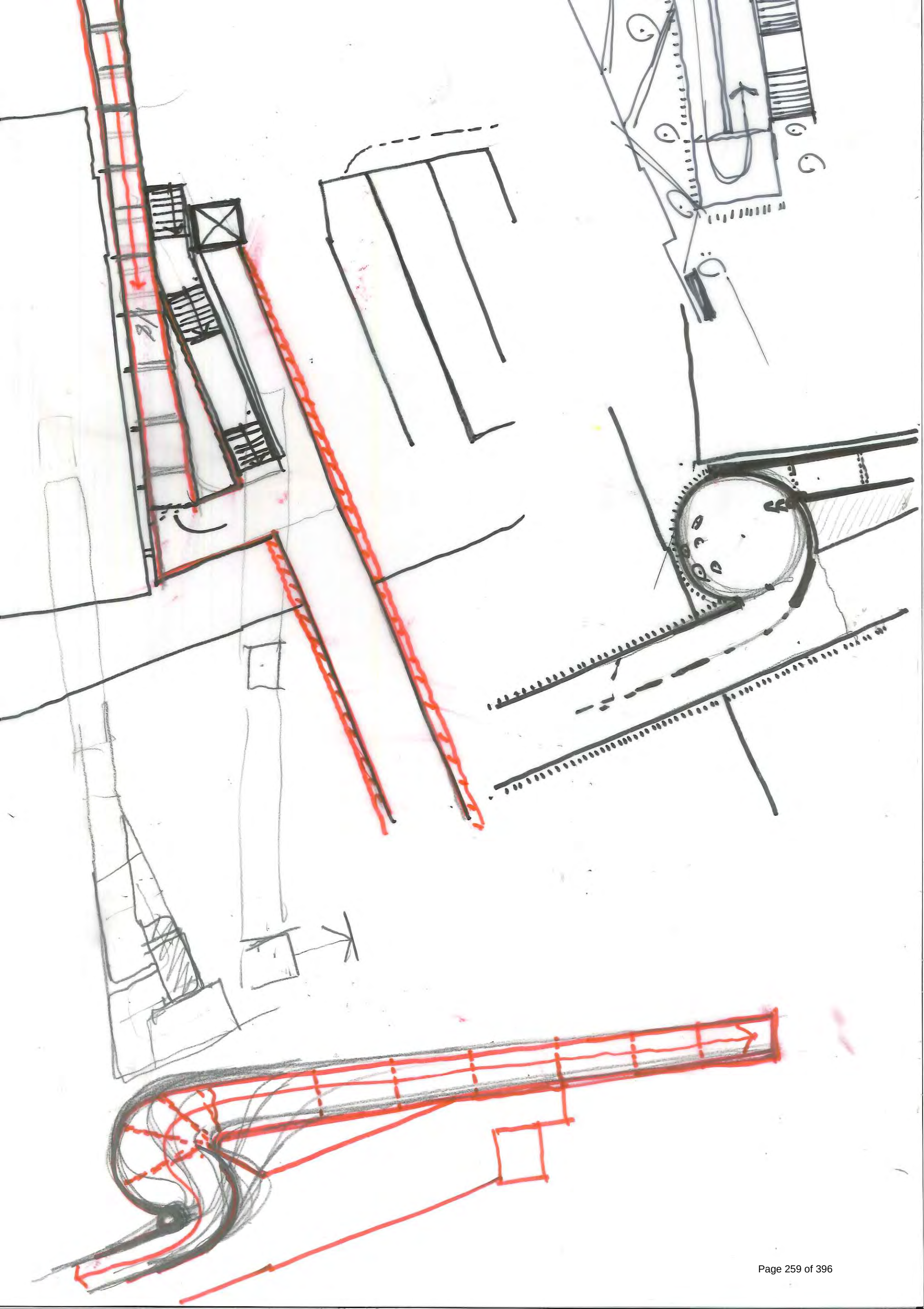
Single Ramp

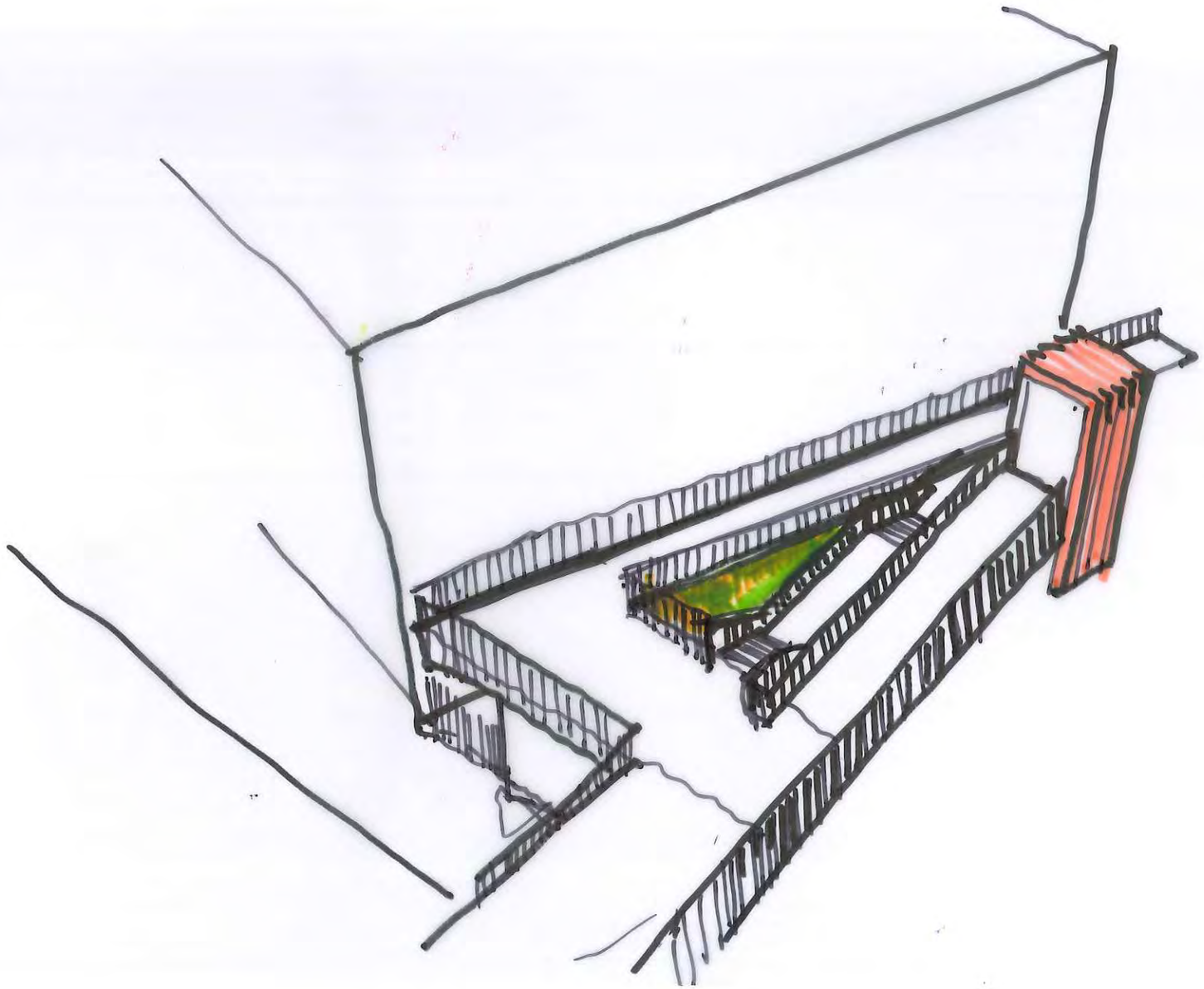



BRIDGE
move services
Ramp
Level
1 – in 8 Grade
Grade 1:7
Grade 1:7
Direction Barrier
BRIDGE
platform
structure lined
Ramp
1 in 8 @ 31m
Landscape Storage below.









# Appendix H – Costing Estimates

LONDON LEGACY DEVELOPMENT CORPORATION

# Wallis Road Bridge (H10) Ramp Proposal

## Feasibility Study and Investigation

Revision 8

19th December 2014

FGOULD.COM

FAITHFUL GOULD

## AUDIT AND CHECKING & VERIFICATION PAGE

| DOCUMENT STATUS | | | | | |
|---|---|---|---|---|---|
| Revision | Date | Status or comment | Prepared by | Checked by | Authorised by |
| | | | | | |
| 0 | 17.09.14 | First Issue | [redacted] | [redacted] | [redacted] |
| 1 | 18.09.14 | | [redacted] | [redacted] | [redacted] |
| 2 | 22.09.14 | | [redacted] | [redacted] | [redacted] |
| 3 | 22.09.14 | | [redacted] | [redacted] | [redacted] |
| 4 | 05.11.14 | | [redacted] | [redacted] | [redacted] |
| 5 | 07.11.14 | | [redacted] | [redacted] | [redacted] |
| 6 | 13.11.14 | | [redacted] | [redacted] | [redacted] |
| 7 | 21.11.14 | | [redacted] | [redacted] | [redacted] |
| 8 | 19.12.14 | | [redacted] | [redacted] | [redacted] |

| FAITHFUL+GOULD | | |
|---|---|---|
| VERIFICATION | | |
| Job Nr: 511 4214 | Initial | Date |
| Technical | [redacted] | 19.12.14 |
| Arithmetical | [redacted] | 19.12.14 |
| Spreadsheet Formulae | [redacted] | 19.12.14 |
| Type/Page | [redacted] | 19.12.14 |
| Authorised for Issue | [redacted] | 19.12.14 |

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Epsom
Surrey
KT18 5BW

Tel: 01372 752659

| Item | Description | Quantity | Unit | Rate (£) | Total (£) |
|---|---|---|---|---|---|
| | **Option 1 - Over stair ramp** | | | | |
| 1 | Allowance to break out existing flights of stairs (Provisional Sum) | 1 | PS | 5,000 | 5,000 |
| 2 | Remove existing handrails and dispose off site | 1 | Item | 1,000 | 1,000 |
| 3 | Protection to existing lift | 1 | Item | 500 | 500 |
| 4 | Remove existing bollards, set aside for re-use | 3 | nr | 150 | 450 |
| 5 | Construct new concrete steps (half width) | 1 | Item | 4,000 | 4,000 |
| 6 | Construct new ramp; assumed timber frame, with timber framing to the junction between the ramp and existing steps | 47 | m2 | 70 | 3,290 |
| 7 | Construct lower section of ramp, built up from hardcore type 1 subbase; assumed average depth of 300mm | 5 | m3 | 70 | 350 |
| 8 | Allowance for additional ramp edge / balustrade support | 40 | m | 100 | 4,000 |
| 9 | Allowance for demolition of low level wall and steps and rebuild to new formation (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 10 | Allowance for channel drain to bottom of ramp, assumed 'Aco' drain or similar | 30 | m | 130 | 3,900 |
| 11 | Allowance for connections to existing drainage (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 12 | Allowance to raise existing access chambers to ensure a flush finish with the ramp surface (Provisional Sum) | 1 | PS | 5,000 | 5,000 |
| 13 | Allowance to raise existing pillar box to ensure a flush finish with the ramp surface (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 14 | Allowance metal wall cladding for junction between new ramp and existing steps | 26 | m2 | 130 | 3,380 |
| 15 | Allow for bituminous type surface (cycle standard) to ramp | 47 | m2 | 75 | 3,525 |
| 16 | Granite setts as speed calming measure including sub base etc | 5 | m2 | 75 | 375 |
| 17 | Stainless steel handrailing with glass infills to ramp | 40 | m | 1,000 | 40,000 |
| 18 | Stainless steel handrail mounted off existing metal wall cladding | 22 | m | 250 | 5,500 |
| 19 | Reinstall existing bollards | 3 | nr | 200 | 600 |
| 20 | Allowance for ramp illumination (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 21 | Allowance for making good to surrounding hard landscape to tie in new layout etc (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 22 | Allowance for public realm improvements; incl cycle lane, zebra crossing etc '(Provisional Sum) | 1 | PS | 25,000 | 25,000 |
| 23 | Allowance for planting, including planters; assumed timber (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 24 | Allowance for street furniture, assumed benching & litter bins (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 25 | Allowance for signs, i.e. warning users of narrow width and steep gradient (Provisional Sum) | 1 | PS | 1,000 | 1,000 |
| 26 | Allowance for adjustments to existing road signage, markings etc for new ramp access configuration (Provisional Sum) | 1 | PS | 500 | 500 |
| 27 | Allowance for surface markings, i.e. SLOW (Provisional Sum) | 1 | PS | 200 | 200 |
| 28 | Allowance for temporary light duty staircase, incl removal on completion (Provisional Sum) | 1 | PS | 7,500 | 7,500 |
| | Sub-total | | | | 130,570 |
| | Preliminaries | 20 | % | | 26,114 |
| | Contractor's OH+P | 10 | % | | 15,668 |
| | RISK - Design Development | 25 | % | | 43,088 |
| | RISK - Construction Contingency | 15 | % | | 32,316 |
| | Inflation - 3Q 2014 to 3Q 2015 @ 5.6 % | 5.6 | % | | 13,874 |
| | Rounding for reporting purposes | | | | 3,369 |
| | **Total Estimated Construction Cost (excl VAT)** | | | | **265,000** |
| | Detailed Design fees (Atkins) | 12 | % | | 31,800 |
| | Supervision | 4 | % | | 11,872 |
| | Project Management | | | | 76,000 |
| | CDMC Fees | 2 | % | | 7,693 |
| | Heritage Consulting | | | | 5,000 |
| | OPEX Maintenance (10 Year Period) (LLDC) | | | | 15,000 |
| | Site Investigations and Surveys | | | | 10,000 |
| | Technical Approval and Safety Audits | 6 | % | | 25,342 |
| | Feasibility Design and Investigations (Atkins) | | | | 20,000 |
| | Rounding for reporting purposes | | | | 2,293 |
| | **Total Estimated Project Cost (excl VAT)** | | | | **470,000** |

| Item | Description | Quantity | Unit | Rate (£) | Total (£) |
|---|---|---|---|---|---|
| | **Option 2a - Ramp widened at top and bottom** | | | | |
| 1 | Allowance to break out existing flights of stairs (Provisional Sum) | 1 | PS | 5,000 | 5,000 |
| 2 | Remove existing handrails and dispose off site | 1 | Item | 1,000 | 1,000 |
| 3 | Protection to existing lift | 1 | Item | 1,000 | 1,000 |
| 4 | Remove existing bollards, set aside for re-use | 3 | nr | 150 | 450 |
| 5 | Allow to deconstruct the existing metal facade, setting aside the panels for re-use | 1 | Item | 5,000 | 5,000 |
| 6 | Construct new concrete steps (half width) | 1 | Item | 4,000 | 4,000 |
| 7 | Construct new ramp including widening the top; assumed timber frame, with timber framing to the junction between the ramp and existing steps | 107 | m2 | 70 | 7,490 |
| 8 | Construct lower section of ramp, built up from hardcore type 1 subbase; assumed average depth of 300mm | 8 | m3 | 70 | 560 |
| 9 | Allowance for additional ramp edge / balustrade support | 40 | m | 100 | 4,000 |
| 10 | Allowance for demolition of low level wall and steps and rebuild to new formation (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 11 | Allowance for channel drain to bottom of ramp, assumed 'Aco' drain or similar | 35 | m | 130 | 4,550 |
| 12 | Allowance for connections to existing drainage (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 13 | Allowance to raise existing access chambers to ensure a flush finish with the ramp surface (Provisional Sum) | 1 | PS | 5,000 | 5,000 |
| 14 | Allowance to raise existing pillarbox to ensure a flush finish with the ramp surface (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 15 | Construct existing metal wall panelling against existing wall | 1 | Item | 5,000 | 5,000 |
| 16 | Allowance metal wall cladding for junction between new ramp and existing steps | 26 | m2 | 130 | 3,380 |
| 17 | Stainless steel handrailing with glass infills to ramp | 40 | m | 1,000 | 40,000 |
| 18 | Stainless steel handrail mounted off existing metal wall cladding | 30 | m | 250 | 7,500 |
| 19 | Allow for bituminous type surface (cycle standard) to ramp | 107 | m2 | 75 | 8,025 |
| 20 | Granite setts as speed calming measure including sub base etc | 5 | m2 | 75 | 375 |
| 21 | Reinstall existing bollards | 3 | nr | 200 | 600 |
| 22 | Allowance for ramp illumination (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 23 | Allowance for making good to surrounding hard landscape to tie in new layout etc (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 24 | Allowance for public realm improvements; incl cycle lane, zebra crossing etc (Provisional Sum) | 1 | PS | 25,000 | 25,000 |
| 25 | Allowance for planting, including planters; assumed timber (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 26 | Allowance for street furniture, assumed benching & litter bins (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 27 | Allowance for signs, i.e. warning users of narrow width and steep gradient (Provisional Sum) | 1 | PS | 1,000 | 1,000 |
| 28 | Allowance for adjustments to existing road signage, markings etc for new ramp access configuration (Provisional Sum) | 1 | PS | 500 | 500 |
| 29 | Allowance for surface markings, i.e. SLOW (Provisional Sum) | 1 | PS | 200 | 200 |
| 30 | Allowance for temporary light duty staircase, incl removal on completion (Provisional Sum) | 1 | PS | 7,500 | 7,500 |
| | Sub-total | | | | 152,630 |
| | Preliminaries | 20 | % | | 30,526 |
| | Contractor's OH+P | 10 | % | | 18,316 |
| | RISK - Design Development | 25 | % | | 50,368 |
| | RISK - Construction Contingency | 15 | % | | 37,776 |
| | Inflation - 3Q 2014 to 3Q 2015 @ 5.6 % | 5.6 | % | | 16,218 |
| | Rounding for reporting purposes | | | | -834 |
| | **Total Estimated Construction Cost (excl VAT)** | | | | **305,000** |
| | Detailed Design fees (Atkins) | 12 | % | | 36,600 |
| | Supervision | 4 | % | | 13,664 |
| | Project Management | | | | 76,000 |
| | CDMC Fees | 2 | % | | 8,625 |
| | Heritage Consulting | | | | 5,000 |
| | OPEX Maintenance (10 Year Period) (LLDC) | | | | 15,000 |
| | Site Investigations and Surveys | | | | 10,000 |
| | Technical Approval and Safety Audits | 6 | % | | 28,193 |
| | Feasibility Design and Investigations (Atkins) | | | | 20,000 |
| | Rounding for reporting purposes | | | | 1,918 |
| | **Total Estimated Project Cost (excl VAT)** | | | | **520,000** |

| Item | Description | Quantity | Unit | Rate (£) | Total (£) |
|---|---|---|---|---|---|
| | **Option 2b - Ramp widened at top and bottom (Facade removed)** | | | | |
| 1 | Allowance to break out existing flights of stairs (Provisional Sum) | 1 | PS | 5,000 | 5,000 |
| 2 | Remove existing handrails and dispose off site | 1 | Item | 1,000 | 1,000 |
| 3 | Protection to existing lift | 1 | Item | 1,000 | 1,000 |
| 4 | Remove existing bollards, set aside for re-use | 3 | nr | 150 | 450 |
| 5 | Allow to deconstruct the existing metal facade, disposing of any materials off site | 1 | Item | 7,000 | 7,000 |
| 6 | Construct new concrete steps (half width) | 1 | Item | 4,000 | 4,000 |
| 7 | Construct new ramp including widening the top; assumed timber frame, with timber framing to the junction between the ramp and existing steps | 107 | m2 | 70 | 7,490 |
| 8 | Construct lower section of ramp, built up from hardcore type 1 subbase; assumed average depth of 300mm | 9 | m3 | 70 | 630 |
| 9 | Allowance for additional ramp edge / balustrade support | 40 | m | 100 | 4,000 |
| 10 | Allowance for demolition of low level wall and steps and rebuild to new formation (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 11 | Allowance for channel drain to bottom of ramp, assumed 'Aco' drain or similar | 35 | m | 130 | 4,550 |
| 12 | Allowance for connections to existing drainage (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 13 | Allowance to raise existing access chambers to ensure a flush finish with the ramp surface (Provisional Sum) | 1 | PS | 5,000 | 5,000 |
| 14 | Allowance to reposition existing pillarbox to opposite end of ramp (Provisional Sum) | 1 | PS | 30,000 | 30,000 |
| 15 | Allowance metal wall cladding for junction between new ramp and existing steps | 26 | m2 | 130 | 3,380 |
| 16 | Stainless steel handrailing with glass infills to ramp | 40 | m | 1,000 | 40,000 |
| 17 | Stainless steel handrail mounted off existing wall | 30 | m | 250 | 7,500 |
| 18 | Allow for bituminous type surface (cycle standard) to ramp | 107 | m2 | 75 | 8,025 |
| 19 | Granite setts as speed calming measure including sub base etc | 5 | m2 | 75 | 375 |
| 20 | Concrete edging to junction between existing building facade and ramp | 35 | m | 100 | 3,500 |
| 21 | Reinstall existing bollards | 3 | nr | 200 | 600 |
| 22 | Allowance for ramp illumination (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 23 | Allowance for making good to surrounding hard landscape to tie in new 'layout etc (Provisional Sum) | 1 | PS | 2,500 | 2,500 |
| 24 | Allowance for public realm improvements; incl cycle lane, zebra crossing etc (Provisional Sum) | 1 | PS | 25,000 | 25,000 |
| 25 | Allowance for planting, including planters; assumed timber (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 26 | Allowance for mural / artwork (Provisional Sum) | 1 | PS | 20,000 | 20,000 |
| 27 | Allowance for street furniture, assumed benching & litter bins (Provisional Sum) | 1 | PS | 2,000 | 2,000 |
| 28 | Allowance for signs, i.e. warning users of narrow width and steep gradient (Provisional Sum) | 1 | PS | 1,000 | 1,000 |
| 29 | Allowance for adjustments to existing road signage, markings etc for new ramp access configuration (Provisional Sum) | 1 | PS | 500 | 500 |
| 30 | Allowance for surface markings, i.e. SLOW (Provisional Sum) | 1 | PS | 200 | 200 |
| 31 | Allowance for temporary light duty staircase, incl removal on completion (Provisional Sum) | 1 | PS | 7,500 | 7,500 |
| | Sub-total | | | | 200,700 |
| | Preliminaries | 20 | % | | 40,140 |
| | Contractor's OH+P | 10 | % | | 24,084 |
| | RISK - Design Development | 25 | % | | 66,231 |
| | RISK - Construction Contingency | 15 | % | | 49,673 |
| | Inflation - 3Q 2014 to 3Q 2015 @ 5.6 % | 5.6 | % | | 21,326 |
| | Rounding for reporting purposes | | | | 2,845 |
| | **Total Estimated Construction Cost (excl VAT)** | | | | **405,000** |
| | Detailed Design fees (Atkins) | 12 | % | | 48,600 |
| | Supervision | 4 | % | | 18,144 |
| | Project Management | | | | 76,000 |
| | CDMC Fees | 2 | % | | 10,955 |
| | Heritage Consulting | | | | 5,000 |
| | OPEX Maintenance (10 Year Period) (LLDC) | | | | 15,000 |
| | Site Investigations and Surveys | | | | 10,000 |
| | Technical Approval and Safety Audits | 6 | % | | 35,322 |
| | Feasibility Design and Investigations (Atkins) | | | | 20,000 |
| | Rounding for reporting purposes | | | | 980 |
| | **Total Estimated Project Cost (excl VAT)** | | | | **645,000** |

| Item | Notes, Assumptions, Risks & Exclusions |
|---|---|
| | **Notes** |
| A | Costs based upon Options Study Report provide by [redacted] (05.09.14). |
| B | All costs are at 3Q 2014, and based upon similar recent projects undertaken by F+G. |
| C | This document and its contents have been prepared and are intended solely for the Client's information and use in relation to Wallis Road Bridge (H10). Faithful+Gould assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents. |
| D | The copyright of this document is vested in Faithful+Gould. This document may not be reproduced in whole or in part without their express written permission. |
| E | No site visit has been carried out by F+G. |
| | **Key Assumptions** |
| A | No contaminated land, abnormal ground conditions, unexploded bombs or antiquities. |
| B | The site is level. |
| C | No delays in obtaining planning approval. |
| D | The works will be procured through a competitive tender with one contractor selected to carry out the works. |
| E | The contractor will have sufficient space on site for accommodation, welfare facilities etc. |
| F | No allowance has been made for use of a barge during construction. |
| G | It is assumed the construction of the ramp will be timber with a bituminous surface finish. |
| H | An allowance has been made for stainless steel handrailing with glazed infills to both sides of the ramp edges. |
| J | Design fees have been included at a rate of 12% |
| K | OPEX costs have been based on 2nr visits every 6 months by maintenance personnel to carry out cleaning works to the ramp through vandalism or graffiti over a 10 year basis. An allowance has also been made for upgrading the bituminous surface after 5 years on each option. |
| L | No allowance has been made for re-wiring the electrical pillarbox in Options 1 & 2a. An allowance has been made for trenching and associated builders work for repositioning the pillar-box in Option 2b. |
| M | The rate for the temporary stairs includes removal after the works |
| N | Project Management fee as advised by [redacted] via email on 12/11/2014 |
| P | No inclusion has been made for covering the stairs or additional lighting to the stairs. The figure indicated includes for cutting the barrier and making good upon completion |
| Q | It is assumed that craneage costs will be included within the preliminaries allowance. |
| | **Risks** |
| A | Planning approval. |
| B | Connections to and capacity of the existing incoming services, capable to cope with the proposed works. |
| C | Public safety during construction. |

| Item | Notes, Assumptions, Risks & Exclusions |
|---|---|
| D | Adverse weather conditions. |
| E | Contractor insolvency. |
| F | Disruption to local roads through construction traffic. |
| G | Ground conditions. |
| H | Site access. |
| | **Exclusions** |
| A | Land Acquisition and associated costs (CPO). |
| B | Legal and Agency Fees. |
| C | Value Added Tax. |
| D | Section 106/278 Agreements. |
| E | Out of Hours Working . |
| F | Abnormal ground conditions. |
| G | Traffic signalling equipment / systems. |
| H | Statutory charges including Thames Water. |
| I | Access alterations to existing buildings |
| J | Any works relating to the existing bridge structure and opposite approach to Wallis Road. |
| K | Licences for road closures. |
| L | Associated builders works in connection with the install of vehicular barriers |

CONSTRUCTIVE EXPERTISE

FGOULD.COM

# Appendix I – Stage 1 RSA for Option 2b

local transport projects

*traffic engineering and transport planning*

ATKINS

# Hackney Wick, Wallis Road Bridge Ramp
# Stage 1 Road Safety Audit

September 2014

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Beverley,
East Riding of Yorkshire.
HU17 0DY.

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www.local-transport-projects.co.uk

*Registered No. 5295328*

ATKINS

# Hackney Wick, Wallis Road Bridge Ramp

# Stage 1 Road Safety Audit

September 2014

| Client Commission | | | |
|---|---|---|---|
| Client: | ATKINS | Order No: | |
| Commissioned By: | [redacted] | Date Commissioned: | September 2014 |

| LTP Quality Control | | | | | |
|---|---|---|---|---|---|
| Job No: | LTP/14/1935 | | File Ref: | London Wallis Road Bridge Ramp(ATKINS) RSA1 Draft v2.docx | |
| Issue | Revision | Description | Originated | Checked | Date |
| 1 | 0 | Report | [redacted] | [redacted] | 23/09/14 |
| | | | Authorised for Issue: | | |

## LTP PROJECT TEAM

*As part of our commitment to quality the following team of transport professionals was assembled specifically for the delivery of this project. Relevant qualifications are shown and CV's are available upon request to demonstrate our experience and credentials.*

| Team Member | LTP Designation | Qualifications |
|---|---|---|
| [redacted] | [redacted] *(Project Manager)* | *BA(Hons) MSc CMILT MCIHT FSoRSA* |
| [redacted] | [redacted] | *CEng BSc(Hons) MICE MCIHT* |

# Hackney Wick, Wallis Road Bridge Ramp
# Stage 1 Road Safety Audit

## CONTENTS

# 1.0 INTRODUCTION

1.1 Local Transport Projects Ltd. (LTP) has been commissioned by ATKINS (ref. [redacted]) to carry out a Stage 1 Road Safety Audit on a scheme to provide a new ramp for the use of cyclists to the west side of Wallis Road Bridge, Hackney Wick. Wallis Road Bridge (Bridge H10, London Legacy Development Corporation), links Hackney Wick, over the River Lea Navigation to the Queen Elizabeth Olympic Park. The existing west side staircase has a wheeling channel for cycles on the right hand side (for climbers).

1.2 The proposed ramp is Option 2b in the ATKINS '*Feasibility Study and Investigation (Wallis Road Bridge (H10) Ramp Proposal)*'. The proposed ramp is on a continuous gradient of 1 in 7 (14.3%) and width varying from 5.8m at the top; 2.5m near the foot of the existing stairs and 3.6m where it lands on the raised pavement area to the north west of 90 Main Yard. The width of proposed stairway is 1.9m.

1.3 The audit was carried out on 22nd/23rd September 2014 and was based on an examination of the information identified within *"Wallis Road Bridge (H10) Ramp Proposal, Feasibility Study and Investigation, London Legacy Development Corporation, 18 September 2014, ref: LC810-LC1_H10_CB-REP-0002" issued by ATKINS*.

1.4 No Personal Injury Collision (PIC) data for the highway in the vicinity of the bridge approaches was made known to the Audit Team. A search on the publically available Crashmap website (http://www.crashmap.co.uk/Search) revealed no personal injury collisions on Wallis Road in the vicinity of the existing steps within the 5 year period Jan 2008 to Dec 2012.

1.5 A site inspection was carried out on Wednesday 25th June 2014, between 15.50 and 16.30. The weather was fine and dry at the time of the site visit.

1.6 The audit team comprised the following people:

- [redacted], BA(Hons) MSc CMILT FIHE MCIHT FSoRSA (Audit Team Leader)
- [redacted] BSc CEng MICE MCIHT (Audit Team Member)

1.7 The audit was carried out with reference to HD19/03 "Road Safety Audit" (The Highways Agency, DMRB Volume 5, Section 2, Part 2), and the IHT Road Safety Audit Guidelines 2008, (Third Edition).

1.8 No Departures from Standards were made known to the Audit Team.

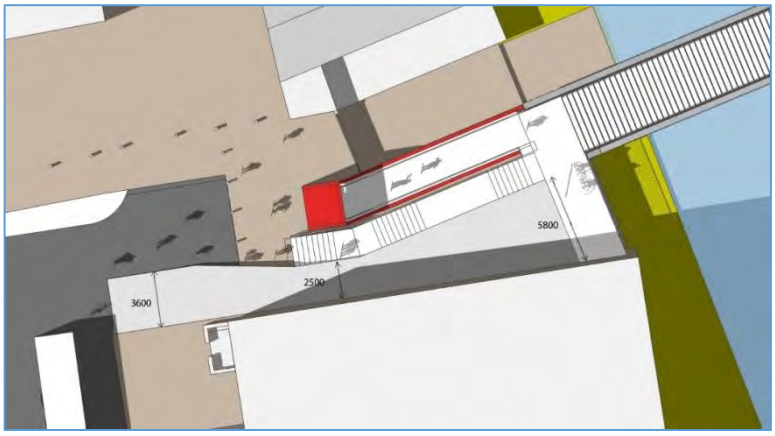
1.9 The audit team has examined and reported only on the road safety implications of the scheme using the information provided and has not examined or verified the compliance of the design to any other criteria.

1.10 The problems identified in this report are considered by the audit team to require action in order to improve safety and reduce the risk of collisions occurring.

# 2.0 ITEMS RAISED BY THIS SAFETY AUDIT

2.1 **Problem**

**Risk of ramp users losing control and falling due to excessive gradient and absence of intermediate landings**. The proposed ramp has a steep gradient on a continuous descent with no rest areas (landings). Users travelling down the ramp may build up speed as they descend and be unable to stop - increasing their risk of falling from their bike or coming into conflict with other ramp users.




**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004). See also LTN 2/08 (DfT, October 2008) – *paragraph 10.8, "The generally preferred gradient is therefore 5 per cent, with 8 per cent as the absolute maximum ……. Individual flights must not exceed 10 metres, and intermediate resting places should be at least 2 metres long"*.

2.2 **Problem**

**Risk of pedestrians falling on the staircase**. The existing staircase is approximately 3.6m wide. If it has been designed for a capacity pedestrian loading, then reducing its width to 1.9m will increase pedestrian density and the risk of conflict between pedestrians.

**Recommendation**

The width of the proposed staircase should be adequate for expected usage. This requirement may not be consistent with the proposal to provide a bridge ramp in this location.

2.3 **Problem**

**Risk of conflict between ramp users and vehicles / pedestrians in the vicinity of the ramp base**. The steep gradient of the ramp and absence of landings may lead to cyclists reaching high speeds on the down slope. Visibility in the area around the base of the

ramp, and for vehicles travelling northbound from the parking area to the south, may be restricted, leading to potential collisions.

**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004). Suitable staggered barrier / bollards should be provided in the area around the base of the ramp to reduce the speed of cyclists, giving due consideration to the needs of users of non-standard bicycles, trailers etc. It appears that the pedestrian access to the adjacent building will be relocated due to the level differences between access and ramp.

2.4 **Problem**

**Risk of cyclist unable to cycle up steep gradient losing control.** The proposed ramp gradient is 1:7. Recommended gradients are 1:20 or 1:12 maximum in exceptional circumstances - DMRB BD 29/04, (Highways Agency 2004). As such, less able cyclists may struggle to remain mounted when cycling up the ramps as their bike becomes less stable at low speed. They may lose control and fall from their cycle, with potential for injury.

**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004).

2.5 **Problem**

**Risk of wheelchair / mobility scooter users experiencing difficulty and losing control due to steep ramp gradients**. It is understood that the existing lift would remain in place for wheelchair / mobility scooter users with the proposed ramp arrangements. However they would not be physically prevented from gaining access to the ramp (to do so would likely prevent convenient cycle access also). This could lead to a situation where a wheelchair or mobility scooter user enters the top section of ramp and loses control on the steep downward gradient, with no intermediate landings, leading to injury.

**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004).

2.6 **Problem**

**Risk of injury due to unintended use by skateboarders, BMX riders etc.** There is a risk that groups for which the scheme was not designed may use the facility in an unintended way, for example to practice stunt riding on the ramp. Not only may this present a risk to those taking part in such activities, but it may also present a hazard to other legitimate users of the ramp should a collision take place. Although such a risk may be present to some extent with any ramp scheme, the steep nature of the proposals in this case may increase the likelihood of such groups congregating around the ramp, increasing the risk of injury.

**Recommendation**

The gradient of the ramp should be reduced and landings introduced in accordance with BD29/04 Design Criteria for Footbridges, Design Manual for Roads and Bridges, (Highways Agency, 2004).

2.7 **Problem**

**Risk of westbound cyclists riding down steps**. The alignment of the steps with the proposed arrangement would mean that they were almost in a straight line from the edge of the bridge parapet railings for westbound cyclists, with cyclists having to make a sharp movement to the left in order to access the ramp. There is a risk that a westbound cyclist travelling at speed could ride down the steps of the pedestrian facilities, resulting in injury.

**Recommendation**

Provide suitable staggered barrier / bollard arrangement at top of steps to prevent cyclists riding straight down steps.

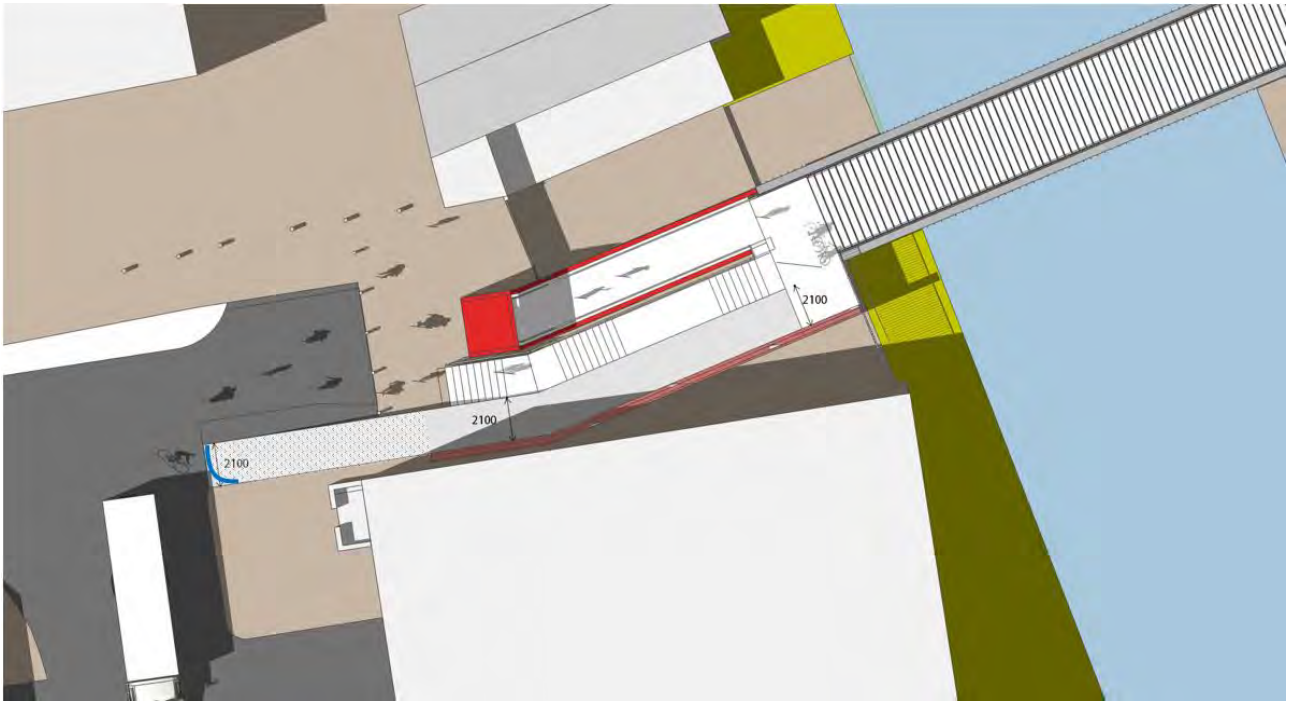
## 3.0 AUDIT TEAM STATEMENT

3.1 I certify that this audit has been carried out in accordance with HD 19/03.

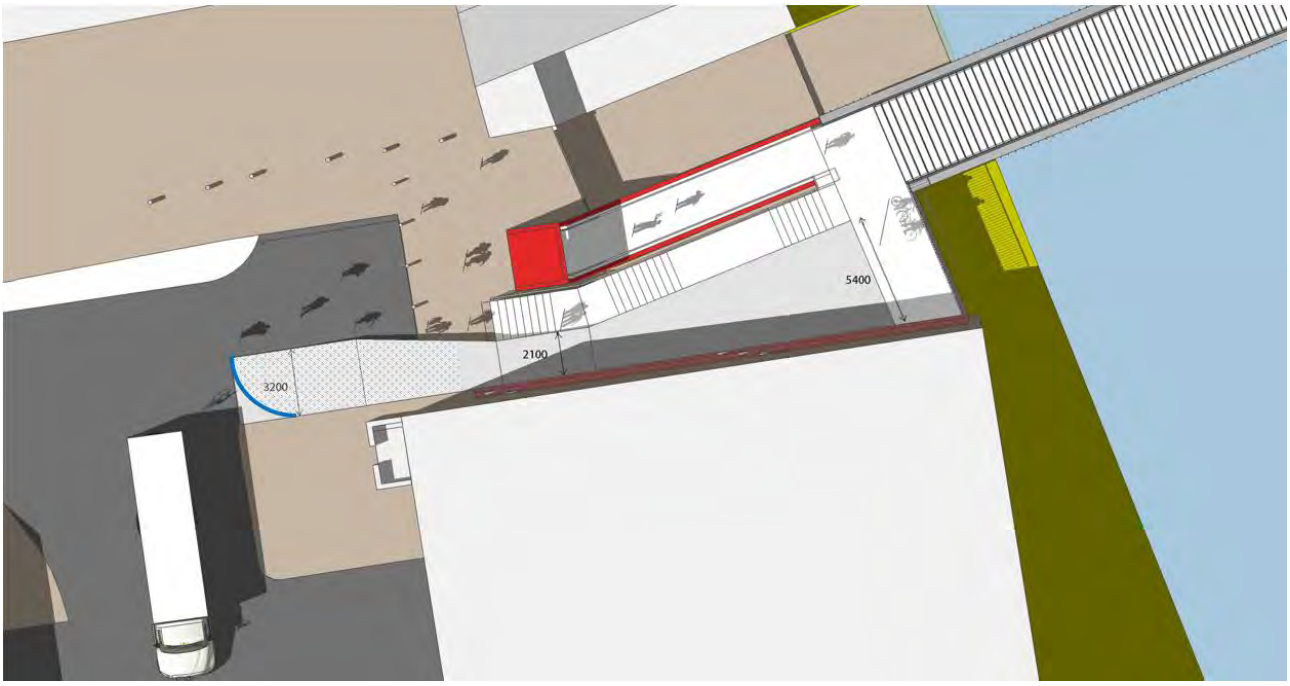
| Audit Team Leader | | | |
|---|---|---|---|
| **Name:** | [redacted] | **Signed:** | |
| **Position:** | [redacted] | **Date:** | |
| **Organisation:** | **Local Transport Projects Ltd.** | | |
| **Address:** | **22 Trinity Lane, Beverley, East Riding of Yorkshire. HU17 0DY** | | |

| Audit Team Member | | | |
|---|---|---|---|
| **Name:** | [redacted] | **Signed:** | |
| **Position:** | [redacted] | **Date:** | |
| **Organisation:** | **Local Transport Projects Ltd.** | | |
| **Address:** | **22 Trinity Lane, Beverley, East Riding of Yorkshire. HU17 0DY** | | |

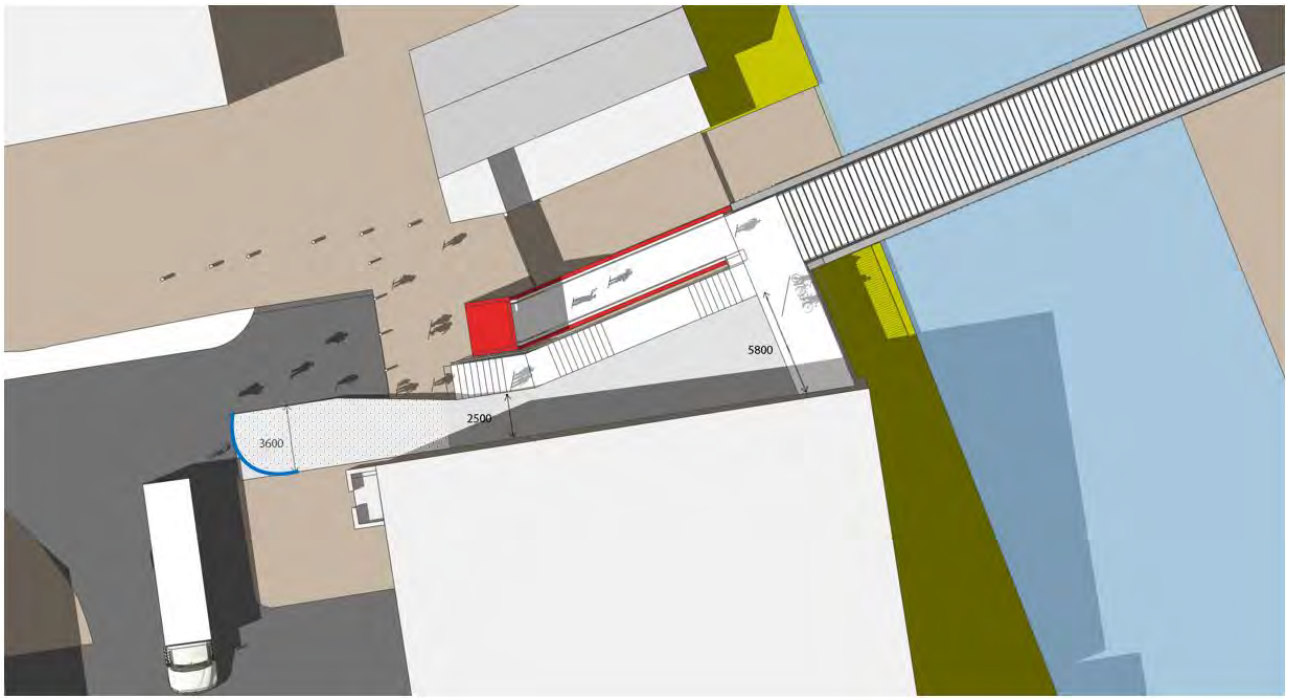
# Appendix J – Images of Option 1


2100
2100
2100

# Appendix K – Images of Option 2a


5400
2100
3200

# Appendix L - Images of Option 2b


5800
2500
3600

[redacted]
Atkins
Euston Tower
286 Euston Road
London
NW1 3AT

[redacted]@atkinsglobal.com
[redacted]

**From:** [redacted]
**To:** [redacted]
**Cc:** [redacted]; [redacted]; [redacted]
**Subject:** Re: H10 cycling bridge (wallace road)
**Date:** 22 March 2015 11:02:43

---

[redacted]

Many thanks for the copy.

We might want to have a word on this first half of next week and/or you might want to speak to [redacted] (and probably in due course [redacted]!) before next Thursday's [redacted] meeting

Regards

[redacted]

On 22 Mar 2015, at 07:46, "[redacted]" <[redacted]@londonlegacy.co.uk> wrote:

> [redacted]
> Below our internal exchanges on the above - our understanding of the position is in the bottom email
>
> Copied to [redacted]
>
> Come back to me if you need any more info
>
> All best
> [redacted]
>
> ---
>
> **From**: [redacted]
> **Sent**: Friday, March 20, 2015 11:30 AM
> **To**: [redacted]
> **Cc**: [redacted]; [redacted]; [redacted]
> **Subject**: Re: H10 cycling bridge
>
> Dear [redacted],
>
> Yes please go ahead and use this as you see fit.
>
> As a further update a discussion will take place next Thursday at a weekly meeting with the deputy mayor. I think it is called the 'cycling portfolio delivery'. [redacted] at tfl is preparing a note to present and [redacted] will bring his own case. [redacted] also attends.
> We are helping tfl today/ Monday to pull together more detailed programme info on the 1 in 7 delivery that sets out risks and challenges.
> Regards,
>
> [redacted]
> Sent from my iPhone
>
> On 19 Mar 2015, at 19:05, "[redacted]" <[redacted]@londonlegacy.co.uk> wrote:
>
> > Thanks, v helpful
> >
> > I want to keep close with Tfl on this

If [redacted] is escalating it, any reason I shouldn't forward your note to my senior contacts at Tfl so that they are aware quickly?

Sent from my iPad

On 19 Mar 2015, at 16:45, [redacted] <[redacted]@londonlegacy.co.uk> wrote:

> Dear [redacted],
>
> [redacted] and I met with [redacted] and [redacted] yesterday afternoon. Tfl reported that they had run another safety audit on our 1:7 ramp and concluded it was unsafe to proceed. They then presented their new ramp which is DDA compliant but involves removing the current provision of lift and stair – see attached sketch.
>
> We all agreed to dismiss it for the following reasons: (Note an identical option had already been looked at by us last year and dismissed for the same reasons)
>
> 1. It does not provide a direct connection and certainly is not a better urban design solution
> 2. It worsens the current situation for other users
> 3. It would involve narrowing the access to the boat club for reversing of their trailers and would reopen negotiations which no one wants to do
> 4. It would be costly and lengthy
>
> On this basis [redacted] has demanded that Tfl review the safety audit on the 1 in 7 ramp and come up with the right answer.
>
> I also presented the LLDC led HW masterplan work which shows a 1 in 12 ramp can be provided to meet the bridge as part of the delivery of the neighbourhood centre. [redacted] is less interested in this as the earliest likely delivery will be 2020 as it will form part of the later phase of works. However we believe this solution is appropriate to provide for and meet the needs of cyclists within that timescale as this is when HereEast, Sweetwater/ Eastwick and Hackney Wick will have a critical mass of new residents and businesses.
>
> We also spoke about the possibility of rerouting the Quietway over White Post Lane until the masterplan is built out. [redacted] dismissed this as says the route is too busy with other vehicles for cyclists to be safe. We are doubtful that this is in fact accurate and think it warrants some further investigation which Tfl may choose to undertake.
> We also presented some other options including putting a second cycle trough on the other side of the stair so cyclists don't have to wait for one to be down before one can come up; and also the option of an electric assisted traveller. [redacted] is not interested in either of these.

[redacted] said he is very frustrated at the lack of progress on this scheme and wants to escalate.
The meeting concluded with [redacted] agreeing to go back to discuss further at Tfl. We agreed to provide any information we can to be as helpful as possible.

Ill keep you updated and do let me know if you would like to discuss further.

Kind regards

[redacted]

[redacted]

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E20 1EJ

DDI: [redacted]
DDI: [redacted]
Website: www.QueenElizabethOlympicPark.co.uk

---

**From:** [redacted]
**Sent:** 11 March 2015 19:13
**To:** [redacted]
**Cc:** [redacted]
**Subject:** Re: H10 cycling bridge

No, I haven't heard anything else on it. Let me know how you get on - I am seeing [redacted] fairly soon so can follow up then if need be

[redacted]

---

**From:** [redacted]
**Sent:** Wednesday, March 11, 2015 02:12 PM
**To:** [redacted]
**Cc:** [redacted]
**Subject:** H10 cycling bridge

Dear [redacted],

[redacted] at TFl has just got in touch re H10 as apparently Tfl have been looking at more options further to us handing over our feasibility work on the 1 in 7 ramp at Christmas.
Specifically they have looked at options to provide a compliant 1:21 ramp (which we had also done and dismissed prior to the more recent work). Their version will have a major impact on Eton Mission and will also mean removing the lift and stair!

A meeting has been planned for next Wednesday for [redacted], [redacted] and I to review and discuss next steps which [redacted] has now invited himself to. [redacted], [redacted] and I are now having a pre-meet Monday.

Before I meet with TfL Monday I was wondering if you have heard any more on H10 that I should be aware of from any of your TfL or other sources?
I will provide an update to you after Monday.

Kind regards

[redacted]

[redacted]

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DDI: [redacted]
DDI:
Website: www.QueenElizabethOlympicPark.co.uk

<H10 1 in 20 ramp v01.pdf>

**From:** [redacted]
**To:** [redacted]; [redacted]
**Cc:** [redacted]
**Subject:** TfL Portal - Payment for Leaway & H10 Works
**Date:** 25 March 2015 11:52:13
**Attachments:** FW H10 Bridge (57.9 KB).msg
**Importance:** High

---

Dear all

As I have mentioned, the TfL portal needs to be up to date showing all the projects and a completed spend profile (Value of Work Done) for 2014/15 by 30 March. If the funding is not shown on the portal with a VOWD profile by this date we will be unable to pay – a reminder of the key dates sent previously are below. The following actions need to be undertaken to ensure that we can pay you for the works you have carried out:

[redacted]

[redacted]

[redacted]

**H10 Bridge** – I still have not received an application for funding for this feasibility work. Please submit an application as per the attached e mail under the Cycling Quietways budget line.

[redacted] and [redacted] have the necessary permissions to use the Portal so should be able to complete this. Please note, when you submit a new application (as in the case of [redacted] & H10) someone else at LLDC will need to log on to verify it before it reaches TfL for approval.

Let me know if you have any queries

[redacted]

[redacted] | [redacted]
**Surface Strategy and Planning | Transport for London**

**Mail:** Palestra 11Y8, 197 Blackfriars Road, Southwark, London SE1 8NJ
**Phone:** [redacted] **Mobile:** [redacted]
**Email:** [redacted]@tfl.gov.uk

---

**From:** [redacted]
**Sent:** 26 February 2015 15:07
**To:** [redacted]@newham.gov.uk'
**Cc:** [redacted]'
**Subject:** RE: Invoicing deadline

Hi [redacted]

The key dates for funding within 2014/15 are:

**March 13 2015**: Submit claims on to the portal by this date to guarantee payment by 31 March 2015

**March 30 2015:** All Value of Work Done (VOWD) profiles for 2014/15 to be up to date in the portal. They can't be changed after this.

**August 21 2015:** This is the final date that TfL will pay a claim relating to work within 2014/15 i.e. up to March 31st 2015. All invoices must state that work was carried out within 2014/15

Hope that's clear but happy to discuss if not.

Thanks
[redacted]

---

**From:** [redacted]@newham.gov.uk [mailto:[redacted]@newham.gov.uk]
**Sent:** 25 February 2015 16:01
**To:** [redacted]
**Subject:** Invoicing deadline

Hi [redacted],

We're putting our delivery programme together and hoping to send to you before the end of the week. Please can you confirm what your deadline is for receiving invoices?

Also, we've already spent a small amount on the [redacted] for design fees and I wanted to check if this can come out of the [redacted] or is it OK to still come out of [redacted]?

Thank you

[redacted] I [redacted] I Regeneration
Strategic Regeneration, Planning and Olympic Legacy
London Borough of Newham
Newham Dockside I 1000 Dockside Road I London E16 2QU
DDI: [redacted]
www.newham.gov.uk I Follow us on Twitter @newhamlondon

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**********



**********

**From:** [redacted]@tfl.gov.uk>
**Sent:** 27 February 2015 17:50
**To:** [redacted]
**Cc:** [redacted]
**Subject:** FW: H10 Bridge

Hi [redacted]

As discussed, when you submit the application for **£29,733.74** to cover the cost of the feasibility work for the H10 Bridge, please submit under the **Cycling Quietways** budget line. You might have to submit the application for £30,000 and then I can amend from my side. The claim will need to be on the portal with the Value of Work Done profiled by 13 March to ensure payment by 30 March 2015.

Any questions, please let [redacted] or I know.

Thanks
[redacted]

---

**From:** [redacted]
**Sent:** 09 January 2015 14:42
**To:** [redacted]
**Cc:** [redacted]; [redacted]; [redacted]; [redacted]'
**Subject:** RE: H10 Bridge

Hi [redacted]

Thanks for your e mail an apologies for the delay in getting back you.

I have been advised that the easiest way for us to pay you is via our existing Section 159 Agreement that I set up with [redacted] to cover the Leaway work. The Section 159 is just a legal mechanism by which to pay you so it is OK to use this existing one rather than create a new one for H10 Bridge.

[redacted] and [redacted] are coming in for training next Wednesday regarding how to submit claims to TfL's financial system (the Portal). I suggest that when they are here, we set the H10 Bridge up as a scheme and then once [redacted] is back in the office he can submit the payment request and TfL will pay you via BACS (this is set up already). When you/[redacted] submit the request for payment, there will be a disclaimer that you need to tick to say that you have an invoice that verifies this work has been complete and to the stated value – you won't need to send it in separately.

Hope that makes sense but please give me a call if you need me to explain.

[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 06 January 2015 17:28
**To:** [redacted]
**Cc:** [redacted]; [redacted]
**Subject:** RE: H10 Bridge

Dear [redacted],

Atkins have confirmed the plans are to scale and have provided the additional views- see attached.

In terms of the scale they have reported that the images showing the ramp options are to scale however they have been altered to fit within the report and therefore it is not recommended that we use them to scale or measure from. You are welcome to contact [redacted] at Atkins directly if you wish to discuss any further: [redacted]@atkinsglobal.com

I am just about to issue the final draft of the report and the minutes of the meeting with your comments incorporated so you will receive these shortly.

Also I promised the final costs for you- these come to:

[redacted]

[redacted]

It would be great if you could set out how we should go about getting these costs reimbursed.

Apparently the meeting with [redacted] and [redacted] just before Christmas went well.
If there is anything you need or want to discuss further please get in touch.

Best wishes and Happy New Year,
[redacted]

[redacted]

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DDI: [redacted]
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---

**From:** [redacted]
**Sent:** 16 December 2014 16:55
**To:** [redacted]
**Cc:** [redacted]; [redacted]
**Subject:** RE: H10 Bridge

Dear [redacted],

Thanks for this. I can confirm that the total cost estimate for the work to date is approx £30K and Ill get you accurate figures next week as promised once the report is finalised.
Also the final project cost is now £640K once you add in the additional public realm work.

We have asked Atkins whether the plans are to scale and whether there are any other drawings and will let you know asap.

Did you manage to make contact with [redacted] and get what you needed from him?

Also am sure you know but [redacted] is meeting with [redacted] on Friday this week and wanted an update on H10 which I am providing for him.

Kind regards

[redacted]

[redacted]

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DDI: [redacted]
DDI: [redacted]
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---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 02 December 2014 15:30
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge

Hi [redacted]

Thank you for the opportunity to comment on the minutes. I attach a version with some suggested changes to the TfL relevant parts. Let me know if you'd like me to clarify.

I sat down with [redacted] earlier and we don't have any specific comments on the report apart from a couple of minor questions:

- Are the images showing the ramp options to scale?
- Can you confirm if Atkins have any other plans/drawings of the preferred option (2b) or is what is contained in the feasibility report everything they have done?

Grateful for a contact e mail address for your cycling colleague when you have a chance.

Many thanks
[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 28 November 2014 16:22
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge

Dear [redacted],

Nor have we had time to review and Ill issue together with the minutes which have been put together by the project manager. Draft here attached for your comment-( my name spelt wrongly and a few typos to start..).

I am still awaiting the last of the costs incurred to date and will forward as soon as I have them

Kind regards
[redacted]

---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 28 November 2014 13:00
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge

[redacted]

Thank you for sending this across.

I haven't had an opportunity to go through this with my technical colleagues yet but I will do next week. I intend to tie in our comments to a response to this scheme more generally so please don't feel you have to wait for our comments ahead of issuing the final document.

Thanks
[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 25 November 2014 15:57
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge

Dear [redacted],

Just by way of an update we are pulling this information together for you.

We have received a draft report from Atkins but we have comments and need to get amended before it is sent round but am happy to share with you- see here:
https:/[redacted]

The updated cost to incorporate the additional elements identified in the meeting is £640K and includes the following:

- Public realm works
- Artwork to replace the removed facade
- Heritage consultancy/advice

We are feeding comments back this week on the report so let me know if you have any.

On the costs to date I hope to have these for you by end of this week. And on the minutes- [redacted] has done a first draft which she is amending this week and Ill share with you when she has finished before sending round.

Hope that's helpful
[redacted]

[redacted]

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DDI: [redacted]
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---

**From:** [redacted]
**Sent:** 18 November 2014 22:26
**To:** [redacted]
**Subject:** RE: H10 Bridge

Dear [redacted],

Yes I too have been wondering about the minutes of that meeting! Don't worry we will run them past you before issue ( probably next week)

We will get you the rest of the info asap.

[redacted]

---

**From:** [redacted] [mailto[redacted]@tfl.gov.uk]
**Sent:** 18 November 2014 17:53
**To:** [redacted]
**Subject:** H10 Bridge

[redacted]

Thank you for the meeting yesterday and the useful discussion afterwards. To build on a couple of points we covered:

To help with our discussions at TfL it would be useful if you can send me a copy of Atkins feasibility report and any other plans/strategies you have for cycling access to and within the QEOP. I appreciate you are updating the cost for option 2b to incorporate the public realm works on Wallis Road. Do you know when Atkins expect to have this finalised?

In addition, we agreed that TfL would cover the cost of the feasibility work undertaken to date by Atkins. If you have an invoice for this you can share that would be useful for getting payment set up.

Finally, I noticed your colleague that I was sat next to was taking a note of the meeting - I am sure there will be no issue, but given the sensitive nature of this work, I'd be grateful if you could send me the notes ahead of sharing with the wider group just to be certain that TfL's position is captured accurately.

Happy to discuss.

Kind regards
[redacted]

[redacted] | [redacted]
**Surface Strategy and Planning | Transport for London**

**Mail:** Palestra 11Y8, 197 Blackfriars Road, Southwark, London SE1 8NJ
**Phone:** [redacted]
**Email:** [redacted]@tfl.gov.uk

**********



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**From:** [redacted]
**To:** [redacted]
**Cc:** [redacted]; [redacted]
**Subject:** Re: Alternative alignment
**Date:** 26 March 2015 13:44:15

---

Hi [redacted] - thanks for the updated programme and alignment - these will be useful for the meeting later this afternoon.

I will let you know how it goes when I hear.

[redacted]

---

**From**: [redacted] [mailto[redacted]@londonlegacy.co.uk]
**Sent**: Tuesday, March 24, 2015 09:23 AM
**To**: [redacted]
**Cc**: [redacted] [redacted]@londonlegacy.co.uk>; [redacted]
<[redacted]@londonlegacy.co.uk>
**Subject**: RE: Alternative alignment

Hi [redacted],

Atkins have suggested a 12 week design period for RIBA stages 4 and 5, so I have updated the programme, attached.

Kind regards,

[redacted]

**London Legacy Development Corporation**
DDI: [redacted]
Mobile: [redacted]

---

**From:** [redacted]
**Sent:** 23 March 2015 18:41
**To:** [redacted]
**Cc:** [redacted] [redacted]
**Subject:** RE: Alternative alignment

Hi [redacted],

I have attached a draft programme for the delivery of H10, which has been updated from last week following conversations with Atkins and the project manager. This is still just an indicative programme and there are a number of factors that could vary the programme considerably.

These include, but are not limited to:

- The time taken for TfL to approve the 1:7.5 ramp could be longer than shown, for example if conversations need to be had with our CEO as discussed previously
- It may take longer than 3 weeks to procure the design team as LLDC's contract with Atkins expires at the end of March '15. I was only made aware of this today and will try to find out some more information ASAP. Do TfL have a contract with Atkins or similar who may be able to undertake the detailed design work at short notice?
- It is possible that tender design (RIBA stage 4) and construction design (RIBA stage 5) would be undertaken at the same time, before the tender process. This would likely

extend the programme by a number of weeks. I am waiting on an estimated timescale from Atkins and will update the programme when I get a reply. For the moment I have left them separate as outlined in Atkins' feasibility report.

- It could be possible to undertake the tender design before planning permission is granted, saving approximately 8 weeks. However this carries significant financial risks if there are major changes to be made or if the planning permission is refused.

I've also attached an updated map of the alternative route over White Post Lane which now has a key.

Please let me know if I can do anything else.

Kind regards,

[redacted]

**London Legacy Development Corporation**
DDI: [redacted]
Mobile: [redacted]

---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 20 March 2015 17:27
**To:** [redacted]
**Cc:** [redacted]; [redacted]
**Subject:** RE: Alternative alignment

Hi [redacted]

Many thanks for both the alternative alignment and the programme – these will be very useful for the meeting on Thursday.

A decision whether to progress further with the 1:7.5 option or deliver an interim measure e.g. an additional channel will be presented to the Cycling Portfolio Delivery Meeting chaired by the Deputy Mayor. It is possible that they may take a decision at this meeting but alternatively they way wish to speak to senior officer's at LLDC. I will keep you posted.

Many thanks again – the quick turnaround is much appreciated.

[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 20 March 2015 15:03
**To:** [redacted]
**Cc:** [redacted]; [redacted]
**Subject:** RE: Alternative alignment

Hi [redacted],

We've drafted a programme using the timetable provided by Atkins in their feasibility report. Do you know how long the approval process will take at TfL? At the moment I have put that it is going to the deputy mayor next week and if approved by her then the project is officially going forward and detailed design should start, but I appreciate that it could take a lot longer than that.

Many thanks,

[redacted]

**London Legacy Development Corporation**
DDI: [redacted]
Mobile: [redacted]

---

**From:** [redacted] [mailto:[redacted]tfl.gov.uk]
**Sent:** 20 March 2015 13:45
**To:** [redacted]; [redacted]
**Subject:** Alternative alignment

Hi [redacted],

I wanted to confirm the alternative alignment with you as I am conscious our TfL mapping might be out of date when it comes to the Olympic Park. As I understand, the alternative you suggested would be along White Post Lane – Clarnico Lane – Waterden Road then right along the shared use pedestrian and cycle way up to Honour Lea Avenue. Does this sound accurate? I understood from our meeting on Wednesday that the timescales for the developments in the surrounding area are such that the roads are unlikely to be heavily trafficked until 2020 by which time the new ramp will be delivered.

Whilst I am happy to include this within my briefing, this alignment would be subject to assessment to ensure that it meets the Quietways level of service.

Many Thanks
[redacted]

[redacted] | [redacted]
**Surface Strategy and Planning | Transport for London**

**Mail:** Palestra 11Y8, 197 Blackfriars Road, Southwark, London SE1 8NJ
**Phone:** [redacted] **Mobile:** [redacted]
**Email:** [redacted]tfl.gov.uk

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**From:** [redacted]
**To:** Rachael Clauson
**Subject:** FW: TfL / LLDC Meeting - 18th March 2015
**Date:** 08 June 2015 16:11:02
**Attachments:** 20150327121156017.pdf

---

[redacted]

London Legacy Development Corporation
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1 Stratford Place, Montfichet Road
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Direct: [redacted]

Email: [redacted]@londonlegacy.co.uk
Website: www.QueenElizabethOlympic Park.co.uk

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**From:** [redacted] [mailto:[redacted]@Tfl.gov.uk]
**Sent:** 27 March 2015 12:13
**To:** [redacted];
**Cc:** [redacted] (TfL); [redacted]; [redacted]; [redacted]; [redacted]
**Subject:** RE: TfL / LLDC Meeting - 18th March 2015

[redacted],

Many thanks for the email below. [redacted] is keen that you include [redacted] in the copy list of the notes, please, given the subjects discussed and would also like you to flesh out what is the current destination of the 388 bus. [redacted] manuscript comments on the attached note refer.

He thinks it would also be helpful to point out that it was agreed that the next meeting would be held in Stratford.

Many thanks.

[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]

**Sent:** 20 March 2015 18:10
**To:** [redacted]
**Cc:** [redacted] (TfL); [redacted] ; [redacted] ; [redacted] ; [redacted] ; [redacted] (ST)
**Subject:** Re: TfL / LLDC Meeting - 18th March 2015

Thanks a lot [redacted] , we'll come back to you if there are any differences of view or issues with what you say ,, but I don't think there are

[redacted]

Sent from my iPad

On 20 Mar 2015, at 08:43, [redacted]@tfl.gov.uk> wrote:

> [redacted] /[redacted] /[redacted],
>
> A quick note to follow up from this weeks meeting:
>
> [redacted]
>
> [redacted]
>
> **Wallace Road Bridge** – We don't have agreement with [redacted] on a solution here. A scheme has been drawn up by LLDC's consultants that could be provided in the short term, but this has a ramp with a gradient of 1:7 which we (and LLDC) don't think is acceptable although [redacted] disagrees and wants to see it implemented. We came up with an alternative that provides a 1:20 ramp, but this requires land take that Hackney / LLDC advise wont be practical in advance of the wider master-planning. We therefore have a stalemate.
>
> [redacted]

[redacted]

[redacted]

Regards

[redacted] | [redacted] | TfL Planning
**Transport for London** | 10th Floor, Windsor House, 50 Victoria Street, London SW1H 0TL
Telephone Number: [redacted] | Email: [redacted]@tfl.gov.uk

Click here to report this email as SPAM.

Next mtg 17/06 in Stratford

[redacted]

**From:** [redacted]@londonlegacy.co.uk]
**Sent:** 20 March 2015 18:10
**To:** [redacted]
**Cc:** [redacted](TfL); [redacted]; [redacted]; [redacted]; [redacted]; [redacted](ST)
**Subject:** Re: TfL / LLDC Meeting - 18th March 2015

Thanks a lot [redacted], we'll come back to you if there are any differences of view or issues with what you say ,, but I don't think there are

[redacted]

Sent from my iPad

On 20 Mar 2015, at 08:43, [redacted]@tfl.gov.uk> wrote:

Assume copied to LD to?

[redacted]/[redacted]/[redacted]

A quick note to follow up from this weeks meeting:

[redacted]

[redacted]

**Wallace Road Bridge** – We don't have agreement with [redacted] on a solution here. A scheme has been drawn up by LLDC's consultants that could be provided in the short term, but this has a ramp with a gradient of 1:7 which we (and LLDC) don't think is acceptable although [redacted] disagrees and wants to see it implemented. We came up with an alternative that provides a 1:20 ramp, but this requires land take that Hackney / LLDC advise wont be practical in advance of the wider master-planning. We therefore have a stalemate.

[redacted]

[redacted]

[redacted]

Regards

Get [redacted] to write what the can't deal. is by

[redacted] [redacted] TfL Planning
**Transport for London** | 10th Floor, Windsor House, 50 Victoria Street, London SW1H 0TL
Telephone Number: [redacted] | Email: [redacted]@tfl.gov.uk

**From:** [redacted]
**To:** [redacted]
**Cc:** [redacted]
**Subject:** H10 Bridge - Update
**Date:** 27 March 2015 12:35:45
**Attachments:** H10 Bridge Note v04.doc

---

[redacted]

Please find attached the note that was tabled yesterday at the meeting with the Deputy Mayor. As you will see it draws a lot on the feasibility work carried out by Atkins and sets out the impacts of progressing with the temporary ramp.

As the bridge is an LLDC asset the Deputy Mayor has requested LLDC to formally set out their position on taking this work forward. In parallel to this, [redacted] has requested to meet with [redacted] to discuss further. [redacted] (Head of Borough Projects & Programmes) at TfL will also attend. I've asked [redacted] office for some available dates – please could you make [redacted] aware that this meeting and a formal response has been requested.

Feel free to give me a call if you'd like to discuss.

Kind regards
[redacted]

[redacted] | [redacted]
**Surface Strategy and Planning | Transport for London**

**Mail:** Palestra 11Y8, 197 Blackfriars Road, Southwark, London SE1 8NJ
**Phone:** [redacted] **Mobile:** [redacted]
**Email:** [redacted]

# Wallis Road Bridge (H10) Interim Ramp

## 1. EXECUTIVE SUMMARY

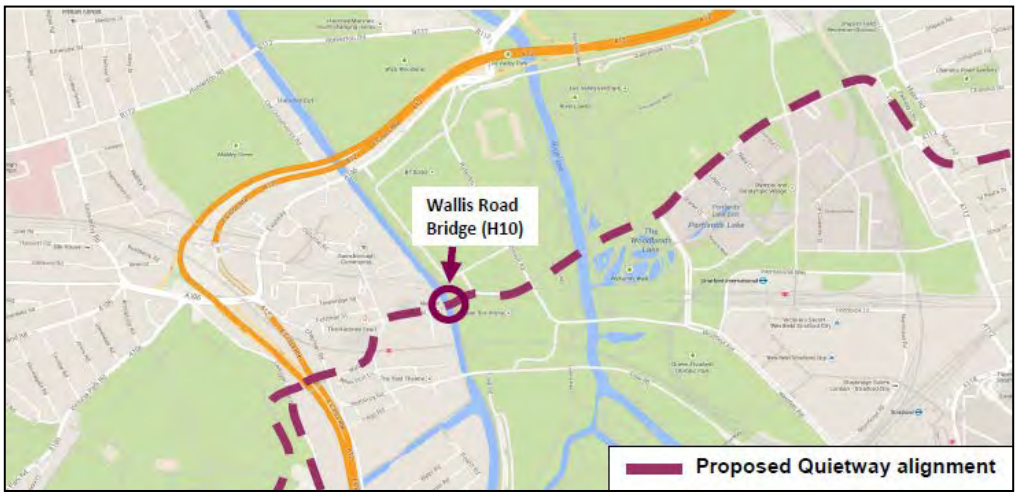
As part of the delivery of the Aldgate to Hainault Quietway route (to be complete in 2016) the London Legacy Development Corporation (LLDC) have investigated options to provide a temporary ramp at the Wallis Road (also known as H10) Bridge in advance of the Hackney Wick Masterplan coming forward in 2020. The Masterplan will deliver a new cycling ramp whilst retaining the lift and staircase by reconfiguring land not currently owned by the LLDC. A 1:7.5 option costing approximately £645,000 has been identified by LLDC consultants, which requires a departure from current standards (ramps should ideally be at a gradient of 1:20 and no greater than 1:12 over short distances), as well as the need to address a number of issues identified through the Road Safety Audit. TfL undertook its own investigations to consider alternative options that meet standards, but this would require a Compulsory Purchase Order (CPO) of the adjacent land which is unlikely to be supported by LLDC or deliverable within 2016 timescales.

The LLDC feasibility study demonstrated that a 1:7.5 temporary ramp could be delivered by mid July 2016, subject to two approvals from the Olympic Infrastructure Technical Approval Authority as well as planning consent. The alternative short term solution is to retain the existing lift and staircase whilst improving conditions for cyclists by either widening the existing channel/implementing an additional one or installing a power assisted version.

## 2. BACKGROUND & CONTEXT

The Wallis Road Bridge connects Wallis Road in Hackney to the Queen Elizabeth Olympic Park (QEOP). The bridge is owned and managed by the LLDC and forms a link on the Aldgate to Hainault Quietway route. The route is one of the first seven to be delivered under the Mayor's Quietways Programme and is currently at design stage with construction to be completed in 2016. Currently the western approach of Wallis Road Bridge provides access via a lift, which is DDA compliant and a staircase with an inbuilt channel for cyclists wishing to push their bicycles up/down the stairs.

Map showing location of Wallis Road Bridge.



The proposed ramp would offer an interim solution to the current stairs, lift and cycle channel. LLDC are leading the development of a Masterplan for Hackney Wick which includes improved access to Wallis Road Bridge via a new cycle ramp and a better link across the canal by changes to the public realm. The timescales for delivery of this work is 2020. However, due to delivery timescales for the proposed Quietway route LLDC were requested to explore the options for installing an interim cycle ramp for the western approach of Wallis Road Bridge.

The existing arrangements require cyclists to dismount prior to climbing/descending the western approach of Wallis Road Bridge. The purpose of the ramp is to provide an interim solution to enable cyclists to avoid the need to dismount. There is no requirement to install a ramp on the eastern approach as the ground level is significantly higher and allows level access to the existing bridge deck. The current arrangements are shown in the pictures below.

**Western Approach of Wallis Road Bridge**

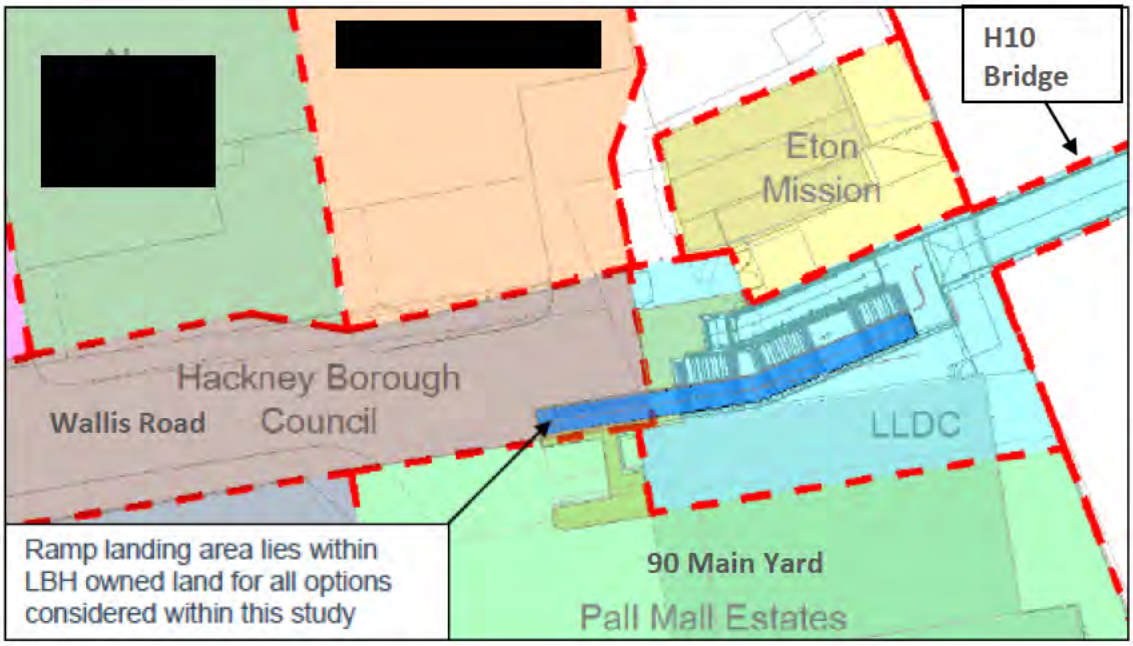
**Eastern Approach of Wallis Road Bridge**

TfL has undertaken an internal assessment of the different options, taking into account their deliverability, safety implications, risks and value for money. This notes sets out the different options considered.

## 3. WALLIS ROAD LAYOUT & LAND OWNERSHIP:

The area around the Wallis Road Bridge is home to a number of commercial units, namely 90 Main Yard (part of Pall Mall Estates) where vehicles are often parked outside and require continual access via Wallis Road. In addition, the site's fire evacuation strategy requires people to walk under the existing staircase to Eton Mission and this route would need to remain accessible. To the north of the stairs is Eton Mission Rowing Club, which similarly requires access from Wallis Road. The proposed 1:7.5 ramp site extends beyond LLDC owned land into London Borough of Hackney (see land ownership map below). LLDC are leading on the Hackney Wick Masterplan that will see significant changes and redevelopment to the Hackney Wick area. The Wallis Road Bridge is within scope of the Masterplan and will be upgraded to include a 1:10 to 1:12 ramp (exact gradient to be confirmed), whilst retaining the lift and staircase.

Map showing land ownership around Wallis Road Bridge site; the ramp shown is the 1:7.5 option




## 4. INTERIM RAMP OPTIONS

Three options were considered by Atkins as part of their feasibility work for LLDC. These are set out in Appendix A. The Cycling Commissioner has expressed a preference for progressing Option 2b, which provides a 1:7.5 ramp and is shown in the plan below.

**Impact of progressing Option 2b:**

- Provides temporary ramped access for cyclists to and from the QEOP, enabling those using the Quietway to make a continuous journey without the need to dismount. This section of the Quietway route will provide benefit to existing and new cyclists and might offer an alternative to busier routes along the A11 corridor and Bow Roundabout, which is approximately 1.5 miles to the south via canal towpaths or 2 miles by road.

- Early feasibility work suggests that this option is deliverable within 2016 timescales. See section 5 for the indicative delivery programme.

- The lift is retained in order to facilitate access for users with accessibility requirements. The structure therefore remains DDA compliant.

- Removal of façade of 90 Main Yard needs to be agreed with the owners.

- Incurs a cost of £645,000 for the four years it is required in advance of the master planning work being complete.

- Site constraints such as access arrangements, a 4m level difference between the bridge deck and landing site and potential utility diversion will have to be considered at detailed design. Potentially, the 90 Main Yard site access will have to be reconfigured to accommodate the ramp. Equally, part of the ramp extends into LB Hackney highway meaning agreement from the borough will also be necessary.

- Requires a departure from the LCDS (2014) which states that ramps should ideally be at a gradient of 1:20 and no greater than 1:12 over short distances. Whilst Principle 20 of the LCDS states that it is acceptable to depart from guidance where 'absolutely unavoidable', there is a risk that a 1:7.5 ramp will be too steep for a significant proportion of cyclists, resulting users having to dismount. Equally, the bridge provides a key link into the QEOP and there is regular pedestrian footfall around the site.

- Requires a departure from standards for widths for two-way cycling that state it should be 3m minimum. Taking the width of a typical bicycle and typical deviation when travelling down hill (LCDS 2014) cyclists would need 1.85m minimum to cycle comfortably down the ramp in one direction. Cyclists ascending at lower speeds are prone to wobbling and deviation of 0.8m at 3mph (LTN2/08). To maintain balance, cyclists travelling up hill would require a minimum of 2.45m width. At its narrowest the ramp is 2.5m and therefore unlikely to comfortably accommodate two-way cycling.

- Reduced width of the staircase (currently 3.6m reduced to 1.9m), impacting pedestrian comfort and movement.

- Two 'Approval in Principles' will be required for 1) the assessment of the changes to the existing structure and 2) the assessment of the proposed design. The AIP's will need approval from the Olympic Infrastructure Technical Approval Authority ahead of planning permission.

- Detailed design must demonstrate how the road safety implications identified in Stage 1 Road Safety Audit (see section 6) have been adequately addressed.

- Installation of the ramp will require the stairs to be closed for up to two months with intermittent use of the lift.

With the view to addressing some of the issues identified by the Road Safety Audit (see section 6) and to design a ramp that meets current standards, TfL investigated a further option, which is detailed in Appendix A. The impacts of progressing this option are largely the same as progressing option 2b except:

- Option 3 is compliant in terms of meeting current standards (1:20).

- This option would address some of the points raised in the Road Safety Audit,

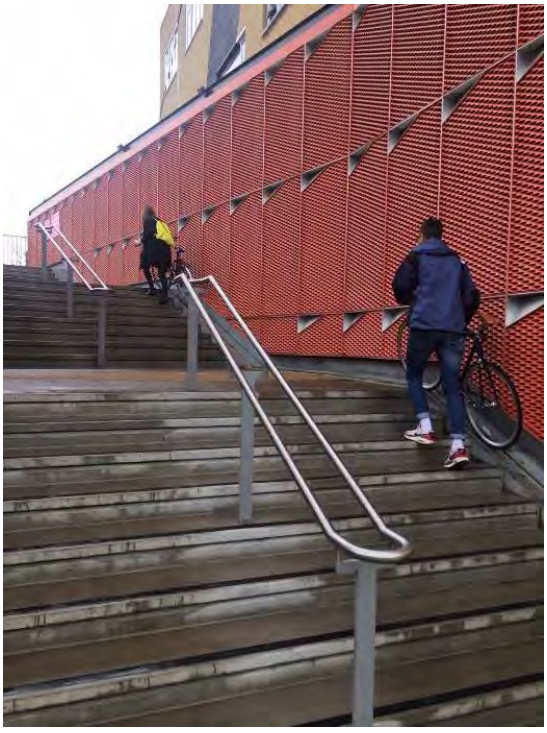
particularly those issues around users losing control due to the steep gradient. The proposal would also address the recommendation to include landings along the ramp. However, it still does not address the issues raised around risk of collision along the ramp between different users or at the base between vehicles and ramp users.

- The staircase and lift are both removed which will negatively impact on pedestrian journey times. However, the structure will be DDA compliant.

- The structure will require use of land owned by Eton Mission Rowing Club. A CPO of the land and will have to be negotiated with Eton Mission Rowing Club, which is unlikely to be supported by LLDC or be achievable within the 2016 timescale.

The other interim solution that has been identified in advance of the LLDC provision of a permanent ramp is to either: (a) widen the existing 200mm cycle channel; or (b) install an additional cycle channel on the other side of the staircase; or (c) install a 'Velo Comfort' (a power assisted cycle channel). A picture of the existing cycle channel and a 'Velo Comfort' type solution are shown below.

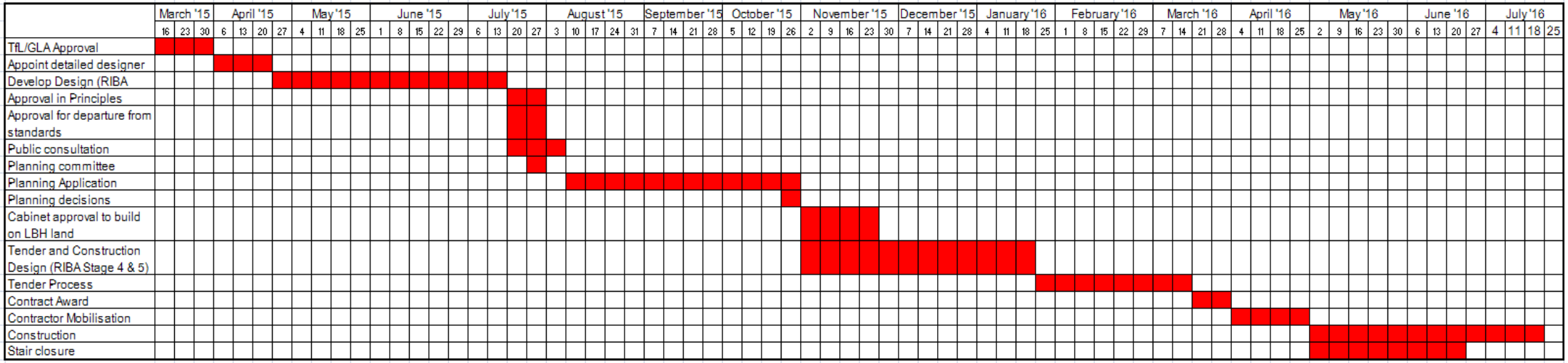
**Cyclists utilising the existing wheeling channel**



**Velo Comfort powered assisted cycle channel**

## 5. DELIVERY PROGRAMME

The table below shows the indicative delivery programme for the 1:7.5 option at Wallis Road Bridge. A more detailed programme can be developed at detailed design stage.



## 6. SUMMARY OF ISSUES IDENTIFIED BY STAGE 1 ROAD SAFETY AUDIT & MITIGATIONS

An independent Stage 1 Road Safety Audit was carried out on Option 2b by Local Transport Projects. TfL's Road Safety Audit team also undertook a review of the audit, conducted a site visit to assess the conditions and discussed the issues identified. TfL's Road Safety Audit team endorse the audit completed by Local Transport Projects and are satisfied that their findings cover the relevant issues at this stage.

The main issues of concern identified by the Road Safety Audit are shown below in table 6 with potential mitigations (these would need to be formally addressed at detailed design stage). Other items raised include 1) risk of injury due to unintended use by skateboarders, BMX riders etc and 2) risk of westbound cyclists riding down steps and 3) risk of wheelchair / mobility scooter users experiencing difficulty and losing control due to steep ramp gradient.

Table 6: Significant items identified by the Stage 1 Road Safety Audit and potential mitigations

| Item | Possible mitigations |
|---|---|
| Risk of ramp users losing control and falling due to excessive gradient and absence of intermediate landings. | • Given the site constraints the gradient and widths outlined in Option 2b are the best that are achievable in the short term.<br>• Rougher surface texture with a high friction or a different colour surface could be used on ramp to assist braking and manoeuvrability and highlight that the ramp is for cyclists.<br>• Markings and signage to encourage slow speeds. Any markings used would have to be tested to ensure they did not become too slippery in wet conditions.<br>• Segregate the ramp and staircase to avoid any collisions with ramp users and staircase users. |
| Risk of pedestrians falling on the staircase due to decreased width | • Ensure that the staircase has sufficient capacity for expected use. The current width is 3.6m and the ramp proposal would reduce this to 1.9m.<br>• Maintain the handrail to ensure pedestrian safety and signage or road markings to give pedestrians advance warning of cycle ramp. In addition, explore the possibility if installing an additional handrail on the other side. |
| Risk of conflict between ramp users and vehicles / pedestrians in the vicinity of the ramp base | • Install street furniture e.g. planters or staggered barriers to reduce cyclists speeds at the top and bottom of the ramp to manage entry and exit speeds.<br>• Signage, road markings or urban realm works at the 'T' junction of Wallis Road and Main Yard to define priority and reduce cycle speeds into the junction and increase visibility. |
| Risk of cyclist unable to cycle up steep gradient losing control | • Priority give way system to cyclists climbing the ramp through the use of road markings and signage. As above, any markings used would have to be tested to ensure they did not become too slippery in wet conditions. |

## 7. PRECENDENTS

As part of the feasibility work to assess options for a temporary ramp two other ramps were identified that were as steep as or steeper than Option 2b. One is at Horseshoe Bridge over the River Lea that forms part of the Bloomsbury to Walthamstow Quietway and the other connects Prince Albert Road with the Regent's Canal Towpath in Camden. Both locations are off highway and do not pose the same level of risk of cyclist, pedestrian and vehicle conflict Both locations will form part of the new cycling network in London and work is currently being undertaken to look at options to provide new ramps to reduce the gradients. The closest on highway example found is Swains Lane in Highgate, which has a 1:8 gradient.

## 8. CONCLUSION

TfL has considered all the options in the Atkins feasibility report and has also investigated alternatives that offer a compliant ramp, subject to the removal of the staircase and lift. In advance of the Hackney Masterplan work being completed in 2020 and a permanent ramp being installed there are two options available:

- Construct the 1:7.5 temporary ramp at a cost of £645,000. Whilst precedents of 1:7.5 or steeper ramps in London can be found, they are not in line with current standards and significant safety concerns have been highlighted through the Road Safety Audit in terms of potential cycle / pedestrian / vehicle conflicts.

- Widening the existing 200mm cycle channel or install an additional cycle channel on the other side of the staircase or install a 'Velo Comfort' (a power assisted cycle channel).

**Appendix A: Summary of Options developed by Atkins on behalf of LLDC**

Option 1 (developed by Atkins)

| | |
|---|---|
| Option summary | This option involves splitting the existing western stairway of Wallis Road Bridge into a stair and ramp access point. |
| Stair width | 1.9m |
| Gradient | 13.48% or 1:7.42 |
| Minimum width of ramp | Top: 2.1m |
| | Middle: 2.1m |
| | Bottom: 2.1m |
| Ramp length | 30.5m |
| Cost estimate | £470,000 |

Option 2a (developed by Atkins)

| | |
|---|---|
| Option summary | Ramp widened at top and bottom requiring adjacent building facade to be re aligned, existing staircase to be replaced and ramp to extend beyond the stairs at Wallis Road. |
| Stair width | 1.9m |
| Gradient | 13.42% or 1:7.45 |
| Minimum width of ramp | Top: 5.4m |
| | Middle: 2.1m |
| | Bottom: 3.2m |
| Ramp length | 30.18m |
| Cost estimate | £520,000 |

Option 2b (developed by Atkins)

| | |
|---|---|
| Option summary | Same as option 2a but adjacent building facade to be removed to achieve maximum possible width for the ramp. In addition, this option includes public realm works on Wallis Road to help mitigate against the potential cyclist and pedestrian conflicts at the base of the ramp. |
| Stair width | 1.9m |
| Gradient | 13.39% or 1:7.47 |
| Minimum width of ramp | Top: 5.8m |
| | Middle: 2.5m |
| | Bottom: 3.6m |
| Ramp length | 30.24m |
| Cost estimate | £645,000 (includes public realm works on Wallis Road) |

Option 3 (developed by TfL).

| | |
|---|---|
| Option summary | Requires full removal of the staircase and lift to accommodate a ramp at 1:20. The ramp will have three landing points and will require using some land owned by Eton Mission (see land ownership map in section 3). A CPO will be required to acquire the necessary land. |
| Stair width | Staircase fully removed |
| Gradient | 1:20 |
| Minimum width of ramp | Not possible to maintain a consistent width. However, a width of approximately 3m at the top and bottom is likely to be achievable with |

| | |
|---|---|
| | 2.4 to 2.6m in the middle. |
| Ramp length | 80m |
| Cost estimate | £650,000 excluding the costs of a CPO |

**From:** [redacted]
**To:** [redacted]
**Subject:** RE: H10 Bridge - Wallis Road
**Date:** 14 April 2015 18:27:52

---

[redacted]

Just left another message on your phone this afternoon. It would be great if you can give me a ring back tomorrow.
Thanks
[redacted]

[redacted]

**Queen Elizabeth Olympic Park**
London Legacy Development Corporation
Level 10
1 Stratford Place, Montfichet Road
London
E20 1EJ

DDI: [redacted]
DDI: [redacted]
Website: www.QueenElizabethOlympicPark.co.uk

---

**From:** [redacted]
**Sent:** 08 April 2015 22:31
**To:** [redacted]
**Subject:** RE: H10 Bridge - Wallis Road

Thanks [redacted] for forwarding. I met with [redacted] today and now I have spoken with you it would be good to have a chat with you too. I left a message on your phone this morning – if you could give me a ring back when you get a chance that would be great
Thanks
[redacted]

---

**From:** [redacted] [mailto:[redacted]tfl.gov.uk]
**Sent:** 07 April 2015 18:47
**To:** [redacted]
**Subject:** Fw: H10 Bridge - Wallis Road

[redacted] - please see below for a response from Hackney on their position on H10. I understand that a meeting has now been set up for 18 May. Just so you're aware, [redacted] - will be attending along with [redacted] from TfL.

[redacted]

---

**From:** [redacted] [mailto:[redacted]@Hackney.gov.uk]
**Sent:** Thursday, April 02, 2015 02:58 PM

**To:** [redacted]
**Cc:** [redacted] <[redacted]@Hackney.gov.uk>
**Subject:** RE: H10 Bridge - Wallis Road

[redacted],

I have discussed the scheme with both my Lead Member and my AD and though we have not signed off the proposals in any formal manner as yet the Council position is that we support these proposals.

There are though a number of issues that need to be considered:

- Ideally the ramp would not discharge directly onto carriageway as it will be used for peds and cyclists. It would be better to emerge onto a shared surface that covered the area. [redacted] supported this view and it is reflected in your report.
- We raised the issue of land ownership. We would look to agree to providing a highway license to permit the ramp to land on the public highway.
- We do have a concern on the impact of closing the bridge again. We would be seeking reassurance that this would be kept to a minimum during construction and that the programme allows for it remaining operational for the majority of the construction period.

We do recognise that the ramp does not meet normal guidelines and that the residual stair width is much reduced but on balance as said above we are in support of the proposals and are keen to be consulted on any proposals for a shared space / public realm design at the bottom of the ramp in Wallis Road.

[redacted]

[redacted]
Health and Community Directorate
[redacted]

---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 27 March 2015 13:02
**To:** [redacted]
**Subject:** H10 Bridge - Wallis Road

Dear [redacted]

My name is [redacted] and I work in [redacted] team at TfL. We met a few months ago at LLDC's offices where we were presented with Atkins's feasibility study looking at options to provide an interim ramp at the H10 Bridge into the Olympic Park.

Since then, TfL has assessed the proposals and the attached note was tabled yesterday at a meeting with the Deputy Mayor for Transport, the Cycling Commissioner and TfL managers. As

you will see, it draws on the feasibility work carried out by Atkins and sets out the impacts of progressing with the temporary ramp.

As Hackney are the highway authority for Wallis Road where the proposed ramp would land, the Deputy Mayor has requested that Hackney formally set out their position on taking this work forward. In parallel to this, [redacted] has requested to meet with [redacted] at LLDC and you to discuss further - [redacted] at TfL will also attend.

I've asked [redacted] office for some available dates and will get back to you on proposed dates/times. In the meantime, it would be useful if Hackney can consider their formal response to the proposed interim ramp.

Feel free to give me a call if you'd like to discuss.

Kind regards
[redacted]

[redacted] | [redacted]
**Surface Strategy and Planning | Transport for London**

**Mail:** Palestra 11Y8, 197 Blackfriars Road, Southwark, London SE1 8NJ
**Phone:** [redacted] **Mobile:** [redacted]
**Email:** [redacted]@tfl.gov.uk

**From:** [redacted]
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10
**Date:** 17 April 2015 15:41:51

---

Hi [redacted]

Thanks – I think this will be fine as these journey times will be estimates only anyway as they're based on assumptions. I'll come back to you next week with the figures.

Have a good weekend

[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 17 April 2015 15:12
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10

Hi [redacted],

I've just measured the distances between the points A and B as:

Route 1 = 691m
Route 2 = 963m
Route 3 = 1259m

These are approximate as I've just traced a line over the map and worked out its length- let me know if you would need them 100% accurately.

Kind regards,

[redacted]

**London Legacy Development Corporation**
DDI: [redacted]
Mobile: [redacted]

---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 17 April 2015 13:58
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10

Thanks [redacted] – it's not a big job to work out the timings as we just calculate these using distance and average cycling speed (16 km/hour). Do you have the distances of these alignments? I can easily find the distance of the current alignment (red) but I'm not sure we have accurate mapping at TfL for the alternative 2 shown on your map and I can't see a scale?

Unfortunately I can't access the link on TfL's network so I will take a look at the photo's from home.

[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 16 April 2015 19:51
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10

Hi [redacted]

Sorry I was unreachable yesterday and thanks for emailing back so promptly.
Attached is the overall map showing the routes to measure for the journey times- when do you think you can get these checked by? Also attached is the alternative route marked on the Quietway map in blue. It's very interesting to see how small the wiggle is in the overall context of a wiggly route that negotiates the urban fabric of London!
Also see here for some pictures [redacted] took of the route on her way in to work:
http://[redacted]

With regards the note you asked for [redacted] is finalising our formal response for the Deputy Mayor and we should have it you very soon.

Kind regards,

[redacted]

**Queen Elizabeth Olympic Park**
London Legacy Development Corporation
Level 10
1 Stratford Place, Montfichet Road
London
E20 1EJ

DDI: [redacted]
DDI: [redacted]
Website: www.QueenElizabethOlympicPark.co.uk

---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 15 April 2015 13:46
**To:** [redacted]
**Subject:** H10

[redacted]

I tried to give you a call about half an hour ago but couldn't get through. Having spoken with colleagues, we aren't able to commission Sustrans to undertake an assessment of the alternative route until we have buy in from the Cycling Commissioner. However, we can

present the maps showing the alternative alignment and the journey time differences and if [redacted] agrees on 18 May, we can commission Sustrans to assess the route. Equally, the route feasibility study solely looked at the Wallis Road/H10 alignment option.

Happy to discuss.

[redacted]

**From:** [redacted]
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10
**Date:** 23 April 2015 15:35:39

---

Hi [redacted],

Yes, for Route 2 Atkins measured the maximum gradient of Clarnico Lane at **1:16.5**. It is only this steep for around a quarter of the road; it is around 1:30 at the top of Clarnico Lane and 1:65 at the bottom. Please note that this is a rough approximation and is subject to the accuracy of the as-built data. I have not calculated the gradient of Route 3, but I was informed that it is fully compliant, so should be no steeper than 1:20. I can ask Atkins to double check this if required.

Yes there are two traffic light signals.

Many thanks,

[redacted]

**London Legacy Development Corporation**
DDI: [redacted]
Mobile: [redacted]

---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 23 April 2015 15:13
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10

Hi [redacted]

In the table below, you'll see the approximate cycle journey times for all three options. We also factor in some time for waiting at signals, usually 30 seconds given the average cycle time is 90 seconds. I hope I've got the number of signals correct as Google maps isn't up to date - the two I have accounted for are at White Post Lane/Loop Lane and at Waterden Road/Carnico Lane.

Can I confirm that the gradients shown in the map you sent through have been measured?

Hope this is clear – let me know if you'd like to discuss further.

[redacted]

| Route option | Length (km) | Signal junctions | Journey time* |
|---|---|---|---|
| 1 | 0.7 | 0 | 3 minutes |
| 2 | 1.0 | 2 | 5 minutes (4 minutes + 1 min for 2 signalised |

| | | | |
|---|---|---|---|
| | | | junctions) |
| 3 | 1.3 | 1 | 5 minutes 30 seconds (5 minutes + 0.5 min for 1 signalised junction) |

Assumptions:

- Cycling speed used is 16 kph which is in line with TfL's cycling journey planner
- Assume 30 seconds wait time per signalised junction

---

**From:** [redacted] [mailto[redacted]@londonlegacy.co.uk]
**Sent:** 17 April 2015 15:12
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10

Hi [redacted],

I've just measured the distances between the points A and B as:

Route 1 = 691m
Route 2 = 963m
Route 3 = 1259m

These are approximate as I've just traced a line over the map and worked out its length- let me know if you would need them 100% accurately.

Kind regards,

[redacted]

**London Legacy Development Corporation**
DDI: [redacted]
Mobile: [redacted]

---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 17 April 2015 13:58
**To:** [redacted]
**Cc:** Rebecca Miller
**Subject:** RE: H10

Thanks [redacted] – it's not a big job to work out the timings as we just calculate these using distance and average cycling speed (16 km/hour). Do you have the distances of these alignments? I can easily find the distance of the current alignment (red) but I'm not sure we have accurate mapping at TfL for the alternative 2 shown on your map and I can't see a scale?

Unfortunately I can't access the link on TfL's network so I will take a look at the photo's from home.

[redacted]

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 16 April 2015 19:51
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10

Hi [redacted],

Sorry I was unreachable yesterday and thanks for emailing back so promptly.
Attached is the overall map showing the routes to measure for the journey times- when do you think you can get these checked by? Also attached is the alternative route marked on the Quietway map in blue. It's very interesting to see how small the wiggle is in the overall context of a wiggly route that negotiates the urban fabric of London!
Also see here for some pictures [redacted] took of the route on her way in to work:
http://[redacted]

With regards the note you asked for [redacted] is finalising our formal response for the Deputy Mayor and we should have it you very soon.

Kind regards,

[redacted]

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E20 1EJ

DDI: [redacted]
DDI: [redacted]
Website: www.QueenElizabethOlympicPark.co.uk

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 15 April 2015 13:46
**To:** [redacted]
**Subject:** H10

[redacted]

I tried to give you a call about half an hour ago but couldn't get through. Having spoken with colleagues, we aren't able to commission Sustrans to undertake an assessment of the alternative route until we have buy in from the Cycling Commissioner. However, we can present the maps showing the alternative alignment and the journey time differences and if [redacted] agrees on 18 May, we can commission Sustrans to assess the route. Equally, the route feasibility study solely looked at the Wallis Road/H10 alignment option.

Happy to discuss.

[redacted]

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**From:** [redacted]
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge - Update
**Date:** 13 May 2015 09:48:22
**Attachments:** image001.png

---

Hi [redacted]

Apologies for the delay in getting back to you. Yes, that was the only one. The TfL Road Safety Audit team reviewed it and commented that they endorsed the findings so there was not any value in commissioning a new one.

[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 07 May 2015 14:50
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge - Update

Hi [redacted]

Just a quick side question- is the road safety audit included in Atkin's feasibility study at the end of last year the only one that has been undertaken?

Many thanks,

[redacted]

**London Legacy Development Corporation**
DDI: [redacted]
Mobile: [redacted]

---

**From:** [redacted]
**Sent:** 07 May 2015 14:25
**To:** [redacted]; [redacted]
**Subject:** RE: H10 Bridge - Update

HI [redacted],

Many thanks for your update. In terms of the work progressing the ramp Atkins have confirmed the cost at £3,816 and we have appointed Tibbalds to look at the heritage elements and we expect this to come in under £1500.

If you would like to meet us before the meeting on the 18th we have held a slot with Atkins 11am next Wednesday 13th and so you could join us for that?

Best Wishes,

[redacted]

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DDI: [redacted]
Website: www.QueenElizabethOlympicPark.co.uk

---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 06 May 2015 08:43
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge - Update

Hi [redacted]

I spoke to the Cycling Commissioner yesterday afternoon about alternative alignments through the Olympic Park – unfortunately I didn't get the opportunity to discuss this with him last week. At present, he's not supportive of looking at alternative alignments and is focused on improving cyclists access to the park via the H10 Bridge. At this point, we can't commission Sustrans to look at these other options or offer funding for you to do so via Atkins. However, if this is raised via [redacted] at the meeting on 18 May and he is able to gain [redacted] support we can look at this further.

[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 05 May 2015 15:05
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge - Update

Hi [redacted],

I hope you had a good long weekend. How did your meeting with the Cycling Commissioner go last week?

We have a meeting with Atkins this afternoon to discuss both the further design work needed for the H10 option and looking at the alternative route over White Post Lane. It would be great to know whether [redacted] has given the go ahead for Sustrans to be involved.

Many thanks,

[redacted]

**London Legacy Development Corporation**
DDI: [redacted]
Mobile: [redacted]

---

**From:** [redacted]
**Sent:** 28 April 2015 15:57
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge - Update

Hi [redacted],

We are just getting task orders with fee proposals from Atkins but we have passed on your notes a part of the instruction. We should have something in draft next week.
How did your meeting with [redacted] go yesterday? Any movement on alternative alignment that could involve Sustrans?
[redacted]

[redacted]

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---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 21 April 2015 17:24
**To:** [redacted]
**Subject:** RE: H10 Bridge - Update

Hi [redacted]

Many thanks for your e mail.

I didn't see [redacted] earlier so unfortunately couldn't discuss the alternative alignment with him – however, I am seeing him on Monday so will raise it then. To confirm our conversation earlier, we agreed that you would commission Atkins to undertake some further work to cover the following.

- To look in more detail at some options to mitigate the points raised within the RSA
- To consider options to address the planning conditions that will require LLDC to consider the quality of the design/appearance of the ramp and related structure in

relation to the areas conservation status.
- An approach to assessing the impact of the reduction in width of the stairway
- Looking at options to create a shared space where the ramp lands – as raised by Hackney

Given that the timescales are tight, it would be good to understand from Atkins how much of this they can realistically cover and where we might just need to outline an approach to addressing the points.

Let me know once you have had a chance to discuss with Atkins and what their fee is likely to be.

Many thanks
[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 17 April 2015 16:23
**To:** [redacted]
**Cc:** [redacted]; [redacted]; [redacted]; [redacted]
**Subject:** FW: H10 Bridge - Update

Dear [redacted],

In response to your request for LLDC for set out their position on taking the H10 bridge proposals forward please see the below note from [redacted]. As you know a meeting is now arranged for Monday the 18th May at 2pm at our offices.
Kind regards,

[redacted]

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---

**From:** [redacted] **On Behalf Of** [redacted]
**Sent:** 17 April 2015 16:08
**To:** [redacted]
**Subject:** H10 Bridge - Update

LLDC have commissioned a feasibility study of behalf of the Cycling Commissioner that proposes a temporary ramp of 1 in 7.5 that will link Wallis Road with the bridge deck.

Such a scheme would provide a short-term solution to provide a route for cyclists in advance of bringing forward a permanent ramp in the medium term through the delivery of the LLDC –led Hackney Wick Neighbourhood Centre plans.
LLDC are supportive of this, subject to resolving a number of issues that need to be resolved:

- A satisfactory safety audit will need to be produced.
- LLDC will take on the long-term maintenance of the ramp so all related requirements will need to be agreed.
- A departure from standards process will need to be followed through as the ramp is non- compliant
- Planning considerations will include the conservation area context, the quality of the design/appearance of the ramp and related structure and the achievable gradient and general safety issues (including whether other 'compliant' routes have been considered)
- Land Ownership and Adjacent owner issues will need to be resolved
- The impact of the reduction in width of the stairway on other users will need to be tested
- The impact of the route closure for construction on residents and local businesses including Here East
- Costs of the ramp removal , once the permanent solution is delivered as part of the Hackney Wick Neighbourhood Centre plans, will need to be considered alongside construction costs

In support of the Cycling Commissioner's objective for an efficient Quietway through QEOP, LLDC have also identified a potential alternative route, that may provide a simpler and quicker to deliver solution. The route runs in parallel to the current proposal, and is a minimal diversion from the current proposed Quietway. LLDC and TfL will start to explore the deliverability and benefits of the alternative route, alongside the proposed route, ahead of the meeting with the Cycling Commissioner

Regards

[redacted]

[redacted]

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**From:** [redacted]
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge - Update
**Date:** 13 May 2015 11:37:55
**Attachments:** image001.png

---

Hi [redacted],

Do you know if the overall time to cycle from Hainault to Aldgate was calculated?

Many thanks,

[redacted]

**London Legacy Development Corporation**
DDI: [redacted]
Mobile: [redacted]

---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 13 May 2015 11:28
**To:** [redacted] Rebecca Miller
**Subject:** RE: H10 Bridge - Update

Hi [redacted]

Unexpectedly, I've had to work at home today so unfortunately I won't be able to join you. The costs you quote below are fine and you can submit these via the portal for payment as a 2015/16 scheme. Also, you will be able to submit your VOWD profile for the £30,000 H10 feasibility work soon – I hope by the end of next week. That way, you can claim the funding.

Thanks
[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 07 May 2015 14:25
**To:** [redacted]; [redacted]
**Subject:** RE: H10 Bridge - Update

HI [redacted],

Many thanks for your update. In terms of the work progressing the ramp Atkins have confirmed the cost at £3,816 and we have appointed Tibbalds to look at the heritage elements and we expect this to come in under £1500.

If you would like to meet us before the meeting on the 18th we have held a slot with Atkins 11am next Wednesday 13th and so you could join us for that?

Best Wishes,

[redacted]

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**Sent:** 06 May 2015 08:43
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge - Update

Hi [redacted]

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[redacted]

---

**From:** [redacted] [mailto[redacted]@londonlegacy.co.uk]
**Sent:** 05 May 2015 15:05
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge - Update

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Many thanks,

[redacted]

[redacted]

**London Legacy Development Corporation**
DDI: [redacted]
Mobile: [redacted]

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**From:** [redacted]
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**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 Bridge - Update

Hi [redacted],

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How did your meeting with Andrew go yesterday? Any movement on alternative alignment that could involve Sustrans?
[redacted]

[redacted]

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DDI: 02032881809
Website: www.QueenElizabethOlympicPark.co.uk

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**Sent:** 21 April 2015 17:24
**To:** [redacted]
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Let me know once you have had a chance to discuss with Atkins and what their fee is likely to be.

Many thanks
[redacted]

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**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 17 April 2015 16:23
**To:** [redacted]
**Cc:** [redacted]; [redacted]; [redacted]; [redacted]
**Subject:** FW: H10 Bridge - Update

Dear [redacted]

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Kind regards,

[redacted]

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**Sent:** 17 April 2015 16:08
**To:** [redacted]
**Subject:** H10 Bridge - Update

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Regards

[redacted]

[redacted]

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**From:** [redacted]
**To:** [redacted]
**Subject:** RE: H10 update
**Date:** 15 May 2015 16:52:58
**Attachments:** image001.png
150513_Quietways note for DG.pdf
Alternate Quietways Schemes Technical Note.pdf
H10 Wallis Rd Bridge Ramp Technical note.pdf
MP003-MIW-CB-DGA-0001.pdf

---

Hi [redacted]

Apologies, I forgot you can't access WeTransfer! I've attached the summary note, the technical reports and a developed plan of the proposed temporary ramp, which are the main documents. The other files are plans looking at the alternative route over White Post Lane, but are too large to email.

Thank you for calculating the journey time. It's interesting to know that the times for the routes are 60mins vs 62 mins.

Best,

[redacted]

**London Legacy Development Corporation**
DDI: [redacted]
Mobile: [redacted]

---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 15 May 2015 16:45
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 update

Hi [redacted]

Thanks for sending this information through. I presume the files were too large to send as an attachment? If so, I'll have to see if I can access them from home as unfortunately the TfL network doesn't allow us access to file sharing websites.

I've just had a look at the timings (based on the same methodology I outlined previously) and to cycle the route end to end would take 60 minutes.

Hope that helps

[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 15 May 2015 15:32
**To:** [redacted]
**Cc:** [redacted]
**Subject:** H10 update

Hi [redacted],

Good to speak on the phone before. I've uploaded all the work that Atkin's have done in the last month or so, plus a summary note that we wrote for [redacted] here: http:// [redacted] . Attached is a note from [redacted] who we have appointed to provide heritage advice for the temporary ramp option. Please let me know if you have any immediate feedback.

I have passed on the message regarding [redacted] . [redacted] says she will give you a call on Monday first thing to catch up, if that suits you?

As discussed, it would be really useful to have an approximate overall journey time by Monday morning so that I can feed it into the briefing note.

I hope you have a great weekend,

Many thanks,

[redacted]

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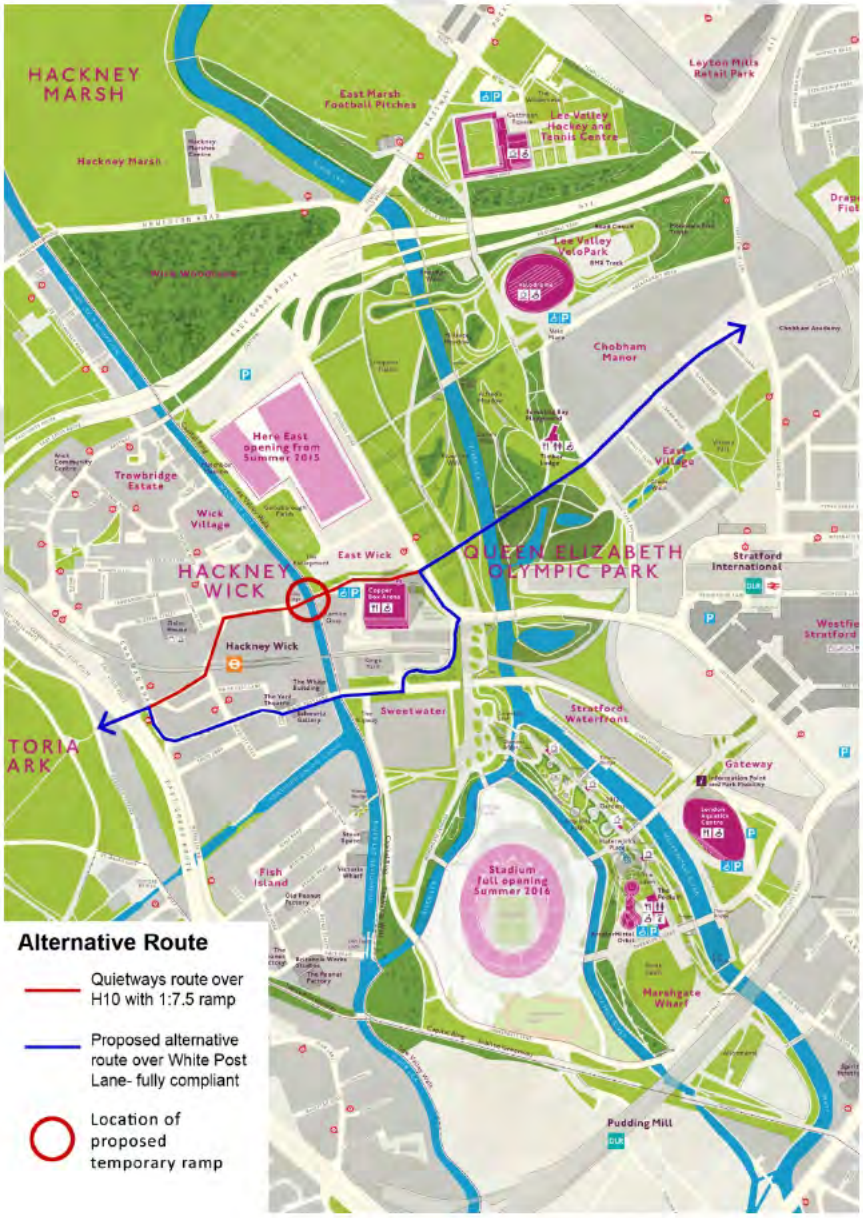
LONDON LEGACY DEVELOPMENT CORPORATION

# Quietway Route Aldgate to Hainault –Section through QEOP

Update to TfL, GLA and LB Hackney
18/05/15- DRAFT 14th May 2015 for comment

| | |
|---|---|
| August 2014 | LLDC asked by GLA to investigate temporary ramp over Wallis Road Bridge. Anticipated gradient 1 in 9.5 |
| December 2014 | Atkins produce feasibility report for temporary ramp. Best achievable gradient confirmed at 1 in 7.4 |
| February 2014 | TfL engineers agree with issues raised in December 2014 Road Safety Audit |
| March- April 2015 | LLDC progress temporary ramp design to address issues at Tfl's request<br>In parallel, LLDC investigate alternative alignment of Quietway route |



## Progressed ramp design

December 2014- proposed design

**Total Cost of Ramp £645K**

**Since March 2015 LLDC have been working to address the points raised in the Safety Audit, issues raised by LLDC and requests for further information by Tfl. The following tables set out the current status of these:**

**LLDC concerns**

**Table 1**

| Points to address | Work undertaken to date |
|---|---|
| A satisfactory safety audit will need to be produced | June 2014- Sustrans undertake Road Safety Audit<br>November 2014- all options for temporary ramp fail road safety audit<br>February 2015- TfL engineers confirm findings from original Sustrans audit.<br>**No satisfactory safety audit to date.** |
| LLDC will take on the long-term maintenance of the ramp so all related requirements will need to be agreed | LLDC Park Security concerned that the bridge may not be able to insured due to safety concerns on gradient. Liaison with insurer required. |
| A departure from standards process will need to be followed through as the ramp is non-compliant | A single departure will need to be approved that will cover both the ramp gradient and width. Two additional Approval in Principles (AIPs) will be required for:<br>- The assessment of the changes to the existing structure<br>- The assessment of the proposed design<br>Both the Departure and the AIP's will need approval from the Olympic Infrastructure Technical Approval Authority (OITAA) |
| Planning considerations will include the conservation area context, the quality of the design/appearance of the ramp and related structure and the achievable gradient and general safety issues (including whether other | Tibbalds appointed as heritage advisors. Key issues identified as:<br>1.The design of the street space should aim to continue its linearity and not create a highway led solution. it should still read as a street that |

| | |
|---|---|
| 'compliant' routes have been considered) | leads to the canal and the end of Wallis Road should feel like a space rather than a junction<br>2. Concerns over cluttering the street scene<br>All signs, road markings and bollards will need to be minimised and be as small as possible and sited as inconspicuously as possible. Any surface treatments should be subtle and not undermine the character of the space, concrete block paving not appropriate<br>3. A high quality design is required given conservation area context. Materials and details need to relate well to the existing footbridge so they read as a single intentional structure and architectural element in the street scene with an industrial character. A high quality design team with a track record for working in a conservation area would be required to take the project forward |
| Land Ownership and Adjacent owner issues will need to be resolved | LBHackney commitment to providing a highway license to permit the ramp to land on the public highway. Other adjacent landowner issue to be resolved through the planning process |
| The impact of the reduction in width of the stairway on other users will need to be tested | Next step would be to carry out a pedestrian comfort level of service assessment, for a fee of approx £3k. |
| The impact of the route closure for construction on residents and local businesses including Here East | 13% of park visitors (3approx.. 1350 people per day) use bridge so closure of bridge for 6-8 weeks during construction would cause significant disruption. More detail needed. |

**TfL requests**

**Table 2**

| **Points to address** | **Work undertaken to date** |
|---|---|
| More detail needed to mitigate the points raised within the Road Safety Audit | Atkins technical note outlines design measures that could be taken to mitigate some of the safety concerns. See table 3 for detail |
| Options required to address the planning conditions that will require LLDC to consider the quality of the design/appearance of the ramp and related structure in relation to the areas conservation status. | Tibbalds appointed as heritage advisors. Key issues identified in previous table. |
| An approach to assessing the impact of the reduction in width of the stairway | Atkins have suggested carrying out a pedestrian comfort level of service assessment, for a fee of approx. £3k |
| Looking at options to create a shared space where the ramp lands – as raised by Hackney | Atkins drawing ref MP003-MIW-CB-DGA-0001. Design will need further development |

**May 2015- draft proposed design developed to address safety audit and public realm issues:**

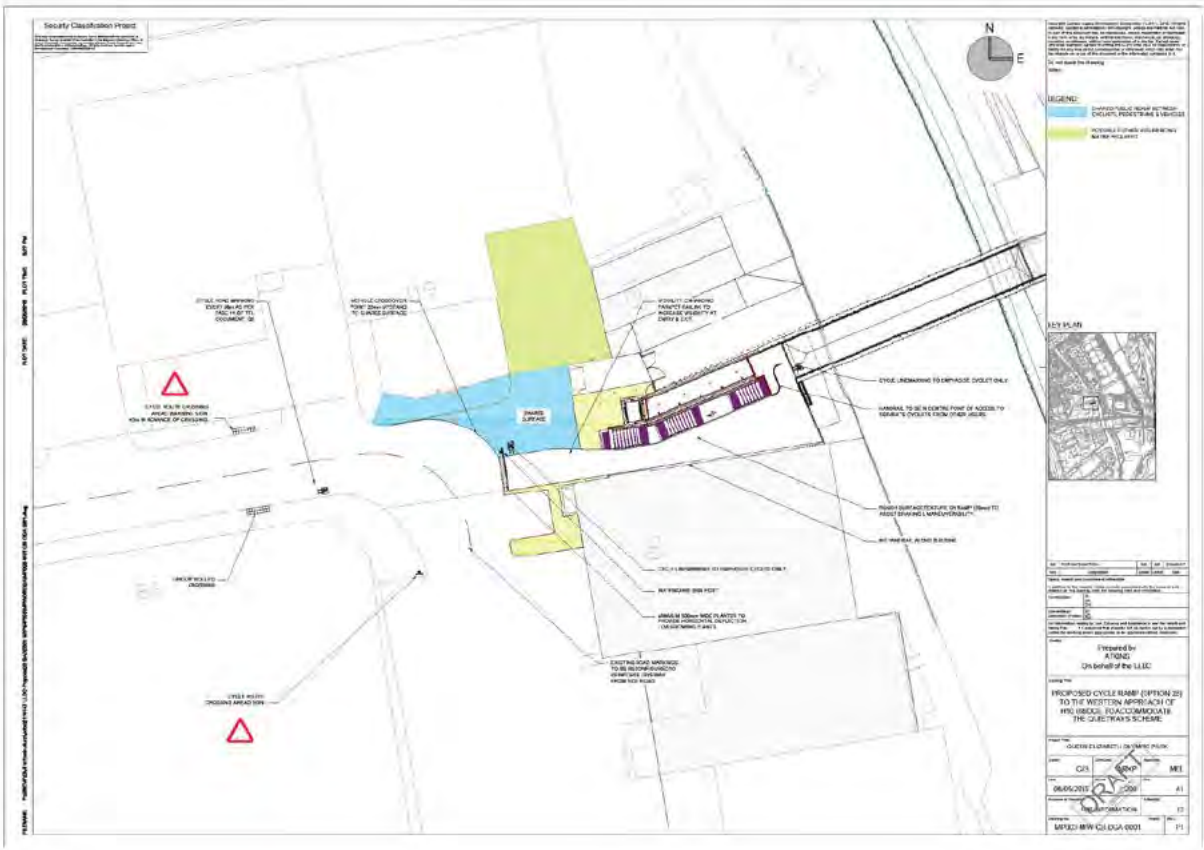


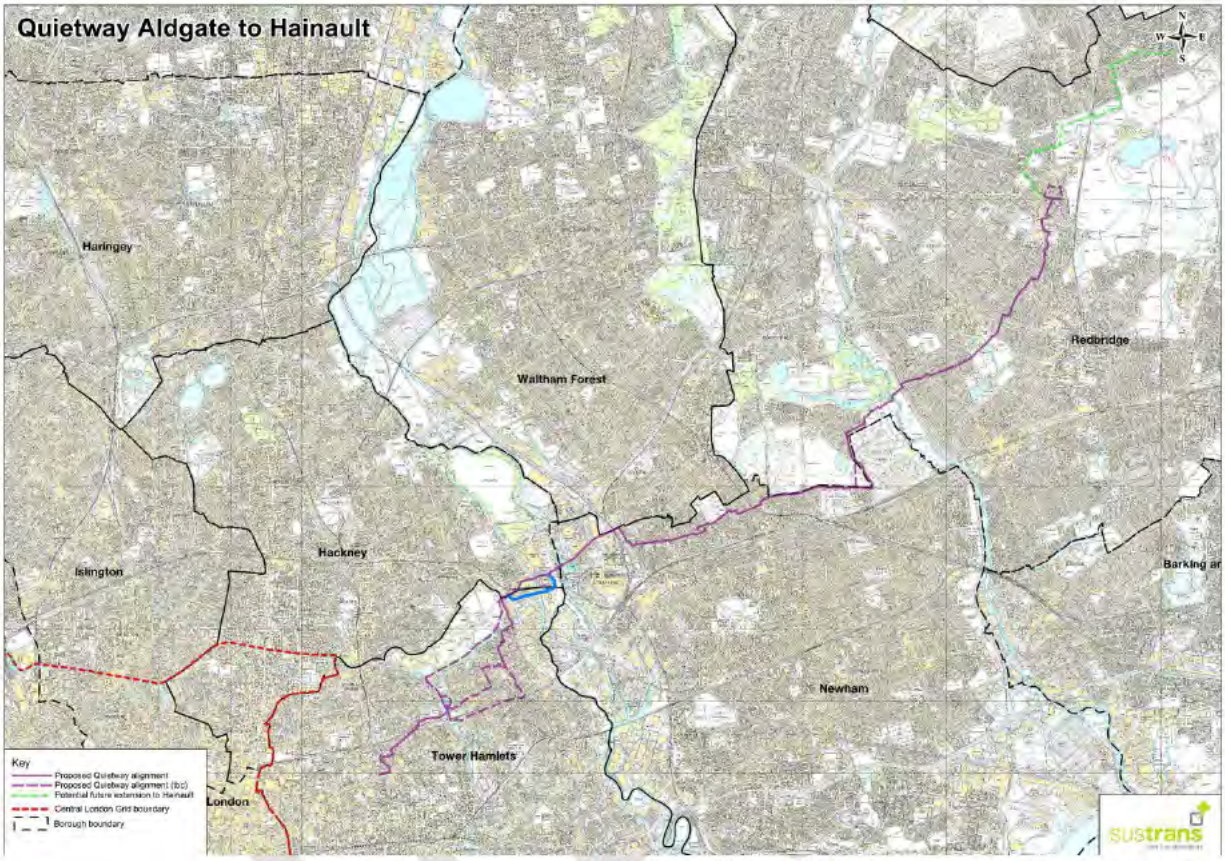
**Table 3**

| Items raised by safety audit- December 2014 | | Design response |
|---|---|---|
| 2.1 | Risk of ramp users losing control and falling due to excessive gradient and absence of intermediate landings | **Not able to mitigate risk as fixed gradient** |
| 2.2 | Risk of pedestrians falling on the staircase | Carry out a pedestrian comfort level of service assessment to calculate impact of reduced width. Review risk once carried out |
| 2.3 | Risk of conflict between ramp users and vehicles / pedestrians in the vicinity of the ramp base | - Provide cycle route crossing warning signage on Wallis Road in advance of the expected crossing point for cyclists;<br>- Provide a road centreline on Wallis Road to reinforce sense of two way traffic for cyclists and vehicles re-joining from shared surface at base of ramp;<br>- Provide a shared surface at the bottom of the ramp and outside No`s 119 and 127 Wallis Road with colour contrast to adjacent carriageway. Provide a minimum kerb up stand of 20mm at the edge of the shared surface for the visually impair to navigate the area;<br>- Provide way/ route finding signage at the base of the ramp to assist user orientation;<br>- Provide transparent parapet railing to maximise visibility entering and exiting the ramp<br>- Provide a continuation of the parapet railing at the top of the ramp to separate pedestrian and cyclists. Of the 3.6m available width at the |

| | | |
|---|---|---|
| | | top of the stairs provide 2.0m (minimum two way cycle standard) for cyclists and 1.8m for pedestrians (typical highway footway width); |
| **2.4** | Risk of cyclist unable to cycle up steep gradient losing control | **Not able to mitigate risk as fixed gradient** |
| **2.5** | Risk of wheelchair / mobility scooter users experiencing difficulty and losing control due to steep ramp gradients | **Not able to mitigate risk as fixed gradient** |
| **2.6** | Risk of collision between cyclists on ramp | Clear signage proposed to indicate priority for cyclists ascending the ramp<br>Provide sign arrangement above ramp to inform users of narrow width and steep gradient at top and bottom of ramp (both non-standard);<br>- Provide way/ route finding signage at the base of the ramp to assist user orientation; |
| **2.7** | Risk of injury due to unintended use by skateboarders, BMX riders etc. | - Provide cycle footway marking at top and bottom of ramp to reinforce cyclist only use of ramp; |
| **2.8** | Risk of westbound cyclists riding down steps | Provide way/ route finding signage at the base of the ramp to assist user orientation |

## Alternative Routes

**Since March 2015 LLDC have been working in parallel to investigate alternative alignments through QEOP to provide the safest possible route for cyclists without impacting significantly on journey times**




Aldgate to Hainault Quietway route shown in purple

| Route option | Length (km) | Signal junctions | Journey time* |
|---|---|---|---|
| 1 (original Quietway route) QEOP section | 0.7 | 0 | 3 minutes |
| 2 (alternative route over White Post Lane) QEOP section | 1.0 | 2 | 5 minutes (4 minutes + 1 min for 2 signalised junctions) |

Alternative alignment over White Post Lane shown in blue

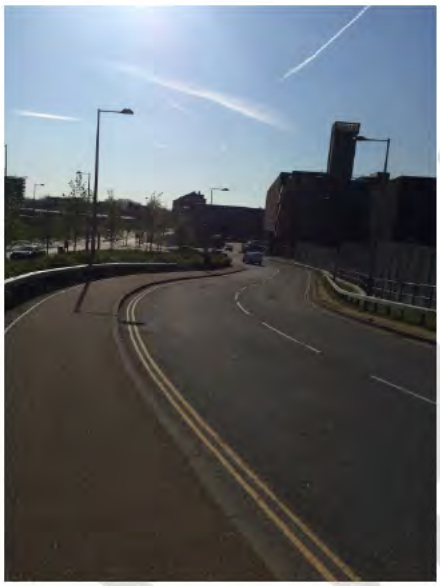
An alternative route through QEOP over White Post Lane bridge rather than over Wallis Road bridge has been identified. The gradient and width of this route adheres to all standards. The steepest gradient found on this route is located at Clarnico Lane where for about a quarter of the road it is 1:16.5 (6%).

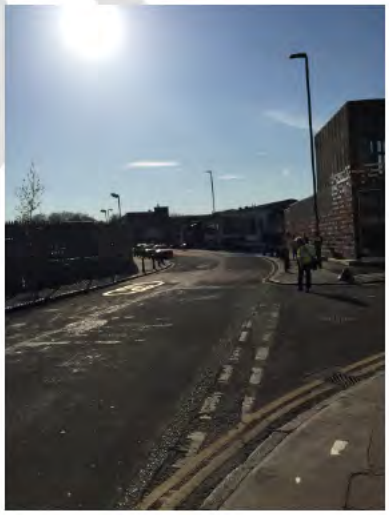
As the route already exists, it would only require signage and road markings, which would cost approximately the same as providing signage and road markings of the original route over Wallis Road Bridge.

Some minor works to upgrade the road condition along from White Post Lane towards the Wallis Road – Rothbury Road junction may be required as it is currently in a poor state. The cost of

resurfacing White Post Lane, allowing for planing the top 25 to 30mm and replacing with tarmac & then relining is estimated at **£50k**.

**Alternative route travelling east to west**

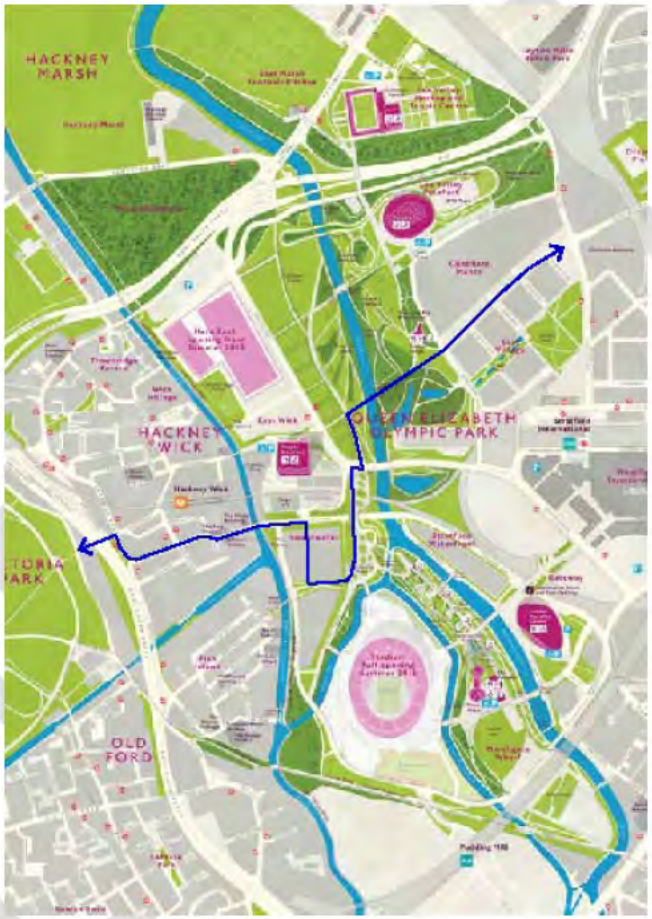




Photos taken on weekday at approx. 17.00

**Alternative route phasing**


**Phase 1- up to 2021**
Clarnico Lane decommissioned as a road in 2017, with potential to retain as a pedestrian/cycle route until approx. 2021




**Phase 2- post 2021**
Potential future route through Sweetwater once developed. Commitment in place to deliver

**Conclusion**

| | Pros | Cons | Next Steps |
|---|---|---|---|
| Temp Ramp at Wallis Road | • Original alignment of route | • Safety Concerns not able to be mitigated against<br>• Does not meet Spring 2016 deadline- programme 16months<br>• Disruptive- stair closure of at least 6 weeks<br>• Needs planning permission- would take safety audit findings into consideration | • Instruct pedestrian comfort survey<br>• Further public realm design<br>• Appoint architect to design ramp in relation to conservation area<br>• Liaison with insurers |
| Alternative Route over White Post Lane | • Significant cost saving- estimate £50K v £645K<br>• Route already existing, operational and compliant<br>• Deliverable in short timescales and by deadline of Spring 2016<br>• Little or no disruption to neighbours, users and stakeholders<br>• Does not need planning permission<br>• Gradients are compliant | • Not on original alignment of route | • Sustrans to carry out suitability assessment<br>• More detailed delivery programme and costs to be produced |

# Technical note

ATKINS

| | | | |
|---|---|---|---|
| **Project:** | LLDC | **To:** | [redacted] (LLDC), [redacted] (LLDC) |
| **Subject:** | Alternative Quietways Scheme Proposal | **From:** | [redacted] |
| **Date:** | 7 May 2015 | **cc:** | [redacted] |

## 1.0 Introduction

The Quietways Scheme is 'a new way of providing safe and direct cycling infrastructure as part of the Mayor of London's vision for cycling. By reprioritising and redesigning our existing infrastructure, and sharing information about the new routes, the Quietways will provide many more people with the opportunity to make their everyday journeys by bike.'

This technical note briefly investigates two routes for the Quietways scheme through the Queen Elizabeth Olympic Park (QEOP). Atkins' design team investigated these routes which alter the original scheme and run south along the footpath west of F03, meeting up again with the original scheme at the Wallis Road and Rothbury Road junction as advised by London Legacy Development Corporation (LLDC). These two options are presented in this document including positive and negatives aspects relating to each.

## 2.0 Original Quietways Scheme

The original route runs westerly over F03, along Copper Street, over Wallis Road (H10) Bridge, along Wallis Road and eventually passes underneath the A12 towards Victoria Park as shown in Appendix XX. The drawing shown in Appendix XX shows the assumed width of the various road/routes which the scheme is to take.

**Table 1 – Original Quietways Scheme Facts**

| Route Option | Length (km) | Signal Junctions | Journey Time* |
|---|---|---|---|
| Original | 0.7 | 0 | 3 minutes |

## 3.0 Alternative Quietways Scheme Proposals

Two alternative solutions have been proposed as the original was deemed unsafe around the Wallis Road (H10) Bridge due to the ramp gradient being 1:7.47. Therefore both these proposals discussed avoid the use of the previously proposed Wallis Road (H10) Bridge. However the following must be noted:

- Road markings used for these proposals shall be the same as per the Quietway scheme which is yet to be decided.
- Significant development is expected in the area which could increase construction traffic along the alternative cycle route. Mitigating measures maybe need to reduce such a risk in the future.

### 3.1 Route 2

This route shall run south along the footpath at F03, along Clarnico Lane, along White Post Lane, along Rothbury Road and eventually meets up with the original scheme at the junction with Wallis Road and Rothbury Road. This route will require minimal alterations to the existing infrastructure. This is shown in Appendix XX.

**Table 2 – Journey Time for Proposal 1**

| Route Option | Length (km) | Signal Junctions | Journey Time* |
|---|---|---|---|
| 1 | 1.0 | 2 | 5 minutes<br>(4 minutes + 1 min for 2 signalised junctions) |

It should be noted that the road conditions along from White Post Lane towards the Wallis Road – Rothbury Road junction may need to be remediated as it is currently in a poor state.

* Assumptions:
- Cycling speed used is 16 kph, in line with TfL's Cycling Journey Planner
- 30 seconds wait time per signalised junction

It should also be noted that in the medium term Clarnico Lane is scheduled for removal as part of the East Wick and Sweetwater Development. This removal is hoped that through consolation with the East Wick and Sweetwater Development this will coincide with the redevelopment of the Wallis Road area facilitating the adoption of the originally proposed route.

### 3.1.1 Gradient

The gradients of this selected route all adhere to the standards shown in Table 4. The steepest gradient found on this scheme is located at Clarnico Lane where for about a quarter of the road it is 1:16.5 (6%).

### 3.2 Route 3

Route 3 mirrors much of Route 2. It runs south along the footpath from F03, following onto the footpath at Mandeville Place, then follows the footpath along Marshgate Terrace over White Post Lane/Carpenters Road, before returning down and existing footpath to White Post Lane/Carpenters Road, running west along White Post Lane, along Rothbury Road and eventually meets up with the original scheme at the junction with Wallis Road and Rothbury Road. This route will require some alteration to the existing infrastructure, including a safety chicane near to White Post Lane/Carpenters Road and widening of an existing footpath on the approach to White Post Lane/Carpenters Road. This is shown in Appendix XX.

**Table 3 – Journey Time for Proposal 2**

| Route Option | Length (km) | Signal Junctions | Journey Time* |
|---|---|---|---|
| 2 | 1.3 | 1 | 5 minutes 30 seconds<br>(5 minutes + 0.5 min for 1 signalised junction) |

It should again be noted that the road conditions along from White Post Lane towards the Wallis Road – Rothbury Road junction may need to be remediated as it is currently in a poor state.

### 3.2.1 Gradient

The gradients of this route all adhere to the standards shown in Table 4. The gradient of the route as it returns down and existing footpath to White Post Lane/Carpenters Road noticeably steep (FIGURE) and therefore it is proposed that chicanes are installed to slow cycle users down.

### 4.0 Standards

Both proposed options adhere to the The London Cycle Design Guidance and London Transport Note 2/08 – Cycle Infrastructure Design standards shown below in Table 4.

**Table 4 – Standards relating to the Proposal**

| Standards Used | The London Cycle Design Guidance and London Transport Note 2/08 – Cycle Infrastructure Design |
|---|---|
| Recommended Maximum Gradient | • 3% (1:33.3),<br>• 5% (1:20) up to 100m,<br>• 7% (1:14.3) gradient over 30m be used. |
| Recommended Minimum Width | • 2.45m for one directional traffic,<br>• 3m for two way traffic. |

* Assumptions:
- Cycling speed used is 16 kph, in line with TfL's Cycling Journey Planner
- 30 seconds wait time per signalised junction

| | | | |
|---|---|---|---|
| **Project:** | H10 Surrounding Public Realm | **To:** | [redacted] (LLDC), [redacted] (LLDC) |
| **Subject:** | Options to Reduce Ramp User Conflicts and Address RSA Comments at Wallis Road Bridge (H10) | **From:** | [redacted] |
| **Date:** | 8 May 2015 | **cc:** | [redacted] |

# 1. Introduction

## 1.1. Study Objective

The Wallis Road Bridge (H10), links Hackney Wick, over the River Lea Navigation to The Queen Elizabeth Olympic Park (QEOP). Currently the western approach of H10 consists of a lift for disabled use and a staircase for pedestrians. Cyclist are able to use the lift or the wheeling channel provided on the right as you climb the staircase, however in conjunction with Hackney Borough Council (HBC) and The Greater London Authority (GLA), LLDC would like to provide cyclists with an uninterrupted ride into/out of the Queen Elizabeth Olympic Park (QEOP).

Following discussions Atkins has been asked by The London Legacy Development Corporation (LLDC) to identify safety critical public realm elements intended for the approaches of the H10 Cycle Ramp.eg Signage and Cycle Routeing, using Option 2b from LC810-LCI-H10-CB-REP-0002 as a base case.

This technical note investigates the options available to reduce ramp user conflict when providing a cycle ramp at the Wallis Rd Bridge (H10).

## 1.2. General Site Description

H10 is located north-west of the Copper Box Arena and links Hackney Wick, over the River Lea Navigation to the QEOP. The western approach of H10 is located at the 'T' junction between Wallis Road and Main Yard cul de sac and currently consists of a lift for disabled use and a staircase for pedestrians. Cyclist are able to use the lift or the wheeling channel provided on the right as you climb the staircase. The eastern approach of H10 does not require a ramp or staircase as the bridge is level with the existing ground.

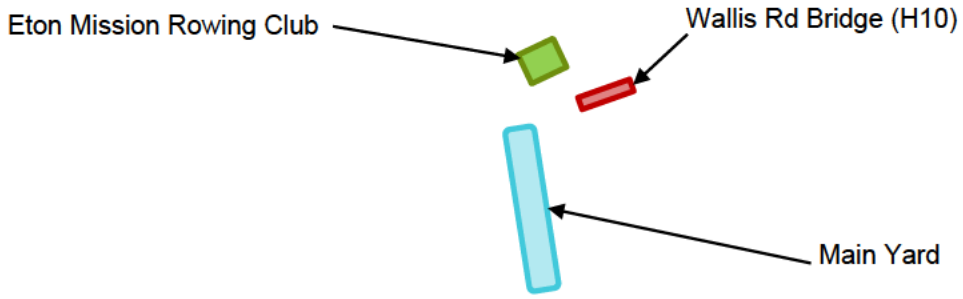



**Figure 1-1 Wallis Road configuration and points of interest within vicinity of H10 bridge**

Wallis Road branches off Chapman Road heading eastwards past Hackney Wick Station. The road turns eastwards again heading towards the River Lee Navigation before entering the Main Yard cul de sac, see **Figure 1-1**. The western approach of H10 is located at the 'T' junction between Wallis Rd and the Main Yard cul de sac.

The Main Yard is home to a number of commercial properties and vehicles are regularly parked outside these premises. Access to the Main Yard can only be obtained via Wallis Road and therefore any bridge ramp proposal should not block this access route.

Furthermore the Eton Mission Rowing Club is located adjacent to the western approach of H10. Any ramp proposal should not block access to this property and the other properties along that stretch of Wallis Road both during construction and operation.

## 1.3. Proposal

Below is an extract from drawing MP003-MIW-CB-DGA-0001:

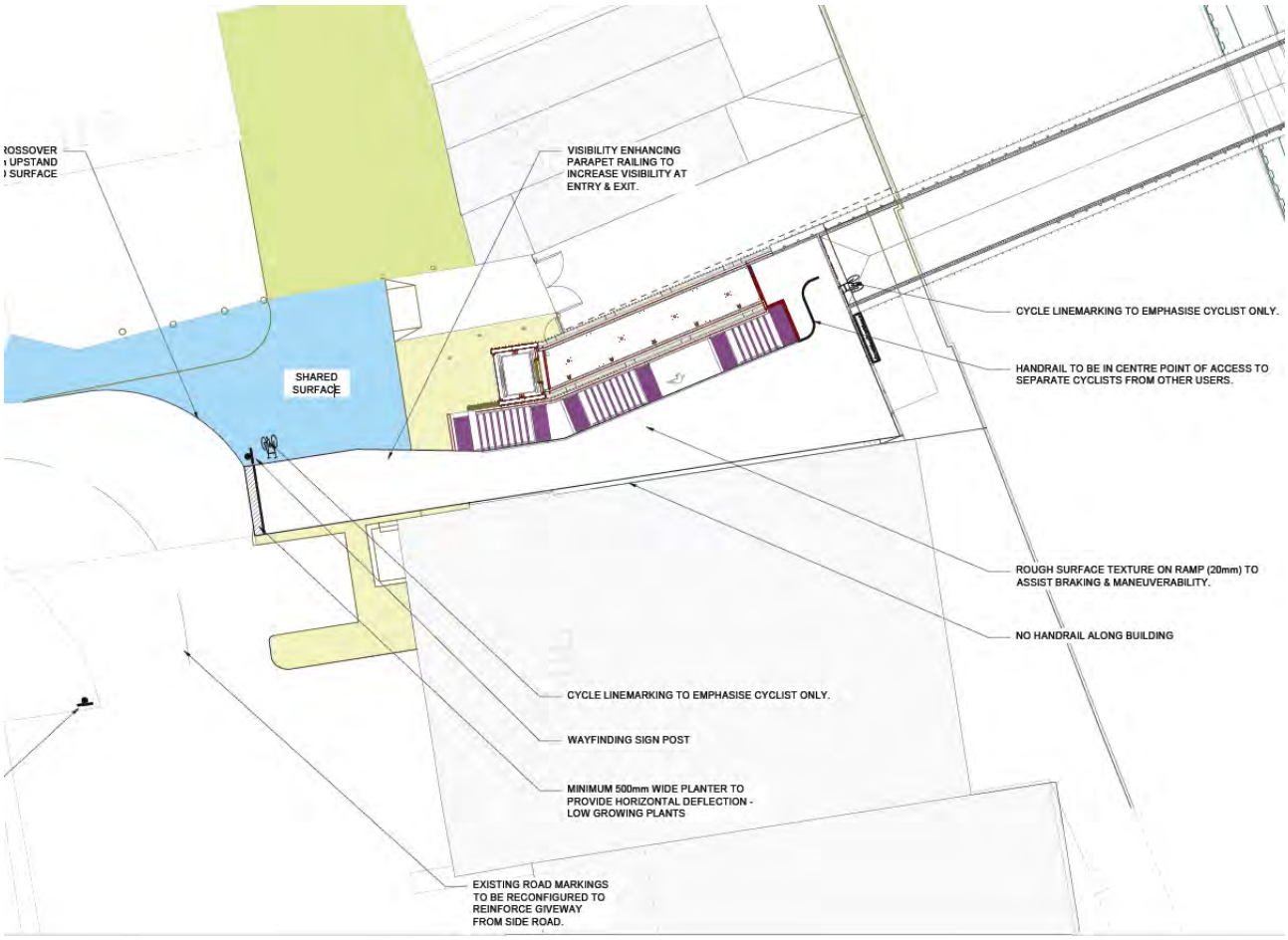



**Figure 1-2 Extract showing proposals from drawing MP003-MIW-CB-DGA-0001**

The proposed ramp is on a continuous gradient of 1 in 7 (14.3%) and width varying from 5.8m at the top; 2.5m near the foot of the existing stairs and 3.6m where it lands on the raised pavement area to the north west of 90 Main Yard. The width of proposed stairway is 1.9m.

## 1.4. Options to Reduce Ramp User Conflicts and Address RSA Comments

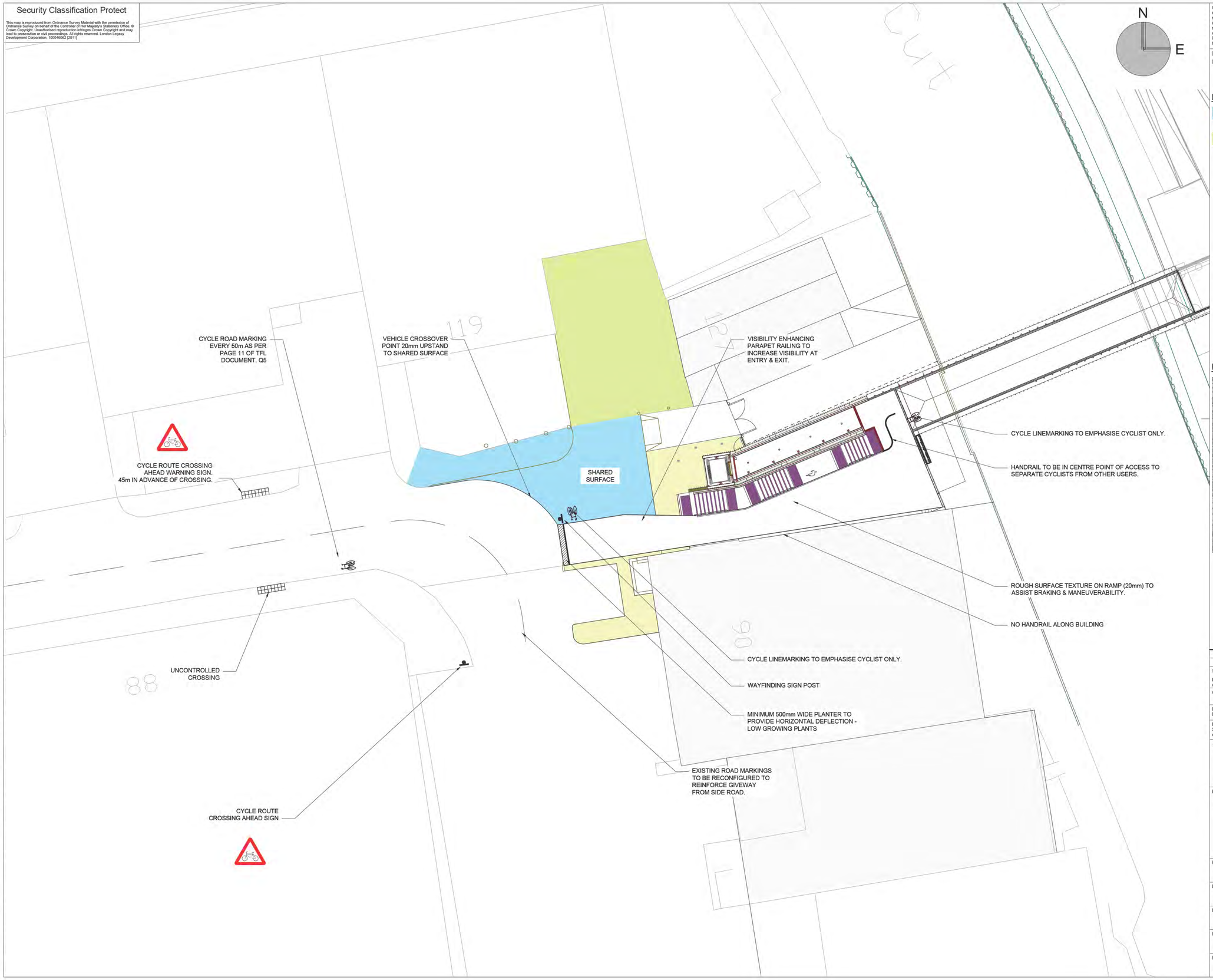
As it is not possible to provide the facilities set out in guidance, i.e. LTN2/08 and London Cycle Design Standards then the following should be considered to reduce/limit the safety concerns listed in the Road Safety Audit:

- Provide cycle route crossing warning signage on Wallis Road in advance of the expected crossing point for cyclists;
- Provide a road centreline on Wallis Road to reinforce sense of two way traffic for cyclists and vehicles re-joining from shared surface at base of ramp;

- Provide a shared surface at the bottom of the ramp and outside No`s 119 and 127 Wallis Road with colour contrast to adjacent carriageway. Provide a minimum kerb up stand of 20mm at the edge of the shared surface for the visually impair to navigate the area;
- Provide way/ route finding signage at the base of the ramp to assist user orientation;
- If cycle flows are anticipated to be low provide horizontal deflection at the base of the ramp to discourage cyclist joining Wallis Road at speed. Consideration should be given to a high visibility planter, approximately at waist height, with low growing, low maintenance plants. If cycle flows are anticipated to be high measures may be required at the 'T' junction of Wallis Road and Main Yard to define priority, reduce cycle speeds into the junction, and increase cyclist visibility. Consideration should be given to a priority give way system for cyclists at the bottom of the ramp, narrowing Wallis Road at its junction with Main Yard cul de sac, or changing priority at the junction, providing features i.e. bollards, or chicane to discourage vehicles entering the ramp and cyclists to slow at the base of the ramp, and consider prohibiting parking in cyclists visibility splays on Wallis Road; Any physical barrier inclusion will need to be risk assessed to reduce the risk of conflicts with ramp users;
- Provide an entry/ exit point to the base for the ramp (minimum 3m);
- Provide transparent parapet railing to maximise visibility entering and exiting the ramp;
- Provide cycle footway marking at top and bottom of ramp to reinforce cyclist only use of ramp;
- Provide pedestrian man footway marking at the top of the ramp to encourage pedestrians to use the stairs, to reduce risk of conflict with cyclists on ramp;
- Provide a rough surface texture on the ramp (London Cycle Design Standards, 20mm) to assist braking, traction, and manoeuvrability for cyclists;
- Not providing a handrail along the wall of building 90 Main Yard;
- Provide contrasting colour surfaces for pedestrian and cyclists to navigate stairs and ramp;
- Provide a continuation of the parapet railing at the top of the ramp to separate pedestrian and cyclists. Of the 3.6m available width at the top of the stairs provide 2.0m (minimum two way cycle standard) for cyclists and 1.8m for pedestrians (typical highway footway width);
- Provide sign arrangement above ramp to inform users of narrow width and steep gradient at top and bottom of ramp (both non-standard);
- Provide "SLOW" footway markings on the ramp to discourage speed;
- Ensure a minimum of 2.3m height clearance to all obstructions on building wall, i.e. flower baskets; and
- Provide suitable illumination of the ramp.

Security Classification Protect








Do not scale this drawing.

Notes:

LEGEND:

- SHARED PUBLIC REALM BETWEEN CYCLISTS, PEDESTRIANS & VEHICLES
- POSSIBLE FUTHER RESURFACING MAYBE REQUIRED

KEY PLAN

| Rev | Description | Drawn | Chk'd | Date |
|---|---|---|---|---|
| XX | FOR INFORMATION | XXX | XX | DD/MM/YY |

Safety, Health and Environment Information

In addition to the hazards / risks normally associated with the types of work detailed on this drawing, note the following risks and information:

| | |
|---|---|
| Construction | Ci.<br>Cii.<br>Ciii. |
| Dismantling / Demolition (Future) | Di.<br>Dii.<br>Diii. |

For information relating to Use, Cleaning and Maintenance see the Health and Safety File. It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement.

Creator

Prepared by
ATKINS
On behalf of the LLDC

Drawing Title

PROPOSED CYCLE RAMP (OPTION 2B) TO THE WESTERN APPROACH OF H10 BRIDGE TO ACCOMMODATE THE QUIETWAYS SCHEME

Project Title

QUEEN ELIZABETH OLYMPIC PARK

| Drawn | Checked | Approved |
|---|---|---|
| CJS | ARKP | MEL |

| Date | Scale | Size |
|---|---|---|
| 06/05/2015 | 1:200 | A1 |

| Purpose of Drawing | Suitability |
|---|---|
| FOR INFORMATION | S2 |

| Drawing No. | Sheet. | Rev. |
|---|---|---|
| MP003-MIW-CB-DGA-0001 | | P1 |

DRAFT 08/05/2015

PLOT DATE: 08/05/2015 PLOT TIME: 5:27 PM

FILENAME: P:\GBEMP\Civil Infrastructure\Jobs\5114143 LLDC Projects\03 CAD\0301 WIP\MP003\MIW\CB\DGA\MP003-MIW-CB-DGA-0001.dwg

**From:** [redacted]
**To:** [redacted]; [redacted]
**Subject:** RE: H10 update
**Date:** 18 May 2015 11:04:07
**Attachments:** image001.png
180513_Quietways note for DG_RM.docx

---

Hi [redacted],

Afraid I am about to be in a meeting till 1230. Here are our updates- we are still waiting on a few more points.
Do you want to come quarter of an hour earlier?
[redacted]

[redacted]

**Queen Elizabeth Olympic Park**
London Legacy Development Corporation
Level 10
1 Stratford Place, Montfichet Road
London
E20 1EJ

DDI: [redacted]
DDI: [redacted]
Website: www.QueenElizabethOlympicPark.co.uk

---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 18 May 2015 10:27
**To:** [redacted] [redacted]
**Subject:** RE: H10 update

Thanks [redacted]

I just tried to give you a call. I'm at my desk between 11 and 12 if you want catch up?

[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 17 May 2015 17:48
**To:** [redacted]; [redacted]
**Subject:** RE: H10 update

Hi [redacted],

Sorry about that, here is the note which is sendable by email . Attached although I am making some updates to it at the moment and will send over another version tomorrow morning.

[redacted]

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 15 May 2015 16:45
**To:** [redacted]
**Cc:** [redacted]
**Subject:** RE: H10 update

Hi [redacted]

Thanks for sending this information through. I presume the files were too large to send as an attachment? If so, I'll have to see if I can access them from home as unfortunately the TfL network doesn't allow us access to file sharing websites.

I've just had a look at the timings (based on the same methodology I outlined previously) and to cycle the route end to end would take 60 minutes.

Hope that helps

[redacted]

---

**From:** [redacted] [mailto:[redacted]@londonlegacy.co.uk]
**Sent:** 15 May 2015 15:32
**To:** [redacted]
**Cc:** [redacted]
**Subject:** H10 update

Hi [redacted]

Good to speak on the phone before. I've uploaded all the work that Atkin's have done in the last month or so, plus a summary note that we wrote for [redacted] here: http://[redacted] . Attached is a note from [redacted] who we have appointed to provide heritage advice for the temporary ramp option. Please let me know if you have any immediate feedback.

I have passed on the message regarding [redacted]. [redacted] says she will give you a call on Monday first thing to catch up, if that suits you?

As discussed, it would be really useful to have an approximate overall journey time by Monday morning so that I can feed it into the briefing note.

I hope you have a great weekend,

Many thanks,

[redacted]

**Queen Elizabeth Olympic Park**
London Legacy Development Corporation
Level 10
1 Stratford Place, Montfichet Road
London

E20 1EJ

DDI: [redacted]
Mobile: [redacted]
Email: [redacted]@londonlegacy.co.uk

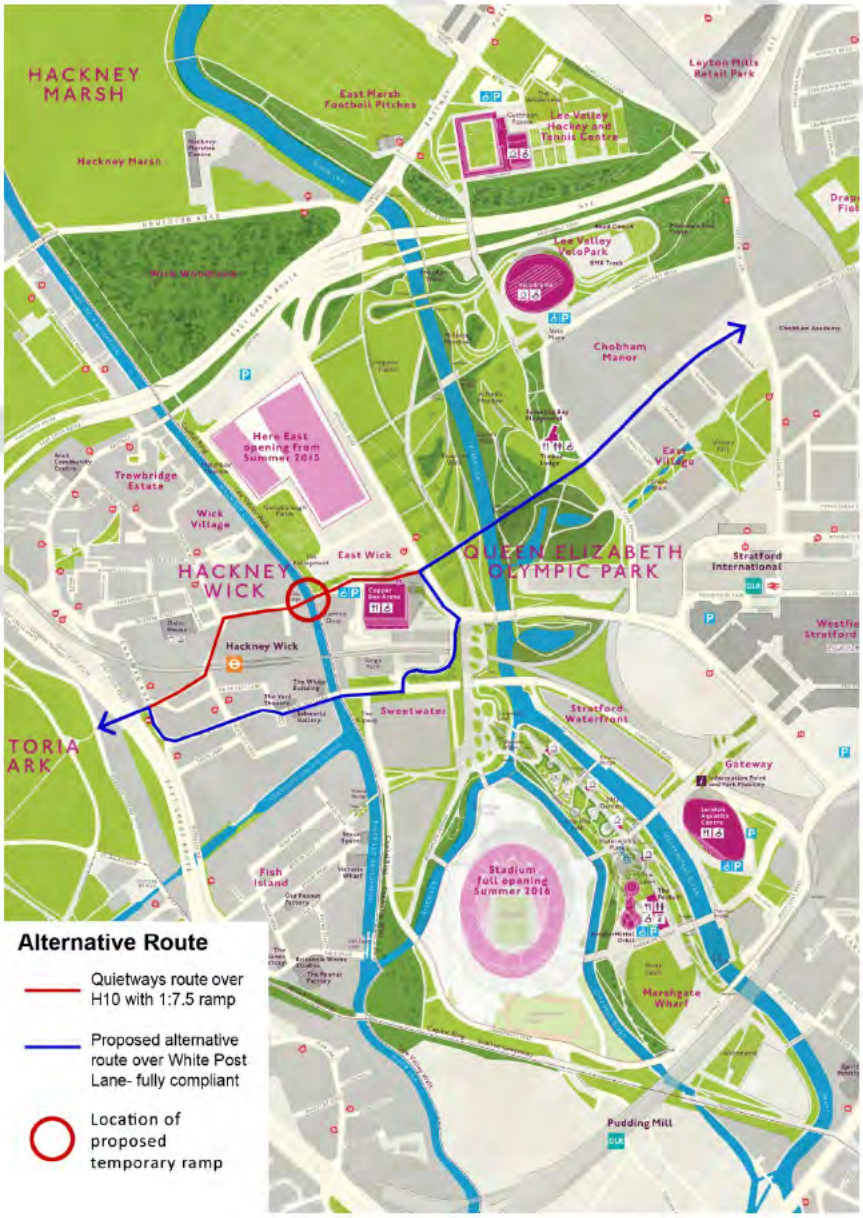
**Queen Elizabeth Olympic Park is now open. For more information please visit**
www.QueenElizabethOlympicPark.co.uk

LONDON LEGACY DEVELOPMENT CORPORATION

# Quietway Route Aldgate to Hainault –Section through QEOP

Update to TfL, GLA and LB Hackney
18/05/15- DRAFT 14th May 2015 for comment

| | |
|---|---|
| August 2014 | LLDC asked by GLA to investigate temporary ramp over Wallis Road Bridge. Anticipated gradient 1 in 9.5 |
| December 2014 | Atkins produce feasibility report for temporary ramp. Best achievable gradient confirmed at 1 in 7.4 |
| February 2014 | TfL engineers agree with issues raised in December 2014 Road Safety Audit |
| March- April 2015 | LLDC progress temporary ramp design to address issues at Tfl's request<br>In parallel, LLDC investigate alternative alignment of Quietway route |



## Progressed ramp design

December 2014- proposed design

**Total Cost of Ramp £645K**

**Since March 2015 LLDC have been working to address the points raised in the Safety Audit, issues raised by LLDC and requests for further information by Tfl. The following tables set out the current status of these:**

**LLDC concerns**

**Table 1**

| Points to address | Work undertaken to date |
|---|---|
| A satisfactory safety audit will need to be produced | June 2014- Sustrans undertake Road Safety Audit<br>November 2014- all options for temporary ramp fail road safety audit<br>February 2015- TfL engineers confirm findings from original Sustrans audit.<br>**No satisfactory safety audit to date. Gradient will continue to be an issue. However progress has been made on the design to mitigate against the some of the safety issues** |
| LLDC will take on the long-term maintenance of the ramp so all related requirements will need to be agreed | LLDC Park Security concerned that the bridge may not be able to insured due to safety concerns on gradient. **LLDC POV investigating insurance issues, update due end of May 2015** |
| A departure from standards process will need to be followed through as the ramp is non- compliant | A single departure will need to be approved that will cover both the ramp gradient<br>and width. Two additional Approval in Principles (AIPs) will be required for:<br>- The assessment of the changes to the existing structure<br>- The assessment of the proposed design<br>Both the Departure and the AIP's will need approval from the Olympic Infrastructure Technical Approval Authority (OITAA) **This would happen at the end of RIBA Stage 3 (August 2015)** |
| Planning considerations will include the conservation area context, the quality of the design/appearance of | **Tibbalds appointed as heritage advisors to address conservation area context Key issues already identified as:** |

| | |
|---|---|
| the ramp and related structure and the achievable gradient and general safety issues (including whether other 'compliant' routes have been considered) | 1.Design of the street space should aim to continue its linearity and not create a highway led solution and read as a street that leads to the canal and the end feel like a space rather than a junction<br>2. Concerns over cluttering the street scene: signs, road markings and bollards will need to be minimised. Surface treatments should be subtle and not undermine the character of the space<br>3. A high quality design is required given conservation area context. Materials and details need to relate well to the existing footbridge so they read as a single intentional structure and architectural element in the street scene with an industrial character. A high quality design team with a track record for working in a conservation area would be required to take the project forward<br>**Other issues will be dealt with through close working with PPDT and through the planning process (Sep-Nov 2015)** |
| Land Ownership and Adjacent owner issues will need to be resolved | **LBHackney commitment to Tfl** providing a highway license to permit the ramp to land on the public highway, received April 2015. **Other adjacent landowner issue to be resolved through the planning process.** |
| The impact of the reduction in width of the stairway on other users will need to be tested | Pedestrian comfort level of service assessment **due June 2015** |
| The impact of the route closure for construction on residents and local businesses including Here East | **Results of study** show 13% of park visitors (approx. 1350 people per day) use bridge so closure of bridge for 6-8 weeks during construction would cause significant disruption. **More detail needed on types of users – due ....** |

**TfL requests**

**Table 2**

| **Points to address** | **Work undertaken to date** |
|---|---|
| More detail needed to mitigate the points raised within the Road Safety Audit | **Progress has been made on the design to mitigate against the some of the safety issues.** Atkins technical note outlines design measures that could be taken to mitigate some of the safety concerns. See table 3 for detail |
| Options required to address the planning conditions that will require LLDC to consider the quality of the design/appearance of the ramp and related structure in relation to the areas conservation status. | **Tibbalds appointed as heritage advisors.** Key issues identified in previous table. |
| An approach to assessing the impact of the reduction in width of the stairway | Pedestrian comfort level of service assessment **due by end June 2015** |
| Looking at options to create a shared space where the ramp lands – as raised by Hackney | **Design has been developed to create public space**- this is in development. Atkins drawing ref MP003-MIW-CB-DGA-0001. Design will need further development |

**May 2015- draft proposed design developed to address safety audit and public realm issues:**

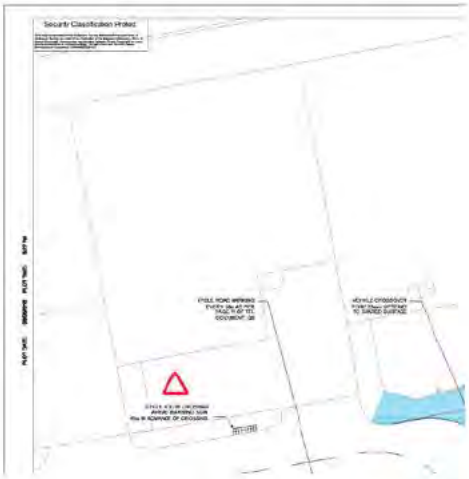


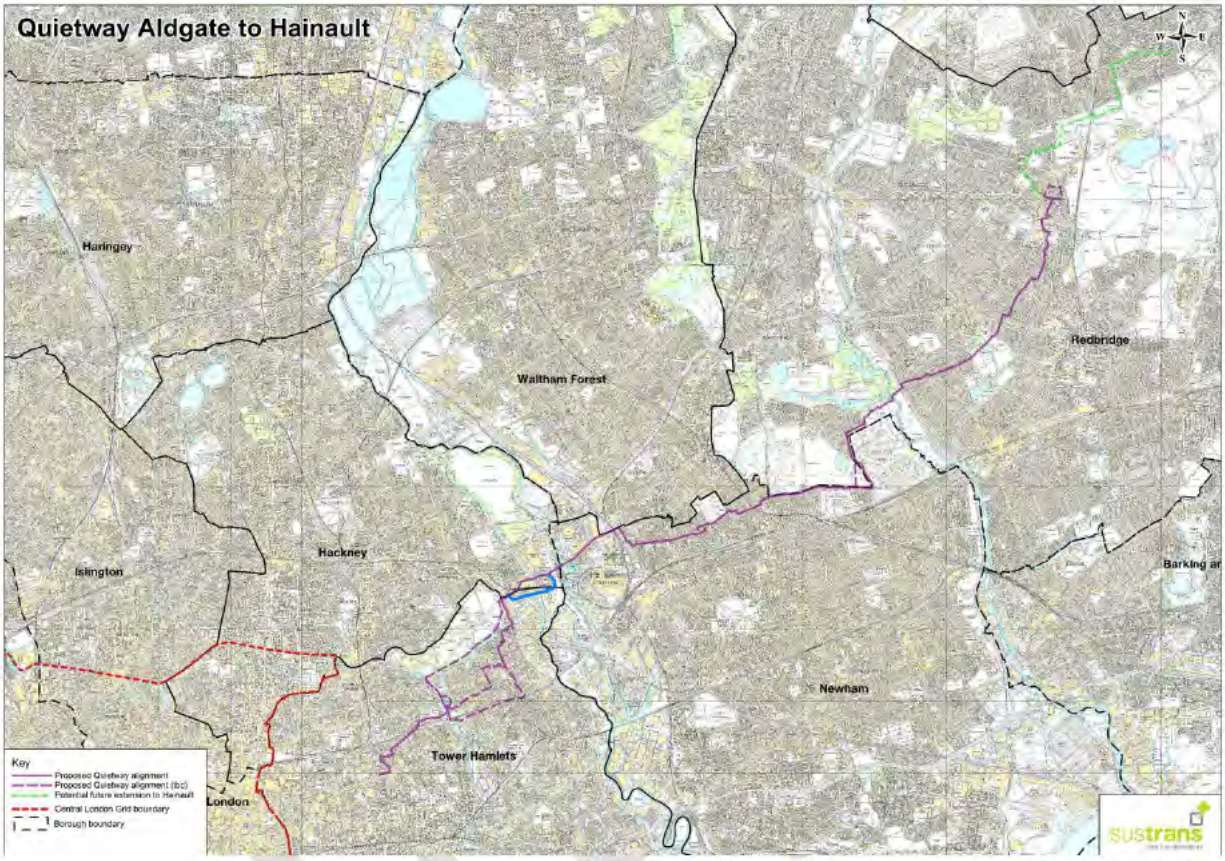
**Table 3**

| Items raised by safety audit- December 2014 | | Design response |
|---|---|---|
| **2.1** | Risk of ramp users losing control and falling due to excessive gradient and absence of intermediate landings | **Not able to mitigate risk as fixed gradient** |
| **2.2** | Risk of pedestrians falling on the staircase | Carry out a pedestrian comfort level of service assessment to calculate impact of reduced width. Review risk once carried out |
| **2.3** | Risk of conflict between ramp users and vehicles / pedestrians in the vicinity of the ramp base | - Provide cycle route crossing warning signage on Wallis Road in advance of the expected crossing point for cyclists;<br>- Provide a road centreline on Wallis Road to reinforce sense of two way traffic for cyclists and vehicles re-joining from shared surface at base of ramp;<br>- Provide a shared surface at the bottom of the ramp and outside No`s 119 and 127 Wallis Road with colour contrast to adjacent carriageway. Provide a minimum kerb up stand of 20mm at the edge of the shared surface for the visually impair to navigate the area;<br>- Provide way/ route finding signage at the base of the ramp to assist user orientation;<br>- Provide transparent parapet railing to maximise visibility entering and exiting the ramp<br>- Provide a continuation of the parapet railing at the top of the ramp to separate pedestrian |

| | | |
|---|---|---|
| | | and cyclists. Of the 3.6m available width at the top of the stairs provide 2.0m (minimum two way cycle standard) for cyclists and 1.8m for pedestrians (typical highway footway width); |
| **2.4** | Risk of cyclist unable to cycle up steep gradient losing control | **Not able to mitigate risk as fixed gradient** |
| **2.5** | Risk of wheelchair / mobility scooter users experiencing difficulty and losing control due to steep ramp gradients | **Not able to mitigate risk as fixed gradient** |
| **2.6** | Risk of collision between cyclists on ramp | Clear signage proposed to indicate priority for cyclists ascending the ramp<br>Provide sign arrangement above ramp to inform users of narrow width and steep gradient at top and bottom of ramp (both non-standard);<br>- Provide way/ route finding signage at the base of the ramp to assist user orientation; |
| **2.7** | Risk of injury due to unintended use by skateboarders, BMX riders etc. | - Provide cycle footway marking at top and bottom of ramp to reinforce cyclist only use of ramp; |
| **2.8** | Risk of westbound cyclists riding down steps | Provide way/ route finding signage at the base of the ramp to assist user orientation |

## Alternative Routes

**Since March 2015 LLDC have been working in parallel to investigate alternative alignments through QEOP to provide the safest possible route for cyclists without impacting significantly on journey times. The overall journey time from Hainault to Aldgate is approximately 60 minutes.**




Aldgate to Hainault Quietway route shown in purple

| Route option | Length (km) | Signal junctions | Journey time* | Overall journey time |
|---|---|---|---|---|
| 1 (original Quietway route) QEOP section | 0.7 | 0 | 3 minutes | 60 minutes |
| 2 (alternative route over White Post Lane) QEOP section | 1.0 | 2 | 5 minutes (4 minutes + 1 min for 2 signalised junctions) | 62 minutes |

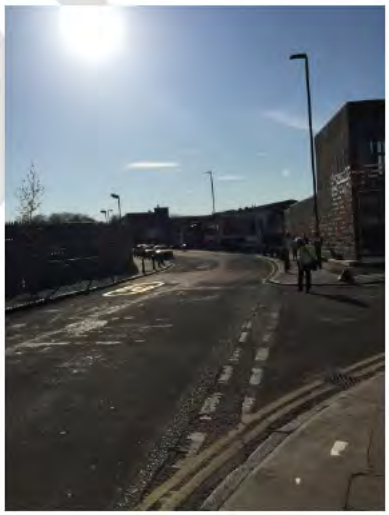
Alternative alignment over White Post Lane shown in blue

An alternative route through QEOP over White Post Lane bridge rather than over Wallis Road bridge has been identified. The gradient and width of this route adheres to all standards. The steepest gradient found on this route is located at Clarnico Lane where for about a quarter of the road it is 1:16.5 (6%).

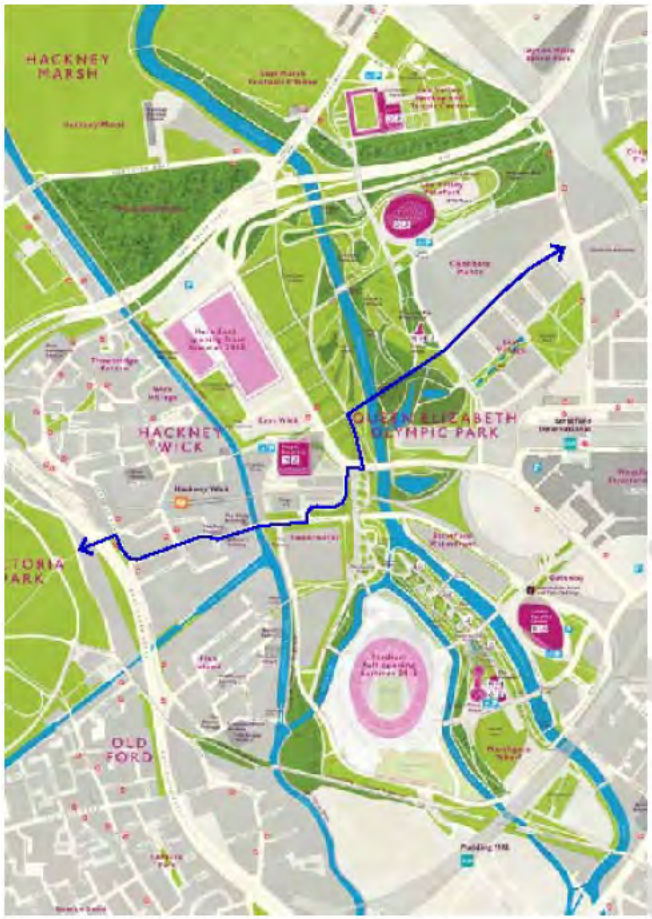
As the route already exists, it would only require signage and road markings, which would cost approximately the same as providing signage and road markings of the original route over Wallis Road Bridge.

Some minor works to upgrade the road condition along from White Post Lane towards the Wallis Road – Rothbury Road junction may be required as it is currently in a poor state. The cost of resurfacing White Post Lane, allowing for planing the top 25 to 30mm and replacing with tarmac & then relining is estimated at **£50k**.

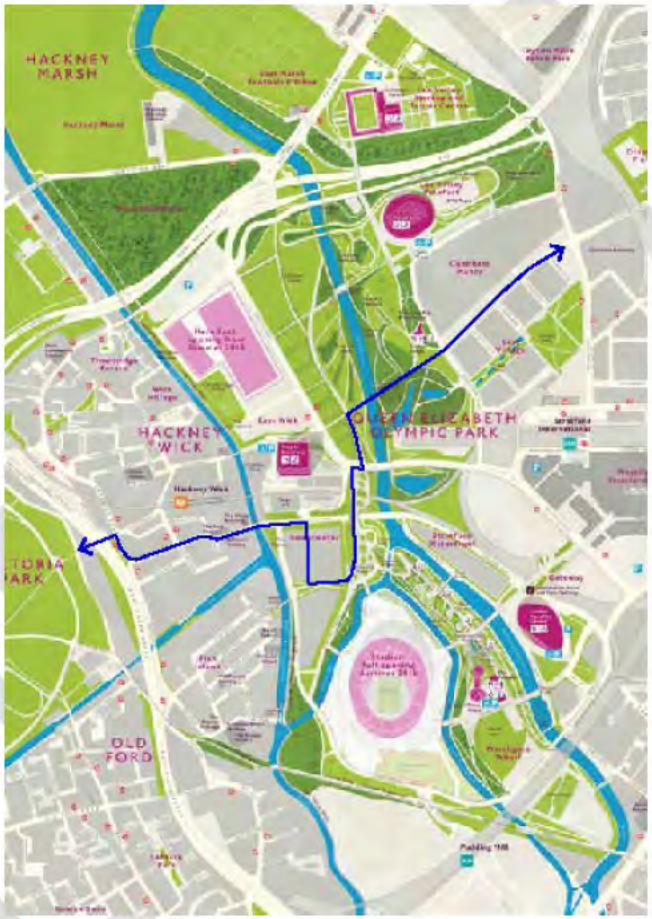
**Alternative route travelling east to west**- Photos taken on weekday at approx. 17.00



**Alternative route phasing**




**Phase 1- up to 2021**
Clarnico Lane decommissioned as a road in 2017, with potential to retain as a pedestrian/cycle route until approx. 2021



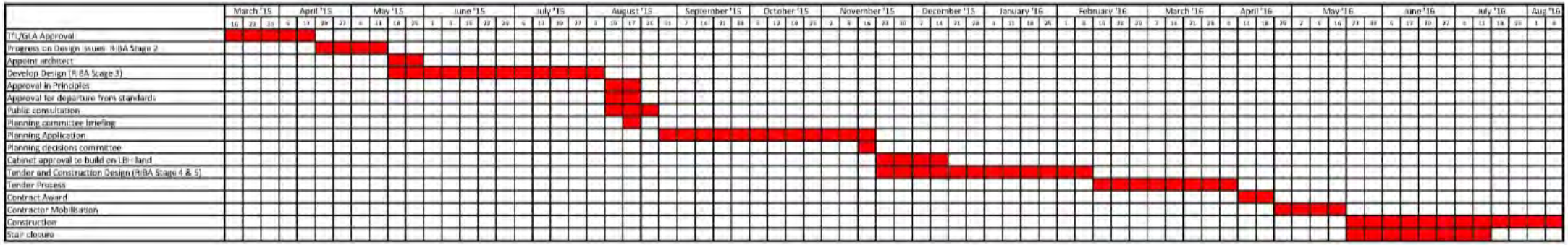

**Phase 2- post 2021**
Potential future route through Sweetwater once developed. Commitment in place to deliver

**Conclusion**

| | Pros | Cons | Next Steps |
|---|---|---|---|
| Temp Ramp at Wallis Road | • Original alignment of route | • Safety Concerns not able to be mitigated against<br>• Does not meet Spring 2016 deadline- programme 16months<br>• Disruptive- stair closure of at least 6 weeks<br>• Needs planning permission- would take safety audit findings into consideration<br>• Increased construction traffic due to Eastwick and Sweetwater development | • Pedestrian comfort survey results<br>• Further public realm design<br>• Appoint architect to design ramp in relation to conservation area<br>• LLDC POV liaison with insurers on public liability insurance<br>• Assessment of existing users of bridge required<br>• Liaison with Balfour Beatty to accommodate cyclists |
| Alternative Route over White Post Lane | • Significant cost saving- estimate £50K v £645K<br>• Route already existing, operational and compliant<br>• Deliverable in short timescales and by deadline of Spring 2016<br>• Little or no disruption to neighbours, users and stakeholders<br>• Does not need planning permission<br>• Gradients are compliant | • Not on original alignment of route<br>• Increased construction traffic due to Eastwick and Sweetwater development | • Sustrans to carry out suitability assessment<br>• More detailed delivery programme and costs to be produced |

## H10 Temporary Ramp

LLDC/TfL- Programme to Delivery
DRAFT May 2015




NOTE:
Tender design could take place while the planning application is being decided, however this carries significant risks

**From:** [redacted]
**To:** [redacted]; [redacted]; [redacted]@sustrans.org.uk"
**Subject:** RE: H10
**Date:** 03 June 2015 10:16:42
**Attachments:** H10 Wallis Rd Bridge Ramp Technical note.pdf
Alternate Quietways Schemes Technical Note.pdf

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Hi [redacted],

It was good to meet you yesterday.

In response to my actions;

- [redacted] is the point of contact at LLDC for the Waterden Road possession; [redacted]@londonlegacy.co.uk
- Costs are currently being reviewed and can be passed onto LLDC next week
- [redacted] is the [redacted] for POV who should be your first point of contact; [redacted]@londonlegacy.co.uk
- Attached are the two Atkins technical notes; 'Alternate Quietways Schemes Technical Note' and 'H10 Wallis Rd Bridge Ramp Technical note'
- [redacted] is the point of contact within LLDC for the planning restictions on the current and future building project on/around the park; [redacted]@londonlegacy.co.uk

Please Cc' me into any of the emails you may send to these staff members to ensure they have a point of reference for the project. if I can be of anymore assistance, please feel free to contact me.

Kind regards
[redacted]

---

**From:** [redacted] [mailto:[redacted]@tfl.gov.uk]
**Sent:** 03 June 2015 08:59
**To:** [redacted]; [redacted]; [redacted]@sustrans.org.uk'
**Subject:** H10

Dear all

Thank you for meeting yesterday to discuss next steps with the H10 Bridge.

As discussed, attached is a note of the meeting on 18 May. Grateful if you can take a look and let me know if you have any comments. The key points that we covered yesterday are copied below:

- *The discussion focused in on the safety audit issues and potential mitigations.* [redacted] *shared the latest plan and advised an architect would need to be appointed to develop the design further to address both the design and heritage issues. I advised LLDC they would need to sign off the safety audit as they would be the owner of the ramp and the infrastructure owner cannot negate responsibility to another organisation or individual, however,* [redacted] *offered to draft a statement on behalf of Hackney once the next iteration of design is complete advising that the borough consider the mitigations*

*sufficient and that they are supportive. I said TfL could potentially do similar, but first we would need to see the next iteration of design and the results of a stage two safety audit. It was agreed TfL would pay for the next stage of design work.*

- [redacted] *offered that TfL take the lead in taking forward the planning and approvals. I said I wasn't sure this was practical as it was LLDC land and they were the approving body. It was agreed that both LLDC and TfL consider this further.*

To confirm, some other points we discussed:

- The Surface Board date that we are aiming for is 29 September. We will need to have our paper finalised and ready to send for approval w/c 7 September.
- [redacted] will review Atkins cost estimate – I'd like to include this in the analysis so will need the revised cost estimate well before this date.
- [redacted] will send [redacted] details of the Park Operations team and any background info from Atkins/LLDC e.g. Technical Notes
- [redacted] / [redacted] will send across fee estimates to appoint the consultant team soon.
- Toby and I will finalise the scope for the alignment assessments this week and send this over to you.

I hope this covers most things but let me know if I've missed anything

[redacted]

[redacted] | [redacted]
**Surface Strategy and Planning | Transport for London**

**Mail:** Palestra 11Y8, 197 Blackfriars Road, Southwark, London SE1 8NJ
**Phone:** [redacted] **Mobile:** [redacted]
**Email:** [redacted]@tfl.gov.uk

| | | | |
|---|---|---|---|
| **Project:** | H10 Surrounding Public Realm | **To:** | [redacted] (LLDC), [redacted] (LLDC) |
| **Subject:** | Options to Reduce Ramp User Conflicts and Address RSA Comments at Wallis Road Bridge (H10) | **From:** | [redacted] |
| **Date:** | 8 May 2015 | **cc:** | [redacted] |

# 1. Introduction

## 1.1. Study Objective

The Wallis Road Bridge (H10), links Hackney Wick, over the River Lea Navigation to The Queen Elizabeth Olympic Park (QEOP). Currently the western approach of H10 consists of a lift for disabled use and a staircase for pedestrians. Cyclist are able to use the lift or the wheeling channel provided on the right as you climb the staircase, however in conjunction with Hackney Borough Council (HBC) and The Greater London Authority (GLA), LLDC would like to provide cyclists with an uninterrupted ride into/out of the Queen Elizabeth Olympic Park (QEOP).

Following discussions Atkins has been asked by The London Legacy Development Corporation (LLDC) to identify safety critical public realm elements intended for the approaches of the H10 Cycle Ramp.eg Signage and Cycle Routeing, using Option 2b from LC810-LCI-H10-CB-REP-0002 as a base case.

This technical note investigates the options available to reduce ramp user conflict when providing a cycle ramp at the Wallis Rd Bridge (H10).

## 1.2. General Site Description

H10 is located north-west of the Copper Box Arena and links Hackney Wick, over the River Lea Navigation to the QEOP. The western approach of H10 is located at the 'T' junction between Wallis Road and Main Yard cul de sac and currently consists of a lift for disabled use and a staircase for pedestrians. Cyclist are able to use the lift or the wheeling channel provided on the right as you climb the staircase. The eastern approach of H10 does not require a ramp or staircase as the bridge is level with the existing ground.

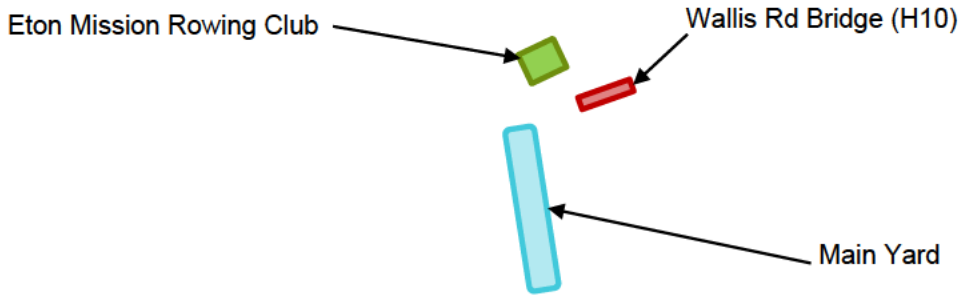


**Figure 1-1 Wallis Road configuration and points of interest within vicinity of H10 bridge**

Wallis Road branches off Chapman Road heading eastwards past Hackney Wick Station. The road turns eastwards again heading towards the River Lee Navigation before entering the Main Yard cul de sac, see **Figure 1-1**. The western approach of H10 is located at the 'T' junction between Wallis Rd and the Main Yard cul de sac.

The Main Yard is home to a number of commercial properties and vehicles are regularly parked outside these premises. Access to the Main Yard can only be obtained via Wallis Road and therefore any bridge ramp proposal should not block this access route.

Furthermore the Eton Mission Rowing Club is located adjacent to the western approach of H10. Any ramp proposal should not block access to this property and the other properties along that stretch of Wallis Road both during construction and operation.

## 1.3. Proposal

Below is an extract from drawing MP003-MIW-CB-DGA-0001:

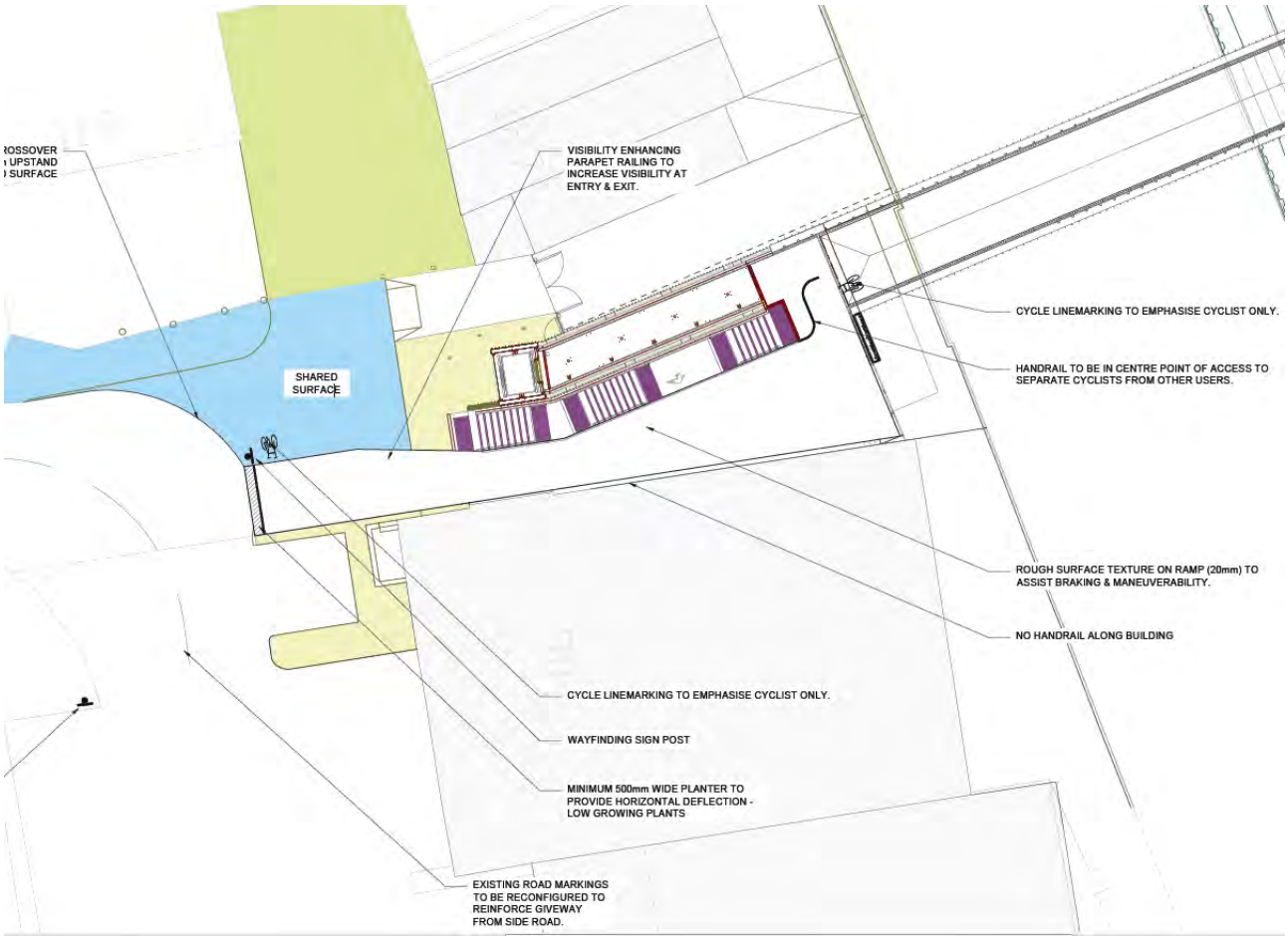


**Figure 1-2 Extract showing proposals from drawing MP003-MIW-CB-DGA-0001**

The proposed ramp is on a continuous gradient of 1 in 7 (14.3%) and width varying from 5.8m at the top; 2.5m near the foot of the existing stairs and 3.6m where it lands on the raised pavement area to the north west of 90 Main Yard. The width of proposed stairway is 1.9m.

## 1.4. Options to Reduce Ramp User Conflicts and Address RSA Comments

As it is not possible to provide the facilities set out in guidance, i.e. LTN2/08 and London Cycle Design Standards then the following should be considered to reduce/limit the safety concerns listed in the Road Safety Audit:

- Provide cycle route crossing warning signage on Wallis Road in advance of the expected crossing point for cyclists;
- Provide a road centreline on Wallis Road to reinforce sense of two way traffic for cyclists and vehicles re-joining from shared surface at base of ramp;

- Provide a shared surface at the bottom of the ramp and outside No`s 119 and 127 Wallis Road with colour contrast to adjacent carriageway. Provide a minimum kerb up stand of 20mm at the edge of the shared surface for the visually impair to navigate the area;
- Provide way/ route finding signage at the base of the ramp to assist user orientation;
- If cycle flows are anticipated to be low provide horizontal deflection at the base of the ramp to discourage cyclist joining Wallis Road at speed. Consideration should be given to a high visibility planter, approximately at waist height, with low growing, low maintenance plants. If cycle flows are anticipated to be high measures may be required at the 'T' junction of Wallis Road and Main Yard to define priority, reduce cycle speeds into the junction, and increase cyclist visibility. Consideration should be given to a priority give way system for cyclists at the bottom of the ramp, narrowing Wallis Road at its junction with Main Yard cul de sac, or changing priority at the junction, providing features i.e. bollards, or chicane to discourage vehicles entering the ramp and cyclists to slow at the base of the ramp, and consider prohibiting parking in cyclists visibility splays on Wallis Road; Any physical barrier inclusion will need to be risk assessed to reduce the risk of conflicts with ramp users;
- Provide an entry/ exit point to the base for the ramp (minimum 3m);
- Provide transparent parapet railing to maximise visibility entering and exiting the ramp;
- Provide cycle footway marking at top and bottom of ramp to reinforce cyclist only use of ramp;
- Provide pedestrian man footway marking at the top of the ramp to encourage pedestrians to use the stairs, to reduce risk of conflict with cyclists on ramp;
- Provide a rough surface texture on the ramp (London Cycle Design Standards, 20mm) to assist braking, traction, and manoeuvrability for cyclists;
- Not providing a handrail along the wall of building 90 Main Yard;
- Provide contrasting colour surfaces for pedestrian and cyclists to navigate stairs and ramp;
- Provide a continuation of the parapet railing at the top of the ramp to separate pedestrian and cyclists. Of the 3.6m available width at the top of the stairs provide 2.0m (minimum two way cycle standard) for cyclists and 1.8m for pedestrians (typical highway footway width);
- Provide sign arrangement above ramp to inform users of narrow width and steep gradient at top and bottom of ramp (both non-standard);
- Provide "SLOW" footway markings on the ramp to discourage speed;
- Ensure a minimum of 2.3m height clearance to all obstructions on building wall, i.e. flower baskets; and
- Provide suitable illumination of the ramp.

# Technical note

ATKINS

| | | | |
|---|---|---|---|
| **Project:** | LLDC | **To:** | [redacted] (LLDC), [redacted] (LLDC) |
| **Subject:** | Alternative Quietways Scheme Proposal | **From:** | [redacted] |
| **Date:** | 7 May 2015 | **cc:** | [redacted] |

## 1.0 Introduction

The Quietways Scheme is 'a new way of providing safe and direct cycling infrastructure as part of the Mayor of London's vision for cycling. By reprioritising and redesigning our existing infrastructure, and sharing information about the new routes, the Quietways will provide many more people with the opportunity to make their everyday journeys by bike.'

This technical note briefly investigates two routes for the Quietways scheme through the Queen Elizabeth Olympic Park (QEOP). Atkins' design team investigated these routes which alter the original scheme and run south along the footpath west of F03, meeting up again with the original scheme at the Wallis Road and Rothbury Road junction as advised by London Legacy Development Corporation (LLDC). These two options are presented in this document including positive and negatives aspects relating to each.

## 2.0 Original Quietways Scheme

The original route runs westerly over F03, along Copper Street, over Wallis Road (H10) Bridge, along Wallis Road and eventually passes underneath the A12 towards Victoria Park as shown in Appendix XX. The drawing shown in Appendix XX shows the assumed width of the various road/routes which the scheme is to take.

**Table 1 – Original Quietways Scheme Facts**

| Route Option | Length (km) | Signal Junctions | Journey Time* |
|---|---|---|---|
| Original | 0.7 | 0 | 3 minutes |

## 3.0 Alternative Quietways Scheme Proposals

Two alternative solutions have been proposed as the original was deemed unsafe around the Wallis Road (H10) Bridge due to the ramp gradient being 1:7.47. Therefore both these proposals discussed avoid the use of the previously proposed Wallis Road (H10) Bridge. However the following must be noted:

- Road markings used for these proposals shall be the same as per the Quietway scheme which is yet to be decided.
- Significant development is expected in the area which could increase construction traffic along the alternative cycle route. Mitigating measures maybe need to reduce such a risk in the future.

### 3.1 Route 2

This route shall run south along the footpath at F03, along Clarnico Lane, along White Post Lane, along Rothbury Road and eventually meets up with the original scheme at the junction with Wallis Road and Rothbury Road. This route will require minimal alterations to the existing infrastructure. This is shown in Appendix XX.

**Table 2 – Journey Time for Proposal 1**

| Route Option | Length (km) | Signal Junctions | Journey Time* |
|---|---|---|---|
| 1 | 1.0 | 2 | 5 minutes<br>(4 minutes + 1 min for 2 signalised junctions) |

It should be noted that the road conditions along from White Post Lane towards the Wallis Road – Rothbury Road junction may need to be remediated as it is currently in a poor state.

* Assumptions:
- Cycling speed used is 16 kph, in line with TfL's Cycling Journey Planner
- 30 seconds wait time per signalised junction

It should also be noted that in the medium term Clarnico Lane is scheduled for removal as part of the East Wick and Sweetwater Development. This removal is hoped that through consolation with the East Wick and Sweetwater Development this will coincide with the redevelopment of the Wallis Road area facilitating the adoption of the originally proposed route.

### 3.1.1 Gradient

The gradients of this selected route all adhere to the standards shown in Table 4. The steepest gradient found on this scheme is located at Clarnico Lane where for about a quarter of the road it is 1:16.5 (6%).

### 3.2 Route 3

Route 3 mirrors much of Route 2. It runs south along the footpath from F03, following onto the footpath at Mandeville Place, then follows the footpath along Marshgate Terrace over White Post Lane/Carpenters Road, before returning down and existing footpath to White Post Lane/Carpenters Road, running west along White Post Lane, along Rothbury Road and eventually meets up with the original scheme at the junction with Wallis Road and Rothbury Road. This route will require some alteration to the existing infrastructure, including a safety chicane near to White Post Lane/Carpenters Road and widening of an existing footpath on the approach to White Post Lane/Carpenters Road. This is shown in Appendix XX.

**Table 3 – Journey Time for Proposal 2**

| Route Option | Length (km) | Signal Junctions | Journey Time* |
|---|---|---|---|
| 2 | 1.3 | 1 | 5 minutes 30 seconds<br>(5 minutes + 0.5 min for 1 signalised junction) |

It should again be noted that the road conditions along from White Post Lane towards the Wallis Road – Rothbury Road junction may need to be remediated as it is currently in a poor state.

### 3.2.1 Gradient

The gradients of this route all adhere to the standards shown in Table 4. The gradient of the route as it returns down and existing footpath to White Post Lane/Carpenters Road noticeably steep (FIGURE) and therefore it is proposed that chicanes are installed to slow cycle users down.

### 4.0 Standards

Both proposed options adhere to the The London Cycle Design Guidance and London Transport Note 2/08 – Cycle Infrastructure Design standards shown below in Table 4.

**Table 4 – Standards relating to the Proposal**

| Standards Used | The London Cycle Design Guidance and London Transport Note 2/08 – Cycle Infrastructure Design |
|---|---|
| Recommended Maximum Gradient | • 3% (1:33.3),<br>• 5% (1:20) up to 100m,<br>• 7% (1:14.3) gradient over 30m be used. |
| Recommended Minimum Width | • 2.45m for one directional traffic,<br>• 3m for two way traffic. |

* Assumptions:
- Cycling speed used is 16 kph, in line with TfL's Cycling Journey Planner
- 30 seconds wait time per signalised junction

**Note of H10 meeting on 18 May 2015**

**Attendees:**

[redacted] LLDC
[redacted] (Hackney)
[redacted] (LLDC)
[redacted]
[redacted] (GLA)
[redacted] LLDC)
[redacted] (TfL)

**Key issues:**

- [redacted] sought to promote the alternative route via White Post Lane as a short term solution, but [redacted] rejected this citing concerns over increasing levels of HGVs with the planned construction. [redacted] supported [redacted] on this point and said Hackney wanted to retain the alignment via Wallis Road.
- [redacted] cited examples of where existing cycle routes have gradients at 1:7.5 or less without any recorded safety issues. He said he had 12 examples of which two were very recent:
    - A ramp on CS3, which he said was installed by TfL c.3 years ago with a gradient of 1:6.5. [redacted] – please can you speak to the CSH team and find out about this ramp [[redacted] thinks it was in place before the CSH was installed] - was a safety audit undertaken and what mitigations were implemented to address the gradient issues. I said I'd share with LLDC any findings on this example.
    - A ramp on the Ridgeway in Greenwich, which he said was another new facility which the borough has only recently implemented at a gradient of greater than 1:7.5.
- [redacted] shared the accident stats for Bow roundabout and said the new Wallis Road ramp would provide a viable alternative for cyclists. I explained that TfL's modelling was not sophisticated enough to determine whether trips would transfer given the distances between the routes / desire lines.
- I asked about the timeframe to realise the masterplan and longer term ramp solution – [redacted] said at least five years as some of the land is not in LLDC's ownership. [redacted] said he thought it would be closer to 8 – 10 years, which LLDC did not challenge.
- The discussion focused in on the safety audit issues and potential mitigations. [redacted] shared the latest plan and advised an architect would need to be appointed to develop the design further to address both the design and heritage issues. I advised LLDC they would need to sign off the safety audit as they would be the owner of the ramp and the infrastructure owner cannot negate responsibility to another organisation or individual, however, [redacted] offered to draft a statement on behalf of Hackney once the next iteration of design is complete advising that the borough consider the mitigations sufficient and that they are supportive. I said TfL could potentially do similar, but first we would need to see the next iteration of design and the results of a stage two safety audit. It was agreed TfL would pay for the next stage of design work.
- [redacted] asked about the TfL approval process. I advised we would be looking to go back to Surface Board in the autumn (September?) to seek approval for funding the route implementation and this would be one of the items which we would be seeking agreement on. To do this I said we would need to compare the costs, benefits and dis-benefits of the different options (i.e. temporary H10 ramp, alternative alignment or other solutions such as electric ramps). [redacted] accepted this was necessary and I said we would get Sustrans to investigate the alternative route in terms of viability/requirements/costs.

- [redacted] challenged LLDC on the approval and implementation timeline suggesting they could reduce the process by at least two months, which they agreed to look at.
- [redacted] offered that TfL take the lead in taking forward the planning and approvals. I said I wasn't sure this was practical as it was LLDC land and they were the approving body. It was agreed that both LLDC and TfL consider this further.

**Next steps:**

- [redacted] please can you liaise with [redacted] on them appointing an architect to work up the design.
- I propose we ask Sustrans to look at the alternative route and determine what measures would be necessary and costs. We can then use this information with the analysis of journey times that has already been completed to undertake a simple cost-benefit analysis between the options, coupled with the wider information contained in the note you previously produced. This can then be used to inform the recommendation to Surface Board.