

Civic Centre 1
High Street
Huddersfield
HD1 2NE

APPROVAL IN PRINCIPLE FOR DESIGN OF

***Proposed Private Footbridge over B6432
St Andrew's Road, Huddersfield. HD1 6RA***

Structure reference:	K66773
Date:	13/11/25
Revision:	P06
Status:	Final
Prepared by:	Mr A Hoyland
Checked by:	Mr L Hoyland

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

DOCUMENT CONTROL

Structure title: S Andrew's Road Footbridge

Structure reference: K66773 Date: 13/11/25

Revision: P06

Status: Final

Document issue record

Issue	Status	Prepared	Date	Checked	Date	Approved	Date
P01	Draft	AJH	16/05/25	LJH	16/05/25	AJH	16/05/25
P02	Draft	AJH	16/07/25	LJH	16/05/25	AJH	16/05/25
P03	Draft	AJH	17/07/25	LJH	17/07/25	AJH	17/07/25
P04	Draft	AJH	24/10/25	LJH	24/10/25	AJH	03/09/25
P05	Draft	AJH	04/11/25	LJH	04/11/25	AJH	04/11/25
P06	Final	AJH	13/11/25	LJH	13/11/25	AJH	13/11/25

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

PROJECT DETAILS

Name of project: Proposed Private Footbridge over St Andrew's Road Huddersfield

Name of Bridge or Structure: St Andrew's Road Footbridge

Structure reference no: **K66773**

Summary:

Description of Scheme: The bridge will be owned by Cummins Turbo and is intended to provide a grade separated means of their staff crossing the B6432 St Andrew's Road, between their two factory facilities. There is no intention to offer this bridge up for adoption.

Reason for the AIP: This AIP is a condition of the Town and Country Planning Act 1974 approval.

Construction dates: As soon as is reasonably practicable

1. HIGHWAY DETAILS

1.1. Type of highway

1.1.1. Location and OS Map / Grid reference

Location: B6432 St Andrew's Road, Huddersfield. HD1 6RA

OS Map: SE 15061 16966

Grid Ref (X, Y): 53.648985, -1.7736281

1.2. Permitted traffic speed

30mph on B6432 St Andrew's Road in Huddersfield on which this is an overbridge.

1.3. Existing restrictions

1. The bridge will be owned by Cummins Turbo and is intended to provide a grade separated means of their staff crossing the B6432, between their two factory facilities. There is no intention to offer this bridge up for adoption.
2. The bridge will connect into the first floor of the existing factory, on the western abutment, and its eastern abutment will be positioned within a landscaped area.
3. It must be aesthetically appealing, as it is viewed, by the Metropolitan Borough of Kirklees' Planning Department, as forming a gateway into the centre of Huddersfield. This is a primary driver of the design.

**Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge**

**Struc Ref:
K66773
P06 – 13/11/25**

4. The bridge will be fully lit and air-conditioned, so as to mitigate the risk associated with the provision of opening lights over the highway. The windows will, however, be openable for cleaning purposes from the deck.
5. The bridge must be fully accessible for disabled users.

2. SITE DETAILS

2.1. Obstacles crossed

1. The footbridge spans over the B6432 St Andrew's Road in Huddersfield.

3. PROPOSED STRUCTURE

3.1. Description of structure and design working life

1. The highway structure will be a footbridge, over the B6432 St Andrew's Road in Huddersfield. It will be owned by Cummins Turbo and is intended to provide a grade separated means of their staff crossing the B6432, between their two factory facilities.
2. The bridge will be fully clad, with a lift and staircase, on the eastern abutment, and will be connected into the first floor of the existing factory, on the western abutment.
3. The bridge will be fully lit and air-conditioned, so as to mitigate the risk associated with the provision of opening lights over the highway. The windows will, however, be openable for cleaning purposes from the deck.
4. The bridge must be fully accessible for disabled users.
5. The design working life is in accordance with CD 350 minimum of 120 years design working life in accordance with Table 7.1.

3.2. Structural type

1. The deck will be formed from a structural steelwork Vierendeel truss arrangement, which will be supported at the abutments by bi-directionally braced or portalised structural steelwork frames, which also form the stair and lift enclosures.
2. The abutments will be fully independent of the existing factory structure on the western side. Given that there are no existing buildings in the vicinity of the

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

eastern abutment, it will be designed as a free-standing structure, supporting the deck.

3.3. Foundation type

1. The foundations will be formed from reinforced concrete pile caps and bored, cast in place reinforced concrete piles.

3.4. Span arrangements

1. The single 26m span bridge deck will be fully connected into the supporting, bi-directionally braced or portalised structural steelwork frames.

3.5. Articulation arrangements

1. The single span bridge deck will be fully connected into the supporting, bi-directionally braced or portalised structural steelwork frames and will therefore act as fully fixed ends.
2. The structure will be designed to accommodate the design loads effects imparted into it due dead, superimposed dead, live, snow, wind and thermal changes, together with predicted foundation settlement.

3.6. Classes and levels

3.6.1. Consequence class

Consequence class to be CC2 - Medium consequence for loss of human life, economic, social or environmental consequences considerable.

(See CD350 – The Design of Highway Structures Table 7.2 – Categories and Reliability Classes and BS EN 1990-2002+A1:2005 Table B1 – Definition of Consequence Classes)

3.6.2. Reliability class

Reliability class to be RC2 - Reliability class is to be associated with the Consequence Class detailed in 3.6.1.

Factor for actions to be used $K_{FI} = 1.0$. – Table B3

(See CD350 – The Design of Highway Structures Table 7.2 – Categories and Reliability Classes and BS EN 1990-2002+A1:2005 – Table B3 – K_{FI} Factor for Actions)

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

3.6.3. **Inspection level**

1. Inspection Level 2 – Normal inspection.

(See CD350 – *The Design of Highway Structures* Table 7.2 – *Categories and Reliability Classes* and BS EN 1990-2002+A1:2005 – Table B5 – *Inspection Levels (IL)*).

3.6.4. **Checking Category**

1. Pursuant with the requirements of Table 7.2 – *Categories and Reliability Classes* of CD350 *The Design of Highway Structures*, the bridge should be the subject of a Category 2 check.

Design Supervision Level – Normal Supervision (Table B4)

2. Due to concerns regarding wind loading, however, KMC, as the TAA, have insisted that an independent peer review be undertaken on the computational fluid dynamic analysis of the wind load effects.

(See CD350 – *The Design of Highway Structures* Table 7.2 – *Categories and Reliability Classes* and BS EN 1990-2002+A1:2005 – Table B4 – *Design Supervision Levels (DSL)*).

3.7. Road restraint systems requirements

1. The Vierendeel trusses and cladding to the deck and staircase handrails will be designed to Loading Class E, 1.6 kN/m, assuming no overcrowding, in accordance with:
 - a. PD CEN/TR 1317-6:2012 Road restraint system.
 - b. BS EN 1991-2:2003, 4.8, Note 2. *Eurocode 1: Actions on structures — Part 2: Traffic loads on bridges*
 - c. NA BS EN 1991-2:2003, 2.32 *National Annex to Eurocode 1: Actions on structures — Part 2: Traffic loads on bridges*

3.8. Proposals for Water Management

1. Rainwater runoff from the deck and western abutment will be collected using a concealed guttering system that will discharge water into the factory's existing surface water drainage system.
2. Rainwater runoff from the eastern abutment will discharge, following the curve of the roof, onto the hard standings in the landscaped area.

**Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge**

**Struc Ref:
K66773
P06 – 13/11/25**

3.9. Proposed arrangements for future maintenance and inspection

3.9.1. Traffic management

1. Traffic management will be required on the B6432 St Andrew's Road for the inspection and maintenance of the deck's cladding and the exposed elements of the structural steelwork frame beneath the deck.

3.9.2. Arrangements for future maintenance and inspection of structure. Access arrangements to structure.

1. Generally, the inspection and maintenance of the structure's primary and secondary structural steelwork frames will be undertaken from the inside of the structure.
2. The maintenance and inspection of the exposed elements of structural frame beneath the deck. cladding and abutment windows will be carried out externally, from Mobile Elevating Work Platforms, with suitable traffic management on the B6432 St Andrew's Road.
3. The windows on the deck will be openable for maintenance and inspection only.

3.10. Environment and sustainability

1. Where possible, low-carbon, recyclable, and locally sourced materials, ideally with Environmental Product Declarations (EPDs), will be used to reduce embodied carbon.
2. Materials and coatings will be adopted that do not emit volatile organic compounds (VOCs) or other pollutants during installation or over time.
3. Materials will also be used that provide extended maintenance periods, with self-cleansing and low-maintenance properties.
4. The wind regime in the vicinity of the bridge, insofar as it may affect highway users, is not expected to be significantly affected by the presence of the proposed bridge (see also cl 4.1.2 5 below).

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

3.11. Durability. Materials and finishes

Item	Material	Finish / Location
External cladding	Weathertight shell and Factory Mutual Fire Protection standard	• Euroclad Rainspan panel with VIEO Standing seam wall profile fixed to the face. Colour - Anthracite • Kingspan Quadcore AWP Microrib 100mm thick - Horizontal Colour – Anthracite (To match existing). • Kingspan Quadcore AWP Plank 100mm thick - Vertical Colour - Grey (to match existing) • Euroclad VIEO Warm Wall MW5 Standing seam Colour – Anthracite • Polyester powder coated aluminium framed double glazed windows Colour – Anthracite • Polyester powder coated aluminium framed double glazed windows Colour – Anthracite • Polyester powder coated aluminium framed double glazed doors Colour – Anthracite • Black / Dark Grey facing brickwork at low level with dark mortar
Bridge Structural Steelwork	ISO 12944 C3 environment. LTFMM up to 20 years.	High resistant paint by Sherwin Williams. Primer of Macropoxy C400V3 – 200 microns Finishing Coat of Acrolon C137V2 F – 50 microns. Steel hollow sections to be 'hot finished' steel grade S355 J2H to BSEN 10210. Plate and all other sections to be 'hot rolled' steel grade S355 J2G3 to BS EN 10025
Reinforced Concrete Foundation Elements	Grade C35/45 concrete	Formed finished: F2 Unformed finished: U2 Exposure classes: XC2 Concrete grade: C35/45 (or higher) w/c ratio: max 0.45 Minimum cement: 360 kg/m³ Cement type: e.g., SRPC or CEM I with PFA Nominal cover: 50mm DC Class: DC-4finish

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Reinforced concrete piles	Grade C35/45 concrete	Exposure classes: XC2 Concrete grade: C35/45 w/c ratio: max 0.45 Minimum cement: 360 kg/m ³ Cement type: e.g., SRPC or CEM I with PFA Nominal cover: 50mm DC Class: DC-4 finish
Precast concrete floors	Grade C25/30 concrete	Formed finished: F3 Unformed finished: U3 Exposure classes: XC1 Concrete grade: C25/30 w/c ratio: max 0.65 Minimum cement: 280 kg/m ³ Cement type: e.g., CEM I with PFA Nominal cover: 35 mm
Concrete reinforcement	Grade: 500 N/mm ²	B500B ribbed bars to BS 4449:2005 and BS EN 10080:2005.
Masonry to lift shaft	-	Block type: Dense concrete block Compressive strength: 7.3 N/mm ² Dimensions: 440 x 215 x 100/140 mm Unit weight: Typically 1900–2300 kg/m ³ Work size tolerance: Category D1
Mortar to lift shaft	-	Mix type: 1:1:6 (cement:lime:sand) or M4 Compressive strength: M4 grade Durability class: Internal, dry environment

3.12. Risks and hazards considered for design, execution, maintenance and demolition. Consultation with and/or agreement from Overseeing Organisation

The Principal Designer, who has reviewed the risk and hazards identified in the AIP, is:

Mr J Thomas
 Construction Marine Limited
 Mansion Gate Drive
 Chapel Allerton
 Leeds
 LS7 4FE

**Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge**

**Struc Ref:
K66773
P06 – 13/11/25**

Engineering Manager
Email: j.thomas@cml.uk.com
Phone: 07921 387505

Refer to Appendix C for Design Risk Assessment.

3.13. Estimated cost of proposed structure together with other structural forms considered (including where appropriate proprietary manufactured structure), and the reasons for their rejection (including comparative whole life costs with dates of estimates)

1. No Options Report has been prepared and no other form of structural solution has been considered, given that the bridge has been dictated, largely by its architectural aesthetic, for which Planning Permission under the Town and Country Planning Act 1974 is currently being sought.
2. The cost of the structure is, at present, unknown.

3.14. Proposed arrangements for construction

3.14.1. Construction of structure

1. The reinforced concrete piles and foundations will be constructed in-situ within areas segregated from the factory operations.
2. The pre-painted abutment structural steelwork frame will be assembled on site. The cladding, services, blockwork lift core and lift will then be added and access will be made into the factory building on the western abutment.
3. The deck will be painted and assembled off site, with the exception of the bottom boom truss and the windows, and all the services will be added.
4. The deck will then be positioned within the factory car park, where the assembly will be completed, with the deck being supported in its permanent configuration. Finally, once all the dead and superimposed dead load has been added to the deck, which will instigate the full dead and superimposed load deflection, the windows will be installed.
5. The deck will then be lifted into position from B6432 St Andrew's Road by means of a large road-mobile crane.

3.14.2. Traffic management

1. Traffic management will be required on the B6432 St Andrew's Road for the installation of the footbridge.. All traffic management

**Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge**

**Struc Ref:
K66773
P06 – 13/11/25**

including diversion of vehicles and pedestrians shall be approved by the Kirklees Highways Streetworks team.

2. A temporary road closure, will be subject to a 9-week notice period and the approval of Kirklees Highways Streetworks Team.

3.14.3. Service diversions

1. No service diversion will be required for the works.

3.14.4. Interface with existing structures

1. The proposed bridge will be designed to act independently of the existing factory building, at the western abutment. The eastern support is free-standing.
2. The piles will be cored through the existing flood defence wall at the western abutment and the foundation will be cast above ground level, to prevent any conflict with buried services.

3.15. Deliberate damage and security

1. Access into the structure can only be gained from within the existing factory site, which is the subject of high security levels.
2. Physical contact with the outside of the structure cannot be made from the B6432 St Andrew's Road without traffic management and specialised access equipment.

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

4. DESIGN CRITERIA

4.1. Actions

4.1.1. Permanent actions

1. All permanent actions to be as outlined in *EN 1991-1-1: Eurocode 1: Actions on structures - Part 1-1: General actions - Densities, self-weight, imposed loads for buildings* and the UK National Annex.
2. Loading will be applied and combined in accordance with BS EN 1990 and BS EN 1991 as amended by the UK National Annex for both ULS and SLS.

4.1.2. Snow, Wind and Thermal actions

1. All snow loads will be derived in accordance with *EN 1991-1-3: Eurocode 1: Actions on structures - Part 1-3: General actions - Snow loads* and the National Annex, with particular attention being paid to the snow drifting condition between the parapets on the roof of the deck.
2. All wind loads will be derived in accordance with *EN 1991-1-4: Eurocode 1: Actions on structures - Part 1-4: General actions - Wind actions*, the National Annex, and PD6688-1-4, using computational fluid dynamics techniques to assess the wind load effects.
3. All thermal loads will be derived in accordance with *EN 1991-1-5: Eurocode 1: Actions on structures - Part 1-5: General actions - Thermal actions*.
4. The structure will be assessed in accordance with the combinations derived from BS EN 1990:2002 Table A2.4(A), (B) and (C), with Lead and Accompanying Variable Actions.
5. The wind The CFD modelling will be extended to demonstrate that the wind regime in the vicinity of the bridge, insofar as it may affect highway users, is not significantly affected by the presence of the proposed bridge.

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

4.1.3. **Actions relating to normal traffic under AW regulations and C&U regulations**

1. Given this is a footbridge, it will not be subject to loads associated with The Road Vehicles (Authorised Weight) Regulations 1998 or The Road Vehicles (Construction and Use) Regulations 1986.

4.1.4. **Actions relating to General Order traffic under STGO regulations**

1. Given this is a footbridge, it will not be subject to loads associated with The Road Vehicles (Authorisation of Special Types) (General) Order 2003.

4.1.5. **Footway or footbridge variable actions**

1. A variable footway action Load Model 4 (Crowd loading) of 5kN/m^2 will be adopted for the bridge deck design, in accordance with *EN 1991-2: Eurocode 1: Actions on structures - Part 2: Traffic loads on bridge and the relevant National Annex*.
2. A concentrated load of 10kN acting on a square surface of sides 0.1m will be adopted for the bridge deck in accordance with *EN1991-2 – 5.3.2.1 & 5.3.2.2*, assuming no maintenance vehicles will use the bridge.
3. The characteristic value of the horizontal force should be taken equal to 10 per cent of the total load corresponding to the uniformly distributed load according to *EN1991-2 – 5.3.2.1*. The horizontal force is considered as acting simultaneously with the corresponding vertical load, and in no case with the concentrated load Q_{fwk} .
4. The Vierendeel trusses and cladding to the deck and staircase handrails will be designed to Loading Class E, 1.6 kN/m , and a concentrated load of 10kN acting on a square surface of sides 0.1m will be taken for local check. (This assumes no overcrowding, in accordance with:
 - a. PD CEN/TR 1317-6:2012 Road restraint system.
 - b. BS EN 1991-2:2003, 4.8, Note 2. *Eurocode 1: Actions on structures — Part 2: Traffic loads on bridges*
 - c. NA BS EN 1991-2:2003, NA.2.32 *National Annex to Eurocode 1: Actions on structures — Part 2: Traffic loads on bridges*
5. No maintenance vehicle loads will need to be considered.

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

- 4.1.6. **Actions relating to Special Order traffic, provision for exceptional abnormal indivisible loads including location of vehicle track on deck cross-section**
1. Given this is a footbridge, it will not be subject to loads associated with Section 44 of The Road Vehicles (Authorisation of Special Types) (General) Order 2003 (Statutory Instrument 2003 No. 1998) or Individual Vehicle Special Orders (VSO).
- 4.1.7. **Accidental actions**
1. In accordance with PD 6688-1-7:2009 *Recommendations for the design of structures to BS EN 1991-1-7 (+A1:2014)* Section 2.1.1:
 - a. The requirement of Section 2.1.1.1(b), adopting multiple columns, and Section 2.1.1.1(c) adopting suitable tying, will both be applied to the design.
 - b. The assessment which concluded that the risks and consequence of collapse are not high, has been included in the Appendix and, as a result, the requirements of Section 2.1.1.1 (a), discrete collision protection, and Section 2.1.1.1(c), columns to sustain collision, loading do not apply.
 - c. In order to reduce the risk of a Heavy Goods Vehicle (HGV) impact on a support which may cause bridge collapse, then, Approach (b) will be adopted:

Designing the supports in the form of multiple columns so that a support can withstand impact damage from a struck column, and even loss, without the deck above becoming unstable.
 - d. Vehicle collision bollards, designed in accordance with the PAS 68: *Impact test specifications for vehicle security barrier systems*, will be installed, to reduce the risk of collision by HGVs manoeuvring in the western car park with the Western Abutment.
 2. The robustness requirements will be applied to the design of the structure in accordance with Section 2.5.a Table 1 of PD 6688-1-7:2009 *Recommendations for the design of structures to BS EN 1991-1-7 (+A1:2014)*.
 3. The intact structure will be analysed, in the permanent condition, to Ultimate and Serviceability Limit States, but only to the Ultimate Limit State, in the permanent condition with columns removed. The load combinations will be derived from BS EN 1990:2002 Table A2.4(A), (B) and (C), with Lead and Accompanying Variable Actions.

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

4. In accordance with *EN 1991-1-7: Eurocode 1: Actions on structures - Part 1-7: General actions - Accidental action* Section 4.3.2 Note 1 and *National Annex to Eurocode 1: Actions on structures – Part 1-7: Accidental actions* NA.2.17 Values of r_F , h_0 and h_1 [BS EN 1991-1-7:2006, 4.3.2 (1) Note 3]: e-superstructure.
- a. The minimum height of clearance between the road surface and the underside of the bridge deck below which an impact on the superstructure needs to be taken into account, $h_0 = 5.7\text{m}$.
 - b. The value of the clearance between the road surface and the underside of the bridge deck, for impact force F need not to be considered. $h_1 = 5.7\text{m}$.
 - c. Factor r_F for vehicular collision forces on horizontal structural members above roadways, depending on the clearance height h , $r_F = 1.0$.
 - d. The physical clearance between the road surface and the underside of the bridge deck, $h > 5.8\text{m}$.

Maximum channel level beneath bridge = 61.780m
Maximum footpath level beneath bridge = 61.990m
Level to underside of the truss = 67.800m
Minimum clearance = 5.810m
 - e. The deck will be designed to be precambered such that the deck will remain hogging and the gutter falls remain operational in the most adverse load combinations derived from BS EN 1990:2002 Table A2.4(A), (B) and (C), with Lead and Accompanying Variable Actions.

4.1.8. Action during construction

1. All actions applied to the structure during construction will be derived in accordance with *EN 1991-1-6: Eurocode 1: Actions on structures - Part 1-6: General actions - Actions during execution* and the UK National Annex, adopting partial factors and combinations of actions that are associated with transient situations.

4.1.9. Any special action not covered above

None

**Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge**

**Struc Ref:
K66773
P06 – 13/11/25**

4.2. Heavy or high load route requirements and arrangements being made to preserve the route, including any provision for future heavier loads or future widening

1. The bridge is not on a High Load Route and its supports are constructed some distance from the highway boundary. Consequently, no high load route requirements and arrangements are being made, associated with the scheme, to preserve the route, including any provision for future heavier loads or future widening.

4.3. Proposed minimum headroom provided

1. A minimum headroom of 5.8m + sag will be provided, in compliance with the requirements of CD127, across the width of the highway (i.e. carriageways and footways), and considering the most onerous load combinations.

4.4. Set out measures that will be incorporated into design to minimise maintenance

1. The structural steelwork frame has been clad, to enhance corrosion protection.
2. The bridge has been designed as a continuous structure, to mitigate the requirements for bearings.
3. The windows will be designed so that they can be cleaned from the inside of the deck, which will not require a road closure.

4.5. Authorities consulted and any special conditions required

1. By means of the conditional approval to the original Town and Country Planning Act (1974) planning permission, the Kirklees Metropolitan Council's Planning Department confirmed that, other than the bridge's aesthetics, there are no special conditions that are to be applied to the scheme.
2. The Structures Section of Kirklees Council's Highways and Streetscene Department, who are the Technical Approval Authority, were consulted, and the requirements are contained herein.

4.6. Standards and documents listed in the Technical Approval Schedule

1. TAS dated 5 February 2025 - See appendix A.

4.7. Proposed departures from standards listed in 4.6

1. None

**Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge**

**Struc Ref:
K66773
P06 – 13/11/25**

4.8. Proposed departures from standards concerning methods for dealing with aspects not covered by standards listed in 4.6

1. The proposed footbridge will be a private structure and as such its maintenance liability will solely rest with the title holders of the adjoining property.
2. Wind tunnel effect of the proposed footbridge on the highway infrastructure (see 4.1.2 point 5). Matrix Technical Guidance Note no 54 - Lawson Wind Comfort Criteria will be used.

4.9. Proposed safety critical fixings

1. It is proposed that no chemical or mechanical fixings will be adopted for this scheme which could be considered to be critical.

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

5. STRUCTURAL ANALYSIS

5.1. Methods of analysis proposed for superstructure, substructure and foundations

1. Hand and finite element analysis using Dlubal RFEM-6.

5.2. Description and diagram of idealised structure to be used for analysis

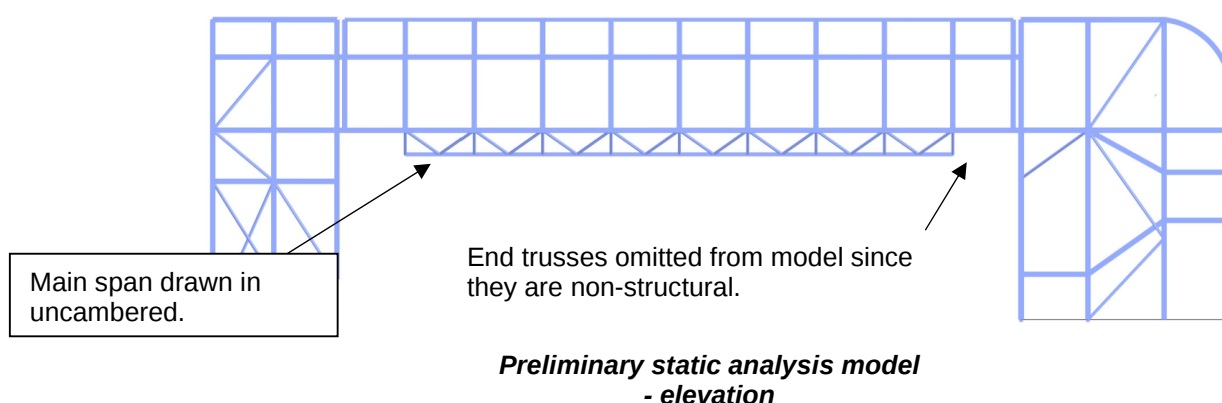
1. Modelling & analysis methods

1.1 FEA Model

The structure shall be analysed in Dlubal RFEM6 Finite Element software. RFEM6 has a core program which allows for simple static analysis, with add-on modules to enable further analysis such as stability and dynamic analysis. 2 FEA models shall be created; a preliminary model and a main model.

1.2 Preliminary model

- a. The modelled structure shall mostly consist of 2D line elements, arranged in to form a 3D analysis model. It shall only be used to perform a basic linear elastic analysis, in conjunction with a construction sequence analysis (5.4.1.5), from which we shall calculate the expected deflection of the main span.
From this we have a value by which to pre-camber the bridge.
- b. The fixities of the beam elements will vary across the model, with rigid joints where appropriate in the Vierendeel truss, and pinned joints where appropriate elsewhere.
- c. The end truss bays are determined to be non-structural, and hence will be omitted from the calculation models.

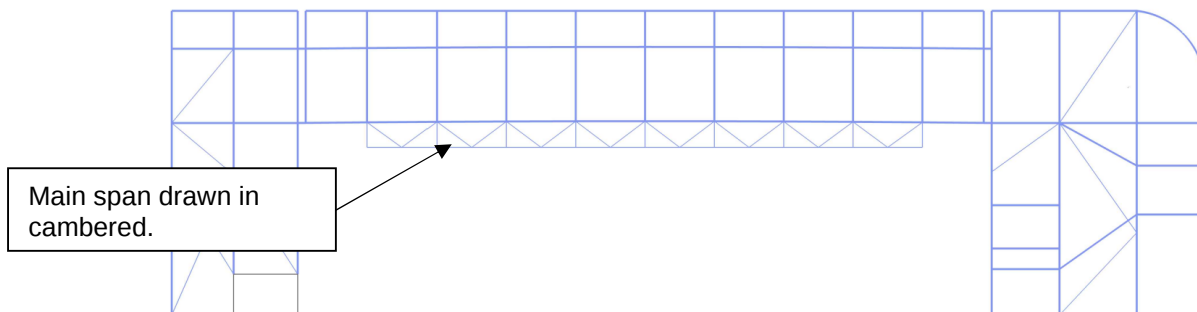


Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

1.3 Main analysis model

- a. This model shall be drawn with the deck precambered based on results from the preliminary analysis model. This model shall be used to carry out:
 - i. Static analysis: Linear elastic analysis. Discussed further in 5.4.1.1
 - ii. Stability analysis: Elastic buckling analysis discussed further in 5.4.1.4
 - iii. Computational Fluid Dynamic analysis: Discussed further in 5.4.1.2
 - iv. Modal analysis: Discussed further in 5.4.1.3.a
 - v. Vibration response analysis: Discussed further in 5.4.1.3.b.
 - vi. Construction sequence analysis: It is proposed that user-specific load combinations will be used to determine the deflections on the bridge at each stage of its construction. Construction sequence is covered in section 5.4.1.5.



- b. East tower stair: This model was used to analyse the static and dynamic forces on the east tower stair.
- c. West tower stair: This model was used to analyse the static and dynamic forces on the west tower stair.

5.3. Assumptions intended for calculation of structural element stiffness

The bridge stiffness will be calculated in the finite element analysis software using gross cross section and associated elastic moduli:

C35/45 Concrete:	$E = 34000 \text{ N/mm}^2$
C25/30 Concrete:	$E = 31000 \text{ N/mm}^2$
Steel:	$E = 210000 \text{ N/mm}^2$

5.4. Basis of Design

1.1 Static analysis

- a. Loading model

**Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield**
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Live loading model in accordance with EN 1991-2:2003 Traffic loads on bridges

Wind loading model in accordance with EN 1991-1-4 (discussed further in section 1.2)

Snow loading model in accordance with EN 1991-1-3

Thermal loading model in accordance with EN 1991-1-5

Combinations created in accordance with EN 1990 Annex A2 A2.2.3 'Combination rules for footbridges'.

b. Pre-camber and deflection.

1. The deck will be designed to be precambered such that the deck will remain hogging and the gutter falls remain operational in the most adverse load combinations derived from BS EN 1990:2002 Table A2.4(A), (B) and (C), with Lead and Accompanying Variable Actions.
2. A deflection limit of $L/500$ is proposed to be adopted due to the presence of brittle finishes, i.e. cladding and glazing panels on the bridge deck.
3. Deflection will be analysed at each stage of the construction sequence (covered in 5.4.1.5), to ensure that the global structure and the local elements are in compliance with deflection limits at all times.
4. Deflection in sensitive M&E areas such as lifts proposed to be checked under a variety of loading conditions.

c. Balustrade Design

1. The Vierendeel trusses and cladding to the deck and staircase handrails will be designed to Loading Class E, 1.6 kN/m, assuming no overcrowding, in accordance with:
 - a. PD CEN/TR 1317-6:2012 Road restraint system.
 - b. BS EN 1991-2:2003, 4.8, Note 2. *Eurocode 1: Actions on structures — Part 2: Traffic loads on bridges*
 - c. NA BS EN 1991-2:2003, 2.32 *National Annex to Eurocode 1: Actions on structures — Part 2: Traffic loads on bridges*

1.2 Wind load analysis (Computational Fluid Dynamics)

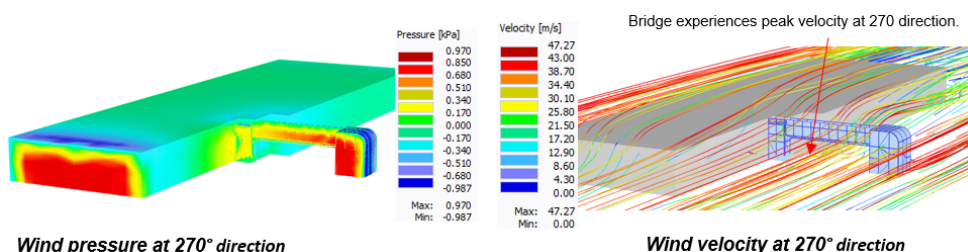
- a. Wind calculation will be carried out in accordance with BS EN 1991-1-4 and included in analysis of both super- and substructure. Dynamic

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

response due to wind will be checked in accordance with 8.2 and associated National Annex taking into account PD6688-1-4.

- b. RFEM's RWIND package shall be adopted to construct a virtual 'wind tunnel', using computational fluid dynamic techniques to assess the wind load effects. This approach also considers the proximity effects of surrounding buildings, which can contribute to wind loads due to such effects as funnelling, vortex shedding and eddies. Typical extract below:



- c. The following is also considered as part of the CFD analysis:
- Along wind response, NA to BS EN 1991-1-4: NA 2.49.1
 - Vertical wind response, NA to BS EN 1991-1-4: NA 2.49.2
 - Aerodynamic instability, NA to BS EN 1991-1-4: NA 2.49.3
 - Vortex shedding, PD 6688-1-4: Annex A
 - Galloping, PD 6688-1-4: A.2
 - Torsional motion, PD 6688-1-4: A.2.4.1(b)
 - Flutter to PD 6688-1-4: A.4.4

1.3 Dynamic analysis

The bridge must be designed to comply with serviceability requirements made with respect to the dynamics of the structure. Dynamic check under live loading will be carried out in accordance with BS EN 1991-2 and associated national annexes as modified by PD 6688-2.

- a. Modal analysis

Parameters for modal analysis taken from EN 1990:2002+A1:2000 A2.4.3.2 – '*Verifications concerning vibration*'. Fundamental frequency of the deck must be greater than:

5Hz for vertical vibrations

2.5Hz for horizontal and torsional vibrations

If these conditions are not met, verification of 'comfort criteria' must be performed. This requires a vibration response analysis.

- b. Vibration response analysis

**Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield**
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Dynamic models for pedestrian actions on footbridges in accordance with NA to BS EN 1991-2 shall be considered. The following bridge dynamic assessment classification is proposed:

Bridge class – C

Group size (walking) = 8

Group size (jogging) = 2

Crowd density = 0.8

Vibration response of footbridges is governed by allowable acceleration. Values obtained from BS EN 1991-2:2003, 5.7 (3) with NA.2.44.6 – *Dynamic models for pedestrian actions on footbridges*.

Proposed design dynamic serviceability limits:

Vertical acceleration limit, $\alpha_{\text{limit}} = 0.56\text{m/s}^2$

Based on the following site specific factors:

Site usage factor $k_1 = 0.8$

Route frequency factor $k_2 = 0.7$

Height of structure factor $k_3 = 1.0$

Exposure factor $k_4 = 1.0$

In absence of guidance in BS EN 1991-2:2003 regarding acceleration limits for horizontal vibrations, the limits in BS EN 1990:2002 A2.4.3.2 are proposed to be adopted:

- i. 0.2m/s² for horizontal vibrations
- ii. 0.4m/s² for exceptional crowd conditions

Allowance shall be made for the consideration of provision of dampers, should the accelerations not satisfy the comfort criteria by a significant margin.

1.4 Stability analysis

Elastic buckling analysis will be considered where required. 2nd order analysis is proposed to consider secondary effects where necessary, in accordance with BS EN 1993-1-1. 2nd order analysis will involve modelling initial imperfections unless it is demonstrated that the analysis is not required.

1.5 Construction sequence

1. The deck will be painted and assembled off site, with the exception of the underslung truss and the windows, and all the services will be added.

**Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge**

**Struc Ref:
K66773
P06 – 13/11/25**

2. The deck will then be positioned within the factory car park, where the assembly will be completed, with the deck being simply supported in its permanent configuration.
3. Once all the dead and superimposed dead load has been added to the deck, which will instigate the full dead and superimposed load deflection, the windows will be installed.
4. Following this the bridge will be lifted into place.

5.5. Proposed range of soil parameters to be used in the design of earth retaining elements

1. There are no earth retaining structure on the scheme.

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

6. GEOTECHNICAL CONDITIONS

6.1. Acceptance of recommendations of the ground investigation report (references/dates) to be used in the design and reasons for any proposed changes

1. A ground investigation report has been commissioned for the area concerned and has been included in the Appendices of this document.
2. Whilst the general findings of the report is accepted, there was insufficient information contained in the report on which to undertake a pile design. As a result, Supplementary Boreholes were undertaken, copies of which are also included in the Appendices.

6.2. Summary of design for highway structure in the ground investigation report

1. There is no summary of design in the GDR, though, from its findings, it is clear that shallow, spread footings would not be suitable for the scheme, due to the extensive depths of made ground and weak, alluvial superficial deposits beneath the site. It is considered, therefore, that the only commercially viable foundation solution for the bridge would be bored cast-in-place piles.
2. The pile designers have undertaken supplementary boreholes, records of which are included in the appendices, which have obtained sufficient information to undertake the pile design.

6.3. Differential settlement to be allowed for in the design of the structure

1. Despite the foundations being formed from end-bearing piles, a maximum differential settlement of 25mm has been allowed for between the bridge abutments. This will represent the adopted value of $d_{set,i}$.

6.4. If the ground investigation report is not yet available, state when the results are expected and list the sources of information used to justify the preliminary choice of foundations

1. The narrative stating the means by which the results from the Supplemental Boreholes will be applied to the pile design will be included at detailed design stage.
2. The decision on the preliminary choice of foundations were based on the original ground investigation report and the Supplemental Boreholes

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

7. CHECK

7.1. Proposed Category and Design Supervision Level

1. Pursuant with the requirements of Table B4 of BS EN 1990:2002 +A1:2005 *Basis of Structural Design*, the Design Supervision Level will be a DSL2.
2. Pursuant with the requirements of Table 7.2 – *Categories and Reliability Classes* of CD350 *The Design of Highway Structures*, the bridge should be the subject of a Category 2 check.
3. Due to concerns regarding wind loading, however, KMC, as the TAA, have insisted that the bridge should be subjected peer review of the computational fluid dynamic wind modelling.

7.2. If Category 3, name of proposed Independent Checker

Peer review of the computational fluid dynamic wind analysis to be undertaken by:

JNP Consulting Engineers Ltd
Woodvale House
Woodvale Road
Brighouse
W Yorks
HD6 4AB

7.3. Erection proposals or temporary works for which Types S and P Proposals will be required, listing structural parts of the permanent structure affected with reasons

1. The elements of temporary works that have currently been identified are:
 - a. Crane pads to the eastern and western abutments.
 - b. Piling mats to the eastern and western abutments.
 - c. Trestles to support the deck temporarily, in the eastern compound, for completion of the cladding works, prior to being lifted into position.
 - d. Road closure of the B6432, for the purposes of lifting the bridge deck into position.
 - e. Pedestrian diversions within the factory facilities.
2. There are no Type P (public) temporary works proposal anticipated: erection proposals, temporary works including those over, under, alongside or otherwise affecting or potentially affecting any highway or other way or area used by, or accessible, to the public.

APPROVAL IN PRINCIPLE FOR DESIGN

**Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield**
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

3. There are no Type S (structure) temporary works proposals anticipated that are of interest to the Highways Authority, due to the bridge being privately maintained,

**Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge**

**Struc Ref:
K66773
P06 – 13/11/25**

8. DRAWINGS AND DOCUMENTS

8.1. List of drawings (including numbers) and documents accompanying the submission

8.1.1. Drawings (See Appendix B)

Reference	Title
CUSA-MWA-XX-ZZ-DR-A-0004 (P4)	PROPOSED PLANS
CUMHD1-MCE-XX-ZZ-DR-C-2001(P01)	PROPOSED GENERAL ARRANGEMENT
CUMHD1-MCE-XX-ZZ-DR-C-2002 (P01)	PROPOSED 3D VIEWS – SHEET 1
CUMHD1-MCE-XX-ZZ-DR-C-2003 (P01)	PROPOSED 3D VIEWS – SHEET 2
CUMHD1-MCE-XX-ZZ-DR-C-3001 (P01)	PROPOSED FOUNDATIONS – GENERAL ARRANGEMENT
CUMHD1-MCE-XX-ZZ-DR-C-4001 (P01)	PROPOSED STEELWORK – GENERAL ARRANGEMENT
CUMHD1-MCE-XX-ZZ-DR-C-6010 (P04.01)	PROPOSED GENERAL ARRANGEMENT – STRUCTURE FREE ZONE

8.1.2. Documents (See Appendix C)

Reference	Title
CUMHD1-MCE-XX-ZZ-RP-C-3001 (P02)	Vehicle Impact Risk Assessment
CUMHD1-MCE-XX-ZZ-RP-C-2001 (P02)	Design Risk Assessment
C4137/24/E/6328	Phase 1 Environmental Desk Study & Coal Mining Risk Assessment Report
-	Supplemental Boreholes

Designer to ensure to include all the latest drawing revisions in the above table.

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

9. THE ABOVE IS SUBMITTED FOR ACCEPTANCE

Design Team Leader

(Signature)

Name	Mr A Hoyland
Engineering Qualifications	BSc (Hons), DIS, CEng, MStructE, MCIHT, MIED
Name of Organisation	Matrix Consulting Engineers
Date	13/11/25

Check Team Leader

Name	Mr K Kam
Engineering Qualifications	BEng (Hons), CEng MICE
Name of Organisation	Matrix Consulting Engineers
Date	13/11/25

10. THE ABOVE IS ~~REJECTED~~/AGREED SUBJECT TO THE AMENDMENTS AND CONDITIONS SHOWN BELOW

Name	Claire Richardson
Position held	Principal Engineer (Bridges and Structures)
Engineering Qualifications	BEng CEng MICE
TAA	Kirklees Council
Date	19-11-2025

APPROVAL IN PRINCIPLE FOR DESIGN

**Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield**
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Conditions:

- (i) Submission of satisfactory structural calculations for the design of new private footbridge in compliance with the design parameters in the agreed AIP Rev 06.

- (ii) Submission of satisfactory "Design Certificate" and "Check Certificate" (Category 2) in compliance with the agreed AIP Rev 06 for the new private footbridge.

- (iii) Submission of "Construction Compliance Certificate" and "As Built" drawings in accordance with *CG 300 Technical approval of highway structures*, upon the completion of works.

Clarification:

- (iv) The Vehicle Impact Risk Assessment in Appendix C is presented with reference to nationally-assessed risk profile in Appendix B of BS EN 1990, in the context of cl 2.1.1 of PD 6688-1-7 2009 and the design rules around the risk of substructure impact. TAA notes that this does not necessarily reflect the risk profile of the Local Authority, which is appropriately addressed in the Designer's Risk Assessment, also in Appendix C.

For and on behalf of Kirklees Council

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

APPENDIX A

LIST OF RELEVANT DESIGN DOCUMENTS

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

TECHNICAL APPROVAL SCHEDULE (TAS)

Schedule of Documents Relating to Design of Highway Bridges and Structures

(All documents are taken to include revisions current as of 5 February 2025)

Additional standards needed for a particular design should be added to the section at the bottom of the TAS.

The Designer is responsible for ensuring that the standards and references given in the schedule are correct and up to date. [Tick all the documents used](#) (✓)

Used (✓)	Eurocodes and associated UK National Annexes			
	Eurocode part	Title	Amendment / Corrigenda	Notes
	Eurocode 0	Basis of structural design		
✓	BS EN 1990:2002 +A1:2005	Eurocode 0: Basis of structural design	+A1:2005 Incorporating corrigenda December 2008 and April 2010	See CD 350 section 7 for additional guidance. This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1990:2023
✓	NA to BS EN 1990:2002 + A1:2005	UK National Annex to Eurocode 0 Basis of structural design	National Amendment No.1	See CD 350 section 7 for additional guidance.
	Eurocode 1	Actions on structures		
✓	BS EN 1991-1-1:2002	Eurocode 1: Actions on structures. General Actions. Densities, self-weight, imposed load for buildings	Corrigenda December 2004 and March 2009	
✓	NA to BS EN 1991-1-1:2002	UK National Annex to Eurocode 1: Actions on structures. General Actions. Densities, self-weight, imposed load for buildings	Corrigenda July 2019	
✓	BS EN 1991-1-3:2003 +A1:2015	Eurocode 1: Actions on structures. General Actions. Snow loads	+A1:2015 Incorporating corrigenda December 2004 and March 2009	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Eurocodes and associated UK National Annexes			
	Eurocode part	Title	Amendment / Corrigenda	Notes
✓	NA + A2:18 to BS EN 1991-1-3:2003+A1:2015	UK National Annex to Eurocode 1: Actions on structures. General Actions. Snow loads	+A2:2018 Incorporating corrigenda June 2007, December 2015 and October 2018	
✓	BS EN 1991-1-4:2005 +A1:2010	Eurocode 1: Actions on structures. General Actions. Wind actions	+A1:2010 Corrigenda July 2009 and January 2010	
✓	NA to BS EN 1991-1-4:2005 + A1:2010	UK National Annex to Eurocode 1: Actions on structures. General Actions. Wind actions	National Amendment No.1	
✓	BS EN 1991-1-5:2003	Eurocode 1: Actions on structures. General Actions. Thermal actions	Corrigenda December 2004 and March 2009	
✓	NA to BS EN 1991-1-5:2003	UK National Annex to Eurocode 1: Actions on structures. General Actions. Thermal actions	-	
✓	BS EN 1991-1-6:2005	Eurocode 1: Actions on structures. General Actions. Actions during execution	Corrigenda July 2008, November 2012 and February 2013	
✓	NA to BS EN 1991-1-6:2005	UK National Annex to Eurocode 1: Actions on structures. General Actions. Actions during execution	-	
✓	BS EN 1991-1-7:2006 +A1:2014	Eurocode 1: Actions on structures. General Actions. Accidental actions	+A1: 2014 Corrigendum February 2010	
✓	NA+A1 to BS EN 1991-1-7:2006+A1:2014	UK National Annex to Eurocode 1: Actions on structures. Part 1-7 : Accidental actions	+A1:2014 Incorporating corrigenda August 2014 and November 2015	See CD 350 for additional guidance.

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Eurocodes and associated UK National Annexes			
	Eurocode part	Title	Amendment / Corrigenda	Notes
✓	BS EN 1991-2:2003	Eurocode 1: Actions on structures. Traffic loads on bridges	Corrigenda December 2004 and February 2010	See CD 350 section 7 for additional guidance. This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1991-2:2023
✓	NA +A1:2020 to BS EN 1991-2:2003	UK National Annex to Eurocode 1: Actions on structures. Traffic loads on bridges	Corrigendum No.1 Amendment June 2020	See CD 350 section 7 for additional guidance.
	Eurocode 2	Design of concrete structures		
✓	BS EN 1992-1-1:2004 + A1:2014	Eurocode 2: Design of concrete structures– Part 1-1: General rules and rules for buildings	Incorporating corrigendum January 2008, November 2010 and January 2014	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1992-1-1:2023
✓	NA + A2:2014 to BS EN 1992-1-1:2004 + A1:2014	UK National Annex to Eurocode 2: Design of concrete structures – Part 1-1: General rules and rules for buildings		
✓	BS EN 1992-2:2005	Eurocode 2: Design of concrete structures – Part 2: Concrete bridges – Design and detailing rules	Corrigendum July 2008	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1992-1-1:2023
✓	NA to BS EN 1992-2:2005	UK National Annex to Eurocode 2: Design of concrete structure – Part 2: Concrete bridges – Design and detailing rules	-	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Eurocodes and associated UK National Annexes			
	Eurocode part	Title	Amendment / Corrigenda	Notes
✓	BS EN 1992-3:2006	Eurocode 2: Design of concrete structures – Part 3: Liquid retaining and containment structures		This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1992-1-1:2023
	NA to BS EN 1992-3:2006	UK National Annex to Eurocode 2: Design of concrete structures – Part 3: Liquid retaining and containment structures	-	
✓	BS EN 1992-4:2018	Eurocode 2: Design of concrete structures – Part 4: Design of fastenings for use in concrete		
✓	NA to BS EN 1992-4:2018	UK National Annex to Eurocode 2: Design of concrete structures – Part 4: Design of fastenings for use in concrete		
	Eurocode 3	Design of steel structures		
✓	BS EN 1993-1-1:2005 + A1:2014	Eurocode 3: Design of steel structures – Part 1-1 General rules and rules for buildings	Corrigenda February 2006 and April 2009	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1993-1-1:2022
✓	NA + A1:2014 to BS EN 1993-1-1:2005 + A1:2014	UK National Annex to Eurocode 3: Design of steel structures – Part 1-1 General rules and rules for buildings	-	
✓	BS EN 1993-1-3:2006	Eurocode 3: Design of steel structures – Part 1-3 General rules – Supplementary rules for cold-formed members and sheeting	Corrigendum November 2009	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1993-1-3:2024

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Eurocodes and associated UK National Annexes			
	Eurocode part	Title	Amendment / Corrigenda	Notes
✓	NA to BS EN 1993-1-3:2006	UK National Annex to Eurocode 3: Design of steel structures – Part 1-3 Supplementary rules for cold-formed members and sheeting	-	
	BS EN 1993-1-4:2006 + A2:2020	Eurocode 3: Design of steel structures – Part 1-4 General rules – Supplementary rules for stainless steels	+ A1:2015 Amendment No. 1 + A2:2020 Amendment No. 2	Supersedes BS EN 1993-1-4:2006 + A1:2015
	NA+A1:15 to BS EN 1993-1-4:2006+A1:2015	UK National Annex to Eurocode 3: Design of steel structures – Part 1-4 Supplementary rules for stainless steels	+ A1:2015 Amendment No. 1	
	BS EN 1993-1-5:2006+A2:2019	Eurocode 3: Design of steel structures – Part 1-5 Plated structural elements	Corrigendum April 2009, +A1:2017 Amendment No. 2, +A2:2019	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1993-1-5:2024
	NA+A1:2016 to BS EN 1993-1-5:2006	UK National Annex to Eurocode 3: Design of steel structures – Part 1-5 Plated structural elements	+ A1:2016 Amendment No. 1	
	BS EN 1993-1-6:2007+ A1:2017	Eurocode 3: Design of steel structures – Part 1-6 Strength and stability of shell structures	+ A1:2017 Amendment No. 1	
	BS EN 1993-1-7:2007	Eurocode 3: Design of steel structures – Part 1-7 Plated structures subject to out of plane loading	Corrigendum April 2009	
✓	BS EN 1993-1-8:2005	Eurocode 3: Design of steel structures – Part 1-8 Design of joints	Corrigenda December 2005, September 2006, July 2009 and August 2010	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1993-1-8:2024

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Eurocodes and associated UK National Annexes			
	Eurocode part	Title	Amendment / Corrigenda	Notes
✓	NA to BS EN 1993-1-8:2005	UK National Annex to Eurocode 3: Design of steel structures – Part 1-8 Design of joints	-	
	BS EN 1993-1-9:2005	Eurocode 3: Design of steel structures – Part 1-9 Fatigue	Corrigenda December 2005, September 2006 and April 2009	
	NA to BS EN 1993-1-9:2005	UK National Annex to Eurocode 3: Design of steel structures – Part 1-9 Fatigue	-	
✓	BS EN 1993-1-10:2005	Eurocode 3: Design of steel structures – Part 1-10 Material toughness and through-thickness properties	Corrigenda December 2005, September 2006 and March 2009	
✓	NA to BS EN 1993-1-10:2005	UK National Annex to Eurocode 3: Design of steel structures – Part 1-10 Material toughness and through thickness properties	-	
	BS EN 1993-1-11:2006	Eurocode 3: Design of steel structures – Part 1-11 Design of structures with tension components	Corrigendum April 2009	
	NA to BS EN 1993-1-11:2006	UK National Annex to Eurocode 3: Design of steel structures – Part 1-11 Design of structures with tension components	-	
	BS EN 1993-1-12:2007	Eurocode 3: Design of steel structures – Part 1-12 Additional rules for the extension of EN 1993 up to steel grades S 700	Corrigendum April 2009	
	NA to BS EN 1993-1-12:2007	UK National Annex to Eurocode 3: Design of steel structures – Part 1-12 Additional rules for the extension of EN 1993 up to steel grades S 700	-	
✓	BS EN 1993-2:2006	Eurocode 3: Design of steel structures – Part 2 Steel bridges	Corrigendum July 2009	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Eurocodes and associated UK National Annexes			
	Eurocode part	Title	Amendment / Corrigenda	Notes
✓	NA + A1:2012 to BS EN 1993-2:2006	UK National Annex to Eurocode 3: Design of steel structures – Part 2 Steel bridges	+ A1:2012	
	BS EN 1993-5:2007	Eurocode 3: Design of steel structures – Part 5 Piling	Corrigendum May 2009	
	NA + A1:2012 to BS EN 1993-5:2007	UK National Annex to Eurocode 3: Design of steel structures – Part 5 Piling	+ A1:2012	
	Eurocode 4	Design of composite steel and concrete structures		
	BS EN 1994-1-1:2004	Eurocode 4: Design of composite steel and concrete structures – Part 1-1 General rules and rules for buildings	Corrigendum April 2009	
	NA to BS EN 1994-1-1:2004	UK National Annex to Eurocode 4: Design of composite steel and concrete structures – Part 1-1 General rules and rules for buildings	-	
	BS EN 1994-2:2005	Eurocode 4: Design of composite steel and concrete structures – Part 2 General rules and rules for bridges	Corrigendum July 2008	
	NA to BS EN 1994-2:2005	UK National Annex to Eurocode 4: Design of composite steel and concrete structures – Part 2 General rules and rules for bridges	-	
	Eurocode 5	Design of timber structures		
	BS EN 1995-1-1:2004 + A2:2014	Eurocode 5: Design of timber structures – Part 1-1 General – common rules and rules for buildings	+ A2:2014 Incorporating corrigendum June 2006	
	NA to BS EN 1995-1-1:2004 + A2:2014	UK National Annex to Eurocode 5: Design of timber structures – Part 1-1 General – common rules and rules for buildings	+ A2:2014	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Eurocodes and associated UK National Annexes			
	Eurocode part	Title	Amendment / Corrigenda	Notes
	BS EN 1995-2:2004	Eurocode 5: Design of timber structures – Part 2 Bridges	-	
	NA to BS EN 1995-2:2004	UK National Annex to Eurocode 5: Design of timber structures – Part 2 Bridges	-	
	Eurocode 6	Design of masonry structures		
	BS EN 1996-1-1:2005+A1:2012	Eurocode 6: Design of masonry structures – Part 1-1 General rules for reinforced and unreinforced masonry structures	+A1:2012 Corrigenda February 2006 and July 2009	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1996-1-1:2022
	NA to BS EN 1996-1-1:2005 +A1:2012	UK National Annex to Eurocode 6: Design of masonry structures – Part 1-1 General rules for reinforced and unreinforced masonry structures	+A1:2012	This document is to be used until 30 March 2028. After which it will be superseded by NA to BS EN 1996-1-1:2022
	BS EN 1996-2:2006	Eurocode 6: Design of masonry structures – Part 2 Design considerations, selection of materials and execution of masonry	Corrigendum September 2009	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1996-2:2024
	NA to BS EN 1996-2:2006	UK National Annex to Eurocode 6: Design of masonry structures – Part 2 Design considerations, selection of materials and execution of masonry	Corrigendum No.1	
	BS EN 1996-3:2006	Eurocode 6: Design of masonry structures – Part 3 Simplified calculation methods for unreinforced masonry structures	Corrigendum October 2009	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1996-3:2023

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Eurocodes and associated UK National Annexes			
	Eurocode part	Title	Amendment / Corrigenda	Notes
	NA +A1:2014 to BS EN 1996-3:2006	UK National Annex to Eurocode 6: Design of masonry structures – Part 3 Simplified calculation methods for unreinforced masonry structures	+A1:2014	
	Eurocode 7	Geotechnical design		
✓	BS EN 1997-1:2004+A1:2013	Eurocode 7: Geotechnical design – Part 1 General rules	+A1:2013 Corrigendum February 2009	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1997-1:2024
✓	NA+A2:2022 to BS EN 1997-1:2004+A1:2013	UK National Annex to Eurocode 7: Geotechnical design – Part 1 General rules	+A1:2013 Incorporating Corrigendum No.1, Amendment 1 – July 2014 and Amendment 2 - 2022	Supersedes NA+A1:2014 to BS EN 1997-1:2004+A1:2013
✓	BS EN 1997-2:2007	Eurocode 7: Geotechnical design – Part 2 Ground investigation and testing	Corrigendum June 2010	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1997-2:2024
✓	NA to BS EN 1997-2:2007	UK National Annex to Eurocode 7: Geotechnical design – Part 2 Ground investigation and testing	-	
	Eurocode 8	Design of structures for earthquake resistance		
	BS EN 1998-1:2004 + A1:2013	Eurocode 8: Design of structures for earthquake resistance – Part 1 General rules, seismic actions and rules for buildings	Corrigendum June 2009, January 2011 and March 2013	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1998-1-1:2024

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Eurocodes and associated UK National Annexes			
	Eurocode part	Title	Amendment / Corrigenda	Notes
	NA to BS EN 1998-1:2004	UK National Annex to Eurocode 8: Design of structures for earthquake resistance – Part 1 General rules, seismic actions and rules for buildings	-	
	BS EN 1998-2:2005+A2:2011	Eurocode 8: Design of structures for earthquake resistance – Part 2 Bridges	Corrigenda February 2010 and February 2012	
	NA to BS EN 1998-2:2005	UK National Annex to Eurocode 8: Design of structures for earthquake resistance – Part 2 Bridges	-	
	BS EN 1998-5:2004	Eurocode 8: Design of structures for earthquake resistance – Part 5 Foundations, retaining structures and geotechnical aspects	-	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1998-5:2024
	NA to BS EN 1998-5:2004	UK National Annex to Eurocode 8: Design of structures for earthquake resistance – Part 5 Foundations, retaining structures and geotechnical aspects	-	
	Eurocode 9	Design of aluminium structures		
	BS EN 1999-1-1:2007 + A2:2013	Eurocode 9: Design of aluminium structures – Part 1-1 General structural rules	+ A2:2013 Incorporating corrigendum March 2014	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1999-1-1:2023
	NA to BS EN 1999-1-1:2007 + A1:2009	UK National Annex to Eurocode 9: Design of aluminium structures – Part 1-1 General structural rules	National Amendment No.1 Corrigendum No.1	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Eurocodes and associated UK National Annexes			
	Eurocode part	Title	Amendment / Corrigenda	Notes
	BS EN 1999-1-3:2007 + A1:2011	Eurocode 9: Design of aluminium structures – Part 1-3 Structures susceptible to fatigue	+ A1:2011	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1999-1-3:2023
	NA to BS EN 1999-1-3:2007 + A1:2011	UK National Annex to Eurocode 9: Design of aluminium structures – Part 1-3 Structures susceptible to fatigue	+ A1:2011	
	BS EN 1999-1-4:2007 + A1:2011	Eurocode 9: Design of aluminium structures – Part 1-4 Cold formed structural sheeting	+ A1:2011 Corrigendum November 2009	This document is to be used until 30 March 2028. After which it will be superseded by BS EN 1999-1-4:2023
	NA to BS EN 1999-1-4:2007	UK National Annex to Eurocode 9: Design of aluminium structures – Part 1-4 Cold formed structural sheeting	-	

Used (✓)	Bsi Published Documents		
	<i>For guidance only unless clauses are otherwise specified in CD 350 Appendix A.</i>		
	Published Document reference	Title	Notes
✓	PD 6687-1:2020	Background paper to the UK National Annexes to BS EN 1992-1 and BS EN 1992-3	Supersedes PD 6687-1:2010 See CD 350 clauses 3.6, 4.1, 4.2 and Appendix A for additional guidance. Clause 3.6 in CD 350 refers to clause 2.5 in PD 6687-1, this is now clause 4.5 in PD 6687-1 Clause 4.2 in CD 350 refers to clause 2.22 in PD 6687-1, this is now clause 4.21.4 in PD 6687-1
✓	PD 6687-2:2008	Recommendations for the design of structures to BS EN 1992-2:2005	See CD 350 clauses 4.1, 4.2 and Appendix A for additional guidance.
✓	PD 6688-1-1:2011	Recommendations for the design of structures to BS EN 1991-1-1	See CD 350 Appendix A for additional guidance.

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Bsi Published Documents		
	<i>For guidance only unless clauses are otherwise specified in CD 350 Appendix A.</i>		
	Published Document reference	Title	Notes
✓	PD 6688-1-4:2015	Background paper to the UK National Annex to BS EN 1991-1-4	See CD 350 Appendix A for additional guidance.
✓	PD 6688-1-7:2009 +A1:2014	Recommendations for the design of structures to BS EN 1991-1-7	See CD350 clause 3.7 and Appendix B for additional guidance.
✓	PD 6688-2:2011	Recommendations for the design of structures to BS EN 1991-2	See CD 350 Appendix A for additional guidance.
✓	PD 6694-1:2011 + A1:2020	Recommendations for the design of structures subject to traffic loading to BS EN 1997-1	Incorporating Corrigendum 1 Jan 2022 & Corrigendum 2 Jul 2023 See CD 350 Appendix A for additional guidance.
✓	PD 6695-1-9:2008	Recommendations for the design of structures to BS EN 1993-1-9	See CD 350 Appendix A for additional guidance.
✓	PD 6695-1-10:2009	Recommendations for the design of structures to BS EN 1993-1-10	See CD 350 Appendix A for additional guidance.
✓	PD 6695-2:2008 + A1:2012 Incorporating Corrigendum No.1	Recommendation for the design of bridges to BS EN 1993	See CD 350 Appendix A for additional guidance.
✓	PD 6696-2:2007 + A1:2012	Background paper to BS EN 1994-2 and the UK National Annex to BS EN 1994-2	See CD 350 Appendix A for additional guidance.
	PD 6698:2009	Recommendations for the design of structures for earthquake resistance to BS EN 1998	See CD 350 section 7 for additional guidance. Withdrawn
	PD 6702-1:2009+A1:2019	Structural use of aluminium. Recommendations for the design of aluminium structures to BS EN 1999	Amended 31 May 2019
	PD 6703:2009	Structural bearings – Guidance on the use of structural bearings	
	PD 6705-2:2020	Structural use of steel and aluminium. Execution of steel bridges conforming to BS EN 1090-2. Guide	Replaces PD 6705-2:2010 + A1:2013
	PD 6705-3:2009	Recommendations on the execution of aluminium structures to BS EN 1090-3	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Execution Standards referenced in British Standards or Eurocodes		
	Execution Standard reference	Title	Notes
	BS EN 1090-1:2009+A1:2011	Execution of steel structures and aluminium structures - Part 1: Requirements for conformity assessment of structural components	
	BS EN 1090-2:2018+A1:2024	Execution of steel structures and aluminium structures. Technical requirements for the execution of steel structures	Supersedes BS EN 1090-2:2018
	BS EN 1090-3:2019	Execution of steel structures and aluminium structures – Part 3: Technical requirements for aluminium structures	Supersedes BS EN 1090-3:2008
	BS EN 13670:2009 Incorporating corrigenda October 2015 and November 2015	Execution of concrete structures	

Used (✓)	Product Standards referenced in British Standards or Eurocodes		
	Product Standard reference	Title	Notes
✓	BS EN 206:2013+A2:2021	Concrete – Specification, performance, production and conformity	Supersedes BS EN 206:2013+A1:2016
✓	BS EN 1317-1:2010	Road Restraint Systems – Part 1 – Terminology and general criteria for test methods	
✓	BS EN 1317-2:2010	Road Restraint Systems – Part 2 – Performance classes, impact test acceptance criteria and test methods for safety barriers.	
✓	BS EN 1317-3:2010	Road Restraint Systems – Part 3 – Performance classes, impact test acceptance criteria and test methods for crash cushions.	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Product Standards referenced in British Standards or Eurocodes		
	Product Standard reference	Title	Notes
✓	DD ENV 1317-4:2002	Road Restraint Systems – Part 4 – Performance classes, impact test acceptance criteria and test methods for terminals and transitions of safety barriers.	<i>Draft BS EN 1317-4 for public comment published in June 2012</i>
✓	BS EN 1317-5:2007+A2:2012	Road Restraint Systems – Part 5 - Product requirements and evaluation of conformity for vehicle restraint systems	Incorporating corrigendum August 2012 <i>Draft prEN 1317-5 for public comment published in December 2013</i>
✓	PD CEN/TR 16949:2016	Road Restraint System – Pedestrian restraint system - Pedestrian parapets	<i>Bsi Published Document / CEN Technical Report published in July 2016</i> <i>(This document should not be used. The requirements of BS 7818:1995 apply.)</i>
✓	PD CEN/TS 1317 7:2023	Road restraint systems - Part 7: Performance characterisation and test methods for terminals of safety barriers	<i>Replaces Draft prEN 1317-7</i> <i>(All terminals should be in accordance with this document or ENV1317-4.)</i>
✓	PD CEN/TS 17342:2019	Road restraint systems - Motorcycle road restraint systems which reduce the impact severity of motorcyclist collisions with safety barriers	<i>Replaces PD CEN/TS 1317-8:2012</i> <i>(This document should not be used.)</i>
✓	PD CEN/TR 17081:2018	Design of fastenings for use in concrete – Plastic design of fastenings with headed and post-installed fasteners	
	BS EN 1337-1:2000	Structural bearings – Part 1: General Design Rules	
	BS EN 1337-2:2004	Structural bearings – Part 2: Sliding elements	
	BS EN 1337-3:2005	Structural bearings – Part 3: Elastomeric bearings	
	BS EN 1337-4:2004	Structural bearings – Part 4: Roller bearings	Corrigendum No.1 March 2007

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Product Standards referenced in British Standards or Eurocodes		
	Product Standard reference	Title	Notes
	BS EN 1337-5:2005	Structural bearings – Part 5: Pot bearings	
	BS EN 1337-6:2004	Structural bearings – Part 6: Rocker bearings	
	BS EN 1337-7:2004	Structural bearings – Part 7: Spherical and cylindrical PTFE bearings	
	BS EN 1337-8:2007	Structural bearings – Part 8: Guide bearings and restraint bearings	
	BS EN 1337-9:1998	Structural bearings – Part 9: Protection	
	BS EN 1337-10:2003	Structural bearings – Part 10: Inspection and maintenance	Corrigendum No.1 November 2003
	BS EN 1337-11:1998	Structural bearings – Part 11: Transport, Storage and Installation.	
✓	BS EN 10025-1:2004	Hot rolled products of structural steels Part 1: General technical delivery conditions.	
✓	BS EN 10025-2:2019	Hot rolled products of structural steels Part 2: Technical delivery conditions for non-alloy structural steels.	Supersedes BS EN 10025-1:2004
✓	BS EN 10025-3:2019	Hot rolled products of structural steels Part 3: Technical delivery conditions for normalized/normalized rolled weldable fine grain structural steels.	Supersedes BS EN 10025-3:2004
✓	BS EN 10025-4:2019+A1:2022	Hot rolled products of structural steels Part 4: Technical delivery conditions for thermomechanical rolled weldable fine grain structural steels.	Supersedes BS EN 10025-4:2019
✓	BS EN 10025-5:2019	Hot rolled products of structural steels – Part 5: Technical delivery conditions for structural steels with improved atmospheric corrosion resistance	Supersedes BS EN 10025-5:2004
✓	BS EN 10025-6:2019+A1:2022	Hot rolled products of structural steels – Part 6: Technical delivery conditions for flat products of high yield strength structural steels in the quenched and tempered condition.	Supersedes BS EN 10025-6:2019
✓	BS EN 10080:2005	Steel for the reinforcement of concrete – Weldable reinforcing steel - General	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Product Standards referenced in British Standards or Eurocodes		
	Product Standard reference	Title	Notes
✓	BS EN 10210-1:2006	Hot finished structural hollow sections of non-alloy and fine grain steels – Part 1: Technical delivery conditions	
✓	BS EN 10210-2:2019	Hot finished structural hollow sections – Part 2: Tolerances, dimensions and sectional properties	Supersedes BS EN 10210-2:2006
✓	BS EN 10248-1:2023	Hot rolled sheet piling of non alloy steels. Technical delivery conditions	Supersedes BS EN 10248-1:1996
✓	BS EN 10248-2:2024	Hot rolled sheet piling of non alloy steels. Tolerances on shape and dimensions	Supersedes BS EN 10248-2:1996
	BS EN 12063:2024	Execution of special geotechnical work. Sheet pile walls.	Supersedes BS EN 12063:1999
	BS EN 13369:2023	Common rules for precast concrete products	Supersedes BS EN 13369:2018
	BS EN 14388:2005	Road traffic noise reducing devices	There is a 2015 version, however the 2015 version is not harmonised.
	BS EN 15050:2007 + A1:2012	Precast concrete products – Bridge elements	See CD 350 clause 3.8.1 for additional guidance.
	BS EN 15258:2008	Precast concrete products - Retaining wall elements	

Used (✓)	British Standards		
	British Standard reference	Title	Notes
✓	BS 4449:2005+A3:2016	Steel for the reinforcement of concrete	No longer covers plain round bar. (See BS4482 up to 12mm dia, see BS EN 10025-1 for larger sizes and dowels. See BS EN 13877-3 for dowel bars in concrete pavements.)
	BS 5896:2012	Specification for high tensile steel wire and strand for the prestressing of concrete	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	British Standards		
✓	BS 7818:1995	Specification for pedestrian restraint systems in metal	Incorporating Corrigendum No.1 May 2004 and Corrigendum No.2 September 2006 Currently the requirements of BS 7818:1995 are to be used instead of PD CEN/TR 16949:2016
	BS 8002:2015	Code of practice for earth retaining structures	
✓	BS 8004:2015 +A1 2020	Code of practice for foundations	Amendment +A1:2020
	BS 8006-1:2010+A1:2016	Code of practice for strengthened/reinforced soils and other fills	
✓	BS 8500-1:2023	Concrete – Complementary British Standard to BS EN 206: Method of specifying and guidance for the specifier.	Supersedes BS 8500-1:2015+A2:2019
✓	BS 8500-2:2023	Concrete – Complementary British Standard to BS EN 206: Specification for constituent materials and concrete.	Supersedes BS 8500-2:2015+A2:2019
✓	BS 8666:2020	Scheduling, dimensioning, bending and cutting of steel reinforcement for concrete	Supersedes BS 8666:2005

Used (✓)	The Design Manual for Roads and Bridges (DMRB)		
	DMRB reference	Title	Notes
✓	GG 101 Revision 0.1.0	Introduction to the Design Manual for Roads and Bridges	Replaces GG 101 Revision 0
✓	GG 102 Revision 0	Quality Management Systems for Highway Design	Replaces GD 02/16
✓	GG 103 Revision 0	Introduction and general requirements for sustainable development and design	
✓	GG 104 Revision 0.1.0	Requirements for Safety Risk Assessment	Replaces GG 104 Revision 0
✓	GG 184 Revision 0	Specification for the use of Computer Aided Design	Replaces IAN 184/16
✓	CG 300 Revision 0.2.0	Technical approval of highway structures	Supersedes CG 300 Revision 0.1.0
✓	CG 302 Revision 0	As-built, operational and maintenance records for highway structures	Supersedes BD 62/07

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	The Design Manual for Roads and Bridges (DMRB)		
	DMRB reference	Title	Notes
✓	CG 303 Revision 0	Quality assurance scheme for paints and similar protective coatings	Supersedes BD 35/14
	CG 305 Revision 0	Identification marking of highway structures	Supersedes BD 45/93
	CG 501 Revision 2	Design of highway drainage systems	Supersedes HD 33/16, TA 80/99
✓	CD 127 Revision 1.0.1	Cross-sections and headrooms	Replaces TD 27/05 and TD 70/08
✓	CD 350 Revision 0	The design of highway structures	Supersedes BD 100/16, BA 57/01, BD 57/01 and IAN 124/11
✓	CD 351 Revision 0	The design and appearance of highway structures	Supersedes BA 41/98
	CD 352 Revision 0.0.1	Design of road tunnels	Supersedes CD 352 Revision 0
✓	CD 353 Revision 0	Design criteria for footbridges	Supersedes BD 29/17
	CD 354 Revision 1.1.0	Design of minor structures	Supersedes CD 354 Revision 1
	CD 355 Revision 0	Application of whole-life costs for design and maintenance of highway structures	Replaces BD 36/92 and BA 28/92
	CD 356 Revision 1	Design of highway structures for hydraulic action	Supersedes BA 59/94
	CD 357 Revision 1	Bridge expansion joints	Replaces BD 33/94, BA 26/94, IAN 168/12 and IAN 169/12
	CD 358 Revision 2.4.0	Waterproofing and surfacing of concrete bridge decks	Supersedes CD 358 Revision 2.3.0
	CD 359 Revision 0	Design requirements for permanent soffit formwork	Supersedes BA 36/90 and IAN 131/11
	CD 360 Revision 2	Use of compressive membrane action in bridge decks	Supersedes BD 81/02
	CD 361 Revision 0	Weathering steel for highway structures	Supersedes BD 7/01
✓	CD 362 Revision 1	Enclosure of bridges	Replaces BD 67/96 and BA 67/96
✓	CD 363 Revision 0	Design rules for aerodynamic effects on bridges	Replaces BD 49/01
	CD 364 Revision 0	Formation of continuity joints in bridge decks	Replaces BA 82/00
	CD 365 Revision 1	Portal and cantilever signs/signals gantries	Replaces BD 51/14, IAN 193/16, BE 7/04

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	The Design Manual for Roads and Bridges (DMRB)		
	DMRB reference	Title	Notes
	CD 366 Revision 0	Design criteria for collision protection beams	Replaces BD 65/14
	CD 367 Revision 0	Treatment of existing structures on highways widening schemes	Replaces BD 95/07
	CD 368 Revision 0	Design of fibre reinforced polymer bridges and highway structures	Replaces BD 90/05
	CD 369 Revision 0	Surface protection for concrete highway structures	Replaces BA 85/04
	CD 371 Revision 0	Strengthening highway structures using fibre-reinforced polymers and externally bonded steel plates	Replaces BD 85/08, BD 84/02
	CD 372 Revision 0	Design of post-installed anchors and reinforcing bar connections in concrete	Supersedes IAN 104/15
	CD 373 Revision 0	Impregnation of reinforced and prestressed concrete highway structures using hydrophobic pore-lining impregnants	Supersedes BD 43/03
	CD 374 Revision 0	The use of recycled aggregates in structural concrete	Supersedes BA 92/07
	CD 375 Revision 1	Design of corrugated steel buried structures	Supersedes BD 12/01
	CD 376 Revision 0	Unreinforced masonry arch bridges	Replaces BD 91/04
	CD 377 Revision 4	Requirements for road restraint systems	Supersedes TD 19/06
✓	CD 622 Revision 1	Managing geotechnical risk	Replaces HD 22/08, BD 10/97 and HA 120/08
	CS 461 Revision 0	Assessment and upgrading of in-service parapets	Supersedes BA 37/92 and IAN 97/07
	CS 462 Revision 0	Repair and management of deteriorated concrete highway structures	Supersedes BA 35/90 and BA 52/94
	GD 304 Revision 2	Designing health and safety into maintenance	Replaces IAN 69/15
	LA 104 Revision 1	Environmental assessment and monitoring	Supersedes HA 205/08, HD 48/08, IAN 125/15, and IAN 133/10
	LA 106 Revision 1	Cultural heritage assessment	Supersedes HA 208/07, HA 60/92, HA 75/01
	LA 110 Revision 0	Material assets and waste	Supersedes IAN 153/11
	LA 113 Revision 1	Road drainage and the water environment	Supersedes HD 45/09
	LD 119 Revision 0	Roadside environmental mitigation and enhancement	Formerly LA 119, which superseded HA 65/94 and HA 66/95

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Used (✓)	Interim Advice Notes		
	IAN reference	Title	Notes
	IAN 105/08	Implementation of construction (design and management) 2007 and the withdrawal of SD 10 and SD 11	This document has been withdrawn without replacement.

The Manual Contract Document for Highway Works (MCHW)			
Used (✓)	MCHW reference	Title	Notes
✓	MCHW Volume 1: October 2022	Specification for Highway Works	<i>Specification compliant with the execution standards must be used. A Departure is necessary for the parts where a compliant revision has not been published. Amendments October 2022 Supersedes April 2022 version</i>
✓	MCHW Volume 2: October 2022	Notes for guidance on the Specification for Highway Works	<i>Notes for guidance compliant with the execution standards must be used. A Departure is necessary for the parts where a compliant revision has not been published. Amendments October 2022 Supersedes November 2021 version</i>
✓	MCHW Volume 3: February 2017	Highway Construction Details	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Interim Advice Notes			
Used	IAN reference	Title	Notes
	IAN 105/08	Implementation of construction (design and management) 2007 and the withdrawal of SD 10 and SD 11	This document has been withdrawn without replacement.

Miscellaneous			
Used	Standard reference	Title	Notes
✓	CIRIA C543	Bridge Detailing Guide	
✓	CIRIA C686	Safe Access for Maintenance and Repair	
	CIRIA C760	Guidance on embedded retaining wall design	
	CIRIA C766	Control of cracking caused by restrained deformation in concrete	Supersedes C660
	CIRIA C777	General fixings – guidance on selection and whole-life management	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Miscellaneous

Used	Standard reference	Title	Notes
✓	Department for Transport - Design & Maintenance Guidance for Local Authority Roads	Provision of Road Restraint Systems on Local Authority Road	Published October 2011
	Department for Transport	Guidance on the Design, Assessment and Strengthening of Masonry Parapets on Highway Structures	Published 2012

Additional Standards

Additional standards needed for a particular design should be listed here.

Used	Reference	Title	Notes
✓	Matrix reference YY-NNN-TGN-054-0	Matrix Technical Guidance Note no 54 - Lawson Wind Comfort Criteria	Reference document and governing criteria for assessment of the effect of the bridge on the local wind environment, as experienced by highway users.

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

APPENDIX B

DRAWINGS

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

APPENDIX C

VEHICLE IMPACT RISK ASSESSMENT ***DESIGN RISK ASSESSMENT***

APPROVAL IN PRINCIPLE FOR DESIGN

**Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield**
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25



VEHICLE IMPACT RISK ASSESSMENT

For:

CUMMINS TURBO FOOTBRIDGE

On Behalf of:

CONSTRUCTION MARINE LIMITED

Project Reference: 24-147

Document Ref: CUMHD1-MCE-XX-ZZ-RP-C-3001

Status: S0 - Initial Status

Revision: P03

Date: 04/11/25



APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

	MATRIX CONSULTING ENGINEERS	Document Reference: CUMHD1-MCE-XX-ZZ-RP-C-3001	Project Reference: 24-147																																																																																																												
	Suitability: S0 - Initial Status		Sheet No. Rev i P03																																																																																																												
Project Title: CUMMINS TURBO FOOTBRIDGE		Date 04/11/25																																																																																																													
Subject DOCUMENT CONTROL		By AJH	Chkd LJH																																																																																																												
Ref.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="6" style="text-align: left; padding: 5px;">VERIFICATION RECORD</th> </tr> <tr> <td style="width: 50%;">Calculation type</td> <td colspan="5" style="text-align: right;">Original</td> </tr> <tr> <td>Category of Checking</td> <td colspan="5" style="text-align: right;">0</td> </tr> <tr> <td>Design Process</td> <td colspan="5" style="text-align: right;">N/A</td> </tr> <tr> <th colspan="6" style="text-align: left; padding: 5px;">REVISION RECORD</th> </tr> <tr> <th>Rev</th> <th>Status</th> <th>Date</th> <th>Originator</th> <th>Checked</th> <th>Approved</th> </tr> <tr> <td>P01</td> <td style="color: red;">S 0</td> <td>22/08/25</td> <td>TGM</td> <td>AJH</td> <td>AJH</td> </tr> <tr> <td>P02</td> <td style="color: red;">S 0</td> <td>24/10/25</td> <td>AJH</td> <td>LJH</td> <td>AJH</td> </tr> <tr> <td>P03</td> <td style="color: red;">S 0</td> <td>04/11/25</td> <td>AJH</td> <td>LJH</td> <td>AJH</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr> <th colspan="6" style="text-align: left; padding: 5px;">COPYRIGHT STATEMENT</th> </tr> <tr> <td colspan="6" style="padding: 5px;"> Copyright subsists in all Matrix Consulting Engineers Ltd documents. This document is to be regarded as confidential to our Client and it is intended for their use only and may not be assigned. Consequently, and in accordance with current practice, any liability to any third party in respect of the whole or any part of its contents is hereby expressly excluded. Before the document or any part of it is reproduced or referred to in any other document, circular or statement and before its contents or the contents of any part of it are disclosed orally to any third party, our written approval as to the form and context of such a publication or disclosure must be obtained. </td> </tr> <tr> <th colspan="6" style="text-align: left; padding: 5px;">PREPARED BY</th> </tr> <tr> <td colspan="6" style="padding: 5px;"> Matrix Consulting Engineers Unit 7, BBI Centre Innovation Way Barnsley S75 1JL Tel: 03330 142926 Email: info@matrixce.co.uk </td> </tr> </table>		VERIFICATION RECORD						Calculation type	Original					Category of Checking	0					Design Process	N/A					REVISION RECORD						Rev	Status	Date	Originator	Checked	Approved	P01	S 0	22/08/25	TGM	AJH	AJH	P02	S 0	24/10/25	AJH	LJH	AJH	P03	S 0	04/11/25	AJH	LJH	AJH																															COPYRIGHT STATEMENT						Copyright subsists in all Matrix Consulting Engineers Ltd documents. This document is to be regarded as confidential to our Client and it is intended for their use only and may not be assigned. Consequently, and in accordance with current practice, any liability to any third party in respect of the whole or any part of its contents is hereby expressly excluded. Before the document or any part of it is reproduced or referred to in any other document, circular or statement and before its contents or the contents of any part of it are disclosed orally to any third party, our written approval as to the form and context of such a publication or disclosure must be obtained.						PREPARED BY						Matrix Consulting Engineers Unit 7, BBI Centre Innovation Way Barnsley S75 1JL Tel: 03330 142926 Email: info@matrixce.co.uk						Output
VERIFICATION RECORD																																																																																																															
Calculation type	Original																																																																																																														
Category of Checking	0																																																																																																														
Design Process	N/A																																																																																																														
REVISION RECORD																																																																																																															
Rev	Status	Date	Originator	Checked	Approved																																																																																																										
P01	S 0	22/08/25	TGM	AJH	AJH																																																																																																										
P02	S 0	24/10/25	AJH	LJH	AJH																																																																																																										
P03	S 0	04/11/25	AJH	LJH	AJH																																																																																																										
COPYRIGHT STATEMENT																																																																																																															
Copyright subsists in all Matrix Consulting Engineers Ltd documents. This document is to be regarded as confidential to our Client and it is intended for their use only and may not be assigned. Consequently, and in accordance with current practice, any liability to any third party in respect of the whole or any part of its contents is hereby expressly excluded. Before the document or any part of it is reproduced or referred to in any other document, circular or statement and before its contents or the contents of any part of it are disclosed orally to any third party, our written approval as to the form and context of such a publication or disclosure must be obtained.																																																																																																															
PREPARED BY																																																																																																															
Matrix Consulting Engineers Unit 7, BBI Centre Innovation Way Barnsley S75 1JL Tel: 03330 142926 Email: info@matrixce.co.uk																																																																																																															

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

		Project Reference: CUMHD1				Document Reference: CUMHD1-MCE-XX-ZZ-RP-C-3001									
		Sheet No. Rev				Sheet No. Rev									
		SO - Initial Status				P03									
		Date: 04/11/25				Date: 04/11/25									
Subject		Project Title				By				Chkd					
CONSEQUENCE AND RISK OF COLLAPSE ASSESSMENT		CUMMINS TURBO FOOTBRIDGE				AJH				LJH					
RISK OF COLLAPSE										CONSEQUENCE OF COLLAPSE					
Reference	Accidental Situations	Result of action	Probability	Severity	Risk of Collapse	Comment & Mitigations	Reference	Result of Action	Probability	Severity	Consequence of Collapse	Comment & Mitigation			
A: LOCATION FACTORS ⁽¹⁾															
1	Type of Route	HGV highway and colliding with bridge abutment	Low	Medium	Medium	Urban B road, therefore the composition of traffic is less than that of Urban A roads and Motorways with respect to the percentage of heavy goods vehicles.	1.1	Injury to bridge users.	Low	Medium	Medium	It is not a public bridge, with access being restricted to the owner's staff. The number of bridge users, at any one time, is therefore limited.			
							1.2	Injury to road users	Low	Medium	Medium	The road is a single carriageway B road, with load speed. The number of road users injured by the bridge collapse would be comparatively low.			
							1.3	Road network Disruption	Low	Low	Low	The bridge is situated close to a town centre, with many alternative routes.			
							1.4	Secondary Incident	Low	Low	Low	No nearby structures would be effected, such as other bridges, building or transmission cables			
							1.5	Cost of Damage	Low	Low	Low	Privately owned bridge. Costs to LA would be low as there would be no capital reconstruction costs.			
2	Speed Limit	HGV highway and colliding with bridge abutment	Low	Medium	Medium	30mph speed limit is generally the lowest for Urban B roads and significantly less than motorways +C17-H52H38C17-H72C17-H62H38C17-H72A17-H72H38C17-H72A17-H8H38C17-H72H38C17-H72D17-H8H17-H84G17-H84H17-H84H17-H80	2.1	Injury to bridge users.	Low	Medium	Medium	As 1.1.			
							2.2	Injury to road users	Low	Medium	Medium	As 1.2.			
							2.3	Road network Disruption	Low	Low	Low	As 1.3.			
							2.4	Secondary Incident	Low	Low	Low	As 1.4.			
							2.5	Cost of Damage	Low	Low	Low	As 1.5.			
3	Speed Limit	HGV highway and colliding with bridge western abutment	Medium	Medium	Medium	30mph speed limit is generally the lowest for Urban B roads and significantly less than motorways	3.1	Injury to bridge users.	Low	Medium	Medium	As 1.1.			
						The abutment is set back approximately 7.380m from the carriageway	3.2	Injury to road users	Low	Medium	Medium	As 1.2.			
						There is a security fence and dwarf masonry wall between the carriageway and the abutment. Whilst these are not designed to provide vehicle restraint, they are substantial structures and will impede the progress of errant vehicles.	3.3	Road network Disruption	Low	Low	Low	As 1.3.			
							3.4	Secondary Incident	Low	Low	Low	As 1.4.			
							3.5	Cost of Damage	Low	Low	Low	As 1.5.			
4	Speed Limit	HGV highway and colliding with bridge eastern abutment	Low	Medium	Medium	30mph speed limit is generally the lowest for Urban B roads and significantly less than motorways	4.1	Injury to bridge users.	Low	Medium	Medium	As 1.1.			
						The abutment is set back approximately 10.408m from the carriageway	4.2	Injury to road users	Low	Medium	Medium	As 1.2.			
						There is a flood defence wall, security fence and masonry planter between the carriageway and the abutment. Whilst these are not designed to provide vehicle restraint, they are substantial structures and will impede the progress of errant vehicles.	4.3	Road network Disruption	Low	Low	Low	As 1.3.			
							4.4	Secondary Incident	Low	Low	Low	As 1.4.			
							4.5	Cost of Damage	Low	Low	Low	As 1.5.			

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

										Project Reference: CUMHD1		Document Reference: CUMHD1-MCE-XX-ZZ-RP-C-3001	
										Sheet No. D2		Rev P03	
										Date: 04/11/25			
Project Title CUMMINS TURBO FOOTBRIDGE										By AJH		Chkd LJH	
Subject CONSEQUENCE AND RISK OF COLLAPSE ASSESSMENT													
VEHICLE IMPACT RISK ASSESSMENT													
RISK OF COLLAPSE										CONSEQUENCE OF COLLAPSE			
Reference	Accidental Situations	Result of action	Probability	Severity	Risk of Collapse	Comment & Mitigations	Reference	Result of Action	Probability	Severity	Consequence of Collapse	Comment & Mitigation	
B: LAYOUT FACTORS ⁽¹⁾													
5	Proximity of western abutment to the road	HGV Leaving highway and colliding with bridge western abutment	Medium	Medium	Medium	30mph speed limit is generally the lowest for Urban B roads and significantly less than motorways The abutment is set back approximately 7.350m from the carriageway There is a security fence and dwarf masonry wall between the carriageway and the abutment. Whilst these are not designed to provide vehicle restraint, they are substantial structures and will impede the progress of errant vehicles.	5.1 5.2 5.3 5.4 5.5	Injury to bridge users. Injury to road users Road network Disruption Secondary Incident Cost of Damage	Low Low Low Low Low	Medium Medium Low Low Low	Medium Medium Low Low Low	As 1.1. As 1.2. As 1.3. As 1.4. As 1.5.	
6	Proximity of eastern abutment to the road	HGV Leaving highway and colliding with bridge eastern abutment	Low	Medium	Medium	30mph speed limit is generally the lowest for Urban B roads and significantly less than motorways The abutment is set back approximately 10.408m from the carriageway There is a flood defence wall, security fence and masonry planter between the carriageway and the abutment. Whilst these are not designed to provide vehicle restraint, they are substantial structures and will impede the progress of errant vehicles.	6.1 6.2 6.3 6.4 6.5	Injury to bridge users. Injury to road users Road network Disruption Secondary Incident Cost of Damage	Low Low Low Low Low	Medium Medium Low Low Low	Medium Medium Low Low Low	As 1.1. As 1.2. As 1.3. As 1.4. As 1.5.	
7	The vicinity of merge and diverge points	HGV Leaving highway and colliding with bridge abutment	Low	Low	Low	There are no merge and diverge points in close proximity to the bridge.	7.1 7.2 7.3 7.4 7.5	Injury to bridge users. Injury to road users Road network Disruption Secondary Incident Cost of Damage	Low Low Low Low Low	Medium Medium Low Low Low	Medium Medium Low Low Low	As 1.1. As 1.2. As 1.3. As 1.4. As 1.5.	
8	The vicinity of vehicle access points	HGV Leaving highway and colliding with bridge abutment	Low	Low	Low	There are vehicle accesses to the Cummins facility directly to the north and south of the proposed bridge location, these are both perpendicular to St Andrews Road and are gated. When vehicles are entering or leaving by these accesses, they will be either slowly manoeuvring or accelerating/decelerating in a straight line, such that their speeds will be significantly less than the limit on the road (Also see Points 3 and 4).	8.1 8.2 8.3 8.4 8.5	Injury to bridge users. Injury to road users Road network Disruption Secondary Incident Cost of Damage	Low Low Low Low Low	Medium Medium Low Low Low	Medium Medium Low Low Low	As 1.1. As 1.2. As 1.3. As 1.4. As 1.5.	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

		Project Title		Project Reference		Document Reference	
		VEHICLE IMPACT RISK ASSESSMENT		CUMHD1		CUMHD1-MCE-XX-ZZ-RP-C-3001	
		Subject		S0 - Initial Status		Rev	
		CUMMINS TURBO FOOTBRIDGE		D2		P03	
Date:		By		Chkd		Date:	
04/11/25		AJH		LJH		04/11/25	
CONSEQUENCE AND RISK OF COLLAPSE ASSESSMENT							
Reference	Accidental Situations	RISK OF COLLAPSE				CONSEQUENCE OF COLLAPSE	
		Result of action	Probability	Severity	Risk of Collapse	Comment & Mitigations	Reference
9	Overtaking	HGV Leaving highway and colliding with bridge abutment	Low	Medium	Medium	Straight road would increase risk of overtaking, but unlikely that the HGV will overtake a speed in excess of 30 mph.	8.1
					Low	Injury to road users	8.2
					Low	Injury to road users	8.3
					Low	Road network Disruption	8.4
					Low	Secondary Incident	8.5
					Low	Cost of Damage	10.1
10	Priority T-Junctions, particularly where the sideways visibility is poor or where a junction's form is hidden by the carriageway alignment or a see-through problem exists	HGV Leaving highway and colliding with bridge abutment	Low	Low	Medium	No priority T-junctions in the vicinity of the bridge.	10.2
					Low	Injury to road users	10.3
					Low	Road network Disruption	10.4
					Low	Secondary Incident	10.5
					Low	Cost of Damage	11.1
11	Locations where space is constrained and reversing/positioning manoeuvres take place.	HGV manoeuvring in western car park constrained and colliding with bridge abutment	Low	Low	Medium	Provide vehicle collision bollards that are designed in accordance with the PAS 68: Impact test specifications for vehicle security barrier systems	11.2
					Low	Injury to road users	11.3
					Low	Road network Disruption	11.4
					Low	Secondary Incident	11.5
					Low	Cost of Damage	12.1
12	At traffic signals where the approaching driver may not be aware of a queue of stationary traffic.	HGV Leaving highway and colliding with bridge abutment	Low	Medium	Medium	Good sight lines makes visibility for queuing traffic good.	12.2
					Low	Injury to road users	12.3
					Low	Road network Disruption	12.4
					Low	Secondary Incident	12.5
					Low	Cost of Damage	13.1
13	Near roundabout exits and on central islands.	HGV Leaving highway and colliding with bridge abutment	Low	Medium	Medium	No roundabout in vicinity of bridge	13.2
					Low	Injury to road users	13.3
					Low	Road network Disruption	
					Low	Injury to road users	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
					Low	Cost of Damage	
					Low	Injury to road users	
					Low	Road network Disruption	
					Low	Secondary Incident	
		</					

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

VEHICLE IMPACT RISK ASSESSMENT				Project Title		Document Reference:					
CUMMINS TURBO FOOTBRIDGE				CUMHD1-MCE-XX-ZZ-RP-C-3001		Project Reference:					
CUMMINS TURBO FOOTBRIDGE				CUMHD1		CUMHD1-MCE-XX-ZZ-RP-C-3001					
CUMMINS TURBO FOOTBRIDGE				Stability:		Sheet No.					
CUMMINS TURBO FOOTBRIDGE				SO - Initial Status		Rev					
CUMMINS TURBO FOOTBRIDGE				Date:		P03					
CUMMINS TURBO FOOTBRIDGE				Date:		04/11/25					
CUMMINS TURBO FOOTBRIDGE				By		Chkd					
CUMMINS TURBO FOOTBRIDGE				AJH		LJH					
CONSEQUENCE AND RISK OF COLLAPSE ASSESSMENT											
RISK OF COLLAPSE											
Accidental Situations		Result of action		Probability		Severity		Risk of Collapse		Comment & Mitigations	
Reference		Result of Action		Probability		Severity		Consequence of Collapse		Comment & Mitigation	
C: COLLISION FACTORS ¹⁾											
14		Features diverting HGVs towards the bridge abutment		HGV Leaving highway and colliding with bridge abutment		Low		Low		No features in vicinity of bridge that would divert vehicles towards the bridge.	
										Other than vehicles colliding with the collapsed bridge, or any ensuing vehicle queues, there are no other features that would be impacted by the collapsed of the bridge deck, such as other bridges, telecommunication masts or retaining walls.	
D: CONSEQUENTIAL FACTORS ¹⁾											
15		Bridge collapse causing secondary incident		HGV Leaving highway and colliding with bridge abutment		Low		Low		There are no features in vicinity of bridge that would divert vehicles towards the bridge.	
16		Bridge collapse causing disruption to the local highway network		HGV Leaving highway and colliding with bridge abutment		Low		Low		Although the collapse of the bridge deck will close S1000 Road, there are many alternative vehicle routes, principally along Wakefield Road, Southgate and Leeds Road.	
Conclusion: Under no situation is the Risk of Collapse AND the Consequence of Collapse considered high. Therefore, design provisions 2.1.1.1a) and 2.1.1.1d) in PD6688-1-7 do not apply.											
References											
[1] Design & Maintenance Guidance for Local Authority Roads - Provision of Road Restraint Systems on Local Authority Roads											

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25



DESIGN RISK ASSESSMENT

For:

ST ANDREW'S ROAD FOOTBRIDGE

On Behalf of:

CONSTRUCTION MARINE LTD

Project Reference: CUMHD1

Document Ref: CUMHD1-MCE-XX-ZZ-RP-C-2001

Status: S0 - WIP

Revision: P02

Date: 15/05/2025

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's
Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

	MATRIX CONSULTING ENGINEERS	Document Reference: CUMHD1-MCE-XX-ZZ-RP-C-2001	Project Reference: CUMHD1																																																																																																													
	Suitability: S0 - WIP		Sheet No. i	Rev P02																																																																																																												
Project Title: ST ANDREW'S ROAD FOOTBRIDGE			Date 15/05/25																																																																																																													
Subject DOCUMENT CONTROL			By AJH	Chkd LJH																																																																																																												
Ref.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="6" style="text-align: center;">VERIFICATION RECORD</td> </tr> <tr> <td colspan="4">Calculation type</td> <td colspan="2" style="text-align: right;">Original</td> </tr> <tr> <td colspan="4">Category of Checking</td> <td colspan="2" style="text-align: right;">0</td> </tr> <tr> <td colspan="4">Design Process</td> <td colspan="2" style="text-align: right;">N/A</td> </tr> <tr> <td colspan="6" style="text-align: center;">REVISION RECORD</td> </tr> <tr> <td style="text-align: center;">Rev</td> <td style="text-align: center;">Status</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Originator</td> <td style="text-align: center;">Checked</td> <td style="text-align: center;">Approved</td> </tr> <tr> <td style="text-align: center;">P01</td> <td style="text-align: center;">S0</td> <td style="text-align: center;">15/05/2025</td> <td style="text-align: center;">AJH</td> <td style="text-align: center;">LJH</td> <td style="text-align: center;">AJH</td> </tr> <tr> <td style="text-align: center;">P02</td> <td style="text-align: center;">S 0</td> <td style="text-align: center;">24/10/25</td> <td style="text-align: center;">AJH</td> <td style="text-align: center;">LJH</td> <td style="text-align: center;">AJH</td> </tr> <tr> <td style="text-align: center;">P03</td> <td style="text-align: center;">S 0</td> <td style="text-align: center;">04/11/25</td> <td style="text-align: center;">AJH</td> <td style="text-align: center;">LJH</td> <td style="text-align: center;">AJH</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr> <td colspan="6" style="text-align: center;">COPYRIGHT STATEMENT</td> </tr> <tr> <td colspan="6"> Copyright subsists in all Matrix Consulting Engineers Ltd documents. This document is to be regarded as confidential to our Client and it is intended for their use only and may not be assigned. Consequently, and in accordance with current practice, any liability to any third party in respect of the whole or any part of its contents is hereby expressly excluded. Before the document or any part of it is reproduced or referred to in any other document, circular or statement and before its contents or the contents of any part of it are disclosed orally to any third party, our written approval as to the form and context of such a publication or disclosure must be obtained. </td> </tr> <tr> <td colspan="6" style="text-align: center;">PREPARED BY</td> </tr> <tr> <td colspan="6"> Matrix Consulting Engineers Unit 17, BBI Centre Innovation Way Barnsley S75 1JL Tel: 03330 142926 Email: info@matrixce.co.uk </td> </tr> </table>			VERIFICATION RECORD						Calculation type				Original		Category of Checking				0		Design Process				N/A		REVISION RECORD						Rev	Status	Date	Originator	Checked	Approved	P01	S0	15/05/2025	AJH	LJH	AJH	P02	S 0	24/10/25	AJH	LJH	AJH	P03	S 0	04/11/25	AJH	LJH	AJH																															COPYRIGHT STATEMENT						Copyright subsists in all Matrix Consulting Engineers Ltd documents. This document is to be regarded as confidential to our Client and it is intended for their use only and may not be assigned. Consequently, and in accordance with current practice, any liability to any third party in respect of the whole or any part of its contents is hereby expressly excluded. Before the document or any part of it is reproduced or referred to in any other document, circular or statement and before its contents or the contents of any part of it are disclosed orally to any third party, our written approval as to the form and context of such a publication or disclosure must be obtained.						PREPARED BY						Matrix Consulting Engineers Unit 17, BBI Centre Innovation Way Barnsley S75 1JL Tel: 03330 142926 Email: info@matrixce.co.uk						Output
VERIFICATION RECORD																																																																																																																
Calculation type				Original																																																																																																												
Category of Checking				0																																																																																																												
Design Process				N/A																																																																																																												
REVISION RECORD																																																																																																																
Rev	Status	Date	Originator	Checked	Approved																																																																																																											
P01	S0	15/05/2025	AJH	LJH	AJH																																																																																																											
P02	S 0	24/10/25	AJH	LJH	AJH																																																																																																											
P03	S 0	04/11/25	AJH	LJH	AJH																																																																																																											
COPYRIGHT STATEMENT																																																																																																																
Copyright subsists in all Matrix Consulting Engineers Ltd documents. This document is to be regarded as confidential to our Client and it is intended for their use only and may not be assigned. Consequently, and in accordance with current practice, any liability to any third party in respect of the whole or any part of its contents is hereby expressly excluded. Before the document or any part of it is reproduced or referred to in any other document, circular or statement and before its contents or the contents of any part of it are disclosed orally to any third party, our written approval as to the form and context of such a publication or disclosure must be obtained.																																																																																																																
PREPARED BY																																																																																																																
Matrix Consulting Engineers Unit 17, BBI Centre Innovation Way Barnsley S75 1JL Tel: 03330 142926 Email: info@matrixce.co.uk																																																																																																																

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

		Document Reference: CUMHD1-MCE-XX-ZZ-RP-C-2001		Project Reference: CUMHD1	
		Suitability: S0 - WIP		Sheet No. D1	
				Rev P02	
		Title: ST ANDREW'S ROAD FOOTBRIDGE		Date: 15/05/25	
Subject DESIGNER'S RISK ASSESSMENT				By AJH	
Methodology METHODODOLOGY				Chkd LJH	
The degree of RISK is defined as PROBABILITY times SEVERITY and is quantified as HIGH, MEDIUM or LOW. All assessed HIGH risks to be designed out where reasonably practical. A HIGH residual risk after considering available control measures is NOT ACCEPTABLE .					
RISK MATRIX					
The degree of RISK is defined as PROBABILITY times SEVERITY for identified hazards and qualified as HIGH, MEDIUM or LOW.					
		SEVERITY of the Consequences			
		Fatality, major injury or illness causing long-term disability		Injury or illness causing short-term disability	
		High		Medium	
		High		High	
		High		Medium	
		Medium		Low	
COMMON HAZARDS					
Ref		Hazard		Risk	
1		Fall of person from height > 2m		High	
2		Fall of person from height < 2m		Medium	
3		Being struck by mobile plant		High	
4		Fall of person on same level (tripping)		Low	
5		Collapse of structure		High	
6		Manual handling		Low	
7		Striking by moving objects		High	
8		Electricity < 110 volts		Medium	
9		Electricity > 110 volts		High	
10		Hazardous substances including dust - depending on substructure		High/Medium/Low	
11		Noise and vibration - exposure dependant		High/Medium/Low	
12		Hot working (welding, plumbing, etc) - location dependant		High/Medium/Low	
13		Being struck by falling items - Object dependant		High/Medium/Low	
14		Confined spaces		High	
15		Other		-	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

		DESIGN RISK ASSESSMENT Title ST ANDREW'S ROAD FOOTBRIDGE				Document Reference: CUMHD1-MCE-XX-ZZ-RP-C-2001		Project Reference: CUMHD1			
						Suitability: S0 - WIP		Sheet No. D2		Rev P02	
						Date: 15/05/25		By AJH		Chkd Chkd	
Subject DESIGNER'S RISK ASSESSMENT											
Reference	LOCATION	HAZARD	Probability	Severity	Risk	Available Control Measures	Residual Risk	Action by	Procedure	Comment	
A: GENERAL RISKS COMMON TO MOST ACTIVITIES											
1	General	Being struck by vehicles, moving plant or materials.	High	Medium	High	Exclude pedestrians from the vicinity of the works. Barriers / fences to be erected accordingly. Adopt suitable traffic management system.	Low	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment	
2	General	Members of the general public, the client and others coming in to conflict with construction work.	High	Medium	High	Secure site, net scaffolding, use rubbish chutes, exclude pedestrians from the vicinity of the works, adopt suitable vehicle and pedestrian traffic management systems.	Low	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment	
3	General	Exposure to construction dust	Medium	High	High	Prevent dust by using wet cutting and vacuum extraction on tools; use a vacuum cleaner rather than sweeping; use a suitable, well-fitting mask.	Medium	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment	
4	General	Contact with protected/ priority species of fauna and flora.	Medium	High	High	Be vigilant and take precautions as necessary to avoid affecting protected/ priority species of fauna and flora.	Medium	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

				Document Reference: CUMHD1-MCE-XX-ZZ-RP-C-2001		Project Reference: CUMHD1				
Suitability: S0 - WIP				Sheet No. D2		Rev P02				
Title ST ANDREW'S ROAD FOOTBRIDGE				Date: 15/05/25						
Subject DESIGNER'S RISK ASSESSMENT				By AJH		Chkd				
Reference	LOCATION	HAZARD	Probability	Severity	Risk	Available Control Measures	Residual Risk	Action by	Procedure	Comment
5	General	Hot works	Medium	High	High	Suitably trained staff to undertake any hot works required and suitable protection methods put in place	Medium	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment
6	General	Hazardous substances	High	Low	Medium	Suitable PPE to be worn including protective gloves. Masks to prevent inhaling of hazardous chemicals. Washing facilities to be present on-site	Low	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment
7	General	Contact with hazardous animal waste.	Medium	Medium	Medium	Suitable PPE to be worn including protective gloves. Masks to prevent inhaling of hazardous substances. Washing facilities to be present on-site	Medium	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment
8	General	Contact with discarded needles and sharp objects	Medium	High	High	Suitable PPE to be worn including protective gloves to prevent injury from contaminated objects. Washing facilities to be present on-site	Medium	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment
9	General	Contact with Asbestos containing materials	High	Low	Medium	Carry out asbestos survey prior to commencement of works. Suitable protective and monitoring measures to be implemented.	Low	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

										Document Reference: CUMHD1-MCE-XX-ZZ-RP-C-2001		Project Reference: CUMHD1							
										Suitability: S0 - WIP		Sheet No. D2		Rev P02					
DESIGN RISK ASSESSMENT										Title ST ANDREW'S ROAD FOOTBRIDGE									
Subject DESIGNER'S RISK ASSESSMENT																			
Reference	LOCATION	HAZARD	Probability	Severity	Risk	Available Control Measures	Residual Risk	Action by	Procedure	Comment									
10	General	Affecting buried and overhead services by plant and machinery.	Medium	High	High	Temporary works design to be undertaken for mobile lifting equipment or cranes, including the preparation of lifting plans, to ensure that no buried or overhead services are effected. Utilise buried services information and position lifting equipment or cranes appropriately to avoid loading services.	High	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment									
11	General	Affecting buried and overhead services by access equipment	High	Low	Medium	Utilise buried services information and position access scaffolds to avoid loading services. Provide spreader plates to ensure load applied to the surrounding ground are within the allowable bearing pressure. Divert services if necessary	Medium	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment									
12	General	Overhead working including welding	Medium	High	High	Implement work procedure to eliminate this if possible. Wear appropriate PPE and adopt suitable work procedures. All work to be supervised by appropriately experienced and qualified competent technical staff.	Low	Designer/ Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment									
13	General	Exceeding the allowable capacity of the exceeding ground	Medium	High	High	Refer to any SI information and work in accordance with the recommendations contained therein. Provide temporary haul roads, outrigger pads and foundation that have been designed to suit the prevailing ground conditions.	High	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment									
14	General	Working at height on the bridge roof.	High	Low	Medium	Provide suitable fall prevention measures.	Medium	Contractor	Designer to design suitable fall protection measures	No comment									

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

		Document Reference: CUMHD1-MCE-XX-ZZ-RP-C-2001		Project Reference: CUMHD1						
		Suitability: S0 - WIP		Sheet No. D2						
				Rev P02						
DESIGN RISK ASSESSMENT		Title ST ANDREW'S ROAD FOOTBRIDGE		Date: 15/05/25						
Subject DESIGNER'S RISK ASSESSMENT				By AJH	Chkd					
Reference	LOCATION	HAZARD	Probability	Severity	Risk	Available Control Measures	Residual Risk	Action by	Procedure	Comment
15	General	Working at height to maintain glazing and vertical and horizontal cladding	High	Low	Medium	Work from MEWPs with traffic management on St Andrews Road as necessary. Provide suitable windows to permit cleaning from on the bridge deck	Medium	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks. Designer to design specify suitable tilt and turn windows.	No comment
B: RISKS ASSOCIATED WITH FOUNDATIONS AND DRAINAGE WORKS										
14	Foundation and drainage works	Conflict with the existing flood defence wall	High	Medium	High	Sleeve piles through the flood defence wall.	Low	Contractor	Designer to design suitable foundations	No comment
15	Foundation and drainage works	Conflict with the existing factory foundations	High	Medium	High	New foundations to be isolated from the existing factory foundations.	Low	Contractor	Designer to design suitable foundations	No comment
16	Foundation and drainage works	Falling into open excavation.	High	Medium	High	Provide barriers / fences to be erected accordingly. Place warning signs in prominent positions	Low	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment
17	Foundation and drainage works	Collapse of excavation.	High	Medium	High	Provide suitably designed and coordinated temporary excavation support or batter back excavation sides as necessary.	Low	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

				Document Reference: CUMHD1-MCE-XX-ZZ-RP-C-2001				Project Reference: CUMHD1			
				Suitability: S0 - WIP				Sheet No. D2	Rev P02		
								Date: 15/05/25			
DESIGN RISK ASSESSMENT				Title ST ANDREW'S ROAD FOOTBRIDGE							
Subject DESIGNER'S RISK ASSESSMENT											
Reference	LOCATION	HAZARD	Probability	Severity	Risk	Available Control Measures	Residual Risk	Action by	Procedure	Comment	
18	Foundation and drainage works	Collapse of excavation.	High	Medium	High	Do not position or move plant or store materials, including excavation arisings, adjacent to open excavations such that the means of ensuring the excavation stability is affected.	Low	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment	
19	Foundation and drainage works	Objects and material falling into excavations	High	Medium	High	Do not store materials adjacent to or above an open exaction which can be dislodged and fall into the excavation.	Low	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment	
20	Foundation and drainage works	Unsafe excavations.	High	Medium	High	Excavations to be inspected in accordance with Regulation 22 and 24 by a competent person.	Low	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment	
21	Foundation and drainage works	Encounter contaminated and toxic substances	High	Medium	High	Carry out Environmental Desk Top Study, Ground Investigation and risk assessment. Implement conclusions the of risk assessment, either mitigating or remediating the risks as necessary.	Low	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment	
C: RISKS ASSOCIATED WITH WORKS TO EXISTING STRUCTURES											
21	Works affecting existing structures	Instability of existing factory structures during modifications	Medium	High	High	The proposed superstructure and substructure to be independent of the existing factory structure.	Low	Designer/ Contractor	Designer to design suitable foundations	No comment	

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

										Document Reference: CUMHD1-MCE-XX-ZZ-RP-C-2001		Project Reference: CUMHD1			
										Suitability: S0 - WIP		Sheet No. D2		Rev P02	
Title ST ANDREW'S ROAD FOOTBRIDGE										Date: 15/05/25		By AJH		Chkd	
Subject DESIGNER'S RISK ASSESSMENT															
Reference	LOCATION	HAZARD	Probability	Severity	Risk	Available Control Measures	Residual Risk	Action by	Procedure	Comment					
22	Works affecting existing structures	Instability of existing structures during modifications	Medium	High	High	All work to be supervised by appropriately experienced and qualified competent technical staff. Implement appropriately designed and coordinated temporary works scheme.	Low	Designer/ Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment					
23	Works affecting existing structures	Instability due to unforeseen existing structural defects and damage	Medium	High	High	All work to be supervised by appropriately experienced and qualified competent technical staff. Take cognisance in design of findings of any structural surveys. Seek advice from and appropriately experienced and qualified competent technical person as necessary.	Low	Designer/ Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment					
24	Works affecting existing structures	Existing structure configuration is not assumed by the design	Medium	High	High	All work to be supervised by appropriately experienced and qualified competent technical staff. Make the works safe and report any discrepancies to the designer.	Low	Designer/ Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment					
25	Works affecting existing structures	Exceeding existing capacity of structural members	High	Low	Medium	Ensure the existing capacity of structural members are not exceeded, limit the load applied to the structural members, temporary support the structural members, changes load paths through the existing structure.	Medium	Client	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment					

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

 Document Reference: CUMHD1-MCE-XX-ZZ-RP-C-2001 Project Reference: CUMHD1 Suitability: S0 - WIP Sheet No. D2 Rev P02										
Title ST ANDREW'S ROAD FOOTBRIDGE Date: 15/05/25 By AJH Chkd										
Subject DESIGNER'S RISK ASSESSMENT										
Reference	LOCATION	HAZARD	Probability	Severity	Risk	Available Control Measures	Residual Risk	Action by	Procedure	Comment
26	Works effecting existing structures	Contact with lead paint and asbestos	Medium	High	High	Refer to information in contract documentation. If no information exists, obtain and test samples of existing paint to ascertain lead content. All work to be supervised by appropriately experienced and qualified competent technical staff.	Low	Designer/ Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment
27	Works effecting existing structures	Overhead welding	Medium	High	High	Implement work procedure to eliminate this if possible. Wear appropriate PPE and adopt suitable work procedures. All work to be supervised by appropriately experienced and qualified competent technical staff.	Low	Designer/ Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment
D: RISK ASSOCIATED WITH CONSTRUCTION OF NEW STRUCTURE										
28	Vehicle collision with the proposed deck's supporting structures.	Loss of support to and collapse of the bridge deck due to vehicle collision by errant vehicles departing from St Andrew's Road.	Medium	Medium	Medium	Location factors, layout factors, collision risk factors and consequential factors are such that, if the supporting structure is designed, in the form of multiple columns so that a support can withstand impact damage from a struck column, and even loss, without the deck above becoming unstable, then under no situation is the Risk of Collapse AND the Consequence of Collapse considered high. Therefore, design provisions 2.1.1.1a) and 2.1.1.1d) in PD6688-1-7 do not apply.	Low	Designer	The supporting structure is designed in the form of multiple columns so that a support can withstand impact damage from a struck column, and even loss, without the deck above becoming unstable.	No comment

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

										Document Reference: CUMHD1-MCE-XX-ZZ-RP-C-2001		Project Reference: CUMHD1			
										Suitability: S0 - WIP		Sheet No. D2		Rev P02	
DESIGN RISK ASSESSMENT										Title ST ANDREW'S ROAD FOOTBRIDGE		Date: 15/05/25			
Subject DESIGNER'S RISK ASSESSMENT															
Reference	LOCATION	HAZARD	Probability	Severity	Risk	Available Control Measures	Residual Risk	Action by	Procedure	Comment					
29	Vehicle collision with the proposed deck's supporting structures specifically on Western abutment	Loss of support to and collapse of the bridge deck due to vehicle collision by manoeuvring vehicles within the western car park.	Low	Medium	Low	Vehicle collision bollards, designed in accordance with the PAS 68: Impact test specifications for vehicle security barrier systems, will be installed to the Western Abutment.	Low	Designer	Bollards will reduce the risk of collision by HGVs manoeuvring in the western car park with the western abutment.	No comment					
30	Installation of new structure	Lifting heavy pre-fabricated elements.	Medium	High	High	Temporary works design to be undertaken for mobile lifting equipment or cranes, including the preparation of lifting plans.	High	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment					
31	Installation of new structure	Instability during lifting	Medium	High	High	Provide temporary haul roads and pads at outrigger positions that have been designed to suit the prevailing ground conditions.	High	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment					
32	Installation of new structure	Working at height	Medium	High	High	Suitable access scaffolding/protection to be erected, such as MEWP's and mobile scaffolding erected by PASMA qualified competent persons.	Medium	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment					

APPROVAL IN PRINCIPLE FOR DESIGN

Scheme title: Proposed Private Footbridge over St Andrew's Road Huddersfield
Structure title: St Andrew's Road Footbridge

Struc Ref:
K66773
P06 – 13/11/25

		Project Reference: CUMHD1								
		Document Reference: CUMHD1-MCE-XX-ZZ-RP-C-2001								
		Sheet No. D2	Rev P02							
Suitability: S0 - WIP		Date: 15/05/25								
Title ST ANDREW'S ROAD FOOTBRIDGE										
By AJH		Chkd								
Subject DESIGNER'S RISK ASSESSMENT										
Reference	LOCATION	HAZARD	Probability	Severity	Risk	Available Control Measures	Residual Risk	Action by	Procedure	Comment
33	Installation of new structure	Instability of structural elements	Medium	High	High	Before completion of the works take precautions to ensure that structural elements remain stable in the temporary condition. Temporarily secure elements that can be dislodged, such as steel and concrete beams and provide appropriately designed and coordinated temporary works, such as crash decks or the like.	High	Contractor	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment
34	Installation of new structure	Exceeding proposed floor loading	High	Low	Medium	Ensure that the floors loads in temporary condition do not exceed the allowable imposed load limit for the new floor.	Medium	Client	Contractor to prepare RAMS and implement suitable safe method of working. Details to be included in Works Package Plan, Task Briefing Sheets and Toolbox talks.	No comment