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Agrément Certificate
19/5712
Product Sheet 1 Issue 3

HADLEY FRAMING COMPONENTS

HADLEY COLD FORMED STEEL PROFILES

This Agrément Certificate Product Sheet(1) relates to Hadley Cold Formed Steel Profiles, for use as joists, studs and lintels in floors, walls and roofs of multi-storey new and existing domestic and non-domestic buildings in dry, internal conditions, and in corrosivity category is C1. Applications such as sports centres with swimming pools or buildings with high internal humidity levels are outside the scope of this Certificate.

(1) Hereinafter referred to as 'Certificate'.

The assessment includes

Product factors:
- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:
- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:
- regular assessment of production
- formal 3-yearly review

KEY FACTORS ASSESSED

Section 1. Mechanical resistance and stability
Section 2. Safety in case of fire
Section 3. Hygiene, health and the environment
Section 4. Safety and accessibility in use
Section 5. Protection against noise
Section 6. Energy economy and heat retention
Section 7. Sustainable use of natural resources
Section 8. Durability

The BBA has awarded this Certificate to the company named above for the products described herein. These products have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Third issue: 28 March 2024
Originally certified on 17 December 2019

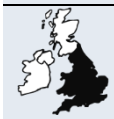
Hardy Giesler
Chief Executive Officer

SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that Hadley Cold Formed Steel Profiles, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations:



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	**A1**	**Loading**
Comment:		The products must be designed to adequately transfer the design loads to the substrate wall structure. See section 9 of this Certificate.
Requirement:	**A3**	**Disproportionate collapse**
Comment:		A system incorporating the products can be designed to incorporate adequate ties to satisfy this Requirement, when necessary to prevent disproportionate collapse. See section 9 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship**
Comment:		The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	**7(2)**	**Materials and workmanship**
Comment:		The products are unrestricted by this Regulation. See section 2 of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)**	**Fitness and durability of materials and workmanship**
Comment:		The products can contribute to a construction satisfying this Regulation. See sections 8 and 9 of this Certificate.
Regulation:	**8(3)**	**Fitness and durability of materials and workmanship**
Comment:		The products are unrestricted by this Regulation. See section 2 of this Certificate.
Regulation:	**9**	**Building standards applicable to construction**
Standard:	1.1(a)(b)	Structure
Comment:		The products must be designed to adequately transfer the design loads to the substrate wall structure with reference to clauses 1.1.1(1)(2), 1.1.2(1)(2) and 1.1.3(1)(2) of this Standard. See section 9 of this Certificate.
Standard:	1.2	Disproportionate collapse
Comment:		A system incorporating the products can be designed to incorporate adequate ties to satisfy this Standard, when necessary to prevent disproportionate collapse, with reference to clause 1.2.1(1). See section 9 of this Certificate.
Standard:	2.6	Spread to neighbouring buildings
Comment:		The products can contribute to satisfying this Standard, with reference to clauses 2.6.4(1)(2), 2.6.5(1) and 2.6.6(2) of this Standard. See section 2 of this Certificate.
Standard:	2.7	Spread on external walls
Comment:		The products can contribute to satisfying this Standard, with reference to clause 2.7.1(1)(2). See section 2 of this Certificate.

Standard:	7.1(a)	Statement of sustainability
Comment:		The products can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	**12**	**Building standards applicable to conversions**
Comment:		All comments in relation to the products under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1[(1)(2)] and Schedule 6[(1)(2)]. (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).

The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation:	**23(a)(i)(iii) (iv)(b)(i)**	**Fitness of materials and workmanship**
Comment:		The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	**30**	**Stability**
Comment:		The products must be designed to adequately transfer the design loads to the substrate wall structure. See section 9 of this Certificate.
Regulation:	**31**	**Disproportionate collapse**
Comment:		A system incorporating the products can be designed to incorporate adequate ties to satisfy this Regulation, when necessary to prevent disproportionate collapse. See section 1 of this Certificate.
Regulation:	**36(a)**	**External fire spread**
Comment:		The products are unrestricted by this Regulation. See section 2 of this Certificate.

Additional Information

NHBC Standards 2023

In the opinion of the BBA, Hadley Cold Formed Steel Profiles, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapter 6.10 *Light steel framed walls and floors*.

Fulfilment of Requirements

The BBA has judged Hadley Cold Formed Steel Profiles to be satisfactory for use as described in this Certificate. The products have been assessed for use in floors, walls and roofs in steel-framed of multi-storey new and existing domestic and non-domestic buildings in dry, internal conditions, and in corrosivity category C1 in accordance with the principles of BS EN ISO 14713-1 : 2017. Applications such as sports centres with swimming pools or buildings with high internal humidity levels are outside the scope of this Certificate.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the products under assessment. Hadley Cold Formed Steel Profiles (see Figure 1) consist of:

- Hadley cold formed C- and U-section cold formed — from coil strip to grade S450 and galvanized to 275 or 600 $g \cdot m^{-2}$ (the latter, when used in ground floors or when required subject to specified durability requirements) in accordance with the principles of
  BS EN 10346 : 2015. Alternatively, they can be galvanized to 275 $g \cdot m^{-2}$ with additional protection of a two-coat bitumen-based coating to BS 1070 : 1993, BS 3416 : 1991 or BS 6949 : 1991, or have a two-coat liquid asphaltic coating. See Tables 1 and 2 of this Certificate for dimensions (and mass per metre length) of Hadley cold formed C- and U-sections
- bracing straps — strip steel produced to BS EN 10346 : 2015 in S450 grade (yield strength of 450 $N \cdot mm^{-2}$), with a galvanized coating of G275 or G600 grade (275 or 600 grams of zinc per m^2). The bracing straps have the following dimensions:
  - 100 x 1.2 mm thick
  - 38 x 0.9 mm thick
- fasteners — fixings are bolt M12 class 8.8 or higher to BS EN 1993-1-8 : 2005 and its UK National Annex and appropriate screws of 5.5 mm diameter. All fasteners including washers, nuts, screws and bolts must have appropriate galvanized protection (zinc coating greater than 8 µm to BS EN ISO 4042 : 2018) or they must be stainless steel grade A4 in accordance with
  the principles of BS EN ISO 3506-1 : 2009 and BS EN ISO 3506-2 : 2009 and BS 8297 : 2017.

Figure 1 Typical sections

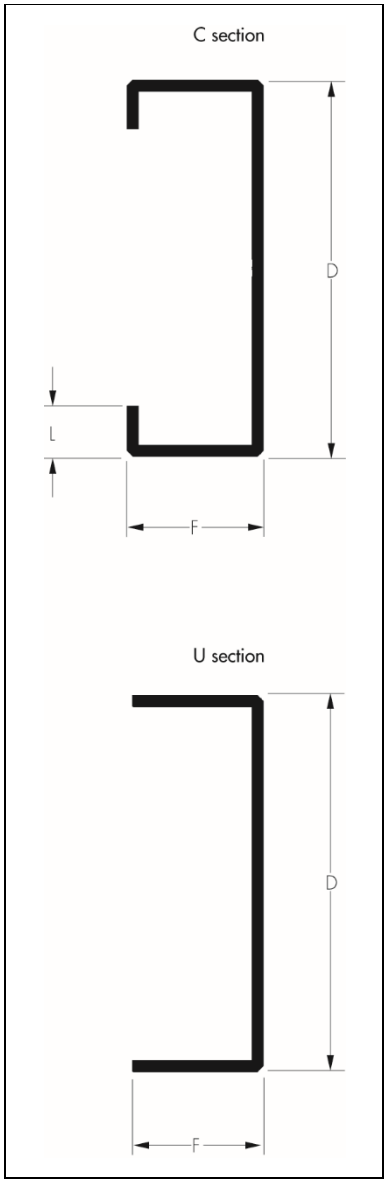


Table 1 Dimensions and mass per metre length of Hadley cold formed C-sections

No	Section reference	Dimensions				Mass per metre (kg)
		Web (D) (mm)	Flange (F) (mm)	Lip (L) (mm)	Thickness (t) (mm)	
1	070F5012	70	50	12	1.2	1.7
2	070F5015	70	50	12	1.5	2.2
3	070F5020	70	50	12	2.0	2.9
4	100F5012	100	50	12	1.2	2.0
5	100F5015	100	50	12	1.5	2.5
6	100F5020	100	50	12	2.0	3.3
7	100F6012	100	60	12	1.2	2.2
8	100F6015	100	60	12	1.5	2.7
9	100F6020	100	60	12	2.0	3.6
10	100F6025	100	60	12	2.5	4.5
11	100F7512	100	75	18	1.2	2.6
12	100F7515	100	75	18	1.5	3.2
13	100F7520	100	75	18	2.0	4.3
14	100F7525	100	75	18	2.5	5.3
15	100F7530	100	75	18	3.0	6.4
16	120F5012	120	50	12	1.2	2.2
17	120F5015	120	50	12	1.5	2.7
18	120F5020	120	50	12	2.0	3.6
19	120F7512	120	75	18	1.2	2.7
20	120F7515	120	75	18	1.5	3.4
21	120F7520	120	75	18	2.0	4.6
22	120F7525	120	75	18	2.5	5.7
23	150F5012	150	50	12	1.2	2.5
24	150F5015	150	50	12	1.5	3.1
25	150F5020	150	50	12	2.0	4.1
26	150F6012	150	60	12	1.2	2.6
27	150F6015	150	60	12	1.5	3.3
28	150F6020	150	60	12	2.0	4.4
29	150F6025	150	60	12	2.5	5.5
30	150F7512	150	75	18	1.2	3.0
31	150F7515	150	75	18	1.5	3.8
32	150F7520	150	75	18	2.0	5.0
33	150F7525	150	75	18	2.5	6.3
34	200F6312	200	63	18	1.2	3.3
35	200F6314	200	63	18	1.4	3.8
36	200F6316	200	63	18	1.6	4.4
37	200F6320	200	63	18	2.0	5.4
38	200F7512	200	75	18	1.2	3.5
39	200F7515	200	75	18	1.5	4.4
40	200F7520	200	75	18	2.0	5.8
41	200F7525	200	75	18	2.5	7.3
42	225F6314	225	63	18	1.4	4.1
43	225F6316	225	63	18	1.6	4.7
44	225F6320	225	63	18	2.0	5.8
45	255F6314	255	63	18	1.4	4.4
46	255F6316	255	63	18	1.6	5.0
47	255F6320	255	63	18	2.0	6.3
48	285F6316	285	63	18	1.6	5.4
49	285F6320	285	63	18	2.0	6.8
50	285F6330	285	63	18	3.0	10.1

Table 1 Dimensions and mass per metre length of Hadley cold formed C-sections (continued)

No	Section reference	Dimensions				Mass per metre (kg)
		Web (D) (mm)	Flange (F) (mm)	Lip (L) (mm)	Thickness (t) (mm)	
51	305F6316	305	63	18	1.6	5.6
52	305F6320	305	63	18	2.0	7.1
53	305F6330	305	63	18	3.0	10.6

Table 2 Dimensions and mass per metre length of Hadley cold-formed U-sections

No	Section reference	Dimensions			Mass per metre (kg)
		Web (D) (mm)	Flange (F) (mm)	Thickness (t) (mm)	
1	074T4012	74	40	1.2	1.4
2	074T7012	74	70	1.2	1.9
3	074T7020	74	70	2.0	3.2
4	104T4012	104	40	1.2	1.7
5	104T7012	104	70	1.2	2.2
6	104T7020	104	70	2.0	3.7
7	124T4012	124	40	1.2	1.8
8	124T7012	124	70	1.2	2.4
9	124T7020	124	70	2.0	4.0
10	154T4012	154	40	1.2	2.1
11	154T7012	154	70	1.2	2.7
12	154T7020	154	70	2.0	4.5
13	204T4012	204	40	1.2	2.6
14	204T7012	204	70	1.2	3.1
15	204T7020	204	70	2.0	5.2
16	229T4012	229	40	1.2	2.8
17	229T7020	229	70	2.0	5.6
18	259T4012	259	40	1.2	3.1
19	259T7020	259	70	2.0	6.1
20	290T4015	290	40	1.5	4.2
21	290T7025	290	70	2.5	8.2
22	310T4015	310	40	1.5	4.4
23	310T7025	310	70	2.5	8.6

Hadley Cold Formed Steel Profiles are manufactured to the nominal characteristics specified in Table 3.

Table 3 Nominal characteristics of Hadley Cold Formed Steel Profiles

Characteristic (unit)	Components		Requirement
	C-section wall studs	U-section base and head tracks	
Proof strength [$Rp_{0.2}$] ($N \cdot mm^{-2}$)	≥450		BS EN 10346 : 2015
Tensile strength [Rm] ($N \cdot mm^{-2}$)	≥510		
Tolerance on dimensions and shapes	Tolerance class 1		BS EN 1090-2 : 2018
Durability	S450 GD+Z 275 or 600		BS EN 1090-1 : 2009

The Certificate holder recommends the following ancillary items for use with the products, but these materials have not been assessed by the BBA and are outside the scope of this Certificate:

- fire protection, thermal insulation and sound protection
- holding-down devices
- screws 5.5 mm diameter with zinc coating greater than 8 µm in accordance the principles of BS EN ISO 4042 : 2018
- foundation.

Applications

The typical application of Hadley Cold Formed Steel Profiles is as follows:

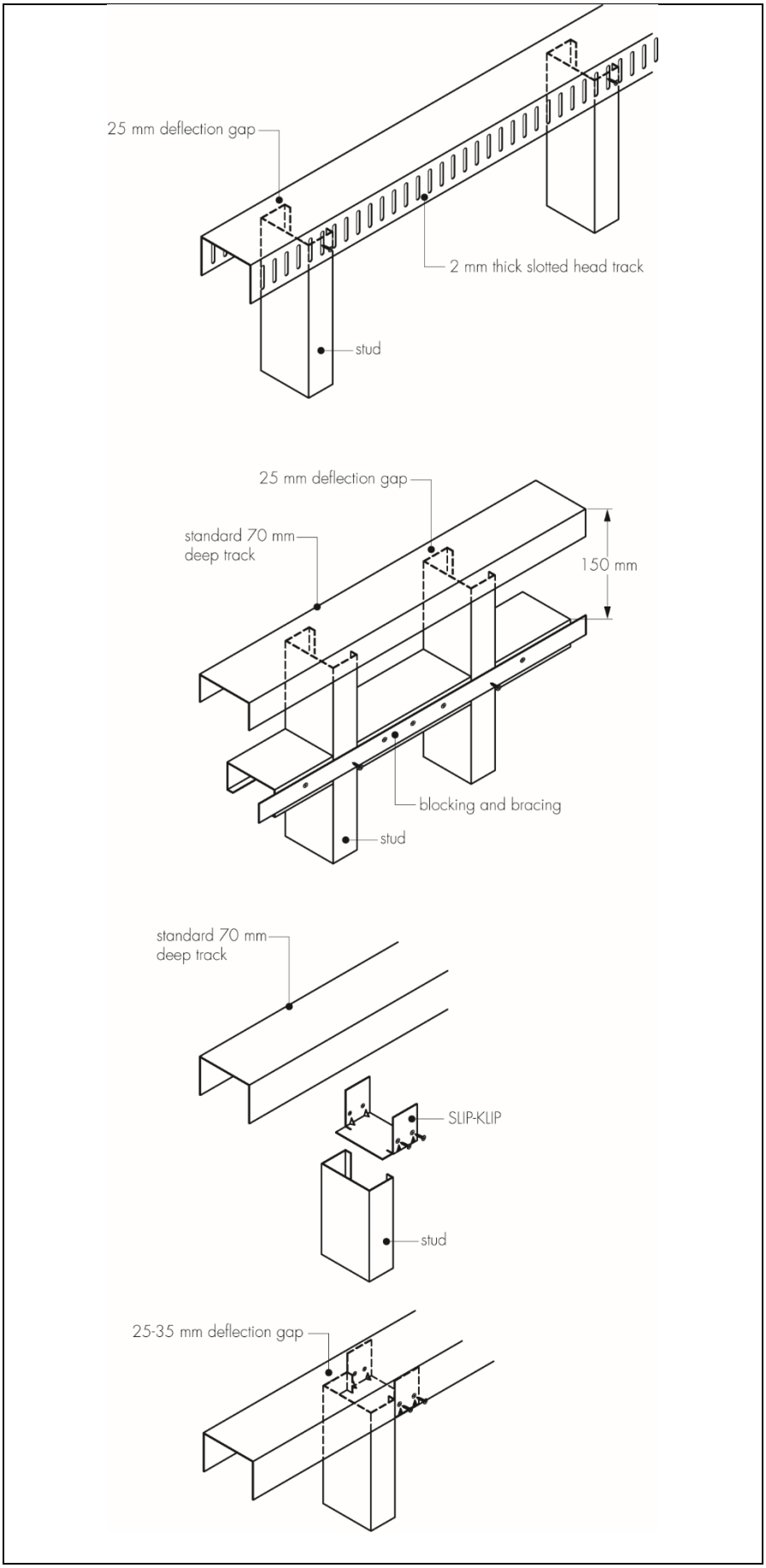
Wall frames

Wall frames consisting of studs (compression members) typically at 400 or 600 mm centres, or as modified at openings; bottom and top tracks which fit around the studs; and noggings to provide lateral restraint. The load bearing wall frame must resist against wind loads when used on the periphery of the building.

Infill walls

Infill walls are fitted between floors in multi-storey buildings as separating walls. Differential movement of the infill walls and the primary structure is accommodated through use of a sliding deflection head, using slotted head tracks, Slip Klip deflection head clips, FC series cleats or blocking and bracing with flat straps (see Figure 2).

Figure 2 Infill framing incorporating deflection head details



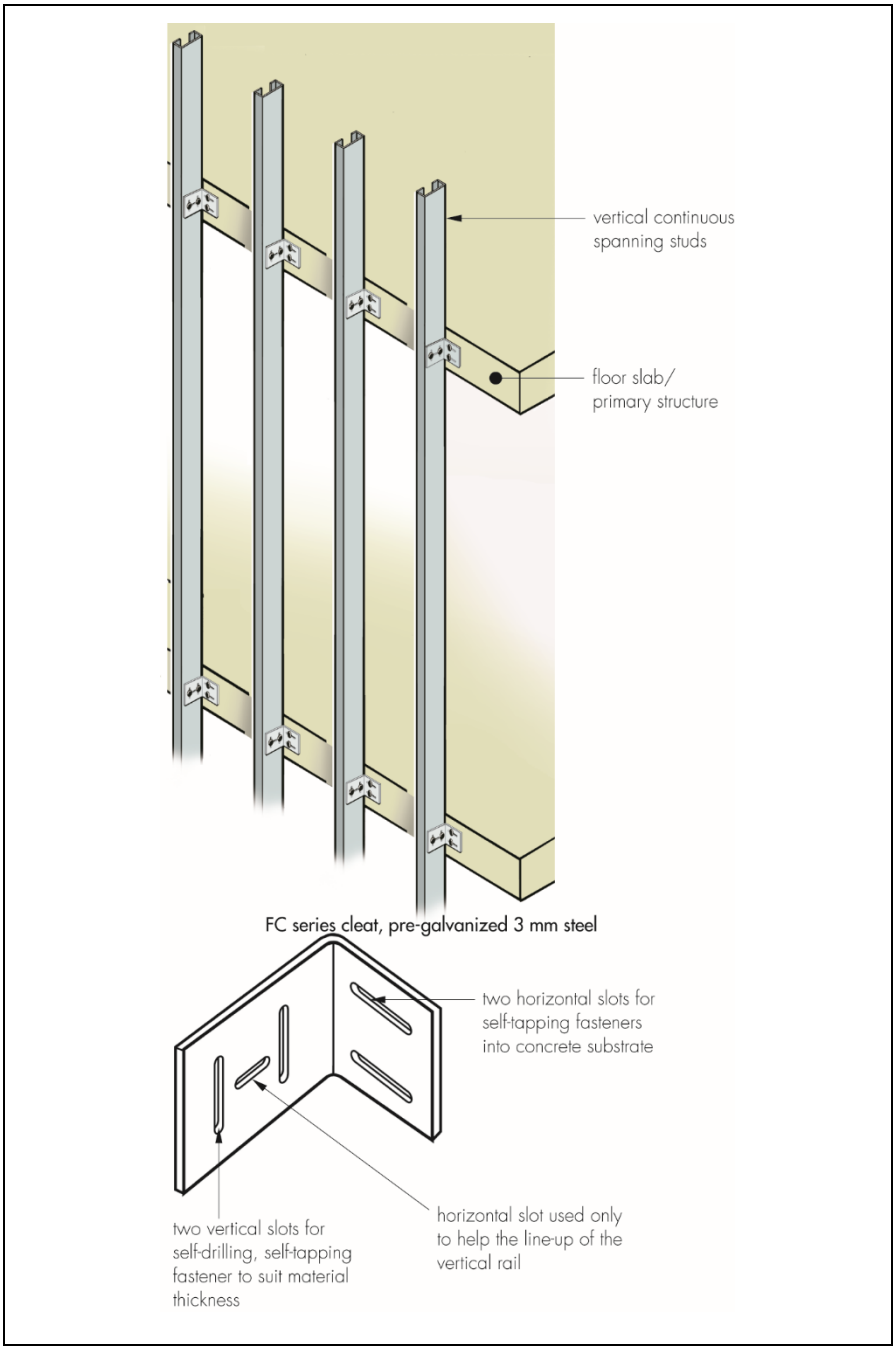
Floor joists

Joists are generally placed at 400 or 600 mm centres, depending on the spanning capabilities of the boarding.

Oversail/continuous walls

The oversail/continuous walls are constructed on the outside of the building and fixed back to the main structural frame using steel cleats. Differential movement of the continuous walls and the primary structure is accommodated through use of slotted holes, and the correct positioning of fixings, in the cleats (see Figure 3).

Figure 3 Typical oversail detail fixed to the main structural frame



Lintels

Lintels and openings may be formed from the components in several configurations depending on the design (see Figures 4 and 5).

Figure 4 Lintels

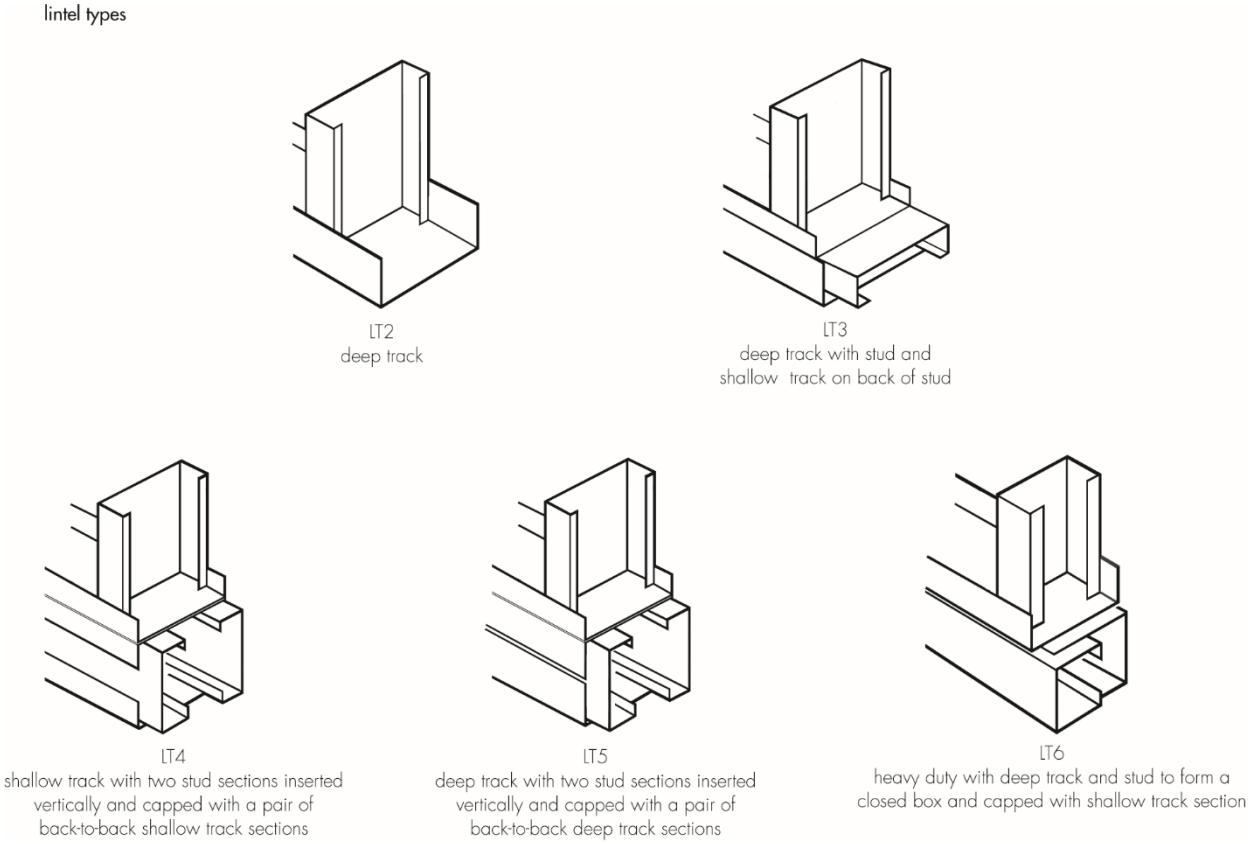
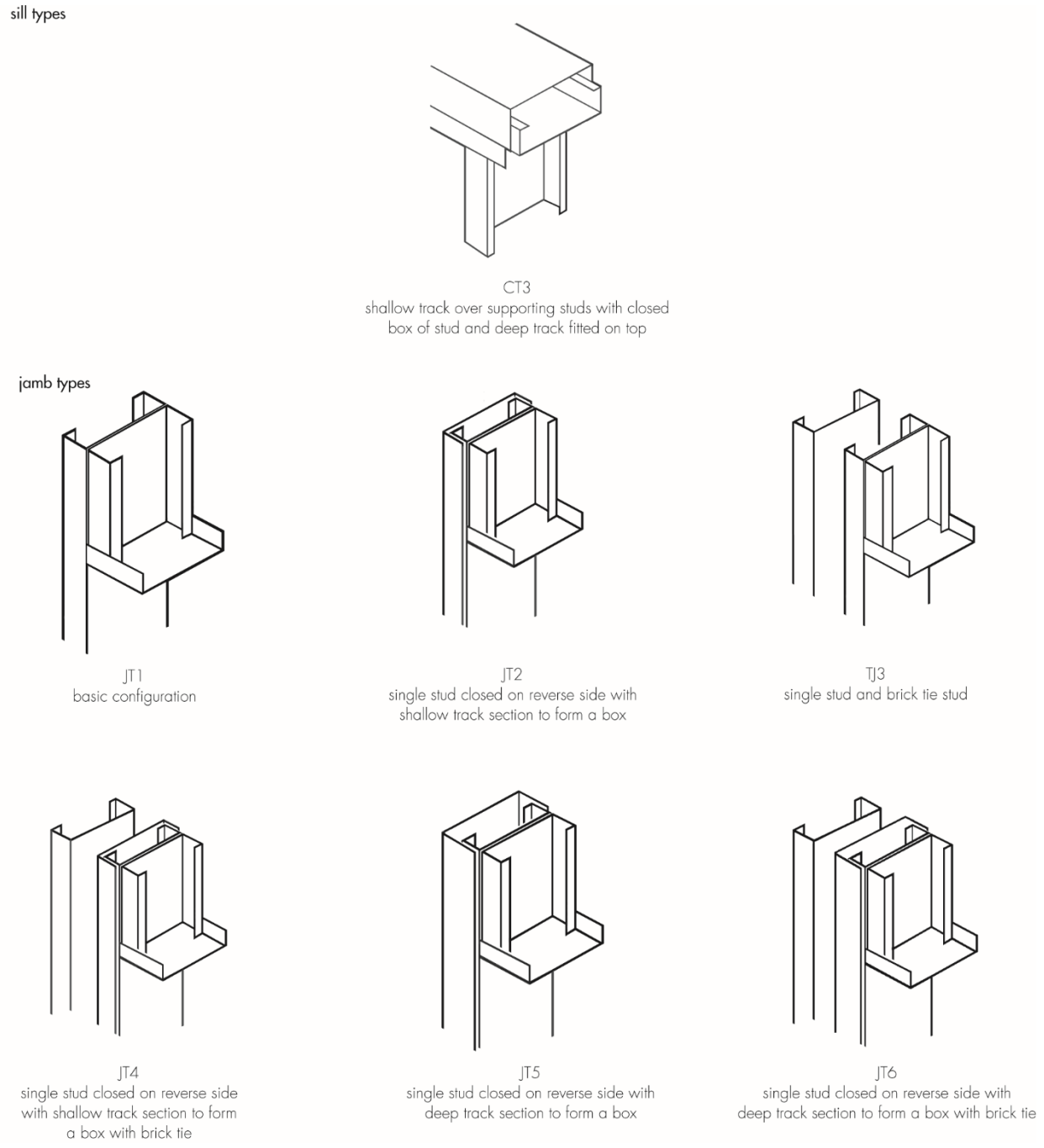


Figure 5 Openings



Product assessment – key factors

The products were assessed for the following key factors, and the outcome of the assessment is shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Not applicable.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 Reaction to fire

2.1.1 The products are classified as A1 by Commission Decision 96/603/EC.

2.1.2 On the basis of the data assessed, the products are unrestricted by the documents supporting the national Building Regulations in terms of height and distance to a relevant boundary.

2.2 Resistance to fire

2.2.1 The section resistance of the cold formed steel, bracing straps and fasteners under fire conditions, where there is no fire protection provided, must be reduced in accordance with the requirements of BS EN 1993-1-2 : 2005 and its UK National Annex.

2.2.2 Where fire resistance is required by the documents supporting the national Building Regulations, the performance of an individual construction must be established by a suitably experienced and competent individual or by a test from a suitably accredited laboratory.

3 Hygiene, health and the environment

Not applicable.

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

Not applicable.

6 Energy economy and heat retention

Not applicable.

7 Sustainable use of natural resources

The products consist of galvanized steel, which is fully recyclable.

8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in the products were assessed.

8.2 Service life

Under normal service conditions, the products will have a life of at least 60 Years, provided they are designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors:

9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed by the BBA, and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 A suitably experienced and competent individual must underwrite the structural design of any buildings covered by this Certificate. In addition, the individual must undertake calculations to the relevant code of practice, taking into account the following:

- calculation of the applied loads (variable and permanents actions) on Hadley Cold Formed Steel Profiles to the relevant part of Eurocodes ie BS EN 1991-1-1 : 2002, BS EN 1991-1-3 : 2003, BS EN 1991-1-4 : 2005 and BS EN 1991-1-5 : 2003, and their UK National Annexes
- the applied compression, shear, tension, flexural buckling loads and bending moment to Hadley Cold Formed Steel Profiles when there is no fire, must not exceed the design resistances of Hadley Cold Formed Steel Profiles to BS EN 1993-1-3 : 2005 and its UK National Annex
- ensure the adequacy of connection details
- the joists must be designed as simply supported beams. The ultimate load and service load applied to the beams must be calculated using the equations from BS EN 1990 : 2002 and its UK National Annex
- ensure that the method of fixing the external cladding or rainscreen to the wall panels is adequate and incorporates provision for differential movement
- full consideration must be given to the required horizontal and vertical ties and robustness of the building to avoid disproportionate collapse under accidental loading in accordance with the principles of BS EN 1990 : 2002 and BS EN 1991-1-7 : 2006, and their UK National Annexes. The required level of robustness will be determined in accordance with the national Building Regulations based on the building or consequence class (relating to building type, occupancy, number of storeys and size of building)
- ensure that adequate bracing is provided to prevent horizontal deformation
- the deflection of the floor beams and lintels under the characteristic load combination owing to variable (imposed) loads must be restricted to the limits as defined in the UK National Annex to BS EN 1993-1-1 : 2005, clause NA.2.23
- the horizontal deflection of the cold formed steel profiles owing to wind loads must be within the acceptable limit of height/300 in accordance with the principles of the UK National Annex to BS EN 1993-1-1 : 2005, clause NA.2.24 and Table NA.3
- limitation of deflection for static and dynamic criteria, including natural frequency of the floor formed with the products, should not be less than 8Hz (see *NHBC Standards* 2023, Chapter 6.10)
- to achieve the durability of Hadley Cold Formed Steel Profiles, the following conditions must be satisfied:
  - Hadley Cold Formed Steel Profiles must be used in buildings in dry, internal conditions, and corrosivity category C1 in accordance with the principles of BS EN ISO 14713-1 : 2017. Applications such as sports centres with swimming pools or buildings with high internal humidity levels are outside the scope of this Certificate
  - when Hadley Cold Formed Steel Profiles are used in cladding, the cavity depth must be extended at least 150 mm below the damp-proof course (DPC), and weep holes, or other suitable means of drainage, must be provided to ensure moisture is drained from the cavity; the width of cavity must be in accordance with *NHBC Standards* 2023, Chapter 6.10, Table 8
  - all fasteners, washers, nuts, screws and bolts have appropriate corrosion protection (galvanized zinc coating greater than 8 µm to BS EN ISO 4042 : 2018) or are stainless steel grade A4 in accordance with the principles of BS EN ISO 3506-1 : 2009, BS EN ISO 3506-2 : 2009 and BS 8297 : 2017.

9.1.3 NHBC acceptance of the products when used as framed, volumetric or modular self-supporting structures, requires compliance with *NHBC Standards* 2023, Part 6, Chapter 6.10, Section 6.10.3 and the issue of 'Stage 1 – System Certification' and 'Stage 2 – Project Certification'.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions. A summary of instructions and guidance is provided in Annex A of this Certificate.

9.3 Workmanship

Practicability of installation was assessed on the basis of the Certificate holder's information. To achieve the performance described in this Certificate, installation of the products must be carried out by a contractor experienced with this type of products and trained and approved by the Certificate holder.

9.4 Maintenance and repair

As the galvanized steel framework is confined within the building elements and has suitable durability, maintenance is not required, provided that the whole building element is designed and constructed to prevent adverse moisture on steel surfaces owing to precipitation or condensation.

10 Manufacture

10.1 The production processes for the product have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors.

10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.3 The quality control procedures and product testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

† 10.2 The BBA has undertaken to review the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

11 Delivery and site handling

11.1 The Certificate holder stated that the products are delivered to site in packaging bearing the product name, Certificate holder's name, batch number, health and safety information and weight of contents in kilograms.

11.2 Delivery and site handing must be performed in accordance with the Certificate holder's instructions and this Certificate, including:

11.2.1 The products are delivered to site in the form of prefabricated sections.

11.2.2 The products are offloaded with mechanical handling equipment (eg by crane) and placed in a suitable holding area until lifted into their final position.

11.2.3 The maximum length of Hadley Cold Formed Steel Profiles is 9 m; the self-mass for one metre length of the profiles is given in Tables 1 and 2 of this Certificate.

ANNEX A – SUPPLEMENTARY INFORMATION †

Supporting information in this Annex is relevant to the products but has not formed part of the material assessed for the Certificate.

Construction (Design and Management) Regulations 2015
Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

UKCA marking

The Certificate holder has taken the responsibility of UKCA marking the products in accordance with Designated Standard EN 1090-1 : 2009. Client to provide a copy of UKCA marking.

Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of BS EN ISO : 2015 by SCCS (Certificate Q027). Client to provide a copy of BS EN Iso 9001 certificate.

Additional information on installation

A.1 Installation must be in accordance with the Certificate holder's instructions and this Certificate.

A.2 The products must be installed in accordance with the design process and the Certificate holder's documented procedure.

A.3 Pre-assembled profiles must not be cut or modified on site.

A.4 Where required, diagonal steel bracing is factory fitted to the pre-assembled structure.

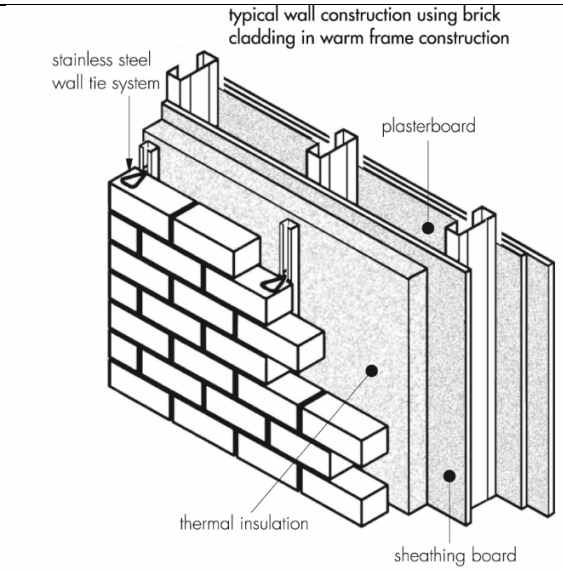
A.5 Where structures are diagonally braced with a flat strip, this should be fixed to each stud at the intersection, to minimise the bow in the bracing member.

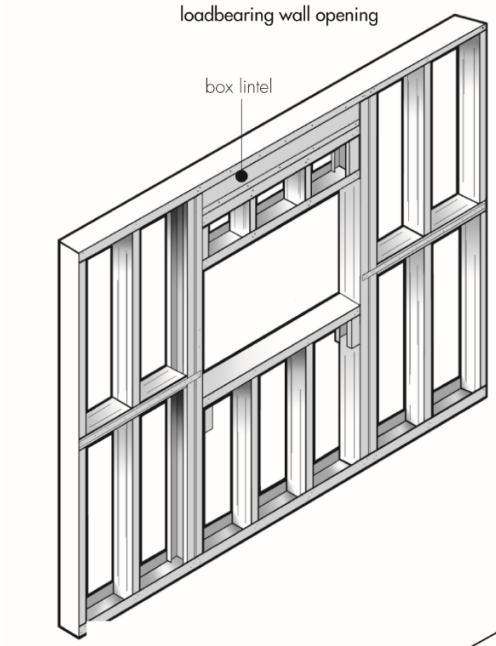
A.6 The accuracy of the section shape is within ± 0.5 mm. The ends of the members may be pre-formed with holes to permit inter-connection.

A.7 If the gap between the bottom rail and the substructure is less than 10 mm, packing is carried out under each stud, using galvanized steel shims. For gaps of 10 to 20 mm, shims are required under each stud, and grout is required under the whole of the base rail. For gaps of more than 20 mm, remedial work to the base/sub structure is required.

A.8 Typical details of the various constructions covered by this Certificate are given in Figures 6 to 8.

Figure 6 Typical construction walls





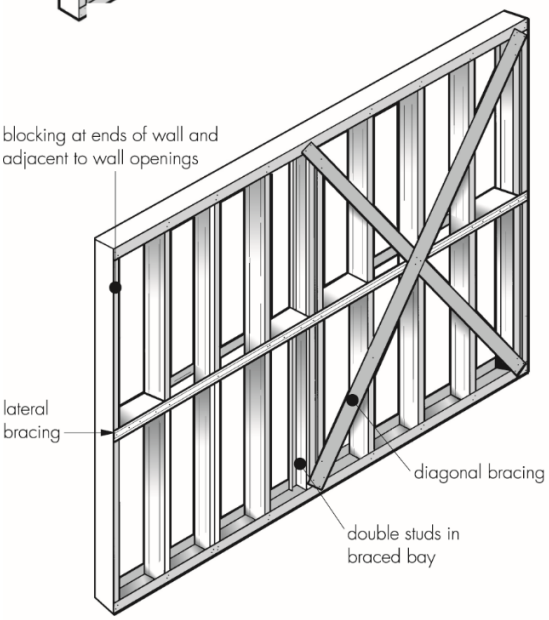


Figure 7 Typical detail partition wall

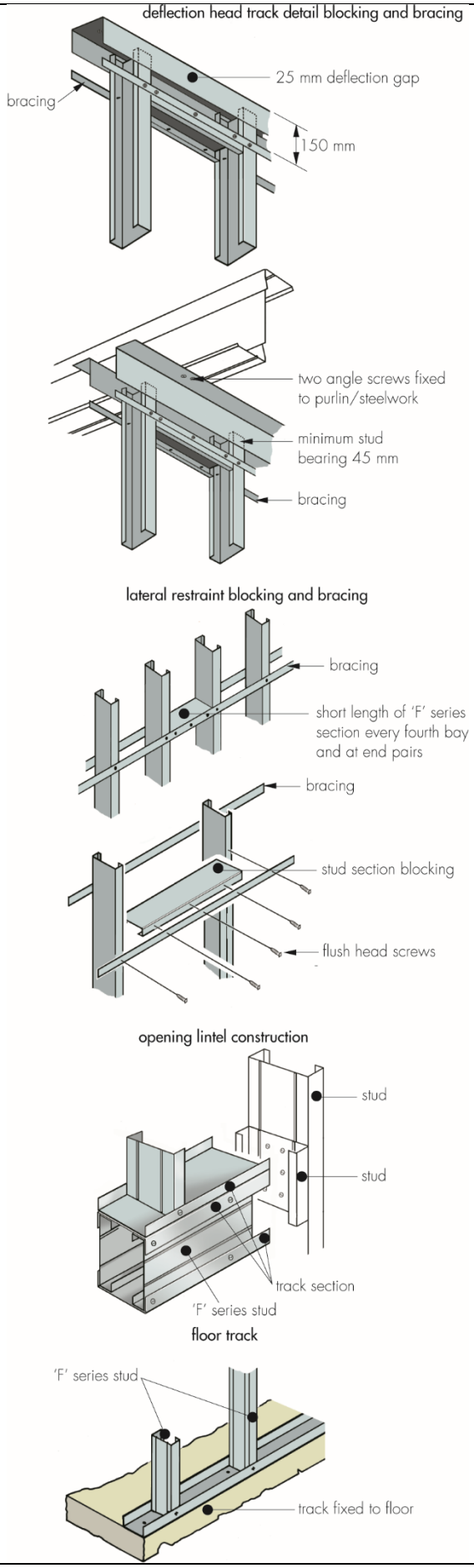
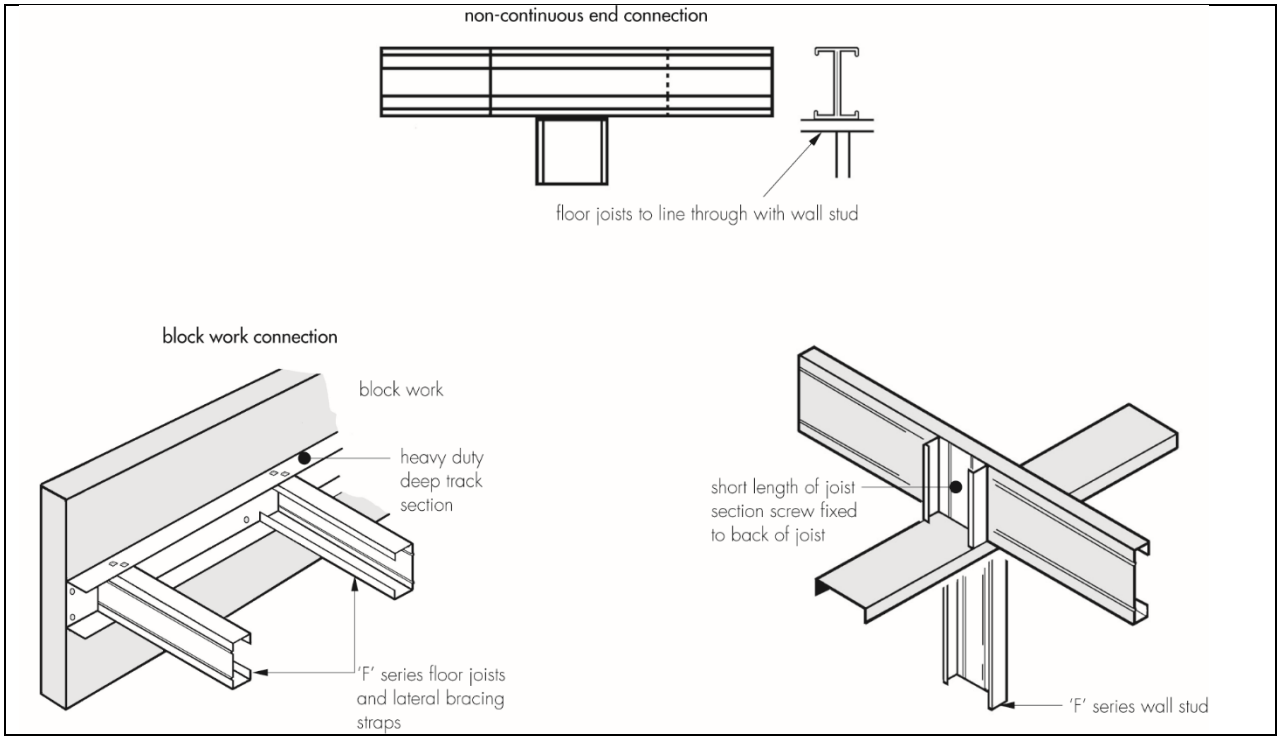


Figure 8 Typical detail floor joists



Bibliography

BS 1070 : 1993 *Specification for black paint (tar-based)*

BS 3416 : 1991 *Specification for bitumen-based coatings for cold application, suitable for use in contact with potable water*

BS 6949 : 1991 *Specification for bitumen-based coatings for cold application, excluding use in contact with potable water*

BS 8297 : 2017 *Design, manufacture and installation of architectural precast concrete cladding — Code of practice*

BS EN 1090-1 : 2009 + A1 : 2011 *Execution of steel structures and aluminium structures — Requirements for conformity assessment of structural components*
BS EN 1090-2 : 2018 *Execution of steel structures and aluminium structures Part 2: Technical requirements for steel structures*

BS EN 10346 : 2015 *Continuously hot-dip coated steel flat products for cold forming — Technical delivery conditions*

BS EN 1990 : 2002 + A1 2005 *Eurocode: Basis of structural design*
NA to BS EN 1990 : 2002 + A1 : 2005 UK National Annex for *Eurocode — Basis of structural design*

BS EN 1991-1-1 : 2002 *Eurocode 1: Actions on structures — General actions — Densities, self-weight, imposed loads for buildings*
NA to BS EN 1991-1-1 : 2002 UK National Annex to *Eurocode 1: Actions on structures — General actions — Densities, self-weight, imposed loads for buildings*
BS EN 1991-1-3 : 2003 + A1 : 2015 *Eurocode 1: Actions on structures — General actions — Snow loads*
NA + A2 : 2018 to BS EN 1991-1-3 : 2003 + A1 : 2015 UK National Annex to *Eurocode 1: Actions on structures — General actions — Snow loads*
BS EN 1991-1-4 : 2005 + A1 : 2010 *Eurocode 1: Actions on structures — General actions — Wind actions*
NA to BS EN 1991-1-4 : 2005 + A1 : 2010 UK National Annex to *Eurocode 1: Actions on structures — General actions — Wind actions*
BS EN 1991-1-5 : 2003 Eurocode 1 — *Actions on structures — Part 1-5: General actions — Thermal actions*
NA to BS EN 1991-1-5 : 2003 UK National *Annex to Eurocode 1 — Actions on structures — General actions — Thermal actions*
BS EN 1991-1-7 : 2006 + A1 : 2014 *Eurocode 1: Actions on structures — General actions — Accidental actions*
NA to BS EN 1991-1-7 : 2006 + A1 : 2014 UK National Annex to *Eurocode 1: Actions on structures — Accidental actions*

BS EN 1993-1-1 : 2005 + A1 : 2014 *Eurocode 3: Design of steel structures — General rules and rules for buildings*
NA + A1 :2014 to BS EN 1993-1-1 : 2005 + A1 : 2014 UK National Annex to *Eurocode 3: Design of steel structures — General rules and rules for buildings*
BS EN 1993-1-2 : 2005 *Eurocode 3: Design of steel structures — General rules — Structural fire design*
NA to BS EN 1993-1-2 : 2005 UK National Annex to *Eurocode 3: Design of steel structures — General rules — Structural fire design*
BS EN 1993-1-3 : 2006 *Eurocode 3: Design of steel structures — General rules — Supplementary rules for cold formed members and sheeting*
NA to BS EN 1993-1-3 : 2006 UK National Annex to *Eurocode 3: Design of steel structures — General rules — Supplementary rules for cold formed members and sheeting*
BS EN 1993-1-8 : 2005 *Eurocode 3: Design of steel structures — Design of joints*
NA to BS EN 1993-1-8 : 2005 UK National Annex to *Eurocode 3: Design of steel structures — Design of joints*

BS EN ISO 3506-1 *:* 2009 *Mechanical properties of corrosion-resistant stainless-steel fasteners — Bolts, screws and studs*
BS EN ISO 3506-2 : 2009 *Mechanical properties of corrosion-resistant stainless-steel fasteners — Nuts*

BS EN ISO 4042 : 2018 *Fasteners — Electroplated coating systems*

BS EN ISO 9001 : 2015 *Quality management systems — Requirements*

BS EN ISO 14713-1 : 2017 *Zinc coatings — Guidelines and recommendations for the protection against corrosion of iron and steel in structures — General principles of design and corrosion resistance*

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