



A36 30.4 Victoria Road Footbridge & A36 30.1 Wyndham Road Footbridge

- Technical Workshop

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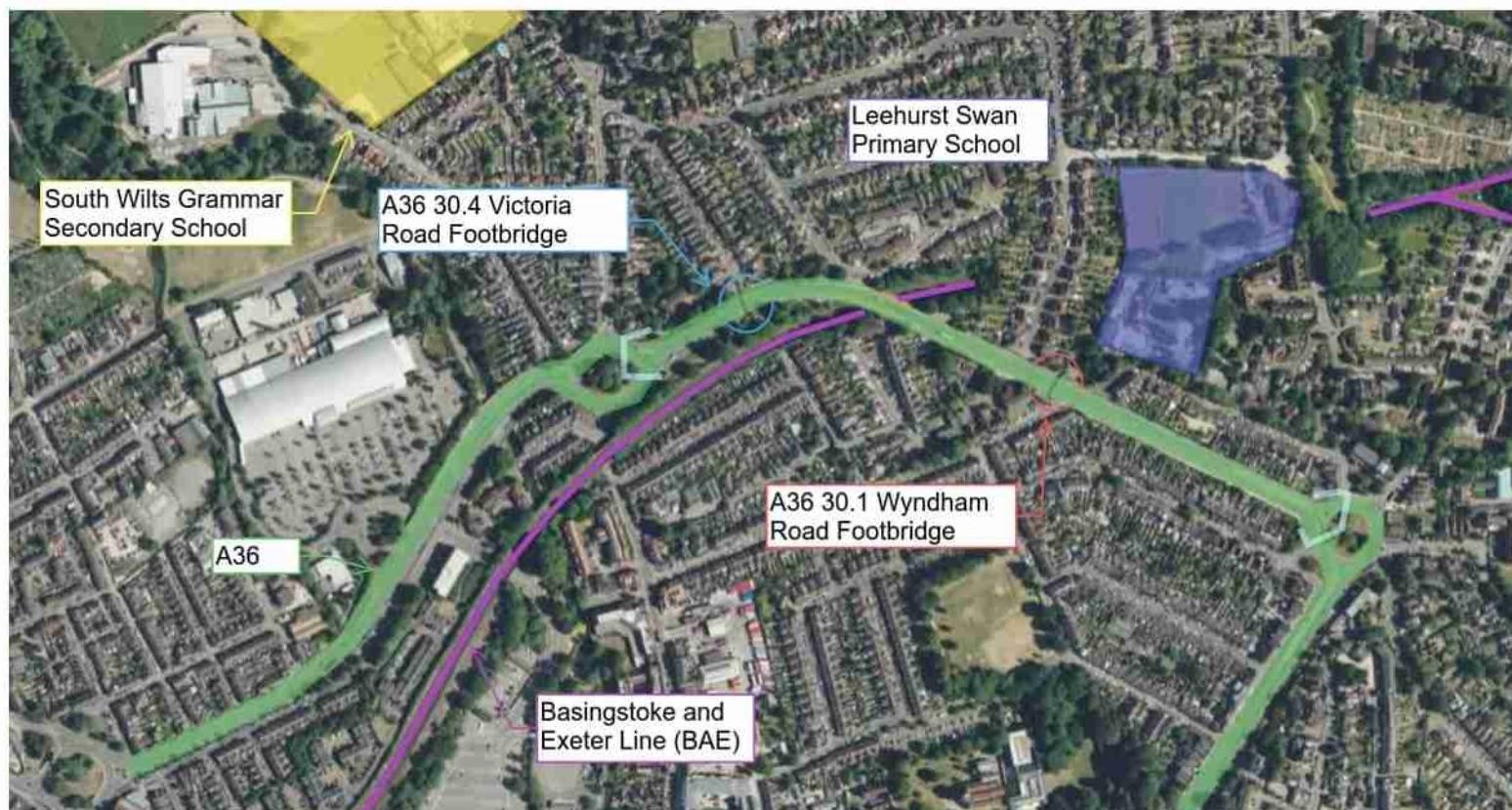
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 - Summary
 - Constraints
 - Proposed Solution
 - Discussion



Location



Location



Location – WCHAR

- Response on use from Wiltshire Council Transport Team

“Both the Victoria Road and Wyndham Road footbridges form key links addressing the severance created by the A36 and form part of the Council’s draft LCWIP for Salisbury.

The **Victoria Road footbridge** is currently signed as and operates as a shared use path and is **well used by pedestrians and cyclists alike**. The **Wyndham Road** footbridge operates a **footway only** and is again well used.

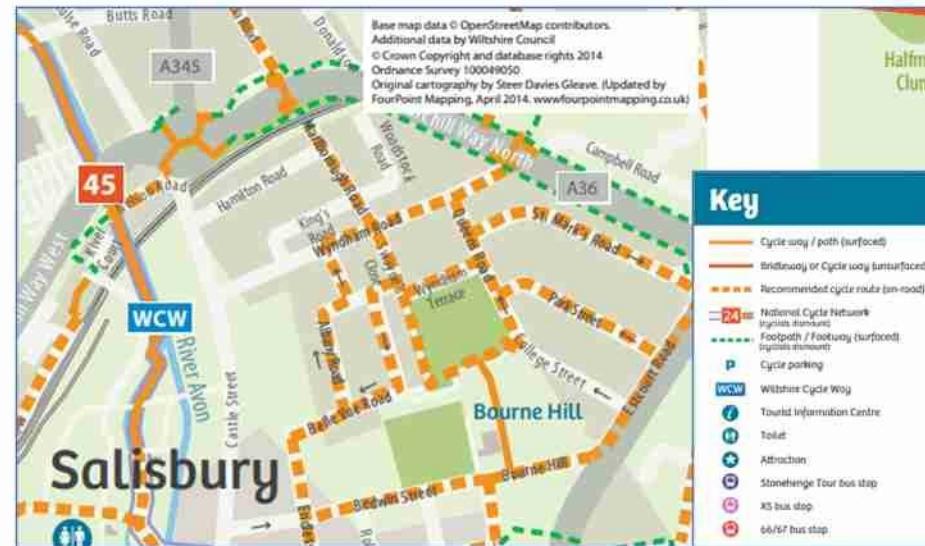
The Council has previously been made aware of personal safety concerns related to the use of the footbridges, specifically relating to levels of lighting where you access/egress them. Improvements to lighting and visibility of users should be considered as part of any refurbishment / replacement proposals.

The Council is not aware of any use of either footbridge by horse riders and would not require any specific provision for them as part of any refurbishment / replacement proposals.”

Cycling Routes



Location – WCHAR



The combined usage sign at Victoria Road Footbridge was installed not in conjunction with National Highways.

There is no signage at Wyndham Road Footbridge

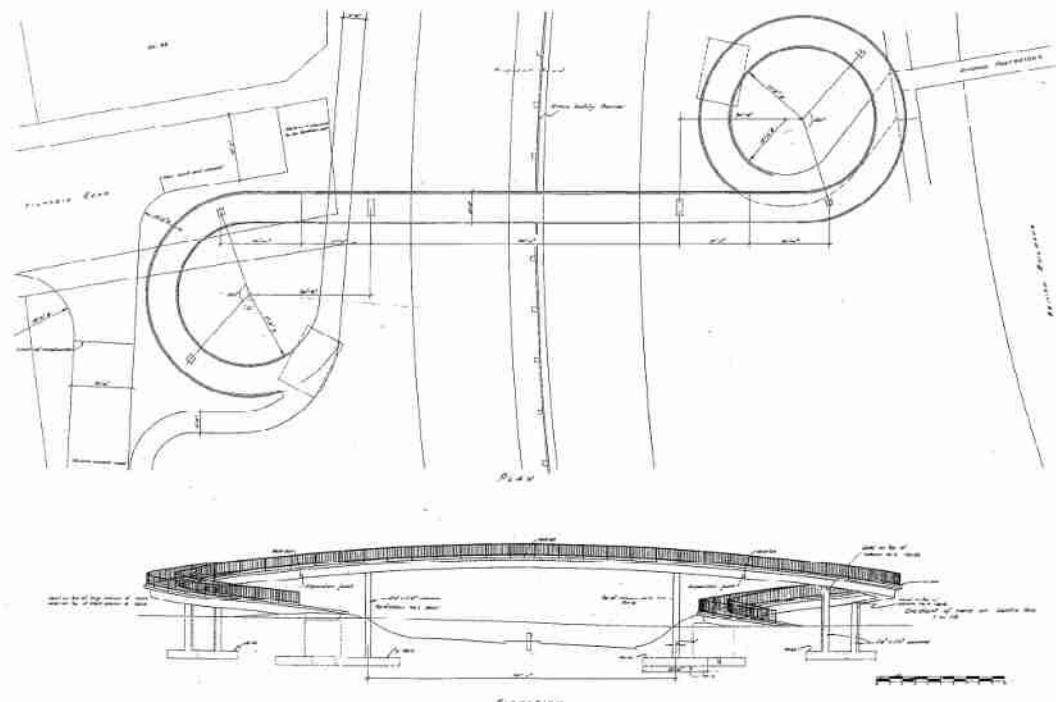
Location – STRAVA Heatmaps

- Walking
- Cycling



Victoria Road Footbridge – As-Built

- Constructed in 1968 of reinforced concrete beams with transverse cantilevers carrying parapets
- Main span is continuous over the columns
- Spiral ramps at each end with 3No. deck units
- 2No. intermediate rectangular reinforced concrete piers supporting the main span, 2No. square reinforced concrete piers per ramp
- Minimum headroom clearance: 5.02m
- Signed head room: 4.8m
- Width: 2.44m



Victoria Road Footbridge – Condition

- Cracking, spalling and delamination of the soffit and piers with exposed corroding reinforcement
- Failed concrete repairs



2016 PI



2023 Walk over



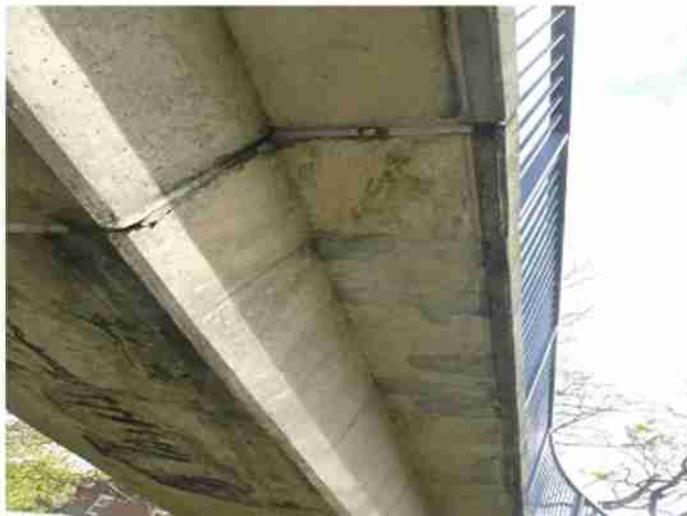
Victoria Road Footbridge – Condition

- Pier 2, north ramp column
 - Cracking present in top of pier 2, with significant corrosion to exposed rebar
 - Steel collar installed



Victoria Road Footbridge – Condition

- Failed and leaking expansion joints



Victoria Road Footbridge – Requirements

- Substandard headroom – 5.02m
- Substandard deck width – 2.44m
- Substandard parapet height – 1.07m
- Existing ramps are steeper than the maximum gradient of 1 in 12m



Table 4.1 Minimum standard headroom at structures

Type of structure	New construction headroom (metres)	Maintained headroom (metres)
Overbridges	5.30 + S	5.03 + S
Footbridges, sign and signal gantries, and other structures vulnerable to vehicular impact	5.70 + S	5.41 + S
Free-standing temporary structures	N/A	5.41 + S
All permanent structures over high load routes (not applicable in NI)	6.45 + S	6.18 + S

Where S is the additional clearance in accordance with Table 4.3

Table 11.7 Minimum bridge widths for shared use

	Footway	Cycle path	Total
When segregated by a kerb not less than 50mm high	2.0 m	2.7 m	4.7 m
When segregated by a physical barrier not less than 900mm high	2.0 m	3.0 m	5.0 m
When segregated by a white line and/or contrasting surface colours or textures	1.5 m	2.5 m	4.0 m
Unsegregated	-	-	3.5 m

On bridges designed for use by cyclists, the minimum height of the parapet shall be 1.40 metres.

Victoria Road Footbridge – Replacement

▪ Existing Bridge Demolition:

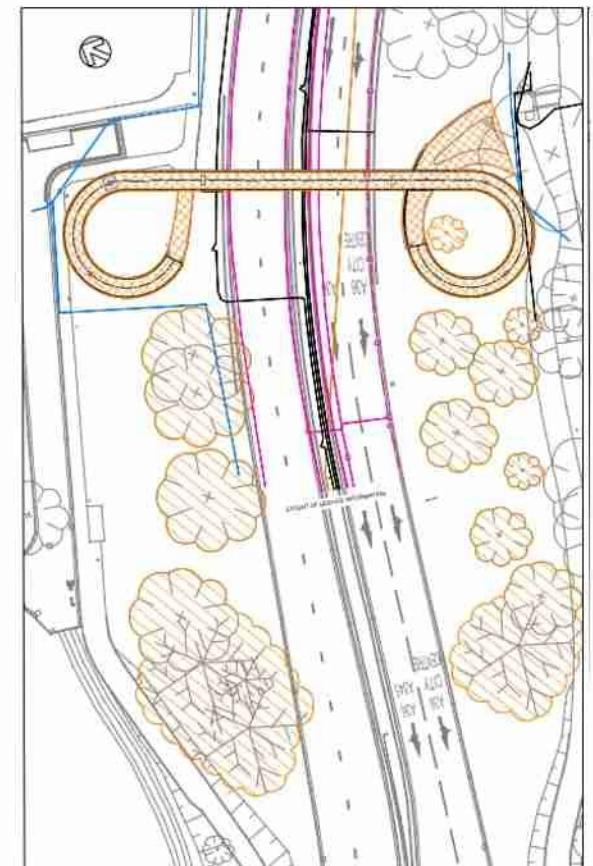
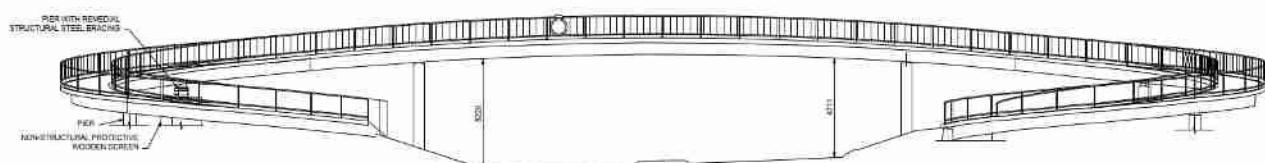
- Demolishing the existing bridge
- Removal of 16 mature trees
 - WSP Arboriculture report concluded there were no TPOs in place
- Potential adverse effects of screening to the adjacent flats



Looking North



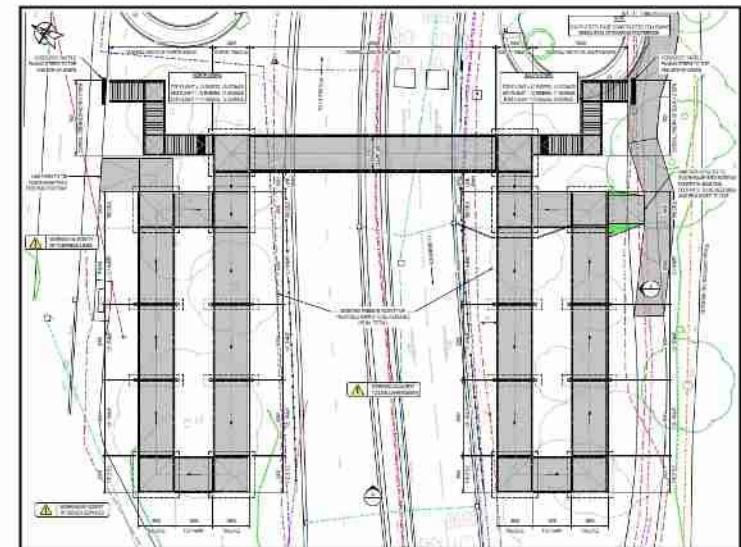
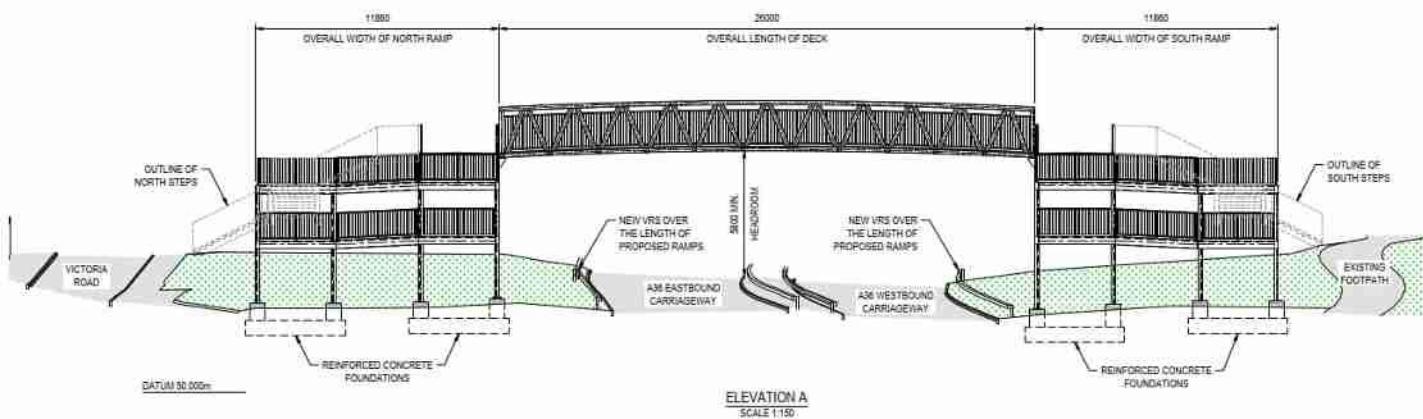
Looking South



Victoria Road Footbridge – Replacement

- **Bridge Replacement:**

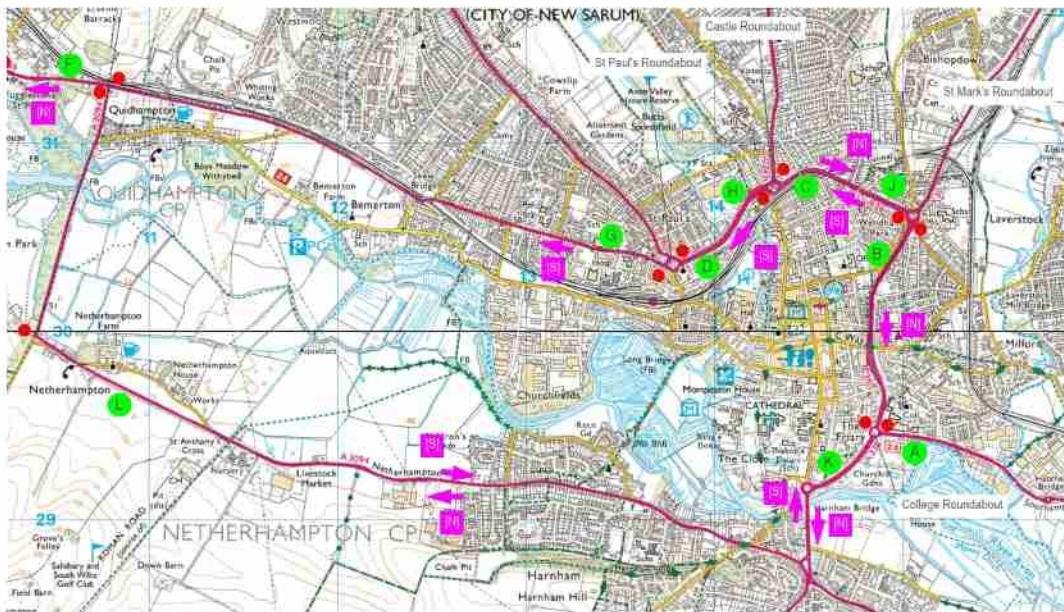
- Demolishing the existing bridge and constructing a new CD 353 compliant steel footbridge
- Compliant headroom for a new structure 5.7m
- Compliant 3.5m clear width for combined pedestrian and cycle
- Stair and ramp access
- Stacked ramp access with maximum 32m length with compliant 1:22 gradient



Victoria Road Footbridge – Replacement

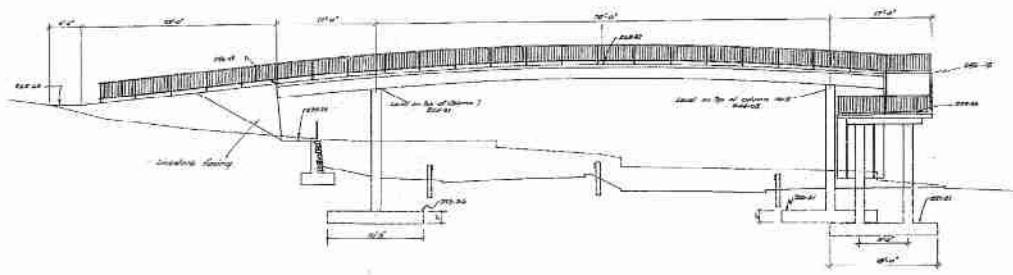
– Sequencing

- The existing footbridge will remain open for the majority of the works with the new footbridge constructed offline
- New ramp structures to be constructed during lane 1 closures of A36 (estimated 6 months per direction) and nighttime closures in a single direction (3 total weekend closures).
- No pedestrian access will be provided for 1 weekend whilst the existing structure is demolished and new bridge main span installed during total closure of A36.

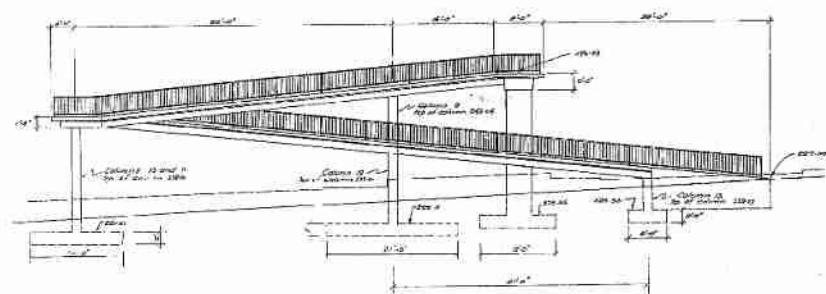


Wyndham Road Footbridge – As-Built

- Constructed in 1968 of reinforced concrete beams with transverse cantilevers carrying parapets
- Main span is continuous over the columns
- 2No. intermediate piers comprising reinforced concrete raked slab wall
- 5No. Span ramp structure at the south end with 4No. Square concrete piers
- Mass concrete abutment at the north end
- Minimum headroom clearance: 4.98m Southbound Lane 2
- Signed headroom: 4.8m
- Width: 2.15m



SECTION A-A

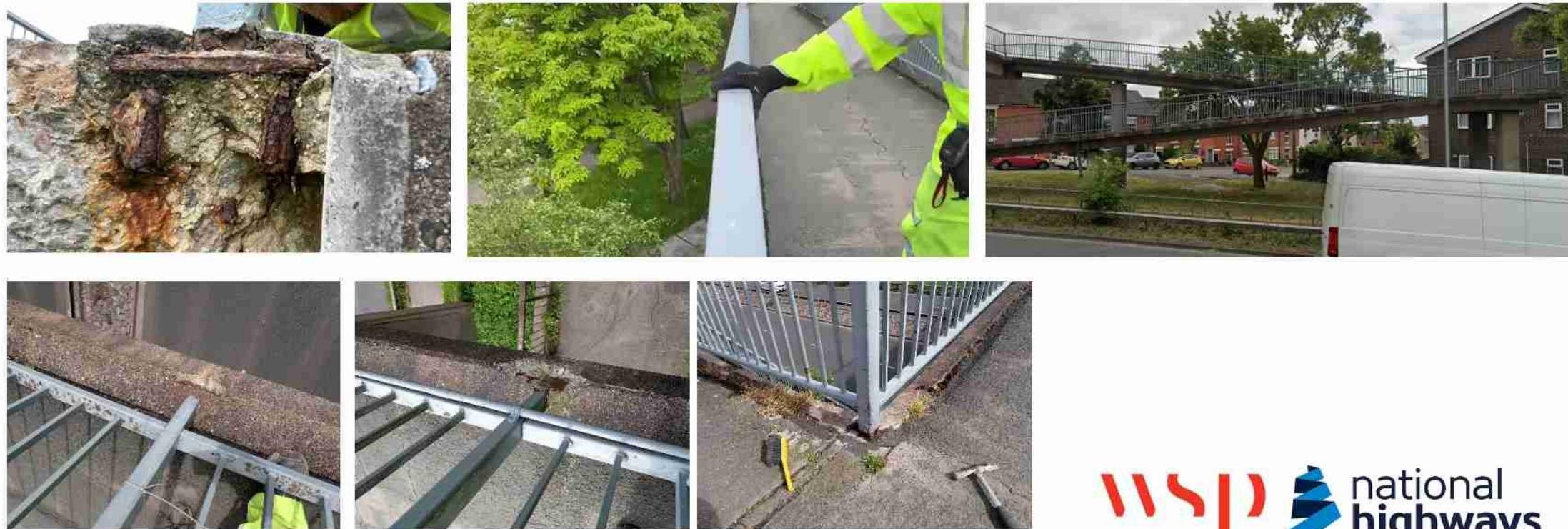


ELEVATION FROM WYNDHAM ROAD

Wyndham Road Footbridge – Condition

■ Parapets

- Following inspection by National Highways the bridge was closed due to the poor condition of the parapet connection **causing a safety risk to pedestrians**



Wyndham Road Footbridge – Condition

- Vehicle impact damage
- Bearing corrosion
- Concrete deterioration
- Cracking to north abutment masonry face



Wyndham Road Footbridge – Requirements

- Signed 4.8m
- Measured headroom – 4.98m
- Required 5.70m + S
- Bridge strike damage to deck above east bound lane 1



Table 4.1 Minimum standard headroom at structures

Type of structure	New construction headroom (metres)	Maintained headroom (metres)
Overbridges	5.30 + S	5.03 + S
Footbridges, sign and signal gantries, and other structures vulnerable to vehicular impact	5.70 + S	5.41 + S
Free-standing temporary structures	N/A	5.41 + S
All permanent structures over high load routes (not applicable in NI)	6.45 + S	6.18 + S

Where S is the additional clearance in accordance with Table 4.3



Wyndham Road Footbridge – Requirements

- Substandard headroom – 4.98m
- Construction depth: 2' 6" = 0.762m
- Top of surfacing – 5.73m

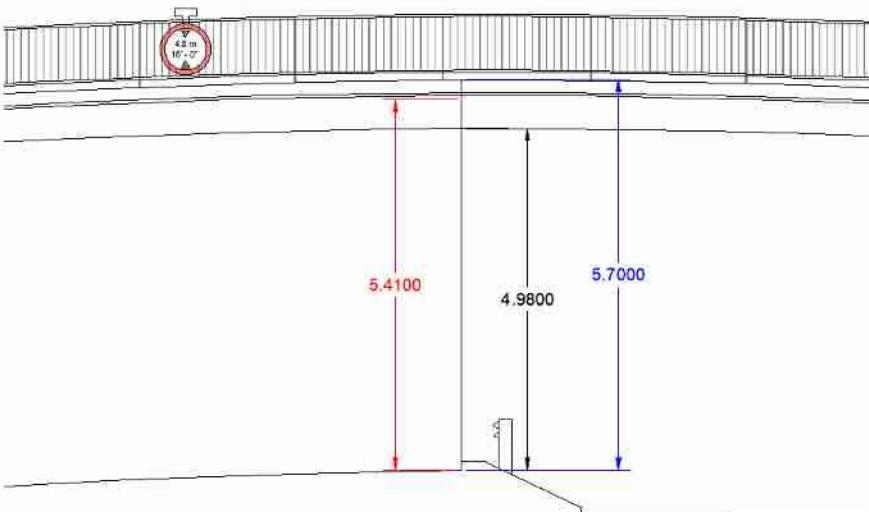


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Where S is the additional clearance in accordance with Table 4.3

Wyndham Road Footbridge – Requirements

- Substandard deck width – 2.13m
- Substandard parapet height – 1m
- Existing ramps are steeper than the maximum gradient of 1 in 12m

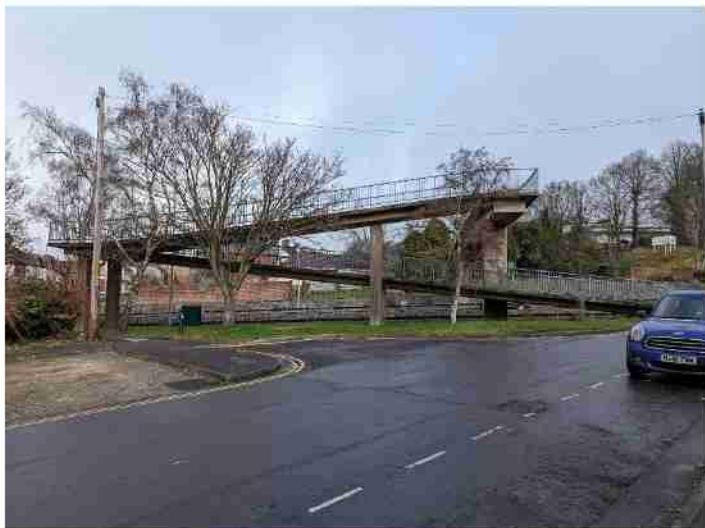


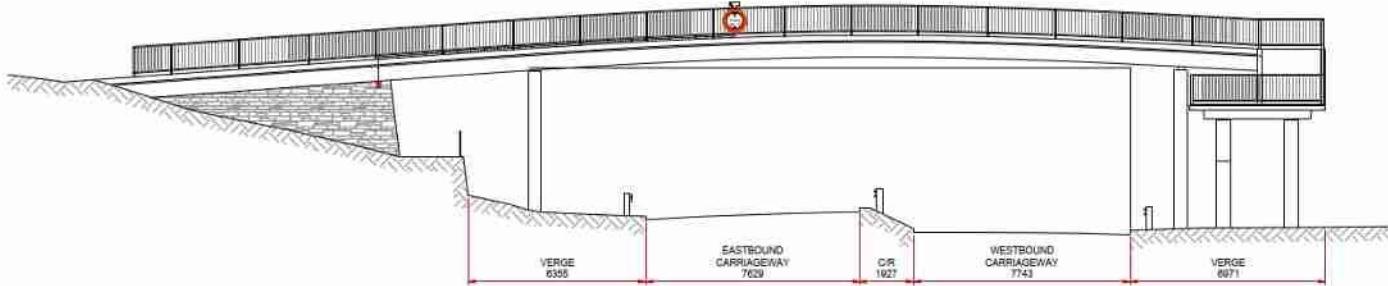
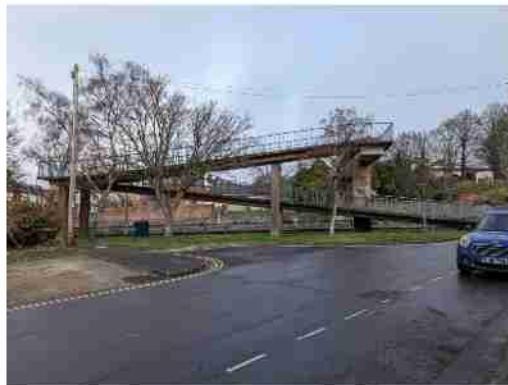
Table 11.7 Minimum bridge widths for shared use

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When segregated by a white line and/or contrasting surface colours or textures	1.5 m	2.5 m	4.0 m
Unsegregated	-	-	3.5 m

On bridges designed for use by cyclists, the minimum height of the parapet shall be 1.40 metres.

Wyndham Road Footbridge – Replacement

- Arrangement of the south ramp
 - Length of ramps are required to be 30m longer than existing
 - Width of deck to be wider for combined pedestrian cycle
 - Services within the ground



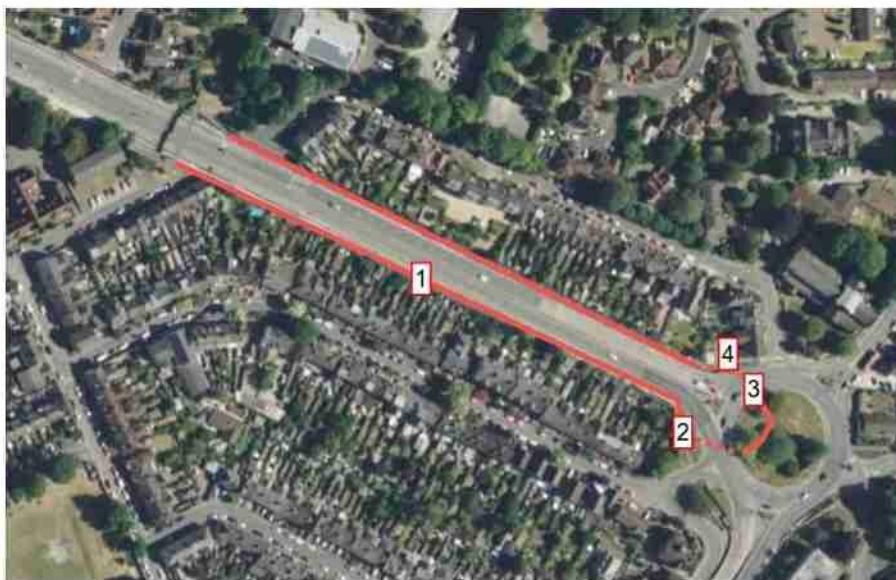
Wyndham Road Footbridge – Preferred Option

- **Demolition and Not Replace**

- Demolish the existing structure, divert footfall to subway ~600m

- **Considerations**

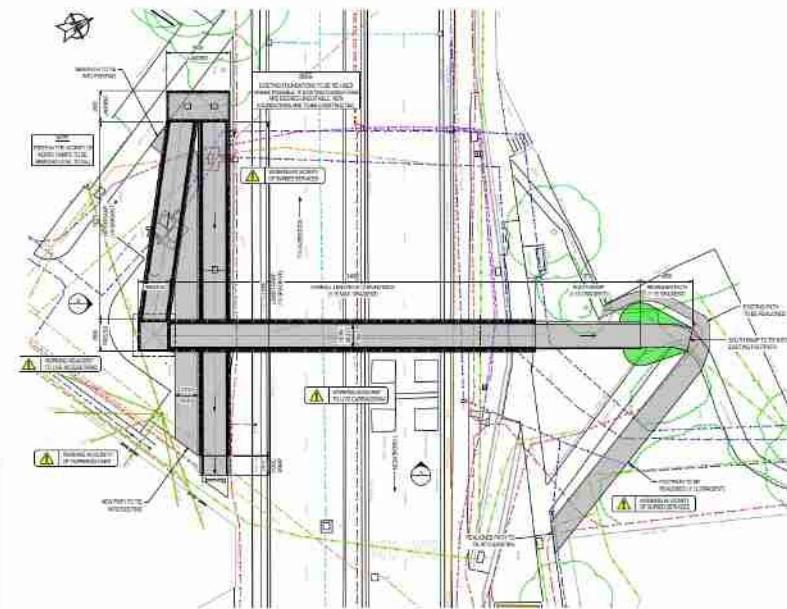
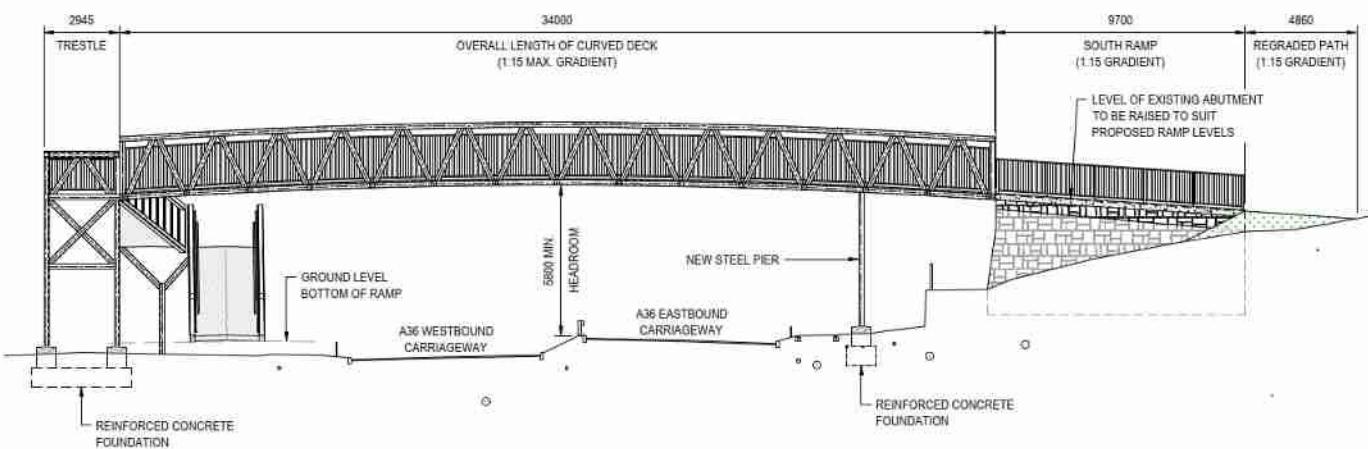
- Improvements to subway
 - Improved access at Victoria Road Footbridge



Wyndham Road Footbridge – Replacement

▪ Bridge Non-Compliant Replacement:

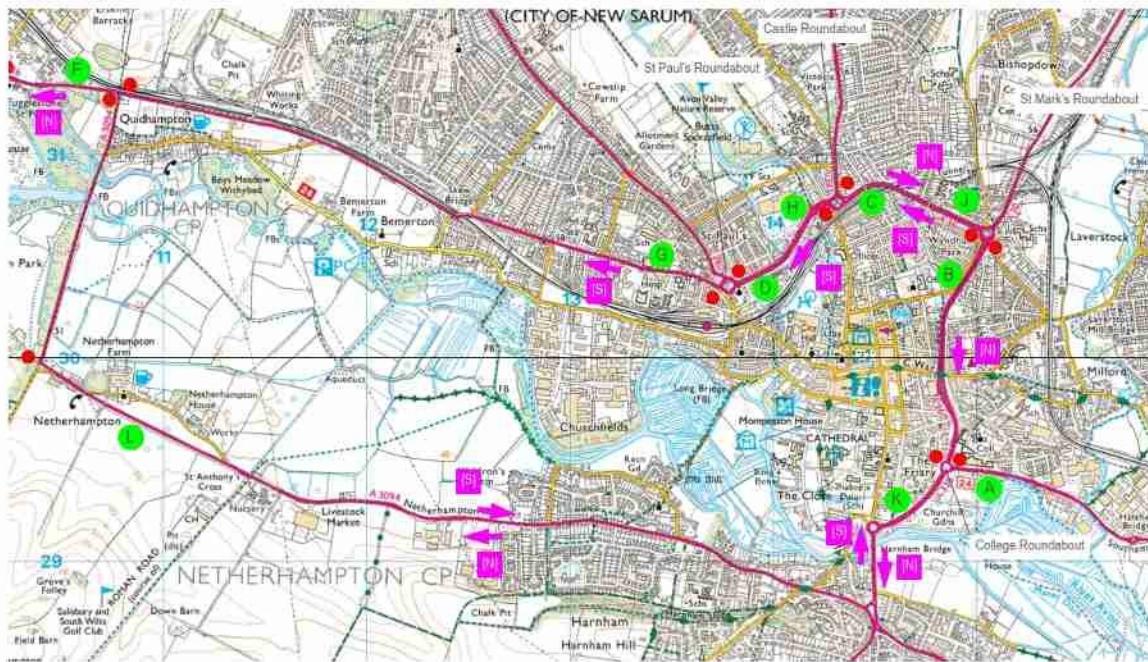
- Demolishing the existing bridge and constructing a new steel footbridge with minor changes to the existing footprint
- 5No. Trees without TPO to be removed.
- Compliant headroom for a new structure 5.7m
- Compliant 2.15m clear width for pedestrian only footpath
- Ramp access with maximum 31m length with non-compliant 1:9 gradient to match the existing



Wyndham Road Footbridge – Replacement

– Sequencing – Would be co-existing with Victoria Road Footbridge

- The existing path will remain closed with no pedestrian access throughout the construction
- The existing footbridge will be demolished over 1No. weekend closure of the A36
- New ramp structure and amendments to abutment to be constructed during lane 1 closures (estimated 4 months per direction) of A36 and nighttime closures in a single direction
- New main span structure and ramp superstructure to be installed during a weekend closure of the A36



Summary

– Victoria Road Footbridge Replacement and Wyndham Road Demolition

