

intrastack

**INTRASTACK  
OVERVIEW  
SLIDE DECK**



# AGENDA

- › Saint-Gobain Global
- › Saint-Gobain UK & Ireland
- › Introducing Intrastack
- › Meet the team
- › System overview
- › Working with you
- › Our end-to-end process
- › Key benefits
- › Testing & certification
- › Intrastack solutions
- › Our projects



# SAINT-GOBAIN GLOBAL

**€46.6bn**  
in 2024 sales

**360**  
years in  
business

**1,100**  
manufacturing  
facilities

**161,000**  
employees

**80**  
countries

**2050**  
net-zero  
commitment

## SAINT-GOBAIN UK & IRELAND

Our portfolio in the UK and Ireland includes some of the region's most respected brands across five divisions: Interior Solutions, Exterior Solutions, Off-Site Solutions, Retail & DIY Solutions, and High-Performance Solutions. Together, they deliver a range of trusted, energy-saving systems and services that enhance living spaces, and lives.

## Our Organisation

4 Consolidated Regions



Southern Europe, Middle East, Africa

Northern Europe

Asia-Pacific

and one global entity

High Performance Solutions

# OUR UK&I BUSINESS



**19** Businesses    **5,600** Employees

**£1,500m**  
Sales



Capital expenditure

**£56m**



Manufacturing & distribution locations

**40**



# SAINT-GOBAIN OFFERS SOLUTIONS AND SERVICES FOR MULTI-OCCUPANCY HOUSING, PUBLIC AND COMMERCIAL BUILDINGS



**ecophon**  
SAINT-GOBAIN

**Ceilings and Noise control**

**Structural Framing**  
Intrastack light gauge steel frame construction

**intrastack**

**Compartment Walls**

**ISOVER** SAINT-GOBAIN      **British Gypsum** SAINT-GOBAIN

**Interior Category B Fit-Out**

**ecophon** SAINT-GOBAIN      **weber** SAINT-GOBAIN      **vetrotech** SAINT-GOBAIN

**ISOVER** SAINT-GOBAIN      **British Gypsum** SAINT-GOBAIN      **okarno**

**Façade**

**British Gypsum** SAINT-GOBAIN      **weber** SAINT-GOBAIN      **Kilwaughter**

**ISOVER** SAINT-GOBAIN

**Duct and pipe insulation**

**ISOVER** SAINT-GOBAIN      **kaimann** SAINT-GOBAIN

**Fire protection**

**ISOVER** SAINT-GOBAIN      **British Gypsum** SAINT-GOBAIN

**vetrotech** SAINT-GOBAIN

**Construction Chemicals**

**gcp**      **chryso** SAINT-GOBAIN

**Flooring**

**weber** SAINT-GOBAIN      **Leca** SAINT-GOBAIN

**FOSROC** constructive solutions

**Services:**

- **Circularity: Glass Forever**
- **Building Performance**
- **Training**

**GLASS FOREVER**

# SOLUTIONS FOR COMMERCIAL, DOMESTIC, RMI & CONSTRUCTION DECARBONISATION

## SAINT-GOBAIN Interior Solutions

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### **UK**

- British Gypsum
- Isover

### **IRELAND**

- Gyproc



## SAINT-GOBAIN Exterior Solutions

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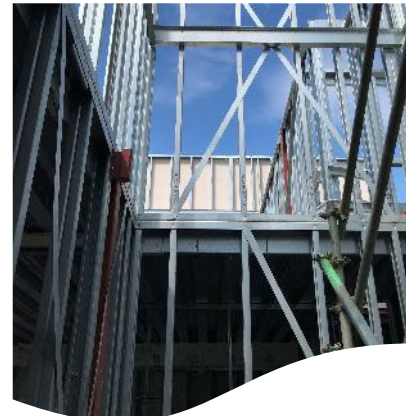
- Saint-Gobain Glass
- Glassolutions
- Weber



## SAINT-GOBAIN Off-Site Solutions

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- Pasquill
- Roofspace Solutions
- Scotframe



## RETAIL / DIY Solutions

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- Okarno



## High Performance Solutions & Construction Specialities

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- Formula
- PAM
- Ecophon
- GCP
- Chryso
- Adfors
- Abrasives



A PORTFOLIO OF SOLUTIONS TO SUPPORT GROWTH

# Interior Solutions

The manufacture of high-performance plasterboard, and gypsum products; thermal insulation; Glasswool and PIR.



3 brands



2,050 people



9 sites

 **British Gypsum**  
SAINT-GOBAIN

 **Isover**  
SAINT-GOBAIN

 **gyproc**  
SAINT-GOBAIN

# Exterior Solutions

Insulation, render, mortars, acoustic solutions.



3 brands



850 people



10 sites



# Off-Site Solutions

Whole house and multi-storey solutions, including light-gauge steel frame systems, timber frame kits, as well as roofing and flooring options, and intelligent drylining.

intrastack

InteWall®  
INTELLIGENT DRYLINING

pasquill  
SAINT-GOBAIN

roofspace

scotframe



# INTRODUCING INTRASTACK

Intrastack LGSF structures are specifically designed to deliver large-scale multi-occupancy residential and commercial projects.

- Providing fully tested & warranted solutions
- Quality manufacture of load-bearing structures
- Delivering accelerated construction programmes
- Reducing site labour requirements
- Reducing on-site and manufacturing waste
- Improving site H&S
- Enabling the progression of difficult-to-develop sites



# MEET THE INTRASTACK AND INTEWALL TEAM



**Andy Higson**

Business Development Director - Intrastack & InteWall



**Matt Grant**

Head of Solutions & Services - Intrastack & InteWall



**Danny Johnson**

Head of Sales - Intrastack & InteWall (North, Mids & SW)



**Cameron McDougall**

Head of Sales - Intrastack & InteWall (Scotland, NE & NI)



**Jason Milligan**

Head of SFS - Intrastack



**Cherise Hardy-Edwards**

Marketing Communications Manager - Intrastack & InteWall



**Tessa Jackson**

Senior Technical Project Manager



**Tom Johnson**

Technical Project Manager



**Jonathan Lamb**

Technical Project Manager



**Gary Fillingham**

Estimator



**Simon Pritchard**

Estimator



**Ashley Dunn**

Technical Specification Manager (SFS)



**Joe Robbins**

Technical Specification Manager (SFS)



**Martin Keogh**

InteWall Strategic Development Manager

# WORKING WITH YOU AND YOUR SUPPLY CHAIN

## Our sectors are your sectors, covering:

- › Medium-rise – up to 12 storeys load-bearing\*
- › High-rise – using SFS infill & envelope systems
- › Low-rise – using our ILRH system

## We work with you, and your wider supply-chain as early as possible to:

- › Design out cost, waste, inefficiency, ambiguity

## We work with:

- › Clients, Developers & Architects
- › Principal and Main Contractors
- › Specialist Sub-Contractors

\* This can be on top of an RC or HRS podium for open-plan commercial at lower levels if required

Hospitals



Care Homes & Assisted Living



Student Accommodation



Hotels



Schools



Apartments



High Rise



Low & Medium Rise



Affordable Housing



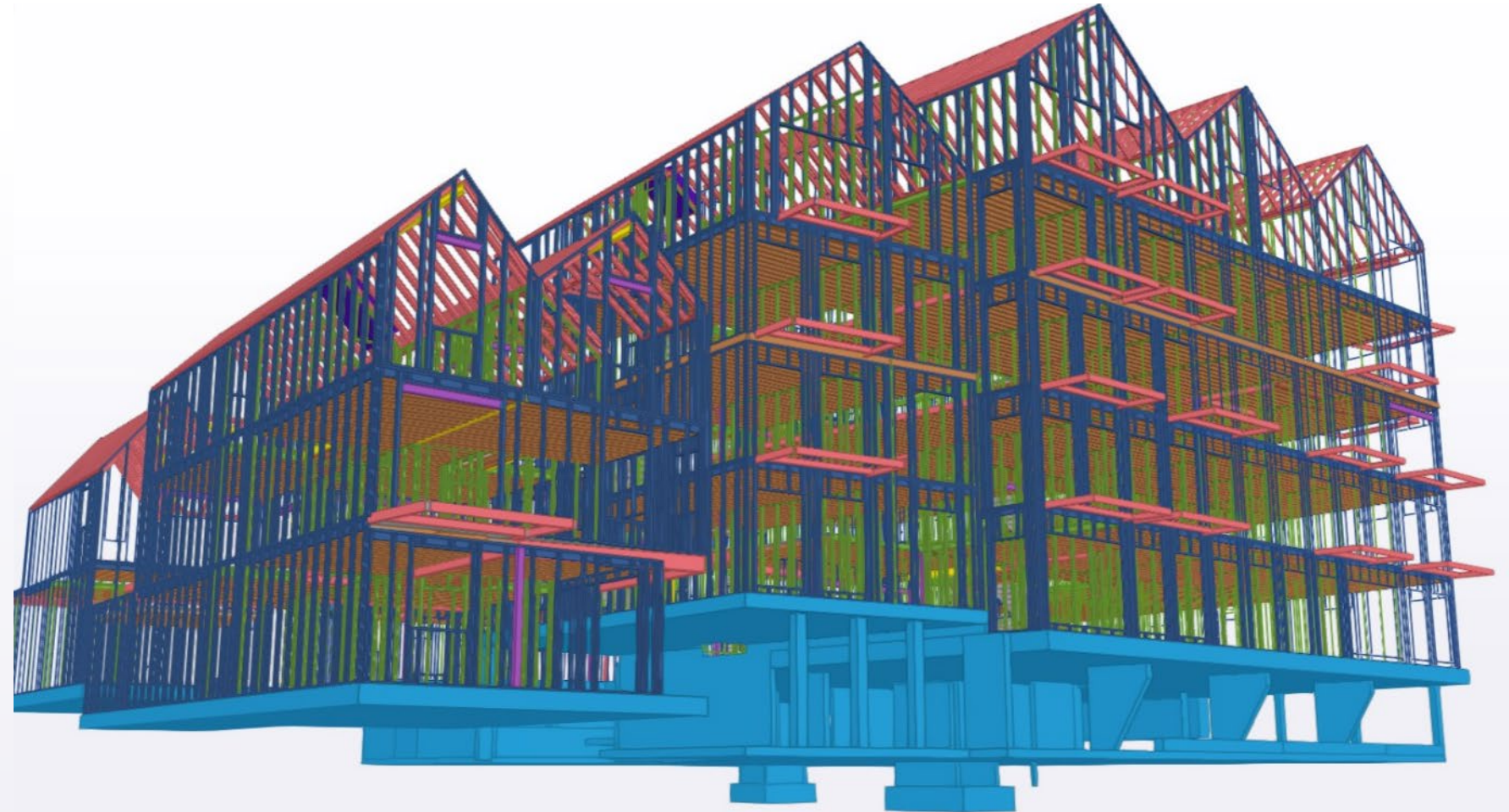
# THE INTRASTACK PROCESS

*“Creating certainty at the core of any steel frame project.”*



## DESIGN

Working with you from the earliest stages of your construction project, we will provide everything from initial, outline plans & mark-ups, through to a fully digitised 3D model for the full structure at frozen design stage. This is then fed into our manufacturing process.



# THE INTRASTACK PROCESS

*“Creating certainty at the core of any steel frame project.”*



## MANUFACTURE

Utilising our 15 acre Chorley manufacturing & assembly facility, we have significant capacity to accommodate all project types and national demand. Intrastack panels are assembled in advance to meet the pre-agreed installation sequence for your project ready for staged call-off.



# THE INTRASTACK PROCESS

*“Creating certainty at the core of any steel frame project.”*



## DISTRIBUTE

We draw upon our national distribution capability from across our 10 UK facilities, along with the wider Saint-Gobain UK infrastructure, providing specialist vehicles, lifting equipment and bespoke logistical solutions to meet your specific project requirements.



# THE INTRASTACK PROCESS

*“Creating certainty at the core of any steel frame project.”*



## INSTALL

We utilise a network of system installers to deliver your load-bearing structure on a supply & installation basis. During the design & quotation stage, we provide system installer options to you, who would then work as part of the Intrustack project team with you throughout.



# KEY BENEFITS OF LGSF TECHNOLOGIES



## Design Flexibility

Intrastack's pre-panelised structures enable a high level of design flexibility. Our LGSF construction kit-of-parts combined with our forward-thinking approach to structural design provides maximum flexibility to meet almost all building typologies and floorplans.



## Safety

When using pre-panelised LGSF structures the HSE states that site safety is improved by a factor of 5 through the reduction of on-site labour, reduced working-at-height, and less waste on site (trip hazards).



## Quality & Accuracy Of Build

The accuracy and precision of LGSF technology (up to 1mm per structural storey height), allows for a more exacting interface with finishing systems, leading to higher levels of quality & performance.



## Increased Productivity

An Intrastack framed building can be constructed up to 50% faster than a traditional structure, leading to reduced site preliminaries, reduced plant costs, and an earlier R.O.I.



## Life span

The NHBC and other housing warrantee providers accept LGSF structures as having a life span in excess of 60 years, however the predicted life span of a steel framed building with warm wall construction is over 250 years.



## Dimensional Stability

LGSF construction is a dry process eliminating shrinkage after construction, steel sections do not suffer from creep, shrinkage or warping under load.



## Reduced Carbon Footprint

Considerable reduction in production of onsite waste material, and up to 20% reduction in embodied carbon in building fabric.\*



## Construction Predictability

Due to the nature of offsite construction, LGSF is less reliant on site and weather conditions, along with the usual 'wet-trade' labour resources.



## Speed Of Construction

Intrastack, pre-panelised structures can improve the overall construction programme by 50%, providing a much quicker ROI for your project.



## Fire Protection & Performance

Unlike timber frame, during construction fire protection of a steel frame is not required. Intrastack LGSF structures can offer up to 120 min fire performance based on our tested configurations.



## Weight Reduction

A lightweight steel frame structure can be up to 70% lighter than a traditional structure, resulting in lighter and cheaper foundations and podium structures.



## System Robustness

Intrastack structures offer the option of a composite concrete floor offering a quality under foot feel to all levels of the building. We can also provide acoustic and durability upgrade options to all structural walls beyond regulatory performance.

\*For more information on this please refer to third party studies ([ED020/ RT1730](#)) conducted by The SCI (The Steel Construction Institute). Reductions will vary by project, based on a number of variables. The % difference will depend on the proposed project specification and build approach. Comparisons will vary depending on specific comparison details and lifecycle stages.

# SYSTEM TESTING & CERTIFICATIONS

## TESTED & CERTIFIED

### › BOPAS (Buildoffsite Property Assurance Scheme)

Provides assurance that construction systems designed, manufactured and installed by accredited MMC Providers will conform to industry best practice in terms of durability and system integrity.

### › SCI/NHBC Stage 1

The Steel Construction Institute has assessed the structural aspects of this system for Stage 1 - System Certification and confirms that it is suitable for use in the construction of dwellings in accordance with NHBC Standards Chapter 6.10 "Light steel framing".

### › Advantage Approval (AHCI)

AHCI have reviewed the structural characteristics of this system for certification and confirm that it is acceptable for use in the construction of dwellings in accordance with AHCI Standards Chapter 11.0 "Light Steel Framed Buildings".

### › Premier Guarantee - System Acceptance

This product has been assessed by LABC Warranty as being fit for its intended use provided it is installed, used and maintained as set out in the System Acceptance Document and documents provided by the product manufacturer. Category 2 Light Gauge Steel Panelised System wall and roof system with Sheathing Board.

### › LABC Warranty – System Acceptance

This product has been assessed by LABC Warranty as being fit for its intended use provided it is installed, used and maintained as set out in the System Acceptance Document and documents provided by the product manufacturer. Category 2 Light Gauge Steel Panelised System wall and roof system with Sheathing Board.

### › Checkmate

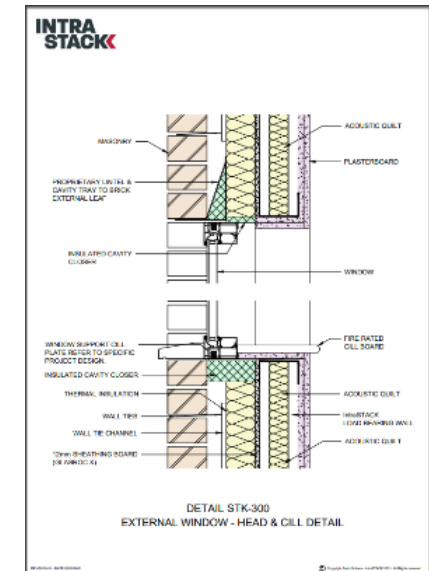
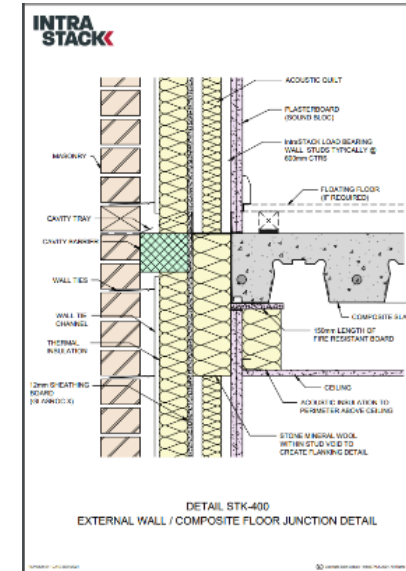
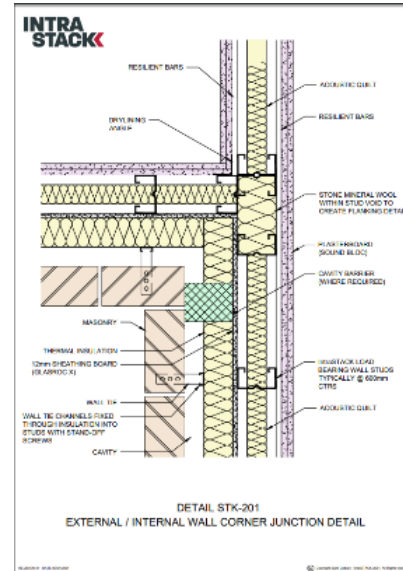
System Approval: Intrastack Low-Rise Housing (ILRH)  
Certificate ref: SG0823



# SYSTEM TESTING & CERTIFICATIONS

## TESTED BUILD-UPS & DESIGNS

We provide extensive fire test results for our most popular wall and floor build-ups for LGSF load-bearing and non-loadbearing, multi-storey and low-rise housing solutions, as well as comprehensive standard details for all our steel solutions.



### ➤ 90MIN EXTERNAL LOADED WALL FIRELINE & GLASROC X

TESTED IN ACCORDANCE WITH BS EN 1365-1:2012

#### WALL BUILD UP:\*

- 2 layers 15mm British Gypsum Gyproc Fireline plasterboard (fireside)
- 100mm IntraStack loadbearing steel frame
- 100mm Isover Acoustic Partition Roll (APR 1200) In stud zone
- 1 layer 12.5mm British Gypsum Glasroc X sheathing board (non-fireside)
- 200mm Isover Polterm Max Plus Insulation (non-fireside)

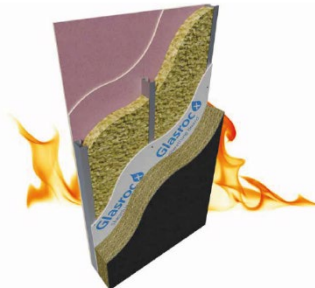
Tested build up did not include breather membrane or vapour control layers, client to assess.

#### FIRE TEST RESULT:

- 90 minutes
- Tested in accordance with BS EN 1365-1:2012
- Tested load 60kN
- Direction of fire: In to out (Internal lining through to façade)

#### APPLICATION RESTRICTIONS:

- Minimum stud depth 100mm
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



### ➤ 120MIN NON LOAD BEARING ISOVER POLTERM MAX PLUS

TESTED IN ACCORDANCE WITH BS EN 1364-1:2015

#### WALL BUILD UP:\*

- 2 layers 15mm British Gypsum Gyproc SoundBloc plasterboard (fireside)
- 100mm IntraStack non-loadbearing steel frame
- 100mm Isover Acoustic Partition Roll (APR 1200) In stud zone
- 1 layer 12.5mm British Gypsum Glasroc X sheathing board (non-fireside)
- 200mm Isover Polterm Max Plus Insulation (non-fireside)

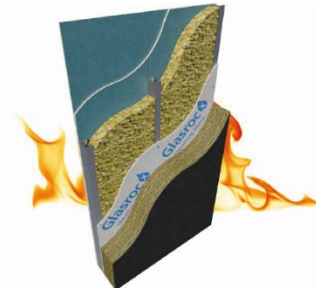
Tested build up did not include breather membrane or vapour control layers, client to assess.

#### FIRE TEST RESULT:

- 120 minutes
- Tested in accordance with BS EN 1364-1:2015
- Direction of fire: In to out (Internal lining through to façade)

#### APPLICATION RESTRICTIONS:

- Minimum stud depth 100mm
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



### ➤ 60MIN FLOOR - LOW RISE LOAD BEARING FIRELINE

TESTED IN ACCORDANCE WITH BS EN 1363-1:2020 and BS EN 1365-2:2014

#### BUILD UP:\*

- 2 layers 12.5mm British Gypsum Gyproc Fireline plasterboard (fireside)
- British Gypsum Gyproc Resilient Bar (RB1)
- 200mm IntraStack steel joists
- 50mm Isover Acoustic Partition Roll (APR 1200) In joist zone
- 1 layer 22mm CaberDek (non-fireside)

#### FIRE TEST RESULT:

- 60 minutes
- Tested in accordance with BS EN 1363-1:2020 & BS EN 1365-2:2014
- Tested load 3.0kN/m<sup>2</sup>
- Direction of fire: from below

#### APPLICATION RESTRICTIONS:

- Minimum joist depth 200mm
- Suitable for low rise housing up to 3 storeys only
- Maximum joist centres 600mm
- Minimum joist metal gauge 1.2mm



Disclaimer:  
\* Restrictions apply for material specification and fixing details for the testing to be relevant. These will be accounted for within the IntraStack design platform.  
All testing information to be applied using the direct field of application of the results.

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\* Restrictions apply for material specification and fixing details for the testing to be relevant. These will be accounted for within the IntraStack design platform.  
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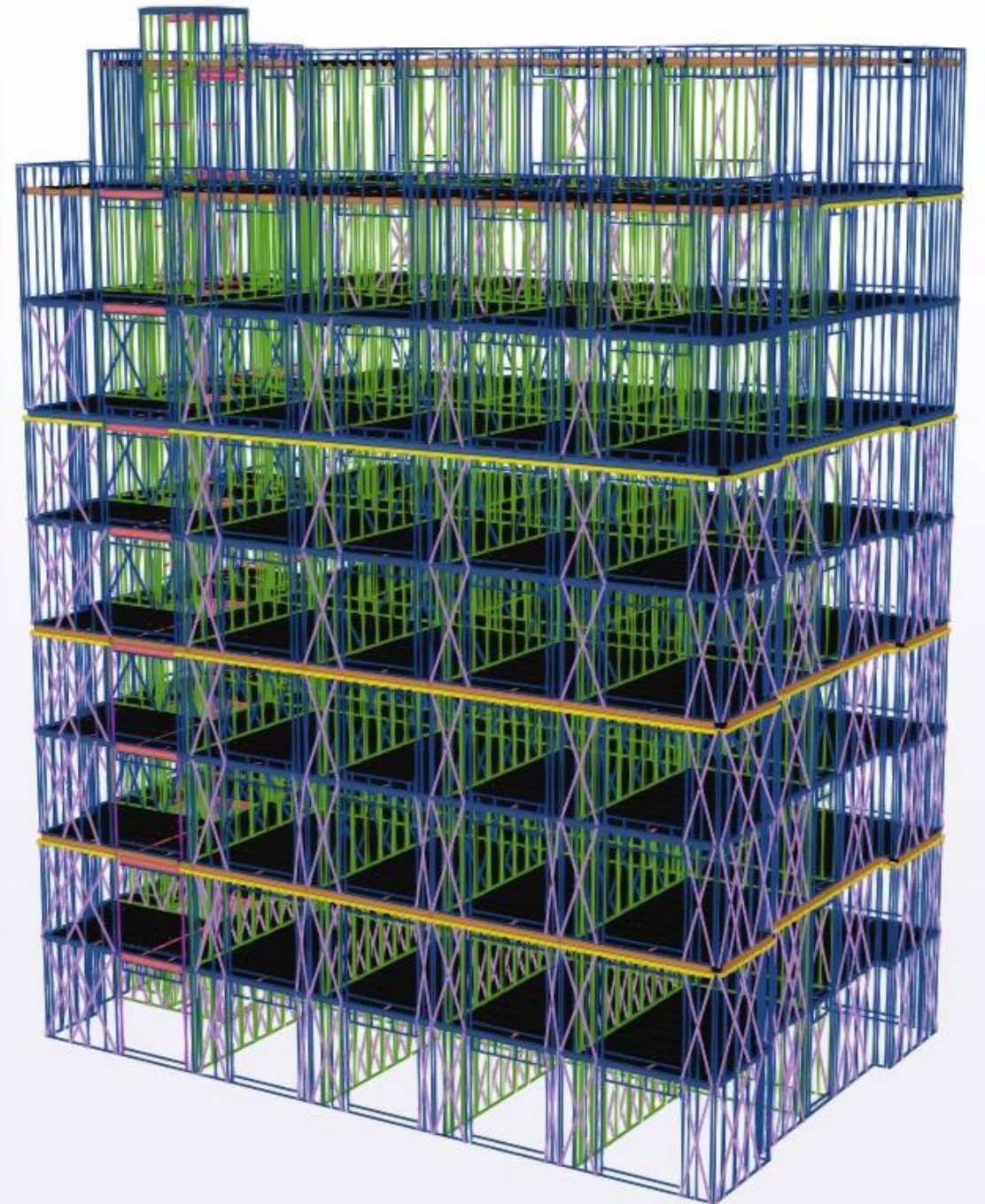
Disclaimer:  
\* Restrictions apply for material specification and fixing details for the testing to be relevant. These will be accounted for within the IntraStack design platform.  
All testing information to be applied using the direct field of application of the results.

# LGSF – MEDIUM-RISE SYSTEM OVERVIEW

## Intrastack provides:

- Fully load-bearing structures up to 12 storeys in height
- Optimised LGSF solutions specific to your project, covering:
- Pre-panelised external walls, internal separating walls, and partitions\*.
- Separating floors, roof cassettes & lift shafts.
- Balconies, stairs, and any other site-required hot-rolled steel components.
- We can provide a composite concrete floor, that would be site installed & poured by system installers.
- We can also provide SFS infill and pre-assembled-façade system should your project not lend itself to a full LGSF load-bearing structure.

\* Only internal partitions required to carry load are typically provided.



# INTRASTACK INFILL / SFS

**Infill walls, also known as SFS, are non-loadbearing external walls built between floors of a primary structural frame; they are used to provide support for the cladding system.**

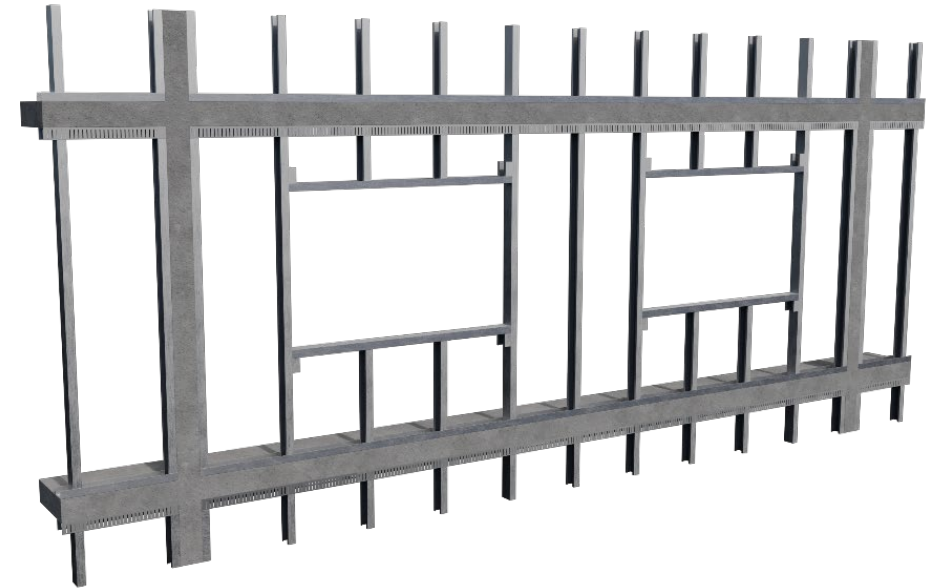
## Non-loadbearing external wall system

Intrastack's light steel infill walls (SFS) use vertical C-sections, known as studs, spanning between the floors of the primary frame and around openings.

The size and spacing of C-sections are selected based on structural requirements, as well as compatibility with external façade materials and standard plasterboard widths.

Wall panels can be pre-fabricated as storey-high units or assembled on-site from cut-to-length C-sections, offering flexibility for different construction scenarios.

Intrastack's SFS system forms part of **GypLyner Xternal** – a complete Saint-Gobain through-wall solution.



## Key Benefits of SFS:

- Quick installation
- Dry construction process
- Design flexibility
- Superior fire resistance
- Exceptional acoustic insulation
- Enhanced thermal efficiency
- Versatile cladding support
- Lightweight construction



# SAINT-GOBAIN GYPLYNER XTERNAL

**GypLyner Xternal is a full Saint-Gobain through-wall SFS solution that has a range of detailed and tested fire and thermal performance specifications, all supported by market leading technical evidence.**

## Through-Wall Infill Solution

With thorough testing and technical know-how at the core of what we do, trusted Saint-Gobain partner brands, Intrastack, British Gypsum and Isover, are working together to provide a reliable infill solution that has been designed to offer versatility and exceed the expectations of our customers.

Our exacting standards for design and testing give you the certainty you need when developing your multi-storey projects.

Delivering attention to detail and providing reassurance with substantiated evidence, this external wall offering has a clear range of regulation & performance specifications to suit all your needs.

## Full Warranty

GypLyner Xternal is covered by a full Saint-Gobain Warranty, which is a combination of British Gypsum's SpecSure® & Intrastack's Design Warranty.

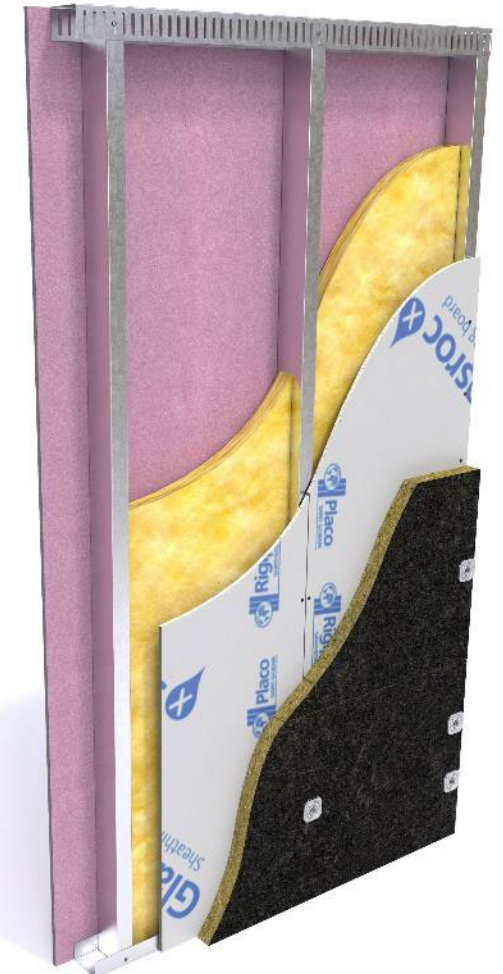
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British  
Gypsum  
SAINT-GOBAIN

ISOVER  
SAINT-GOBAIN

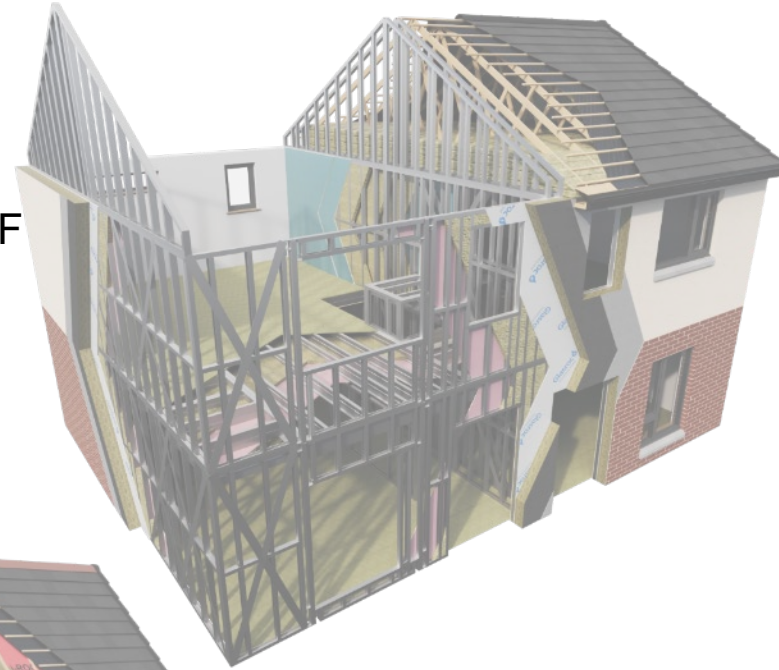
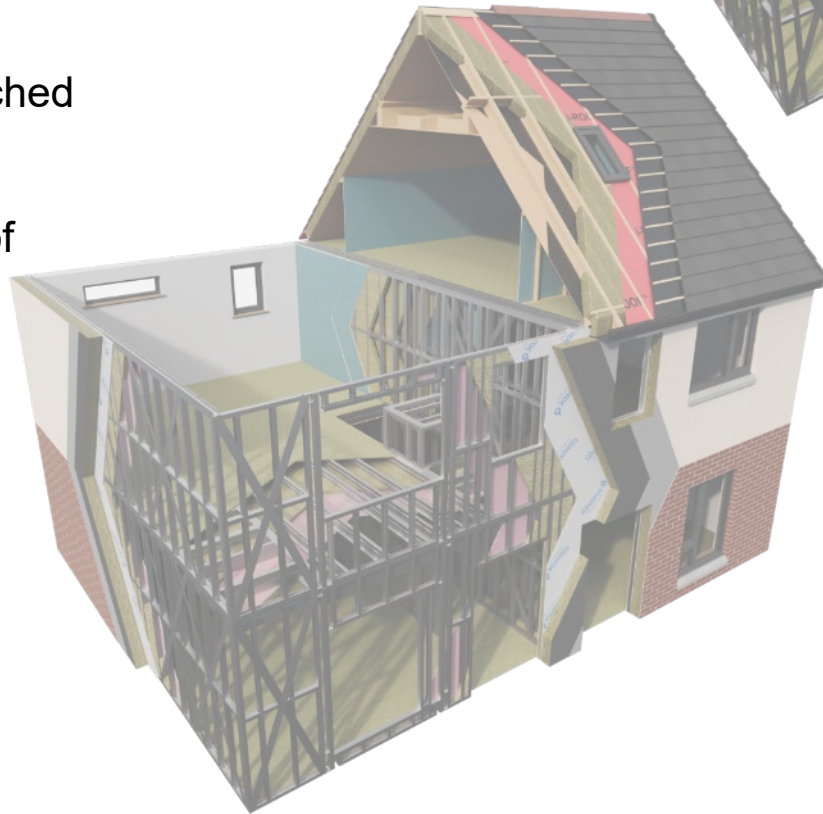
## Key Information:

- Systems designed to offer flexible specification options.
- Meet and exceed thermal performance needs through a range of insulation solutions.
- Comprehensive fire and acoustic tested solutions.
- Fire resistance to BS-EN 1364-1 EI 60, 90 and 120 mins (inside to out, outside to in).
- Installation details for junctions, abutments, windows and deflection requirements.



# INTRASTACK LOW-RISE HOUSING

- Further complementing the Intrastack family of LGSF solutions
- Providing the same benefits of MMC
- Fully tested & accredited
- Single-family homes
- Cottage apartments
- Terraces & semi-detached
- Timber trussed roof
- Cassetted room-in-roof
- On-site now



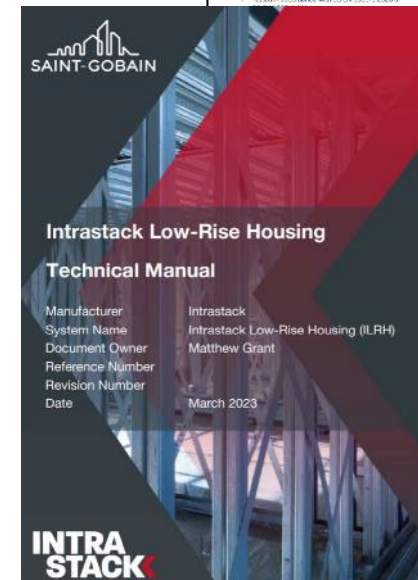
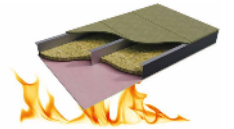
➤ **60MIN INTERNAL - LOW RISE LOAD BEARING**  
**SOUNDBLOC**  
TESTED IN ACCORDANCE WITH BS EN 12518-1:2018 AND BS EN 12518-2:2018  
WALL BUILD UP: \* APPLICATION RESTRICTIONS:

➤ **30MIN EXTERNAL - LOW RISE LOAD BEARING**  
**FIRELINE GLASROC X**  
TESTED IN ACCORDANCE WITH BS EN 12518-1:2018 AND BS EN 12518-2:2018  
WALL BUILD UP: \* APPLICATION RESTRICTIONS:

➤ **30MIN INTERNAL - LOW RISE LOAD BEARING**  
**SOUNDBLOC**  
TESTED IN ACCORDANCE WITH BS EN 12518-1:2018  
WALL BUILD UP: \* APPLICATION RESTRICTIONS:

➤ **60MIN FLOOR - LOW RISE LOAD BEARING**  
**FIRELINE**  
TESTED IN ACCORDANCE WITH BS EN 12518-1:2018 AND BS EN 12518-2:2018  
BUILD UP: \* APPLICATION RESTRICTIONS:

➤ **30MIN FLOOR - LOW RISE LOAD BEARING**  
**FIRELINE**  
TESTED IN ACCORDANCE WITH BS EN 12518-1:2018 AND BS EN 12518-2:2018  
BUILD UP: \* APPLICATION RESTRICTIONS:



SAINT-GOBAIN

## Intrastack Low-Rise Housing Technical Manual

Manufacturer Intrastack  
System Name Intrastack Low-Rise Housing (ILRH)  
Document Owner Matthew Grant  
Reference Number  
Revision Number  
Date March 2023

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SAINT-GOBAIN

# EXAMPLE PROJECT

## ABBEY WALL WORKS, WIMBLEDON

- › 5 to 6 storey apartment development
- › Multiple linked-blocks
- › Complex wedge-shaped structure
- › Multi-faceted roof configuration
- › 15-week installation programme
- › RJB Interiors installing

[www.intrastack.co.uk/project/abbey-wall](http://www.intrastack.co.uk/project/abbey-wall)



# EXAMPLE PROJECT

## IMAGES STUDENT ACCOMMODATION, WORCESTER

- 8 storey student living
- Tight inner-city site
- Close to inner ring-road
- Onto 2-storey RC podium
- 10-week installation programme
- Intastruct installing

[www.intrastack.co.uk/project/images-worcester](http://www.intrastack.co.uk/project/images-worcester)



# EXAMPLE PROJECT

## THE PRESSWORKS, BIRMINGHAM

- 3 blocks x 4 to 5 storey apartments
- Wrapping around existing, listed buildings
- Directly onto public footpath & through-road
- Complex horse-shoe configurations
- 16-week installation programme
- BR Hodgson installing

[www.intrastack.co.uk/project/the-pressworks](http://www.intrastack.co.uk/project/the-pressworks)



# EXAMPLE PROJECT THE MALL, EALING

- 10 storey inner-city living - apartments
- Directly next-to TFL Ealing Broadway
- Access via neighbouring properties
- Very little site landing capability
- 11-week installation programme
- SDP solutions installing

[www.intrastack.co.uk/project/the-mall-ealing](http://www.intrastack.co.uk/project/the-mall-ealing)



# EXAMPLE PROJECT THE HEIGHTS, GREENWICH

- 2 blocks x 5 storey apartments
- Next to neighbouring properties
- Limited local access routes
- Increased thermal performance requirements
- 12-week installation programme
- SDP solutions installing

[www.intrastack.co.uk/project/the-heights-apartments-greenwich](http://www.intrastack.co.uk/project/the-heights-apartments-greenwich)



# EXAMPLE PROJECT COLLYHURST VILLAGE (PHASE 1), MANCHESTER

- Part of major regeneration project in Manchester
- 3 blocks of 5 & 6 storey apartments
- 100 new flats made available
- 1st village of 7 planned
- 16 weeks LGSF structure installation - block 1
- DEX Construction main contractor

[www.intrastack.co.uk/project/collyhurst-village](http://www.intrastack.co.uk/project/collyhurst-village)



# EXAMPLE PROJECT

## ENNERDALE AVENUE, MANCHESTER

- Low-rise housing scheme
- 8 family homes
- 4-week installation programme
- 300 steel frame panels used
- 15 tonnes in total of cold rolled steel
- 2.6 tonnes in total of hot rolled steel

[www.intrastack.co.uk/project/ennerdale-avenue](http://www.intrastack.co.uk/project/ennerdale-avenue)





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**Manufacturing:** Station Road, Stoney Stanton, Leics, LE9 4NA

**Contact:** [intrastack@saint-gobain.com](mailto:intrastack@saint-gobain.com)



**intrastack**