

1

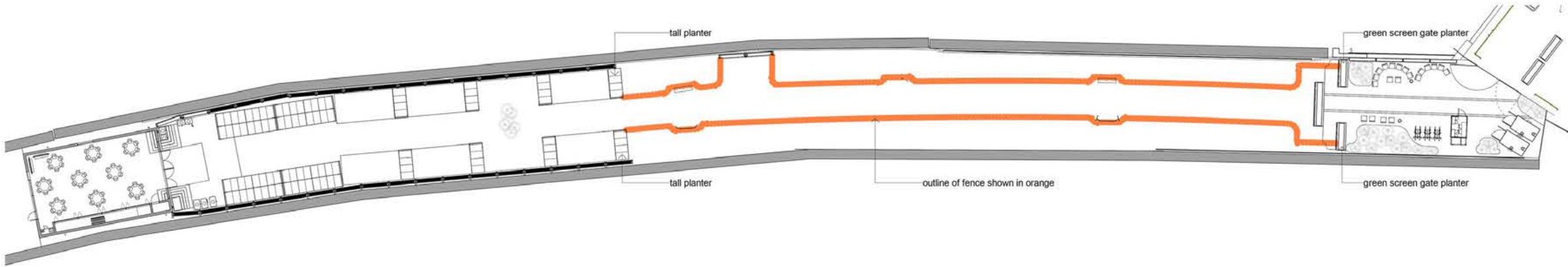
LOW LEVEL HOOK FENCE

Within the 'Viaduct as Existing' zone, a low level fence will ensure visitors do not come into contact with the existing vegetation.

The design of the fencing has been reviewed by the National Trust's Equality Specialist and by the Centre for Accessible Environments' Senior Access Advisor. In line with their advice, the height (500mm) has been agreed to ensure it does not create a tripping hazard, as well as the thickness of the chain (min 20mm) for it to be clearly visible.

The 'hook' design of the fence is inspired from the profile of existing railway ties found on site (see photo on the right).

Material: Metal
Finish: Anthracite Grey 7016



2 (34) Extent of hook fence
1 : 300

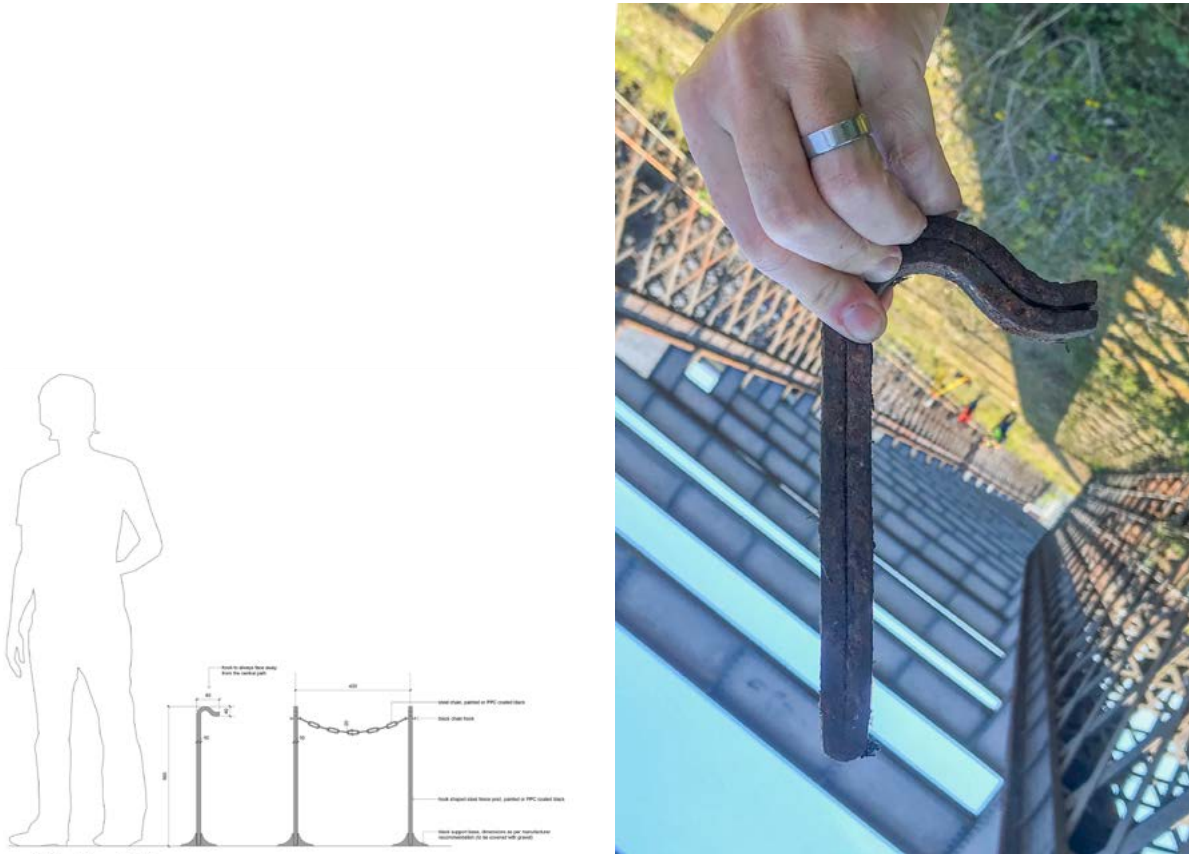
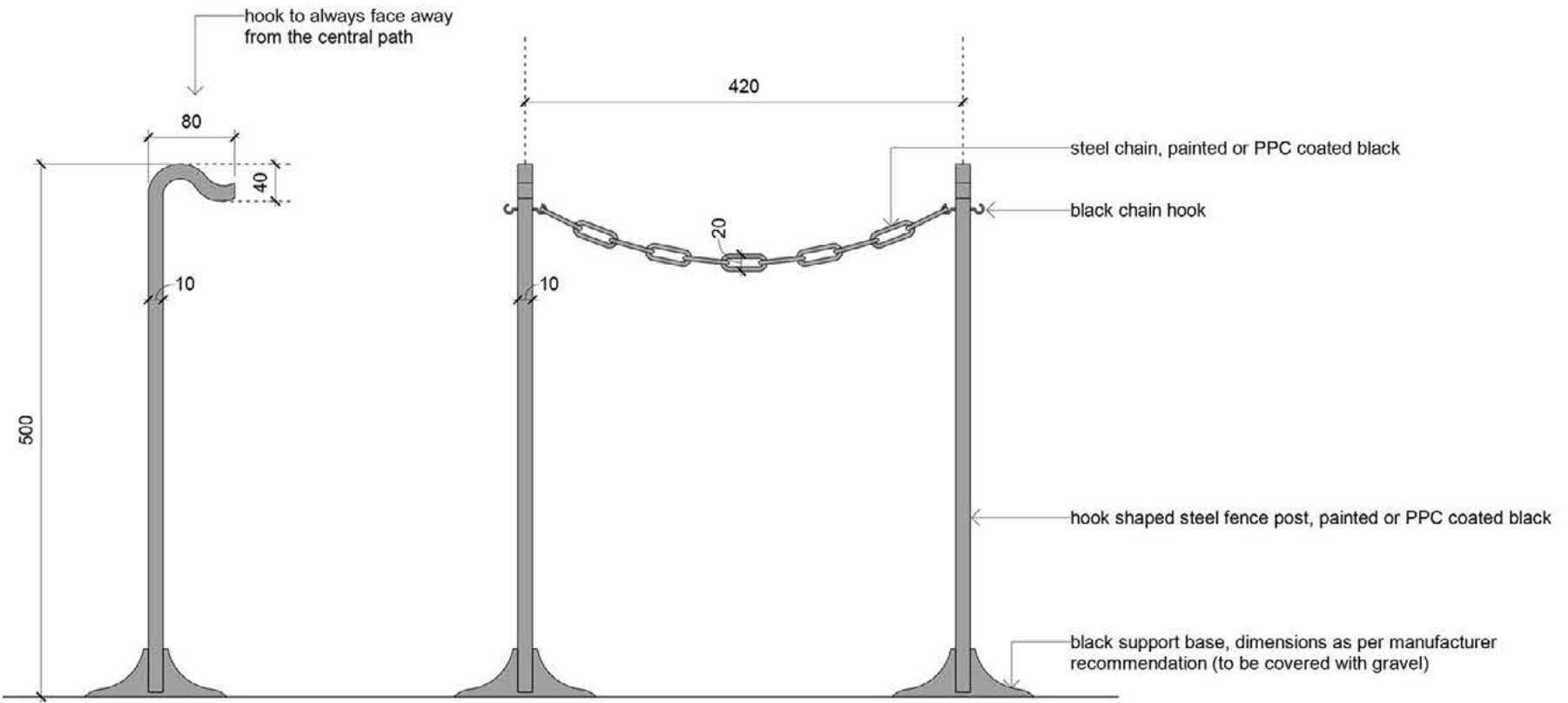


Diagram to show scale



Photo of historic railway tie found on site



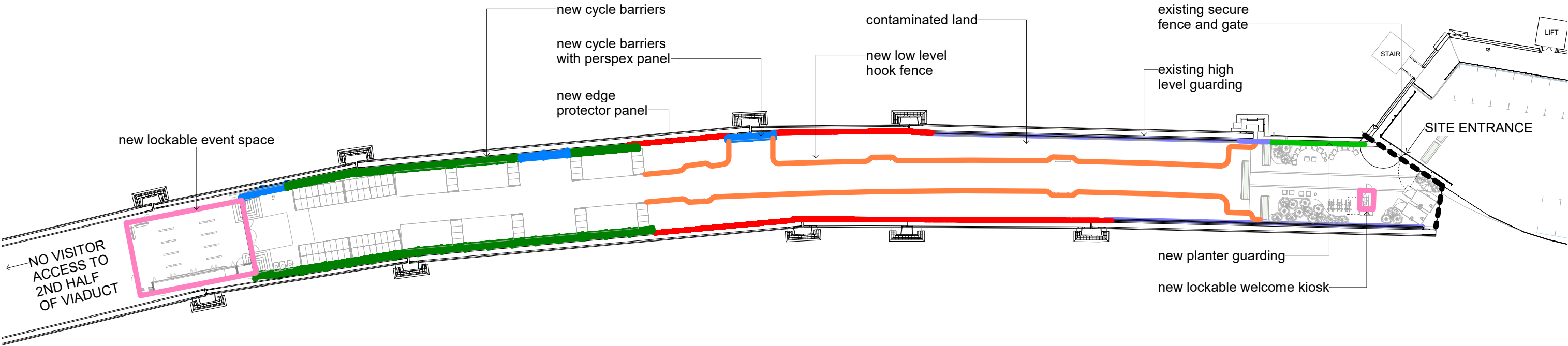
1

LOCKABLE BUILDING ENCLOSURES

The central events building will have lockable doors, meaning visitors cannot pass through from the Secret Garden to the second, Western half of the viaduct. The cycle barriers will run all the way up to the building edges.

Access behind the barriers and to the second half of the viaduct will be for maintenance personnel only, who will be detaching the barriers from the existing scaffolding to gain access.

- KEY**
- 1. Existing Secure Fence and Gate
 - 2. Existing High Level Guarding
 - 3. Edge Protector Panel
 - 4. Cycle Barrier
 - 5. Cycle Barrier with Perspex Panel
 - 6. New Planter Guarding
 - 7. Low Level Hook Fence
 - 8. Lockable Building Enclosures



1 FENCE AT WEST END OF VIADUCT

At the West end of the second half of the viaduct, there is an existing, high level palisade fence which prevents access to the live Metrolink infrastructure - see photo on the right. This fence will be retained.



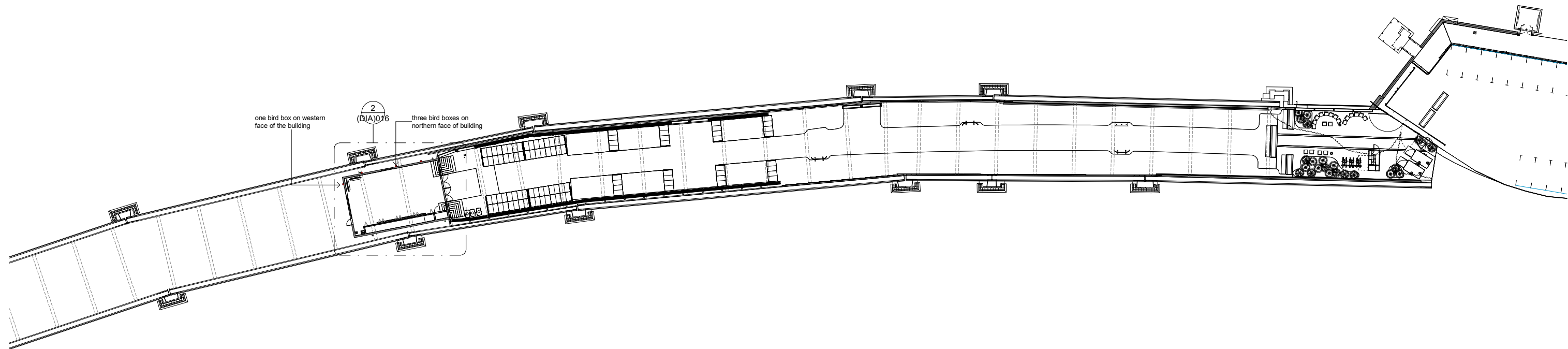
2 MEASURES BENEFICIAL TO WILDLIFE BY URBAN GREEN

2 MEASURES BENEFICIAL TO WILDLIFE

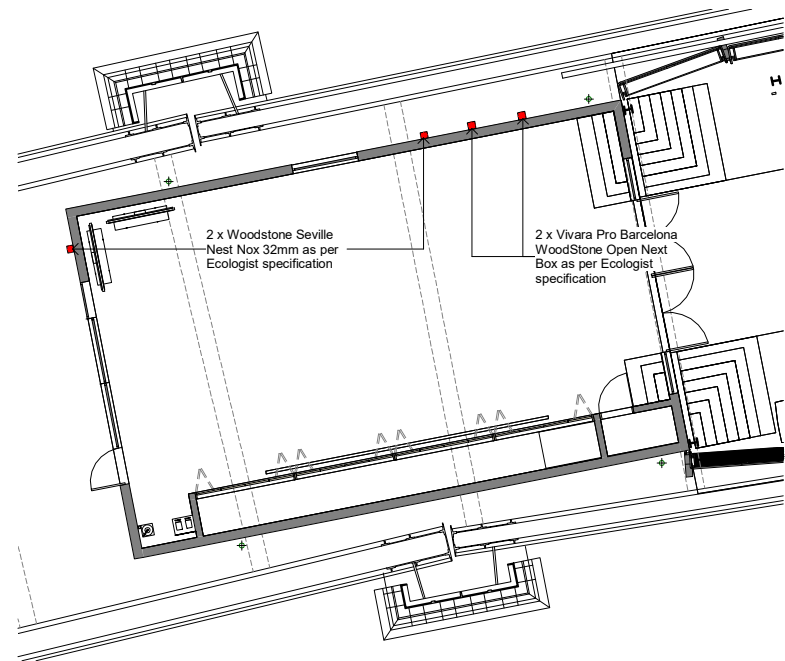
Four bird boxes are being installed as part of the measures beneficial to wildlife. No bat boxes are being proposed, due to the temporary nature of the scheme.

All four will be fixed to the external walls of the temporary building, at a minimum height of 3m. Three will be placed on the North facade and one on the West facade.

Further details are offered in the Bird Box Plan, prepared by Urban Green, on the following pages.

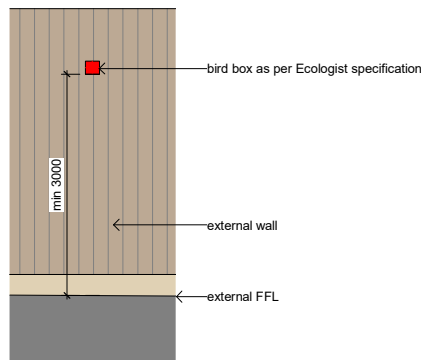


1 Bird Box Locations Masterplan
1 : 300



2 Bird Box Locations - Callout 1
1 : 100

Bird boxes to be fixed at a height of 3m as per Ecologist specification. Please see Ecologist 'Bird Box Plan' for full details



3 (21) Typical Bird Box Elevation
1 : 50

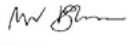
BIRD BOX PLAN

DECEMBER 2021

Castlefield Viaduct Urban Park
Duke Street
Manchester
M3 4RU



QUALITY MANAGEMENT

Project No.:	UG922				
Project:	Castlefield Viaduct Urban Park				
Location:	Duke Street, Manchester, M3 4RU				
Title:	Bird Box Plan				
Document Type:	BBBP				
Date:	7 th December 2021				
Prepared By:	Jake Healy	Signature		Qualifications	Assistant Ecologist, QCIEEM
Checked By:	Mark Blacker	Signature			Senior Ecologist, MSc, ACIEEM
Checked By:	Maisie McKenzie	Signature			Ecologist, MSc, ACIEEM
Revision Status:					
Rev:	Date:	Issue/Purpose/Comment:	Prepared:	Checked:	

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1 Introduction

1.1 Background to the Scheme

This report has been produced by Urban Green on behalf of The National Trust in relation to the proposal to develop land at Castlefield Viaduct in Castlefield Manchester (hereafter referred to as ‘the site’). The proposals include the development of an elevated urban park with integrated active travel hub that is open to the public within a disused railway viaduct.

Urban Green have been appointed to provide a Bird Box Plan (BBP) for the site.

The author of the report is Jake Healy, Qualifying CIEEM, Assistant Ecologist. Jake has experience providing ecological consulting services for a range of development schemes across the UK, including residential, commercial, and industrial schemes.

1.2 Site Context

The site is located at National Grid Reference SJ 83013 97624 and comprises a total area of approximately 0.59ha (see Figure 1).

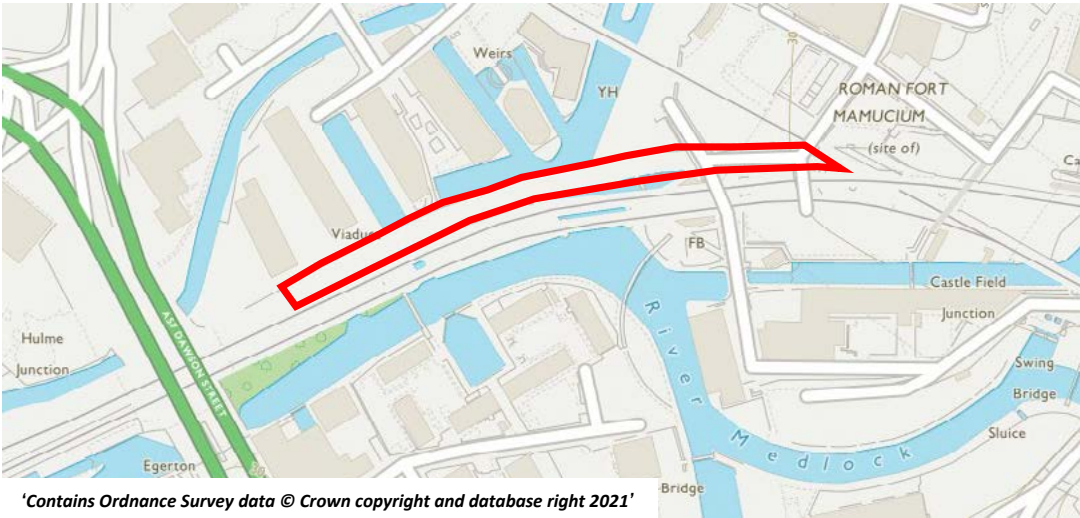


Figure 1 – Site Extent

The site is located in a densely urban area of Manchester city centre, adjacent to an active tram line. The site is also located above the Bridgewater canal and approximately 260m east of the River Irwell. Buildings surrounding the site are mostly commercial offices to the north and high-density residential apartments to the south. Due to the site’s location close to the city centre, there is a high level of disturbance present from main roads such as the A635 present approximately 75m west of the site.

1.3 Purpose of this Report

Urban Green have been appointed to complete a Bird Box Plan in order to discharge condition 14 of the associated planning application, which states:

“The use shall not commence unless and until measures/features that are beneficial to wildlife, such as roosting opportunities for bats or the installation of bird nest boxes, have been submitted to and

approved in writing by the City Council as local planning authority and those approved measures/features have been incorporated into the development.

Reason - To enhance, restore or create new biodiversity either on-site or adjacent to the site in order to contribute to linkages between valuable or potentially valuable habitat areas, pursuant to Policy EN15 of the Core Strategy and to reflect the guidance contained in the National Planning Policy Framework.”

This report details indicative locations for bird boxes to be implemented on site. Bat boxes are not considered within this report due to the nature of the scheme. The plans for the site are to construct a temporary structure at western end of the site for a preliminary year to gauge public opinion on the scheme. Following completion of the first phase of this project, it is recommended that the capacity to include bat boxes into the scheme is evaluated to provide additional roosting habitat for the local bat population.

Appendix 1 includes the relevant legislation.

2 Previous Reports

2.1 Preliminary Ecological Appraisal (April 2021)

A PEA was completed by Urban Green in April 2021. The purpose of which was to identify habitats on site and determine the sites potential value for protected and/or notable fauna and flora. The field survey conducted by Katie Bird (Senior Ecologist) and Mark Blacker (Senior Ecologist) on the 19th of April 2021 identified that the site comprised predominantly ephemeral/short perennial vegetation, with some areas of scattered scrub, semi-improved neutral grassland, and broadleaved scattered trees.

With the habitats found on site, the sites location and the results of the 1km data search taken into consideration, the site was assessed as providing potential for:

- Birds – The site provides value to notable ground nesting and passerine birds within the structure of the viaduct and within the loose substrate and are therefore likely to be present on site. Additionally, multiple feral pigeons were observed nesting during the field survey as well as broken eggshells identified on the ground. A single wren was also observed on site, however, there was no evidence of nesting. Records for black redstart and little ringed plover have been recorded within proximity of the site, which are known to use loose substrate with minimal vegetation for nesting.
- Bats - Structure 1 within the Viaduct was assessed as providing moderate bat roost potential and records of a common pipistrelle roost within close proximity of this structure was returned within the data search. The site likely provides good value to commuting and foraging bats due to the linear nature of the site and the invertebrate population supported by the minimally managed habitat present on site. Overall, the site has the potential to support roosting bats whilst the habitats may provide moderate commuting and foraging value.

As such, the following recommendations were suggested within the PEA:

- Nocturnal bat surveys in the form of dusk emergence and dawn re-entry surveys as well as bat activity transect surveys should be undertaken.
- Bat and/or bird boxes could be placed on the existing Castlefield Viaduct structure, away from the southern side of the site which is in close proximity to the tram line. A plan to show the locations of these boxes and the specifications should be produced by a suitably qualified ecologist once the layout is finalised.
- As much of the current habitat on site should be retained within the design of the site to maintain the site’s value for invertebrates and commuting and foraging bats.
- Native flowering species should be planted within the proposed park to enhance the value of the site to invertebrates, which will in turn provide value to the local bird and bat populations.

2.2 Bat Survey Report (September 2021)

A bat survey report was completed by Urban Green in September 2021. The purpose of the report was to demonstrate the results of nocturnal bat surveys which were completed at the site. The surveys were conducted to confirm presence or likely absence of roosting bats on site, and how bats, if present, utilise the site and to assess the most valuable habitats for bat foraging and commuting.

Two emergence surveys were completed on site with five vantage points surrounding structure 1 which had been assessed as having moderate roosting potential in the PEA. Five activity transect surveys were undertaken on site between June and September (inclusive). A static bat detector (Anabat Express Bat Detector) was deployed at the site for a minimum of one week across four deployment periods from June to September (inclusive).

During the nocturnal emergence surveys, it was identified that two common pipistrelle roosts were present on the northern aspect of S1, with a peak count of three individuals foraging on site at one time. The low number of bats recorded using these roosts indicates that they are non-breeding summer roosts for low numbers of common pipistrelle which is a relatively common and widespread species of bat.

The nocturnal bat activity and static surveys identified that the site is of value to common pipistrelle for foraging purposes, as bat activity relating to common pipistrelle was consistently recorded across all surveys. The viaduct and scrub on site were considered to be of high value to the local population of common pipistrelle as the open area with a relative lack of disturbance and the habitats present attracts a higher number of insects than surrounding areas.

Therefore, it was recommended that:

- Any loss of scrub habitat should be replaced with suitable, species diverse areas of vegetation that will attract high numbers of invertebrates, in order to minimise the impact that the loss of this habitat will have on bat species present on site.
- Some periphery habitats should be retained within the eastern section of the Viaduct to maintain current levels of connectivity through the site.
- An external lighting scheme should be adhered to.

3 Bird Boxes

The development has the potential to enhance bird nesting opportunities through the provision of bird nest boxes. It has been considered suitable that a total of 3 bird boxes are to be installed across the site.

Bird boxes come in various types and sizes, which vary in their suitability from species to species. Table 1 provides details of bird nest box types and the likely species they attract. Bird species that are known to inhabit the local area and readily utilise artificial nest boxes have been selected. Boxes of similar specifications as those detailed in Table 1 can be selected, in the case the example boxes are not available.

Table 1 - Bird nest box hole sizes and associated species

Box entrance hole size	Associated species
28mm	Great tit (<i>Parus major</i>), tree sparrow (<i>Passer montanus</i>), pied flycatchers (<i>Ficedula hypoleuca</i>)
32mm	House sparrow and nuthatch (<i>Sitta europaea</i>)
45mm	Starling
100mm (open fronted)	Robin (<i>Erithacus rubecula</i>) and pied wagtails (<i>Motacilla alba</i>)

Table 2 – Bird nest boxes that can be bought from websites such as nhbs.com, habibat.co.uk or other online retailers

Bird box type	Image	Number of boxes
Woodstone® Seville Nest Box 32mm NHBS (2021) Dimensions: Entrance hole diameter: 32mm Width: 20cm Height: 31cm Length: 20cm Weight: 5.9kg Material: WoodStone®		2
Vivara Pro Barcelona WoodStone Open Nest Box NHBS (2021) Dimensions: Width: 19cm Height: 24cm Length: 17.5cm Entrance hole: Open		2

3.1.1 Positioning of Bird Boxes

Bird boxes are most effective when positioned on a north-or west facing aspect to prevent overheating during the summer nesting season. Care should be taken to make sure boxes are not angled in such a manner to allow rain to enter them. It has been deemed appropriate that the nest boxes should be affixed to vertical surfaces on the temporary constructed building at a minimum height of 3m, rather than on the viaduct itself as this is a listed structure.

Three boxes should be affixed to the north-ern aspect of the building and one should be placed on the western aspect of the temporary structure to be constructed at the western end of the viaduct.

3.1.2 Timing of Installation

Bird boxes are to be installed prior to the completion of the scheme and before the site is open for public use.

3.1.3 Maintenance of Bird Boxes

The following maintenance measures are to be completed, following the installation of the boxes:

- Bird boxes will require periodic checking and cleaning, (e.g. once every two years).
- Unhatched eggs may be removed legally between September and January and must then be disposed of.
- Disused nests must be removed and cleaned using boiling water to remove parasites. Boxes should be left to dry before replacing the lid. Insecticides and flea powders must not be used.
- If any boxes are identified as damaged or missing, they are to be replaced with a box of similar specification.

Note bird boxes must only be opened and cleaned outside the bird nesting season (which is between March to September inclusive).

4 Schedule of Works

4.1 During Construction

Works	J	F	M	A	M	J	J	A	S	O	N	D
Erect boxes	Any time of year. All bird boxes to be erected prior to the completion of the scheme and the opening of the site to the public.											

4.2 Post-Construction

Works	J	F	M	A	M	J	J	A	S	O	N	D
Bird box check and cleaning			Avoid bird nesting season									

Bird box checks should be conducted in October of every other year to ensure that there is sufficient time for any repairs or replacements to be conducted.

	Recommended times when works can be conducted
	Times to avoid work either through recommendation or under licence

5 Conclusion

This plan has demonstrated that the requirements to discharge condition 14 of the relevant application, have been met by demonstrating the following:

- A specification concerning the type of features to be used, as detailed in Section 3. Specifically targeting species identified on site during previous ecological surveys (detailed in Section 2).
- Implementation programme as detailed in Section 4.

It is hoped this will enhance the opportunities offered by the site to these species within the local area upon completion of the scheme.

6 References

NHBS. *Vivara Pro Barcelona WoodStone Nest Box*. Available URL: <https://www.nhbs.com/vivara-pro-barcelona-woodstone-open-nest-box> [Last accessed: 07/12/2021]

NHBS. *Vivara Pro Seville 32mm WoodStone Nest Box*. Available URL: <https://www.nhbs.com/vivara-pro-seville-32mm-woodstone-nest-box?bkfno=234956> [Last accessed: 07/12/2021]

Twelve architects & masterplanners (2021). The National Trust Castlefield Viaduct. Stage 4 Masterplan. (GA)001 A

Urban Green (2021). Preliminary Ecological Appraisal. UG_922_ECO_PEA_01.

Urban Green (2021). Arboriculture Impact Assessment. UG_922_ECO_BSR_01.

Appendix 1 – Relevant Legislation

Breeding Birds

With certain exceptions¹, all wild birds, their nests and eggs are protected by Schedule 1 of the *Wildlife and Countryside Act 1981* (as amended). Therefore, it is an offence to:

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird while it is in use or being built; or
- intentionally take or destroy the egg of any wild bird.

These offences do not apply to hunting of birds listed in Schedule 2 subject to various controls.

Bird species listed on Schedule 1 of the Act receive further protection, thus for these species it is also an offence to:

- intentionally or recklessly disturb any bird while it is nest building, or is at a nest containing eggs or young; or
- intentionally or recklessly disturb the dependent young of any such bird.

¹ Some species, such as game birds, are exempt in certain circumstances.

3 **GRAPHIC PANEL DESIGN**

BY CREATIVE CONCERN / TWELVE ARCHITECTS

3

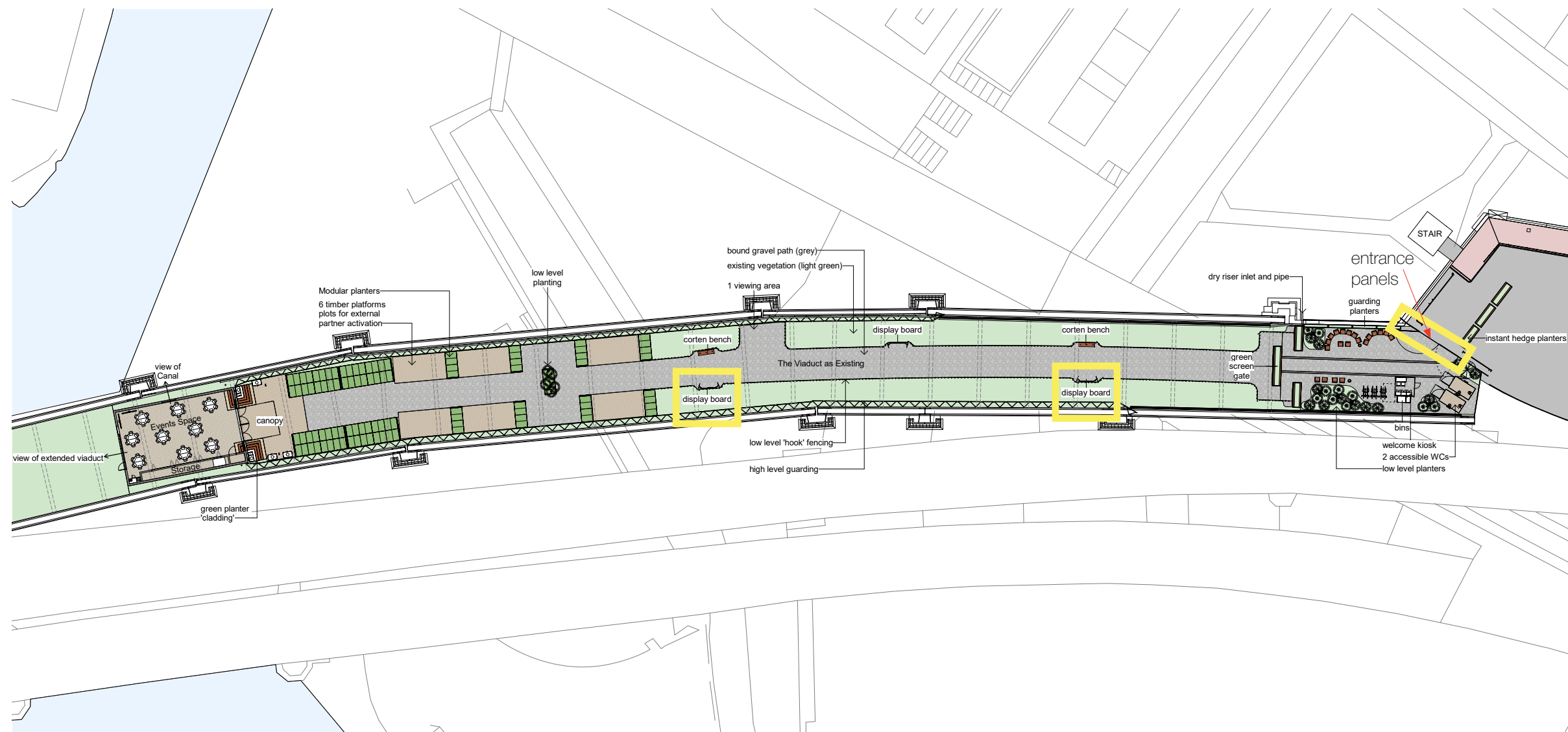
SIGNAGE STRATEGY

The signage and interpretation strategy currently in development for the Viaduct will set out the overarching themes which will be explored creatively, the prompts and questions that will be used to gain insights and feedback from the public, and the creative approach that will be taken to the graphic design and content to be used in the display boards which have been detailed in the overarching masterplan. This on-site signage will work within the National Trust brand guidelines and the material palette detailed in the Design and Access Plan for the site. The strategy more widely will also consider how to direct and encourage visitors to pre-book onto tours for the site and generate high levels of awareness across the city, neighbouring communities and key city stakeholders.

The following pages show details of the signage boards along the viaduct and the graphic panels at the site entrance.

A summary of the National Trust brand guidelines will also be included, with the full guidelines available at the following link:

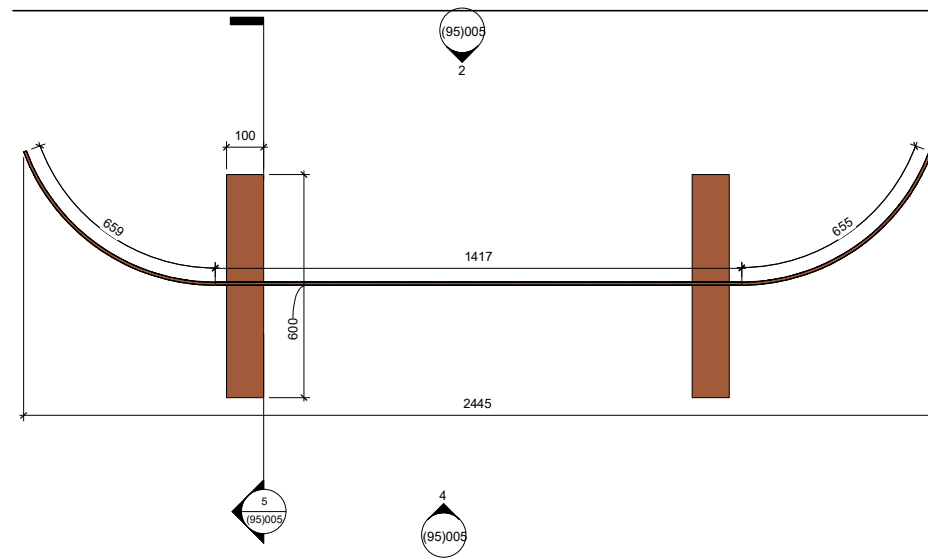
<https://brandcentre.nationaltrust.org.uk>



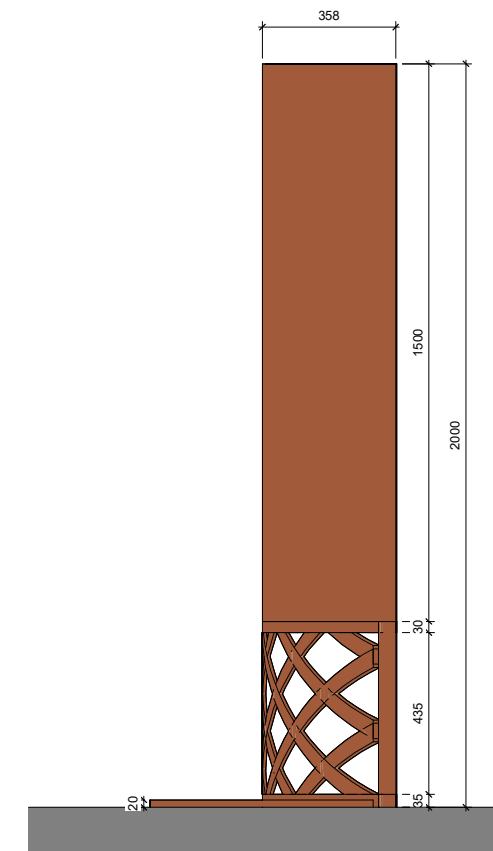
Locations of display boards along the viaduct and entrance panels highlighted in yellow

3

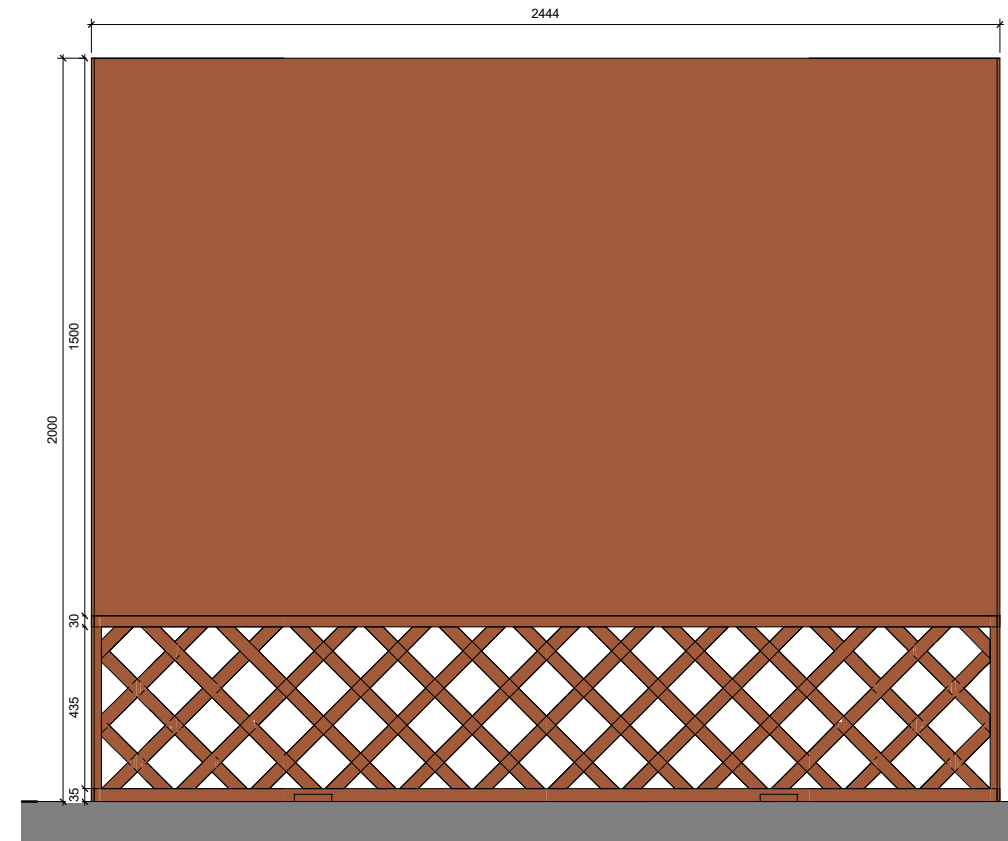
DISPLAY BOARDS



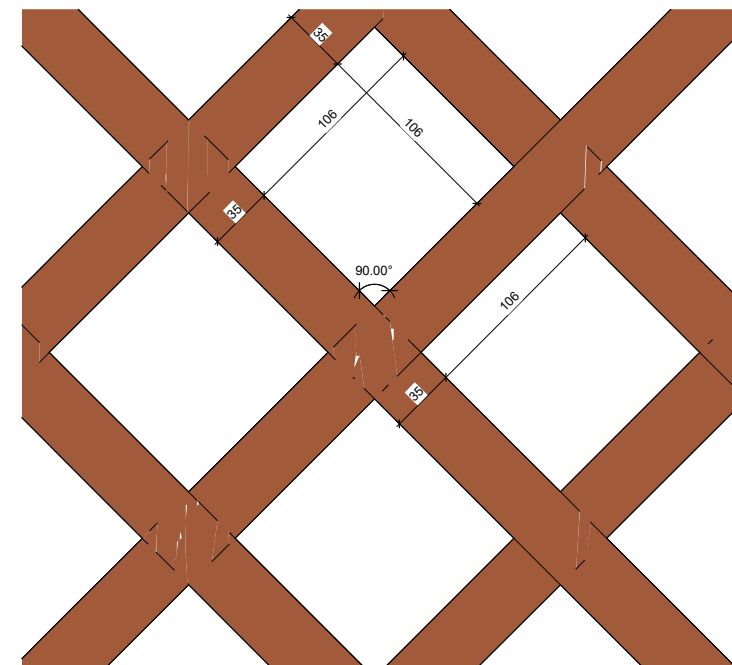
1 (95) Display Board - Plan
1 : 10



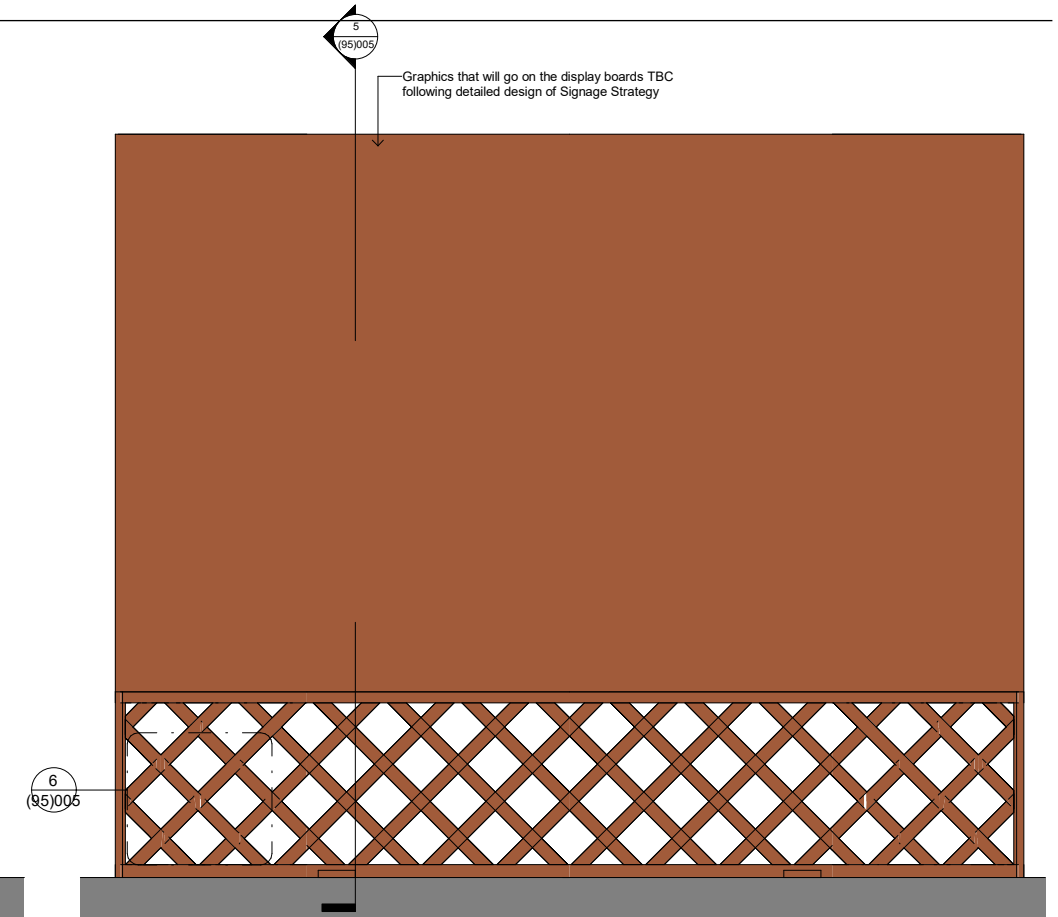
5 (95) Display Board - Section
1 : 10



2 (95) Display Board - Front Elevation
1 : 10

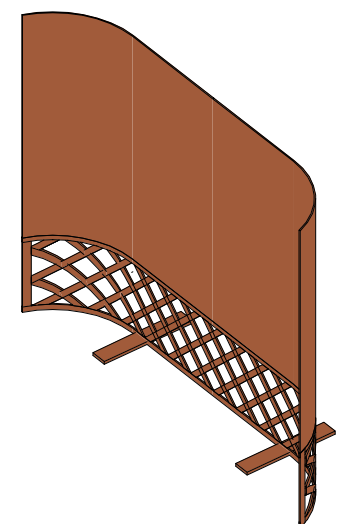


6 (95) Display Board - Lattice Structure
1 : 2



4 (95) Display Board - Back Elevation
1 : 10

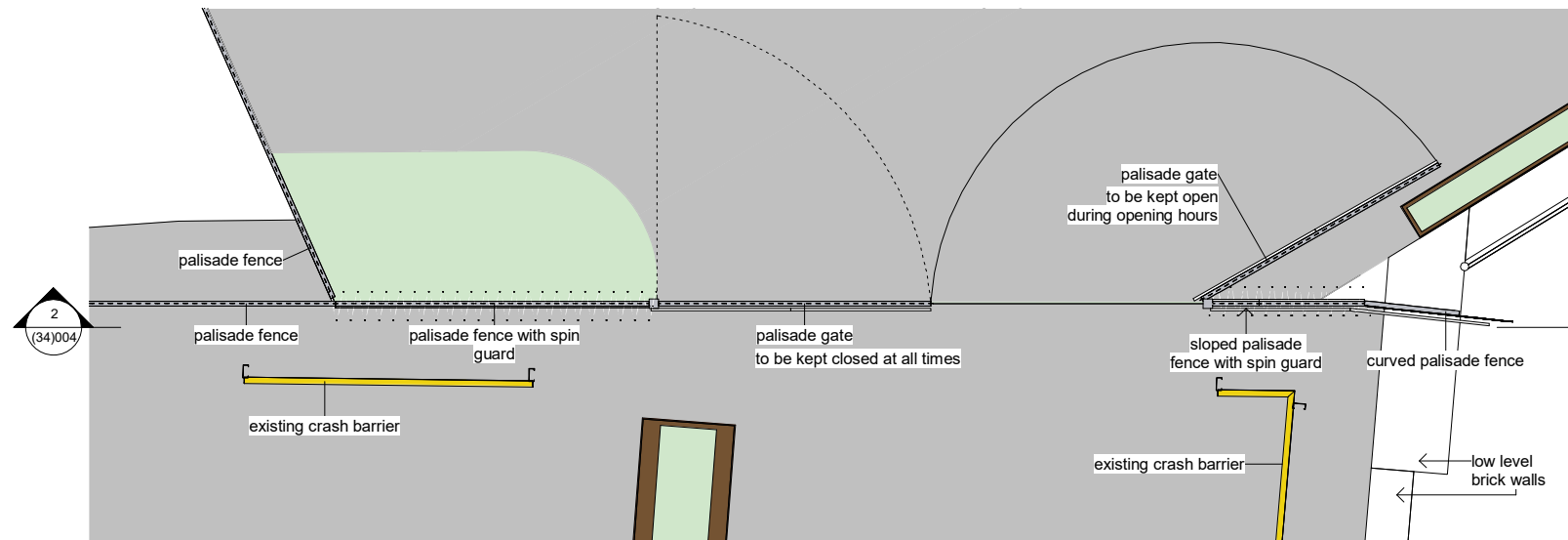
The display boards are to be corten finish and freestanding. The feet at the base will be covered with loose ballast to help conceal them. The final dimension of the feet may be altered slightly to ensure stability.



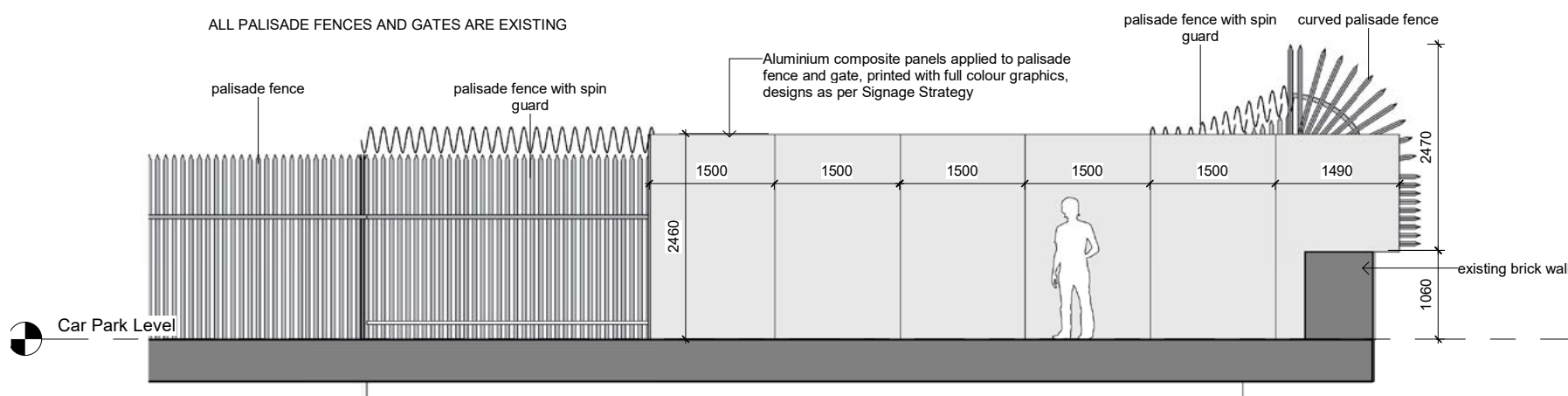
3 (95) Display Board 3D View

3

ENTRANCE PANELS



1 (34) Entrance Fence Plan
1 : 50

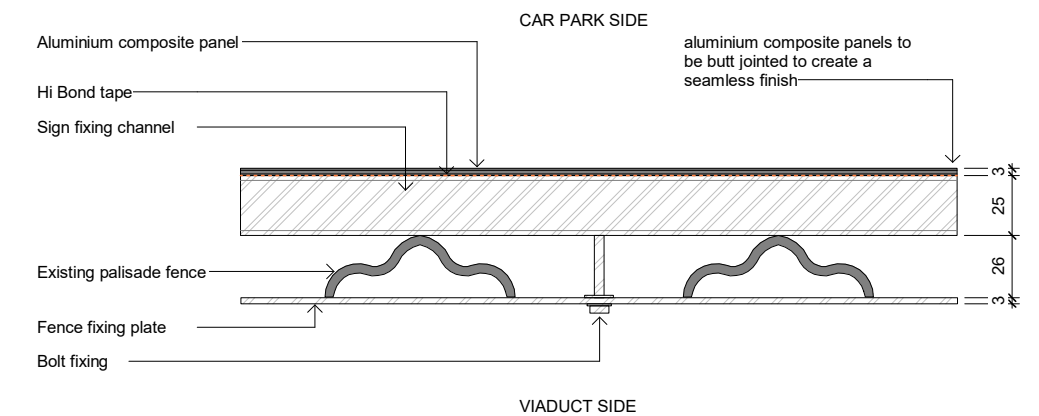


2 (34) Fence Dressing Elevation (Gate Closed)
1 : 50

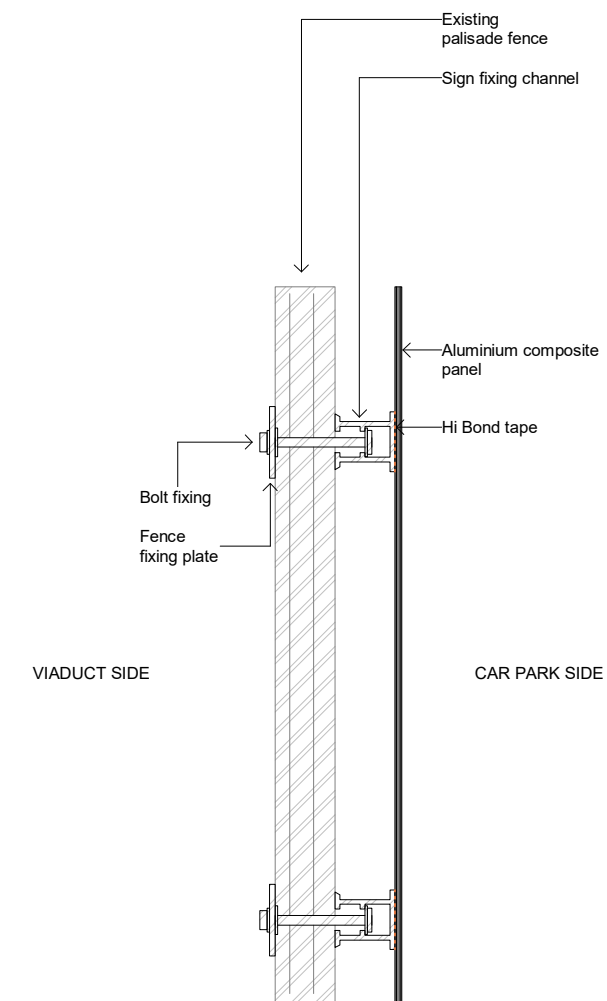
The existing palisade fence and lockable gate are to be retained. They will be covered with Aluminium Composite Boards, which will be printed with full colour graphics.

The detailed graphic design for the graphics is currently being worked out as part of the Signage Strategy.

The Aluminium Composite Boards will be fixed to the existing palisade fence and gate with a bolt system that will allow them to be removed at the end of the pilot scheme.



3 (34) Fence Fixing - Plan Detail
1 : 2



4 (34) Fence Fixing - Section Detail
1 : 2

3 NATIONAL TRUST BRAND GUIDELINES

The following few pages are excerpts from the National Trust brand guidelines, to give reassurance about visual tone and accessibility.

The full guidelines are available at the following link:

<https://brandcentre.nationaltrust.org.uk>

Introduction

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Identity principle 1

Flexibility

Today, our brand identity has to work in many different situations and formats, so it has inbuilt flexibility. It can be discreet or bold, serious or fun, and can sit alongside castles, inner city terraces or wild coastlines.

Just a few examples of how our flexible identity works

Our Brand Guidelines



3 NATIONAL TRUST BRAND GUIDELINES

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<https://brandcentre.nationaltrust.org.uk>

Introduction	Elements	Application	Resources
---------------------	----------	-------------	-----------

Identity principle 2

Accessibility

When we say ‘for everyone’, we mean it. Font size, format, language, colour contrast, who we’re representing in images – they all matter to us because they help people understand, enjoy and feel welcome at Trust places.

Attingham Park, Shropshire

Our Brand Guidelines



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Identity principle 3

Quality

We take our responsibility to protect very seriously, and have an attention to detail that applies to everything we do. Your skilful use of our brand identity helps build our reputation for quality. Thank you for handling it with care.

Powis Castle and Garden, Powys

Our Brand Guidelines

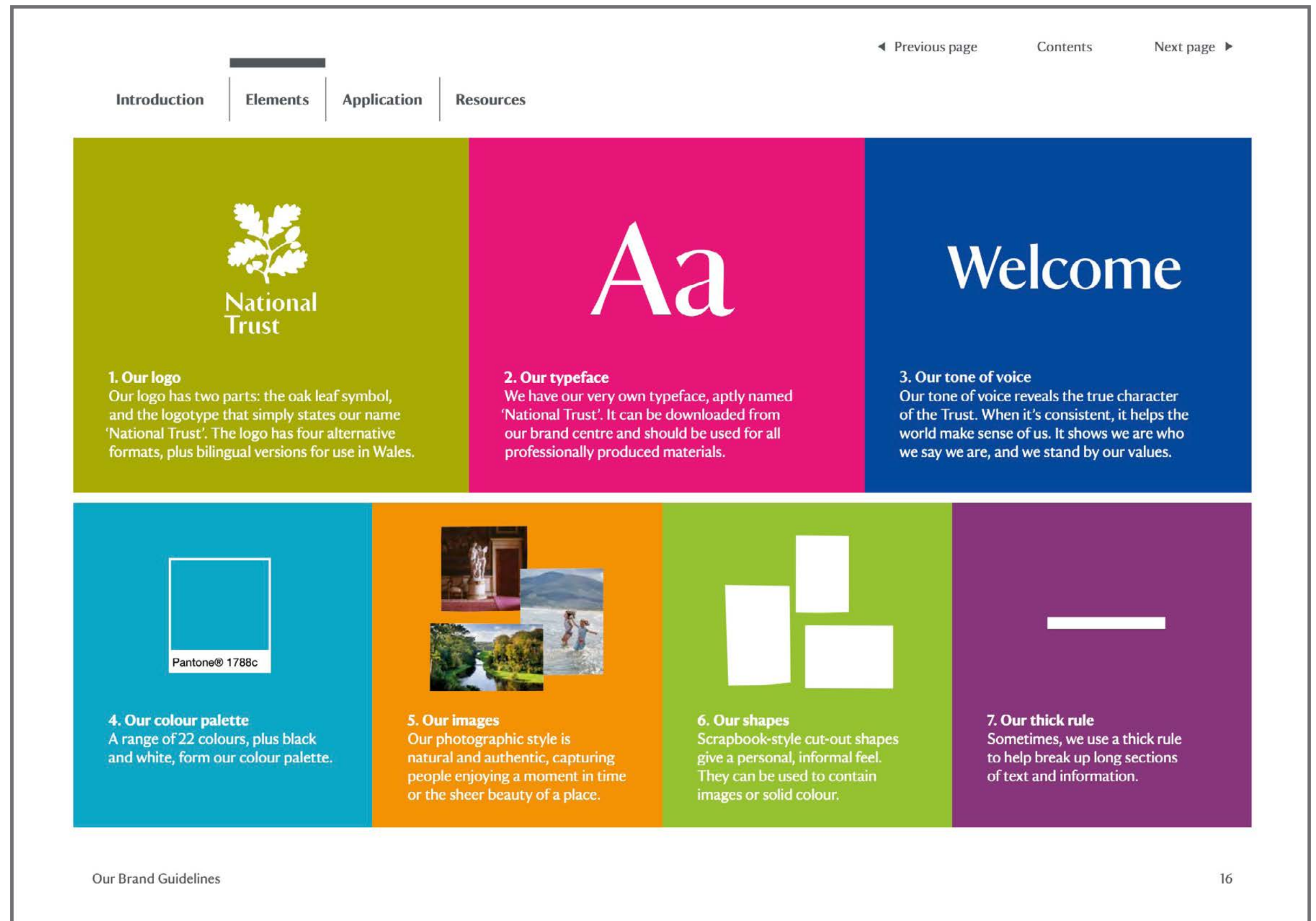


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Typeface family

Our typeface family has four members:

- National Trust Display for headlines
- National Trust Bold for visual emphasis and as an alternative for headlines
- National Trust Regular for body copy
- National Trust Italic for emphasis, foreign words and the titles of books, pictures and so on (see page 40 for a quick style guide).

It can be downloaded from the National Trust brand centre at brandcentre.nationaltrust.org.uk.

Typesetting guidance

- Use the typeface in sentence case, and aligned left (or justified left), not aligned right (or justified right).
- Ideally, set National Trust Display with 110% leading.
- Ideally, set National Trust Bold, Regular and Italic with 120% leading.

Using Arial

We use Arial as an alternative when it's not possible to use our own typeface. For instance, when we are creating a Word or PowerPoint document with people from another organisation, they won't have access to our typeface (unless they are professional designers). For the same reason, we use Arial for all email correspondence.

Display

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 1234567890

Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 1234567890

Regular

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 1234567890

Italic

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 1234567890

Our Brand Guidelines

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3 NATIONAL TRUST BRAND GUIDELINES

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<https://brandcentre.nationaltrust.org.uk>

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Signs

We have a standard, mandatory approach to our core welcome and orientation signage at our pay-to-enter and outdoor places. This sets a consistent, high-quality standard that offers our visitors reassurance: ‘See a National Trust sign; trust that you’re in a place that’s well loved and cared for’. You can find details about these mandatory guidelines on Acorn in the following documents:

- Pay-to-enter signage principles
- Outdoors signage principles

Signs are usually the first thing a visitor will encounter, so it’s all the more important they create a brilliant first impression. This is why we place such emphasis on the quality of materials and production, as well as simple maintenance to keep signs free from dirt and weeds.

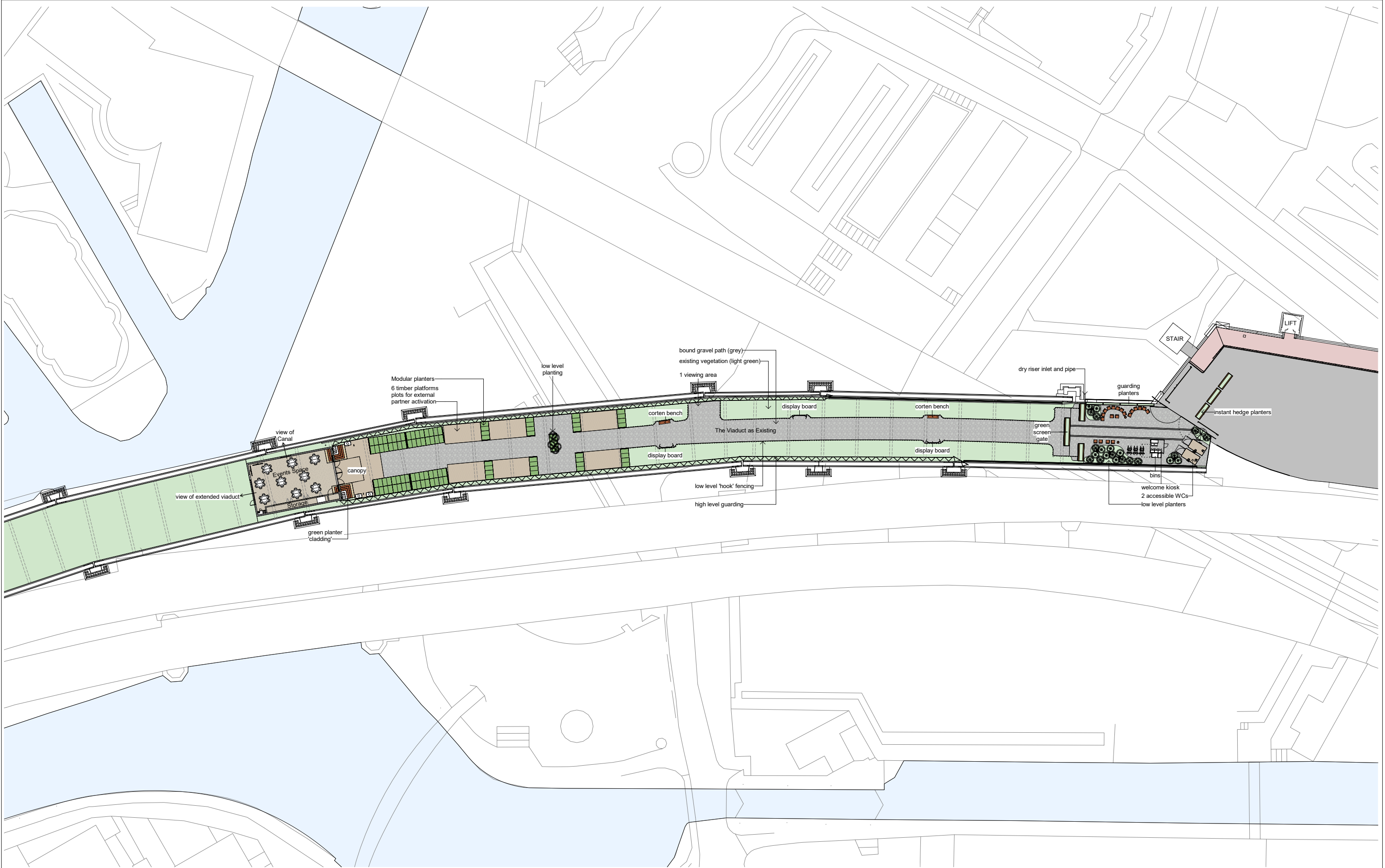
Functional



Clockwise from top left: our threshold sign at Cape Cornwall and a welcome and orientation sign at Chirk Castle, Wales; two examples of black and white signs at pay-for-entry properties; wooden and black and white fingerposts for outdoors and pay-for-entry properties respectively; our much-loved omega sign.



TWELVE ARCHITECTS DRAWINGS



CDM Issues - Significant/Residual Hazards:

All designers involved in this drawing are to ensure that all foreseeable Significant Hazards relating to this drawing are indicated below.

Significant Hazards are not necessarily those that result in the greatest risks, but those that are:

• Unlikely to be obvious to a competent contractor or other designers;

• Unusual;

• Likely to be difficult to manage effectively.

As a design and building project, the Main Contractor is deemed to be a designer under the CDM Regulations as well as the Client, Architect, Engineer or subcontractors. This risk schedule is not a design risk assessment of a full and complete risk schedule and should not be deemed as such. Copies of the designers' risk assessment along with risk schedules are to be available from the Main Contractor's site office upon request.

Hazard	Description	Measure/Location/Reference
Fall from height		
Falling objects		
Hazardous materials		
Uncontrolled substances		
Site transport/plant		
Crushing/entanglement		
Hazardous operations		
Confined spaces		
Noise		
Dust		
Vibration (HAV)		
Manual handling		
Asbestos		
Others		

Notes:

1. Do not scale from this drawing.

2. Dimensions are in millimetres (mm) unless otherwise stated.

3. This drawing is to be read in conjunction with all relevant Architectural, Civil, Structural and Service Engineer's drawings, schedules and specifications.

Key:

Rev.	Date	Description	Dm.	Chkd	Appd
A	15/10/21	Design development revisions	IA	MC	IA
B	22/10/21	Changes to WCs, guarding, dry riser pipe, water butts	IA	MC	IA
C	10/11/21	Post survey adjustments, design development	IA	MC	IA

Key Plan:

Issue Status:

STAGE 4

Project Title:

The National Trust
Castlefield Viaduct
Stage 4 Masterplan

Scale @ A1:

1:300

Date:

22/09/21

Drawn:

IA

Checked:

MC

Approved:

MC

Job No.:

122019

Drawing No.:

(GA)001

Revision:

C

twelve

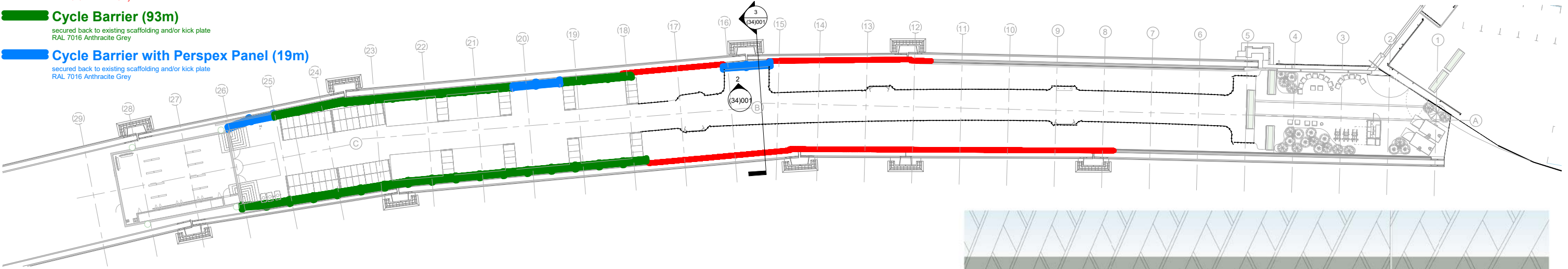
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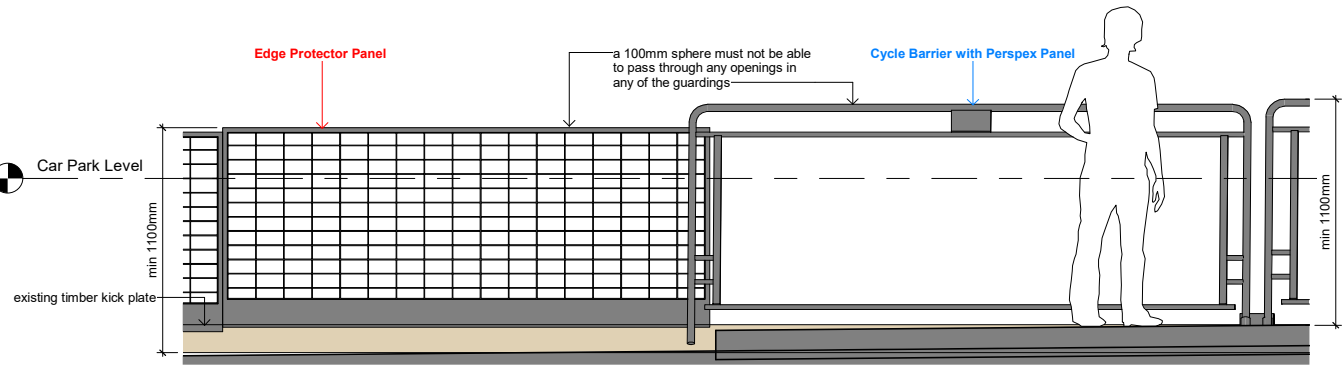
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KEY

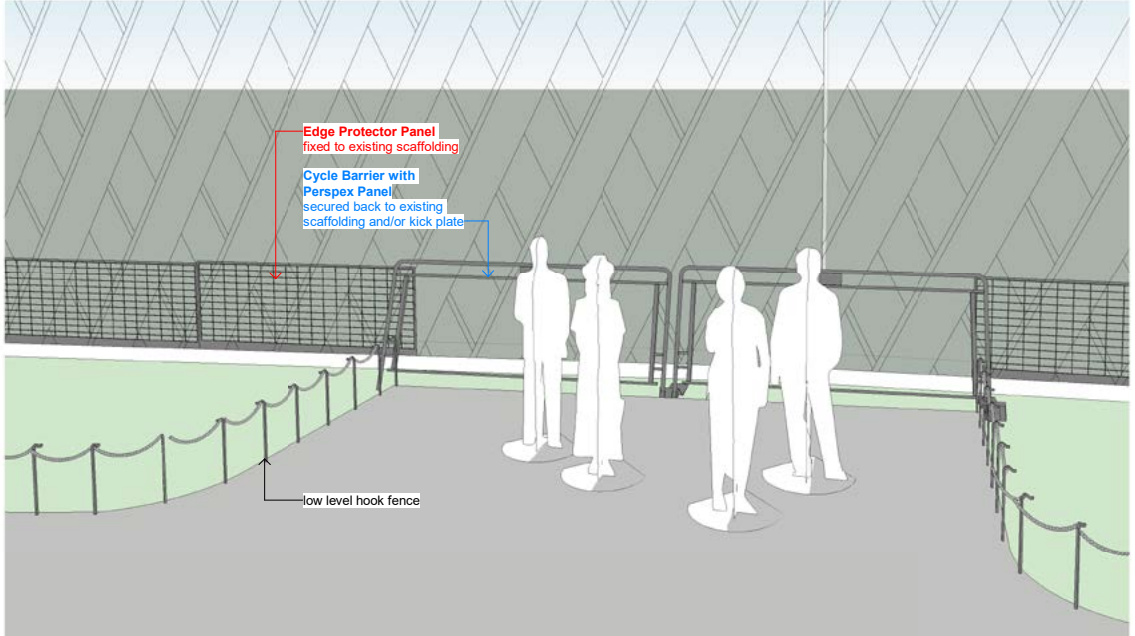
- Edge Protector Panel (97m)
fixed to existing scaffolding
RAL 7016 Anthracite Grey
- Cycle Barrier (93m)
secured back to existing scaffolding and/or kick plate
RAL 7016 Anthracite Grey
- Cycle Barrier with Perspex Panel (19m)
secured back to existing scaffolding and/or kick plate
RAL 7016 Anthracite Grey



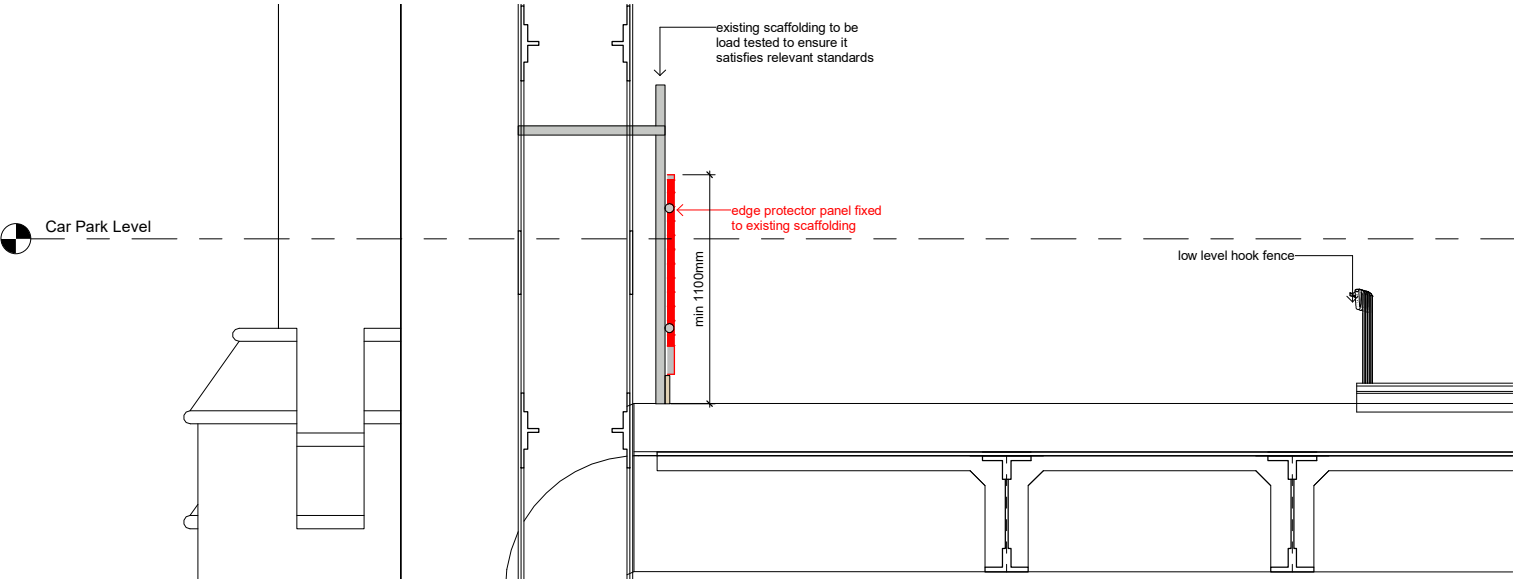
1 (34) Extent of high level guarding
1 : 250



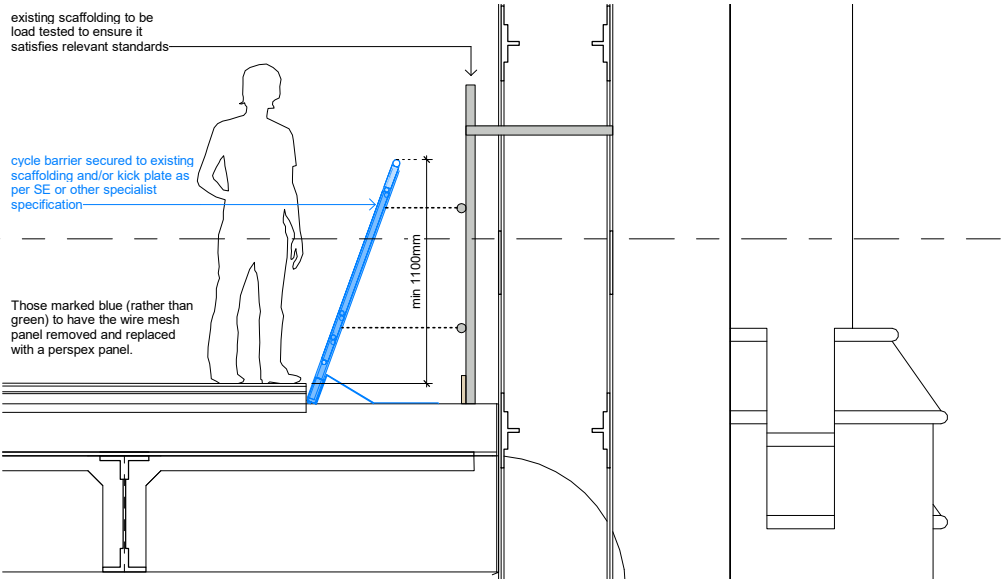
2 (34) Guarding Elevation
1 : 20



4 (34) 3D View



3 (34) Guarding Section
1 : 20



CDM Issues - Significant/Residual Hazards:		Hazard		Description	Measure/Location/Reference	Notes: 1. Do not scale from this drawing. 2. Dimensions are in millimetres (mm) unless otherwise stated. 3. This drawing is to be read in conjunction with all relevant Architectural, Civil, Structural and Service Engineer's drawings, schedules and specifications.	Key:	Rev. Date Description Dm. Chkd Appd				Key Plan:	Issue Status: STAGE 4				twelve architects & masterplanners 148 Tooley Street London SE1 2TU UK t: +44 (0) 207 846 2012 e: info@twelvearchitects.com w: www.twelvearchitects.com
All designers involved in this drawing are to ensure that all foreseeable Significant Hazards relating to this drawing are indicated below. Significant Hazards are not necessarily those that result in the greatest risks, but those that are: - Unlikely to be obvious to a competent contractor or other designers; - Unusual; - Likely to be difficult to manage effectively. As a design and building project, the Main Contractor is deemed to be a designer under the CDM Regulations as well as the Client, Architect, Engineer or subcontractors. This risk schedule is not a design risk assessment of a full and complete risk schedule and should not be deemed as such. Copies of the designers' risk assessment along with risk schedules are to be available from the Main Contractor's site office upon request.		Fall from height			A			29/11/21	Viewing Platform Barriers changed to have Perspex Infill	IA	MC	IA					
		Falling objects															
		Hazardous materials															
		Uncontrolled substances															
		Site transport/pitfall															
		Crushing/enmeshment															
		Hazardous operations															
		Confined spaces															
		Noise															
		Dust															
		Vibration (HAV)															
		Manual handling															
		Asbestos															
		Others															