



Transverse beam
- 1/2" thick web plate

Bearing stiffener
- 6" x 3" x 1/2" Tee
each side of web



Lattice girder
bottom chord

Corrosion typically where
transverse beam extends
beyond weathering
protection of deck plate



Remedial stiffeners installed
during Ph1, to transverse
beam (TB) ends as follows:
- TB 25 - north and south
- TB 27 - north and south
- TB 29 - north
- TB 35 - north
- TB 36 - north
- TB 37 - north
- TB 38 - north
- TB 39 - north
- TB 40 - north
- TB 42 - north
(12No. total)



Air gap between stiffener
and web plate
- not as per 2022 detail
which showed contact
required)

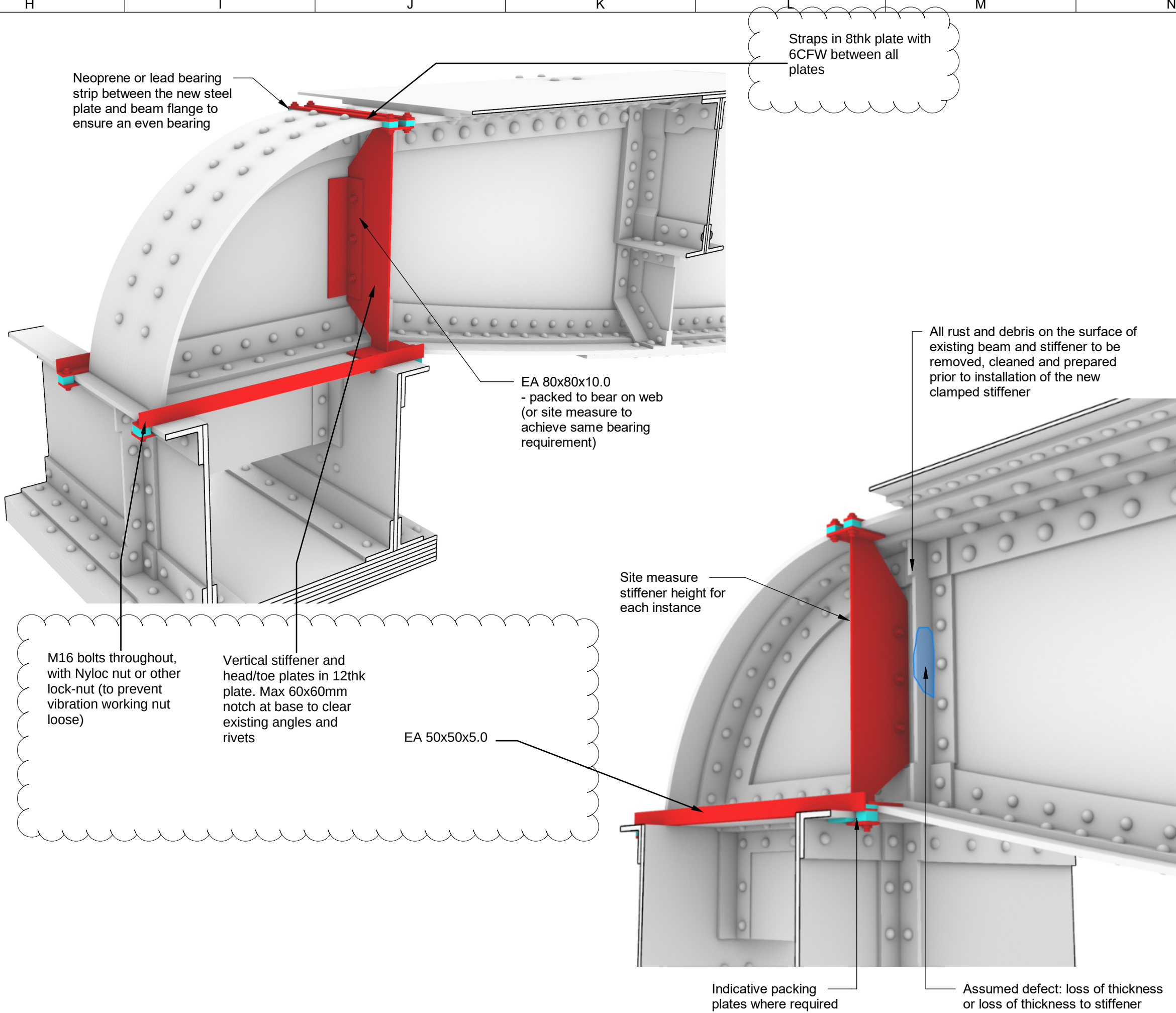


Washers as packers
across top flange of
bottom chord

DEFECT EXAMPLES

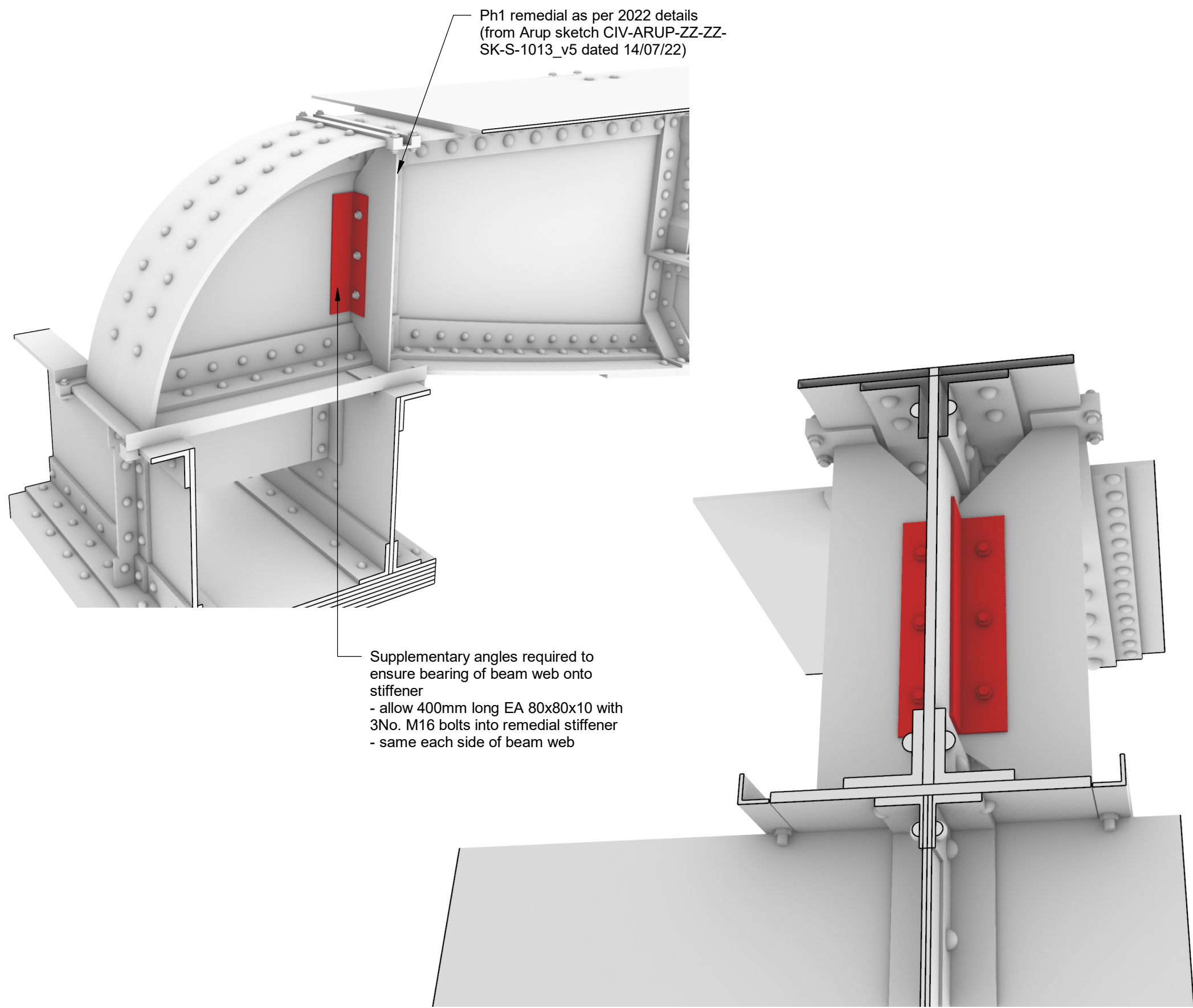
NTS

NOTE: Defect examples taken from Arup 2024 MEWP survey (covering spans 2-4 inclusive) and Balfour 2020 survey (covering spans 2-8 inclusive). Each represents a discrete defect for a unique beam.



REMEDIAL DETAIL A - REMEDIAL TO UNSTRENGTHENED + DETERIORATED STIFFENERS

NTS



REMEDIAL DETAIL B - RETROFIT TO PH1 REMEDIALS

NTS

Notes:

- These drawings shall be read in conjunction with all relevant Engineer's and Architect's drawings and with all relevant specifications
- Existing condition drawn with dimensions from original archive drawings. All existing dimensions to be verified by the Contractor prior to fabrication or construction.
- Drawing to be read in colour.
- Do not scale from this drawing
- For structural nomenclature refer to drawing CVI-ARUP-ZZ-ZZ-DR-S-1055. For structural notation of spans/beams/piers refer to drawing CVI-ARUP-ZZ-ZZ-DR-S-1056

H&S / CDM Risks:

- Specific risks highlighted thus:
- existing paintwork contains lead
 - limited structural capacity of viaduct deck plates
 - existing ballast contaminated with lead and hydrocarbons
 - working at height above water and public areas
- Refer to Arup risk register for further details.

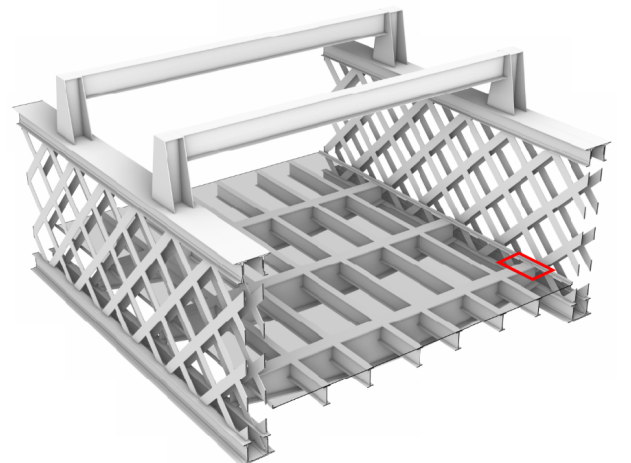
Legend:

- Existing structure
- unchanged unless noted otherwise
- Proposed remedial
- Indicative extent of defect
- typical loss of section or thickness due to corrosion
- Indicative packing plates
- where required

LOCATION / NUMBER OF REMEDIALS REQUIRED:

- Detail A - 4No. required: TB 67 north, TB 68 north, TB 69 north, TB 70 north
- Detail B - 12No. required, at the locations stated opposite on this sheet
- Refer to general notes drawing CVI-ARUP-ZZ-XX-DR-S-0001 for background context for proposed remedials

KEY PLAN:



T4	22/05/25	RR	GH	Updated post- Arup survey
T3	21/03/25	RR	GH	Issue for Tender
T2	15/11/24	RR	GH	WS4 Issue
T1	14/08/24	RR	GH	Preliminary Issue
Rev	Date	Chkd	Appd	Issue Notes

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Client

The National Trust

Project Title

Castlefield Viaduct
Phase 2

Drawing Title

Remedials
Transverse Beams
Bearing Stiffeners

Scale at A1

1 : 100

Drawn By

OD

Role

Structural

Status

S2 - For Information

Arup Job No

282210

Rev

T4

ID

CVI-ARUP-ZZ-ZZ-DR-S-4001