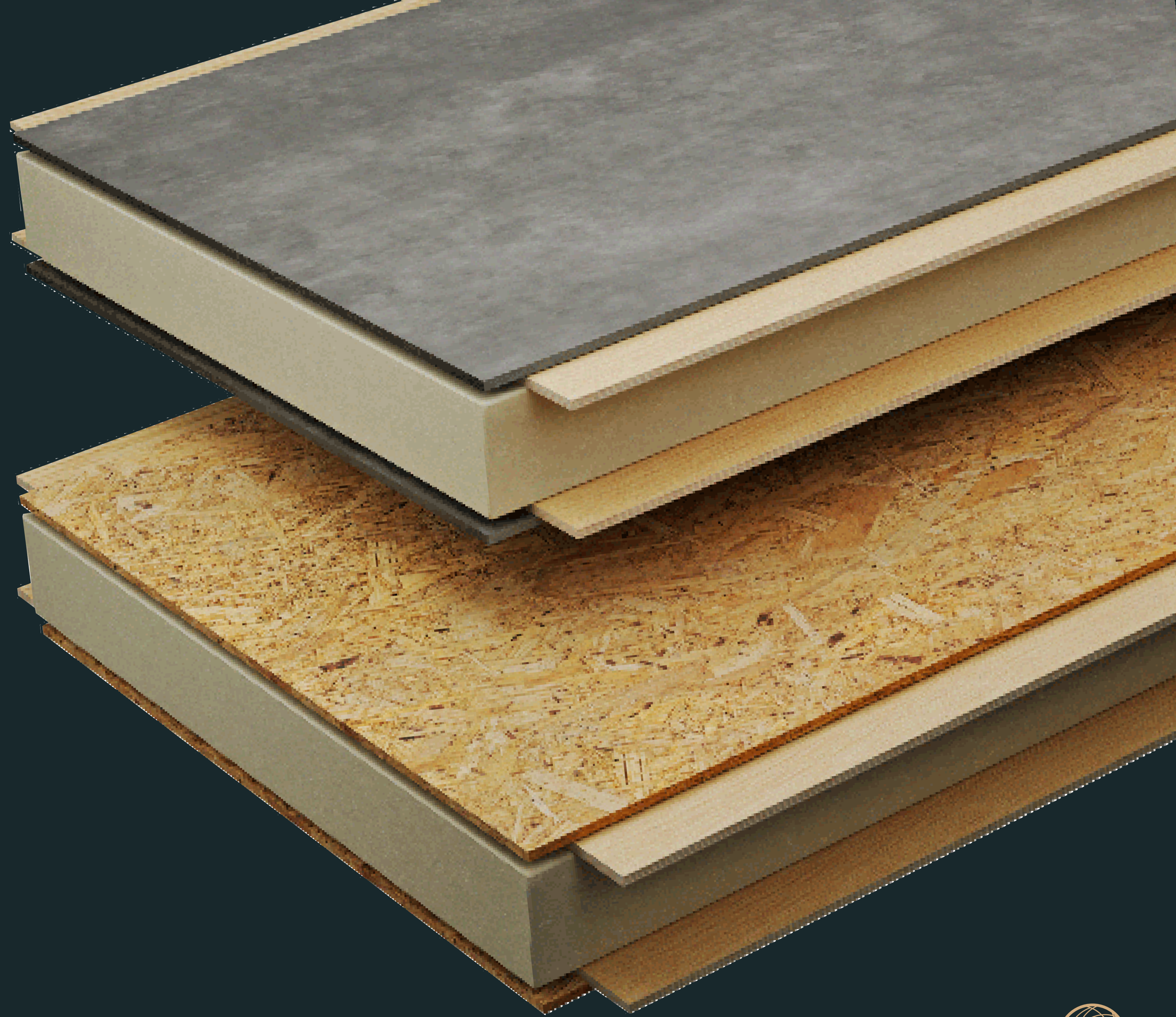


PEELING BACK THE E.ISIP



SUSTAINABLE BUILDING INNOVATION.



E.I. SIP is at the forefront of sustainable building solutions, combining superior strength, durability, and energy efficiency.

Here's what makes the E.I SIP exceptional:

Structural skeleton frame & ring beam:

Significantly enhancing the strength and durability. This robust structure gives our system an unparalleled resilience, ensuring it lasts longer and can handle heavier loads compared to other SIP and timber frame providers. The structural skeleton and ring beam are patent pending.

Superior Thermal Efficiency:

We achieve better U-values than competitors with a thinner wall, providing outstanding insulation. This superior thermal performance helps regulate indoor temperatures more efficiently, reducing energy consumption, leading to long-term cost savings.

Excellent Airtightness:

Airtightness is critical for energy-efficient buildings, E.I SIP's are designed to excel in this area. By minimising air leakage, they contribute to a more controlled indoor environment and greater energy efficiency.

Innovation in Sustainable Building:

E.I SIP's are at the forefront of sustainable building solutions, thanks to it's combination of energy efficiency, strength, and long-term durability. It not only meets, but exceeds the demands for sustainable construction in today's and tomorrow's market.

In addition to the exceptional strength and thermal efficiency of the E.I SIP, we can offer pre-fenestration in the factory, providing even greater convenience and precision. By pre-installing windows during the manufacturing process, we reduce the time and complexity of on-site work, helping streamline the construction time line while adding PMV and giving you a reduced time frame to a weathertight building.

Etopia are also working towards factory-applied façades, a feature that will further enhance our product offering. This will allow for faster construction, improved quality control, and a seamless integration of exterior finishes, ensuring projects can be completed quicker with a higher level of consistency.

Carrier Boards for external finished can be applied in the factory today.

- 1 Ring Beam
- 2 E.I SIP CBPB Version
- 3 E.I SIP OSB Version
- 4 Soleplate





Polyurethane Foam Insulation

A high pressure injection system where we over compact the foam core into the panel, guaranteeing the insulating core's thermal and structural properties. The make up of the panel greatly reduces the risk of interstitial condensation and improves the internal environment of the building.



Cement bonded particle board (CBPB)

(CBPB) is a type of composite panel made up of wood particles, cement, and water. It is used in a wide range of applications including flooring, wall cladding, roofing, and as the substrate for exterior render systems.



Oriented strand board (OSB)

(OSB) is a type of engineered wood panel commonly used in construction and home improvement projects. Made from compressed layers of wood strands bonded with adhesives. OSB is known for its durability, strength and versatility.

Soleplate detail

This is a standard detail that works and is practical, the tolerance level to the substructure is +/-3mm this allows us to build off a level platform.





Spline Detail

This connects the panels while adding structural strength, forming part of the structural skeleton. Unlike standard spline details, this design excels at maintaining airtightness, ensuring that the U-value remains unaffected due to the foam-to-foam connection—an improvement over typical SIP panel connections.

Ring Beam (Universal Structural Element)

The Ring Beam is a critical component in enhancing the structural integrity and load-bearing capacity of the E.I SIP system. Engineered for multifunctionality, it plays an essential role in both horizontal and vertical applications.

It maintains the design aesthetic of the building without the need for additional structural members being introduced, that may exceed the depth of the structural walls.



Horizontally:

It is used to support intermediate floors, whilst maintaining the thermal and airtight performance of the external walls. It distributes loading from the upper floors avoiding the need for structural columns which can decrease the thermal performance through cold bridging.

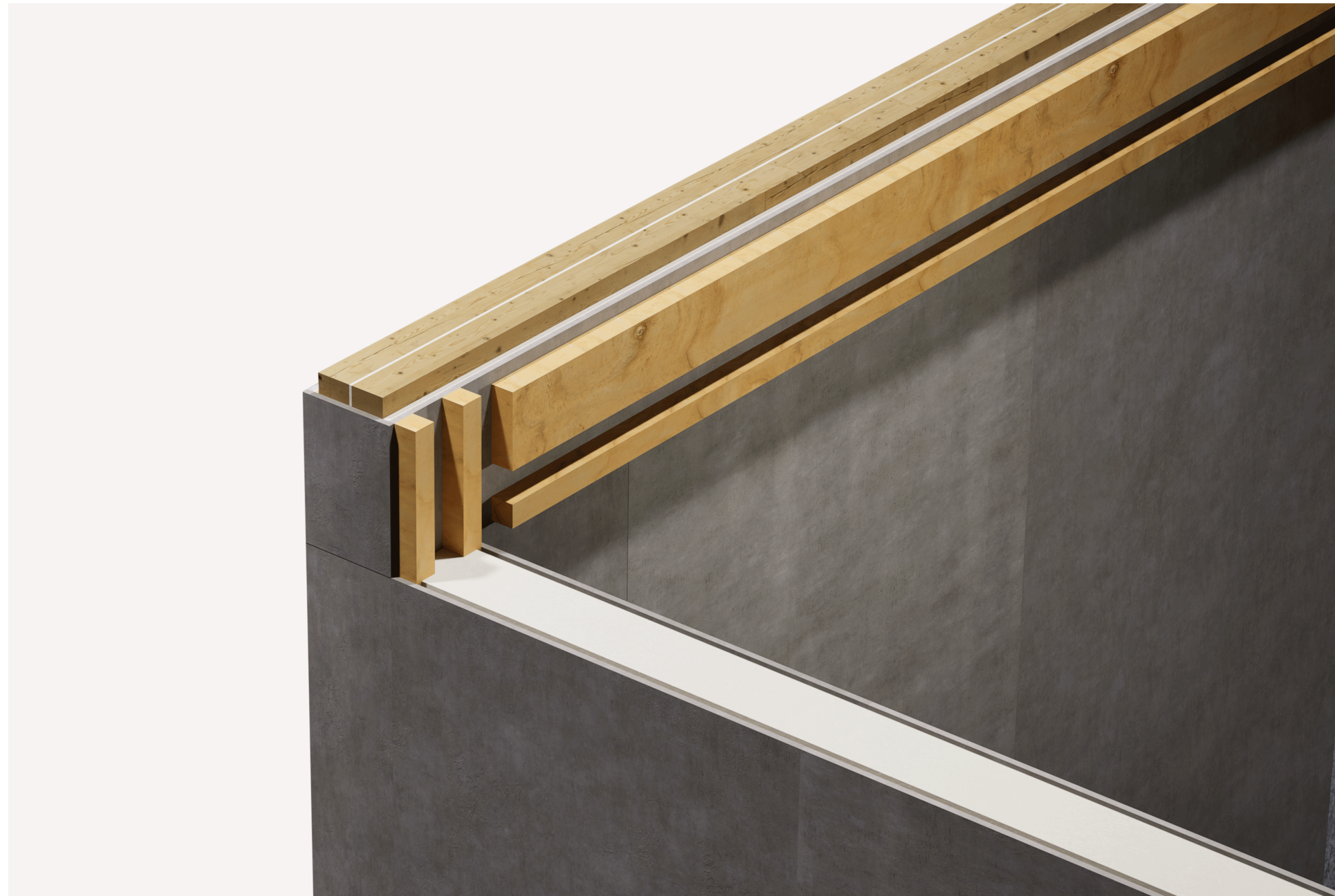
Vertically:

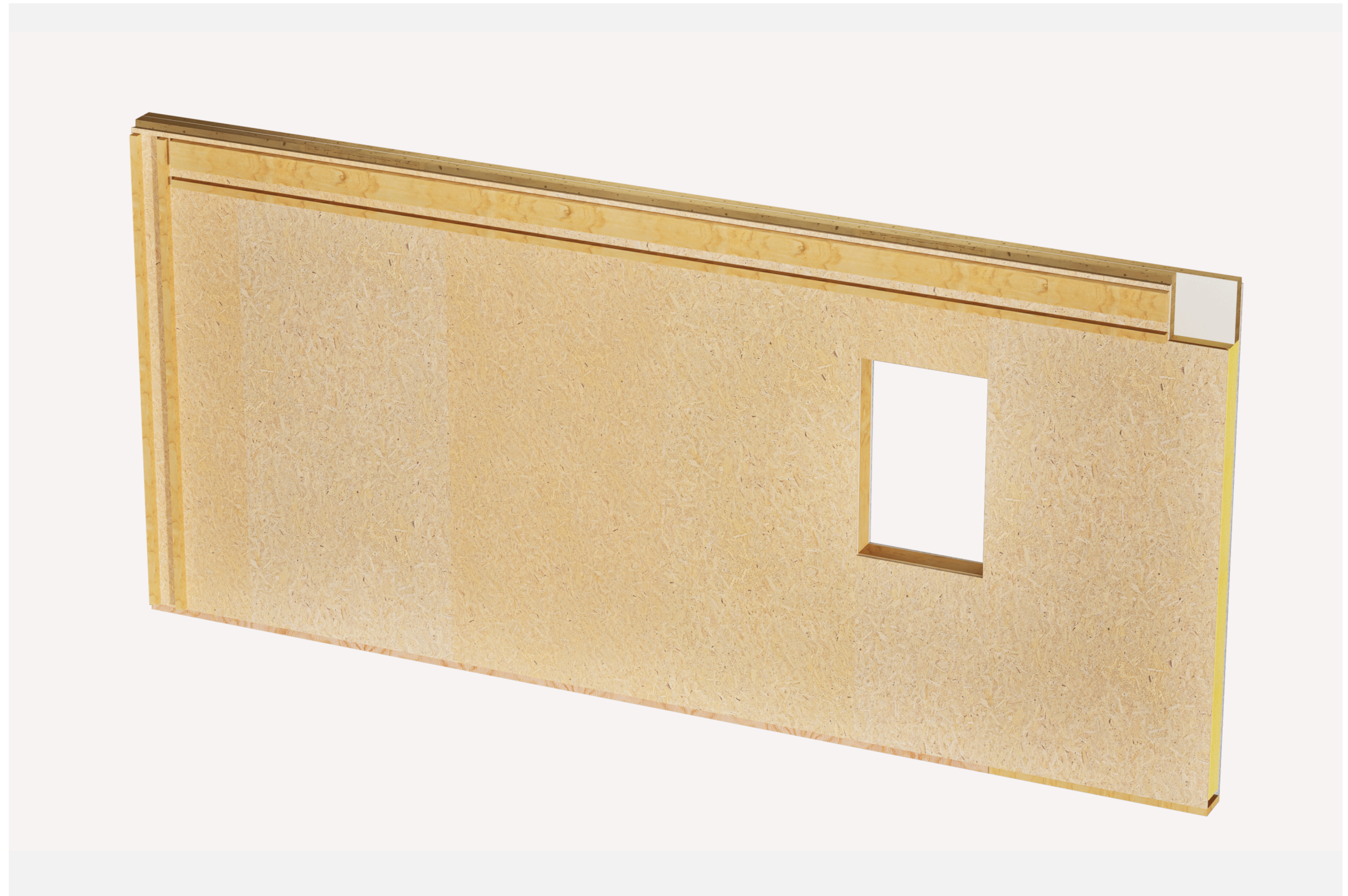
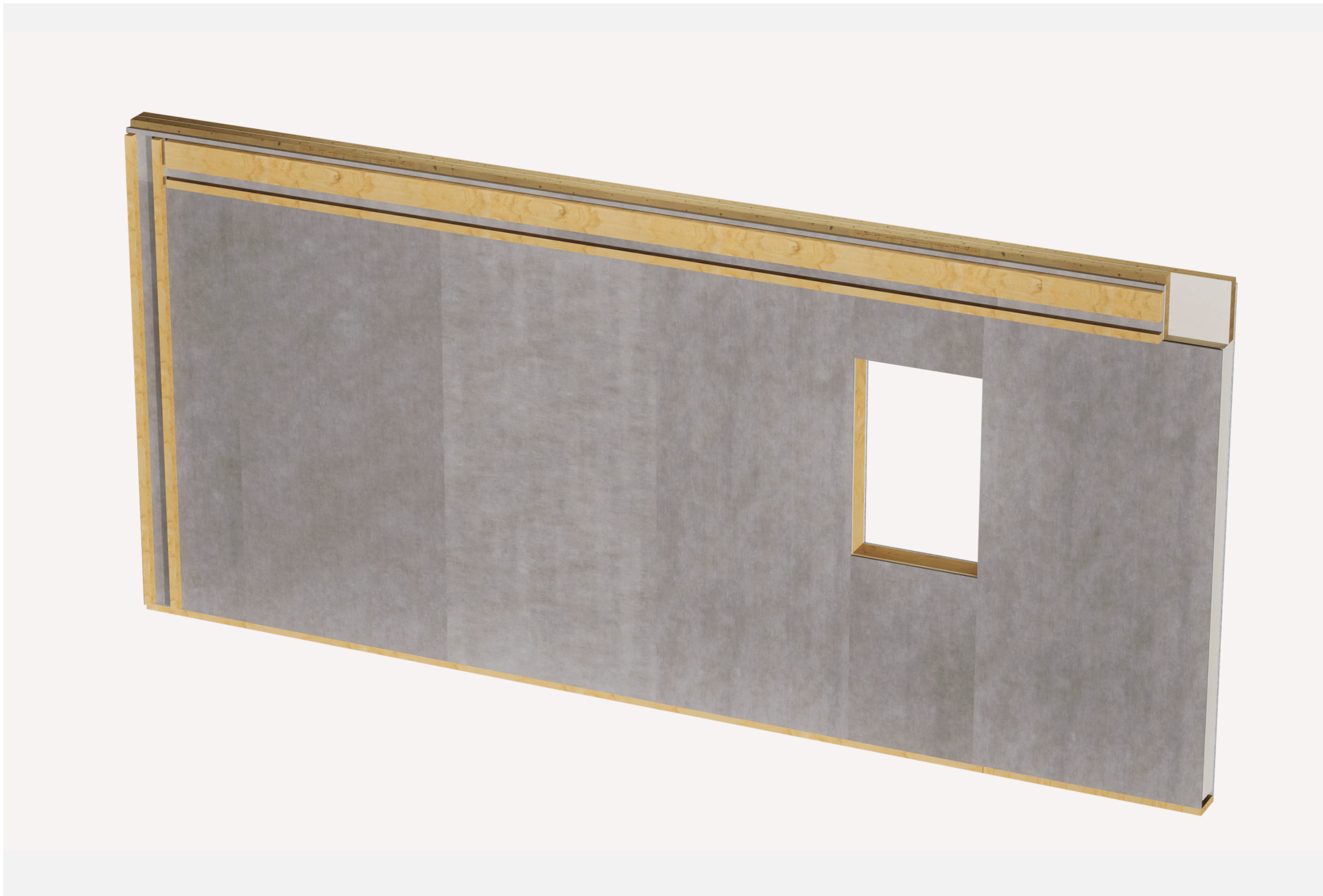
It create wind frames by integrating a steel flitch plate within the centre of the panel, increasing structural stability around large openings. Our columns maintain thermal performance and airtightness, where the typical steel column, creates thermal bridging and difficulties to finish on site.



Corner Detail

Unlike standard sip corner details the E.I SIP has been designed to minimise cold bridging further enhancing the energy efficiency of the building.



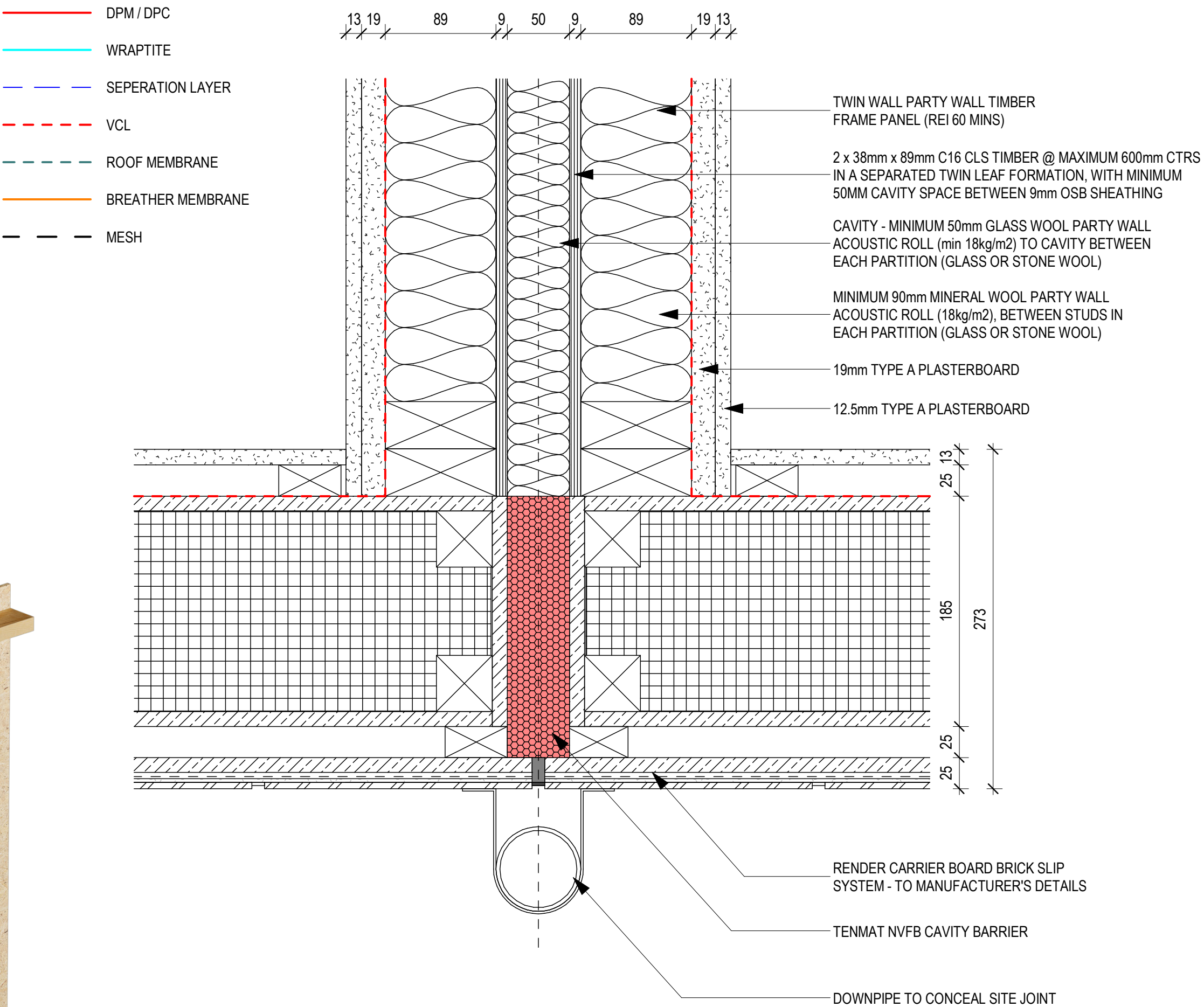


LPF

Panels are manufactured in the factory as SPF (small panel format), these are then assembled into LPF (large panel format). Within our facilities, we have rigorous quality control, making sure we meet the highest standards.

Party Wall Details & Connections to E.I SIP

Our system incorporates a standard timber frame party wall detail, specifically designed to deliver excellent acoustic insulation and robust fire performance. This configuration ensures a high level of soundproofing between adjoining spaces while adhering to strict safety standards for fire resistance. The party wall's robust detail seamlessly connects to the external panel system, maintaining the structural and thermal continuity of the building envelope.

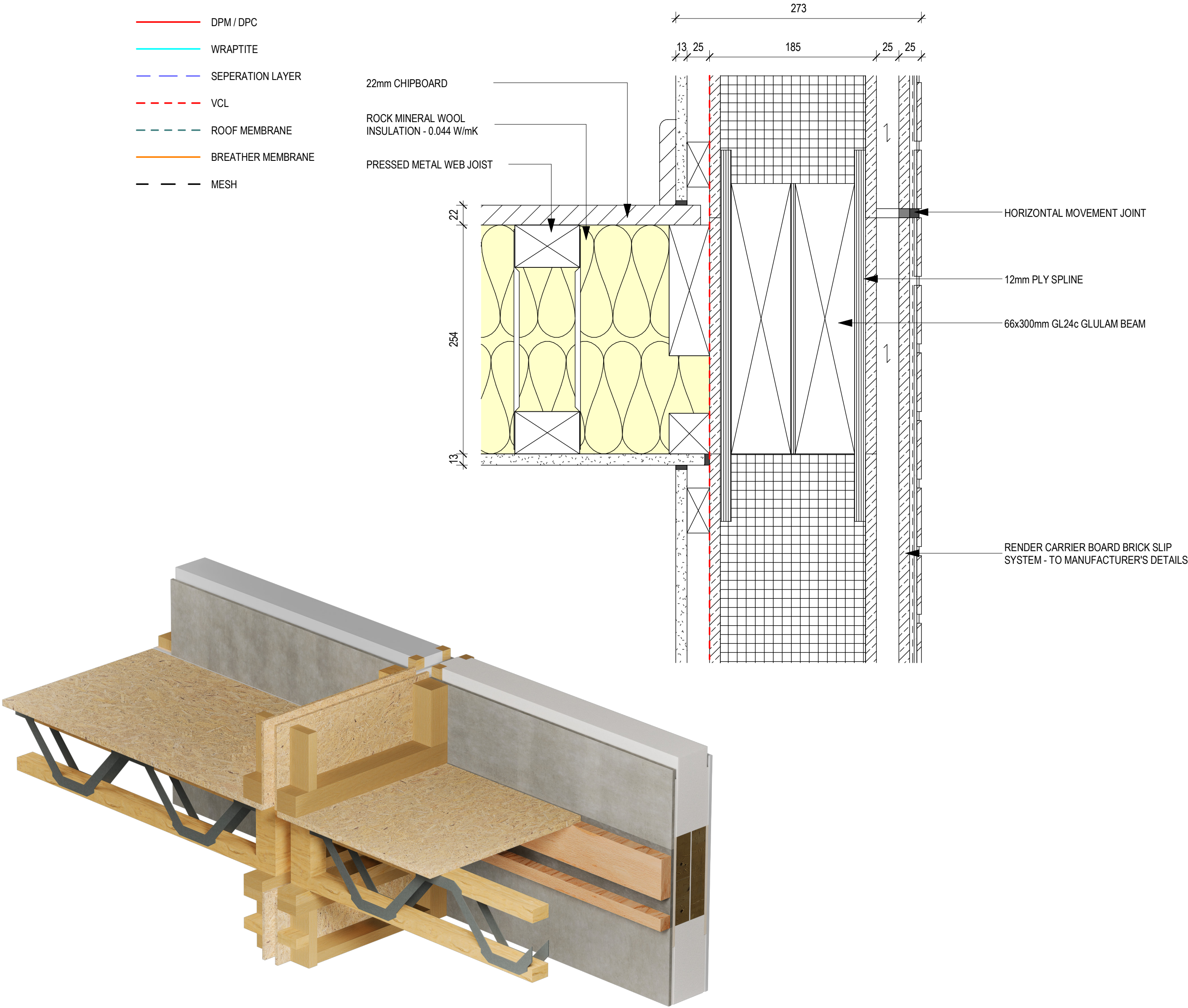


Floors

The ledger is pre-fitted to the ring beam, providing a ready-made supporting member for the floor system.

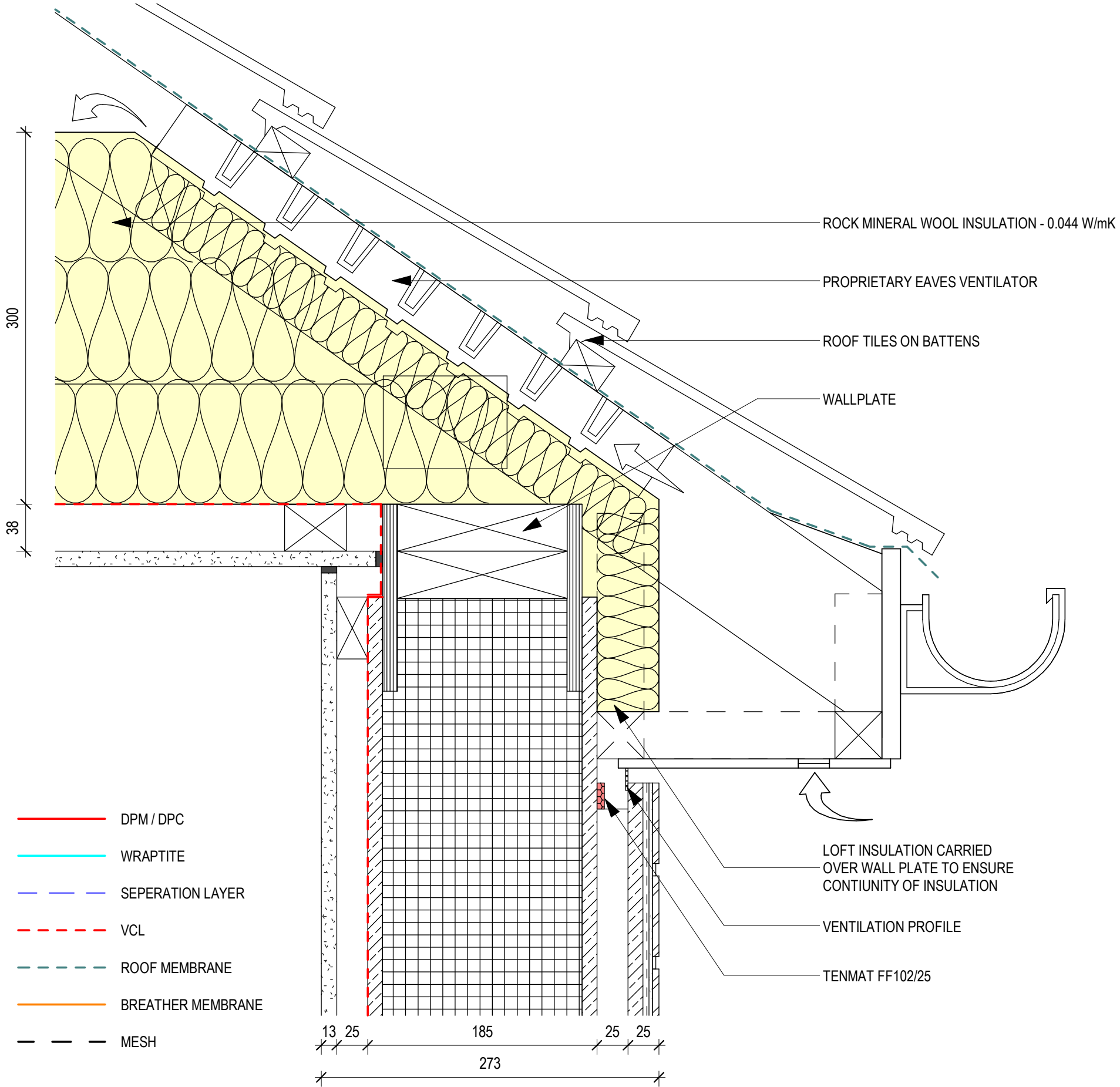
Our floors are delivered to the site in a cassette format, constructed using Posi-Joists. This design allows the cassettes to be placed directly onto the pre-installed ledger, significantly speeding up the floor installation process.

Additionally, the use of Posi-Joists simplifies M&E (mechanical and electrical) installations, ensuring a more efficient and streamlined construction workflow.

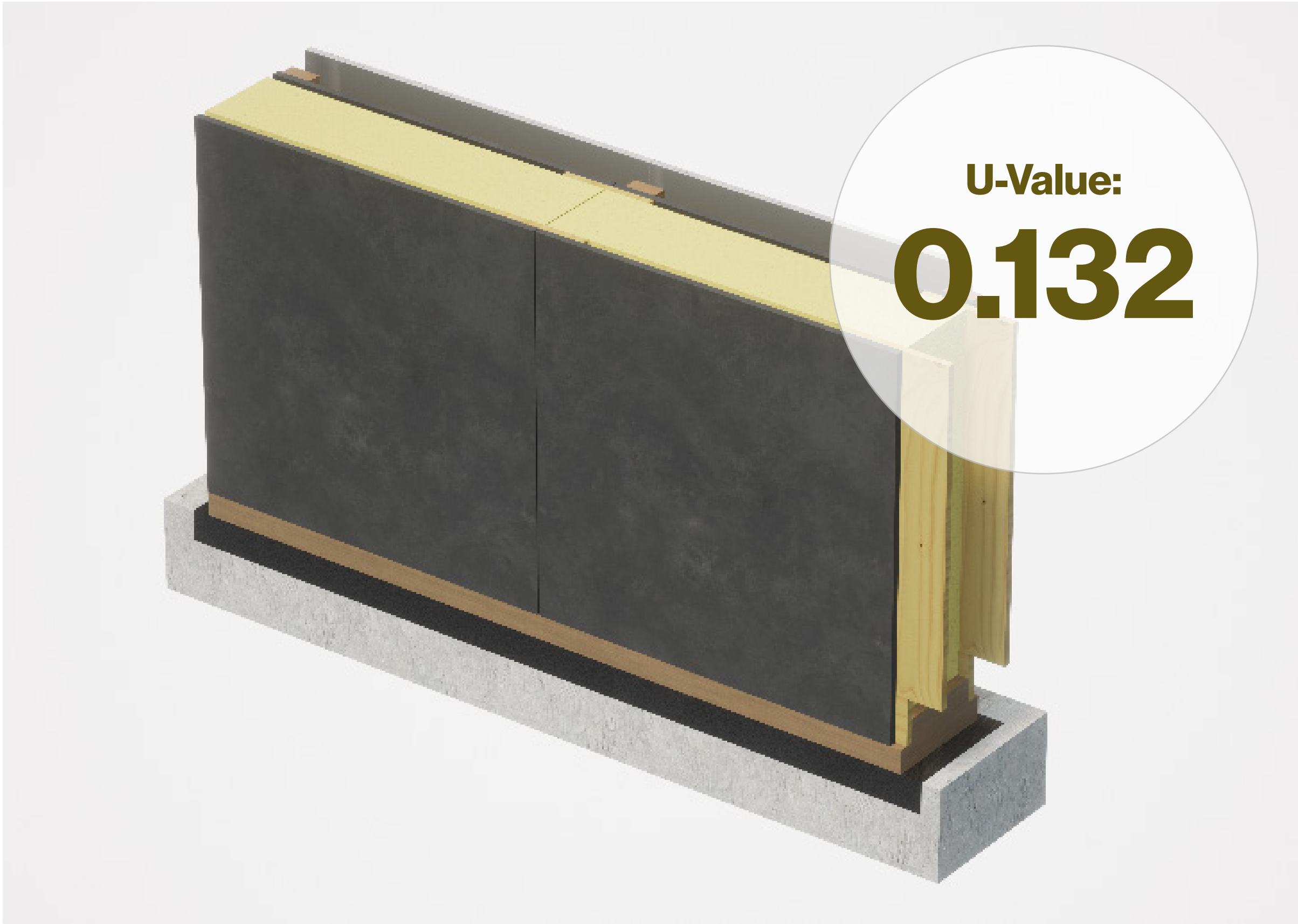


Roof & Wall Plate

Our panels can accept any roof, the wall plate comes pre attached and ready to take the roof.



Thermal Performance: E.I SIP CBPB
25mm service batten internally with 12.5mm plasterboard



Performance: E.I SIP OSB
25mm service batten internally with 12.5mm plasterboard



Sustainable Building Innovation: Optimise your next development.



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