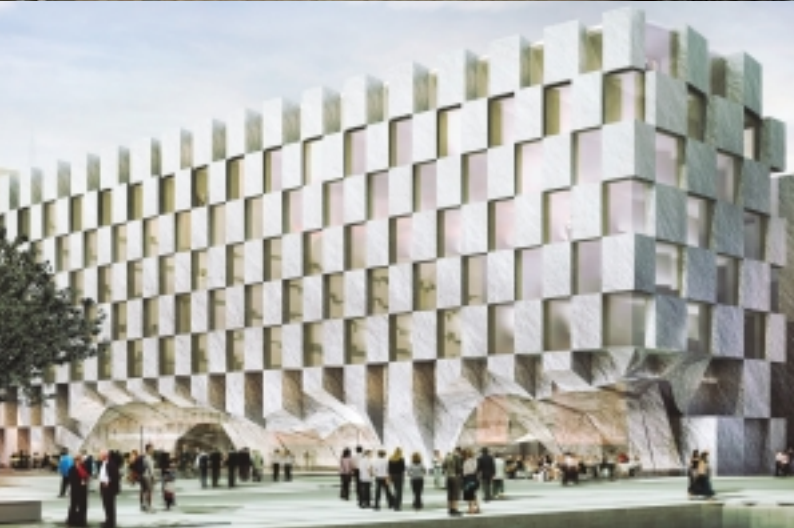


Fabrik

Architectural Facade Systems



*Building
to the Power of*





“Architecture thrives on creativity”



Contents

Introduction	4 - 5
Product Range & Applications	6 - 7
Performance Data	10 - 11
Technical Specification	12 - 15
NBS Plus Specification	16 - 17
Construction Details	18 - 57
Delivery & Site Installation	58 - 59

Introduction

Product Range & Applications

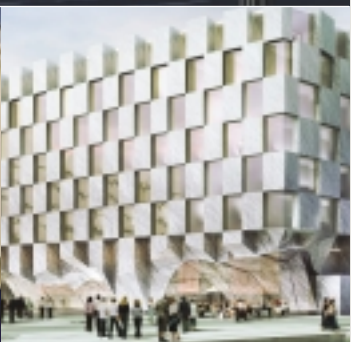
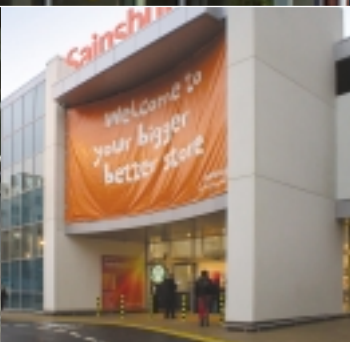
Performance Data

Technical Specification

NBS Plus Specification

Construction Details

Site Installation



Fabrik Facade Systems

Kingspan has opened up a totally new dimension in building facade design, with their innovative Fabrik unitised through-wall rainscreen systems, whose formats, textures, colours and finishes offer designers a wide array of traditional or contemporary surface combinations.

This provides the designer with the opportunity to create signature buildings with aesthetic appeal, whilst reaping the benefits of one of the most high performance construction materials available.

Fabrik facades are made from a composite material mix, comprising a cement and silica sand matrix reinforced with chemical resistant glass fibres, to produce a high compressive strength, lightweight concrete with enhanced tensile and flexural properties and other high performance characteristics.

The material does not burn and will not rot or corrode. The installed system is extremely robust, and provides a high degree of fire, ultra-violet, weather, chemical and impact resistance combined with long term durability in excess of 60 years.

Fabrik facade panels comprise a high strength material, with an external facing surface that is polished or sand blasted to provide colours and textures which match natural materials. Fabrik facade panels are connected to a Kingframe system with stainless steel anchors.

Fabrik facade panels are manufactured to high tolerances which guarantee best fit. Fabrik panels are supplied complete with connection brackets suitable for fixing to steel or concrete main structures. All panels are tailored to project specific requirements and are available up to maximum dimensions of 6000mm x 4000mm.

Fabrik systems easily incorporate, windows, doors, balconies, brise soleil, other architectural features and any type of internal linings.

Applications

Fabrik facade systems are suitable for application on to steel, concrete or timber framed buildings up to any height. Additionally, the system is ideal for dado wall applications.

The system can be connected to the main structure in three ways:

- face-fixed;
- recessed; or
- spandrel

Testing, Accreditation & Approvals

The Fabrik system has been fully tested and certified by the Building Research Establishment (BRE). Additionally, it is approved by NHBC and Zurich Insurance (UK), and the DOE and HomeBond (Ireland) for mortgagability and insurability.

The system conforms with all relevant Building Regulations, Standards, Codes and 'best practice' guidance.



***“A totally new dimension
in building facade design”***





“Fabrik MMC systems provide cost, quality and programme certainty”



Cost, Programme & Quality Certainty

Clients demand sustainable, rapid, high quality construction methods that provide fast track build, early project completion and handover to maximise business income stream. Kingspan Fabrik as a modern method of construction (MMC) delivers on all these objectives.

Quality Assurance

Fabrik facade systems are manufactured to rigorous quality standards, in state-of-the-art manufacturing facilities certified by the Glass Reinforced Concrete Association (GRCA). Our accredited quality management systems and procedures ensure first time quality and lifetime ‘in-service’ performance and durability in excess of 60 years.

Kingspan Fabrik Design & Solutions Bureau

Kingspan Fabrik Design & Solutions Bureau is available to provide an immediate response to installers, designers and engineers on any project.

Tel: +353 (0) 41 988 4800 Fax: +353 (0) 41 988 4801
Email: info@kingspanfabrik.com
kingspanfabrik.com



Fabrik Range

Fabrik panels are available in a vast range of external formats, textures and colours, which match natural materials. They feature either a sand blasted or polished finish, including:

- Brick
- Stone (including sandstone, Portland, granite)
- Fair-face concrete
- Smooth render
- Textured render
- Hung slate and tile
- Terracotta (small, medium and large format)
- Patterned
- Project bespoke finishes are available

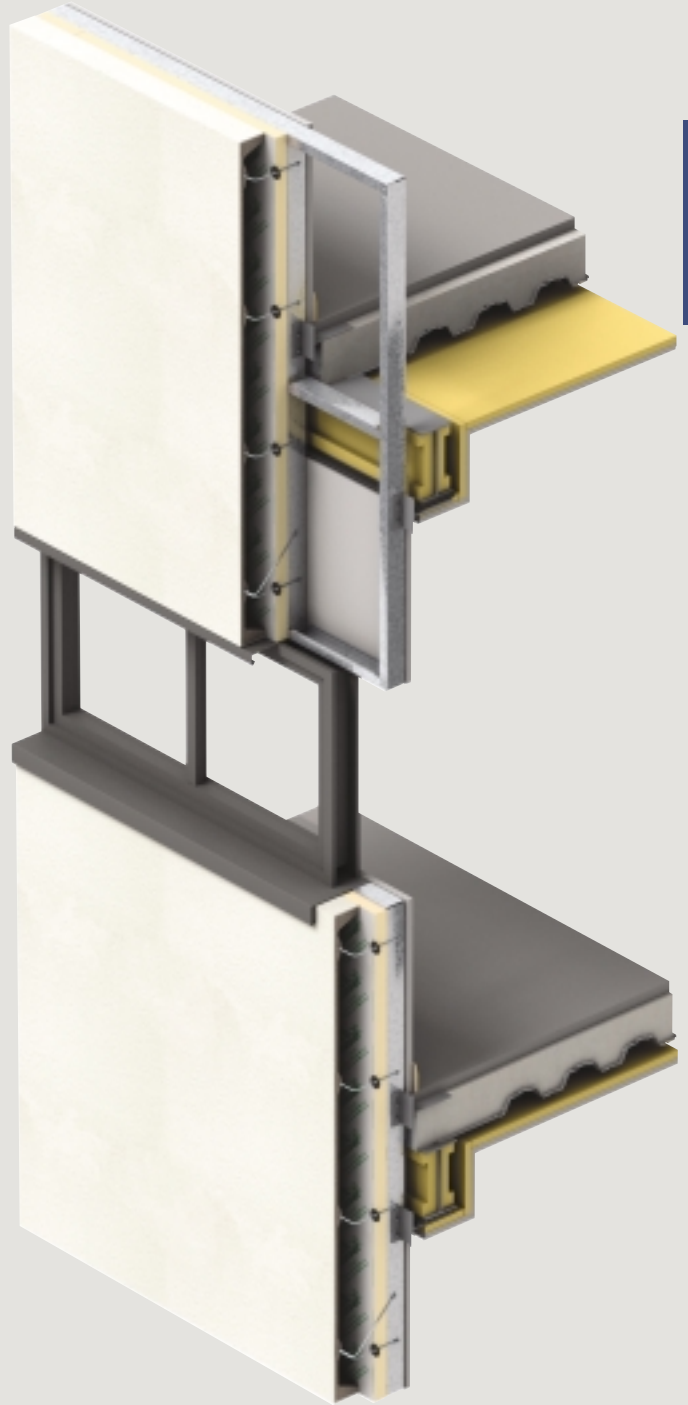
**Face-fixed Facade, Steel (or Concrete)
Main Structure, up to any height**



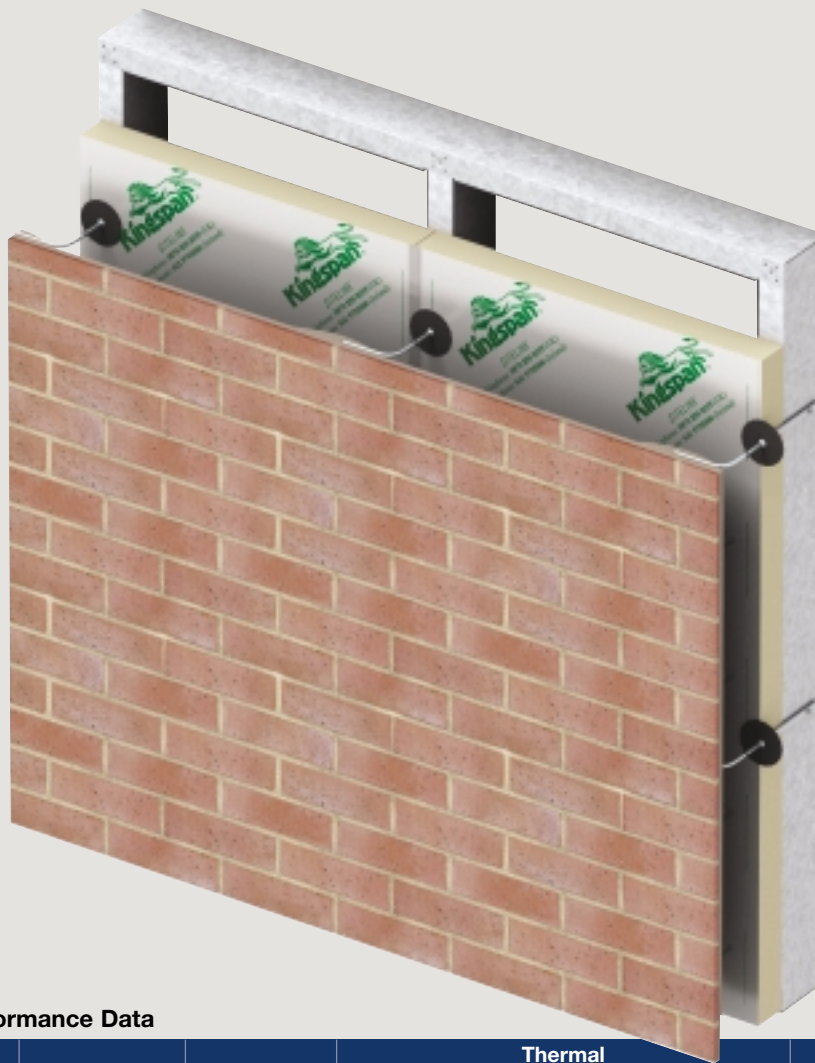
**Recessed Facade, Concrete (or Steel)
Main Structure, up to any height**



**Spandrel Facade, Concrete (or Steel)
Main Structure, up to any height**



Product Range
& Applications



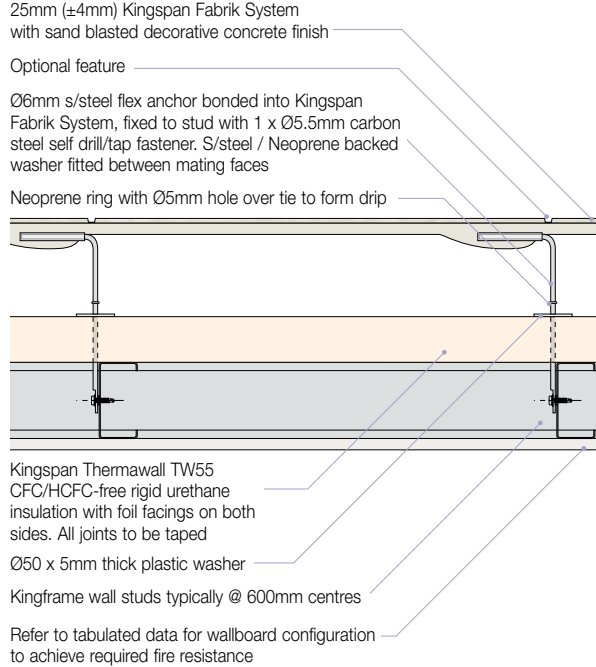
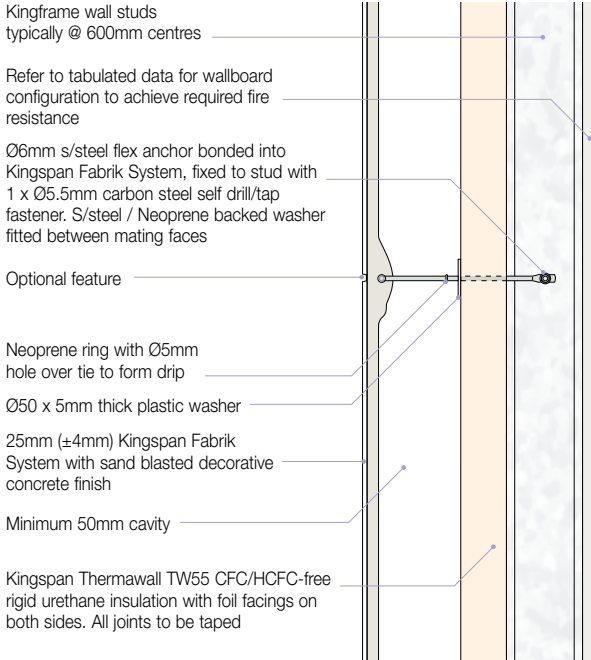
System Performance Data

System Ref	Stud Depth (mm)	System Weight * (kg/m ²)	Thermal			Fire Performance		
			U-Value (W/m ² K)	Insulation Thickness (mm)	Airtightness (m ³ /h/m ² @600Pa)	Insulation (mins)	Integrity (mins)	Reaction to Fire
FS-C-FAB-35a	100, 125, 150	71.62	0.35	35	<5	30	30	Class '0'
FS-C-FAB-35b	100, 125, 150	84.62	0.35	35	<5	60	60	Class '0'
FS-C-FAB-35c	100, 125, 150	76.37	0.35	35	<5	30	30	Class '0'
FS-C-FAB-35d	100, 125, 150	86.37	0.35	35	<5	30	30	Class '0'
FS-C-FAB-35e	100, 125, 150	86.12	0.35	35	<5	60	60	Class '0'
FS-C-FAB-35f	100, 125, 150	90.87	0.35	35	<5	60	60	Class '0'
FS-C-FAB-35g	100, 125, 150	86.62	0.35	35	<5	60	60	Class '0'
FS-C-FAB-30a	100, 125, 150	71.95	0.30	45	<5	30	30	Class '0'
FS-C-FAB-30b	100, 125, 150	84.95	0.30	45	<5	60	60	Class '0'
FS-C-FAB-30c	100, 125, 150	76.70	0.30	45	<5	30	30	Class '0'
FS-C-FAB-30d	100, 125, 150	86.70	0.30	45	<5	30	30	Class '0'
FS-C-FAB-30e	100, 125, 150	86.45	0.30	45	<5	60	60	Class '0'
FS-C-FAB-30f	100, 125, 150	91.10	0.30	45	<5	60	60	Class '0'
FS-C-FAB-30g	100, 125, 150	86.95	0.30	45	<5	60	60	Class '0'
FS-C-FAB-25a	100, 125, 150	72.43	0.25	60	<5	30	30	Class '0'
FS-C-FAB-25b	100, 125, 150	83.43	0.25	60	<5	60	60	Class '0'
FS-C-FAB-25c	100, 125, 150	77.28	0.25	60	<5	30	30	Class '0'
FS-C-FAB-25d	100, 125, 150	87.28	0.25	60	<5	30	30	Class '0'
FS-C-FAB-25e	100, 125, 150	86.93	0.25	60	<5	60	60	Class '0'
FS-C-FAB-25f	100, 125, 150	91.58	0.25	60	<5	60	60	Class '0'
FS-C-FAB-25g	100, 125, 150	87.43	0.25	60	<5	60	60	Class '0'
FS-C-FAB-20a	100, 125, 150	73.23	0.20	85	<5	30	30	Class '0'
FS-C-FAB-20b	100, 125, 150	84.23	0.20	85	<5	60	60	Class '0'
FS-C-FAB-20c	100, 125, 150	78.08	0.20	85	<5	30	30	Class '0'
FS-C-FAB-20d	100, 125, 150	89.08	0.20	85	<5	30	30	Class '0'
FS-C-FAB-20e	100, 125, 150	87.73	0.20	85	<5	60	60	Class '0'
FS-C-FAB-20f	100, 125, 150	92.38	0.20	85	<5	60	60	Class '0'
FS-C-FAB-20g	100, 125, 150	88.23	0.20	85	<5	60	60	Class '0'

- Notes: 1. * Weight/m² based on stud size 150 x 50 x 10 x 1.6 and includes internal linings.
 2. Durability to BS 5234: Parts 1 & 2 1992.
 3. Nominal thickness of Fabrik System GRC is 25mm.

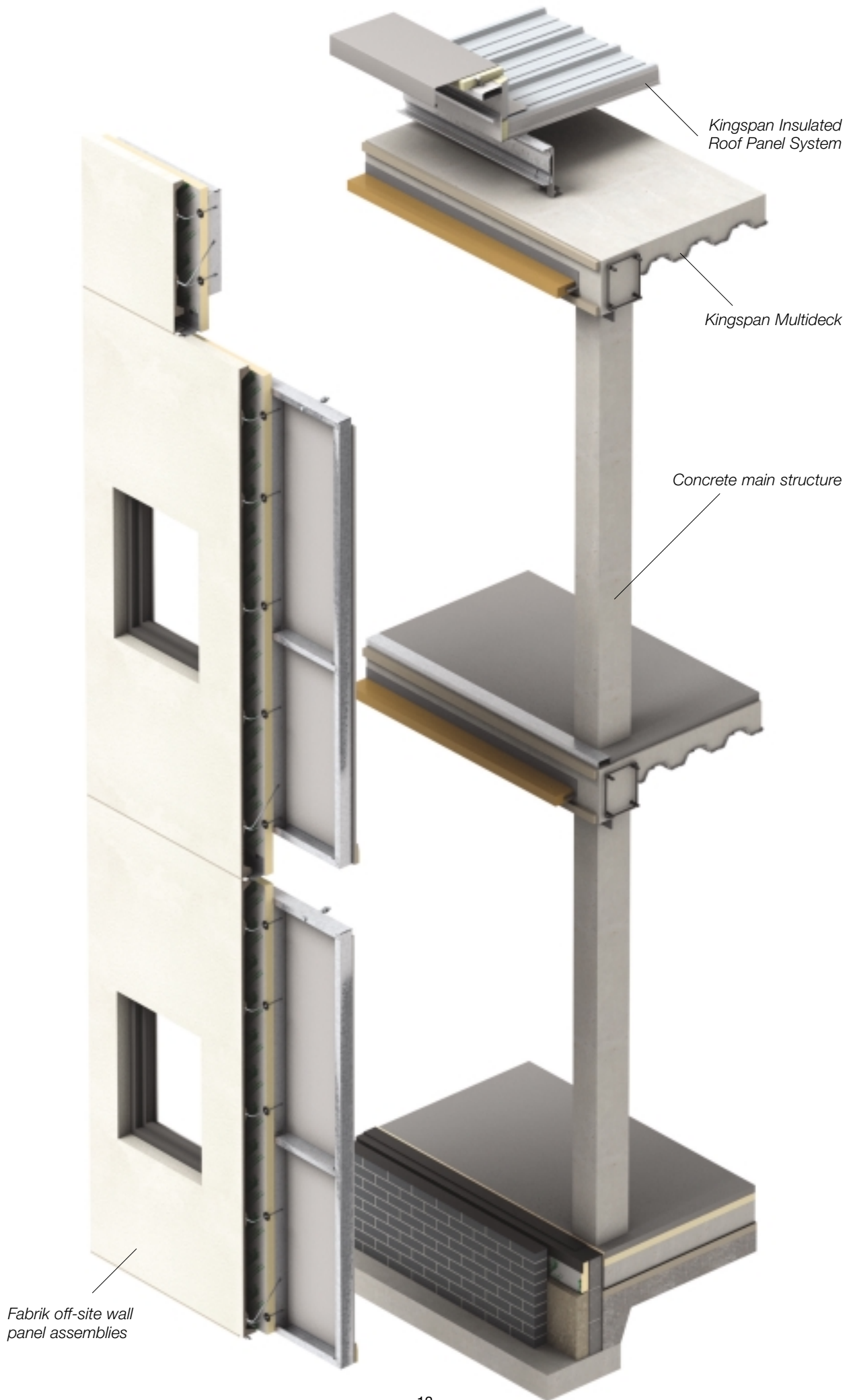
Performance Data

Kingspan Fabrik System



Performance Data

Acoustic		Internal Linings						
Inter Stud Layer	D2m, nt, w (dB)	Cavity (mm)	Primary		Secondary		Impact Durability	Lifetime Durability (years)
			Type	Thickness (mm)	Type	Thickness (mm)		
None	51	Min. 50	Gypsum Board	15.0	None	n/a	Medium	60+
None	53	Min. 50	Gypsum Board	12.5	Gypsum Plank	19.0	Severe	60+
None	52	Min. 50	Fermacell	12.5	None	n/a	Severe	60+
None	54	Min. 50	Fermacell	12.5	Gypsum Board	15.0	Severe	60+
None	52	Min. 50	Gypsum Fireline	12.5	Gypsum Plank	19.0	Severe	60+
None	53	Min. 50	Fermacell	12.5	Gypsum Plank	19.0	Severe	60+
None	54	Min. 50	Gypsum Soundblock	15.0	Gypsum Soundblock	15.0	Severe	60+
None	51	Min. 50	Gypsum Board	15.0	None	n/a	Medium	60+
None	53	Min. 50	Gypsum Board	12.5	Gypsum Plank	19.0	Severe	60+
None	52	Min. 50	Fermacell	12.5	None	n/a	Severe	60+
None	54	Min. 50	Fermacell	12.5	Gypsum Board	15.0	Severe	60+
None	52	Min. 50	Gypsum Fireline	12.5	Gypsum Plank	19.0	Severe	60+
None	53	Min. 50	Fermacell	12.5	Gypsum Plank	19.0	Severe	60+
None	54	Min. 50	Gypsum Soundblock	15.0	Gypsum Soundblock	15.0	Severe	60+
None	51	Min. 50	Gypsum Board	15.0	None	n/a	Medium	60+
None	53	Min. 50	Gypsum Board	12.5	Gypsum Plank	19.0	Severe	60+
None	52	Min. 50	Fermacell	12.5	None	n/a	Severe	60+
None	54	Min. 50	Fermacell	12.5	Gypsum Board	15.0	Severe	60+
None	52	Min. 50	Gypsum Fireline	12.5	Gypsum Plank	19.0	Severe	60+
None	53	Min. 50	Fermacell	12.5	Gypsum Plank	19.0	Severe	60+
None	54	Min. 50	Gypsum Soundblock	15.0	Gypsum Soundblock	15.0	Severe	60+



Technical Specification

Construction

Kingspan Fabrik System

Fabrik facade panels are made from a composite material mix, comprising a cement and silica sand matrix reinforced with chemical resistant glass fibres, to produce a high compressive strength, lightweight concrete with enhanced tensile and flexural properties and other high performance characteristics.

The material does not burn and will not rot or corrode. The installed system is extremely robust, and provides a high degree of fire, ultra-violet, weather, chemical and impact resistance combined with long term durability (60+ years).

Fabrik panels comprise 12-15mm thick high strength material, with a 6-8mm external facing surface that is polished or sand blasted to give colours and textures which match natural materials. Fabrik facade panels are connected to the Kingframe system with 6mm diameter stainless steel flex anchors. The flex anchors spaced at 600mm centres provide resistance to lateral loadings. The external face is vertically supported with 8mm diameter stainless steel gravity anchors connected to the Kingframe system.

The stainless steel flex and gravity anchors are bonded into the Fabrik facade panel and fix directly to the Kingframe studs without compromising the thermal performance of the insulation. EPDM washers provide thermal separation of the stainless steel anchors from the Kingframe.

Dimensions: Fabrik panels are available up to maximum dimensions of 6000mm and height of 4000mm.

Manufacturing flexibility of Fabrik allows designers to incorporate apertures and details for windows, doors, balconies, brise soleil, horizontal or vertical interface junctions, corners and other architectural features.

Durability: Fabrik facades have a lifetime durability in excess of 60 years when designed and installed to Kingspan Fabrik specification and recommendations.



Insulation

Kingspan Thermawall TW55 CFC/HCFC-free insulation board is manufactured from closed cell rigid urethane insulation core, and incorporates foil facings on both sides which are highly resistant to the transmission of water vapour.

Insulation is installed so the steel frame is totally enclosed within the internal environment of the building, thus avoiding any condensation, cold-bridging or mould problems. Insulation boards are fixed to the frames with sides and ends tightly butted together to ensure certainty of insulation and thermal continuity.

Additionally, insulation board joints are factory taped using high strength 75mm wide aluminium foil tape which guarantees a high level of airtightness.

Thermal U-value calculations for the as-built Fabrik wall assembly are based upon the European Standard calculation method, BS/I.S. EN ISO 6946: 1997 (Building components and building elements: Thermal resistance and thermal transmittance. Calculation method).

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation board is directly fixed to the Kingframe with the specified nylon tube washer fixings.

Fire Resistance

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation board has a Class 1 fire rating when tested to BS 476: Part 7: 1997 (Surface Spread of Flame Test).

Technical Specification

Kingframe Facade Framing

Galvanised, cold formed stud and track sections that are factory manufactured and assembled to form bespoke unitised wall frame assemblies.

The head and base sections are reinforced at structural connection points, where necessary. In addition, handling and lifting points are incorporated for subsequent lifting of the completed frame unit assembly.

Where necessary, flush lateral bracings are incorporated into the frame unit to resist bending and twisting under handling and 'in service' loads.

Kingframe units incorporate main structure connection points, openings for windows and doors, and other feature details. Other horizontal/vertical, head, cill and internal/external corner junctions and interfaces are integrated at design, manufacture and assembly of the frame units.



* Kingspan 'flush-faced' connection method - patent applied for.

Kingframe units are assembled using self drill/tap fasteners and high strength rivets. Stud and track connections feature a unique Flush-faced™, 'self-jigging' connection which ensures dimensional accuracy and provision of a completely flat surface for the installation of internal linings. This prevents the potential for any 'read-through' to the inner lining surface and finishes during the building's lifetime.

Vertical studs are generally located at 600mm centres to accommodate the Fabrik facade and the installation of internal linings.

Building Service Distribution Highways

Fabrik frame units are manufactured, assembled and supplied incorporating project specific building service penetrations within the web of the stud and track for routing plumbing and electrical services (power, voice and data). Grommets* are used where there is risk of biometallic contact.

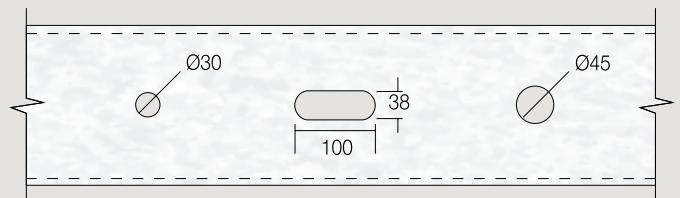
* **Grommets Ltd**
Tel: 01273 493355 Fax: 01273 493388 www.grommets.co.uk
Chesterfield Injection Moulding Services
Tel/Fax: 01246 473337 www.c-i-m-s.co.uk

Tolerances

Fabrik facade units are manufactured, assembled and supplied to a width, height and squareness tolerance of $\pm 3.0\text{mm}$ for frames up to 5000mm, and a tolerance of $\pm 4.0\text{mm}$ for frames of 5001mm to 10000mm.

Service Highway Distribution Penetration Options

Service highway distribution holes can be positioned at any point along the section length and across the web, dependent on web size. Contact **Kingspan Fabrik Design & Solutions Bureau** for advice.



All dimensions in millimetres.

Design

Fabrik facade units are designed to comply with BS 5950 Part 5: 1998 and BS 6399: Parts 1 & 2: 1997 Code of practice for dead, imposed and wind loadings for buildings. The design criteria is based upon allowable deflections due to wind loading.

Materials

All sections and profiles are manufactured from steel to BS EN 10147 Grade S390 GD, pre-galvanised with G275 coating and have a guaranteed minimum yield strength of 390 N/mm².

Durability

Galvanised steel Kingframe units have a lifetime durability in excess of 60 years when designed and installed to Kingspan Off-Site specification and recommendations.

Fasteners

Self drill/tap type fasteners are zinc plated with an organic coating. High strength steel rivets are zinc plated.

Internal Linings

Kingspan Fabrik facade panels are suitable for the application of any type of single or multi-layered internal lining methods for example, blockwork, plasterboard, fire linings, acoustic linings, cellulose fibre reinforced linings, 0.7mm steel or other specialist linings. Reference should be made to internal lining manufacturers recommendations regarding application, specification, performance and installation.

Building Regulations, Standards, Codes & Certification

Kingspan Fabrik Systems conform to the following Building Regulations and Standards:

- Developed and tested in conjunction with BRE - for certification details contact Kingspan Fabrik
- Energy Performance of Buildings Directive
- Approved Document A: Structure (England & Wales)
- Approved Document B: Fire (England & Wales)
- Approved Document E: Resistance to the Passage of Sound (England & Wales)
- Approved Document F: Ventilation (England & Wales)
- Approved Document Parts L1 and L2: Conservation of Fuel & Power (England & Wales)
- Code for Sustainable Homes (December 2006)
- BRE Green Guide
- NHBC
- Council of Mortgage Lenders (CML)
- DfES Building Bulletin (BB93) - Acoustic Design of Schools
- NHS Estates Technical Memorandum (HTM) 2045
- Building Standard Part D: Structural Fire Precautions (Scotland)
- Building Standard Part H: Resistance to the Transmission of Sound (Scotland)
- Building Standard Part J: Conservation of Fuel & Power (Scotland)
- DOE (Northern Ireland)
- HomeBond (Republic of Ireland)
- Technical Guidance Document Part A: Structure (Republic of Ireland)
- Technical Guidance Document Part B: Fire Safety (Republic of Ireland)
- Technical Guidance Document Part D: Materials & Workmanship (Republic of Ireland)
- Technical Guidance Document Part E: Sound (Republic of Ireland)
- Technical Guidance Document Part F: Ventilation (Republic of Ireland)
- Technical Guidance Document Part L: Conservation of Fuel & Energy (Republic of Ireland)



Technical Specification

NBS Plus Specification

NBS Clauses completed to show various facade systems

Rainscreen construction - Kingspan Fabrik Systems

H92 Rainscreen Cladding

120 Rainscreen Cladding

Kingspan Fabrik Facade System

Kingspan Fabrik Ltd, a division of Kingspan, manufacture and assemble framing systems designed for use on low, medium and high-rise steel and concrete framed buildings. Consult Kingspan Fabrik technical literature for details. As the Fabrik Facade Systems can be designed to suit individual requirements, the following headings should be completed to allow Kingspan Fabrik to complete the design and specification and it is recommended that they are consulted early in the design process.

120 Rainscreen Cladding: (Insert location eg. to Facade).

Primary support structure: (Insert details).

Rainscreen cladding system:

Manufacturer: Kingspan Fabrik Ltd,
The Brickworks, Grangegeeth, Slane,
County Meath, Ireland.
Tel: 00 353 41 988 4800 Fax: 00 353 41 988 4801
Email: info@kingspanfabrik.com
www.kingspanfabrik.com

Type: Kingspan Fabrik Facade Panels.

Rainscreen panel:

Manufacturer: Kingspan Fabrik Ltd,
The Brickworks, Grangegeeth, Slane,
County Meath, Ireland.
Tel: 00 353 41 988 4800 Fax: 00 353 41 988 4801
Email: info@kingspanfabrik.com
www.kingspanfabrik.com

Product reference: Kingspan Fabrik Facade Panels.

Material: External high quality aggregate facing on glass reinforced concrete (GRC) backing mix.

Thickness: Fabrik facade panel 18-23mm (comprising external facing, in range of finishes, 6-8mm thick non-structural. Internal GRC backing minimum 12-15mm thick.). Overall complete build-up thickness (ie, Fabrik facade, cavity, insulation and Kingframe) is flexible depending on application, required insulation thickness and wind loadings, etc. Typical total system thickness will range from 220-340mm.

Finish/Colour: Kingspan Fabrik panels incorporate a vast range of formats, textures, colours and finishes, either sand blasted or polished, including: Brick, Stone (*incl. sandstone, Portland, granite*), Fair-face concrete, Smooth Render, Textured Render, Hung Slate & Tile, Terracotta (*small, medium and large format*), High Pressure Laminate (*HPL*), Timber and other bespoke finishes.

Fasteners/Connections: Fabrik facade panels are connected to the Kingframe studs with 6mm diameter stainless steel flex anchors. Flex anchors spaced at 600mm centres provide resistance to lateral loadings. The external face is vertically supported with 8mm diameter stainless steel gravity anchors connected to the Kingframe studs.

Number and location: 600mm centres.

Joint type: Sealed joint.

Joint width: Minimum 10mm.

Air gap: Minimum 20 mm.

Secondary support/framing system: Not required.

Backing wall: Kingspan Fabrik Ltd,
The Brickworks, Grangegeeth, Slane,
County Meath, Ireland.
Tel: 00 353 41 988 4800 Fax: 00 353 41 988 4801
Email: info@kingspanfabrik.com
www.kingspanfabrik.com

System reference: Kingspan Fabrik Facade Panels.

Type: Single storey, Multi-storey, Spandrel or Dado.

Position: Recessed or Face-fixed.

Height: (Insert details).

Structural performance:

Strength grade to BS 5234-2: (Insert requirements).

Air pressure and deflection: (Insert requirements).

Fire resistance of complete partition assembly to BS 476-20 and -22, and BS EN 1364-1:

Integrity/insulation: (Insert requirements).

Sound insulation of complete partition assembly: Weighted sound reduction index R_w (minimum) to BS EN ISO 717-1: (Insert requirements).

Acoustic and fire compartmentation and space separation requirements: (Insert details).

Internal linings: Drylining Systems as NBS K10. All types of internal lining systems, including plasterboard, cellulose board and other specialist fire or acoustic performance materials.

Thermal insulation: Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation board as clause 776.

Accessories: *(Insert details).*

Incorporated components: *(Insert details).*

Other requirements: *(Insert details).*

776 Thermal Insulation

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation board with a rigid urethane insulation core of typical density 32 kg/m² with low emissivity composite foil facings on both sides.

Board size: Typically to suit storey height dimension x 1200mm width.

Thickness: 35, 45, 60 and 85mm. The boards achieve a thermal conductivity of 0.022-0.023 W/m.K.

It is recommended that the guidance give in H92 regarding fire and acoustic performance and the use of cavity barriers is taken into consideration when designing the facade layout. Consult Kingspan Insulation's technical literature for details and guidance.

Material: Rigid urethane insulation core with composite foil facings on both sides.

Manufacturer: Kingspan Insulation Ltd, Pembridge, Leominster, Herefordshire HR6 9LA.
Tel: 0870 8508555 Fax: 0870 8508666.
Email: literature.uk@insulation.kingspan.com
www.insulation.kingspan.com

Product reference: Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation board.

Thickness: *(Insert details).* See performance data sheet.

Installation: Insulation is factory installed so that the facade frame is totally enclosed within the internal environment of the building, thus eliminating any condensation, moisture ingress, cold-bridging or mould problems. Insulation boards are fixed to the facade frames with sides and ends tightly butted together to ensure certainty of insulation and thermal continuity.

Insulation board sides and ends are factory taped using high strength 75mm wide aluminium foil tape which guarantees a high level of airtightness and on-site weather resistance robustness during the on-site period prior to installation of the exterior facade finish.

Kingspan Fabrik Systems can incorporate a range of windows, doors and brise soleil systems. These should be specified in the following NBS Sections:

Windows:

NorDan UK Ltd – NBS L10/210. A range of wood casement, horizontal and vertical sliding and tilt and turn windows.

Technal – NBS L10/330. A range of aluminium casement, horizontal and vertical sliding and tilt and turn windows.

REHAU – NBS L10/350. A range of PVC-U casement, horizontal and vertical sliding and tilt and turn windows.

VELFAC Ltd – NBS L10/400. A range of aluminium and wood composite windows available in casement, horizontal and vertical sliding and tilt and turn format.

Doors:

LS Longdon (Leaderflush) – NBS L20/420. A range of panelled and boarded wood doorsets.

Technal – NBS L20/480. A range of aluminium doorsets.

Brise Soleil:

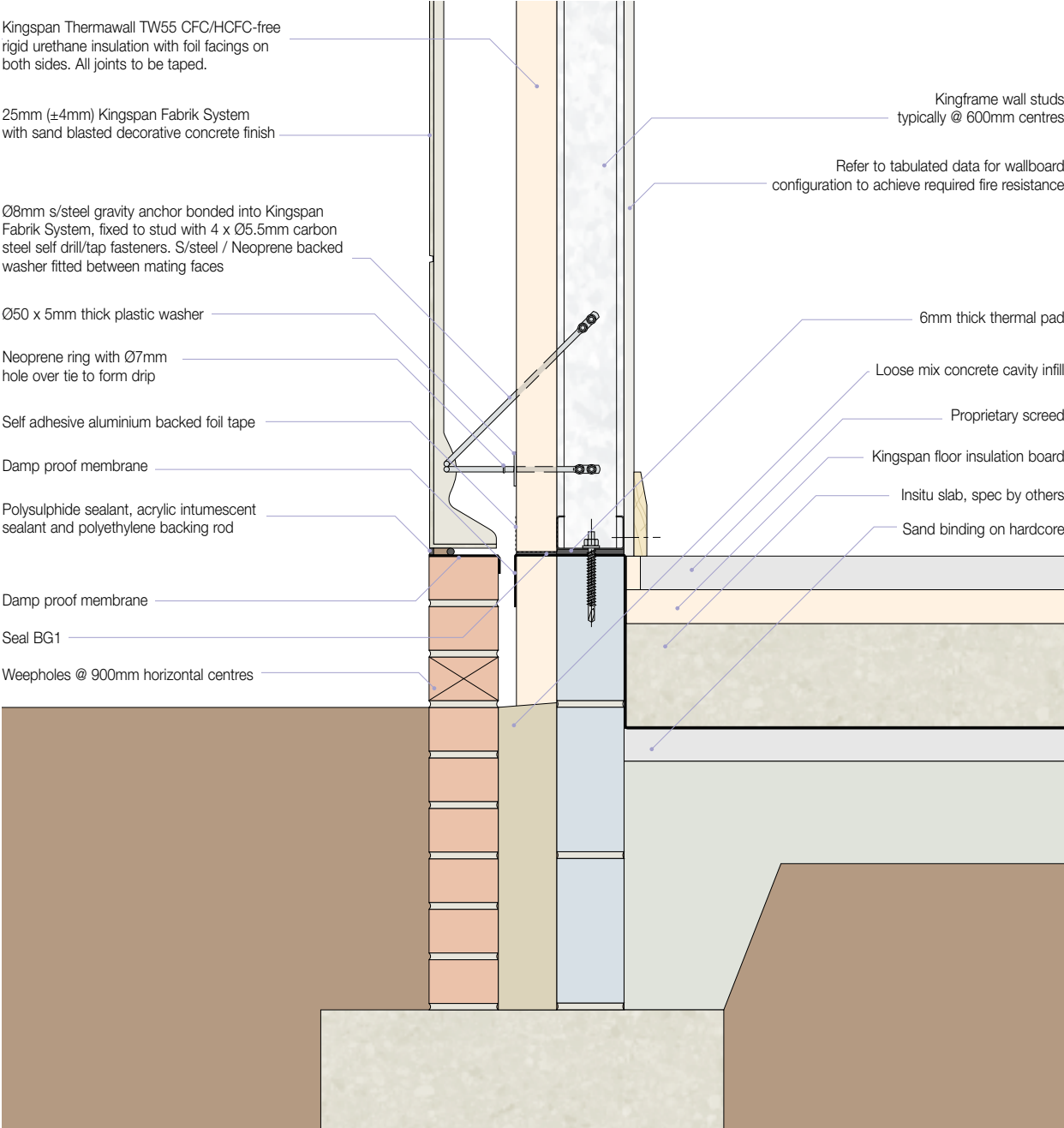
Levolux Ltd – NBS L10/670. A range of products that are designed to control light, heat and glare.

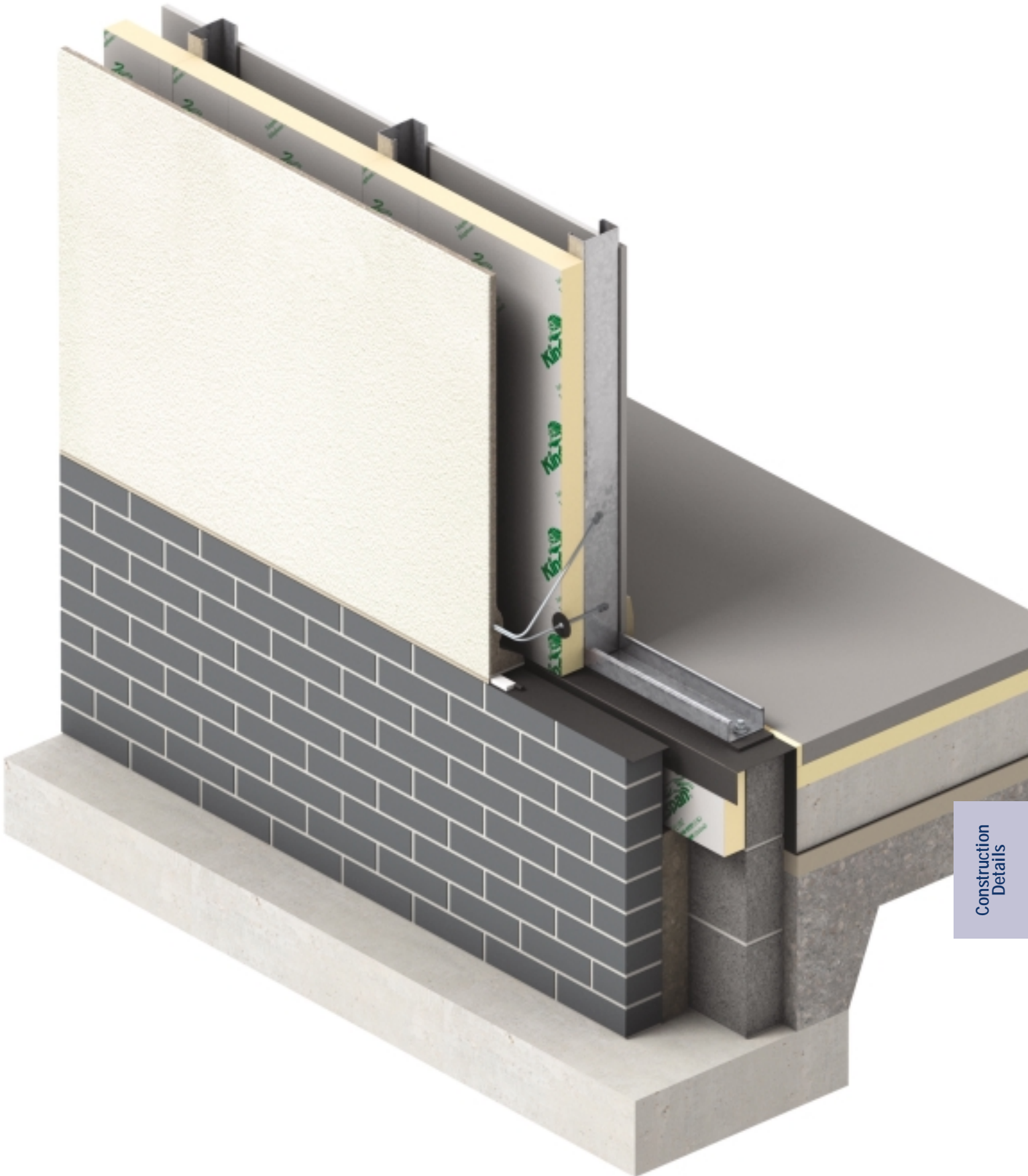
Technal – NBS L10/670. A range of products that are designed to control light, heat and glare.

When specifying windows, doors and brise soleil, it is important to consult with the individual manufacturer for recommendations and details early in the design process.

Foundation Detail

Raft

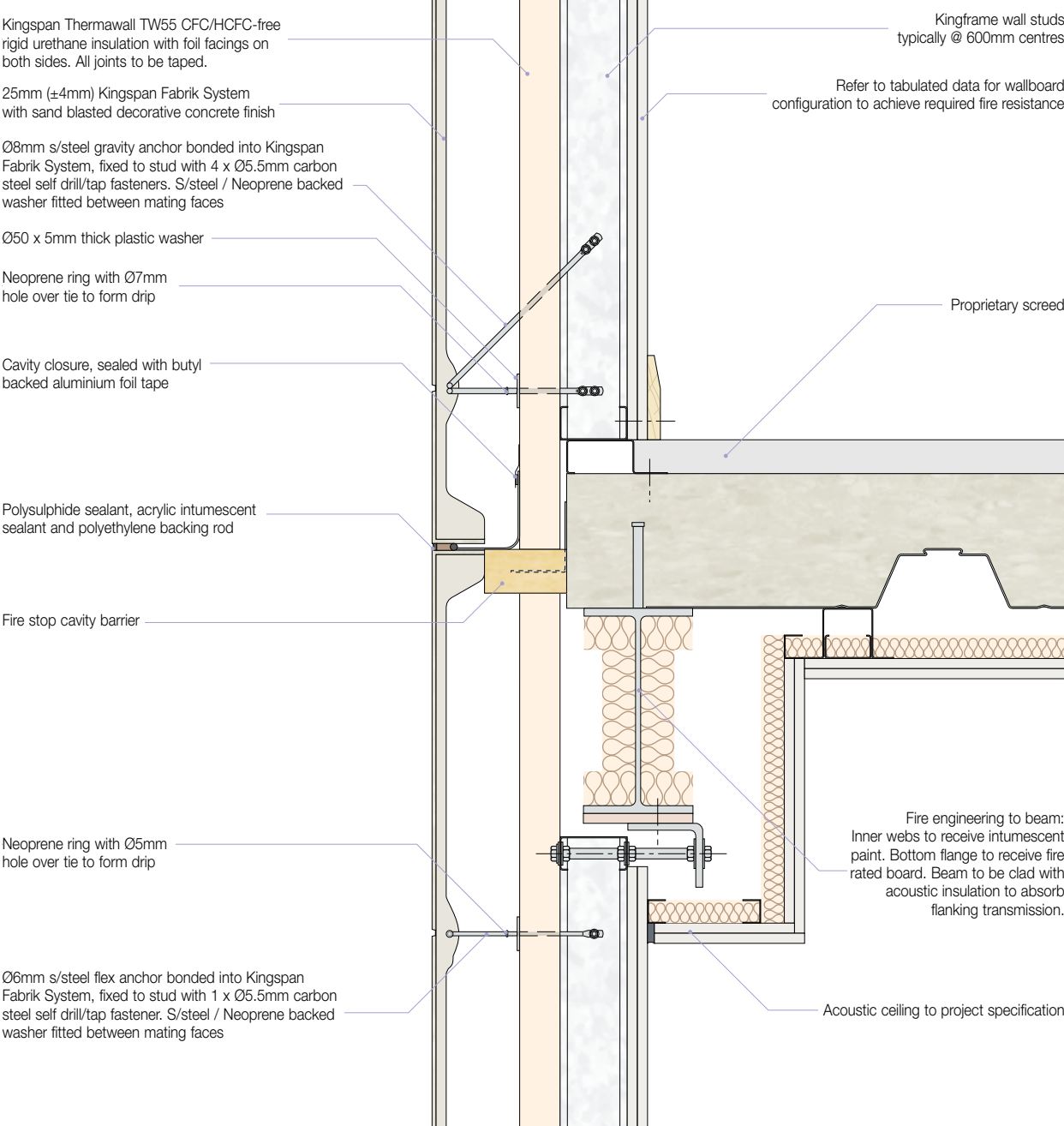




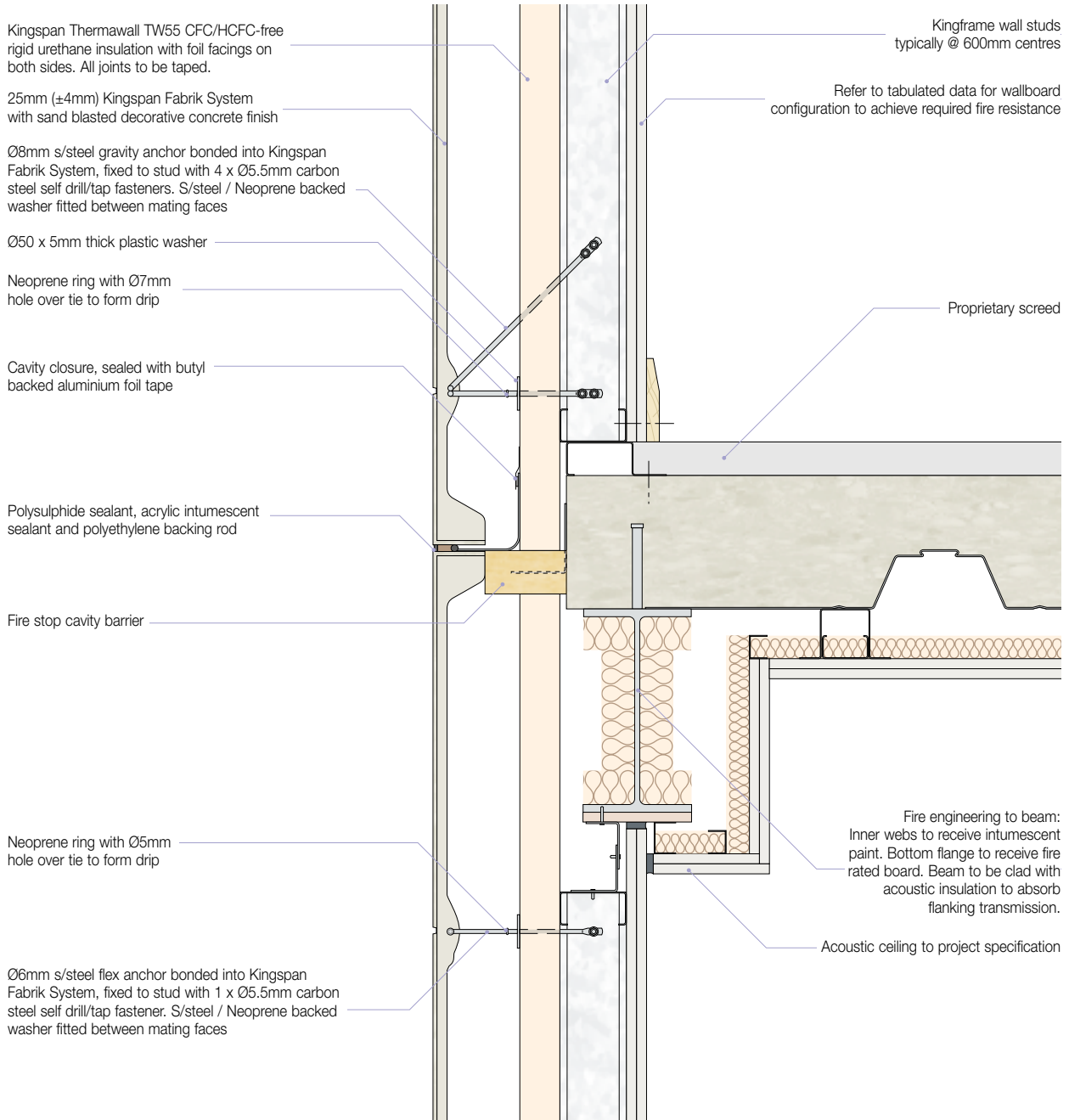
Construction
Details

Intermediate Floor Details

Steel Recessed: Intermediate Floor, Insitu Cast - Part E Compliant

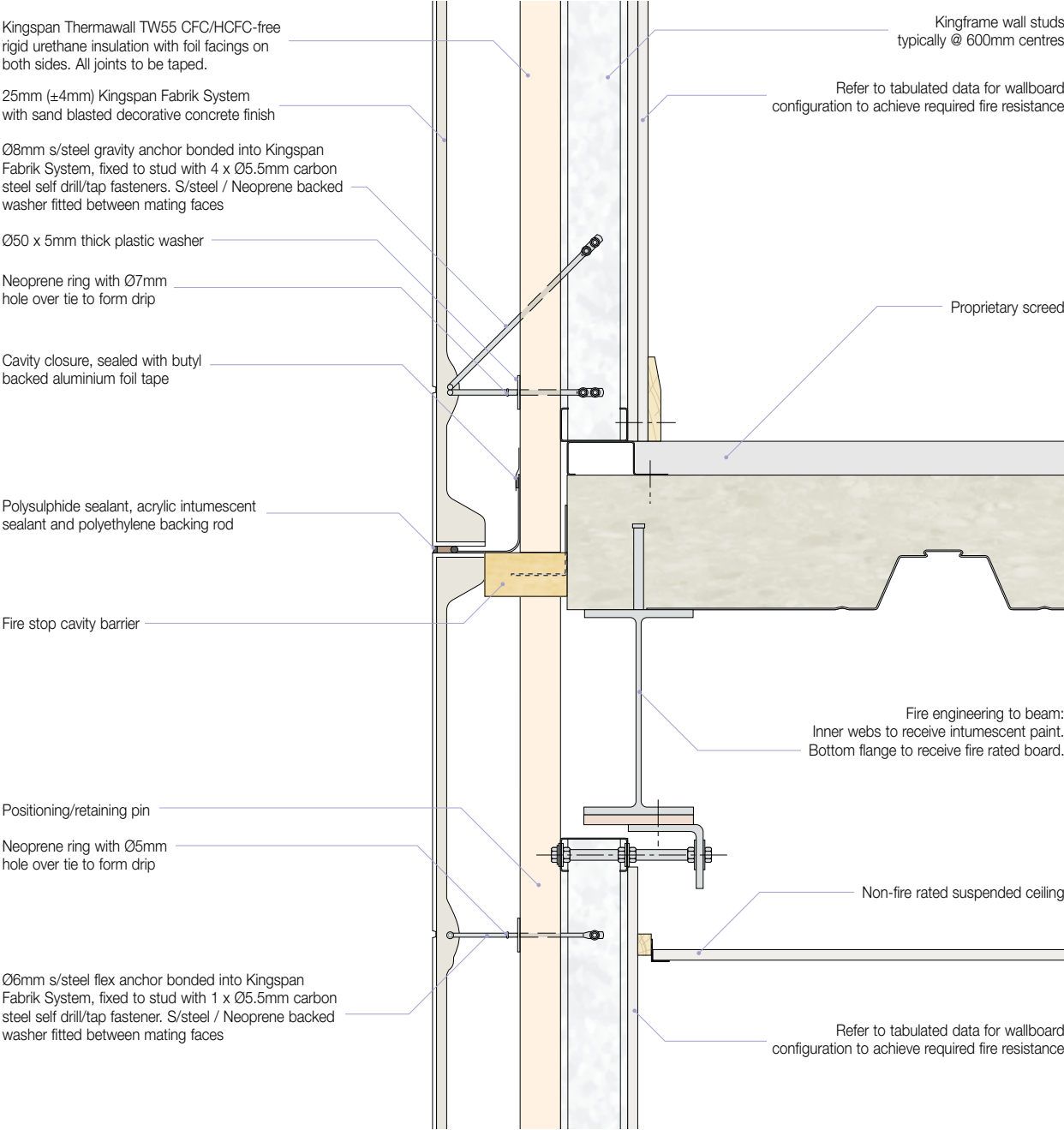


Steel Recessed: Intermediate Floor, Insitu Cast - Part E Compliant

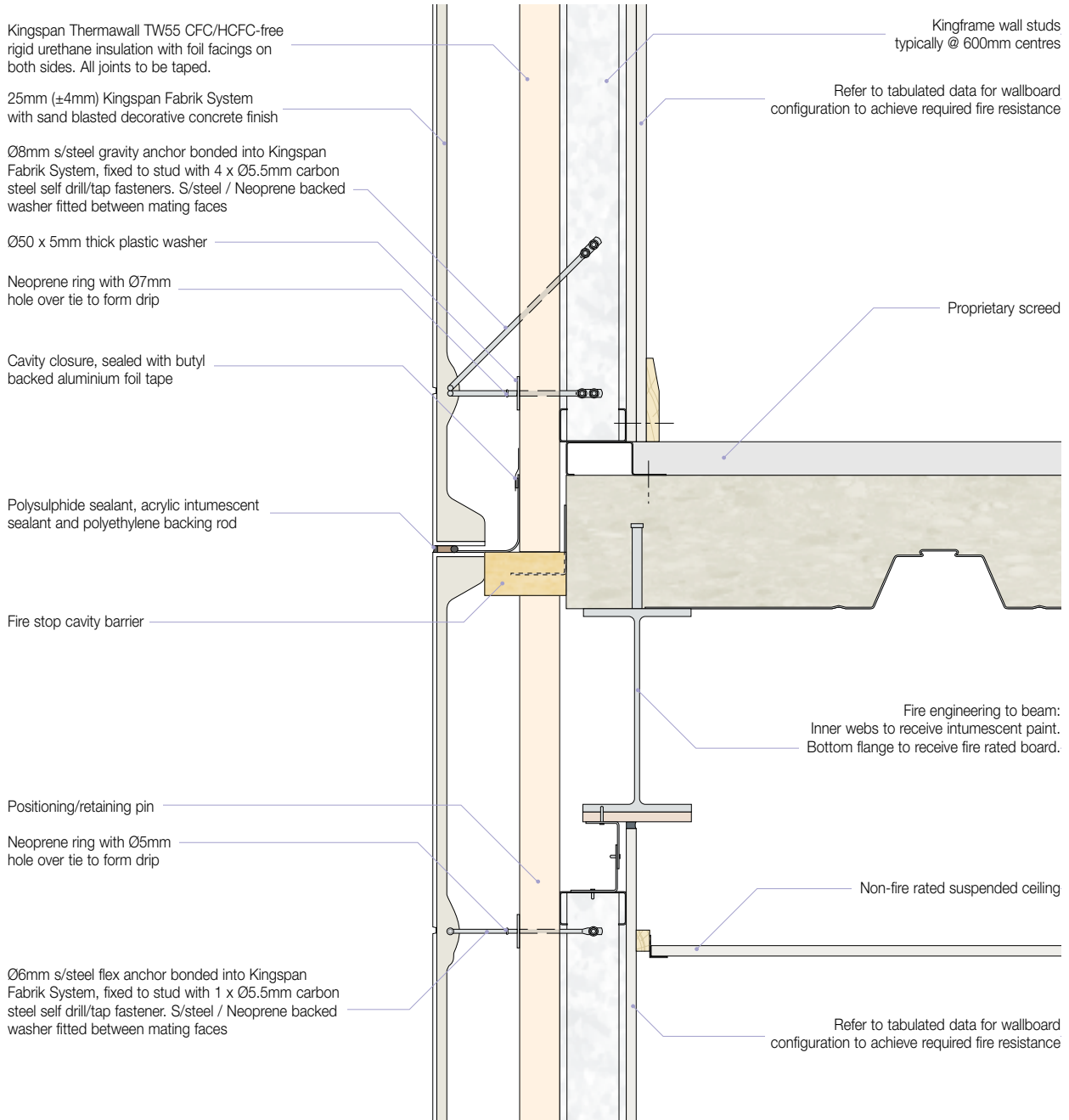


Intermediate Floor Details

Steel Recessed: Intermediate Floor, Insitu Cast



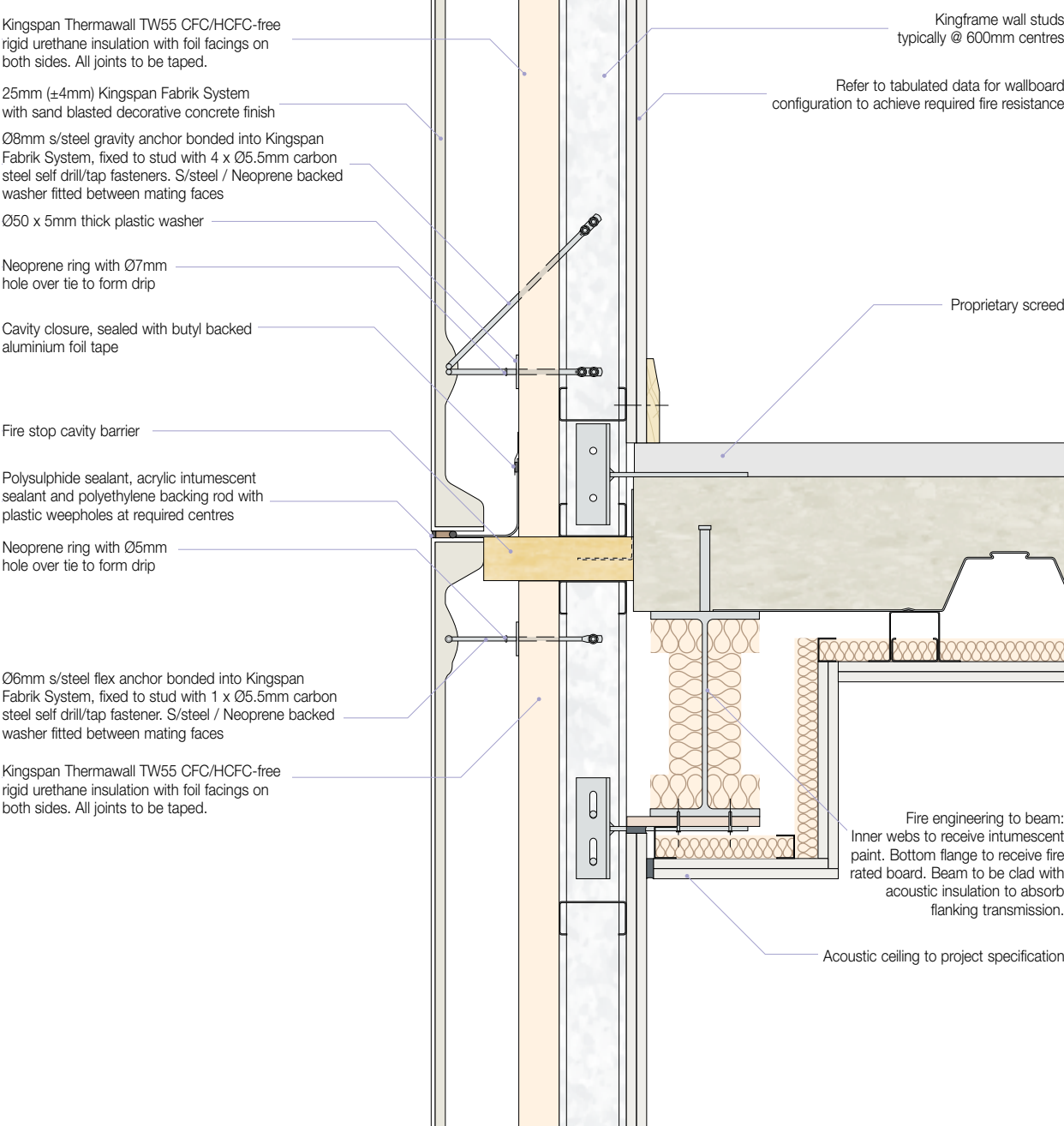
Steel Recessed: Intermediate Floor, Insitu Cast



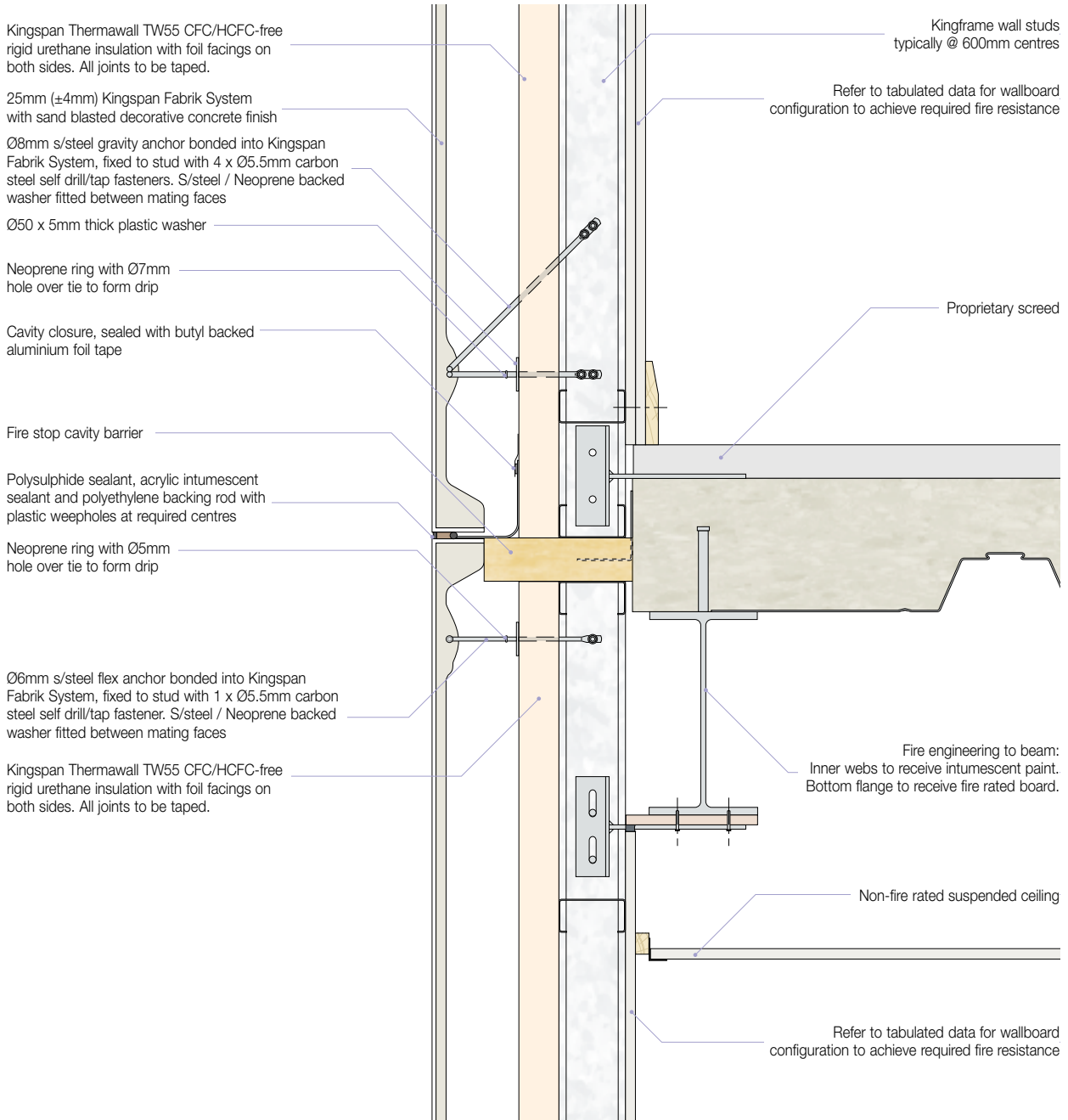
Construction
Details

Intermediate Floor Details

Steel Face-fixed: Intermediate Floor, Insitu Cast - Part E Compliant

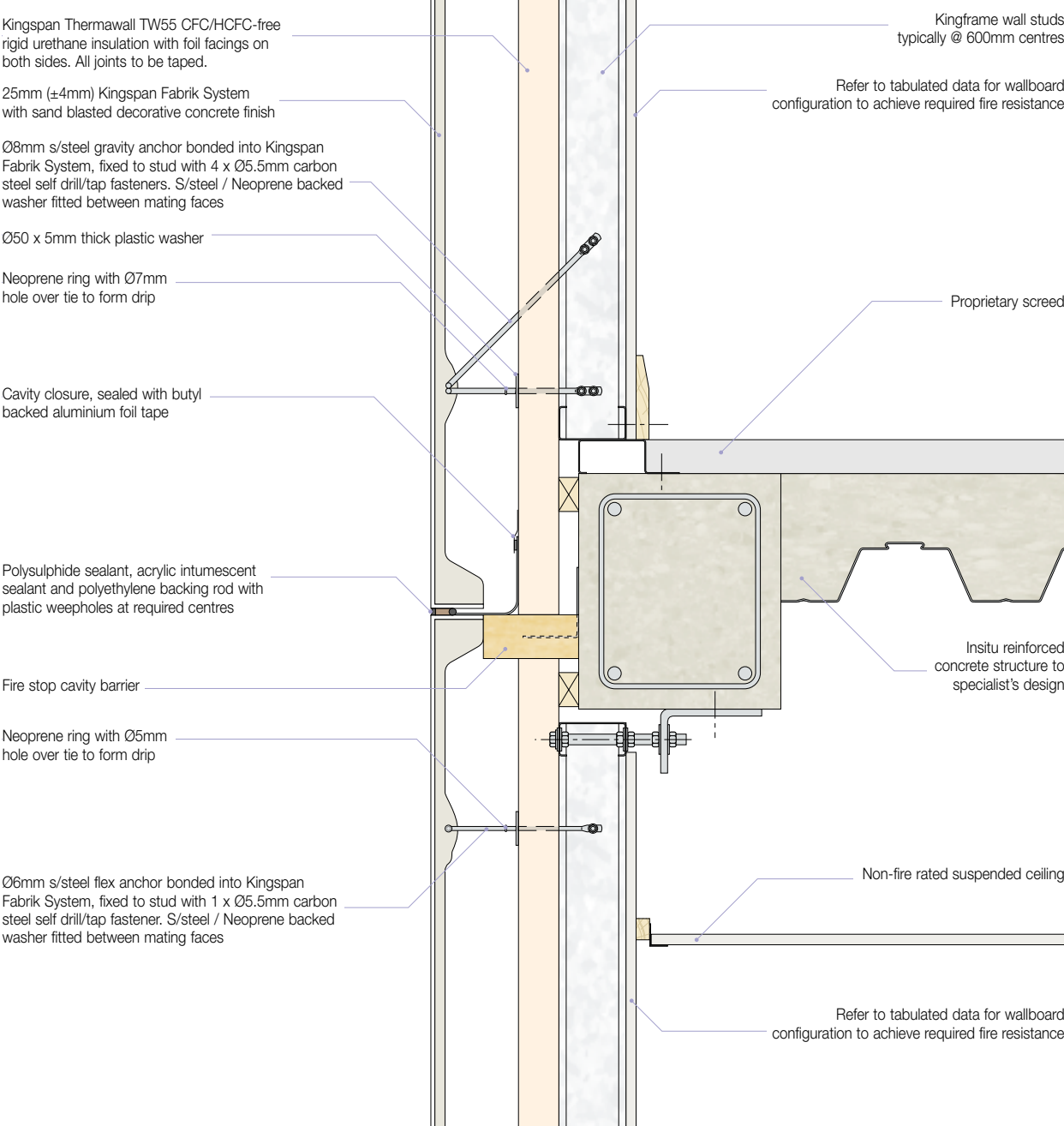


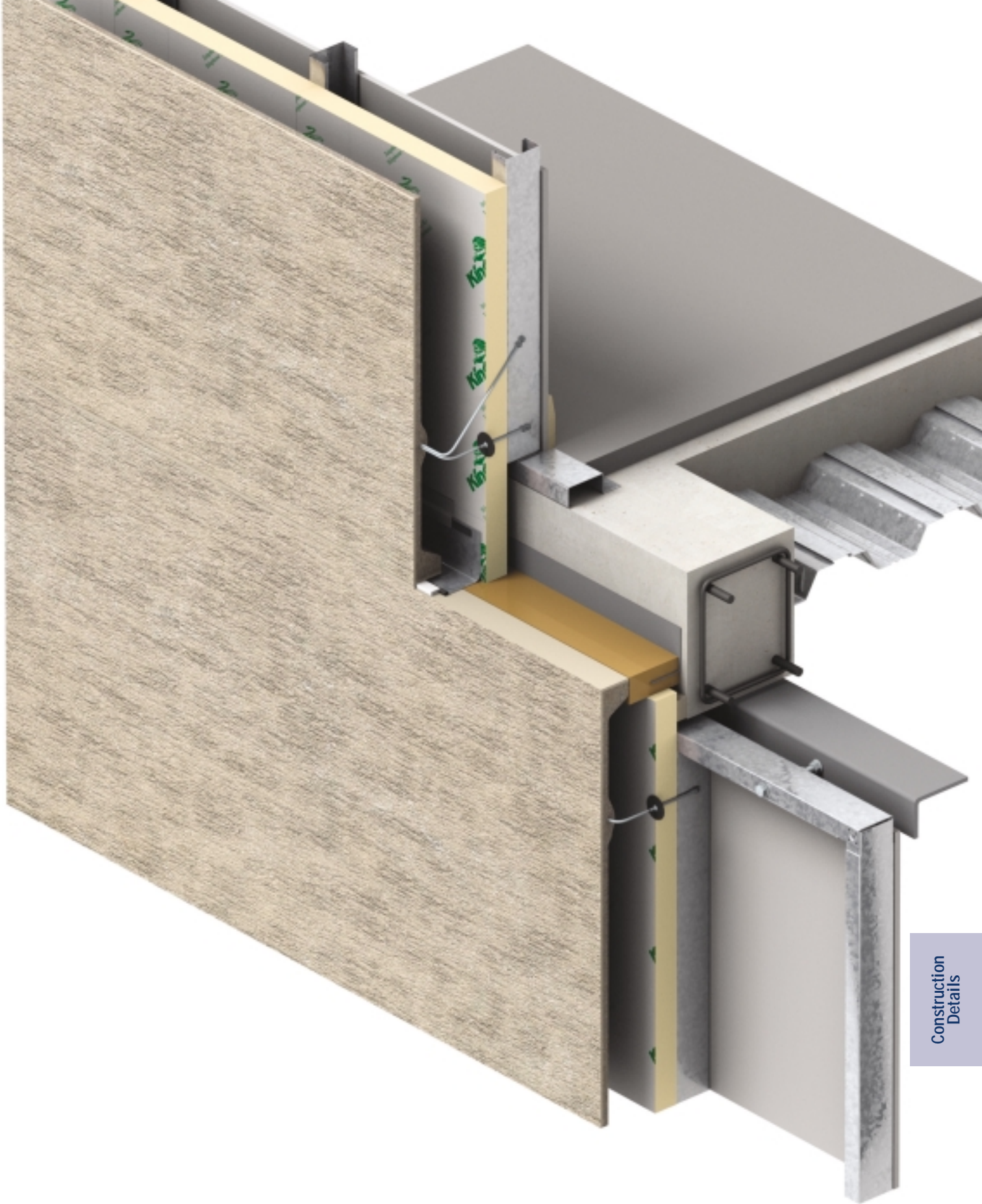
Steel Face-fixed: Intermediate Floor, Insitu Cast



Intermediate Floor Details

Concrete Recessed: Intermediate Floor, Insitu Cast - Part E Compliant

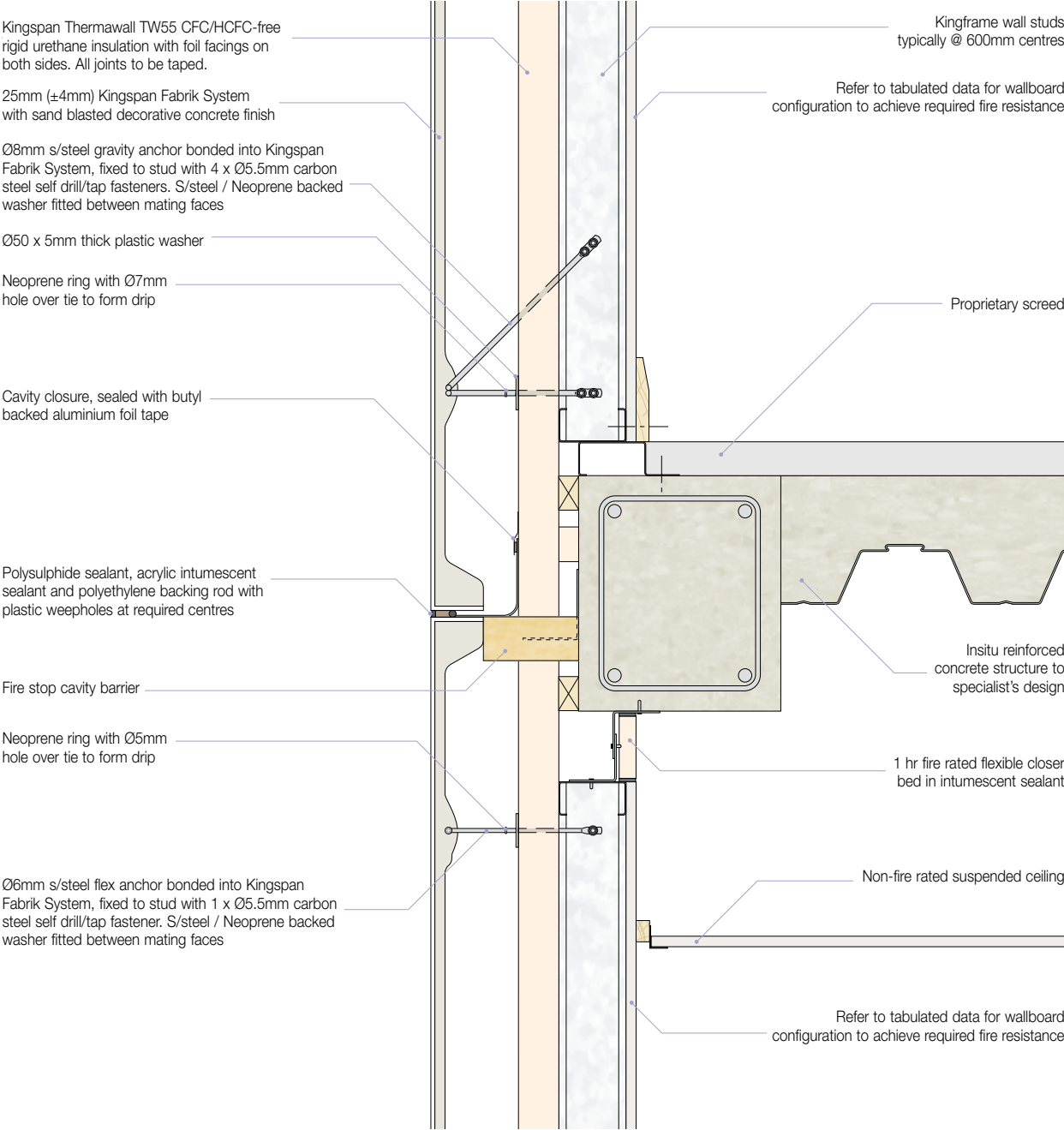




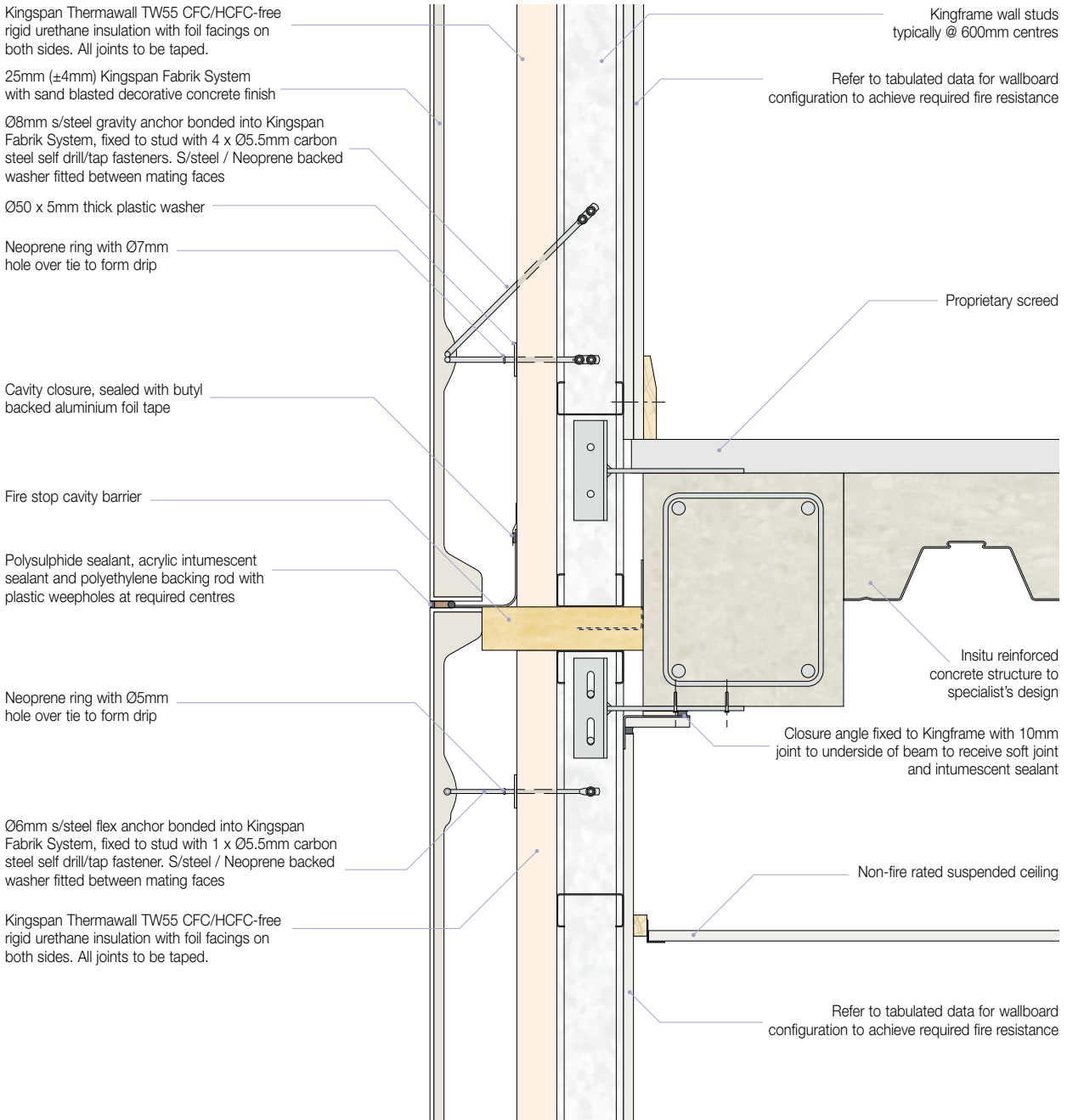
Construction
Details

Intermediate Floor Details

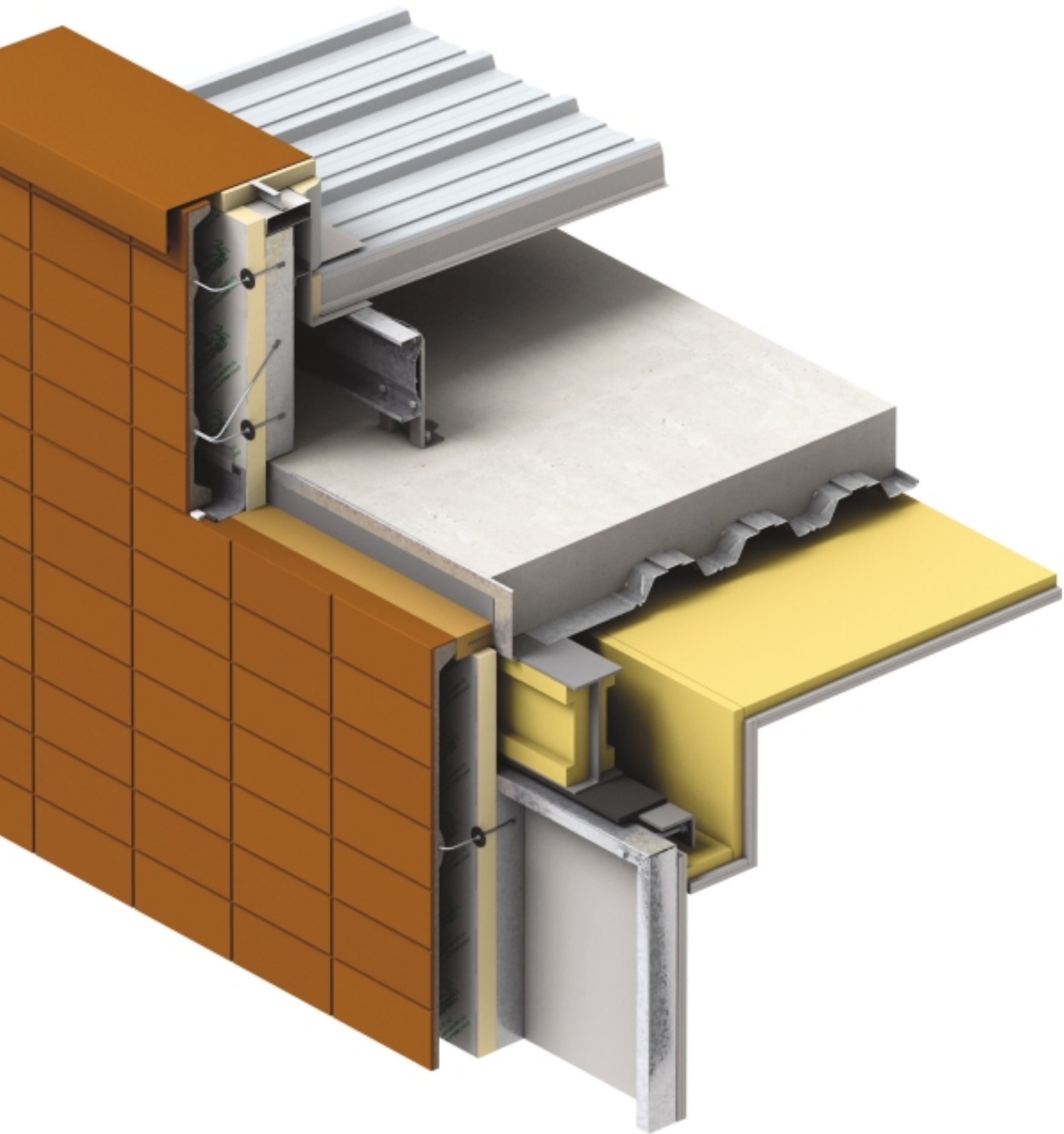
Concrete Recessed: Intermediate Floor, Insitu Cast - Part E Compliant



Concrete Face-fixed: Intermediate Floor, Insitu Cast - Part E Compliant

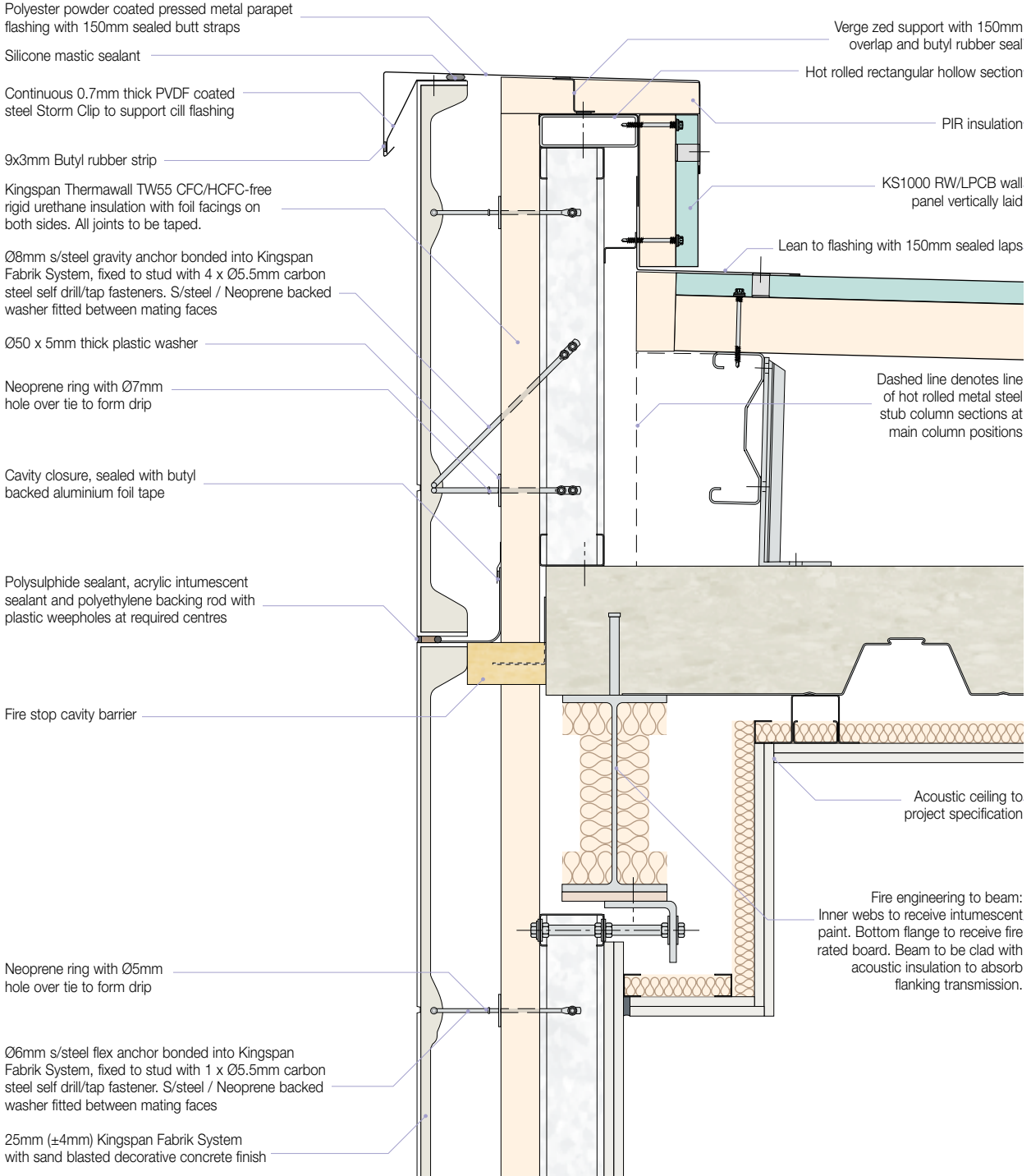


Construction Details



Eaves Details

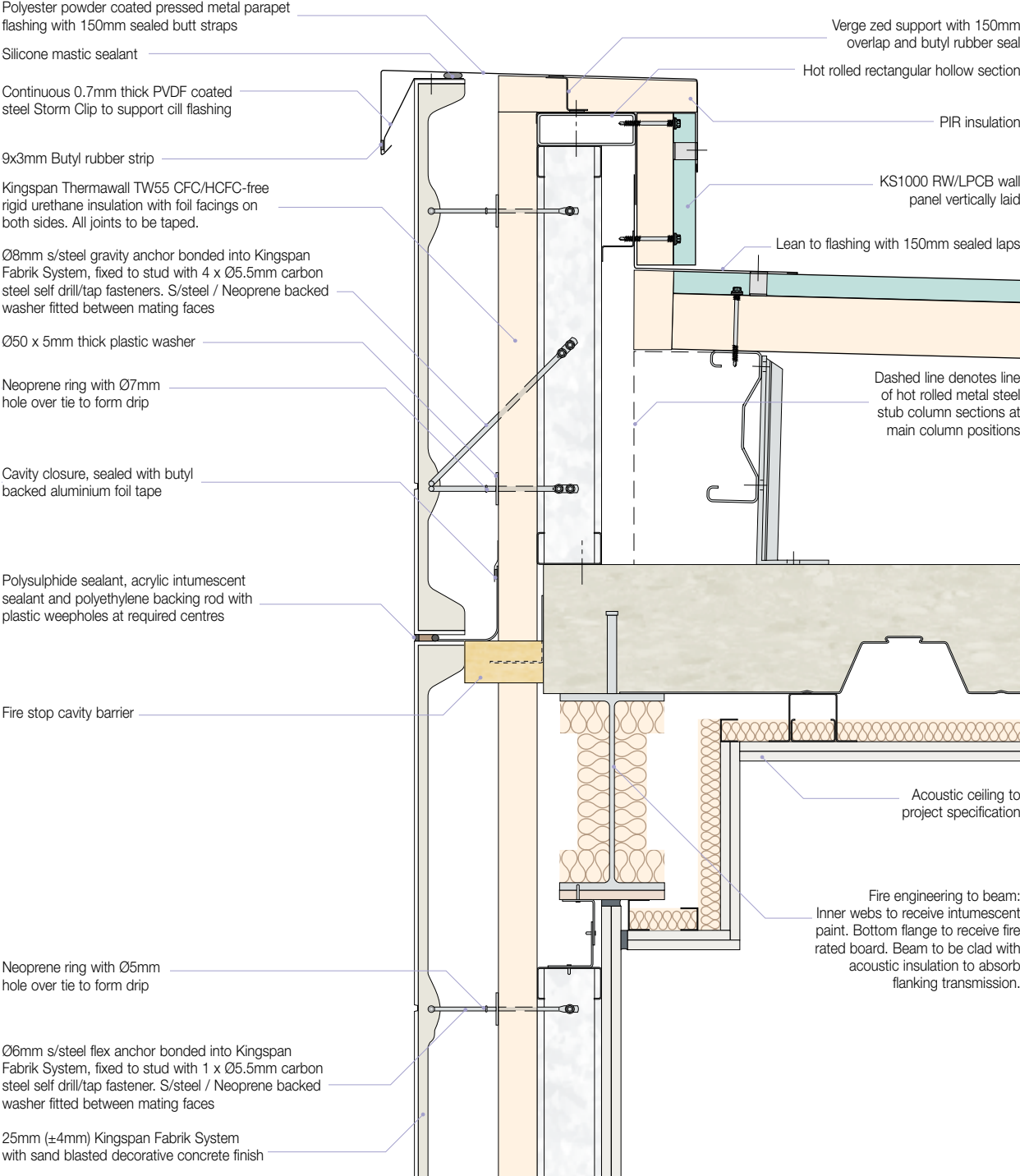
Steel Recessed: Parapet Eaves, Concrete Deck



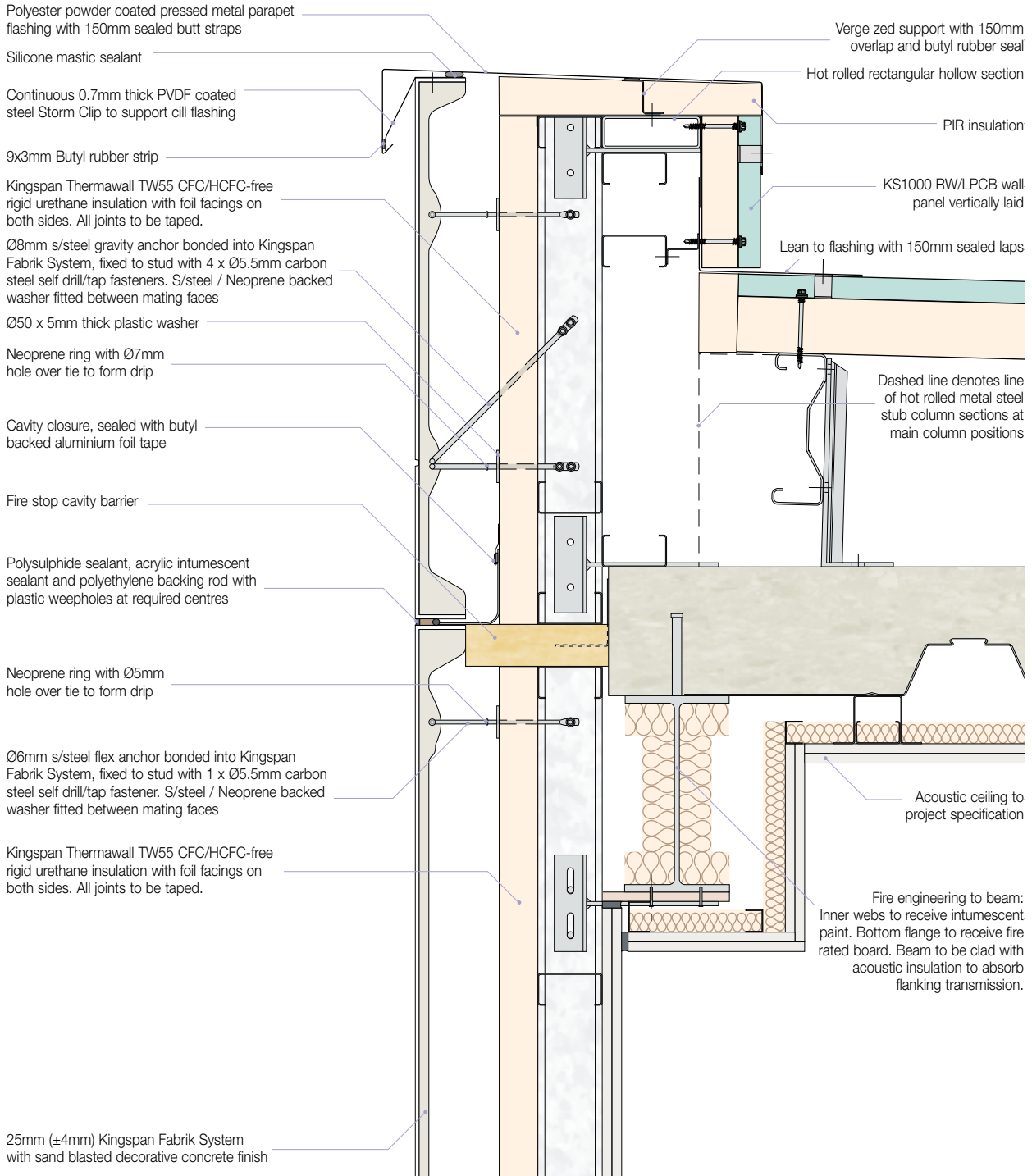
Construction Details

Eaves Details

Steel Recessed: Parapet Eaves, Concrete Deck

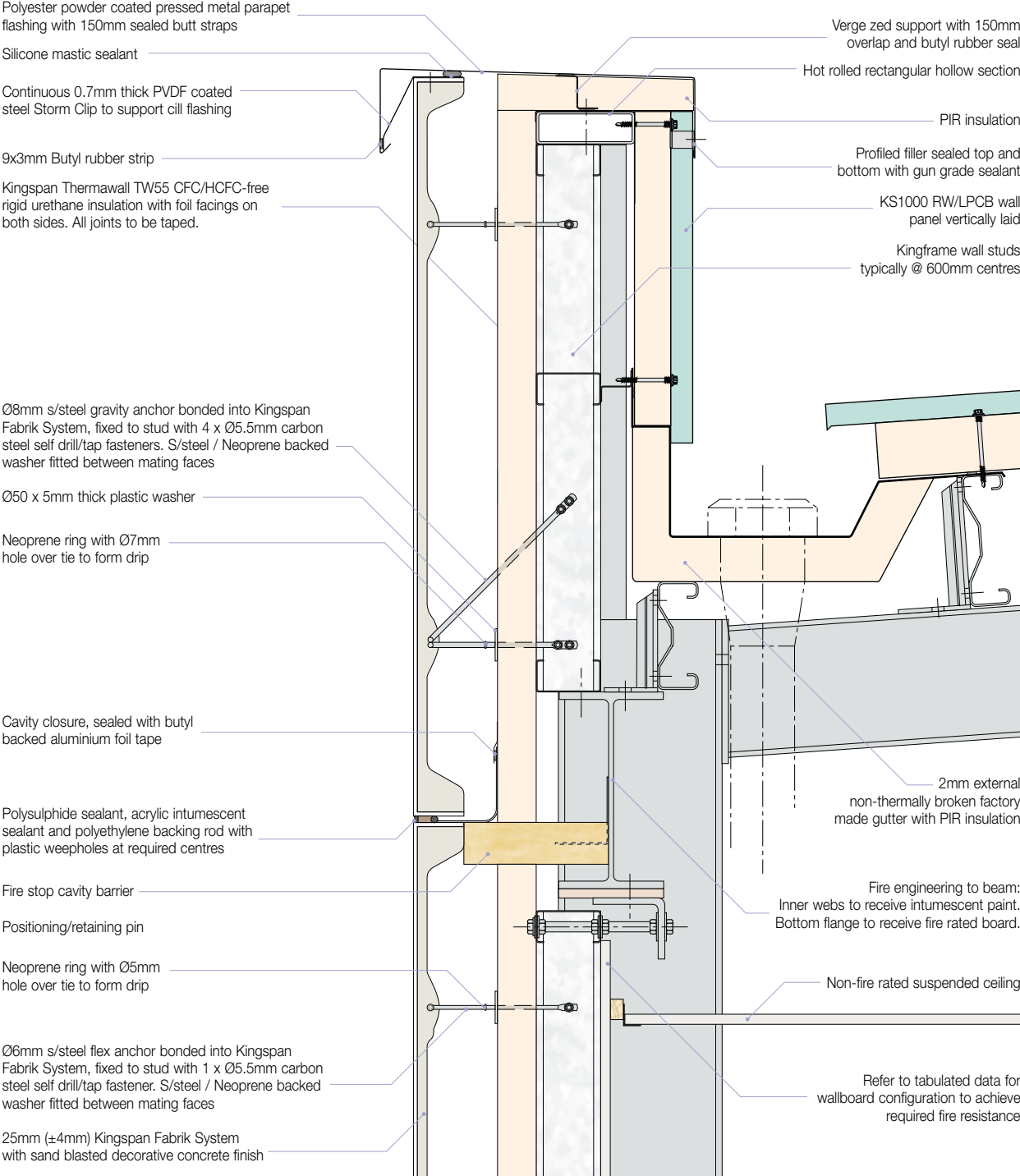


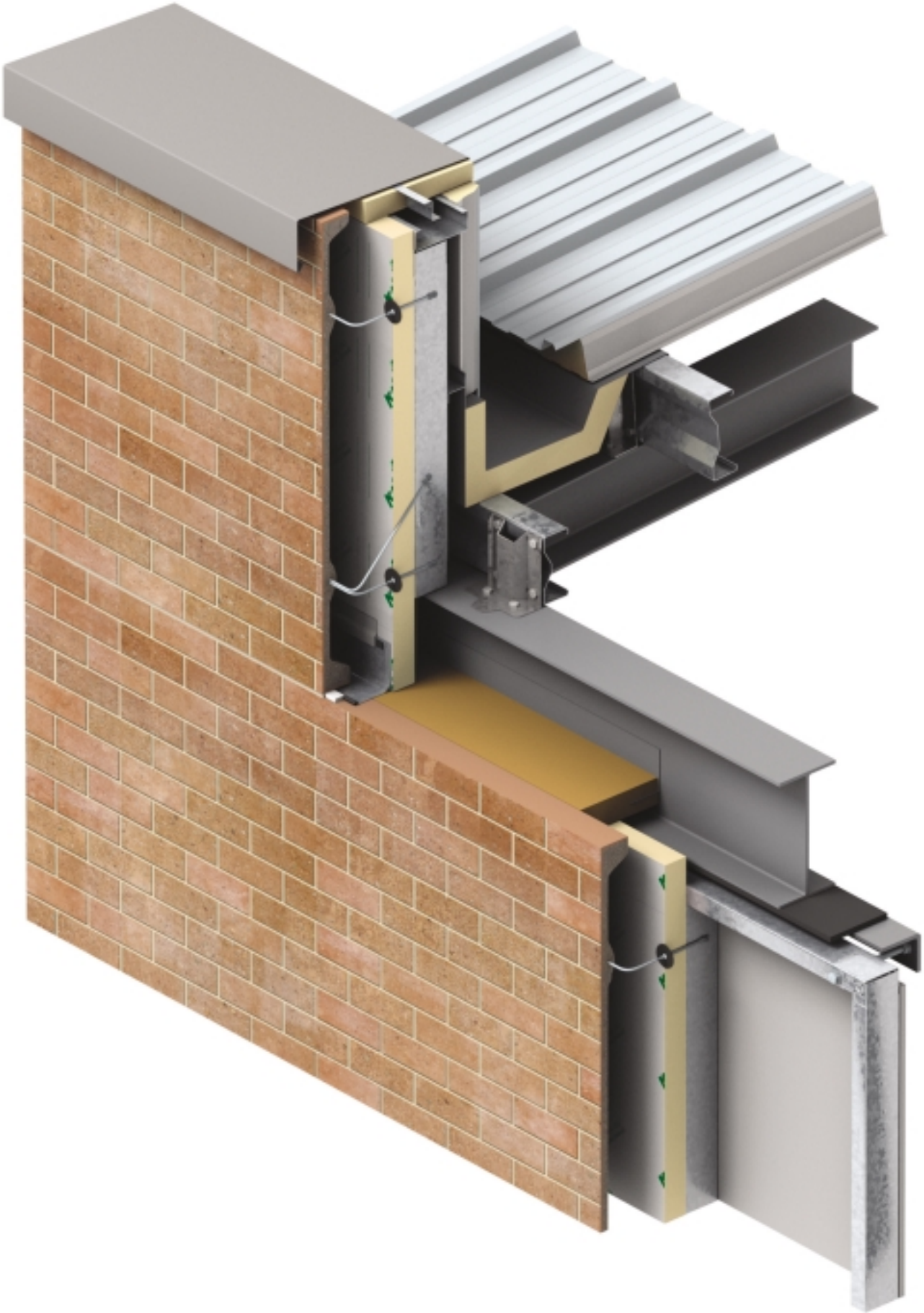
Steel Face-fixed: Parapet Eaves, Concrete Deck



Eaves Details

Steel Recessed: Parapet Eaves, Portal Frame

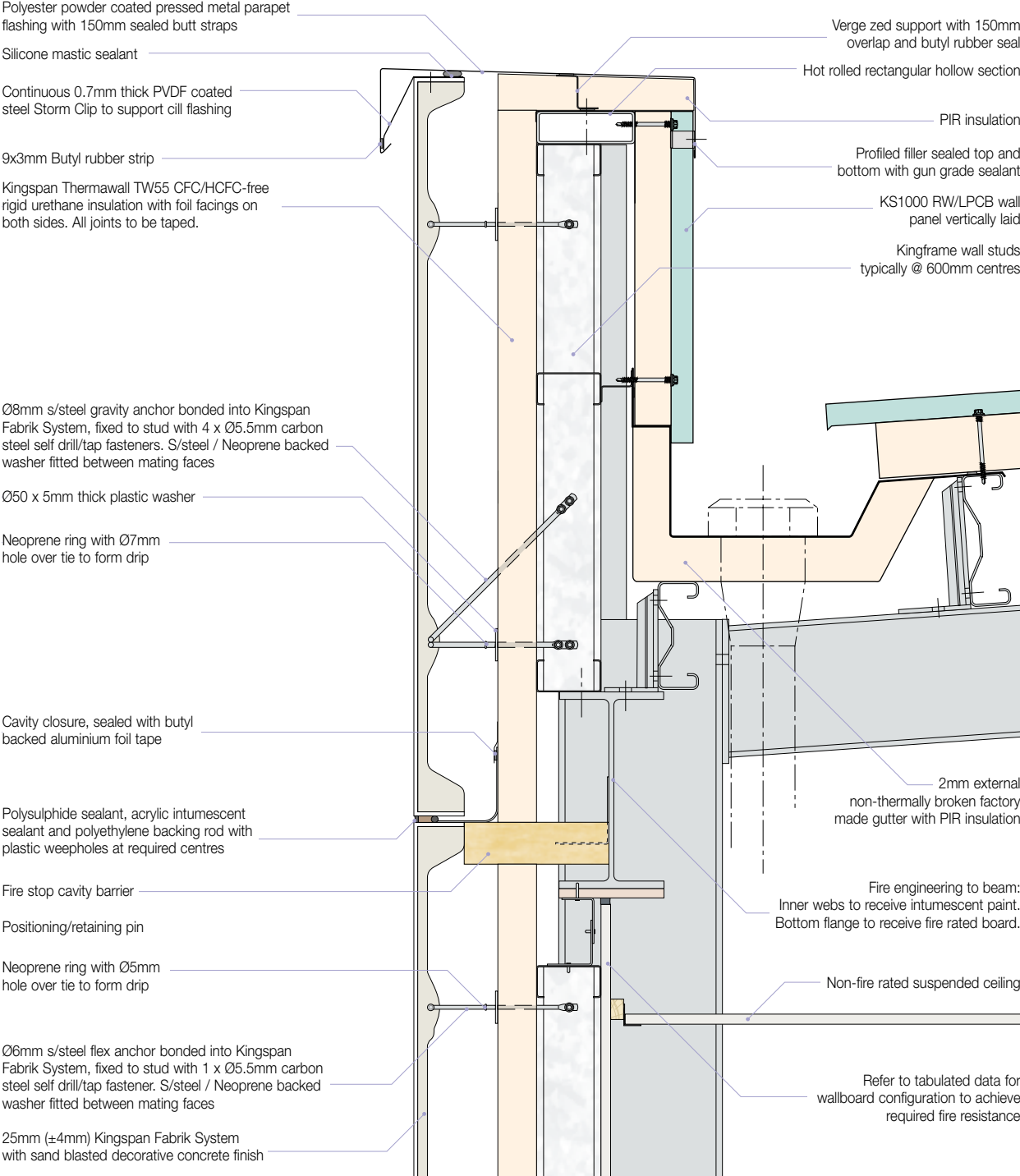




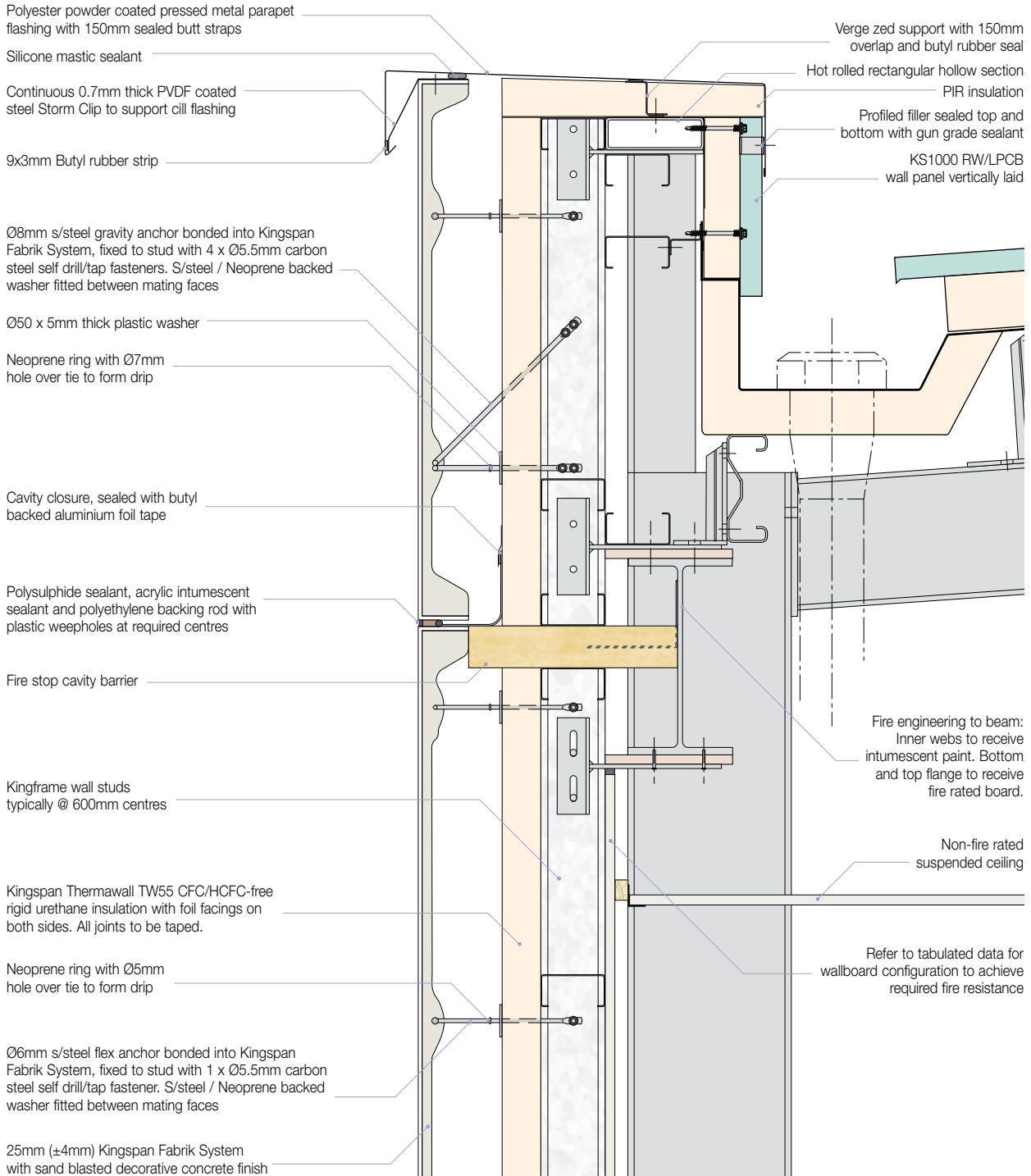
Construction
Details

Eaves Details

Steel Recessed: Parapet Eaves, Portal Frame



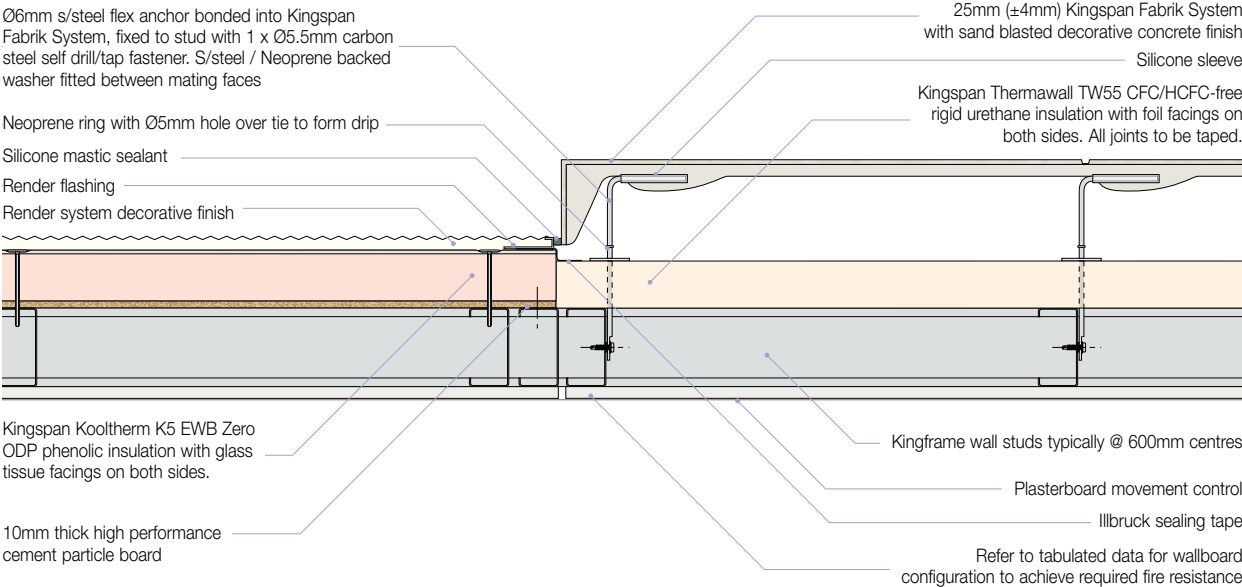
Steel Face-fixed: Parapet Eaves, Portal Frame



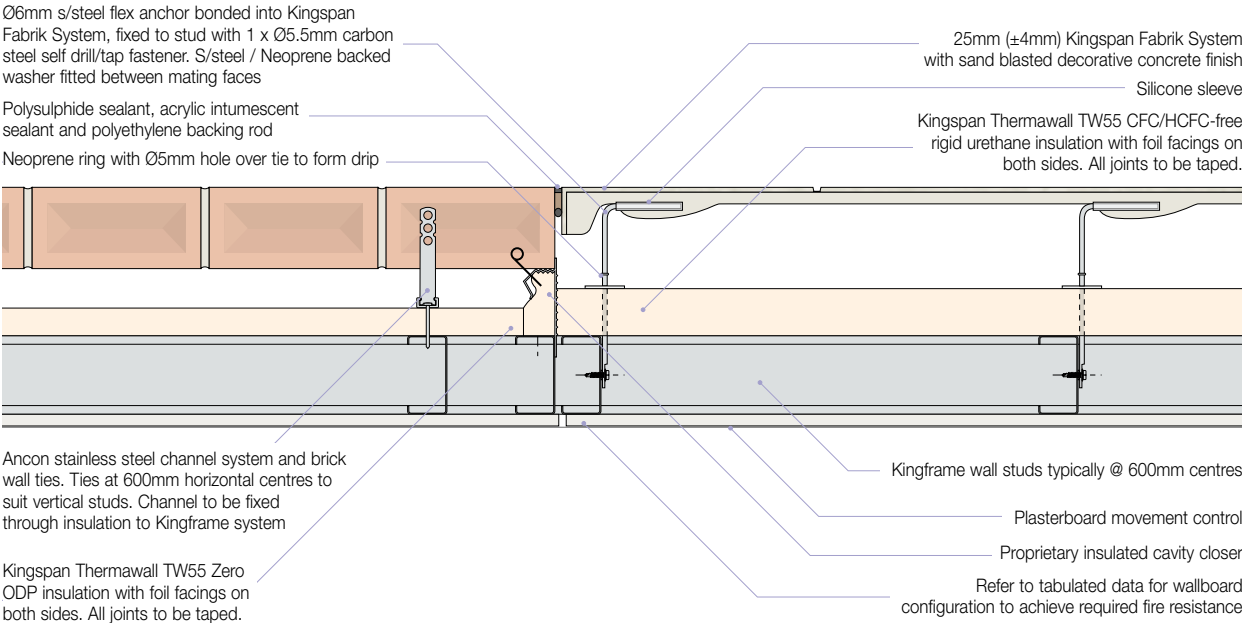
Construction Details

Horizontal Abutment Details

Fabrik & Recessed Direct Insulated Render



Fabrik & Brickwork



Vertical Abutment Detail

Fabrik & Brickwork

Kingframe wall studs typically @ 600mm centres

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.

Ø6mm s/steel gravity anchor bonded into Kingspan Fabrik System, fixed to stud with 1 x Ø5.5mm carbon steel self drill/tap fastener. S/steel / Neoprene backed washer fitted between mating faces

Ø50 x 5mm thick plastic washer

Neoprene ring with Ø7mm hole over tie to form drip

25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish

Hyload original pitch polymer dpc bonded to back face of frame

Polysulphide sealant, acrylic intumescent sealant and polyethylene backing rod with plastic weepholes at required centres

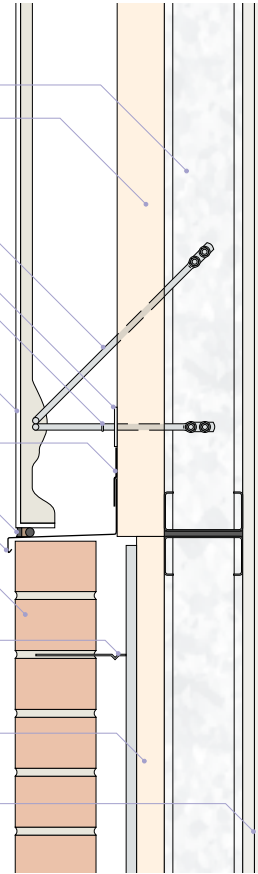
Pressed aluminium cill drip flashing

Facing brickwork to comply with BS 3921 : 1985 FL Quality (or BS EN 771-1)

Ancon stainless steel channel system and brick wall ties.
Ties at 600mm horizontal centres to suit vertical studs.
Channel to be fixed through insulation to Kingframe system

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.

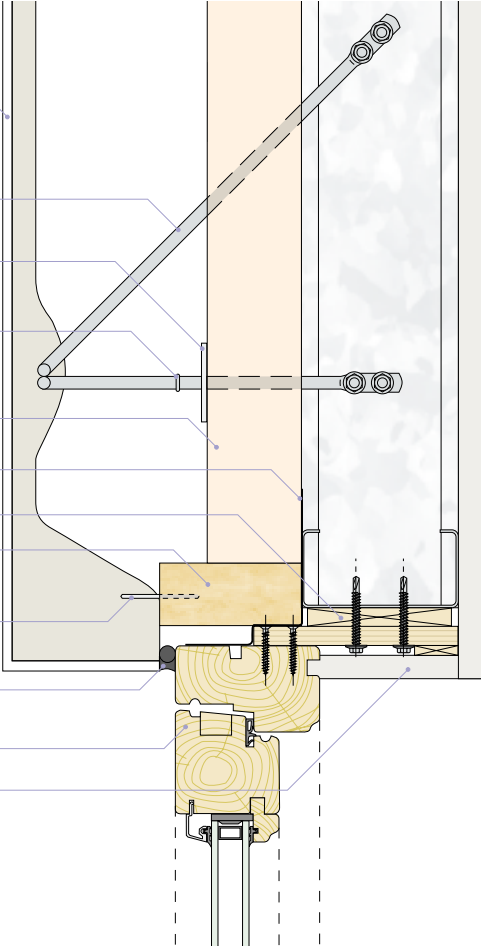
Refer to tabulated data for wallboard configuration to achieve required fire resistance



Door Details

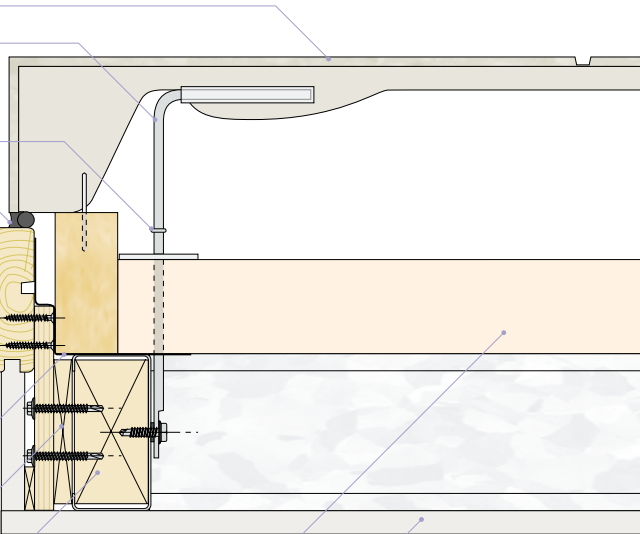
Head (NorDan)

- 25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish
- Ø8mm s/steel flex anchor bonded into Kingspan Fabrik System, fixed to stud with 4 x Ø5.5mm carbon steel self drill/tap fasteners. S/steel / Neoprene backed washer fitted between mating faces
- Ø50 x 5mm thick plastic washer
- Neoprene ring with Ø7mm hole over tie to form drip
- Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.
- Hyload original pitch polymer dpc bonded to back face of frame
- Timber/plywood packers to allow for tolerance
- Fire rated cavity closer
- Cast-in retaining pin
- Polyethylene backing rod with silicone sealant
- NorDan door frame fixed to Kingframe with self-tapping screws through 12mm treated continuous Viroc (or similar)
- Refer to tabulated data for wallboard configuration to achieve required fire resistance



Jamb (NorDan)

- 25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish
- Ø6mm s/steel flex anchor bonded into Kingspan Fabrik System, fixed to stud with 1 x Ø5.5mm carbon steel self drill/tap fasteners. S/steel / Neoprene backed washer fitted between mating faces
- Neoprene ring with Ø5mm hole over tie to form drip
- Polyethylene backing rod with silicone sealant
- NorDan door frame fixed to Kingframe with self-tapping screws through 12mm treated continuous Viroc (or similar)
- Hyload original pitch polymer dpc bonded to back face of frame
- Timber/plywood packers to allow for tolerance
- Timber packing
- Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.
- Refer to tabulated data for wallboard configuration to achieve required fire resistance



Head (Rehau)

25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish

Ø8mm s/steel gravity anchor bonded into Kingspan Fabrik System, fixed to stud with 4 x Ø5.5mm carbon steel self drill/tap fasteners. S/steel / Neoprene backed washer fitted between mating faces

Ø50 x 5mm thick plastic washer

Neoprene ring with Ø7mm hole over tie to form drip

Kingframe wall studs typically @ 600mm centres

Timber/plywood packers to allow for tolerance

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.

Fire rated cavity closer

Cast-in retaining pin

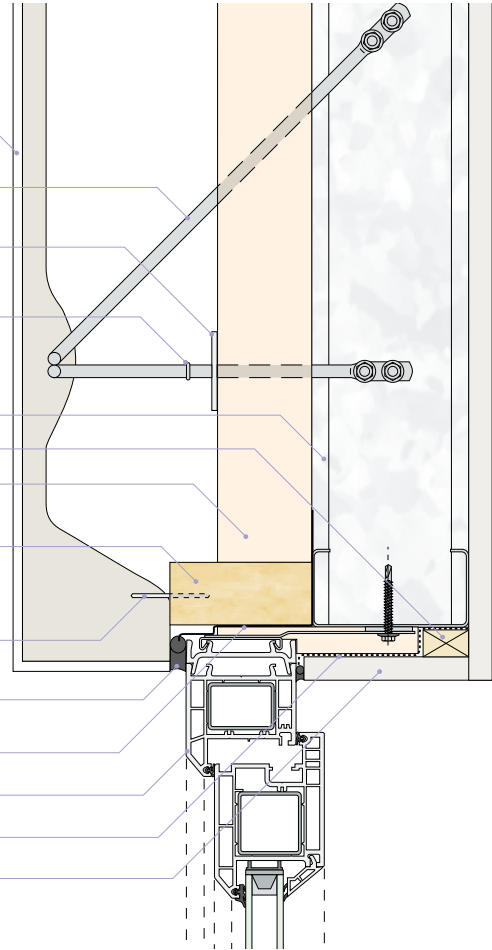
Polyethylene backing rod with silicone sealant

Hyload original pitch polymer dpc bonded to back face of frame

Rehau door frame

Sealing tape to form moisture/vapour barrier

Refer to tabulated data for wallboard configuration to achieve required fire resistance



Jamb (Rehau)

25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish

Ø6mm s/steel flex anchor bonded into Kingspan Fabrik System, fixed to stud with 1 x Ø5.5mm carbon steel self drill/tap fasteners. S/steel / Neoprene backed washer fitted between mating faces

Neoprene ring with Ø5mm hole over tie to form drip

Polyethylene backing rod with silicone sealant

Rehau door frame

Hyload original pitch polymer dpc bonded to back face of frame

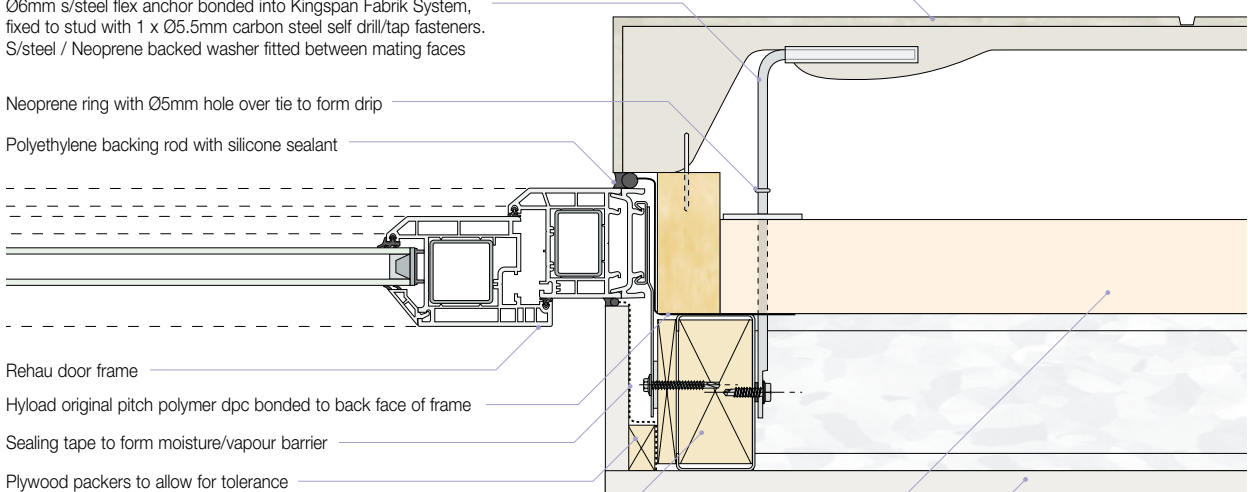
Sealing tape to form moisture/vapour barrier

Plywood packers to allow for tolerance

Timber packing

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.

Refer to tabulated data for wallboard configuration to achieve required fire resistance



Window Details

Head & Cill (NorDan)

25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish

Ø8mm s/steel gravity anchor bonded into Kingspan Fabrik System, fixed to stud with 4 x Ø5.5mm carbon steel self drill/tap fasteners. S/steel / Neoprene backed washer fitted between mating faces

Ø50 x 5mm thick plastic washer

Neoprene ring with Ø7mm hole over tie to form drip

Hyload original pitch polymer dpc bonded to back face of frame

Timber/plywood packers to allow for tolerance

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.

Fire rated cavity closer

Cast-in retaining pin

Polyethylene backing rod with silicone sealant

NorDan window frame fixed to Kingframe with self-tapping screws through 12mm treated continuous Viroc (or similar)

Refer to tabulated data for wallboard configuration to achieve required fire resistance

Polyethylene backing rod with silicone sealant

Internal window board

Staggered fixings along length of particle board packers (both ends and centre)

NorDan window frame fixed to Kingframe with self-tapping screws through 12mm treated continuous Viroc (or similar)

Silicone mastic sealant

Polyester powder coated pressed metal cill flashing with 150mm sealed butt straps

Continuous 0.7mm thick PVDF coated steel Storm Clip to support cill flashing

9x3mm Butyl rubber strip

Continuous treated timber block securely fixed to structure

Aluminium tape to be taken over joint of timber and insulation

Sealing tape to form moisture/vapour barrier

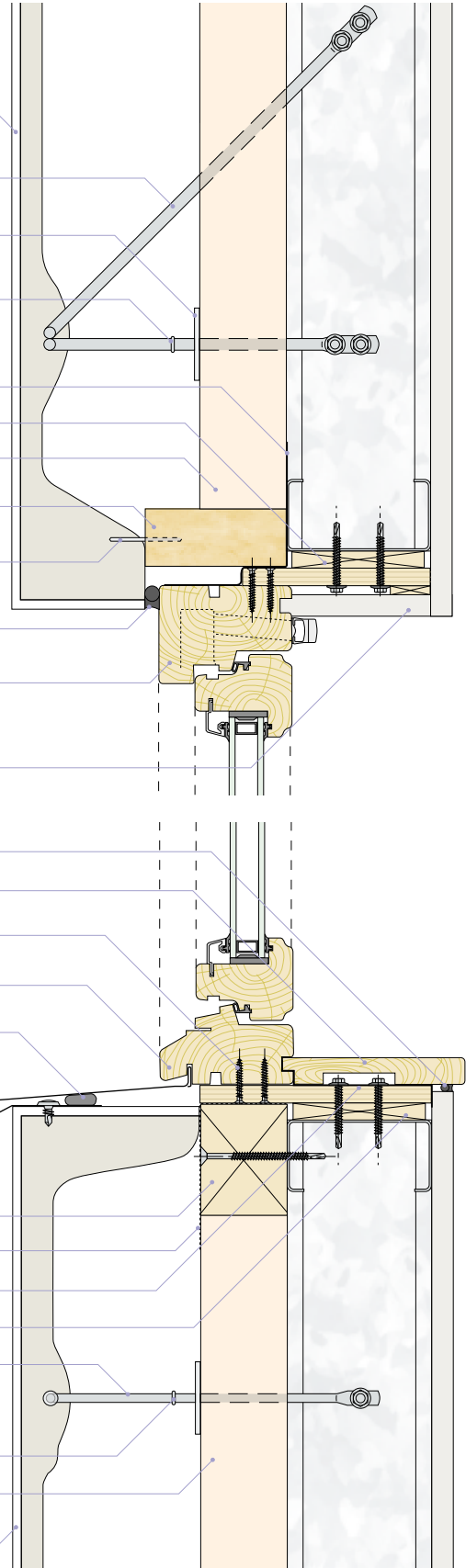
Timber/plywood packers to allow for tolerance

Ø6mm s/steel flex anchor bonded into Kingspan Fabrik System, fixed to stud with 1 x Ø5.5mm carbon steel self drill/tap fastener. S/steel / Neoprene backed washer fitted between mating faces

Neoprene ring with Ø5mm hole over tie to form drip

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.

25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish



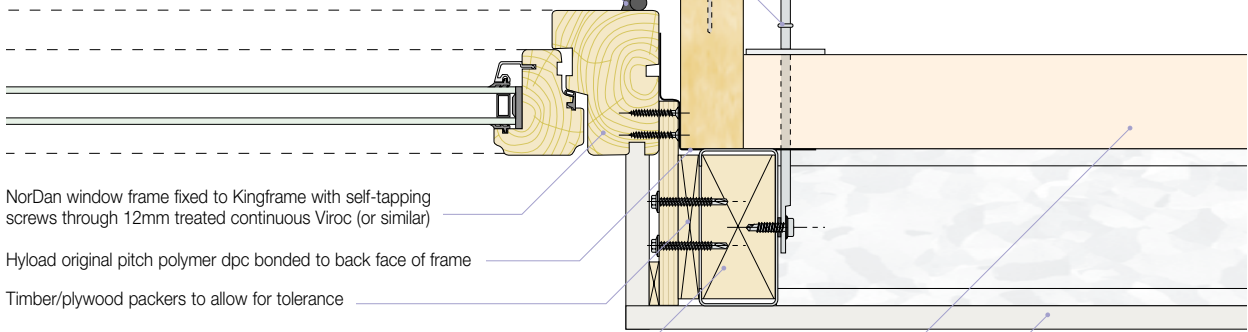
Jamb (NorDan)

25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish

Ø6mm s/steel flex anchor bonded into Kingspan Fabrik System, fixed to stud with 1 x Ø5.5mm carbon steel self drill/tap fasteners. S/steel / Neoprene backed washer fitted between mating faces

Neoprene ring with Ø5mm hole over tie to form drip

Polyethylene backing rod with silicone sealant



NorDan window frame fixed to Kingframe with self-tapping screws through 12mm treated continuous Viroc (or similar)

Hyload original pitch polymer dpc bonded to back face of frame

Timber/plywood packers to allow for tolerance

Timber packing

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.

Refer to tabulated data for wallboard configuration to achieve required fire resistance

Window Details

Head & Cill (Technal)

25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish

Ø8mm s/steel gravity anchor bonded into Kingspan Fabrik System, fixed to stud with 4 x Ø5.5mm carbon steel self drill/tap fasteners. S/steel / Neoprene backed washer fitted between mating faces

Ø50 x 5mm thick plastic washer

Neoprene ring with Ø7mm hole over tie to form drip

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.

Sealing tape to form moisture/vapour barrier

Fire rated cavity closer

Cast-in retaining pin

Polyethylene backing rod with silicone sealant

Hyload original pitch polymer dpc bonded to back face of frame

Continuous foam block insert to maintain position of silicone seal and backing rod

Technal window frame

Refer to tabulated data for wallboard configuration to achieve required fire resistance

Internal window board

Plywood packer to allow for tolerance

Specially designed galvanised fixing lugs; rigid packer and fixing lug pre-fixed to frame

Continuous treated timber block securely fixed to structure

Pre-fixed continuous polyethylene foam seal

Silicone sealant

Silicone mastic sealant

Pre-assembled window surround

Continuous 0.7mm thick PVDF coated steel Storm Clip to support cill flashing

9x3mm Butyl rubber strip

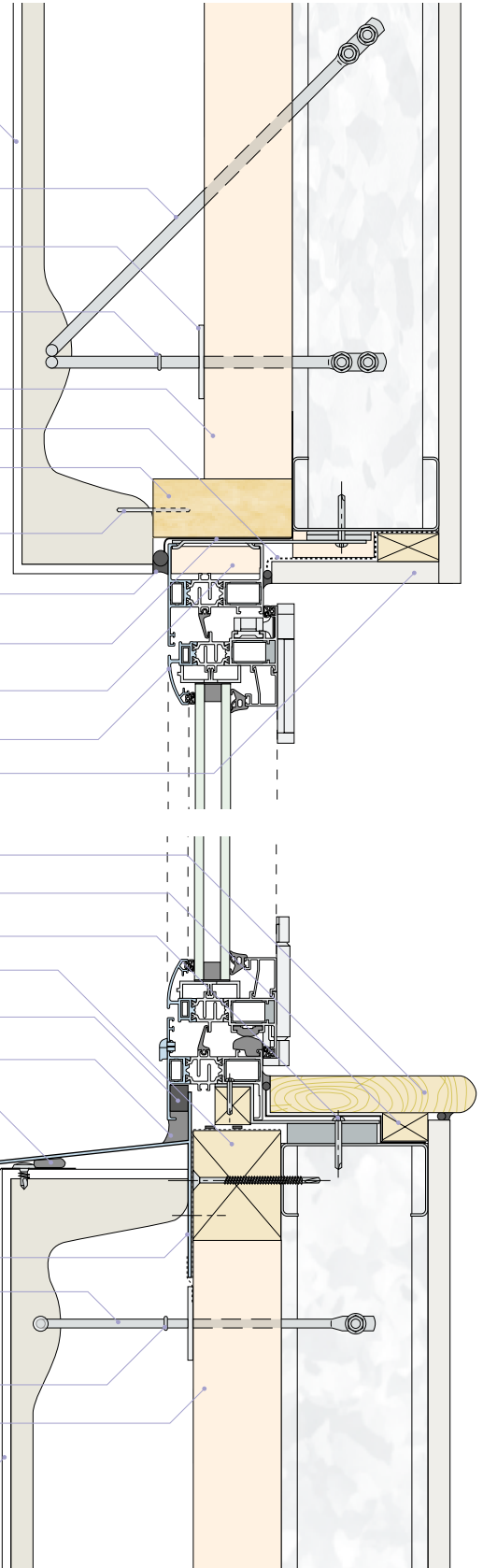
Aluminium tape to be taken over joint of timber and insulation

Ø6mm s/steel flex anchor bonded into Kingspan Fabrik System, fixed to stud with 1 x Ø5.5mm carbon steel self drill/tap fastener. S/steel / Neoprene backed washer fitted between mating faces

Neoprene ring with Ø5mm hole over tie to form drip

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.

25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish



Jamb (Technal)

25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish

Ø6mm s/steel flex anchor bonded into Kingspan Fabrik System, fixed to stud with 1 x Ø5.5mm carbon steel self drill/tap fastener. S/steel / Neoprene backed washer fitted between mating faces

Neoprene ring with Ø5mm hole over tie to form drip

Polyethylene backing rod with silicone sealant

Continuous foam block insert to maintain position of silicone seal and backing rod

Technal window frame

Hyload original pitch polymer dpc bonded to back face of frame

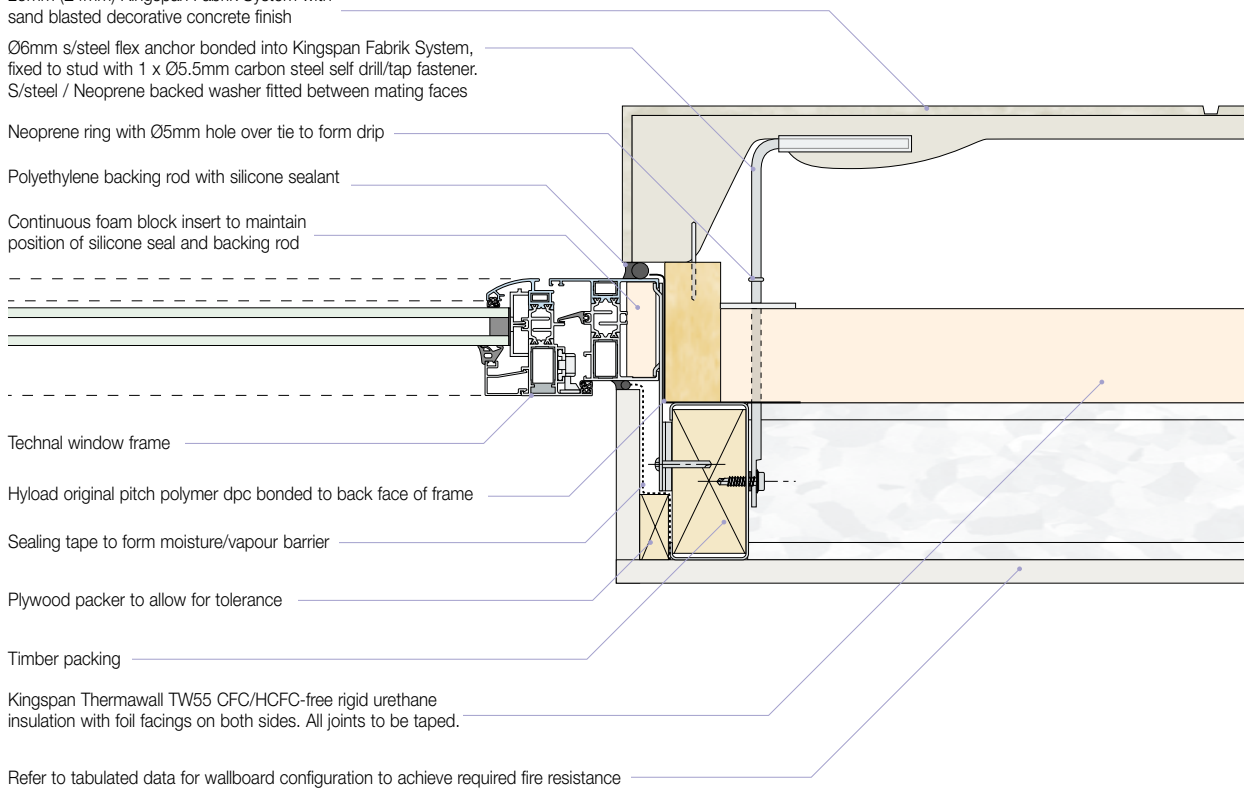
Sealing tape to form moisture/vapour barrier

Plywood packer to allow for tolerance

Timber packing

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.

Refer to tabulated data for wallboard configuration to achieve required fire resistance



Window Details

Head & Cill (Rehau)

Kingframe wall studs typically @ 600mm centres

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.

25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish

Ø8mm s/steel gravity anchor bonded into Kingspan Fabrik System, fixed to stud with 4 x Ø5.5mm carbon steel self drill/tap fasteners. S/steel / Neoprene backed washer fitted between mating faces

Ø50 x 5mm thick plastic washer

Neoprene ring with Ø7mm hole over tie to form drip

Hyload original pitch polymer dpc bonded to back face of frame

Fire rated cavity closer

Cast-in retaining pin

Polyethylene backing rod with silicone sealant

Rehau window frame

Refer to tabulated data for wallboard configuration to achieve required fire resistance

Internal window board

Plywood packer to allow for tolerance

Sealing tape to form moisture/vapour barrier

Rehau window frame

Silicone mastic sealant

Continuous treated timber block securely fixed to structure

Silicone mastic sealant

Continuous 0.7mm thick PVDF coated steel Storm Clip to support cill flashing

9x3mm Butyl rubber strip

Aluminium tape to be taken over joint of timber and insulation

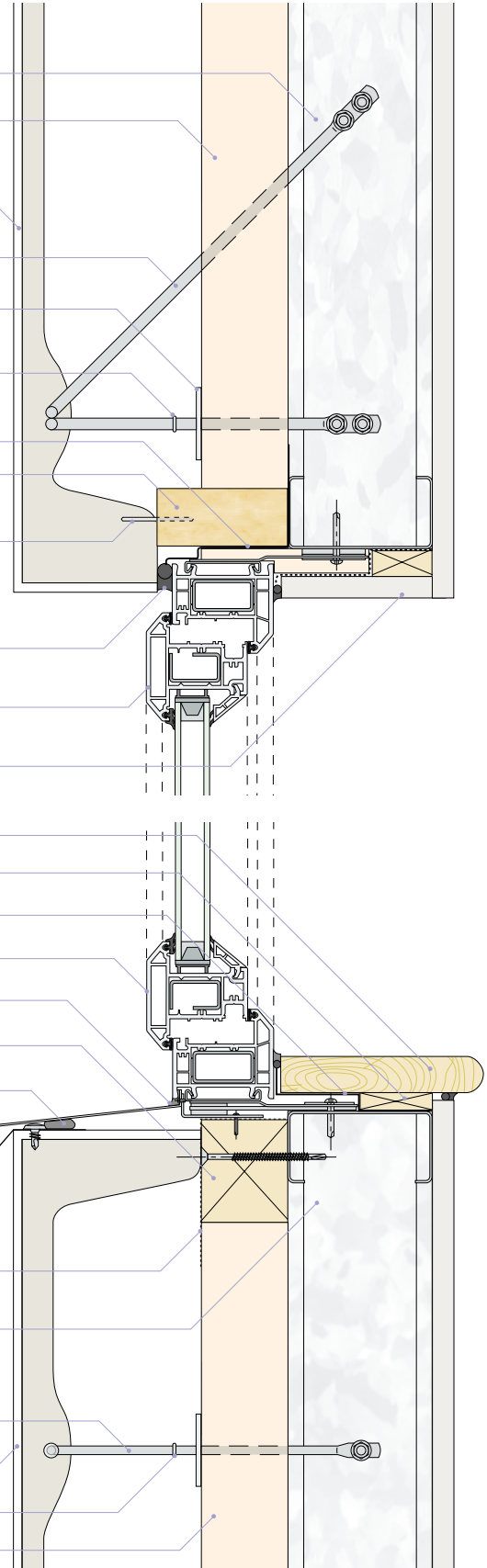
Kingframe wall studs typically @ 600mm centres

Ø6mm s/steel flex anchor bonded into Kingspan Fabrik System, fixed to stud with 1 x Ø5.5mm carbon steel self drill/tap fastener. S/steel / Neoprene backed washer fitted between mating faces

25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish

Neoprene ring with Ø5mm hole over tie to form drip

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.



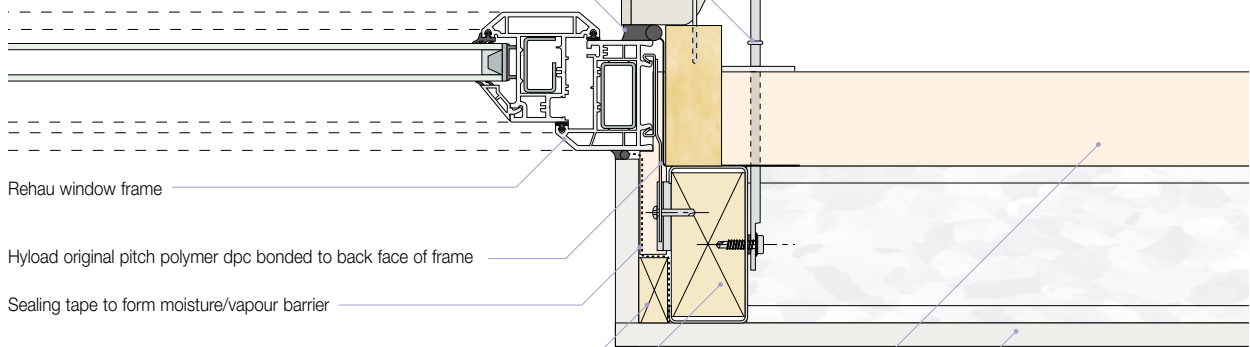
Jamb (Rehau)

25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish

Ø6mm s/steel flex anchor bonded into Kingspan Fabrik System, fixed to stud with 1 x Ø5.5mm carbon steel self drill/tap fastener. S/steel / Neoprene backed washer fitted between mating faces

Neoprene ring with Ø5mm hole over tie to form drip

Polyethylene backing rod with silicone sealant



Rehau window frame

Hyload original pitch polymer dpc bonded to back face of frame

Sealing tape to form moisture/vapour barrier

Plywood packer to allow for tolerance

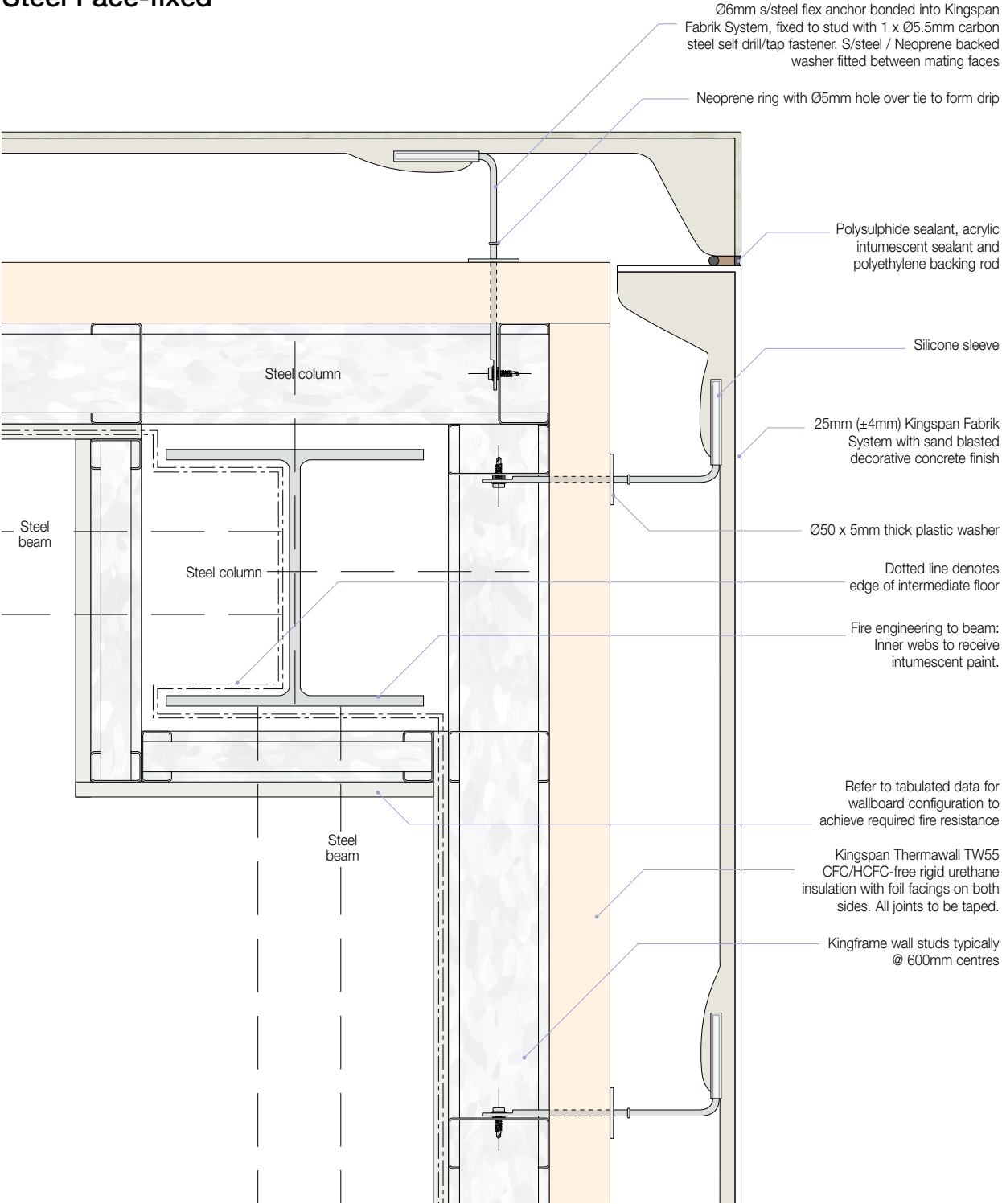
Timber packing

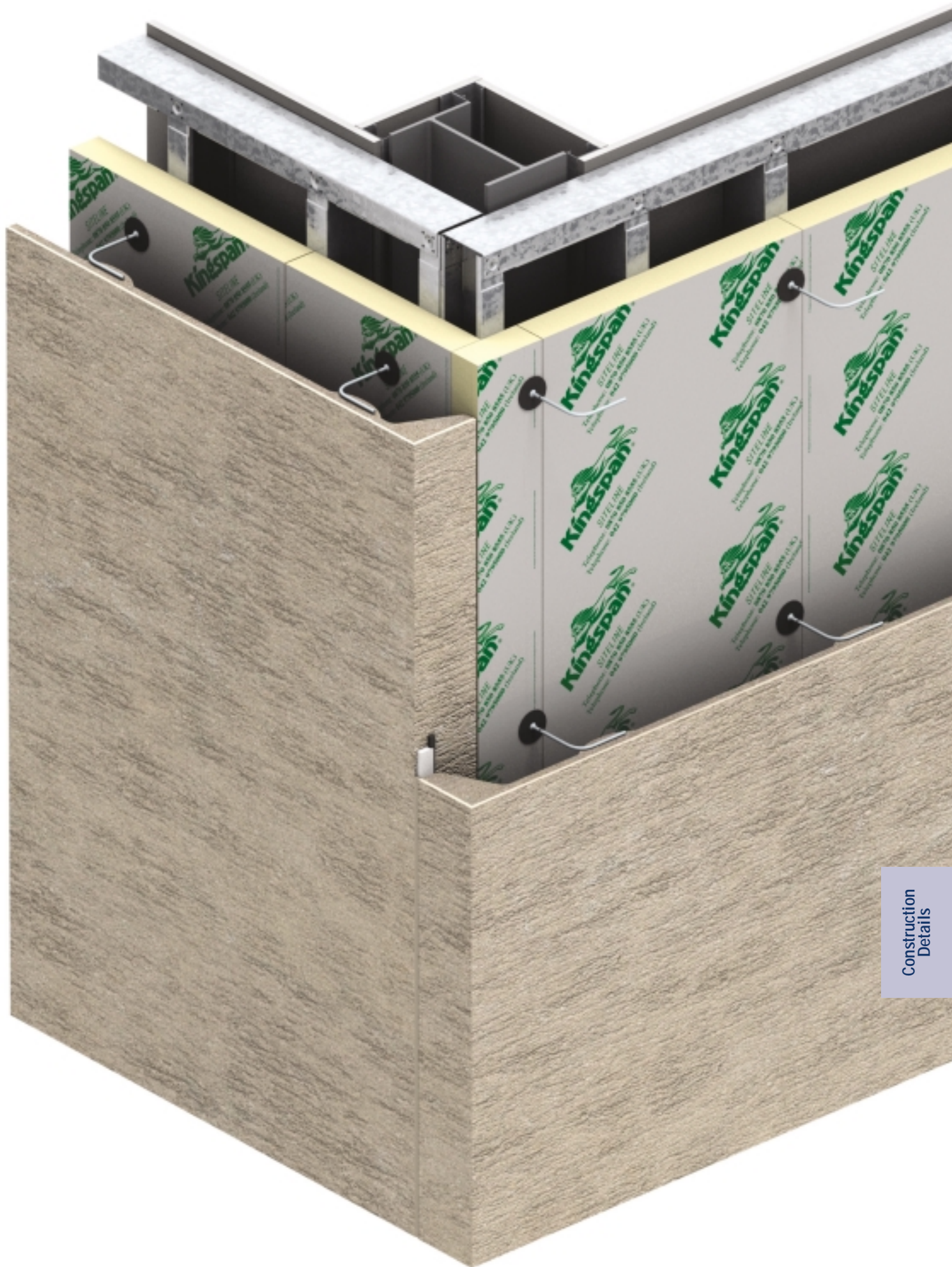
Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.

Refer to tabulated data for wallboard configuration to achieve required fire resistance

External Corner Details

Steel Face-fixed

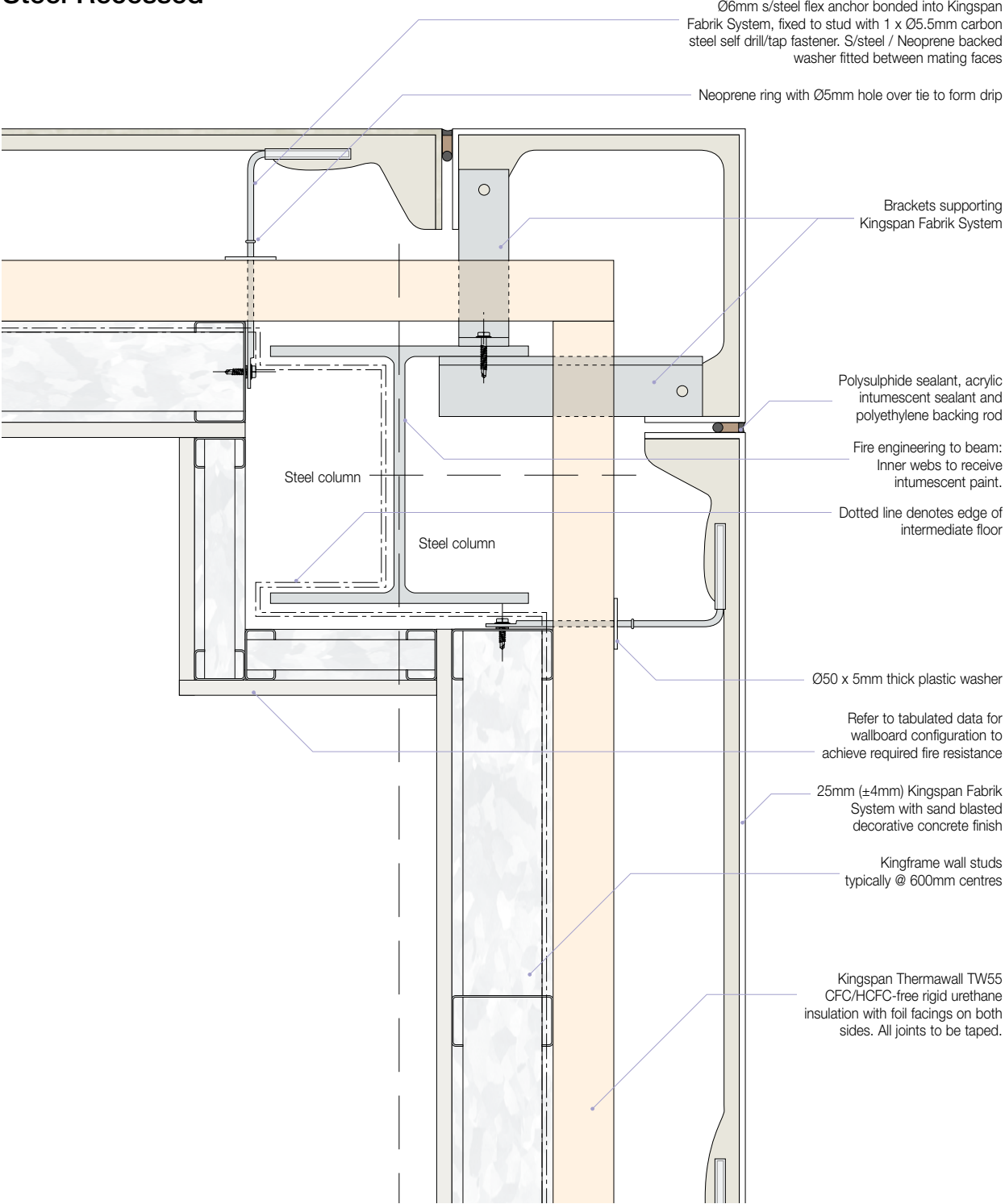




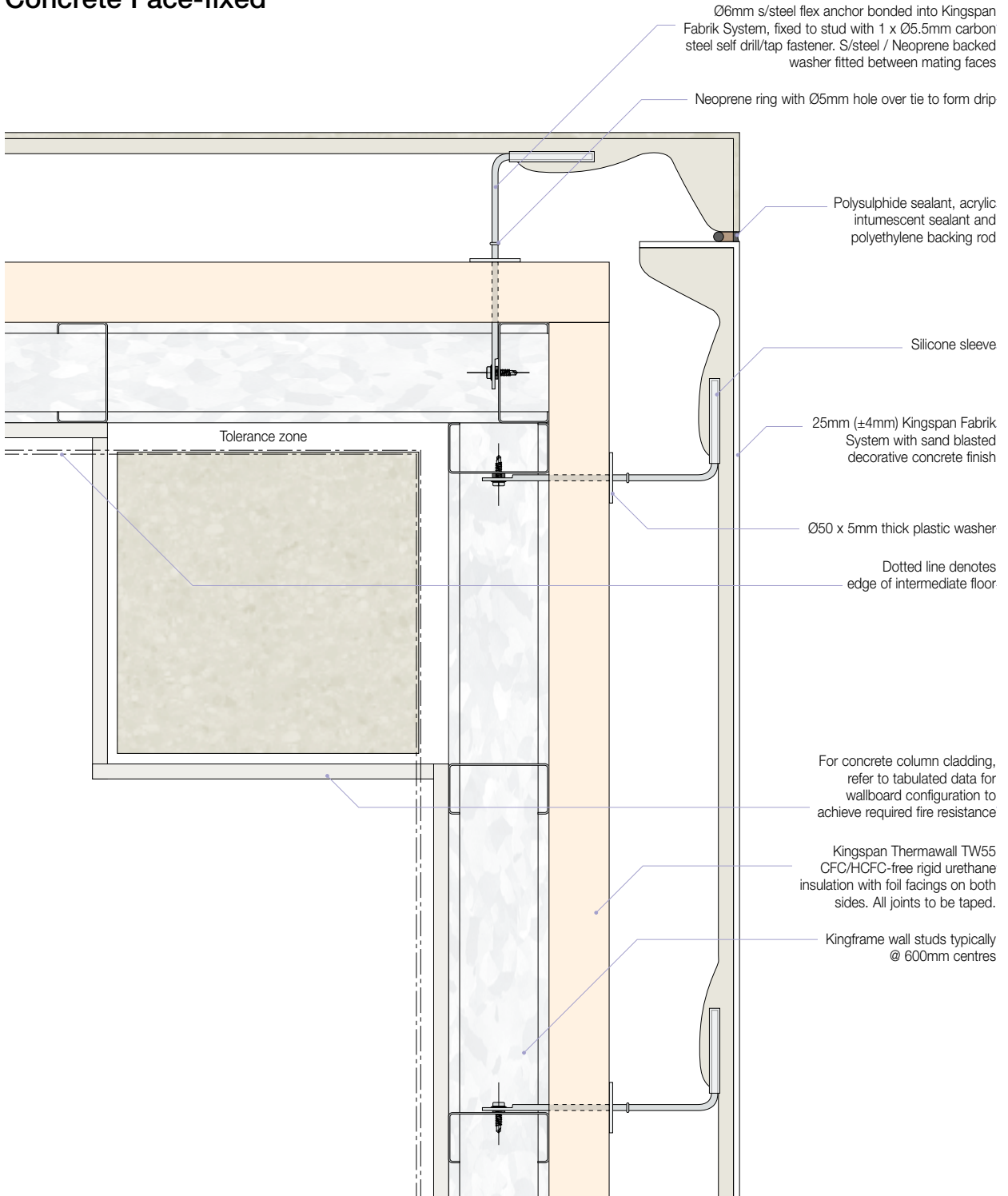
Construction
Details

External Corner Details

Steel Recessed



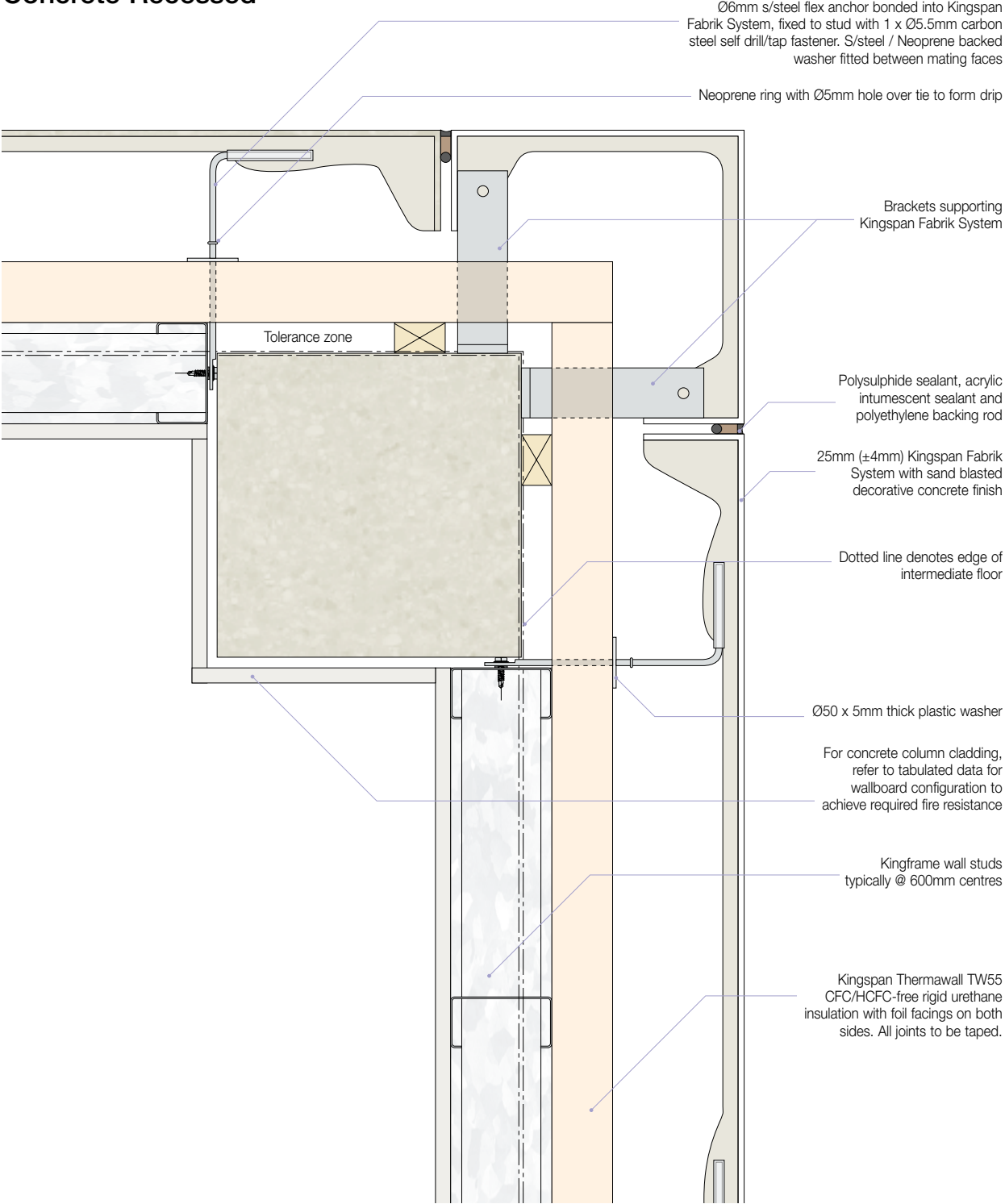
Concrete Face-fixed



Construction Details

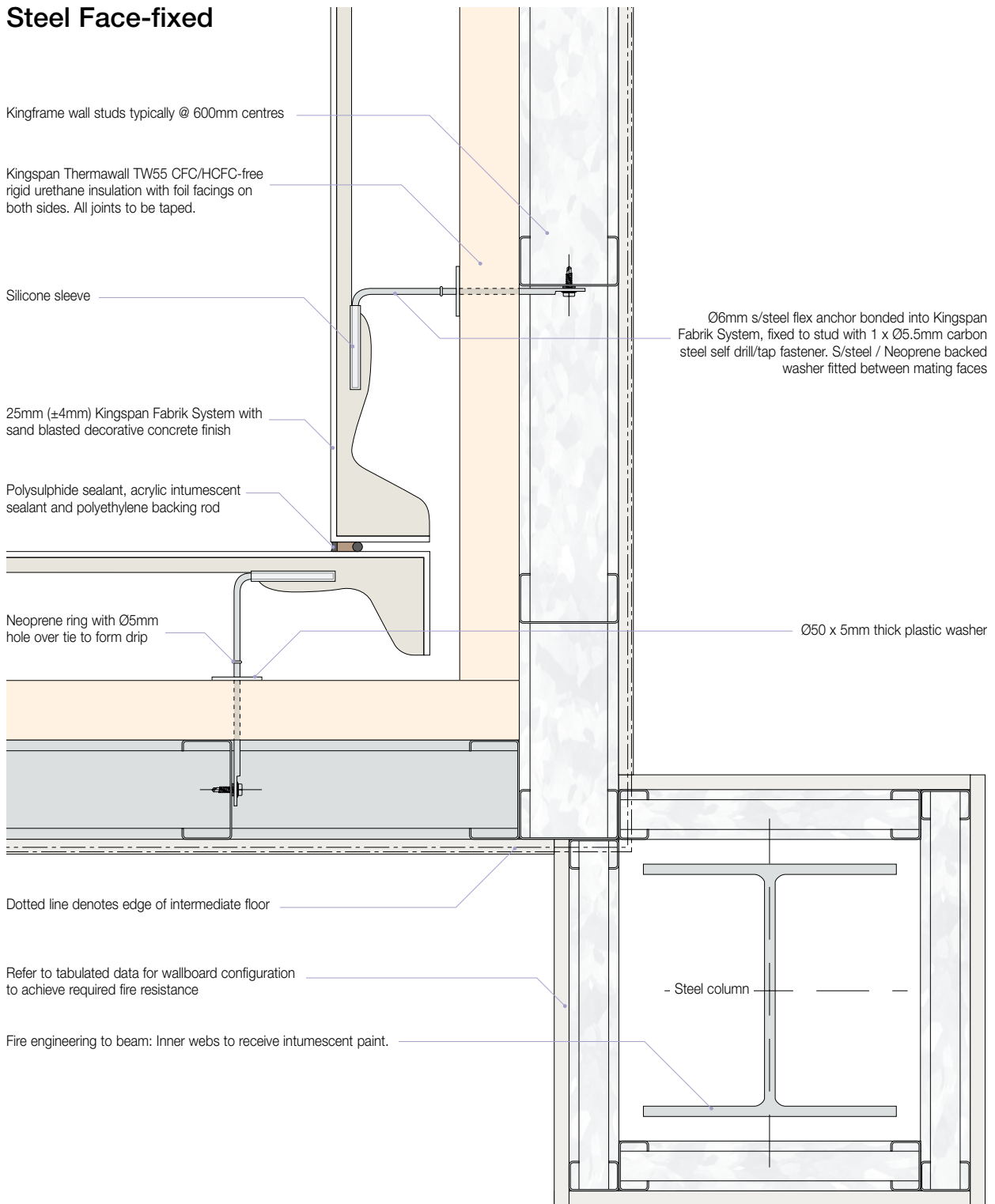
External Corner Details

Concrete Recessed



Internal Corner Details

Steel Face-fixed



Construction
Details

Internal Corner Details

Steel Recessed

Kingframe wall studs typically @ 600mm centres

Dotted line denotes edge of intermediate floor

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.

Ø50 x 5mm thick plastic washer

Silicone sleeve

25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish

Polysulphide sealant, acrylic intumescent sealant and polyethylene backing rod

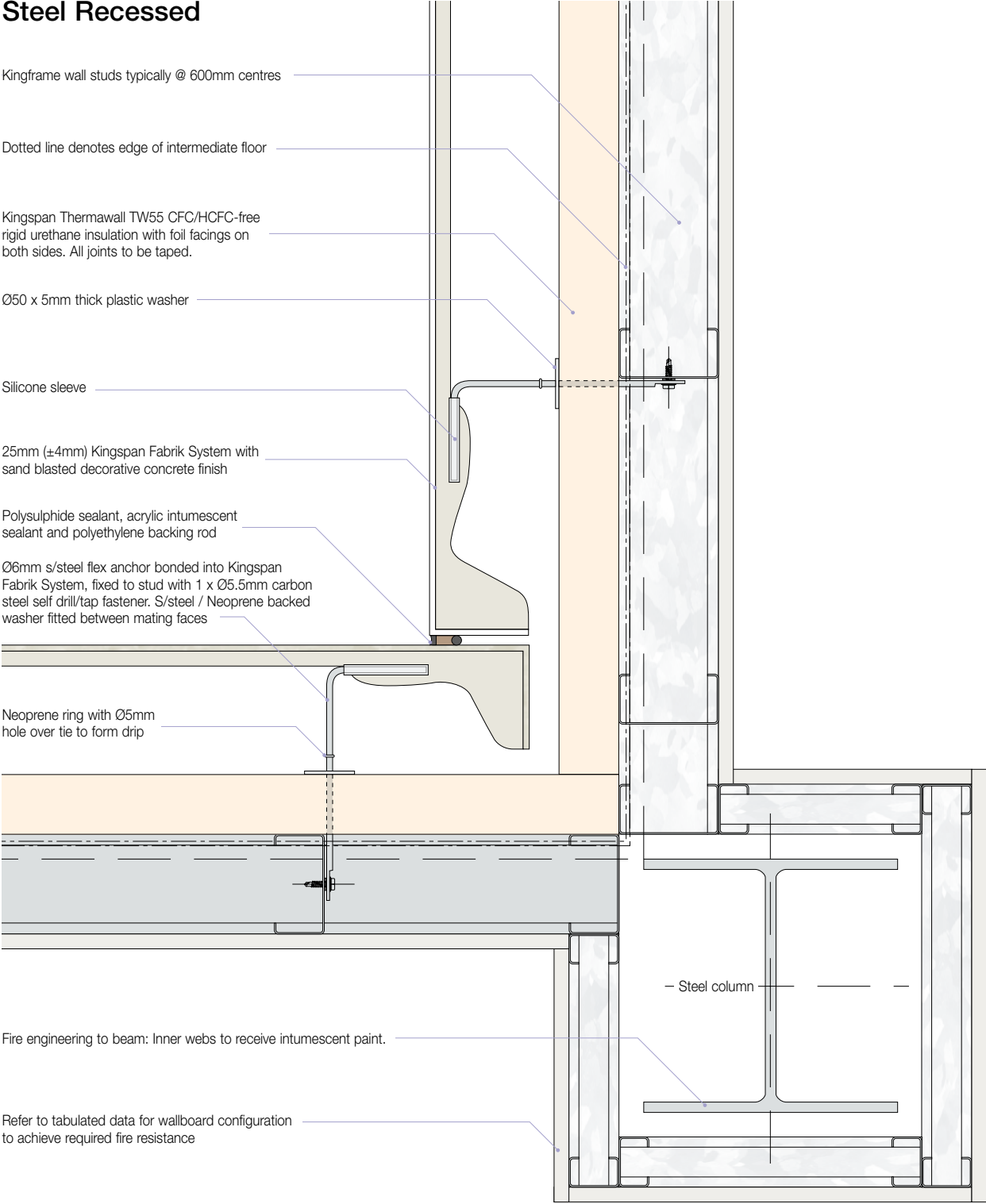
Ø6mm s/steel flex anchor bonded into Kingspan Fabrik System, fixed to stud with 1 x Ø5.5mm carbon steel self drill/tap fastener. S/steel / Neoprene backed washer fitted between mating faces

Neoprene ring with Ø5mm hole over tie to form drip

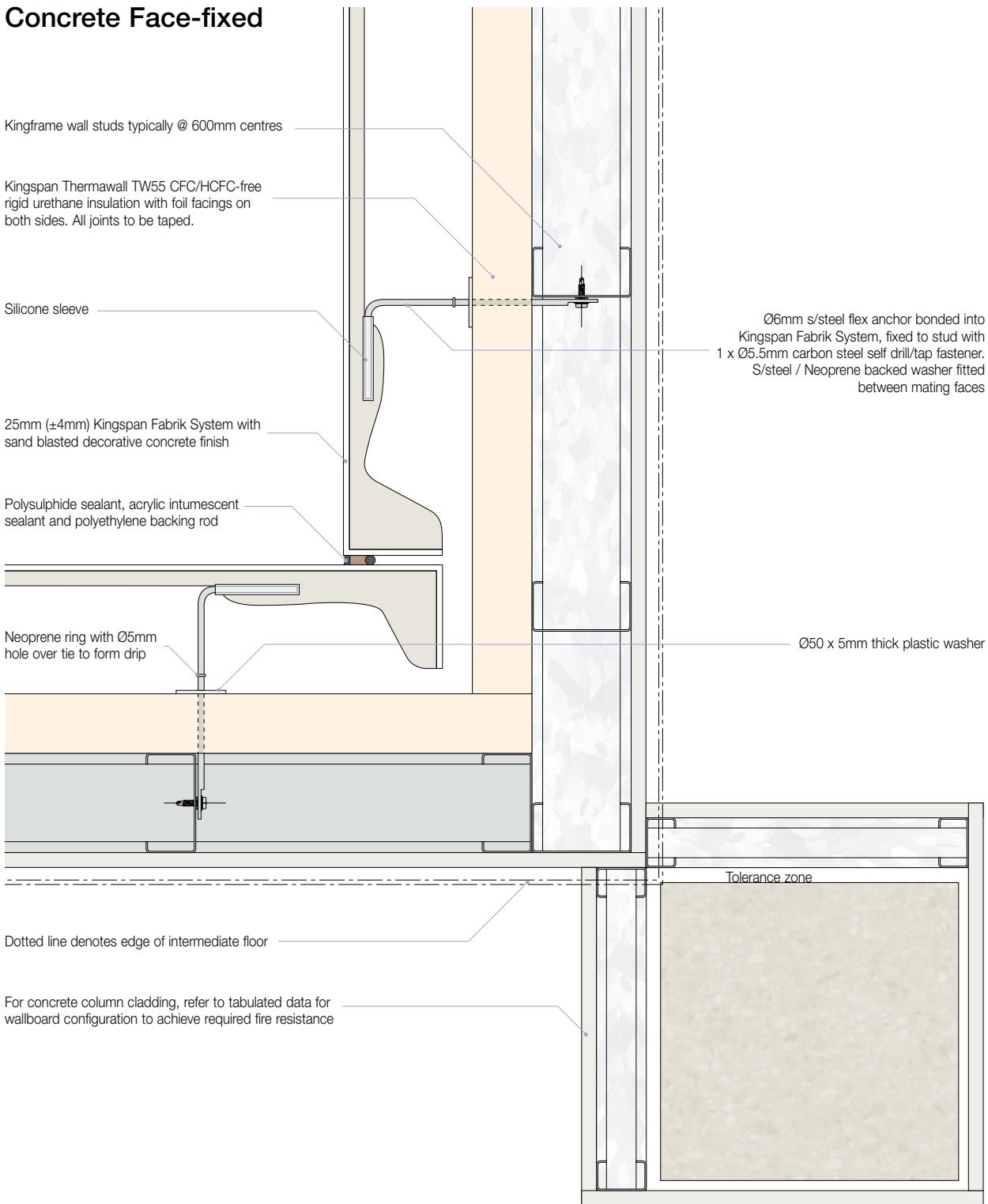
- Steel column

Fire engineering to beam: Inner webs to receive intumescent paint.

Refer to tabulated data for wallboard configuration to achieve required fire resistance



Concrete Face-fixed



Construction Details

Internal Corner Details

Concrete Recessed

Kingspan wall studs typically @ 600mm centres

Dotted line denotes edge of intermediate floor

Kingspan Thermawall TW55 CFC/HCFC-free rigid urethane insulation with foil facings on both sides. All joints to be taped.

Ø50 x 5mm thick plastic washer

Silicone sleeve

25mm (±4mm) Kingspan Fabrik System with sand blasted decorative concrete finish

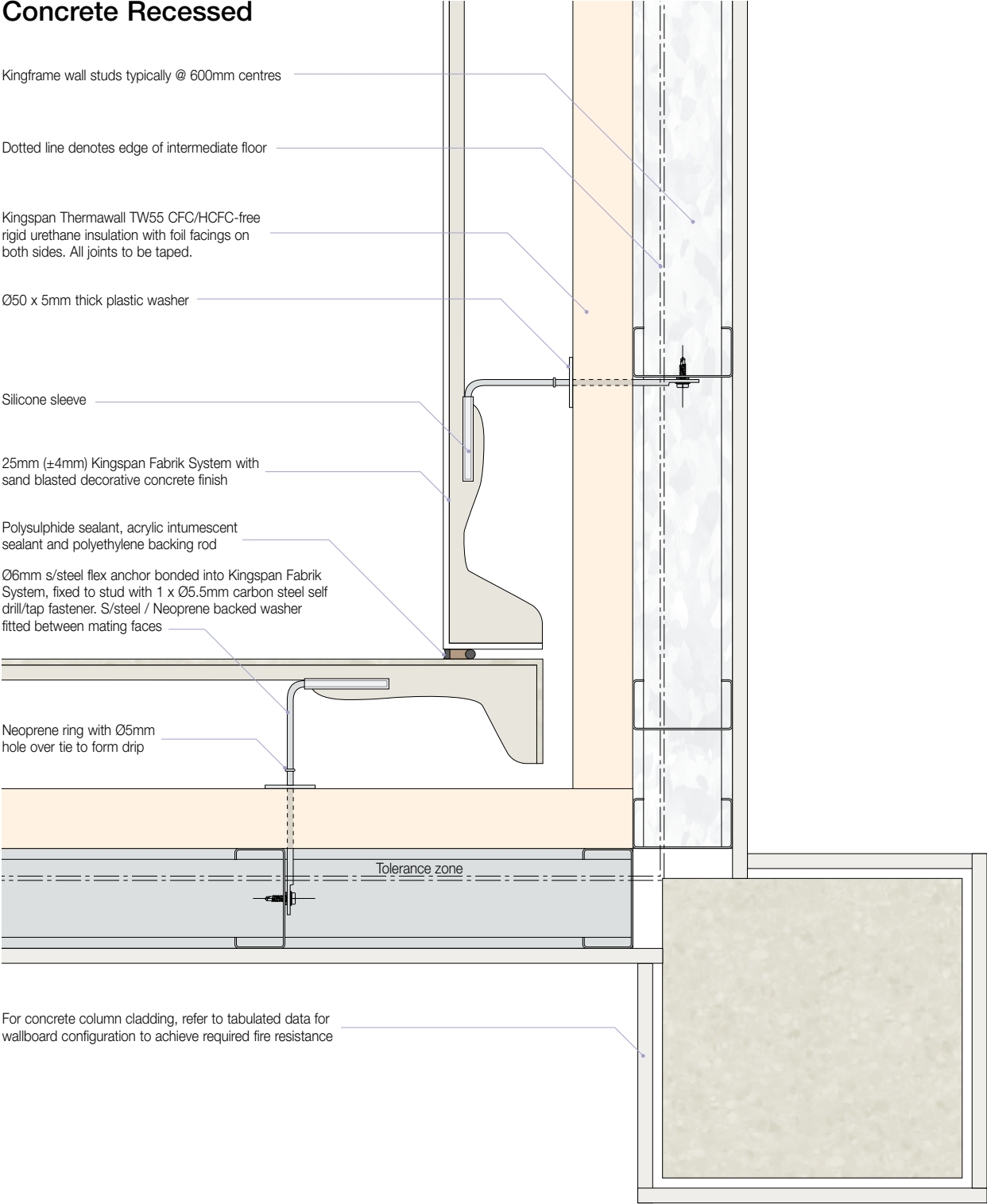
Polysulphide sealant, acrylic intumescent sealant and polyethylene backing rod

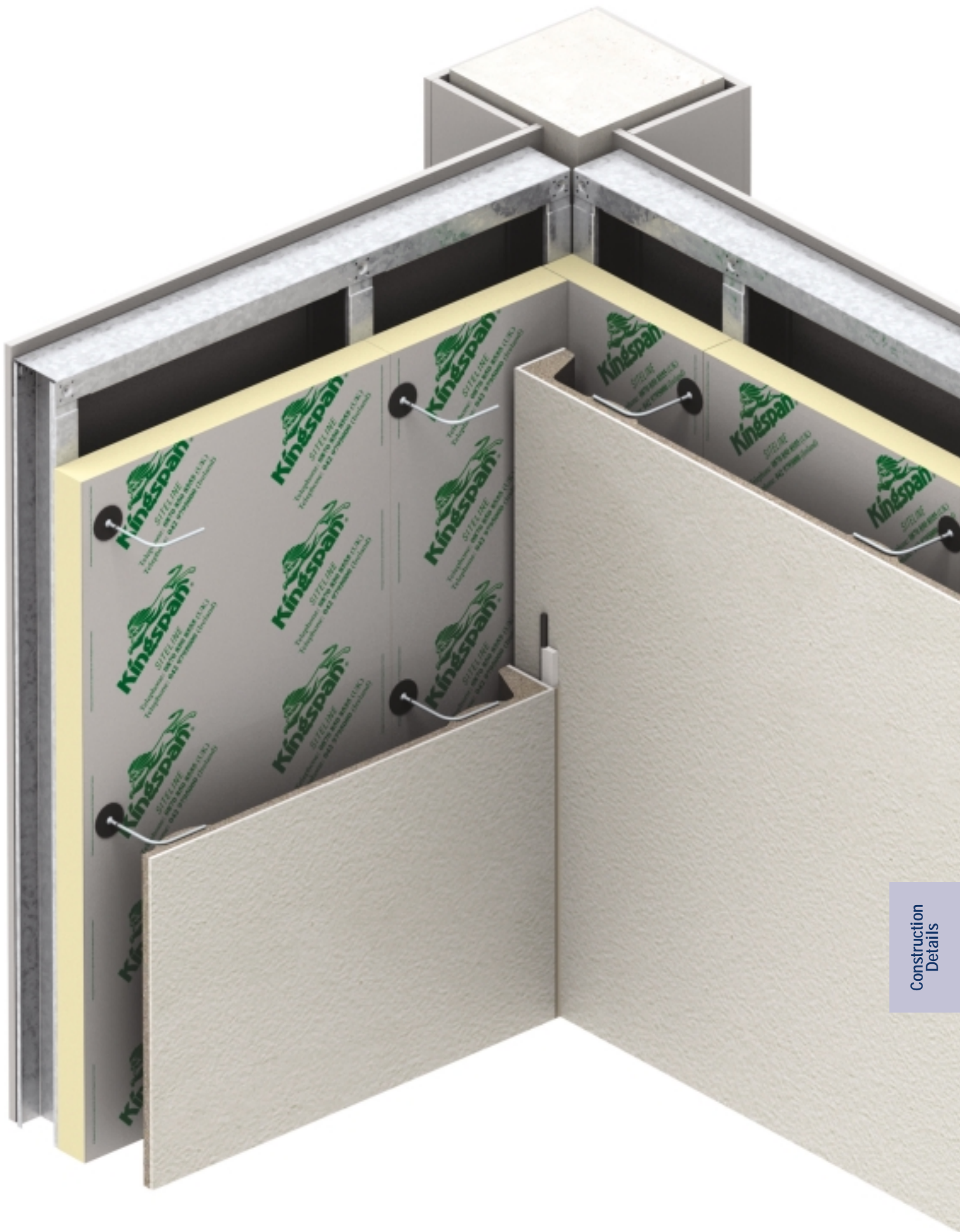
Ø6mm s/steel flex anchor bonded into Kingspan Fabrik System, fixed to stud with 1 x Ø5.5mm carbon steel self drill/tap fastener. S/steel / Neoprene backed washer fitted between mating faces

Neoprene ring with Ø5mm hole over tie to form drip

Tolerance zone

For concrete column cladding, refer to tabulated data for wallboard configuration to achieve required fire resistance





Construction
Details

Delivery & Site Installation

Site Delivery

Kingspan Fabrik provides a site delivery service using low-loading trailers, that incorporate racking, that allow vertical transportation of the unitised assemblies.



This facilitates immediate off-loading, location and connection of the units on to the building mainframe in a single operation. Safety tested and approved factory-fitted lifting eyes are attached to the unitised frames.

An additional benefit of this type of delivery is the elimination of packaging materials, making this a sustainable, 'zero-waste' method.

Site Installation

Fabrik use a network of Approved Installers, who are responsible for the site installation of the delivered unitised assemblies.

These Approved Installers, are fully trained and supported by Fabrik to ensure consistent high standards of performance, site safety and installation.

Site Installation Method Statements are developed on a project specific basis in co-operation with the client and the design and construction teams.





Site Installation

Kingspan Off-Site Product Range

Fabrik Facade Systems



Residential



Retail



Leisure & Hotel



Education & Healthcare

Kingframe Architectural Facade Systems



Conventional Construction



Render Systems

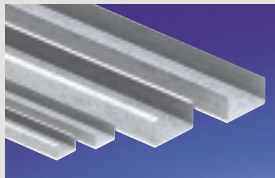


Ventilated Rainscreen Systems



Insulated Panel Systems

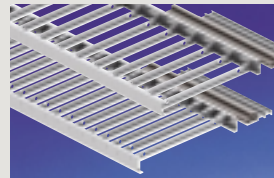
Structural & Framing Systems



Framing Sections



Wall Framing



Roof & Floor Systems



Kingframe Building System

Structural Products



Multibeam

Britain's No.1 cladding support system combining maximum efficiency with cost effectiveness



Multideck

High performance, profiled, galvanised steel floor decking for use in the construction of composite floor slabs



Multichannel

A range of pre-engineered, cold formed structural channel sections



Flat to Pitched Roof System

Innovative roof system providing a pre-engineered solution for over-roofing all types of flat roofs on industrial, educational, health, leisure and residential buildings



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Due to our continuing policy of development and improvement we reserve the right to alter and amend the specification as shown in this literature.