

Ashton Canal Bridge

Design and Access Statement

Document history

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Project Team

Client:

Manchester City Council (MCC)

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1 Introduction

1.1 Executive summary

1 Introduction

1.1 Executive summary

Statement

For the purposes of this statement the proposal is referred to as ‘proposed bridge’ or ‘Ashton Canal bridge’.

Planning Application Proposal

The application relates to the proposed site in New Islington, Manchester on the Ashton Canal, adjacent to Lock No.3.

The scheme comprises a small span bridge to the south of the existing Grade II listed lock, alongside towpath alterations on the western bank adjacent to the Chips Building. The public realm scheme will comprise hard and soft landscaping to help embed the bridge within its context and to reduce the impact on the listed lock.

Architectural Commission

This report has been produced on behalf of Manchester City Council, in support of the planning application for the Ashton Canal bridge.

Hawkins\ Brown were appointed by Manchester City Council in 2021 to develop the design for a bridge in this location. Current access between the two sides of the canal in this locality is available across the listed Ashton Canal Lock No.3. This crossing restricts movement when in-use as an operational lock and is significantly compromised for use by cyclists and pedestrians due to its narrow width and uneven surface.

A new bridge crossing at this location has been identified through the Northern and Eastern Gateway walking and cycling scheme which has been through two rounds of public consultation. Funded by the Greater Manchester Mayor’s Challenge Fund, through a grant from the government’s Transforming Cities Fund; we understand that the ambition is that the Ashton Canal bridge will form part of new continuous active travel route from New Islington through to the Green Quarter.

Pre-Application Consultation

The application is made after pre-application meetings with Manchester City Council, other statutory consultees and stakeholders, local community, local organisations and users during the design development of the bridge. Regular dialogue has taken place with senior officers at Manchester City Council’s Planning and Conservation Departments.

The design process has been informed by feedback from

consultation with Client and the Local Planning Authority gathered during a series of online meetings and exchanges of correspondence summarised as follows:

MCC Consultation

- 23rd February 2021: Pre-application meeting was held with MCC as Local Planning Authority. Whilst linking the two sides of the canal were supported, it was considered that the initial structural design put forward by Wilde would require further work to sit more comfortably within the historic context and reduce pinch point at Chips entrance.
- 08th June 2021: follow up meeting with the planning officer to discuss the proposals in principle, previous design iterations, and the key considerations that should be worked through during the design development stages.
- 24th June and 05th July 2021: early emerging designs were presented to Manchester City Council Planning and Conservation Officers to seek their views and present further consultation feedback received from Canal and River Trust.
- 30th June 2021: developed designs were presented to Manchester City Council to seek their views, who were supportive of the contextual approach and design analysis. It was agreed that the final CGIs would be issued to officers prior to an application being made.

Local Councillors

- 13th January 2021: initial Meeting with the ward members on 13th January, where team discussed the bridge briefly but not much detail was available. All were happy with the improvement to the current crossing
- 1st of July 2021: MCC Major Projects met with Ward Members on 1st July to provide them with feedback about the consultation and the bridge design development. Comments from Councillors requested that there is a good alternative route as it’s a large detour if the current bridge is unavailable when construction is taking place. It was confirmed that updated visuals to be circulated with councillors prior to submission.

Canal and River Trust

- 6th October 2020: Initial meeting was held to understand the constraints for the site.

- 15th January 2021: CRT sent letter detailing concerns around the initial proposals, including that the bridge should be high enough/ allow enough clearance.
- 30th June 2021: further designs were presented to CRT to seek their comments on the updated scheme.

TfGM

28th April 2021: initial engagement with Transport for Greater Manchester via email, which discussed the operation of the tramline at New Islington and its future potential development in relation to the Pollard Street project and the bridge would interlink. Relevant parameters or restrictions on construction vehicles crossing the tracks at Munday Street were provided to confirm how any potential safety conflicts between the tram lines and cyclists would be managed.

06th July 2021: early emerging designs were presented at a TfGM Design Review to seek their views; and present further consultation feedback received from MCC and Canal and River Trust;

GMP

- 08th July 2021: site visit and designs presented to Greater Manchester Police to seek their views and understand secure by design requirements and improvements. This followed initial briefing emails in February and March 2021 to make GMP aware of the scheme and context. Key recommendations from GMP centred around lighting for security both under the bridge, the crossing, and relating to roads and pedestrian routes around the site. GMP also recommended site management and security features built into the design and construction of the bridge are carefully considered and that materials used are sealed, protected and/or support the removal of graffiti.

Little Learning Ladder

- 16th July 2021: Little Learning Ladder (LLL) was contacted via email with a brief description of the proposals, the location of the bridge, and documents detailing the design at this stage, with an offer for a follow up meeting. A follow up email sent 27th July 2021. At the time of writing, there has been no response from LLL but engagement will continue during the application process through neighbour consultations and they will be notified of the gaps.

Chips Residents

- 16th July 2021: CHIPS leaseholders were contacted via email with a brief description of the proposals, the location of the bridge, and documents detailing the design at this stage, with an offer for a follow up meeting. A follow up email sent 27th July 2021. A response was received prior to submission confirming that they had reviewed the proposals and had no further questions at this stage.

General Projects

- 26 February 2021: team met with GP and discussed how the design would integrate with their proposed Pollard Street Design and get their initial comments on the proposed location. A number of key concerns, including the design and lighting of the bridge have also been considered and improved during their progression of Wilde’s original design.

Public Consultation

- March 2021: A public consultation took place for the entire proposed MCC Northern and Eastern Gateway Scheme in March 2021, asking for comments both on the proposed route as a whole and the new bridge. Mostly comments were associated with the route comments on the scheme, including inclusion of a separate cycle lane, but were not directly relevant to the design of the bridge. The primary comment on the bridge was that it wasn’t wide enough, but CRT had previously noted that a wider bridge would have greater impact on canal function.

Summary

Full details of all consultation undertaken during the design development stages are set out in the Planning and Consultation Statement prepared by Deloitte and submitted as part of this Application. In summary, all comments and constraints identified during the pre-application process have been considered and reflected in the design where possible, as set out in this Design and Access Statement.

The consultation process will also continue as part of the formal statutory planning procedure managed by the Local Planning Authority. During this process, the applicant and the project team will carefully consider any comments received from consultees and will respond as appropriate through the Local Planning Authority.

2 Understanding the context

- 2.1 Site context and existing conditions
- 2.2 Future development
- 2.3 Existing crossing
- 2.4 Opportunities and constraints

2

Understanding the context

2.1

Site context and existing conditions

Site location

The proposed bridge is to be strategically located south of Ashton Canal (Islington Branch) Lock No.3, sited between the Chips Building and the consented Pollard Street scheme (planning ref:128191/FO/2020), positioned as a link between future development planned for both sides of the Ashton Canal and the larger catchment area. The development will bring a significant change to the existing character of the area, and the bridge will play a key role connecting the existing residential, commercial and cultural neighbourhoods with the New Islington Tram Stop and wider City Centre walking and pedestrian network.

The current bridge located on the lock is unsuitable for shared cyclist and pedestrian use, with narrowing around the lock gate arms that impede movement and create collision hot spots. It is envisaged that a new link between New Islington Marina and the New Islington Tram Stop at the heart of the Pollard Street scheme will contribute to the commercial and social success of the area, giving people the opportunity to easily walk or cycle between these areas, and into / out of the city centre.

N

City Centre

Neighbourhoods

Green spaces

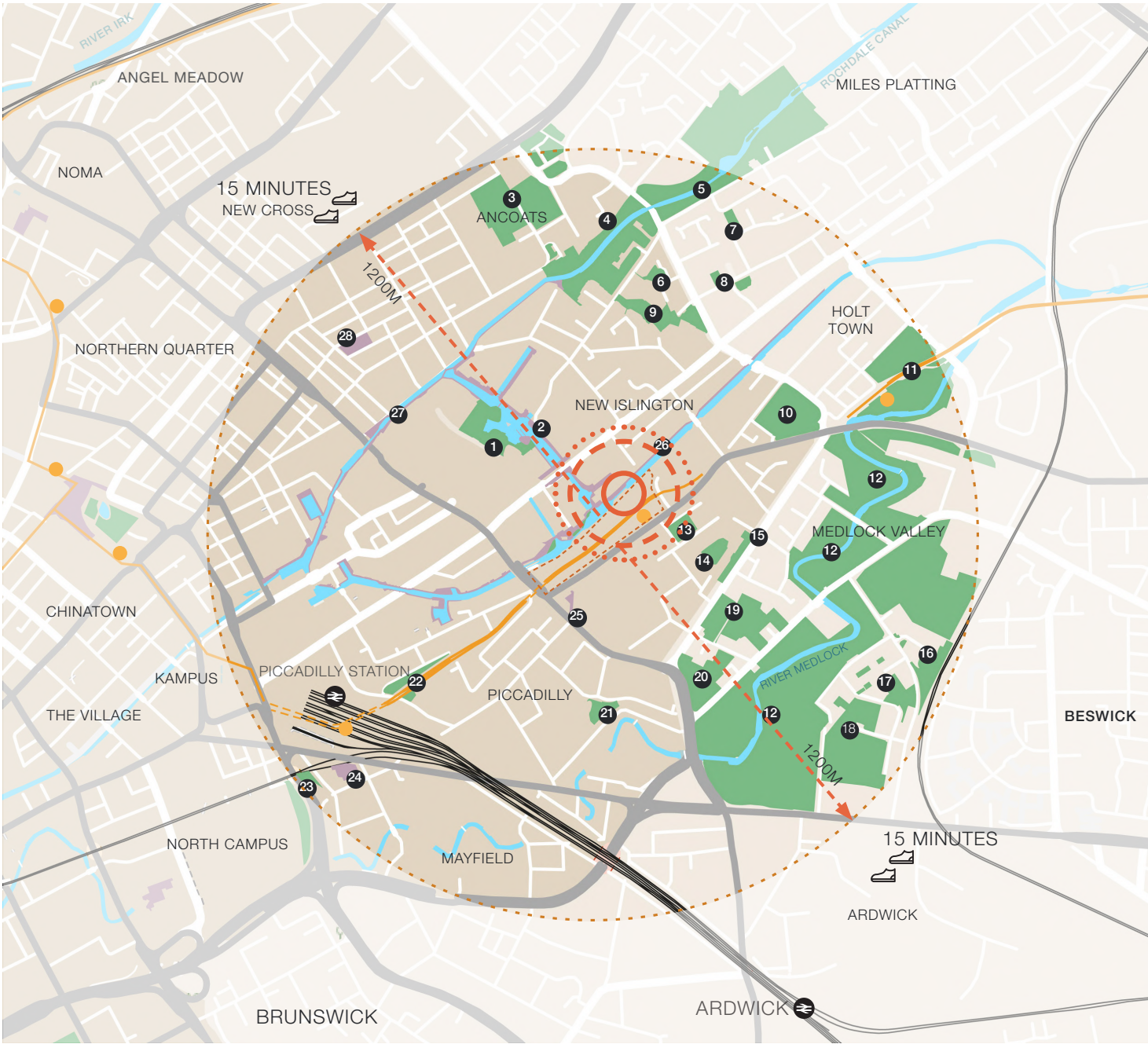
Public spaces

Metrolink

Railway

Administrative boundary

Walking distance - 15 min = approx.1200m



- 1 Cotton Field Park
- 2 Islington Marina
- 3 Ancoats Green
- 4 Victoria Mill Park
- 5 Royle Basin
- 6 Firbeck Drive Greenspace
- 7 Marcer Road Greenspace
- 8 Ridgeway Street Community Gardens / Greenspace
- 9 Buttler Street Greenspace
- 10 Beswick Street / Merrill Street Greenspace
- 11 Holt Town Metro Stop Greenspace
- 12 River Medlock Corridor
- 13 Robbie Park
- 14 Mayes Gardens
- 15 Every Street Greenspace
- 16 Viaduct Street Greenspace
- 17 Ashlar Drive Greenspace / Courtyards
- 18 Markham Close Greenspace
- 19 Ancoats Grove Greenspace
- 20 Palmerston Street Greenspace
- 21 Gidding Road Greenspace
- 22 Sheffield Street / Baird Street Greenspace
- 23 MacDonald Hotel Greenspace
- 24 Travis Street Car Park Temporary Public Space
- 25 Ibis Hotel Open Space
- 26 Ashton Canal Tow Path
- 27 Rochdale Canal Tow Path
- 28 Cutting Room Square

2 Understanding the context

2.1 Site context and existing conditions

Existing context

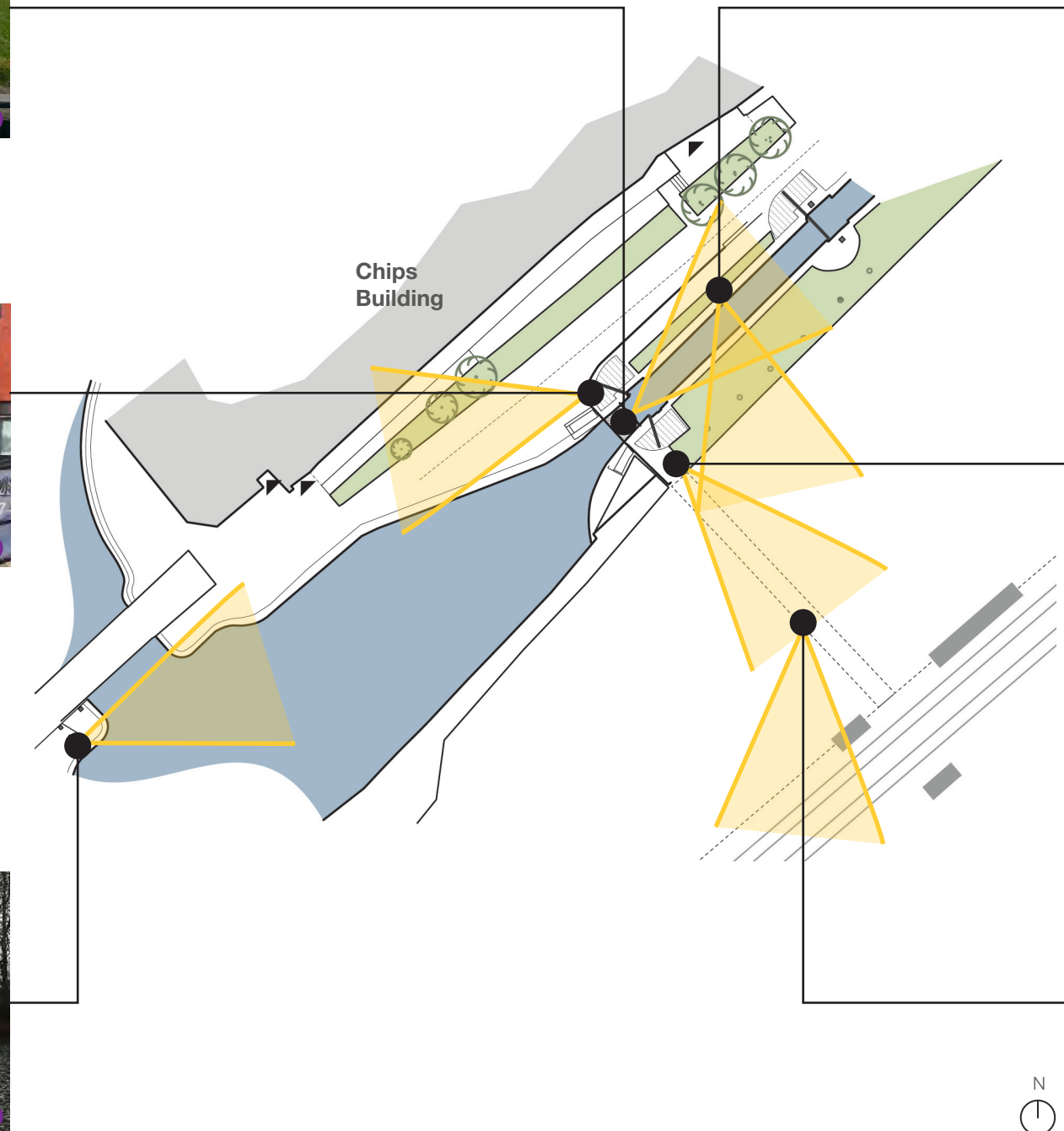
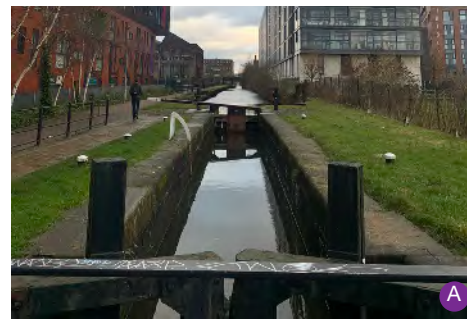
The existing bridge crossing this stretch of the Ashton Canal is located in a part of New Islington where recent developments use ambitious and contemporary structural forms and materiality, creating a diverse collection of colours and textures.

The bridges immediately upstream and downstream to the proposal are often historic red brick bridges, with some cobblestone finish. The bascule bridge located at the south end of the Chips building utilises a traditional steel overhead counterweight painted a striking industrial yellow with timber deck, while the more contemporary 'Cast No Shadow' bridge to the north of New Islington Marina, constructed in 2013, uses perforated steel panels with a concrete deck, concealing rather than exposing the structure beneath.

On the eastern side of the canal, the New Islington tram stop is situated in front of a collection of historic mill building fronting Pollard Street (D, E, and F), while the residential Chips building (B and D) on the western bank is a quirky and bold response to the canal-side setting. It's unusual form and cladding seek to break down the mass, while the building cladding covered in newspaper print seeks to echo the industrial heritage of the local area.

The Chips building, with the nursery at its southern end on the ground floor, has a small access route directly adjacent to the building and a further service access route. A planted area borders the existing towpath, with a mixture of shrubbery and semi-mature trees. This face of the Chips building is broadly inactive at ground floor, with the towpath providing the life along this edge.

Milliners Wharf (C) sits to the north-east of the proposed bridge location, mirroring the linear nature of the Chips Building and maximising views down onto the canal and historic locks.



2

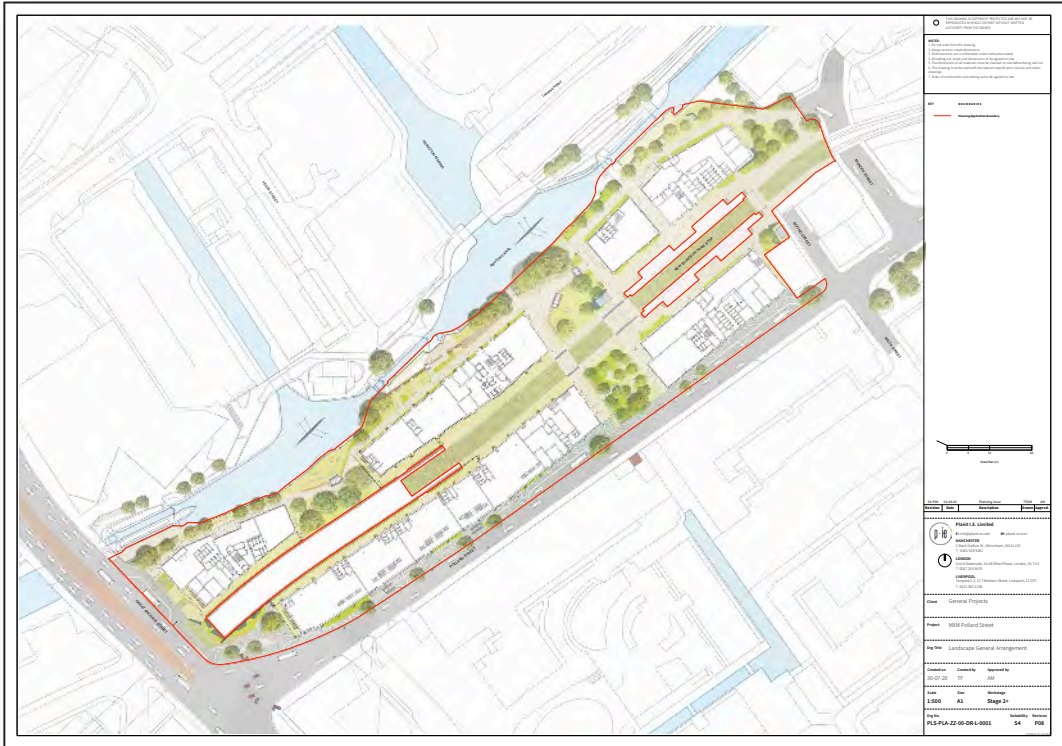
2.2

Understanding the context

Future development

Pollard Street consented scheme
General Projects (Ref: 128191/FO/2020)
Building D sits between the proposed bridge location and the New Islington Tram Stop, enhancing the proposed canal-side walk and strengthening the north-south cycle and walking routes through the site.

The scheme aims to deliver a long-life, sustainable and modern destination in the city – distinctive in its relationship between buildings and landscape – the majority of which is publicly accessible green space. Under the proposals, General Projects would construct five buildings containing a mix of office space ranging from micro-units to grade A ‘innovation’ offices, intended to appeal to ambitious start-ups, fast-growing SMEs and more established businesses.



2 Understanding the context

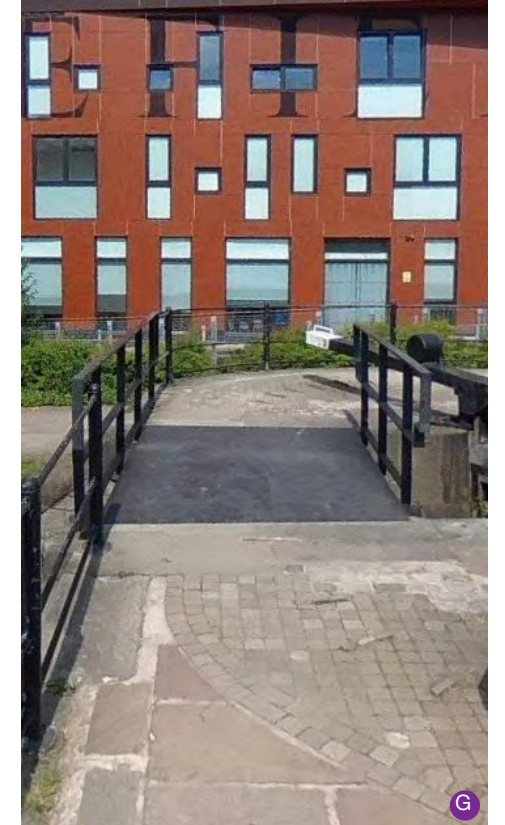
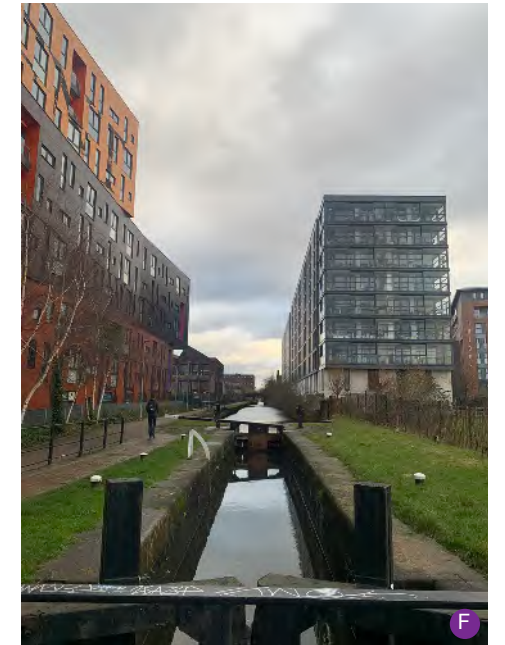
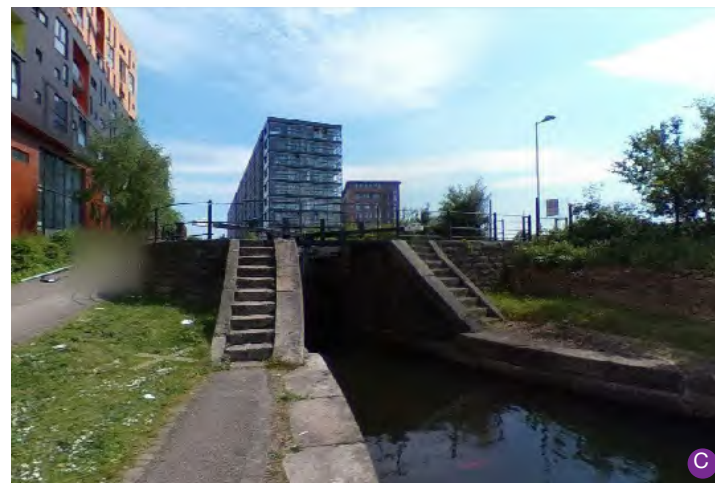
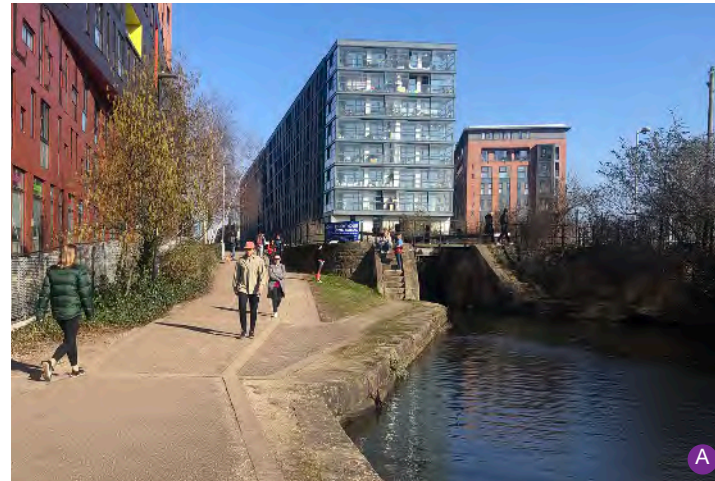
2.3 Existing crossing

Ashton Canal Lock No.3

The Grade II listed lock is part of a group listing of 13 similar locks along the Ashton Canal, all in working order. It features stone steps to the southern approach, flanking the lock entrance / exit with the western set leading to a mooring area on the eastern bank (A), and an informal arrangement at the base of the nearside steps with an area of grass and a quilt of different ground surface finishes. The eastern set lead to an inaccessible landing above the canal by-water.

On top of the lock, non-original black cast-iron look balustrades provide protection against falling, and restrict access to the steps from the lock itself (A-G). The working lock arms mean that access around the curved western wall is tight, and difficult to navigate for e.g. cyclists or those with prams, requiring a tight, nearly 90deg turn (D).

A simple crossing point is provided over the lock that utilises a lightweight black steel plate, with raised relief to provide additional grip underfoot.



2

Understanding the context

2.4

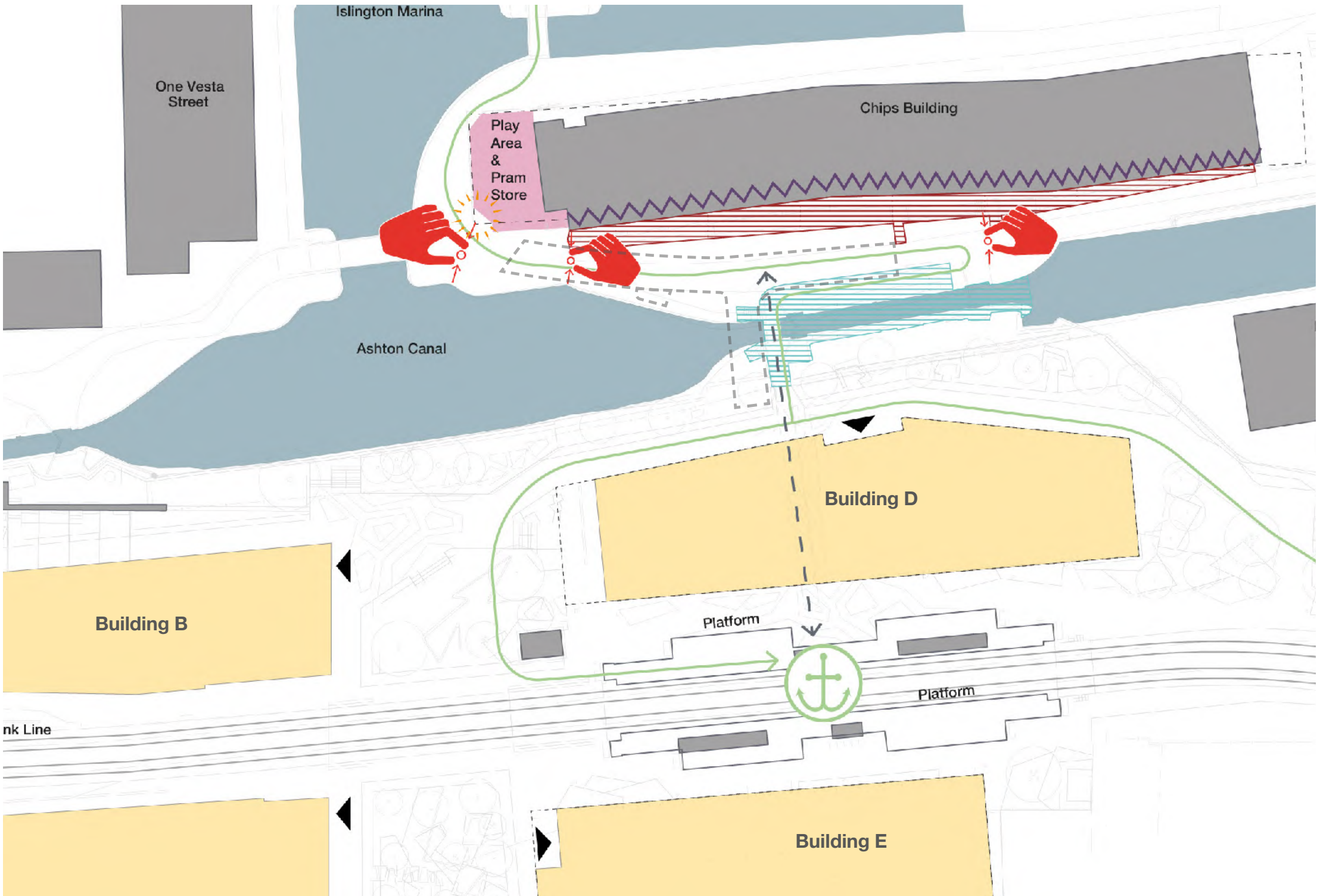
Opportunities and constraints

Understanding the site

One of the main constraints of the site is that it is very constrained, with a minimal area to ramp up to the required minimum height from the south-west side. There are a number of pinch points that require full-time access, with a blind spot on the corner of the nursery outdoor space and pram store exacerbating this tight junction, where people will be travelling to and from multiple directions. The Grade II listed lock presents both an opportunity and a constraint, and we believe the new bridge can act to sensitively celebrate the historic setting without blurring where old ends and new begins – each structure retaining its own identity.

Key

-  Inactive frontage
-  Beeline
-  Cycling-Walking Onwards Connections
-  Proposed Canal Walk
-  Wilde Recommended Location
-  Potential Blind Spot
-  Service Access
-  Grade II Listed Asset
-  Pinch Point
-  Sustainable Travel Anchor Point
-  Existing Buildings
-  Proposed Workspace Development



3 Establishing the brief

- 3.1 Standards and guidance
- 3.2 Design parameters
- 3.3 Project aims and objectives

3 Establishing the brief
3.1 Standards and guidance

The following guidance has been taken into account in the design.

Sustrans
Technical Note 30 Parapet Heights on Cycle Routes
Technical Note 29 Lighting of Cycle Paths
Handbook for Cycle Friendly Design

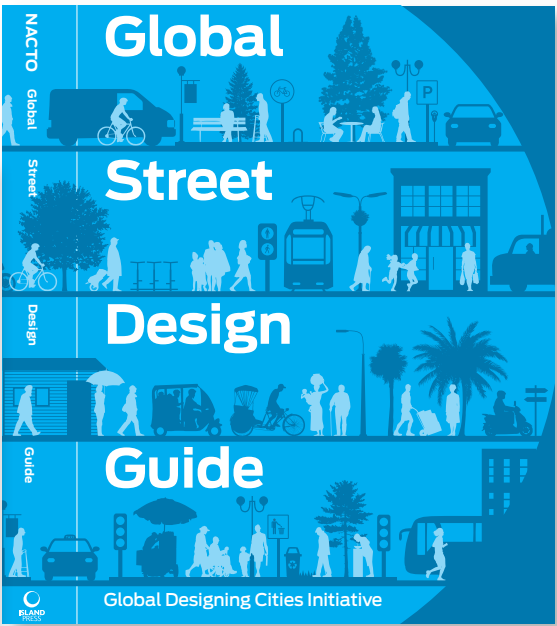
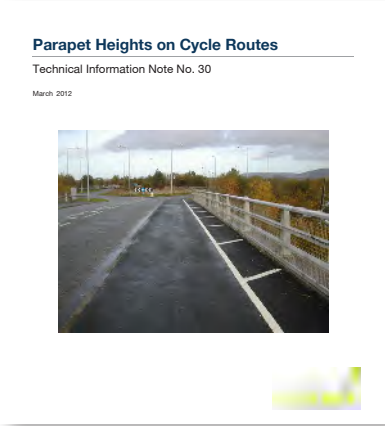
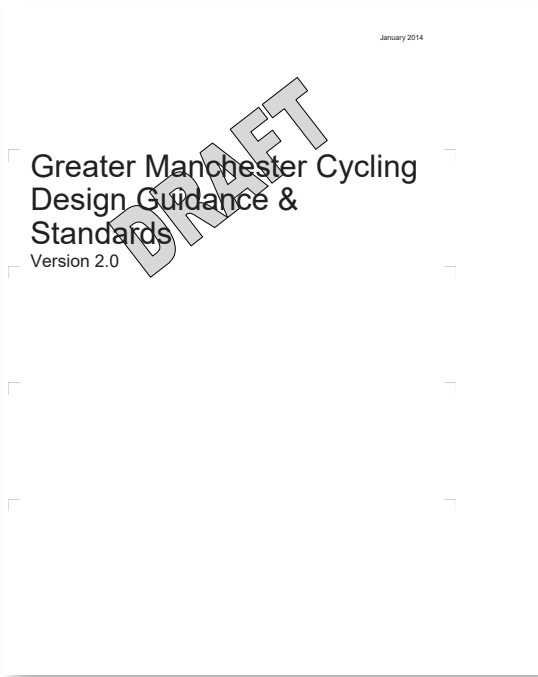
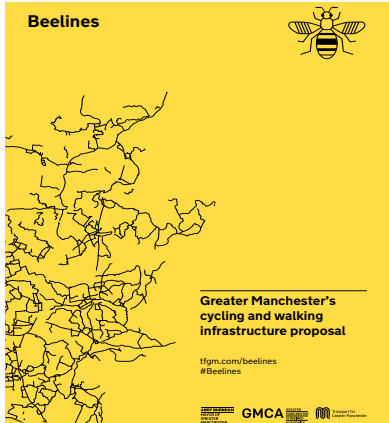
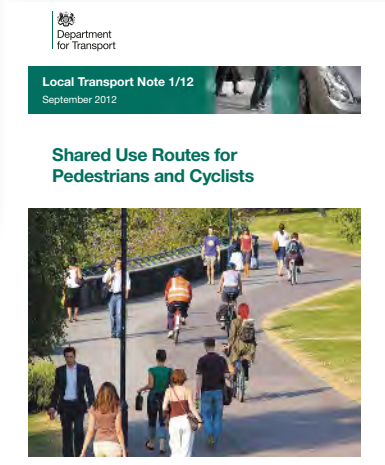
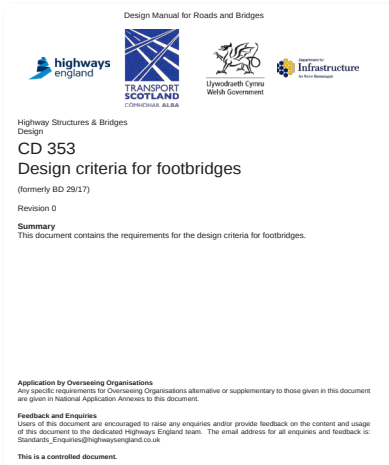
Department for Transport
Design Guide for Inclusive Mobility
Local Transport Note 1/20 - Cycle Infrastructure Design

Which has replaced:
Local Transport Note 2/08 - Cycle Infrastructure Design
Local Transport Note 1/12 - Shared Use Routes for Pedestrians and Cyclists

Department Manual for Roads and Bridges
CD 353 Design Criteria for Footbridges

Planning Guidance
Manchester City Council Guide to Development in Manchester
Supplementary Planning Document

Other
Gear Change: a bold vision for cycling and walking
Made to Move
Bee Network
LCDS Off Road Cycling
Global Street Design Guide



3

Establishing the brief

3.2

Design parameters

The site has a number of key datums that needed to be considered when developing the proposal, and a considerable height difference between the two banks. Canal and River Trust advised that there is a minimum requirement of 2.12m clear height from the water level to the soffit the underside of the bridge. This section is taking downstream of the lock, and shows the New Islington landing at c.1m below the Pollard Street side as well as the minimum height clearance datum above the water.

1. Canal Navigability

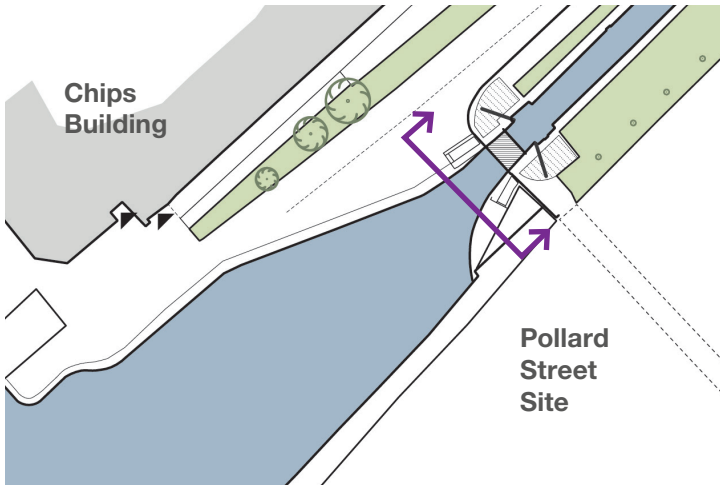
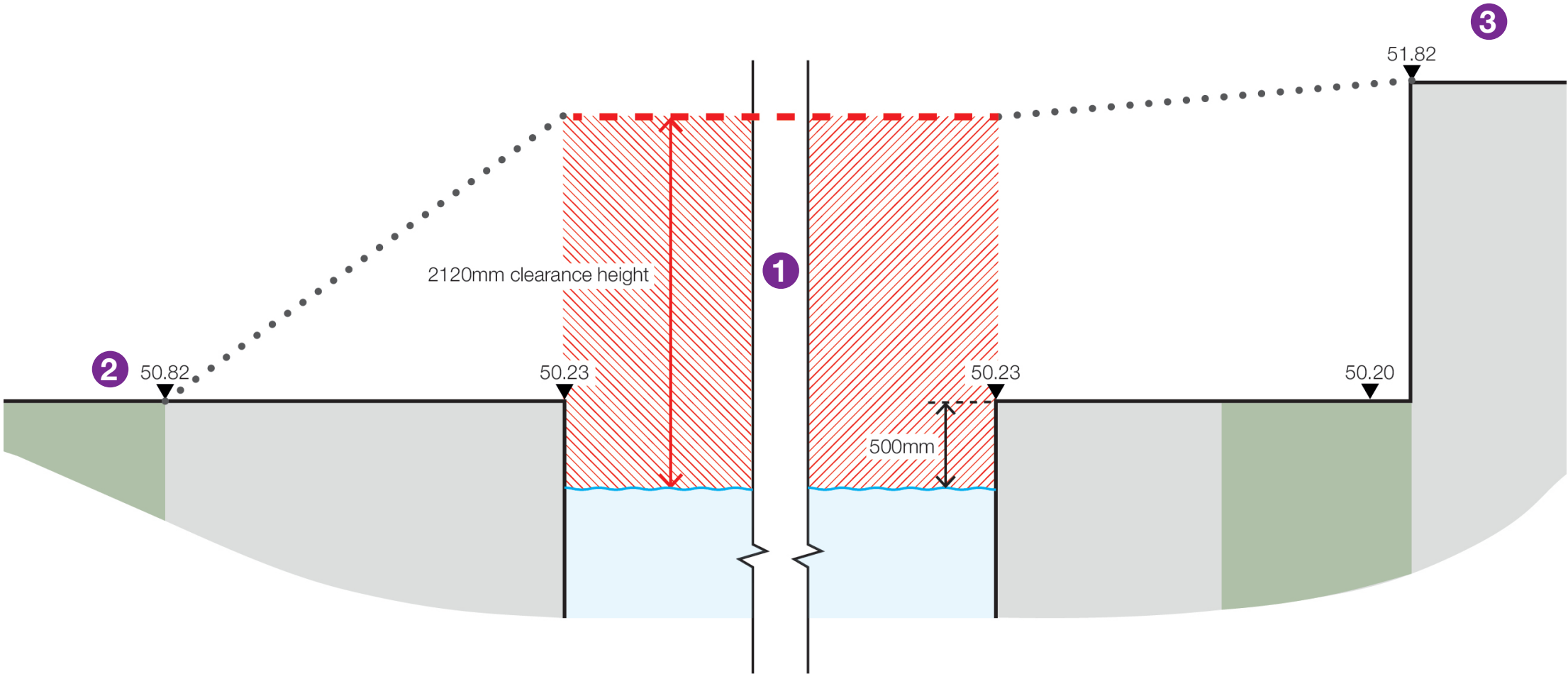
- Min. soffit level of 51.85m (AOD) is required across the full width of the canal
- Min. requirement of 2,120mm clear height from water level

2. New Islington Landing

- Canal Coping Stones = 50.23m
- Existing Grass Edging = 50.82m

3. Pollard Street Landing

- Canal Coping Stones = 50.23m
- Existing Grass Edging = 50.20m
- Canal Wall = 51.82m



3

Establishing the brief

3.2

Design parameters

Developing the approach to width

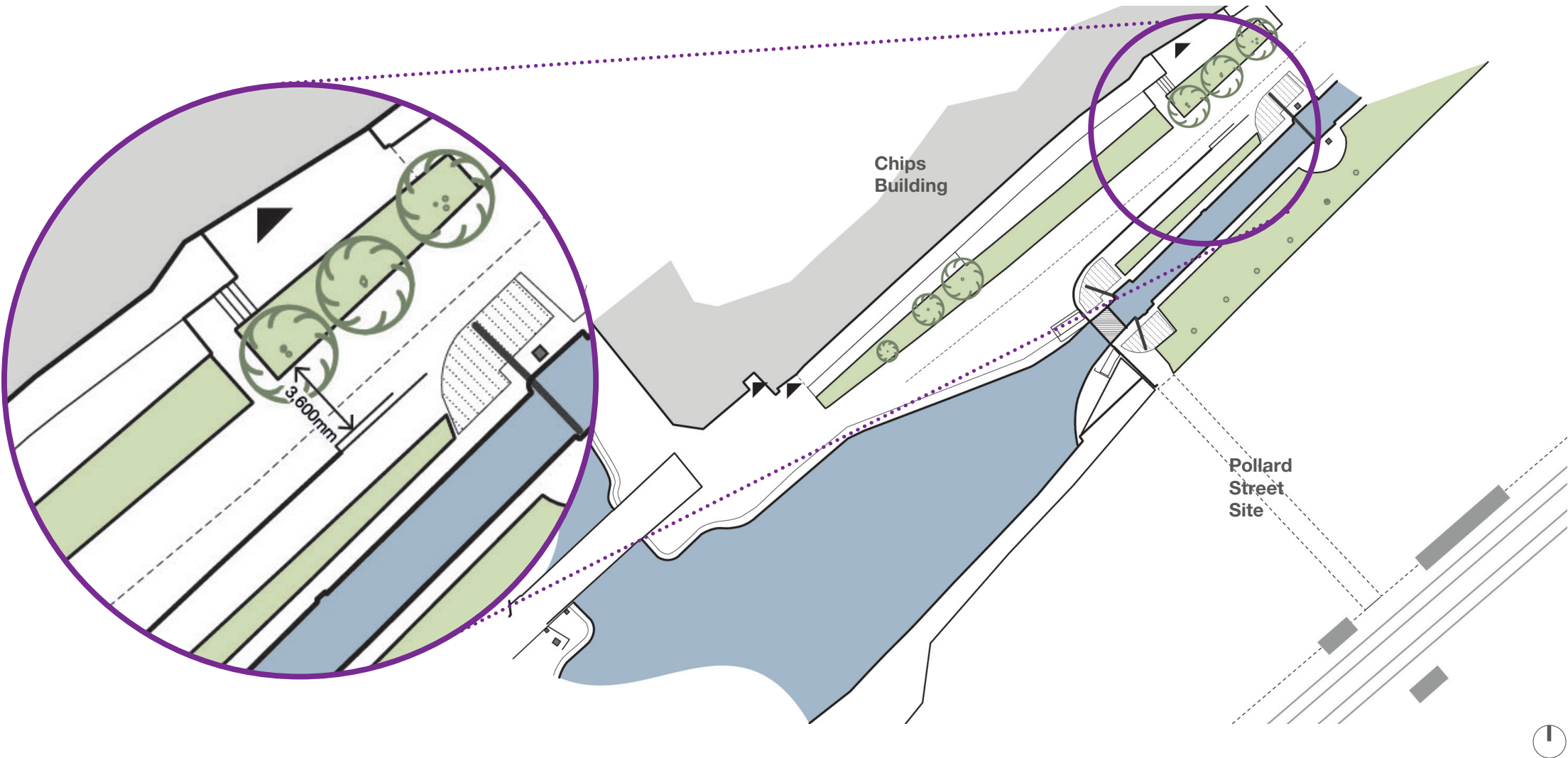
The bridge is proposed to improve walking and cycling connectivity across the Ashton Canal, within the context of a growing walking and cycling network and future development either side of the canal.

- Use/Access**
- Sufficient width for cycle and pedestrian use
 - Bridge approach to be fully DDA compliant

- River Navigability**
- Min. soffit level of 2.12m is required across the full width of the canal

- Maintenance**
- Design and material choice to consider access, minimise maintenance and maximise longevity

There is an established pinch point at the top of Lock No.3 (see opposite), which currently measures c.3.6m across. To avoid exacerbating this pinch point, and worsening the funnelling effect which could increase cyclist speed along the tow path, the bridge and associated ramps are consistent along their entire length from this northern access point.



3

Establishing the brief

3.2

Design parameters

Design Manual for Roads and Bridges (DMRB)

The DMRB provides a minimum width requirement for bridges used by both cyclists and pedestrians. Cyclists and pedestrians can be separated by either a line, a change in surface treatment, or a 50mm kerb.

The location and onward connections of the proposed bridge is likely to attract a higher number of pedestrians than cyclists, particularly at night. It is also likely that the approaches to the bridge on both sides of the canal will not have dedicated cycle lanes as they form part of the proposed Pollard Street linear canal park and existing Ashton Canal towpath.

CD 353 and LTN 1:20 give specific guidance on the design requirements for footbridges, including where there is pedestrian and cycle use. The following parameters have been taken forward in the design as part of the technical brief.

Ramps

- Gradient ≤ 1:15 due to constrained site
- Min. internal radius 5.5m

Useful Width*

- Segregated by 50mm kerb ≥ 4.7m
- Segregated by line ≥ 4m
- Unsegregated ≥ 3.5

*Choice of segregation to match bridge approach

Parapet (CD351, BS:7818 and BS:8300)

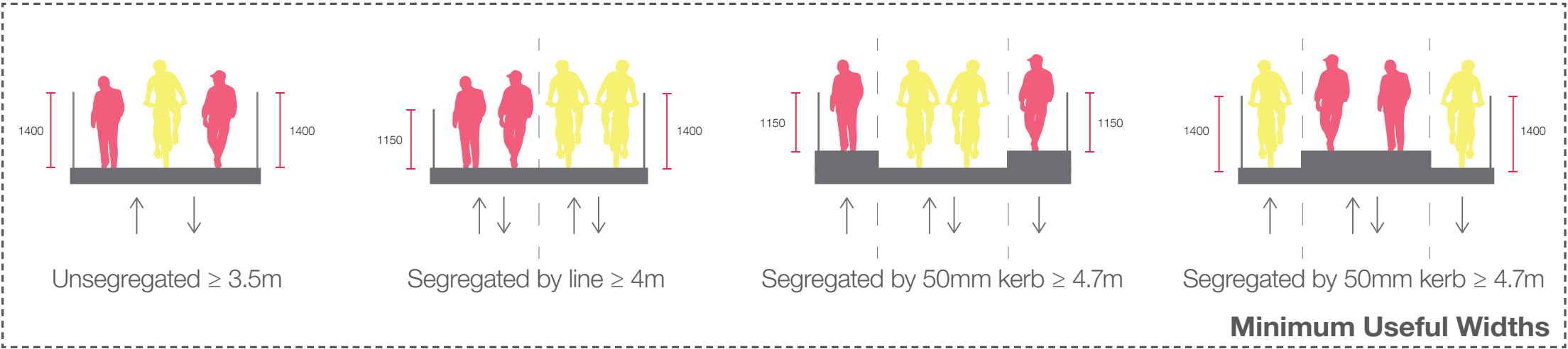
- Min. 1.4m for cycle use

Handrails (BS:8300) To

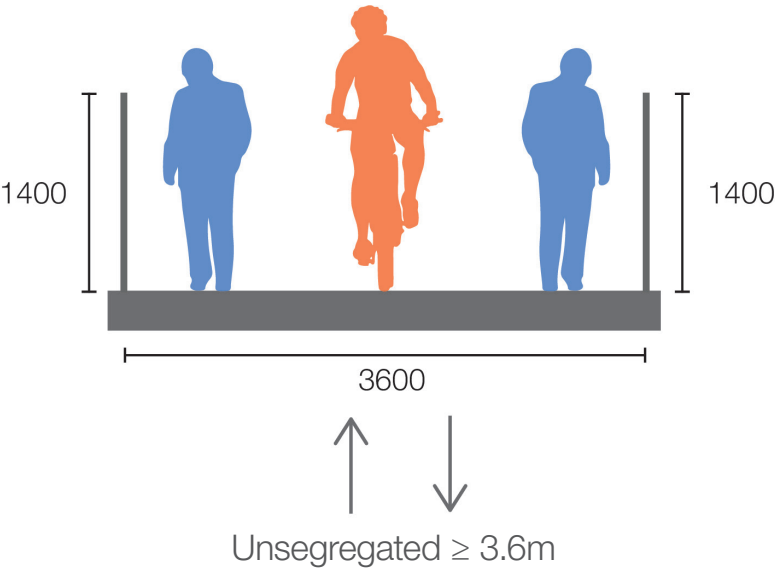
To be provided to decks ≥ 1:20 gradient

Slip Resistance

- Pendulum test 45 ptv



Preferred strategy => unsegregated



3

Establishing the brief

3.3

Project aims and objectives

Linking Communities

The bridge spans the Ashton Canal landing at different levels on each bank, as well as having passers below on different canal boats. It is therefore important that the bridge has a degree of transparency so that lines of sight are not impeded by the necessary structural elements, and that the view of the lock is maximised. At the same time, the setting of the bridge, amidst large-scaled buildings, will benefit from some solidity, giving it the appearance of appropriate human-scale mass in proportion to the surroundings. These helped to inform the projects aims and objectives:

- 1

Celebrate The bridge will offer a unique perspective on the surrounding setting, and a human-scale moment between the delivered and emerging developments.
- 2

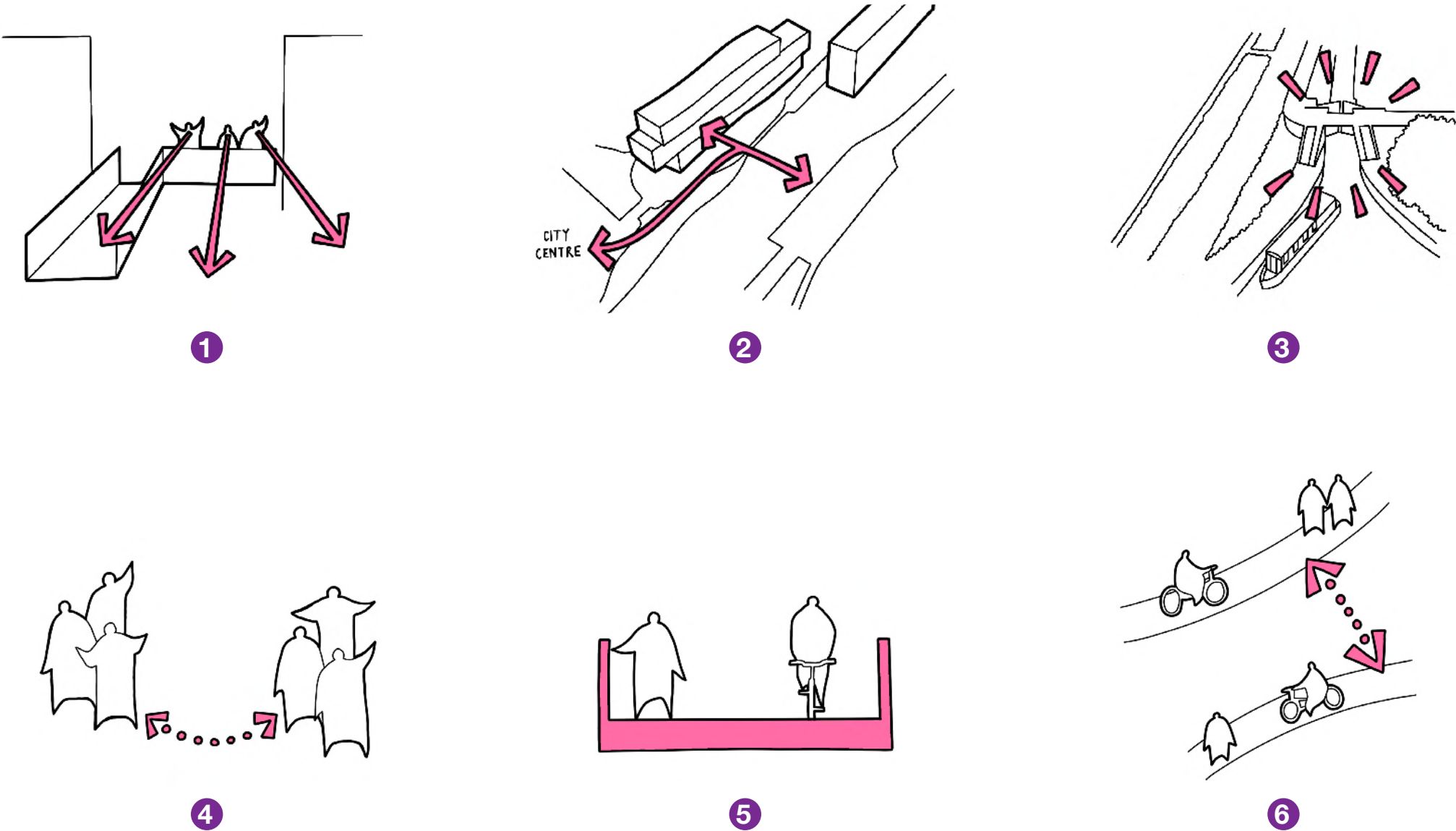
Integrate The two sides of the canal are set to have both thriving residential and commercial communities, and the bridge offer the opportunity to unite and integrate these two uses
- 3

Enhance The listed lock is an important feature of the basin, and should remain as visible as possible, celebrating its heritage without masking it. Similarly, canal users benefit from a unique perspective of the bridge which must be considered
- 4

Harmonise The bridge is for both pedestrians and cyclists, and its important that they are both equally as important and welcome on the structure, with no one group given priority
- 5

Exemplify As a new installation, it is vital that within the confines of the location and the individual challenges of the site that the bridge offers an exemplary solution that celebrates a human-scale public space, renegotiating the focus of users as they reduce their speed while crossing and take a moment to focus on their surroundings
- 6

Connect Manchester is working hard to create a safe, friendly network of walking and cycling routes, and this bridge is a key link in the network



4 Design principles

- 4.1 Maximising visibility
- 4.2 Materials inspired by the historic fabric
- 4.3 Springing between communities
- 4.4 Design iteration
- 4.5 Materiality
- 4.6 Key design moves

4

Design principles

4.1

Preserving the historical setting

Existing setting

The Grade II listed Ashford Canal Lock No.3 is currently set on the edge of a broadly residential area, with a towpath of variable width (ranging from c2.7m to c4.6m in the immediate vicinity) on the Chips Building bank to the west. The area to the east of the lock is currently vacant cleared industrial units that is set to be redeveloped as a series of commercial buildings with linear parks throughout. The lock benefits from being visible from along the full length of the towpath, with the widening of the basin to the south reducing this visibility slightly for users approaching from the south-west. The key, original elements of the lock - the lock gates and steps - are most visible when approaching the lock by boat, and are an important part of the historic asset.

Key

Primary elements of Grade II listed asset



Existing approach

Proposed setting

The proposed bridge seeks to preserving historical setting and significance of the listed lock whilst maximising the view of the historic structure, particularly the lock steps and gates, and improving the user experience of the lock setting. The canal edge is emphasised and highlighted by the ramped approach, which follows the canal coping stones up to the mooring area. The proposed steps to the mooring area echo and mirror the lock steps orientation, while the bridge deck has been optimised to be as slender as possible and maximise the view of the lock and gates, especially for canal users. The bridge will form an important link across from the linear park proposed on the Pollard Street site to the existing communities around New Islington marina.

Key

Primary elements of Grade II listed asset

Proposed alterations to towpath approach



Proposed approach

4

Design principles

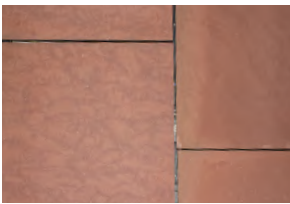
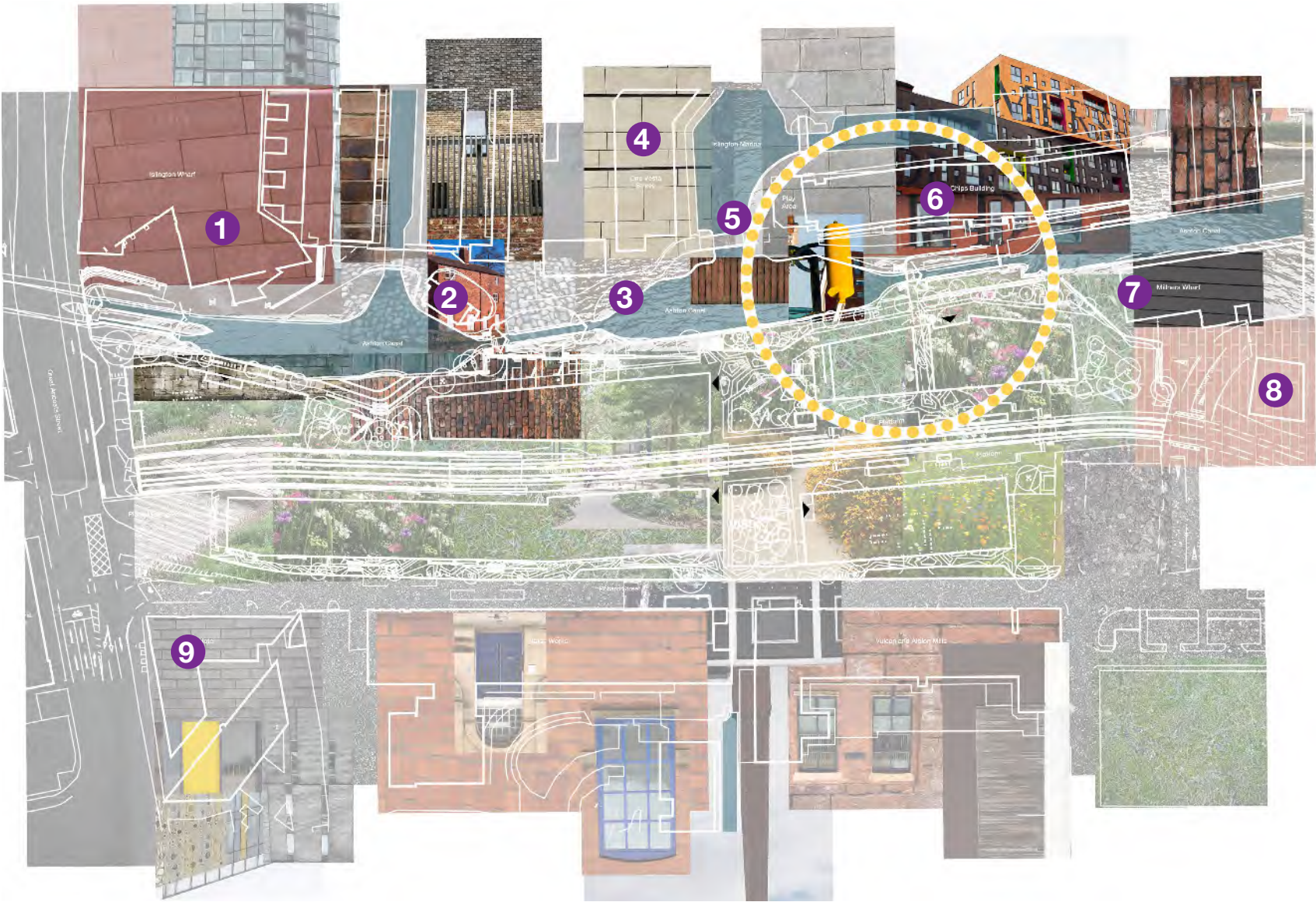
4.2

Materials inspired by the historic fabric

A new canal vernacular

Looking at the context of the site, the material palette is eclectic, ranging from the traditional Manchester red brick of the Lock Keeper's Cottage, to the more colourful GRC panels used on the surrounding offices and residential blocks. This gives the opportunity for the bridge to have its own identity that enhances its setting, and sensitively references the rich history of the site.

Bridges over canals are often colourful, as may be glimpsed up and down the canals of Manchester and in the counter-weight of the bascule bridge. Bridges offer a moment of lightness, and careful use of materials is essential. The consented scheme for Pollard Street will introduce a rich palette of colours, counterpointing the rustier and buff tones on the western side.



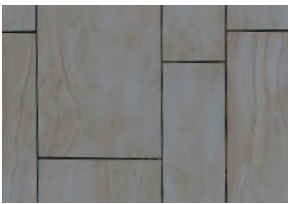
1 Islington Wharf
Residential



2 Lock Keeper's Cottage
Historical Landmark



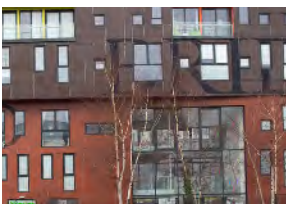
3 Canal Tow Path
Public Realm



4 One Vesta Street
Residential



5 Bascule Bridge
Public Realm



6 Chips
Residential



7 Milliner's Wharf
Residential



8 Hat Box
Residential



9 Pollard Street
Office

4 Design principles

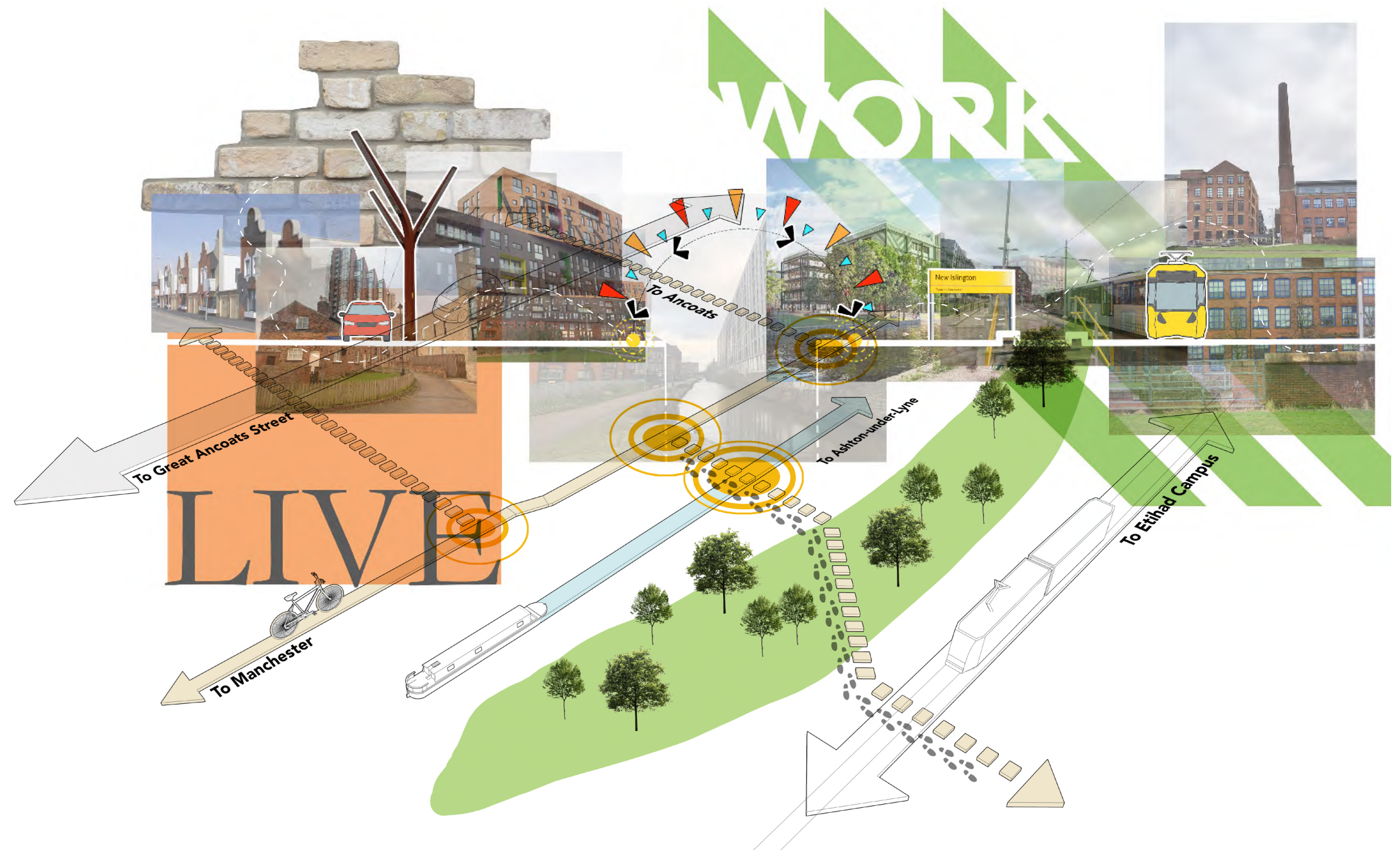
4.3 Springing between communities

A point of reflection within moments of movement

The proposed bridge will connect users across the Ashton Canal, linking the proposed commercial and SME 'Collective' on Pollard Street and the thriving New Islington marina residential area, providing a vital link for people arriving and departing on foot, bicycle or through the New Islington tram stop.

Within this dynamic and rapidly developing neighbourhood, the canal offers a moment of calm as it physically alters the movement patterns around it - encouraging passers-by to slow down, take a moment to reflect, and then continue their journey. The proposed bridge offers an opportunity to capture and celebrate the calming presence of the Ashton Canal, the historic setting of the lock, and give users the opportunity to spring lightly between the different communities.

Either side of the lock there is an emphasis on the linear, parallel movement to the waterway - via the existing towpath and proposed canal-side walk in the Pollard Street scheme - and by cutting between these the bridge can create a visual counterpoint that flows between the banks, inviting people to step out and cross to a new place, a new route, a better journey.



4

Design principles

4.4

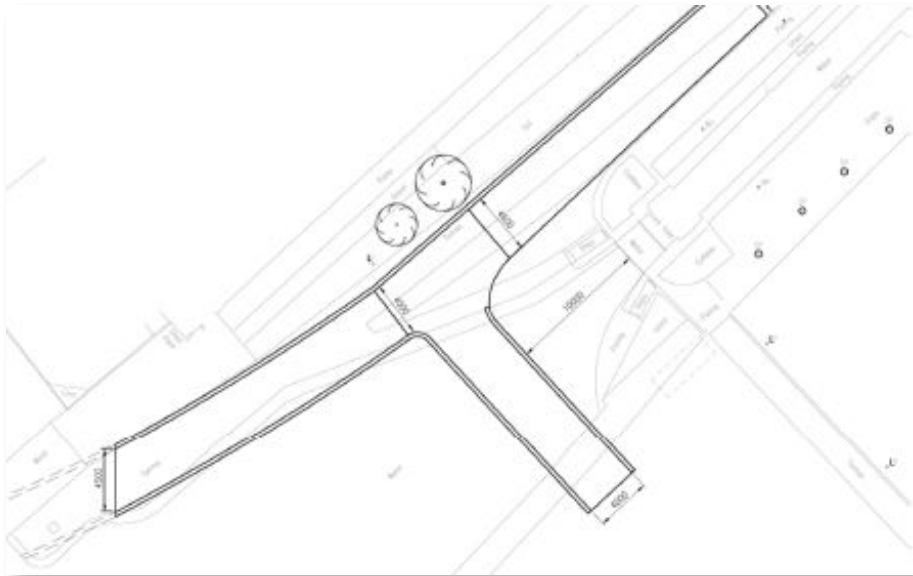
Design iteration

Previously explored options

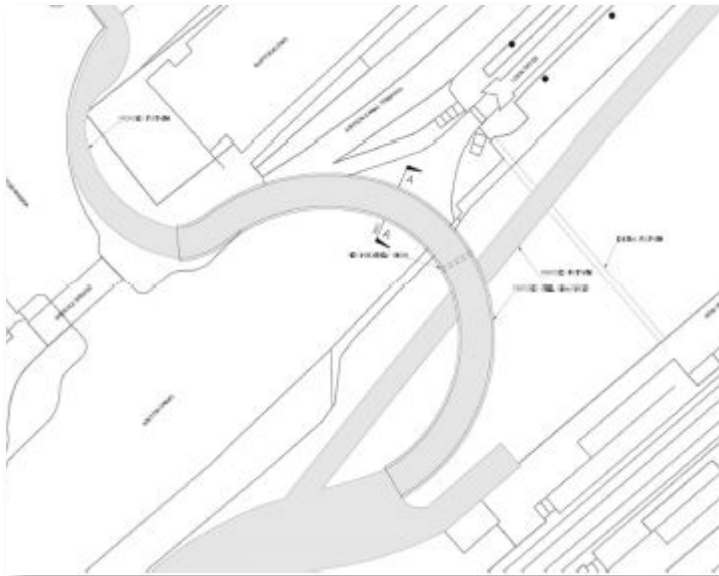
Ashton Canal Cycleway Bridge Options Appraisal Report

Wilde Consultants Ltd (Ref: 651-197-R02-A)

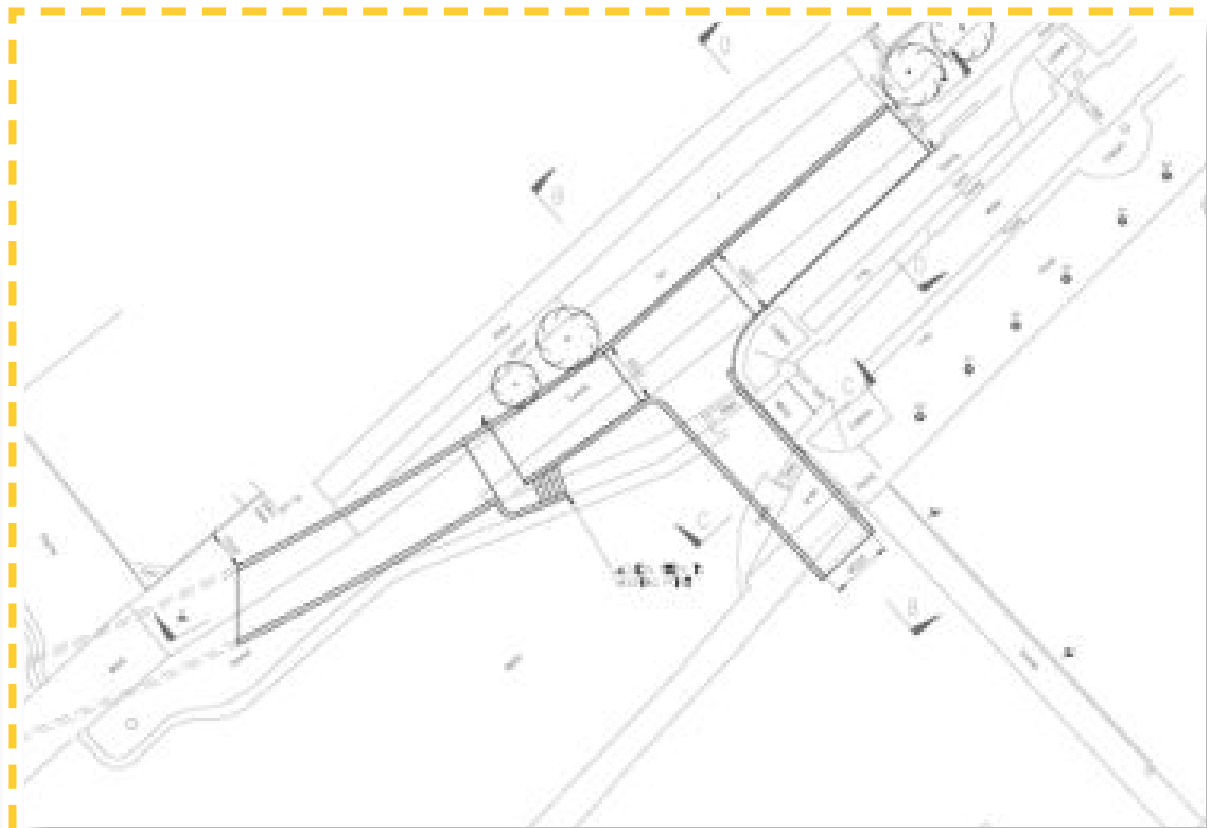
Preferred Bridge Alignment Identified: Straight bridge deck, adjacent to the lock at Location A, with the western ramp formed by raising the entire towpath.



Bridge located away from lock



Curved deck



Previous design work was undertaken in Q1 of 2021 by Wilde Consultants Ltd to determine the preferred location and trajectory of the crossing, as well as an early proposal. Hawkins\Brown undertook a review of the previous design work alongside the feedback received, to distil the key design criteria from stakeholder feedback, including both TfGM and C&RT's perspectives, and in order to understand the opportunities and constraints for the site and project, as well as the sensitive setting and stakeholder ambitions.

TfGM Feedback

- Unique, stand out design in keeping with eclectic context
- Fully DDA and DMRB compliant
- On footbridges intended for shared pedestrian and cycle use the minimum parapet height stipulated by DMRB, section BD 29/04 is 1.4 metres
- Provide permeability for canal-side park experience (visual and physical)

C&RT Feedback

- Simple, clean design with continuity across the locality
- Minimal structure to ensure lightweight visual
- Material palette in keeping with lock setting
- Open balustrade to allow visibility to listed lock
- Lighting to tow-path to be consistent and sufficient for safety and access
- Access to mooring dock



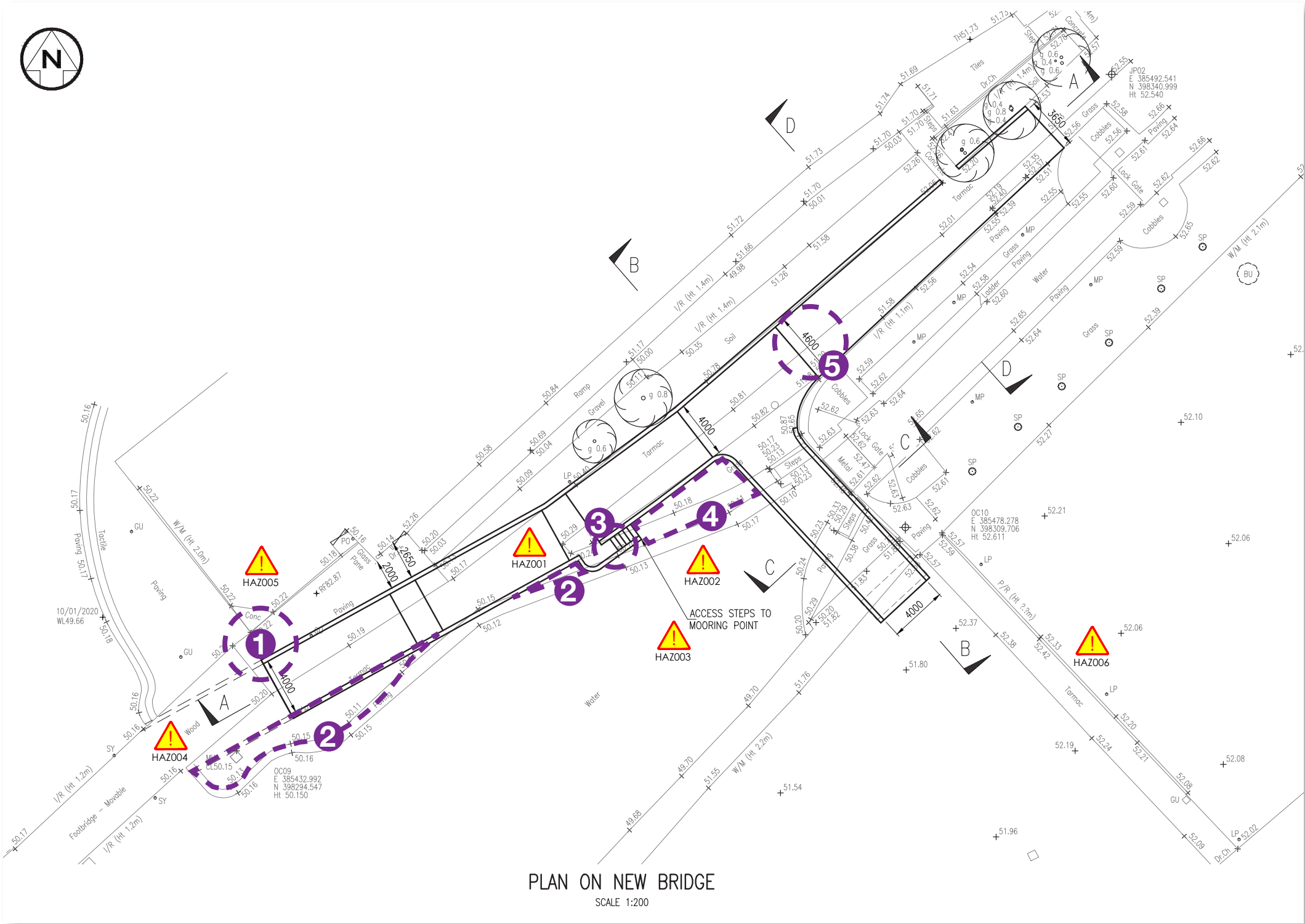
4 Design principles

4.4 Design iteration

Previous Design Review

As part of this work, the alignment of the previous proposal was reviewed and five key opportunities for refinement were identified:

- 1 **Pinch point** Access to the nursery at the base of the Chips building is along the southern side of the block – the previous design encroached on this route, creating a pinch point at the corner and exacerbating the blind spot in this tightly constrained area. This area has users coming from all directions, so its important that it works hard to minimise obstacles to any one group.
- 2 **Pockets of unusable space** The alignment of the first portion of ramp to the west moves away from the canal edge, creating a space that is too narrow for safe use and so could become an unusable space that encourages anti-social behaviour. This move also increases the pressure on the nursery entrance.
- 3 **Constrained stair** The location of the steps means their width has to be compromised to ensure the ramp can be accommodated, and that users wanting to reach New Islington Tram Stop have a less direct route to the bridge.
- 4 **Reduced mooring area** The stepped access shown to the canal docking area sits to the west end, taking up valuable space for boats approaching from the south-west and meaning that canal users cannot as easily disembark from the stern of the boat, while waiting to pass through the lock.
- 5 **Inconsistent clear width** The previous proposal utilises a range of clear widths along the length of the ramps and bridge, from 3.65m to 4.6m, and while this makes full use of the area available it could create a funnelling effect, increasing cyclist speed along the structure and potentially introducing a greater risk for collisions between users. Working with the constraints within the site, we would look to utilise a consistent clear width along the full extent of the proposal.



4 Design principles

4.5 Materiality

Taking historical cues and finding their present echo

As part of the materiality study, traditional UK canal bridges were analysed and a number of material strategies were found that are used across canal bridges in the north-west

1. Ornamental balustrade with contrasting colours
2. Exposure the structural member to accentuate the centre, making it appear more slender than it often is
3. Utilises a generous, rounded off coping for passers-by to lean against while looking at the canal
4. And finally, using regular, permeable structures with often contextual colour to create a more lightweight appearance that sits comfortably within the surroundings

Looking at more recent bridge typologies, we can see the same strategies being utilised, interpreting these traditional strategies in new and exciting ways.



Ornamental balustrade with contrasting colours



Generous coping for leaning on and resting against



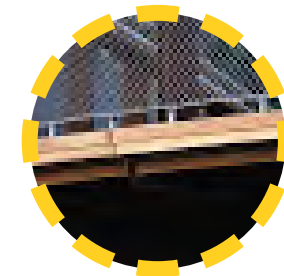
Exposed structure detailed to accentuate slender centre



Permeable structure with use of colour



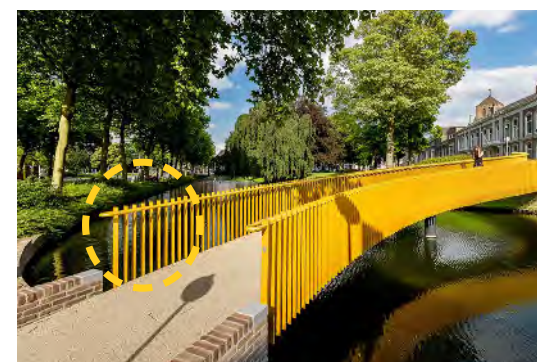
Ornamental balustrade with contrasting colours



Exposed structure detailed to accentuate slender centre



Generous coping for leaning on and resting against



Permeable structure with use of colour

4

Design principles

4.5

Materiality

A balustrade that floats

Looking at more detail at the balustrade itself, a range of material choices were identified that all had a significant impact on the look and feel of the bridge. From our conversations with stakeholders, the design moved towards the lighter end of the spectrum, with the simple repeating, elegant metal uprights with lower level leaning rail.

The balustrade needed to meet a number of key criteria, both technical guidance and maintenance requirements. Key design considerations when developing the balustrade design were:

- Minimising material maintenance
- Material longevity within a marine environment
- Resistance to vandalism, including ‘padlocking’
- Maximising views along the canal when approaching via narrow boat from either direction
- Maximising visibility of the historic lock structure as much as feasible
- Meeting all technical guidance, as required and suitable



Individual regular timber elements
Provide solidity and calming rhythm and minimise potential visual weight of balustrades by wrapping them into the deck



Sculpted metal verticals
Creates movement for the length of the crossing, both by reflecting the river and creating shadow ripples along the deck



Bespoke balustrade
Introduce visual interest, keeping the balustrade open whilst conveying the movement across the bridge and letting the balustrade become the focal point of the design



Simple repeating, elegant metal uprights with lower level leaning rail
Ensures both pedestrians and cyclists feel considered and maximises views by utilising contrasting colours to help vertical element ‘disappear’ from the vista



4

Design principles

4.5

Materiality

A ground that flows

Using a similar approach as to the balustrade, a range of material finishes were discussed during our engagement with MCC, C&RT, TfGM, and Councillors, as well as the Nursery, Chips building management and Pollard Street Developer. The existing tapestry of materials along the towpath means that no one material is dominant within the ground plain palette, however as the bridge is set to spring between the two banks, it was felt that the heavier concrete and paving stones would be unsuitable and not tie into the natural, human-scale setting of the canal and towpath. While a timber decking was found to be unsuitable for the environment, with examples in the immediate vicinity being replaced for paving stones due to wear.

The deck and ramps needed to meet a number of key criteria, both technical guidance and maintenance requirements. Key design considerations when developing the ground plane finish were:

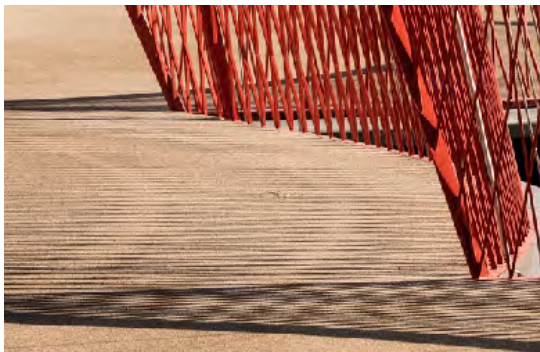
- Minimising material maintenance
- Material longevity within a marine environment
- Provide adequate slip-resistance for all users
- Tie in with the material palettes at all junctions
- Meeting all technical guidance, as required and suitable



Concrete
Provides a homogeneous surface between different surrounding paving types



Paving
Can be laid in different orientation to emphasise changes in direction and highlight movement flows



Resin-bound gravel
Creates a more 'natural' ground surface, balancing between different types of urban realms



Timber
Can be laid to either flow with the movement of users, or used to create visual cues to encourage cyclist to slow down



4

Design principles

4.5

Materiality

Ramp faces that celebrate New Islington

The faces of the ramp provide an opportunity to create a distinct aesthetic for the mooring area, that doesn't blur the lines between historic lock and new structure. A range of materials were considered for the ramp faces, and discussed with key stakeholders, and it was decided that concrete or bricks / glazed bricks offered a distinct material palette that could tie in with the context, without homogenising the two structures together.

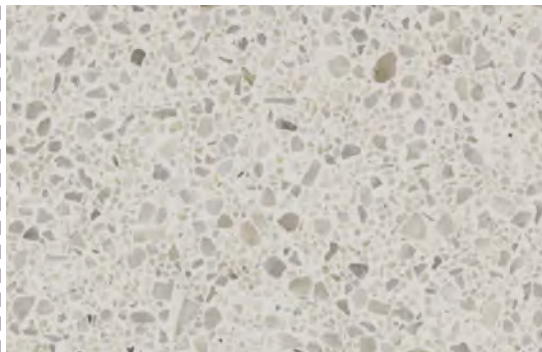
The ramp faces needed to meet a number of key criteria, both technical guidance and maintenance requirements. Key design considerations when developing the balustrade design were:

- Minimising material maintenance
- Material longevity within a marine environment
- Resistance to vandalism, including graffiti
- Ensure a distinction between old and new structures
- Meeting all technical guidance, as required and suitable



Stone slips

Provides a homogeneous surface between listed lock and proposed bridge structure, blurring the line between old and new



Concrete form-work

Can be poured into different form-work or pre-fabricated in different orientations to highlight movement flows, helps to subtly mark difference between lock and new structure



Metal

Potential to include perforations to introduce movement across the faces, and subtly reference traditional stone work



[Glazed] brick slips

Use contrasting colours to celebrate listed lock and highlight its structure by drawing the eye to the original structure



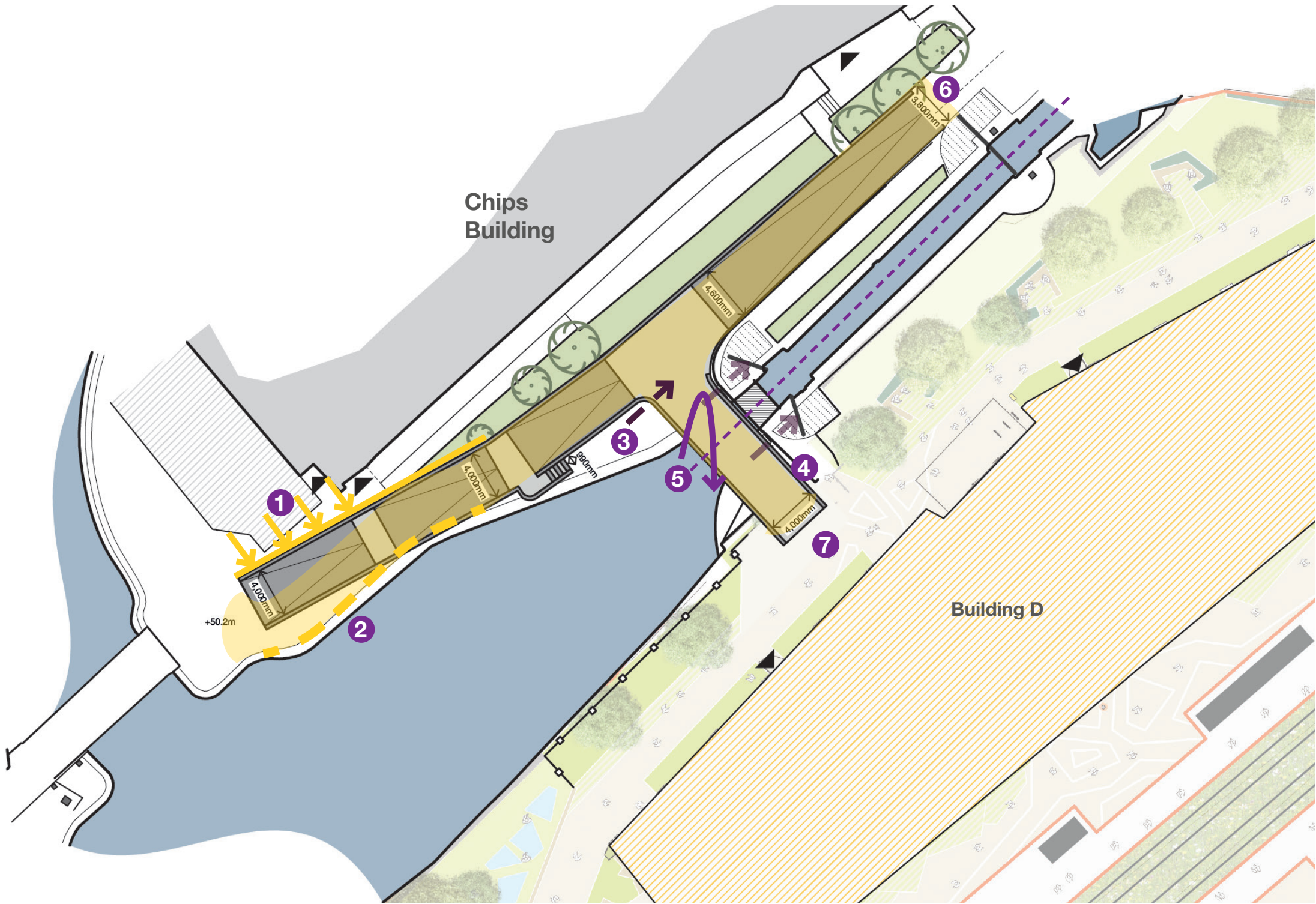
4 Design principles

4.6 Key design moves

Key Moves

The previous design highlights the difficulty in achieving the required elevation on the south-west ramp while meeting guidance - making the ramps shallower would extend their length, which there is limited room to do. At the south end of the Chips building, the ramped approach also needs to address people coming from two directions, as well as accessing the nursery and service zone in the Chips building. Following on from the design review, a few key design moves were implemented.

- 1 'Push' ramp alignment at western edge closer to canal to open up the pinch point against the Chips Building and ground floor nursery, and reduce opportunities for antisocial behaviour in pockets of unusable space
- 2 Follow canal edge on western ramp to introduce gentle inflections to the trajectory to encourage cyclists to slow down, minimise leftover space, and maximise ramp length in order to minimise ramp gradient within constrained site
- 3 Re-position steps to canal mooring to land at key junction adjacent to the bridge, to echo the orientation of the historical lock steps and provide direct access to all three travel routes for mooring users
- 4 Lift bridge away from listed lock to ensure adequate clearance from lock steps and wall without creating 'dead' space
- 5 Maximise visibility of the lock and emphasise alignment by raising the height of the centre of the bridge, referencing traditional humped canal bridges
- 6 Ensure there is a consistent width across the full extent of the bridge and ramped approaches to reduce funnelling effects that could encourage cyclists to speed up
- 7 Address multi-directional approaches using flared ramp entrances that don't create awkward junctions with existing, established movement routes



5 Access and groundwork

5.1 Existing bank conditions

5

Access and groundwork

5.1

Existing bank conditions

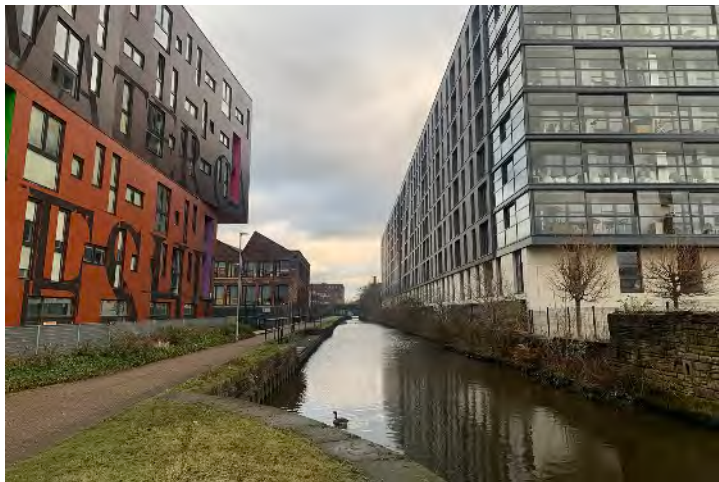
Ashton Canal wall condition

The existing canal wall on the western bank predominately consists of historic coping stones to the waters edge, with a variety of paving styles behind, and is generally in good condition within the immediate vicinity of the proposed bridge. From consultation with the Canal and River Trust, it was agreed that the proposal shouldn't impede on the coping stones, retaining the historic edge to the canal.

On the eastern side, the canal wall extends vertically above the level of mooring area and features unoriginal red brick, concrete and stone sections, with large sections overgrown and in a dishevelled state. In order to determine the condition the of these walls, and their bearing capacity, boreholes were dug and analysis undertaken.

Currently, geotechnical investigations have not been undertaken. Following Planning Approval, investigations are planned consisting of boreholes and trial pits on both sides of the Ashton Canal.

Previous boreholes in the vicinity identify made ground to depths of up to 2.5m followed by increasingly stiff layers of clay down to 8m where the boreholes were terminated for undisclosed reasons. The planned boreholes will aim to reach a depth of 20m or until bedrock is encountered. Tests will be performed to ascertain the properties of both the soil and the bedrock to permit the foundations to be designed appropriately.



6 Proposed design

- 6.1 Site plan
- 6.2 Plan analysis
- 6.3 Section analysis
- 6.4 3D View
- 6.5 Balustrade details
- 6.6 Materiality
- 6.7 CGIs

6 Proposed design

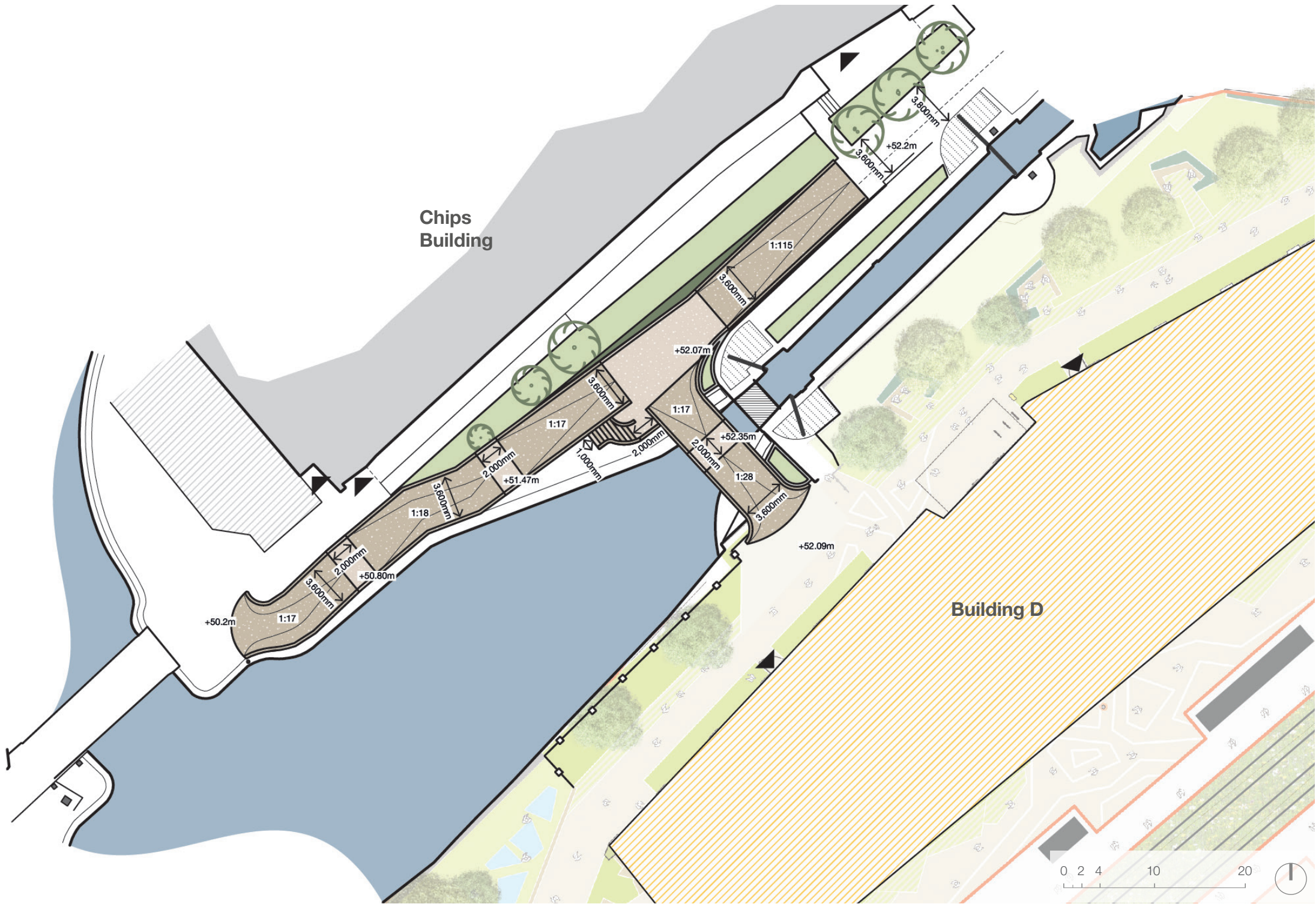
6.1 Site plan

A new bridging springing across the canal

The proposed alignment seeks to address the needs of all users within a tightly constrained site, and address the key concerns with the previous design around user interaction. The existing pinch point at the top of Lock No.3 establishes the clear width for the length of the ramped towpath and bridge at c.3.6m, which remains consistent, introducing no variations that could create a funnelling effect.

Please refer to the submitted proposed drawings for details:

- ICB-HBA-ZZ-XX-DR-A-PL20_0101
- ICB-HBA-ZZ-XX-DR-A-PL20_0102
- ICB-HBA-ZZ-XX-DR-A-PL20_0202
- ICB-HBA-ZZ-XX-DR-A-PL20_0203
- ICB-HBA-ZZ-XX-DR-A-PL20_0302
- ICB-HBA-ZZ-XX-DR-A-PL20_0303
- ICB-HBA-ZZ-XX-DR-A-PL20_0400



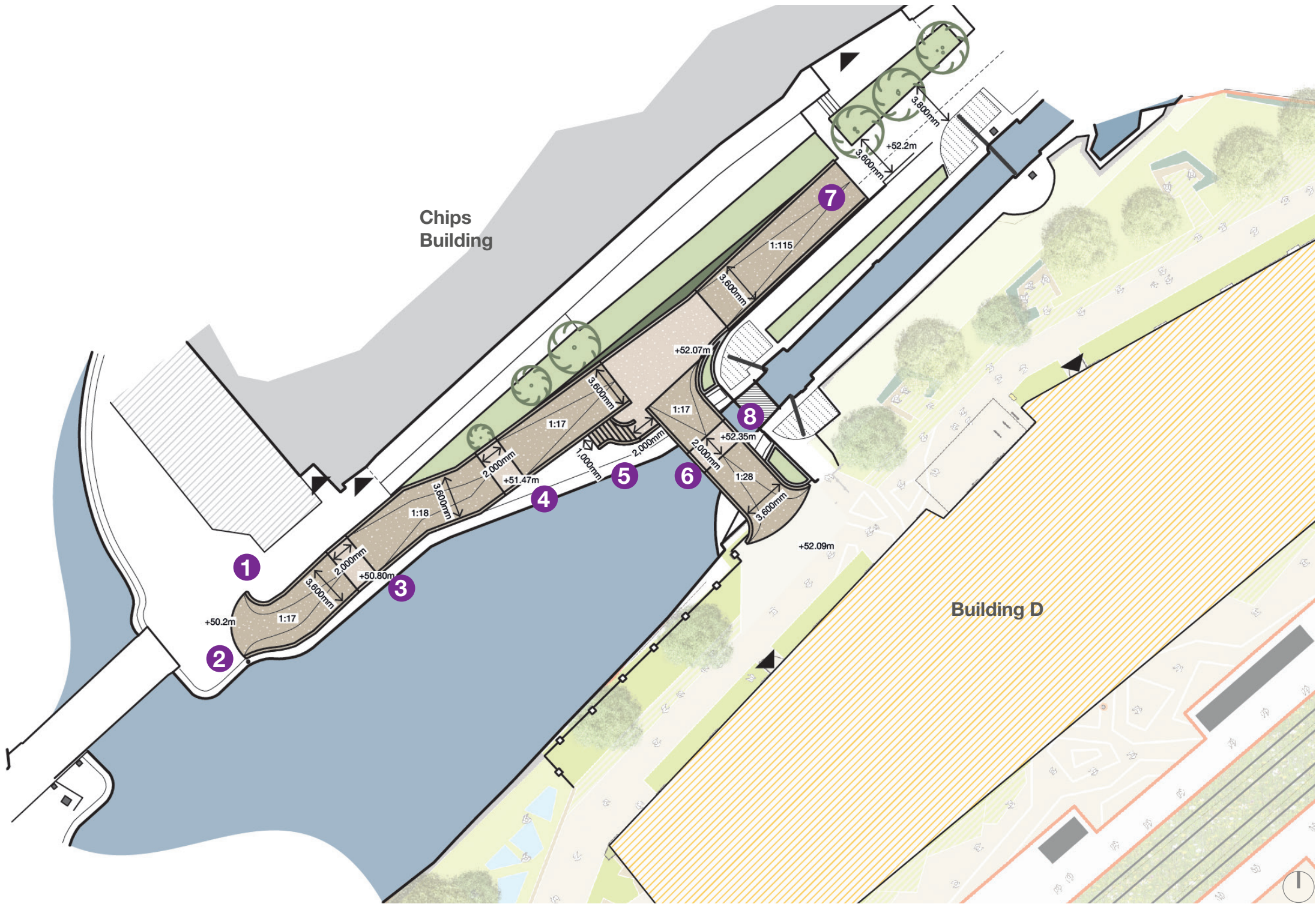
6 Proposed design

6.2 Plan analysis

Connecting communities and encouraging movement

The proposed design takes the key moves onto the site so that:

- 1 The ramp entrance at the south of the Chips building steps away from the nursery and safe guards this area, that can be very busy at drop off and pick up times.
- 2 The flared ramp entrance address approaches form all directions
- 3 The stone coping of the canal is not impeded, but the ramp alignment introduces a slight winding by following the canal edge and closes up pockets of unusable space
- 4 By flipping the steps to the docking area, more space is given to canal users further from the lock, while retaining canal-side access along the length of the mooring area
- 5 Bridge and tow path access for mooring users is provided via 1m wide steps with a 2m long landing at the top. An extra landing provides a pausing point for passers by, while also safeguarding the steps from cyclists and making sure users have space to navigate the stairs
- 6 The centre of the bridge is pulled gently upwards and away from the lock steps to emphasise this unique vantage point and ensure the bridge structure doesn't impact the steps
- 7 A uniform clear width of 3.6m is used across the length of the bridge
- 8 By raising the bridge at its mid-point, the visibility of the listed lock and steps is maximised.



6

Proposed design

6.2

Plan analysis

Adding detail and softening edges

The proposed bridge and ramp alignment seeks to preserve and emphasise the unique canal-side setting, tying into the tranquil and more-human scale nature of the existing towpath and lock. The woven balustrade maximises visibility through the vertical members, while flowing up the towpath and over the proposed bridge, uniting the two side of the canal together (1). The warm, timber balustrade wraps around the balustrade, providing a softer leaning and handrail with integrated lighting that leads both cyclists and pedestrians along their route (3).

The interface between the bridge and the lock in softened with raised planters, creating a natural edge to both and ensuring there are no pockets of unusable space between the two structures, while maintaining a clearance between them so that each structure can retain its own identity (2).

The mooring area and stairs have a distinct feel to the bridge and ramps, directly reaching down and connecting with the canal and narrow boats. The ramp here cranks away from the towpath coping stones, and presents a moment to introduce a harmonious articulation to the ramp face that brings the language of the balustrade down to the mooring area in a different form. A formed, pale concrete with vertical reliefs creates movement across the ramp face, while letting the balustrade float across the top (4).



6

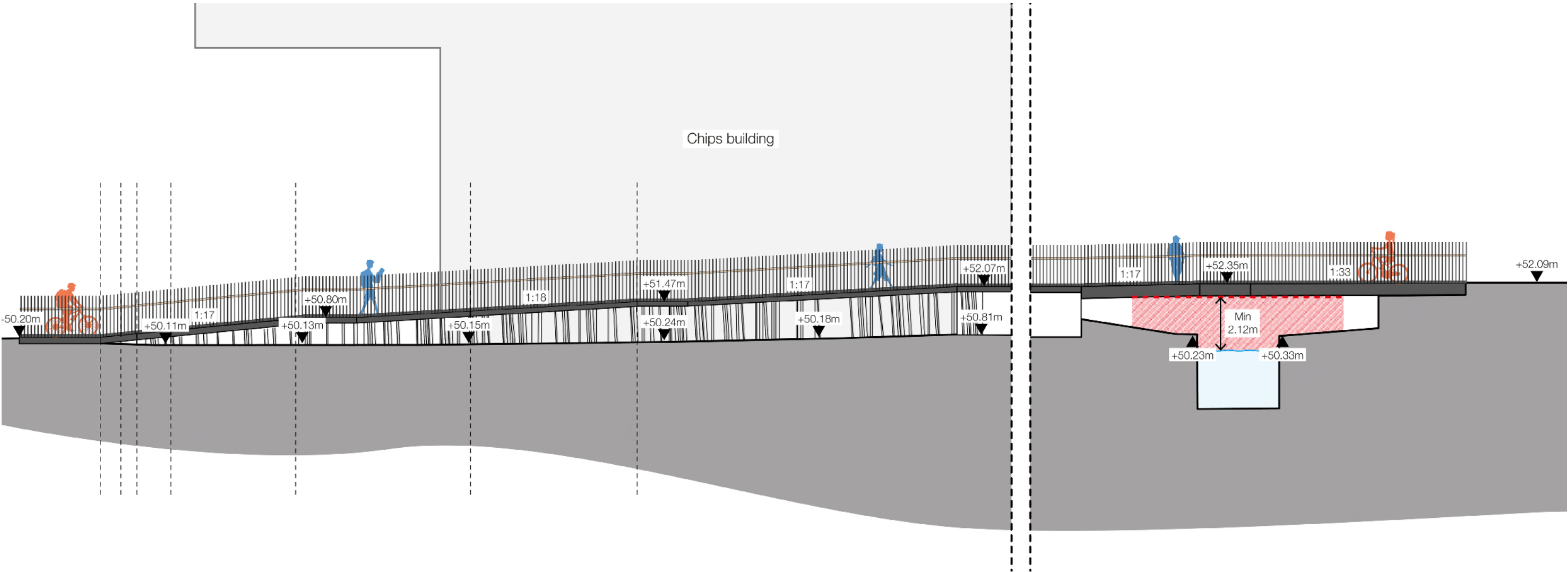
Proposed design

6.3

Section analysis

A bridge of two parts

The proposed bridge consists of two main parts - the ramped towpath approach and the bridge itself - with the simple, elegant balustrade flowing along both structures, uniting them and connecting the two sides of the canal. The slight curvature of the bridge deck ensures that the minimum clear height for the canal is achieved, while creating an experience for users both on and below the bridge, highlighting the canal orientation, referencing traditional canal bridges, and most importantly maximise visibility of the lock.

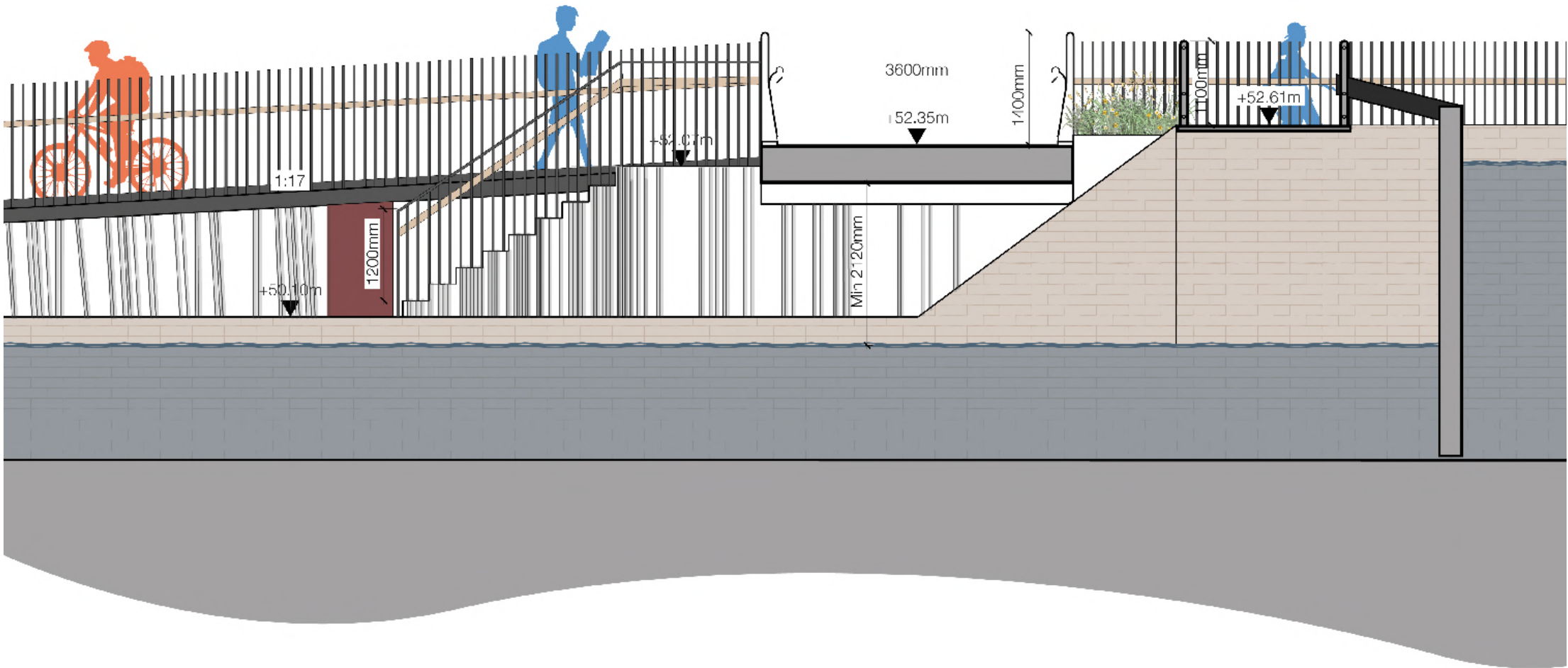


6 Proposed design

6.3 Section analysis

A sympathetic and confident new crossing

The proposed bridge steps away from the historic lock to preserve visibility of the listed lock steps and ensure the two structures remains independent of one another. The space created between the lock steps and bridge abutments is proposed to be reclaimed as a planter to ensure no ‘dead space’ is created and soften the transition between the two elements.

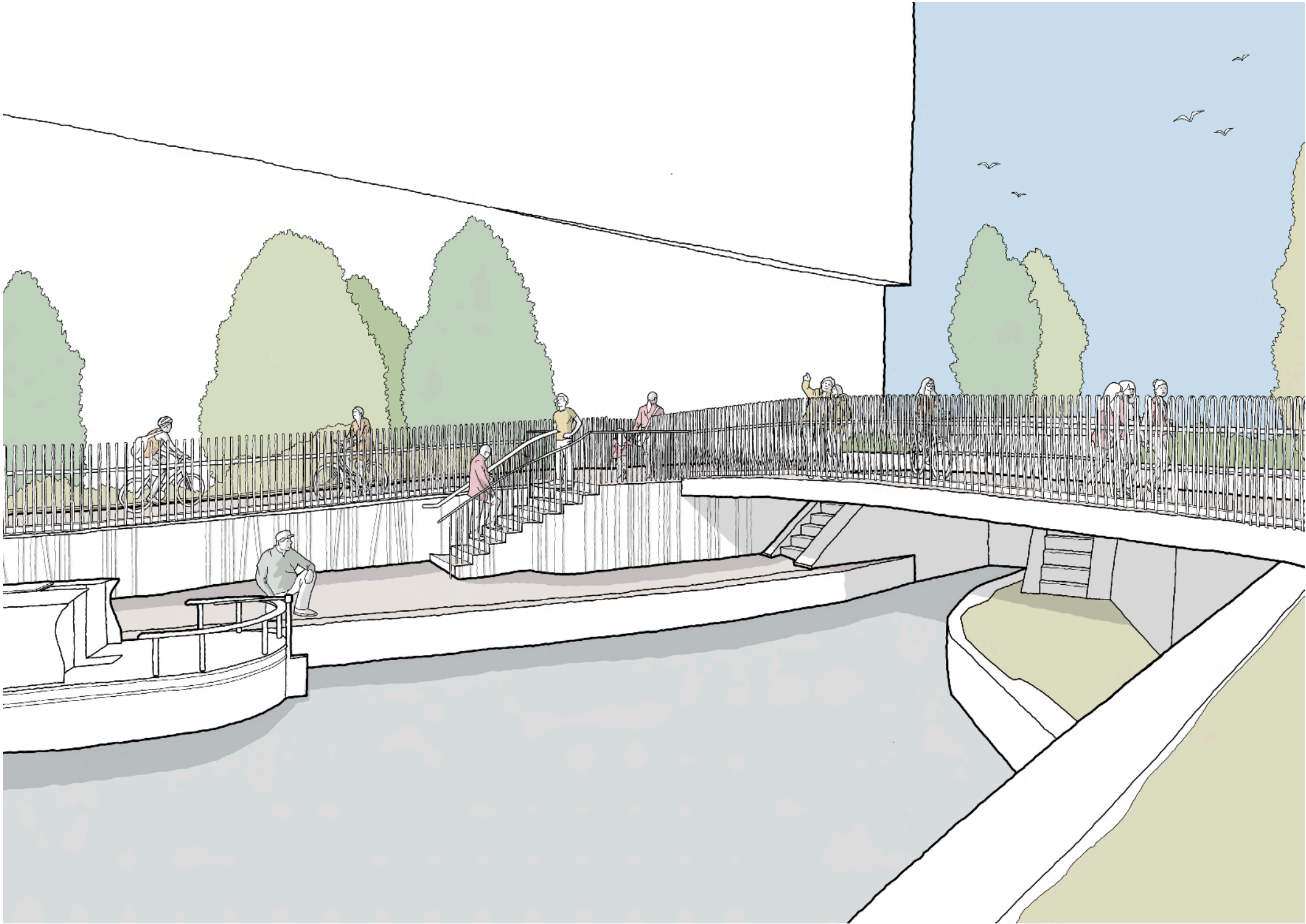
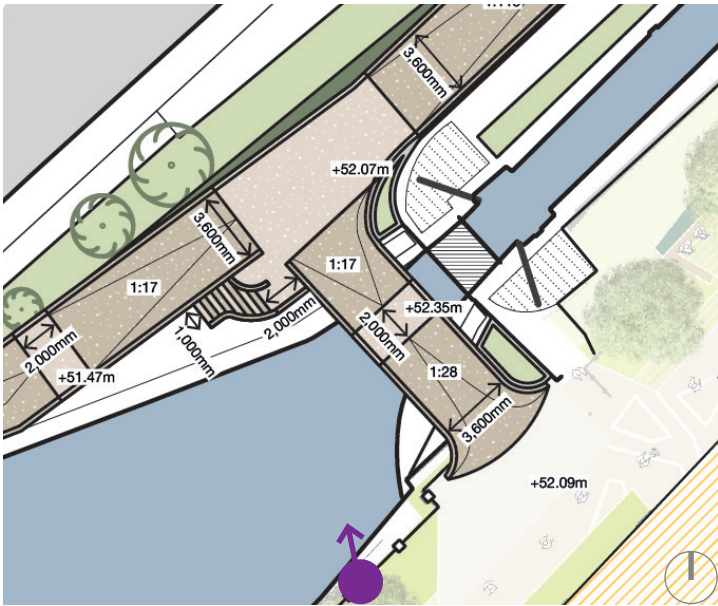


6 Proposed design

6.4 3D View

Step arrangement to the canal mooring area

The historic lock steps are orientated parallel to the canal, with the proposed steps to the mooring area mirroring this alignment. This not only echoes the historic structure, but also means that canal users alight at the central landing, providing direct routes to any of the three travel routes. The 1m wide steps have a 2m long landing at the top, with an extra landing providing a pausing point for passers-by, while also safeguarding the steps from cyclists and making sure users have space to navigate the stairs.



6 Proposed design

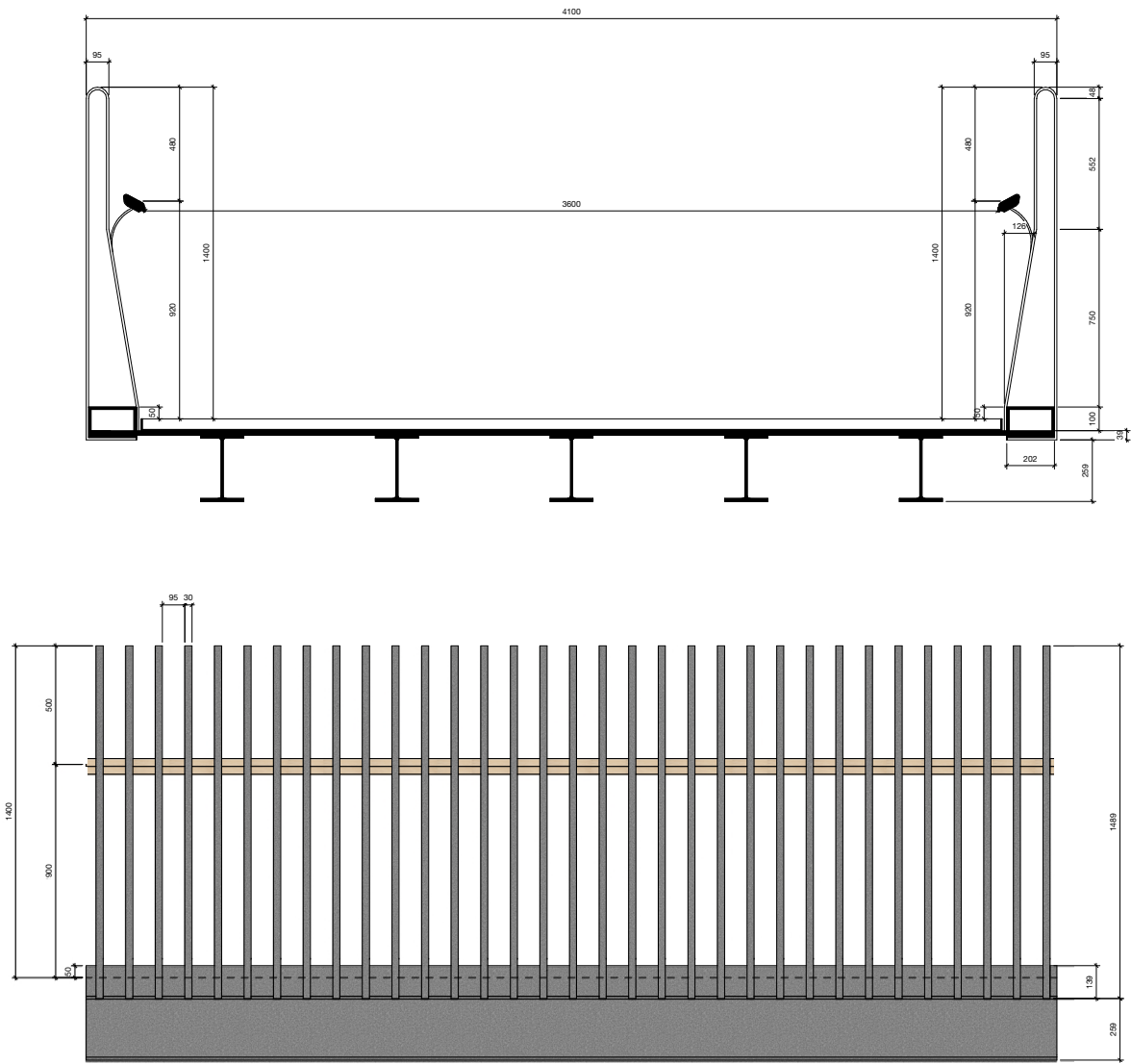
6.5 Balustrade details

A floating balustrade of echoes

The balustrade weaves and winds up the towpath, with simple, repeating vertical elements maximising visibility, and a warm, timber balustrade that wraps around the balusters, providing a softer leaning and handrail with integrated lighting that leads both cyclists and pedestrians along their route. With a distinctive echoes of both historic canal bridge details and the adjacent lock, the proposed balustrade strides out from the past to link the vibrant established and emerging communities on both sides.

The balustrades is arranged on an upstand that not only provides a rigid, solid edge for those with sight canes, but also provides a visual and structural anchor to the balustrade as it flows up the towpath and over the proposed bridge. The angled inner vertical of the balustrade members helps to draw the eye along the gently winding edges, encouraging cyclists to slow down and help create a more human-scale to the proposed bridge.

The handrails are supported on a small, gently swept member to reduce the visual cluster of the balustrade, and maintains a clear width along the full extent of the proposed bridge and ramped towpath of 3.6m. At the landing to the mooring area, the handrail gently sweeps around and down the stairs to invite canal users up onto the bridge by the handrail.



6

Proposed design

6.6

Materiality

Bridge structure and balustrades

Polyester Powder Coating (PPC) steel offers a low maintenance solution for the ‘gunmetal’ grey balusters that characterise the design of Ashton Canal Bridge, as well as the deck edge that will accentuate the form of the bridge.

Appropriate use and limitations

When applied to steel, powder coating provides a protective barrier that helps prevent corrosion. This makes it ideal for use in a canal environment, being able to withstand the environment created by high pedestrian and cycle traffic, the Manchester weather and the canal itself.

Maintenance

Powder coated steel has good resistance to impact, moisture, and extreme weather as well as protection from scratches, chipping, abrasions, corrosion, fading, and general wear. This durability reduces the need for future coating touch-ups or replacement. If damage does occur these can be spot fixed without the need to replace or re-coat the entire part.



Powder coated steel texture



Marple Aqueduct - Powder coated steel balustrade

Bridge handrail

A timber handrail adds warmth to the predominantly metallic aesthetic to the bridge, as well as creating a smooth, gentle surface for people using the handrail.

Appropriate use and limitations

Timber lends itself to the sweeping design of the handrail whilst also allowing the incorporation of lighting into the design.

Weathered appearance and maintenance

Two types of timber have been identified that will last and perform as a balustrade in a canal environment, Accoya and Iroko. If uncoated, these will weather into a silver-grey colour over time. Applying a coating will preserve the appearance of the timber but will require regular maintenance.



Accoya



Iroko



Woven Bridge, Copenhagen - Accoya handrail

6

6.6

Proposed design

Materiality

Bridge deck

Resin bound gravel provides a seamless and permeable bridge deck.

Appropriate use and limitations

Resulting from mixing resin and aggregates together in a forced action mixer, resin bound gravel provides a smooth, flat finish, ideal for a cycling and pedestrian friendly surface. The material has significant slip resistance and permeability benefits, whilst also being an attractive material to be used on the predominantly cobbled canal towpath.

Maintenance

Occasional brushing and/or washing is the only maintenance required for resin-bound surfacing, although even this may not be necessary on a public canal towpath.



Resin bound gravel texture



Example of a resin bound gravel bridge deck

Towpath ramps and faces

Pale concrete provides a contrast to the predominantly dark steel of the bridge, able to be formed with a relief pattern to add visual interest to the ramp faces. The concrete could also contain exposed aggregate to add small areas of colour to the wall.

Appropriate use and limitations

The high compressive strength of concrete means it is appropriate for ramp structures. The use of pale concrete can also provide waterproofing qualities, ideal for use adjacent to a canal.

Weathered appearance and maintenance

Pale concrete has inherent aesthetic quality, with significantly less maintenance required than if whitewashed or painted. The finish can be treated to provide protection against graffiti.



Pale concrete with exposed aggregate texture



Pale concrete wall with relief pattern

6 Proposed design

6.7 CGIs





7 Lighting strategy

7.1 Standards and requirements

7.2 Illuminance zones

7.3 Accentuating the details

7

Lighting strategy

7.1

Standards and requirements

The following standards and guidance have been taken into account in the strategy of the lighting for the footbridge and should be considered in the detailed design. It has been noted that guidance differs, and MCC advise that BS5489-1 should take precedent in informing the lux levels required.

Sustrans

- Technical Note 29 Lighting of Cycle Paths

Department for Transport

- Design Guide for Inclusive Mobility

British Standards

- BS 5489-1:2020 Code of practice for the design of road lighting

Also the works should be carried out to the following standards:

- Code of Practice for Electrical Safety in Public Lighting Operations
- IEE BS 7671
- MCC GD03 Information for Developers



BS 5489-1:2020 gives specific guidance on the design requirements for lighting levels on footbridges, ramps and stairways. The following parameters are advised:

Open Stairways/Ramps

- Day: -
- Night: average 20 lux
- Night: minimum 10 lux
-

Open Footbridges

- Day: -
- Night: average 20 lux
- Night: minimum 10 lux

Inclusive mobility	
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DfT's Design Guide for Inclusive Mobility gives specific guidance on the design requirements for lighting levels on walkways, ramps and stairways. The following parameters are advised:

Open Stairways/Ramps

- Day: -
- Night: minimum 200 lux

Open Footbridges

- Day: -
- Night: minimum 50 lux

Lighting of Cycle Paths

Technical Information Note No. 29

March 2012



Sustrans' Technical Note 29 Lighting of Cycle Paths gives specific guidance on the design requirements for lighting levels for footpaths and cycle tracks, referencing CEN 13201-1 & 13201-2 and BS 5489-1:2003. The following parameters are advised:

Bi-directional cyclist and pedestrian routes

- Day: -
- Night: average 5 lux
- Night: minimum 1 lux

7 Lighting strategy

7.2 Illuminance zones

It is proposed to treat the bridge and its approaches with different types of lighting in order to provide the appropriate lux levels and accentuate the features of each zone. Various opportunities for integrating lighting have been considered, alongside the potential impact on the residential Chips building adjacent, and the existing towpath lighting.

Incorporating the lighting into the balustrade will mean that the ground for the entire length of the ramped towpath, bridge and stairs to the mooring area are illuminated, while minimising light pollution both over the canal and to neighbouring buildings. It is proposed that the existing street lights are retained and relocated as necessary.

Following consultation with GMP's Secure by Design, integrated deck lighting is proposed on the underside of the deck to illuminate the lock steps and reduce the opportunity for antisocial behaviour in and around the mooring area.

These strategies will be reviewed during the detailed design stage against the minimum lux level requirements, taking into account access and maintenance, and testing whether penetrations and a drawstring mechanism for accessing cables within the lower truss member can be incorporated.

Lighting Key

Balustrade Lighting

Deck Lighting (Underneath)

Retained Street Lighting



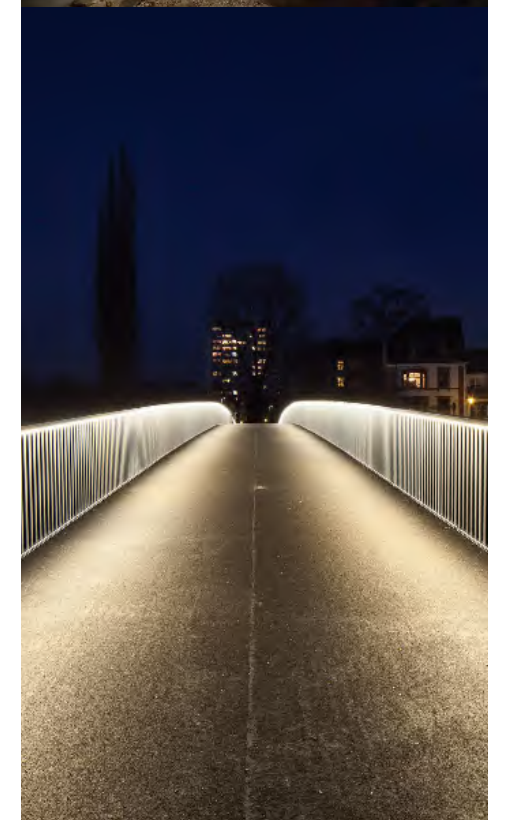
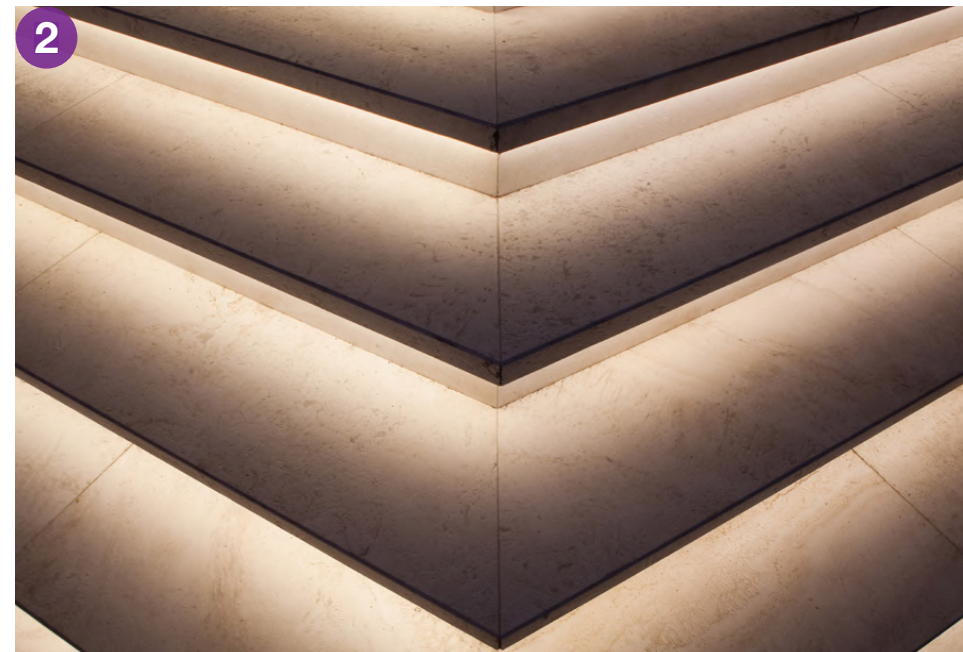
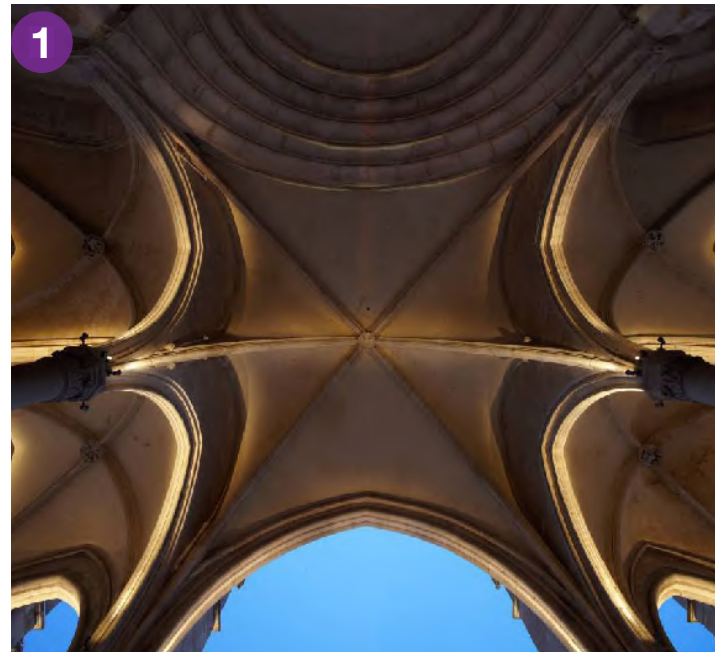
7 Lighting strategy

7.3 Accentuating the details

Integrating lighting in the structure

Lighting presents an opportunity to not only illuminate the route for those using the bridge and associated ramped towpath, but to also illuminate the structure, accentuating the various elements, and areas that may attract anti-social behaviour - e.g. at the base of the lock steps. The proposed balustrade is likely to incorporate LED strip lighting integrated into the handrail to provide a ribbon of light that flows up the ramps, across the bridge, and down the stairs to the mooring area, ensuring all surfaces are evenly and adequately lit for both pedestrians and cyclists. Similarly, it is proposed that lighting is integrated into the structure underneath the deck to illuminate both the bridge form and to ensure areas beneath the deck are well-lit and less likely to become anti-social behaviour hot spots.

Illumination provided on the bridge will be consistent to ensure that all walkway surfaces, stairs and handrails are visible, while avoiding unnecessarily excessive illumination, and will conform to the requirements of BS 5489-1 [Ref 2.I].



Potential lighting products

1. Deck structure lighting: Single spot/strip lights within the truss at Beaune Collegiale, France (iGuzzini Palco Inout)
2. Deck structure lighting: Spill lighting across the deck (iGuzzini Underscore LED strip)
3. Balustrade handrail: Down lighting from the balustrade, Birschpfsteden Bridge, Basel, Switzerland
4. Balustrade handrail: Down lighting from the balustrade LightConstructor solid cluster, Cirkelbroen, Copenhagen, Denmark (iGuzzini Woody Linea)

8 Structural concept design

8.1 Developing a structural language

8 Structural concept design

8.1 Developing a structural language

Bridge

The key consideration of the structural form of the bridge is to keep the deck element as slender as possible while meeting the headroom requirements set out by the Canal and River Trust. Reducing the depth of the deck reduces the required gradient of the western approach ramp.

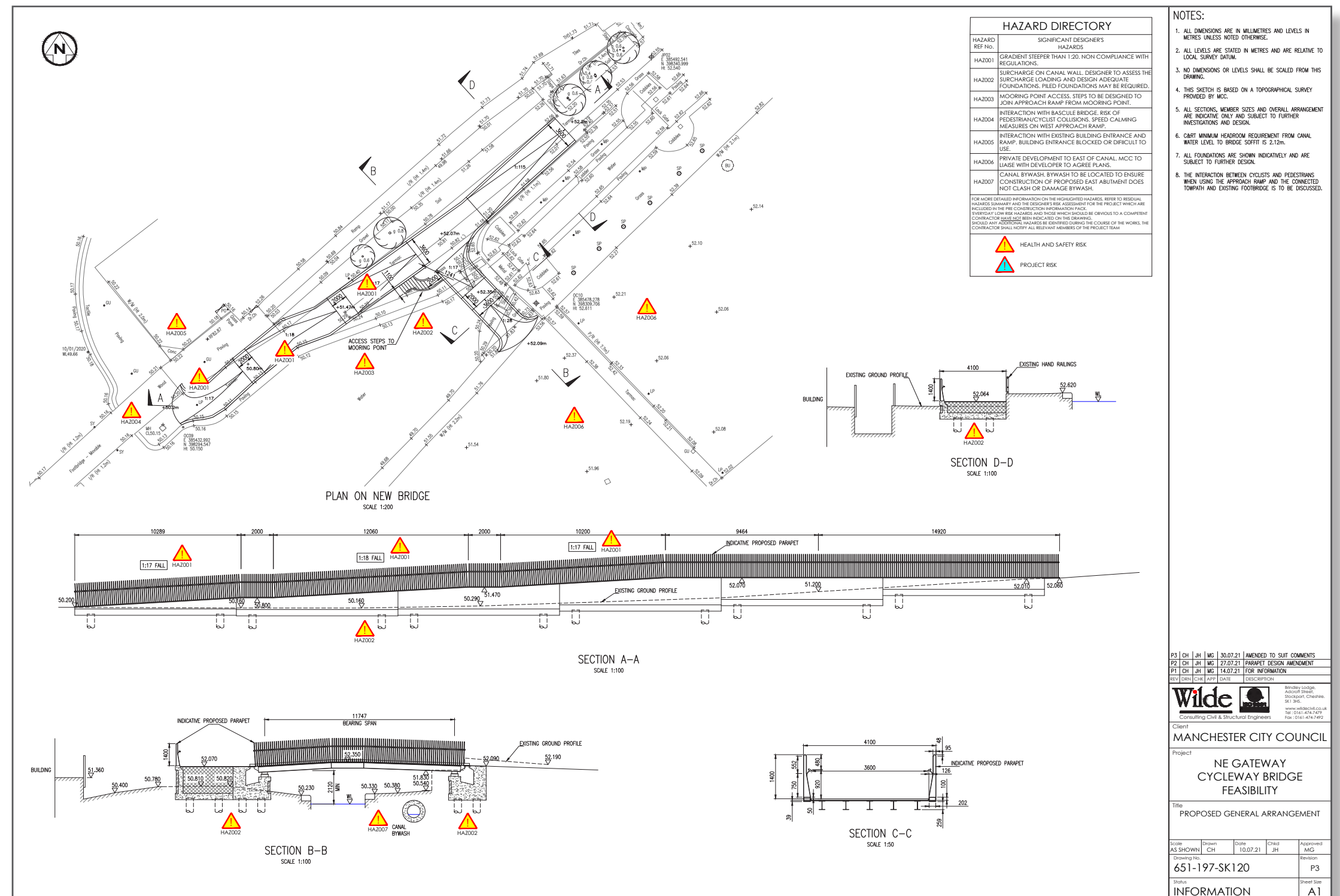
The main elements of the bridge will be steel beams supported upon reinforced concrete abutments. The use of steel elements will allow the proposed design to be kept as slender as is possible.

Ramps and Foundations

The key structural considerations for the foundations and the western ramp are to avoid placing extra loading onto the wash walls of the Ashton Canal.

The western approach ramp is proposed to be formed from reinforced concrete walls, in-filled with structural fill or by utilising lightweight polystyrene void formers. This solution is considered to reduce the weight of the ramps as much as is feasible.

The foundations of both the abutments and the western approach ramp are likely to be reinforced concrete piles. The piles will be topped with reinforced concrete pile caps. The exact size and spacing will be dictated by the results of the geotechnical investigations. Using a piled foundation will enable the loadings from the bridge, ramps and the pedestrians to be transferred to the bedrock and soil beneath the level of the wash walls of the Ashton Canal.



9

CDM

9.1

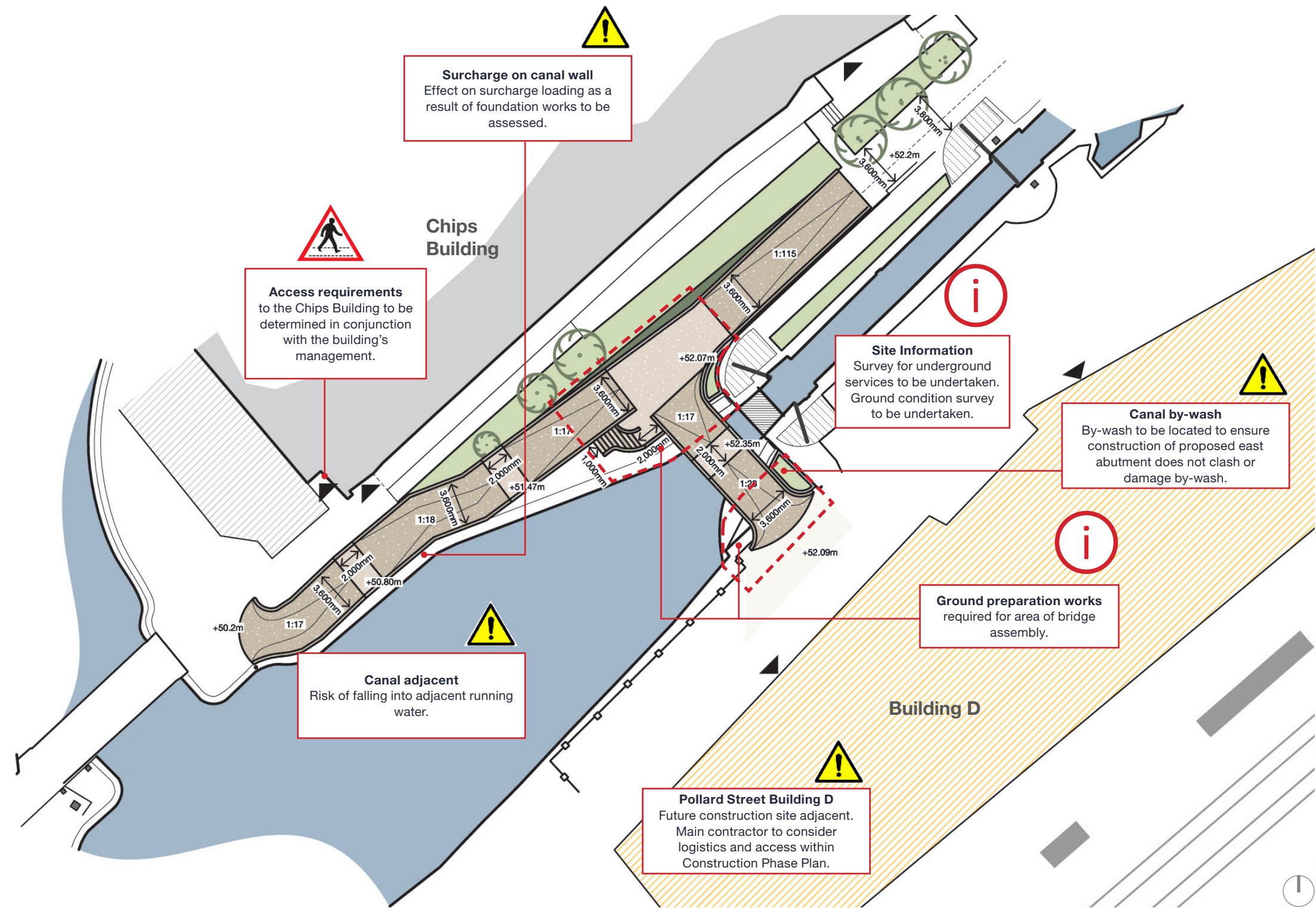
Visual hazard identification

In accordance with CDM Regulations 2015, an initial review of hazards has been undertaken by the Designer to make the Client aware of foreseen risks in delivering the design.

H&S File O&Ms CPP	KEY / GLOSSARY:
	Health & Safety File (handover documentation)
	Operation & Maintenance Manuals (handover documentation)
	Construction Phase Plan

Items noted in the following section may be accompanied by the following symbols;

	Hazard Warning
	Potentially Explosive or Dangerous
	Chemicals or Corrosives Present
	For Information / Items to be noted
	Access Requirements
	High Visibility or Protective Clothing required
	Restrictions Apply / Prohibited Areas
	Advocated Practice



10 Access strategy

- 10.1 Access and movement
- 10.2 Inclusive design and access
- 10.3 Security

10 Access strategy

10.1 Access and movement

The surrounding schemes have been planned to promote walking and cycling to benefit health and well-being. The New Islington Metrolink stop located to the east of the bridge location provides excellent public transport links with additional bus, cycle and walking connections linking through to the Etihad, the city and beyond.

Proposed Bridge

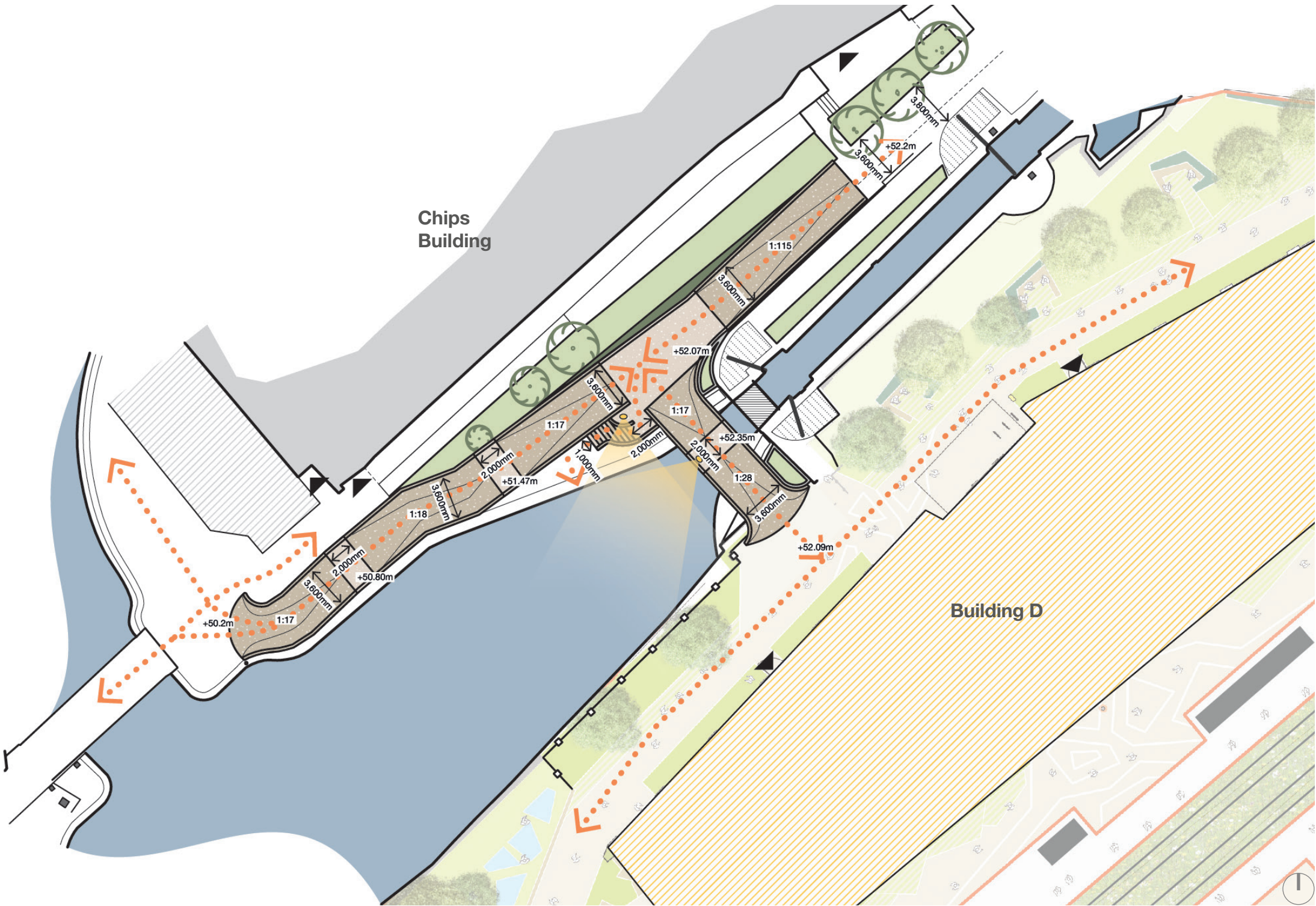
The bridge offers a unique opportunity to connect communities across the Ashton Canal, provide a suitable crossing for both cyclists and pedestrians while preserving the use of the lock and waterway below.

The bridge utilises a series of ramps along the towpath, with interim landings to provide access to bridge. The ends of the ramps to the south-west and east, are flared to facilitate a smooth access and egress by all while the central T-landing is increased in length to encourage cyclists to slow down and provide greater manoeuvrability as users change direction.

While ramped access isn't possible to the mooring area, generous 1m clear width (1.1m total width) steps with a double landing provide ample room for canal users to disembark and access the lock gates.

Please refer to the submitted proposed drawings for details:

- ICB-HBA-ZZ-XX-DR-A-PL20_0101
- ICB-HBA-ZZ-XX-DR-A-PL20_0102
- ICB-HBA-ZZ-XX-DR-A-PL20_0202
- ICB-HBA-ZZ-XX-DR-A-PL20_0203
- ICB-HBA-ZZ-XX-DR-A-PL20_0302
- ICB-HBA-ZZ-XX-DR-A-PL20_0303
- ICB-HBA-ZZ-XX-DR-A-PL20_0400



10

Access strategy

10.2

Inclusive design and access

The scheme has been developed alongside stakeholder engagement through a series of workshops and meetings during early work stages. Feedback and comments on the design have been interrogated and incorporated within the scheme helping to ensure Inclusive Design & Access provisions and principles are embedded within the bridge and towpath proposals described within this Planning Application.

The proposal for the Ashton Canal Lock No.3 Bridge is developed with consideration of the Equality Act (2010) and Health and Safety at Work Act to ensure that the project affords an accessible and inclusive environment for all users. The scheme considers codes, standards and best practice documents in relation to accessibility – in particular, LTN 1/20, Approved Document M, BS 5489-1 and 8300-1 and Design for Access 2 – which will promote levels of accessibility and maximise participation.

The below list is a summary of key guidance which has been incorporated within the design, taking into consideration the constraints of the site. Please note this list is not exhaustive.

– Landing intervals

Landings have been positioned at vertical rise intervals of not more than 0.65m and 10m in length, where the gradient exceeds 1:20, in accordance with LTN1/20 Para. 10.8.23 and CD 353 para. 5.11

– Landing length

The length of landings is not less than 2m measured along the centreline, in accordance with LTN1/20 Para. 10.8.23 and CD 353 para. 5.12

– Parapet

As a bridge designed for use by cyclists, the minimum height of the parapet is proposed as 1.40 metres along the full length of both the bridge and towpath, in accordance with LTN 1/20 para. 10.8.14 and CD 353 para. 11.8

– Stair

1100mm minimum width to stair and minimum 1000mm between handrail and guardrail

Stairs currently design to Approved Documents and comply with BS 5395 [Ref 1.N]

The stairs will incorporate nosing which will be durable, permanently contrasting and the full width of the stair on both the tread and rise

– Upstand

The height of the edge upstand under the parapet for both ramps and stairs shall be not less than 25mm and no more than 50mm, in accordance with CD 353 para. 6.4 and achieves 50mm in accordance with LTN 1-20 para.6.2.8

– Handrails

Handrails are provided on both sides of stairs, ramps and bridge decks, with the centre of the handrail 900mm above the footway surface and designed in accordance with BS 8300-1 [Ref 3.N]

– Drainage

Provision has been made for the drainage of water from the footbridge to ensure surfaces do not become slippery, in accordance with LTN 1-20 para. 15.2.23

– Walkway surface

All traversed surfaces are designed to have minimum slip resistance for the life of the walkway surfacing equivalent to a mean corrected pendulum test value of 45 units using a standard skid resistance pendulum test, in accordance with BS EN 13036-4 [Ref 15.N].

– Lighting

Illumination is provided on the bridge that is consistent to ensure that all walkway surfaces, stairs and handrails are visible, while avoiding unnecessarily excessive illumination.

Lighting conforms to the requirements of BS 5489-1 [Ref 2.I]

– Cyclist speed

Gentle winding has been incorporated into the design to encourage cyclists to slow down

The design has been developed with the objective of creating a secure crossing that does not appear to be aggressively defensive. A key objective is for the bridge to unite communities both sides of the canal and to express a sense of inclusion, openness, and accessibility.

The site benefits from good levels of overlooking from existing and proposed neighbouring buildings. Pedestrian and cycle traffic along the Ashton Canal Towpath, surrounding streets and New Islington Metrolink tram stop contributes to natural surveillance.

The key strategies include:

- Incorporating lighting into the deck structure to ensure areas beneath the deck are well-lit and less likely to become anti-social behaviour hot spots
- Robust materials to reduce risk of vandalism
- Minimal horizontal balustrade members to reduce opportunities for affixing items to the bridge
- Utilising landscaping opportunities to ensure there are no ‘dead spaces’ between the proposed bridge and the lock

A meeting was held at the site with Greater Manchester Police on 08/07/2021, where the scheme was reviewed, and comments (received 22/07/2021) incorporated into the scheme.

1. Positive aspects of the proposal

- 1.1.1.The proposal seeks to make connections across the Ashton Canal linking existing & future buildings, social settings and their surrounding environments. In doing so the project will identify new and emerging opportunities across the site for a whole new range of social and commercial developments with the new public realm at the centre of the growth.
- 1.1.2.The overall proposal will see the redevelopment of the area which has been a generator of anti-social behaviour and criminal activity.
- 1.1.3.The proposal will allow a greater flow in pedestrian and cycle activity across the site. In addition to the proposed bridge the scheme will address the existing hard & soft landscaping treatments. The reduction of existing foliage and self-seeded landscaping on the Pollard St side of the canal will greatly increase visibility across the site thus promoting better natural surveillance around the area. The increased number of users across the site, addressing the visibility across the site will all vastly help to reduce feelings of insecurity around the area. The greater the use of these spaces the less likely they will be populated by those acting anti-socially.
- 1.1.4.The physical architecture of the bridge will incorporate a lightweight metal structure within the design allowing greater visual links across the site during day.
- 1.1.5.The main public realm circulation routes are obvious, leading people directly to where they need to go. The proposals are intended to integrate with surrounding circulation routes and future developments of the Pollard Street consented scheme (12819/FO/2020).
- 1.1.6.The design team will engage and consult with local communities and businesses to understand their desires, concerns and requirements from the proposals. The involvement of local communities encourages pride towards the public realm and creates a sense of greater community ownership and self-policing of spaces.
- 1.1.7.There are good levels of natural surveillance offered by the neighbouring residential buildings onto the site. The future development of the Pollard Street commercial scheme will further enhance natural surveillance of the proposed public realm developments of this project.

2. Further Recommendations to Improve Security & Safety

- 2.1.1.Lighting to access road and pedestrian routes around the site. Effective lighting should be included to allow users to feel secure in the hours of darkness. If lighting is incorporated within the architecture of the bridge it should be designed to allow for routine maintenance. Consideration must also be given to the robust nature of proposed materials and potential attacks.
- 2.1.2.Lighting should be considered to the underside of the bridge discouraging loitering and anti-social behaviour taking place on the canal tow path below the bridge.
- 2.1.3.The management of such areas is essential to encourage active use and enjoyment, whilst making abuse less likely to occur. Poor management and maintenance can lead to a downward spiral of neglect and loss of environmental quality, encouraging nuisance, vandalism, littering and other anti-social or criminal behaviour.
- 2.1.4.Given the high levels of graffiti within and around the site, it is important that materials are sealed, protected and/or supports the removal of graffiti. Developments which contain graffiti can be an indication that the maintenance regime in respect of graffiti is a low priority. If graffiti is left on surfaces it can lead to further acts of graffiti and/or damage and creates a lasting impression of a lack of care towards the local environment. Overtime a neglected public realm can instil a sense of insecurity towards the area. In general a robust management & maintenance strategy should be submitted in respect to the wider masterplan.
- 2.1.5.Security measure carefully incorporated into the public realm design can ensure that the environment is reasonably secure, without visibly announcing that the design was concerned about crime or safety. The proposed development provides the opportunity to include security features built into the design and construction of the bridge and avoid the need for obtrusive retro-fitted security measures that can increase the fear of crime

Lighting has been proposed to be integrated into the handrail to allow the bridge to be well lit along the full length

Lighting has been proposed to be incorporated into the deck structure to illuminate the lock steps and help to avoid loitering in the mooring area

Materials have been carefully selected to minimise maintenance requirements, maximise longevity and robustness, as well as appropriate anti-graffiti treatments identified for the more vulnerable abutments and ramp faces

12 Drawing list



Drawing List - Planning Application

Project name:	Ashton Canal Bridge - New Islington
Project number:	210131
Document reference:	ICB-HBA-ZZ-XX-SH-A-0001
Reason for issue:	Planning Submission
Revision:	P01
Date:	03.08.2021

Architectural drawings			
Document reference	Document title	Size	Scale
Site information			
ICB-HBA-ZZ-XX-DR-A-PL20_0001	Location plan	A3	1:1250
ICB-HBA-ZZ-XX-DR-A-PL20_0100	Existing site plan	A1	1:100
ICB-HBA-ZZ-XX-DR-A-PL20_0101	Proposed site plan	A1	1:100
ICB-HBA-ZZ-XX-DR-A-PL20_0102	Proposed interfaces with existing lock	A1	1:100
Sections			
ICB-HBA-ZZ-XX-DR-A-PL20_0200	Existing elevation A-A	A1	1:100
ICB-HBA-ZZ-XX-DR-A-PL20_0201	Existing elevation C-C	A1	1:50 & 1:100
ICB-HBA-ZZ-XX-DR-A-PL20_0202	Proposed elevation A-A	A1	1:100
ICB-HBA-ZZ-XX-DR-A-PL20_0203	Proposed elevation C-C	A1	1:50 & 1:100
ICB-HBA-ZZ-XX-DR-A-PL20_0300	Existing section B-B	A1	1:100
ICB-HBA-ZZ-XX-DR-A-PL20_0301	Existing section D-D	A1	1:50 & 1:100
ICB-HBA-ZZ-XX-DR-A-PL20_0302	Proposed section B-B	A1	1:100
ICB-HBA-ZZ-XX-DR-A-PL20_0303	Proposed section D-D	A1	1:50 & 1:100
Details			
ICB-HBA-ZZ-XX-DR-A-PL20_0400	Proposed balustrade details	A1	1:10

London\
Edinburgh\
Manchester\
Los Angeles\