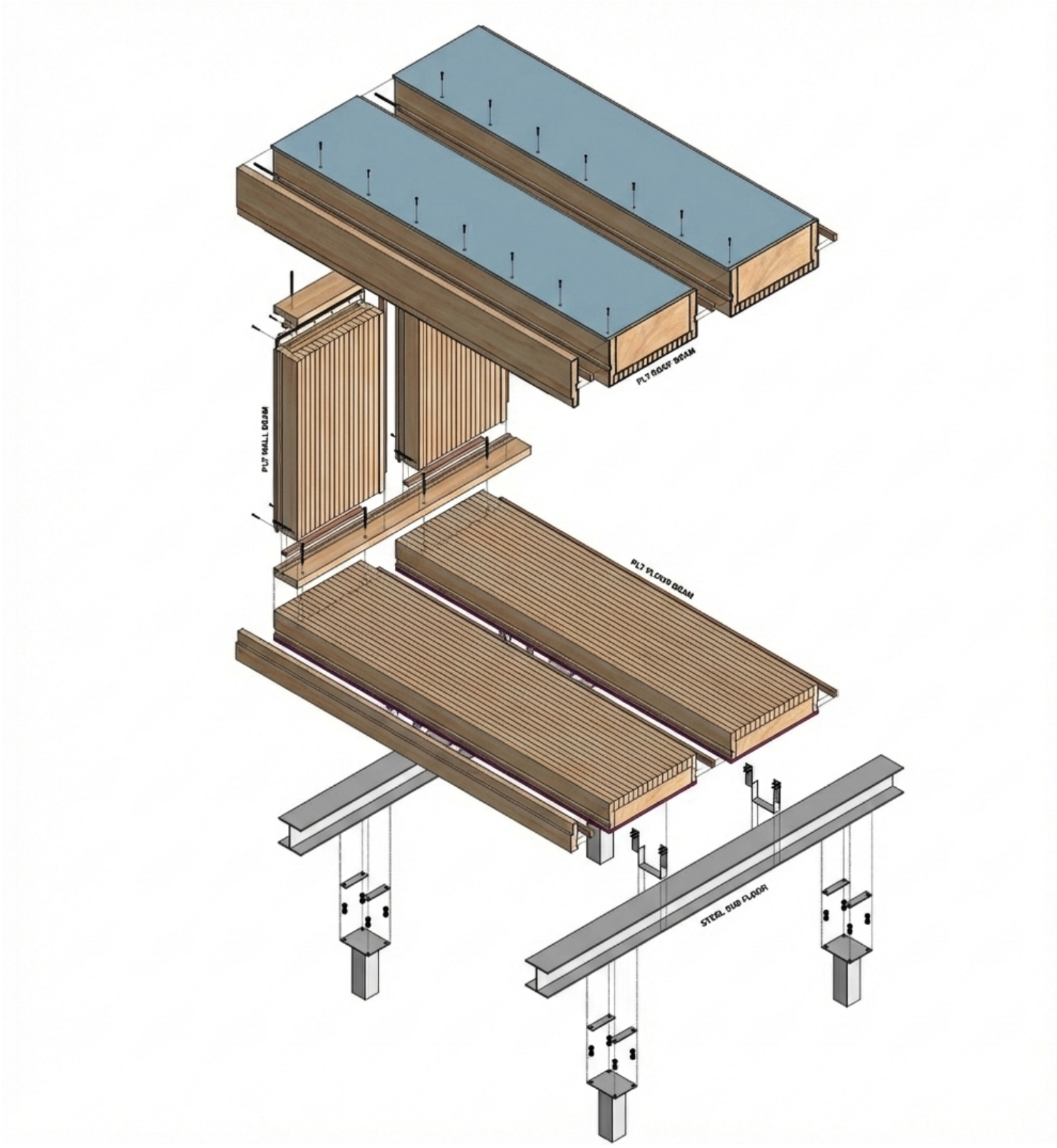

CASE

Prefabricated timber roof, wall and floor modules formed around SUPALAM primary members and laminated Tasmanian oak panels.
Units are supplied pre-oiled and assembled as single-lift elements, integrating structure, internal lining and fixing interfaces to simplify enclosure sequencing and reduce on-site coordination.
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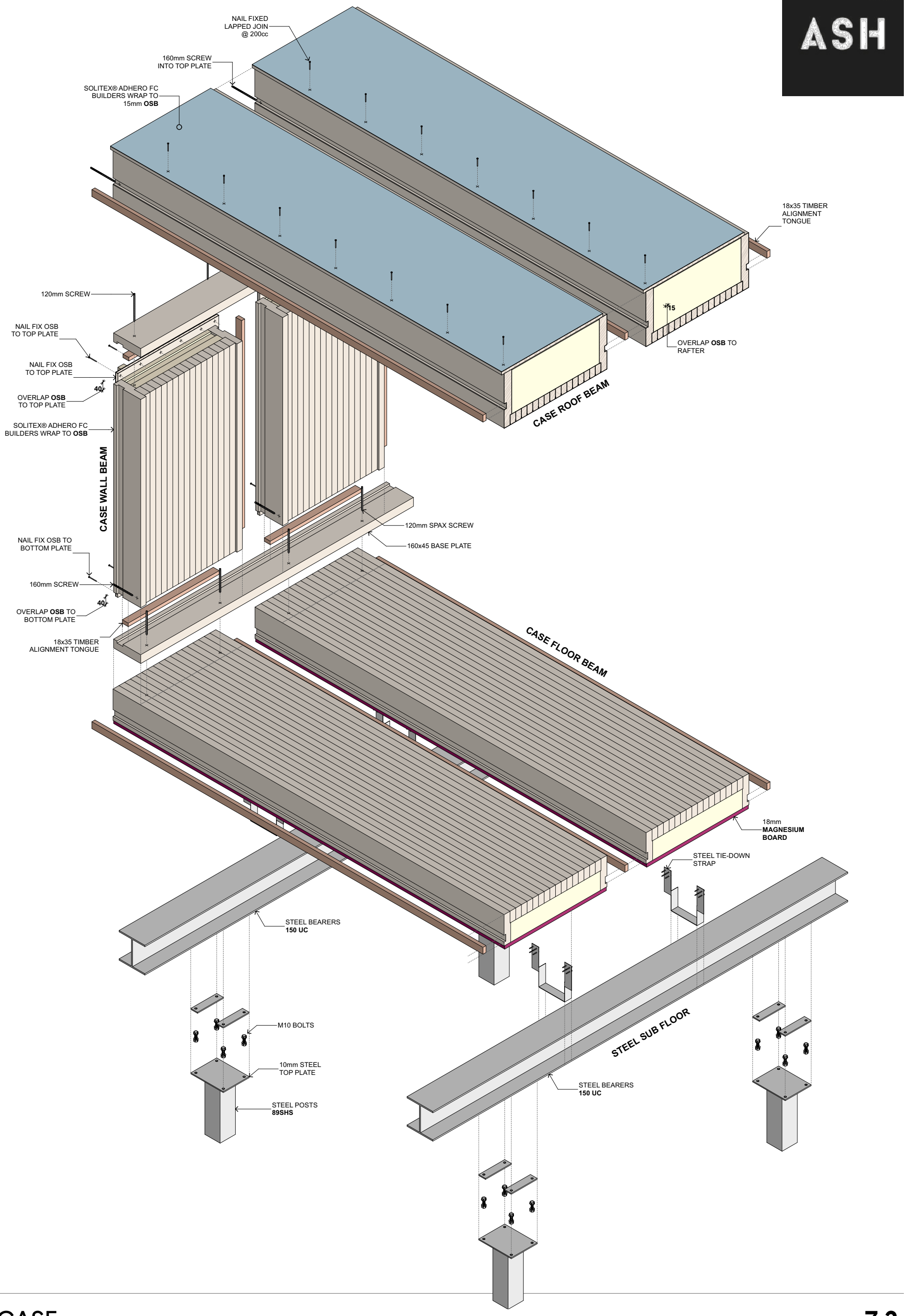
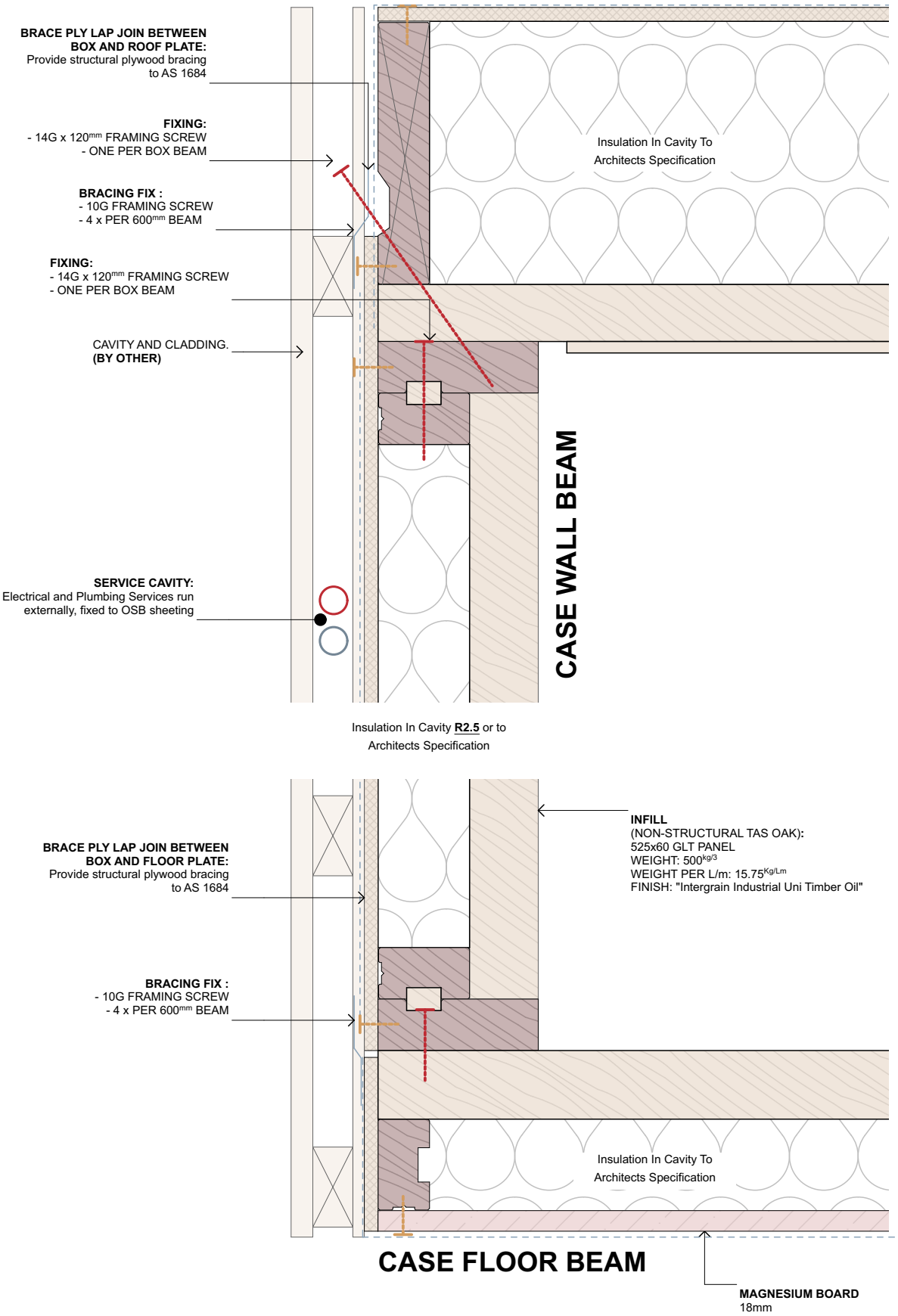

NAIL FIXED
LAPPED JOIN
@ 200cc
160mm SCREW
INTO TOP PLATE
SOLITEX® ADHERO FC
BUILDERS WRAP TO
15mm **OSB**
18x35 TIMBER
ALIGNMENT
TONGUE
15
OVERLAP **OSB** TO
RAFTER
CASE ROOF BEAM
120mm SCREW
NAIL FIX OSB
TO TOP PLATE
NAIL FIX OSB
TO TOP PLATE
40
OVERLAP **OSB**
TO TOP PLATE
SOLITEX® ADHERO FC
BUILDERS WRAP TO **OSB**
CASE WALL BEAM
120mm SPAX SCREW
160x45 BASE PLATE
NAIL FIX OSB TO
BOTTOM PLATE
160mm SCREW
40
OVERLAP **OSB** TO
BOTTOM PLATE
18x35 TIMBER
ALIGNMENT TONGUE
CASE FLOOR BEAM
18mm
MAGNESIUM
BOARD
STEEL TIE-DOWN
STRAP
STEEL BEARERS
150 UC
STEEL SUB FLOOR
M10 BOLTS
10mm STEEL
TOP PLATE
STEEL POSTS
89SHS
STEEL BEARERS
150 UC

CASE ROOF BEAM



SYSTEM SECTION

Section through the integrated roof, wall and floor beam assembly showing how the CASE modules form a continuous building enclosure, including cavity insulation, sheet bracing and secondary fixings.

CASE / SUPALAM Prefabricated Beam Spec

Product description

•The CASE roof beam is a prefabricated roof beam built from two SUPALAM glue-laminated hardwood rafters and a laminated Tasmanian oak ceiling panel. Each unit is supplied pre-oiled and fully assembled, combining structure and finished ceiling in one element.
•These beams are manufactured as single modules to streamline installation, reduce coordination between trades, and provide consistent quality across the roof.

Dimensions and weight

•**Module width**: 595 mm; **height**: 160 mm or 290 mm; **length**: up to 7 200 mm.
•Each module consists of two 290 × 45 mm SUPALAM rafters and a laminated ceiling panel. The total mass is approximately **46.5kg/m²** when the rafters and panel are combined.

Material specifications (SUPALAM)

•**Adhesive** – SUPALAM glulam members are manufactured using a **Class3 exterior-rated adhesive** (suitable for external use) with **no added formaldehyde** .
•**Quality assurance** – the product is **third-party audited** for quality and strength by the Glue Laminated Timber Association of Australia (GLTAA) .
•**Standard** – members are manufactured in accordance with AS 1328 (Glued-laminated structural timber). See ASH's SUPALAM documentation for detailed mechanical properties and treatment options.

Moisture content and protection

•**Target moisture** – mass-laminate components are manufactured from kiln-dried timber with a **target moisture content of 10%** .
•**Protection during construction** – beams must be protected from **direct sun, rain** and **contact with moisture-laden materials** during transport and construction to avoid swelling or checking.
•**Ventilation in service** – provide adequate ventilation so that the **in-service moisture content does not exceed 15%** and moisture gradients across the member do not develop. Protective detailing (cladding, overhangs, caps) is required for Class 2 environments.

Service penetrations / holes and notches

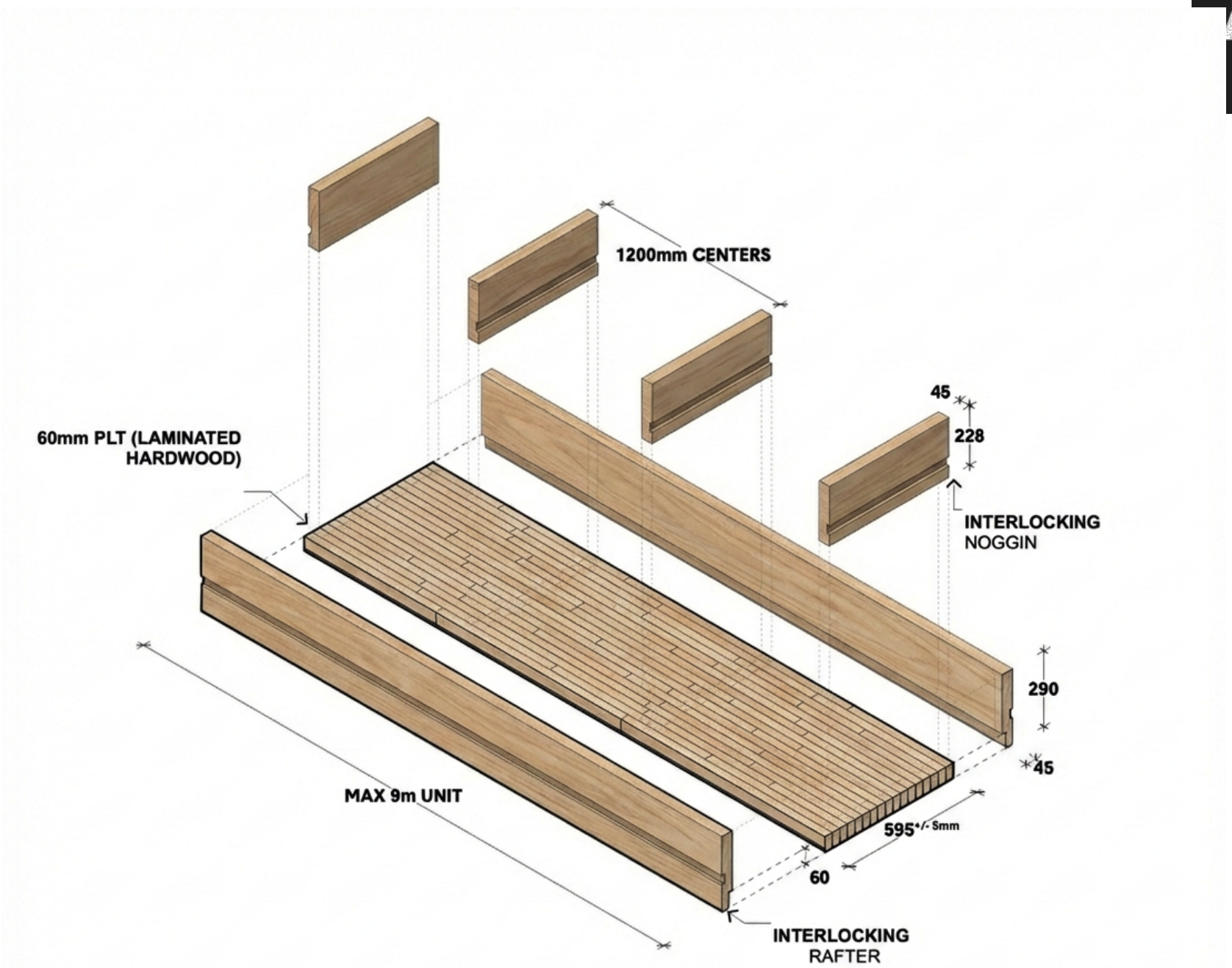
•**Hole diameter** – any bored hole for services **must not exceed one-third of the beam depth** .
•**Edge distances** – holes should be located at least **50mm** (2 in) from the top or bottom edges and from any other hole or notch .
•**Notches** – notches are not permitted in the middle third of the span; end notches should not exceed **one-quarter of the depth** and should be limited to **one-third of the beam depth in length** .
•**Engineer approval** – oversized penetrations or modifications to load-bearing members require specific design and approval by a structural engineer.

Tie-down and structural connections

•**Continuity of tie-down** – AS 1684.2 Clause 9.6.1 states that **continuity of tie-down shall be provided from the roof sheeting through the framing to the foundations** . Where the net uplift forces exceed the capacity of nominal nailing, specific tie-down fixings must be provided .
•**Connection design** – for PLT roof beams, rafter-to-top-plate connections must be sized and spaced to achieve the required uplift resistance for the nominated wind classification. Final fastener selection and spacing should be specified by the project structural engineer.
•**Manufacturer's details vs certification** – manufacturer-provided details describe the interface between the prefabricated beam and supporting structure. They do **not** constitute structural certification of the whole roof system. Structural adequacy (tie-down, bracing, load paths) should be confirmed by the engineer.

Handling and installation notes

•**Lifting** – modules are supplied pre-assembled. Use appropriate slings or spreader bars to avoid damage and overstress.
•**Storage** – store beams in a dry area with adequate support (dunnage) and ventilation to maintain moisture conditions. Protect from direct weather exposure .
•**Coatings and protection** – install protective coatings, caps or cladding in accordance with ASH guidance for Service Class 2 applications, ensuring the timber remains sheltered and vented .
•**Inspection** – inspect beams for damage, moisture ingress or deformation prior to installation; consult ASH if any issues are observed.

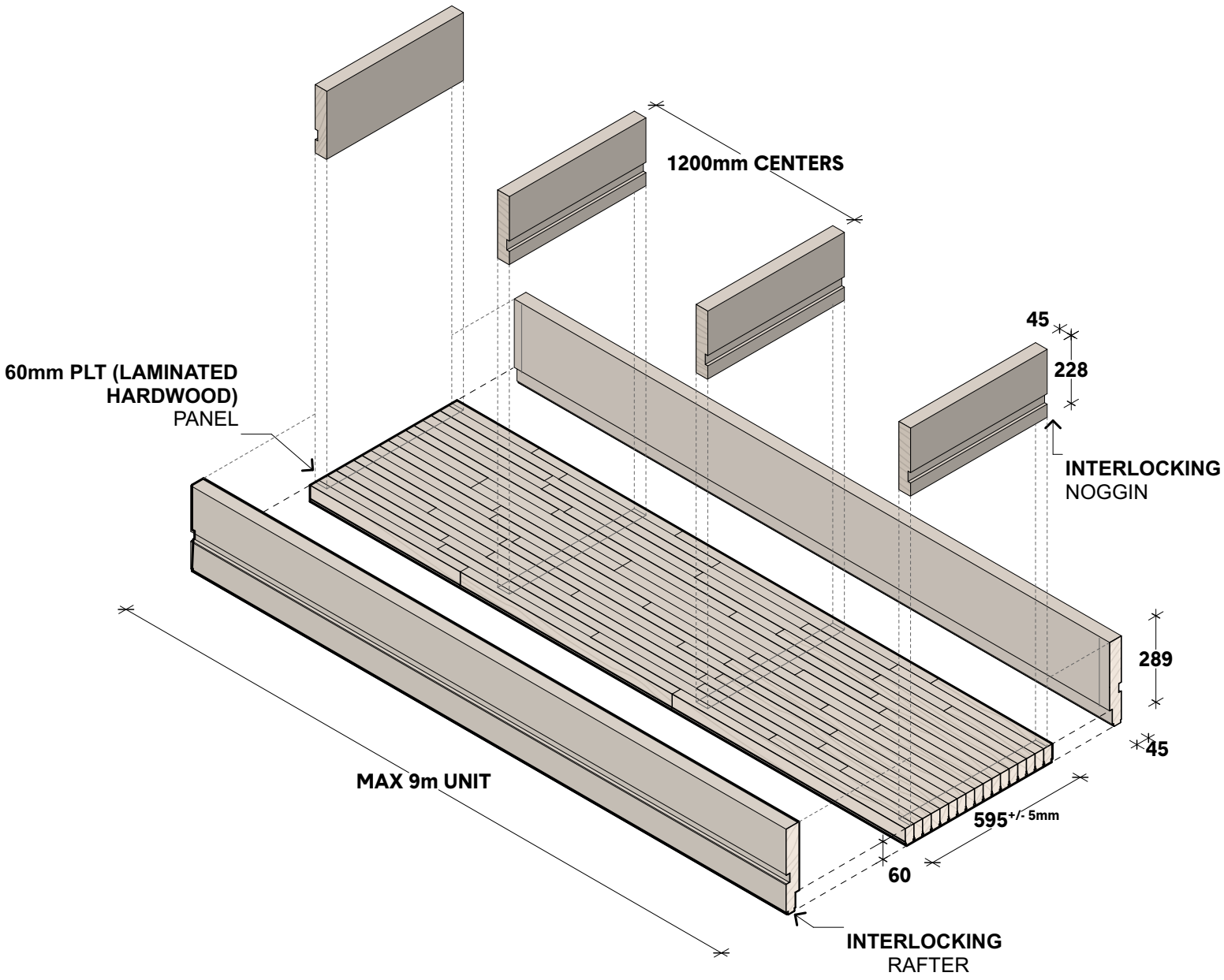


PLT ROOF BEAMS

Prefabricated roof modules comprising two 290 x 45 SUPALAM rafters, a 60 mm laminated Tasmanian oak ceiling panel and interlocking noggins at maximum 1200 mm centres. The module combines structure and finished ceiling in a single element and is supplied pre-oiled for exposed internal use.

Product dimensions
Width: 595mm
Height: 160 or 290mm
Length: Up to 7200mm
Span: Up to 7200mm*

CASE Roof Beam elements:
• Two SUPALAM members, 290 x 45mm, with alignment profiles.
• One PLT (parallel laminated timber) panel with castellation on the visible face (ceiling).
• End noggins with alignment profiles (where required).
• Intermediate noggins at a maximum of 1200mm centre-to-centre. These restrain the PLT panel to minimise cupping and provide fixing points for sheet material.



CASE Roof Beam Module Anatomy

Exploded view of the Roof Beam showing the 60 mm laminated hardwood panel, interlocking rafters and interlocking noggins at maximum 1200 mm centres. Nominal module width is 595 mm with beams set out at 600 mm centres, allowing a small installation tolerance between adjacent units.

GENERAL NOTES:

1. Roof panel element is supplied as CASE roof beam, manufactured by ASH

2. Panel self-weight = 46.53kg/m².

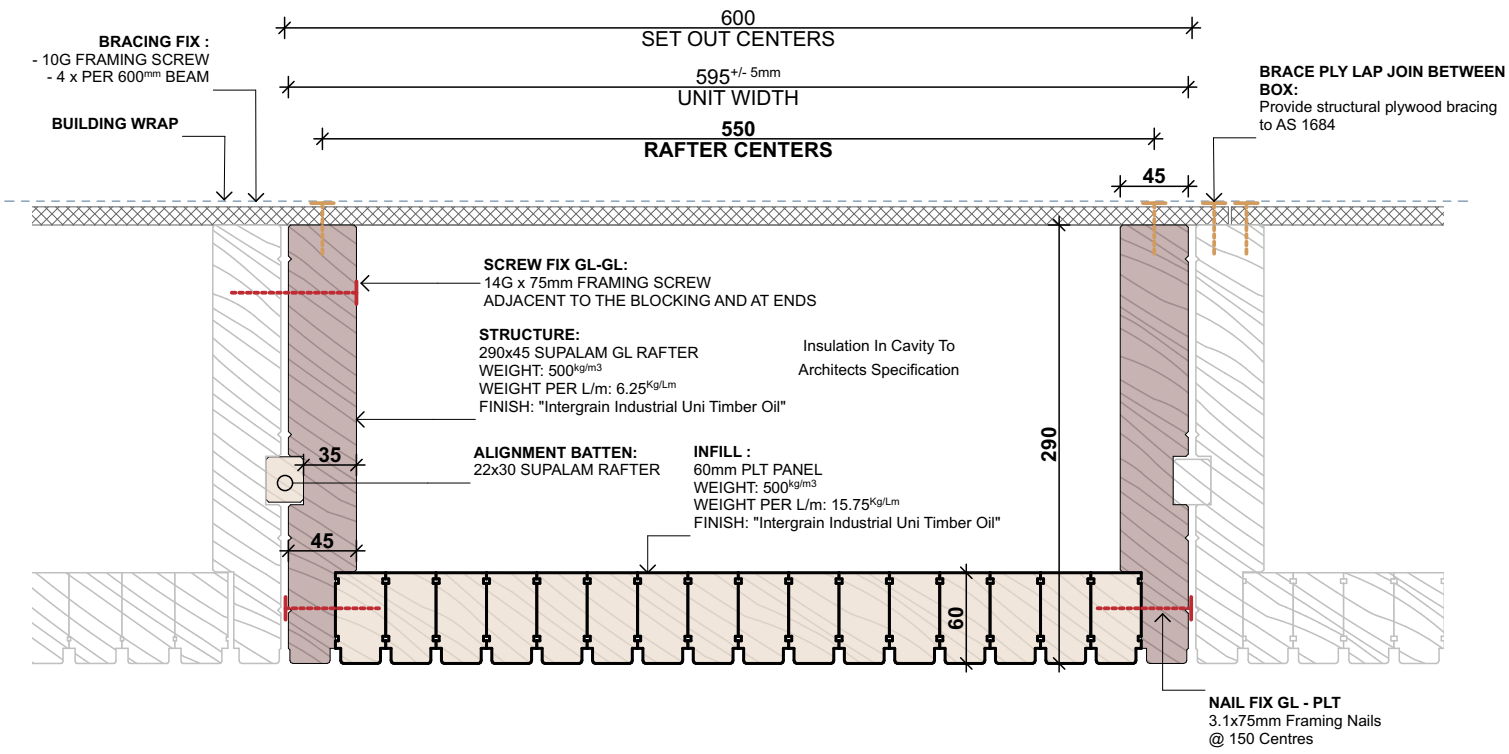
3. Panel dimensions/tolerances: thickness ±2, length ±2, width ±5.

4. Material reference: SUPALAM glue-laminated hardwood members supplied by Australian Sustainable Hardwoods (ASH) to the current SUPALAM / MASSLAM technical documentation (product specification, handling and moisture guidance). Where this drawing states project-specific requirements, those requirements govern.

5. Installation moisture: SUPALAM members are kiln dried; install with timber moisture content typically 10–12% (target 10%). Protect elements from wetting during transport and construction and detail to avoid moisture accumulation; maintain in-service timber moisture content not exceeding 15%. Refer ASH SUPALAM / MASSLAM technical documentation for handling and moisture guidance.

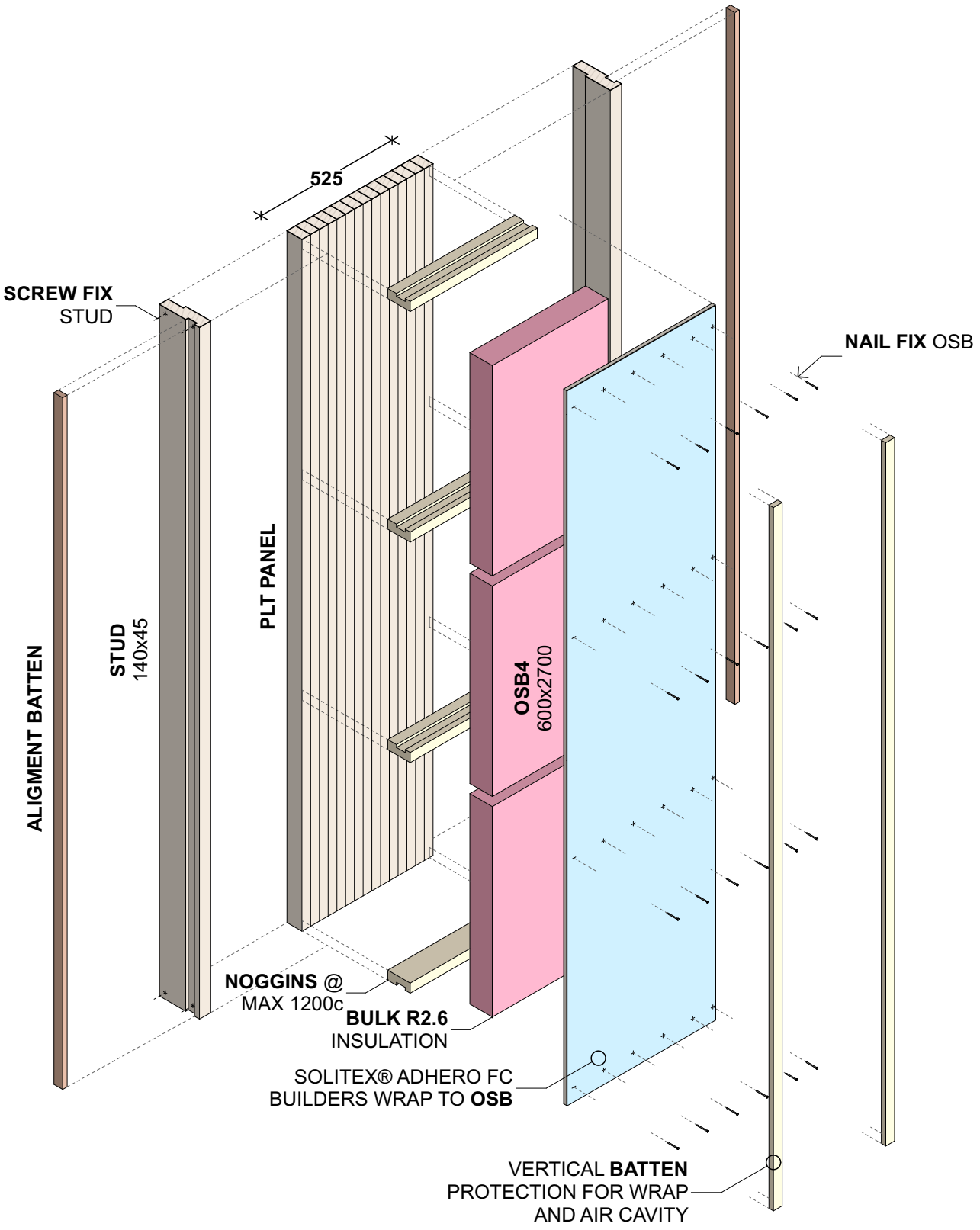
TIE DOWN NOTES:

Rafter to top plate tie-down to provide continuity of tie-down in accordance with AS 1684 (Timber Framing Code) for the nominated site wind classification (AS 4055 / AS/NZS 1170.2 as applicable). Provide direct rafter-to-top-plate screw fixing at each rafter location using structural timber screws sized and spaced to achieve the required uplift resistance for the nominated wind classification, in accordance with the screw manufacturer’s technical data and the project structural engineer’s schedule. Locate tie-down fixings within 100 mm of each rafter position and ensure continuity of the tie-down path to supporting structure.



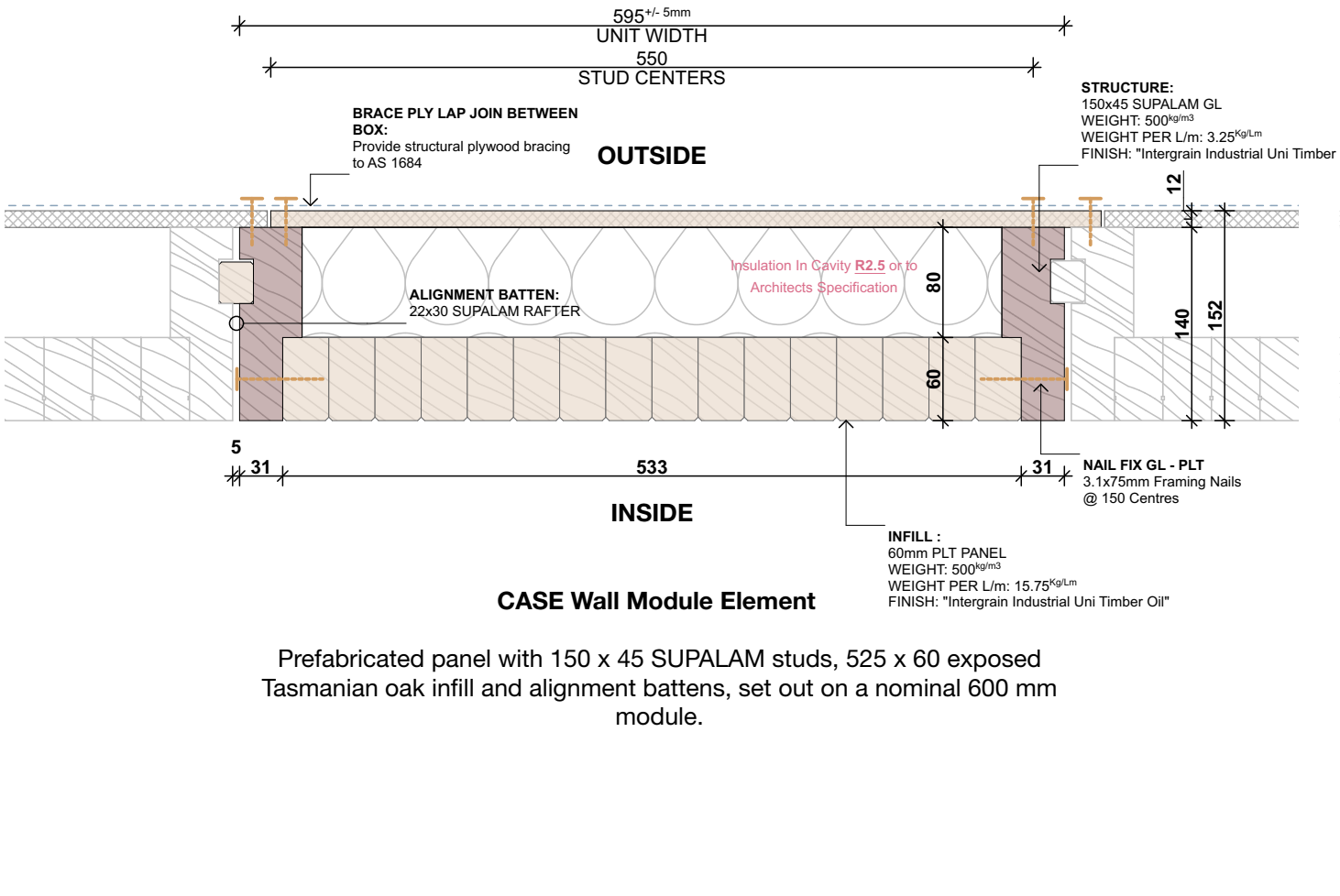
CASE Roof Beam - Element Cross-section

Cross-section through a typical CASE Roof Beam. Two 290 x 45 SUPALAM rafters form the structural sides of the module, enclosing a 525 x 60 Tasmanian oak infill panel and alignment batten. External wrap, cavity insulation and sheet bracing are coordinated with the project wall build-up and are by others unless noted otherwise.



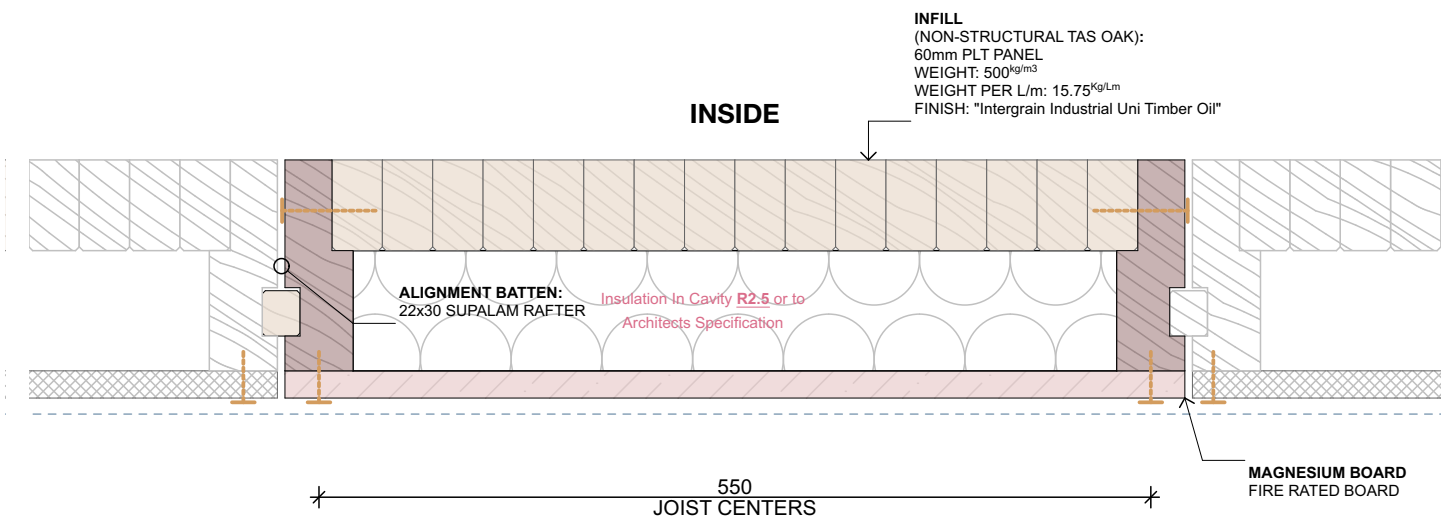
CASE WALL MODULES

Prefabricated wall module comprising studs fixed to an internal PLT lining panel, with cavity insulation, external OSB sheathing and self-adhered wrap to the outside face. Vertical battens form a drained and ventilated cavity ready to receive the nominated external cladding system.



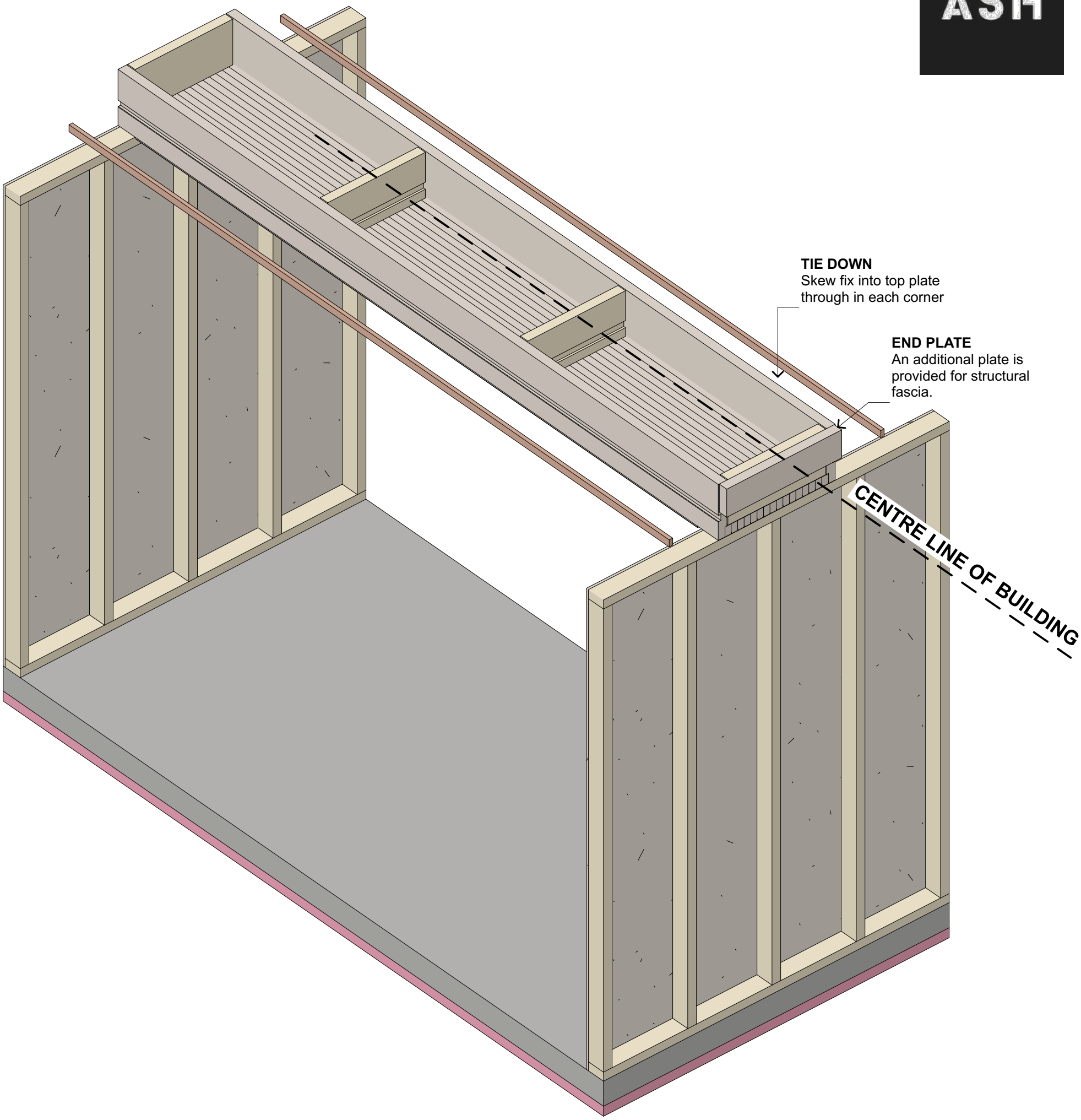
CASE Wall Module Element

Prefabricated panel with 150 x 45 SUPALAM studs, 525 x 60 exposed Tasmanian oak infill and alignment battens, set out on a nominal 600 mm module.



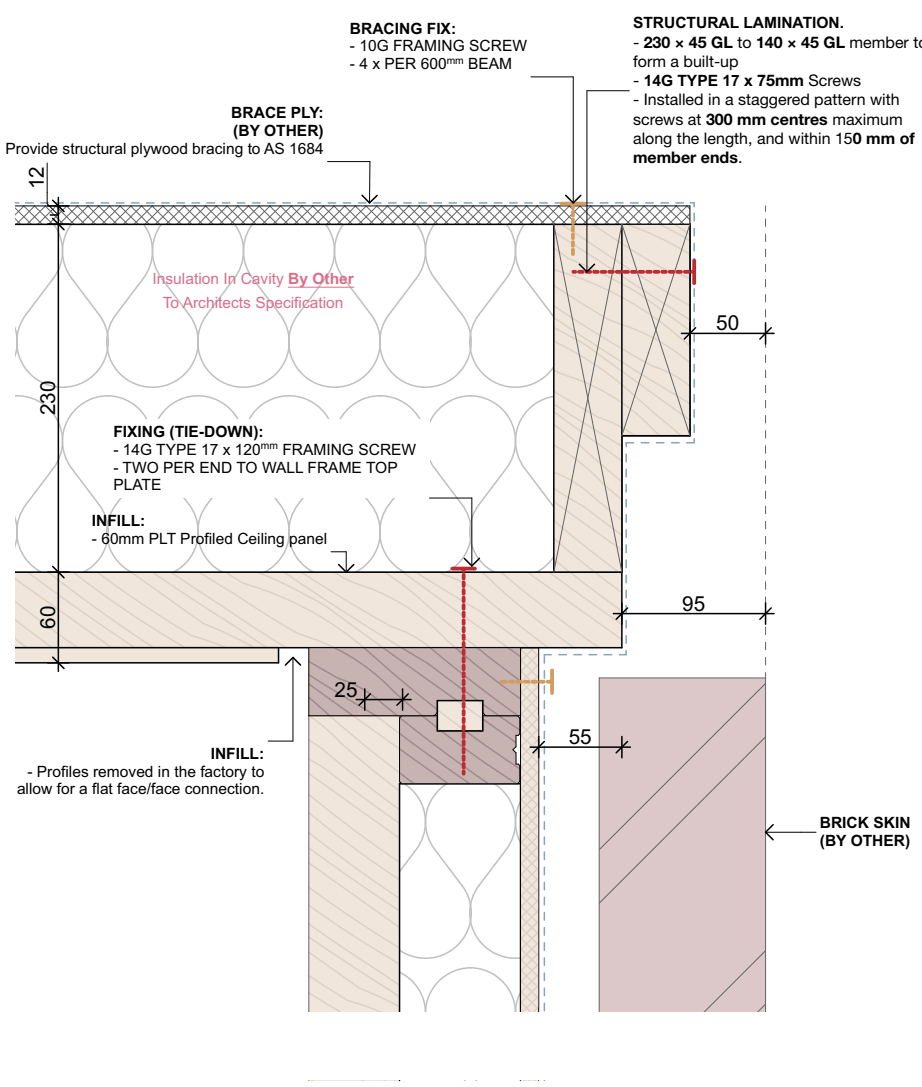
CASE Floor Module

Corresponding prefabricated floor panel using 150 x 45 SUPALAM joists, exposed Tasmanian oak soffit infill and, where required, an 18 mm magnesium board lining to the underside.



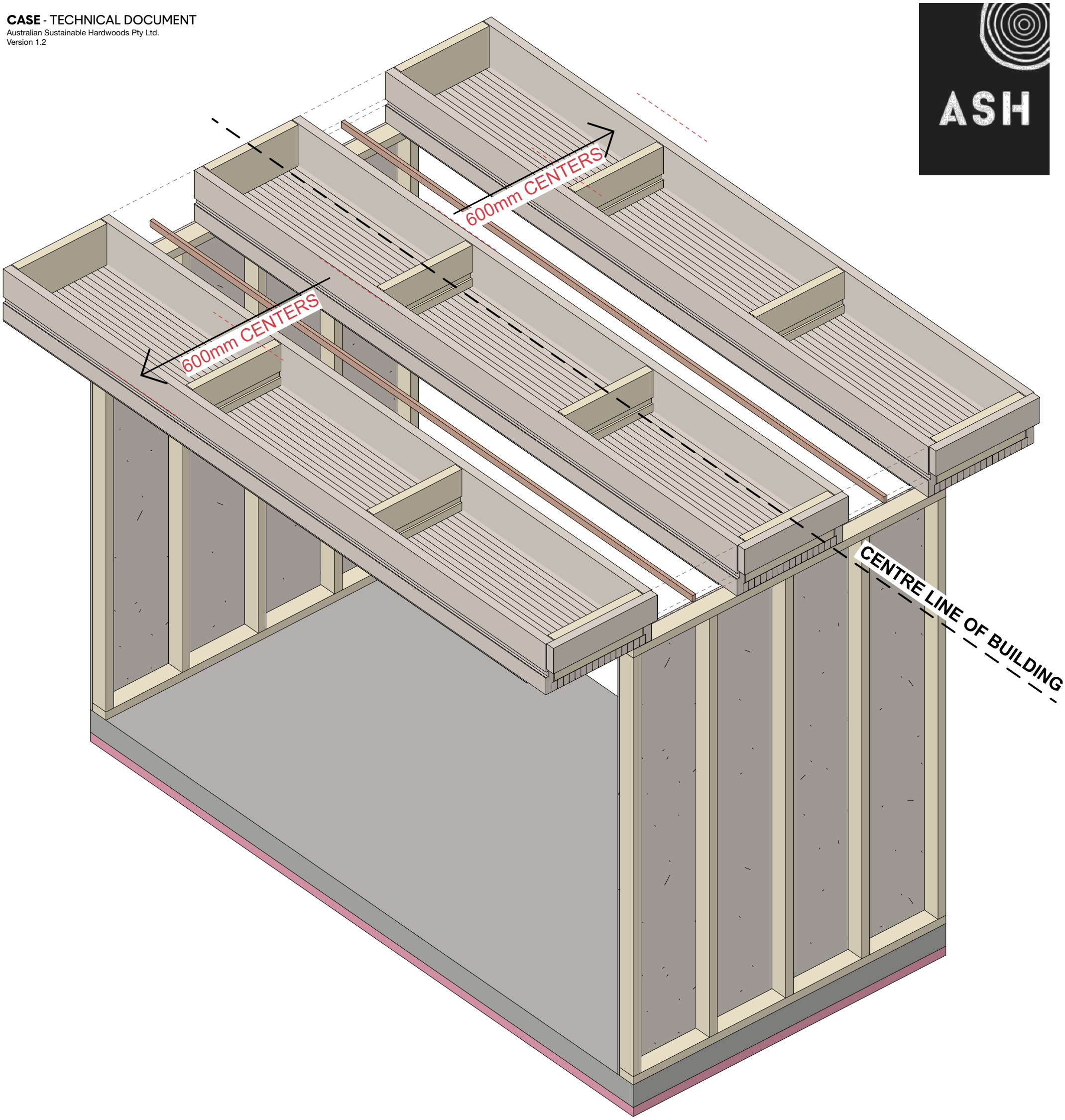
Centre-First Set-out

Start roof beam installation at the building centreline and work outward in both directions. This approach distributes any minor panel-width variation across the run rather than accumulating error at one edge. Fix the first beam square and true before proceeding with adjacent units.



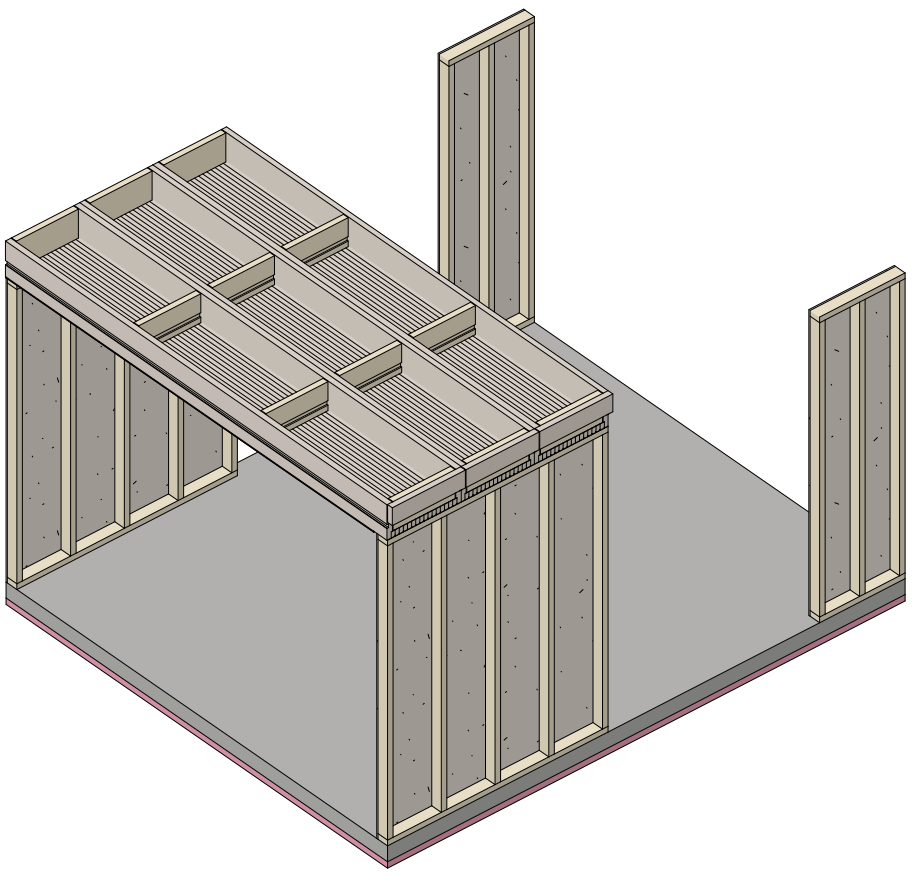
CASE Roof Beam - Connection to Brick Veneer

Detail at the roof-to-wall edge adjacent to brick veneer. The first beam must be set out accurately relative to the external wall line and veneer cavity. The beam may be fixed from above, skew-fixed through the uprights, or fixed from below through the top plate, subject to the project-specific structural detail.



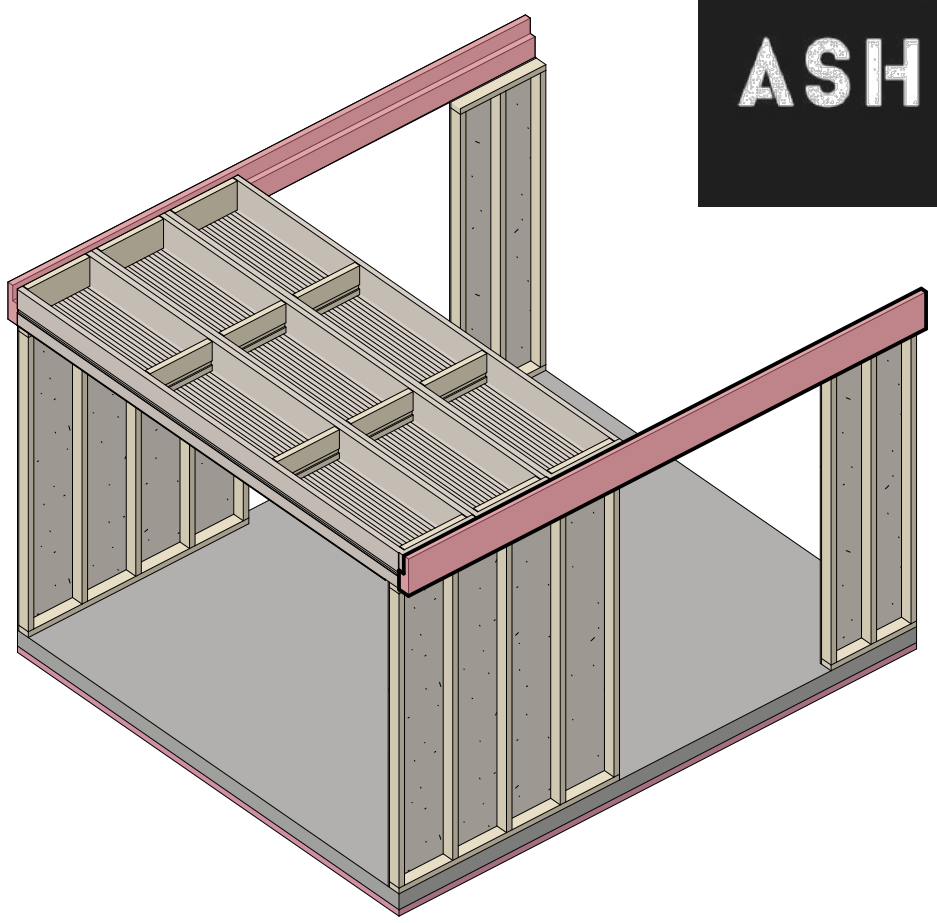
600mm Centres + Tolerance Between Panels

Set CASE Roof Beams out at 600 mm centres from the building centreline. Maintain the nominal tolerance between adjacent panels to accommodate manufacturing and installation variation; do not force units tight, as this can compound error across the roof run.



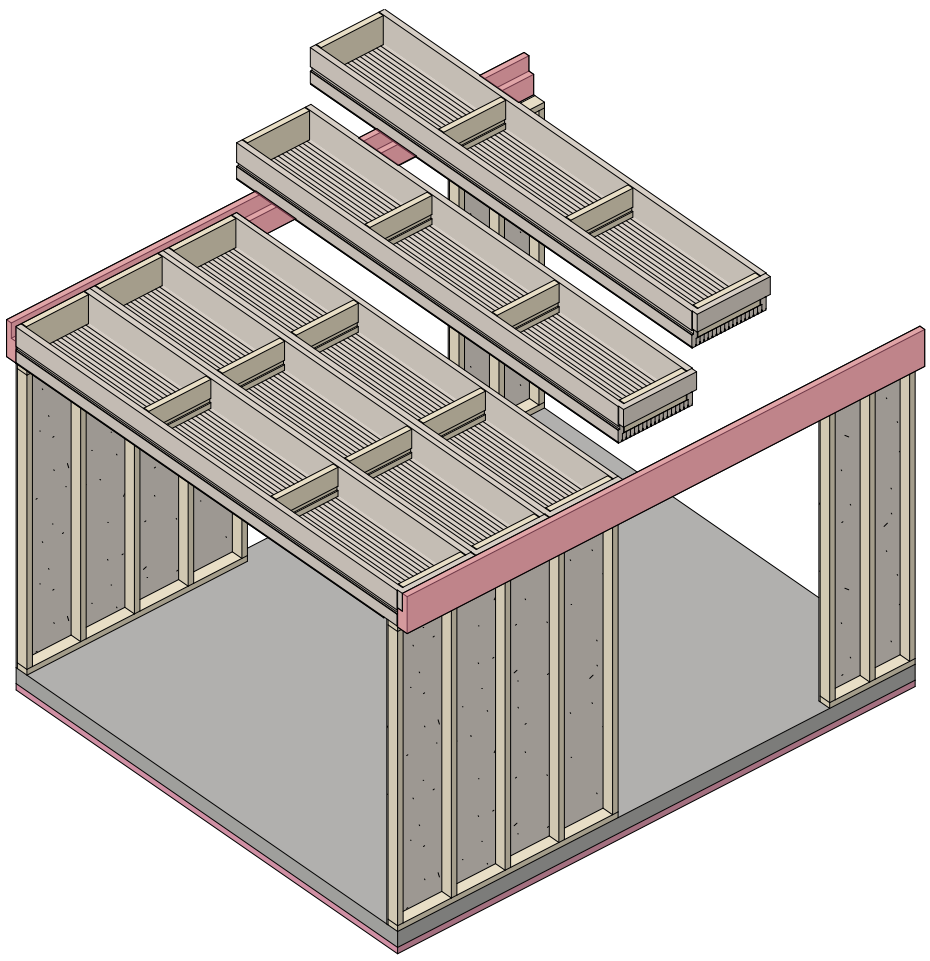
1. Structural Fascia – Set-out

Begin in the fully supported zone and continue the centre-first set-out until the span requiring the fascia is reached.



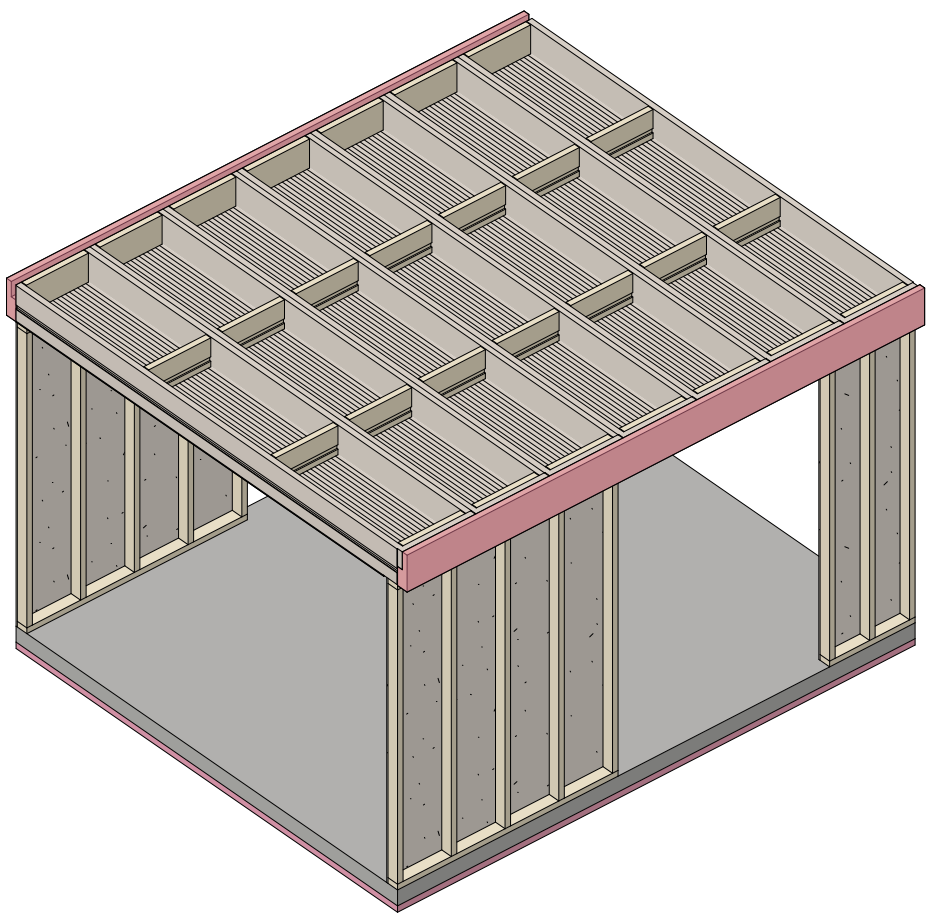
2. Install Structural Fascia

Install and temporarily support the structural fascia, then fix it to the ends of the supported roof beams.



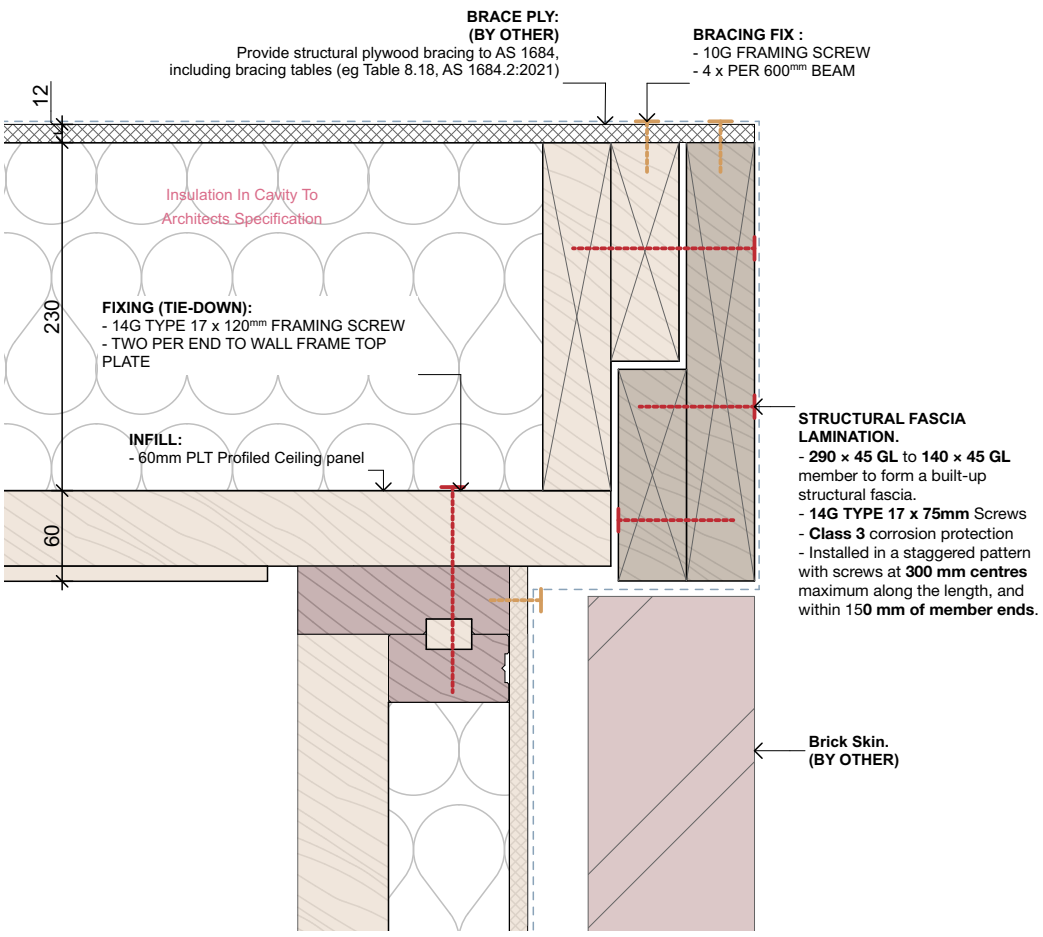
3. Continue PLT install

Continue placing the remaining roof beams across the span, fixing them progressively back to the fascia.



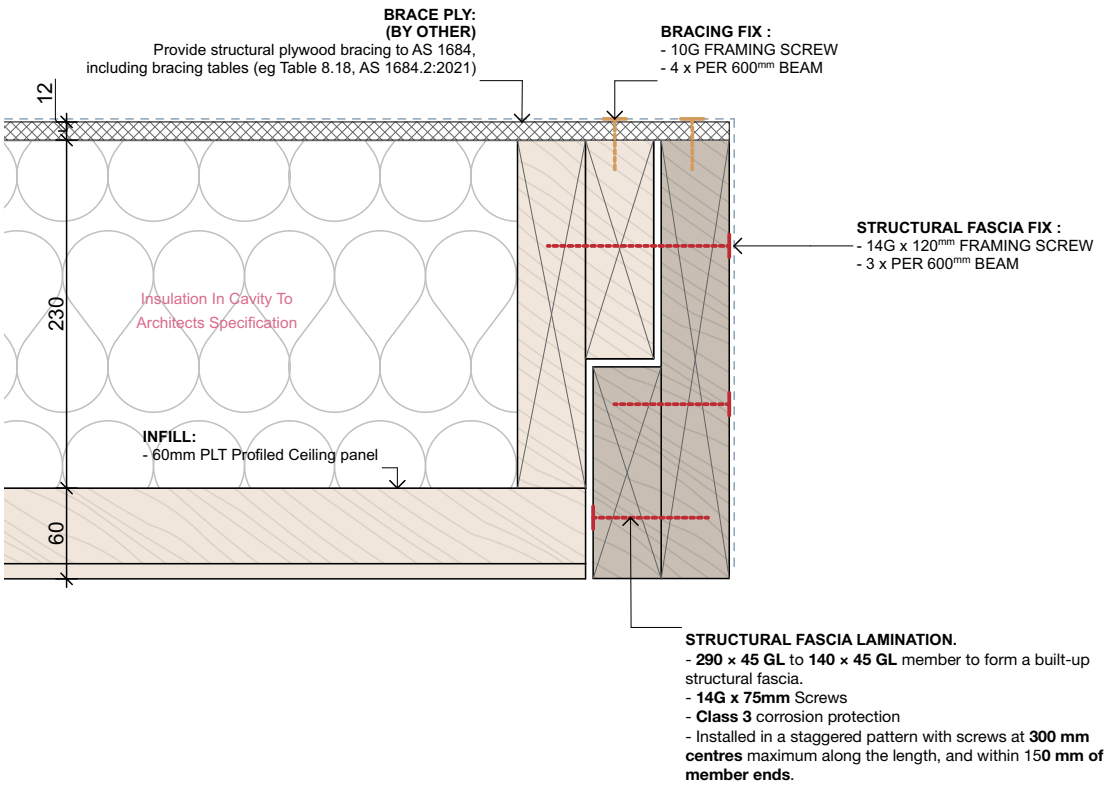
4. Final Fixing and Support

Complete final fixing where the span returns to direct support at the wall.



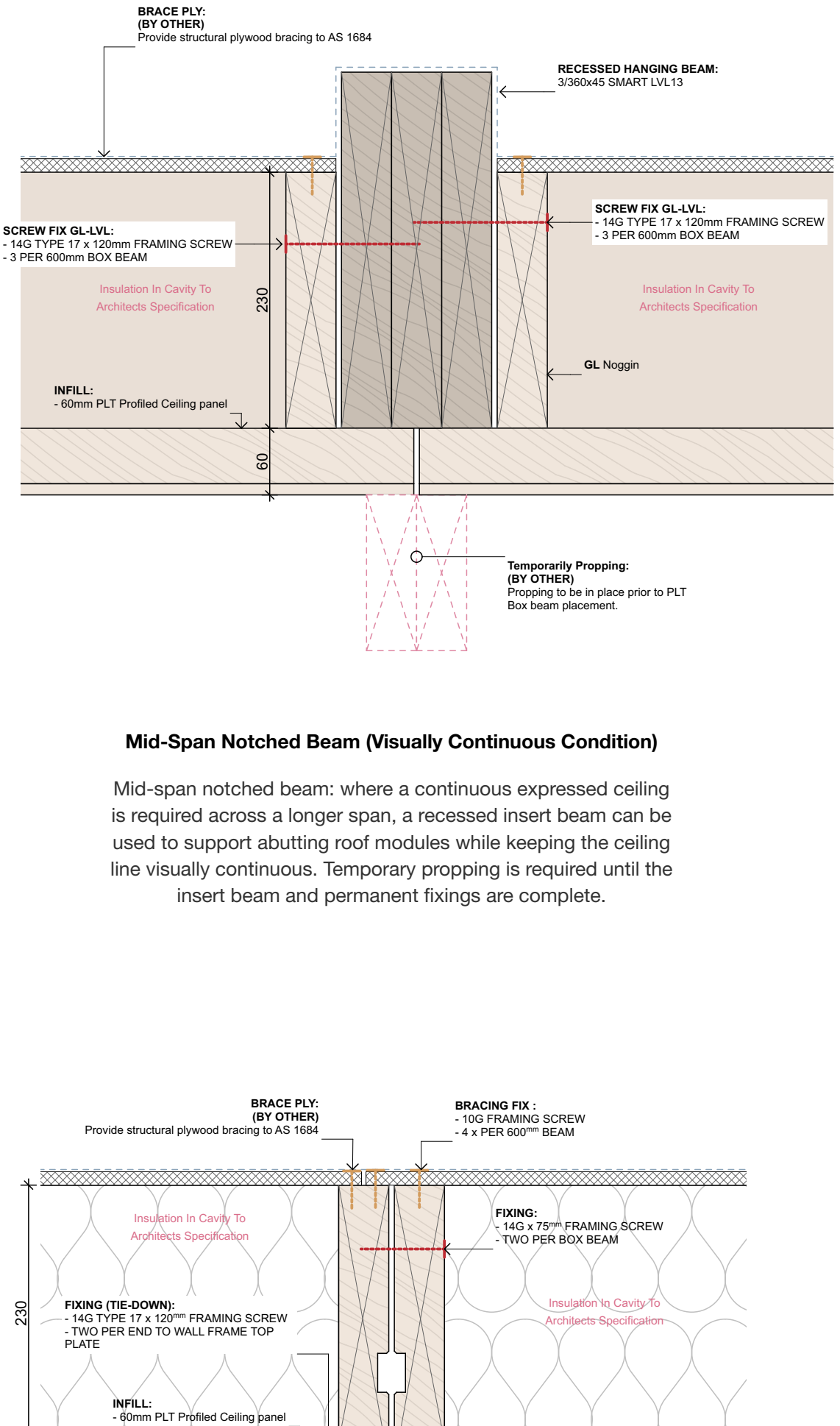
Fascia Supporting Ends

End support detail: the laminated fascia provides edge support and a resolved external termination where the roof beam ends at the wall.



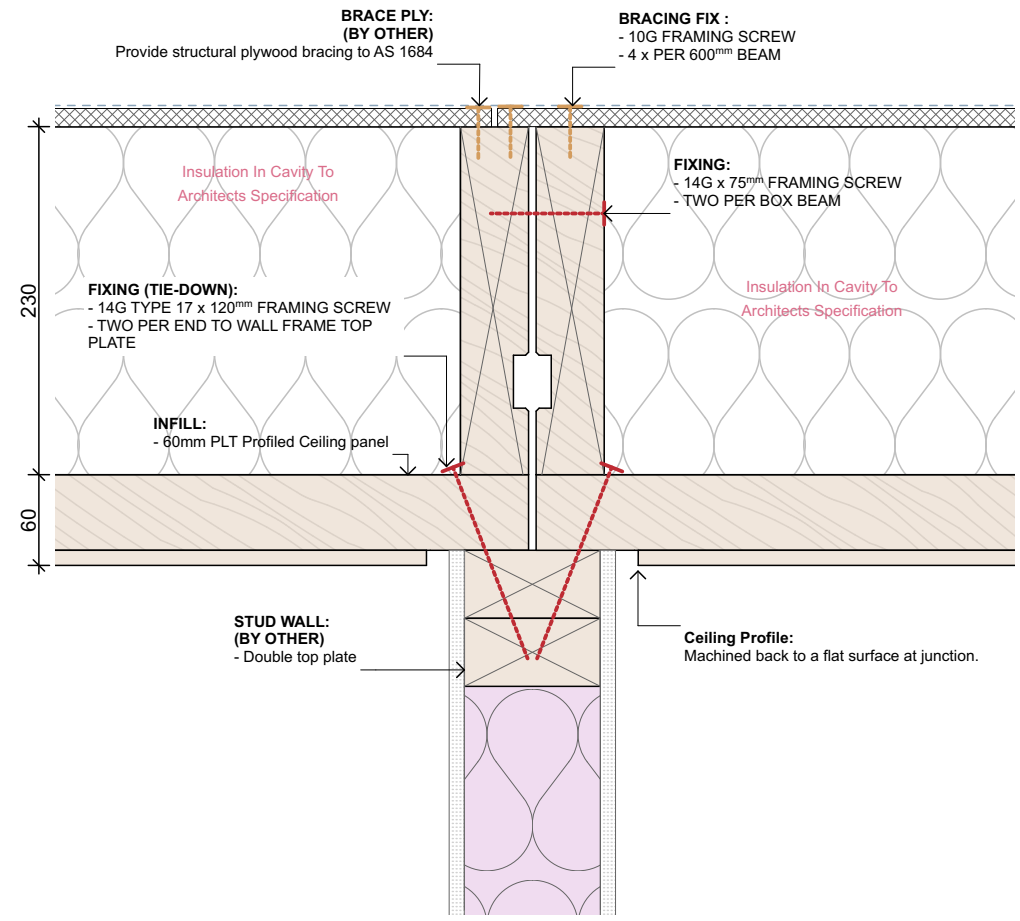
Fascia Supporting Mid-Span

Mid-span support detail: where beams continue past the wall line, the fascia acts as an intermediate support member and transfers load back to the supporting structure. In both cases, tie-down, fascia fixing and bracing are to be coordinated with project-specific engineering.



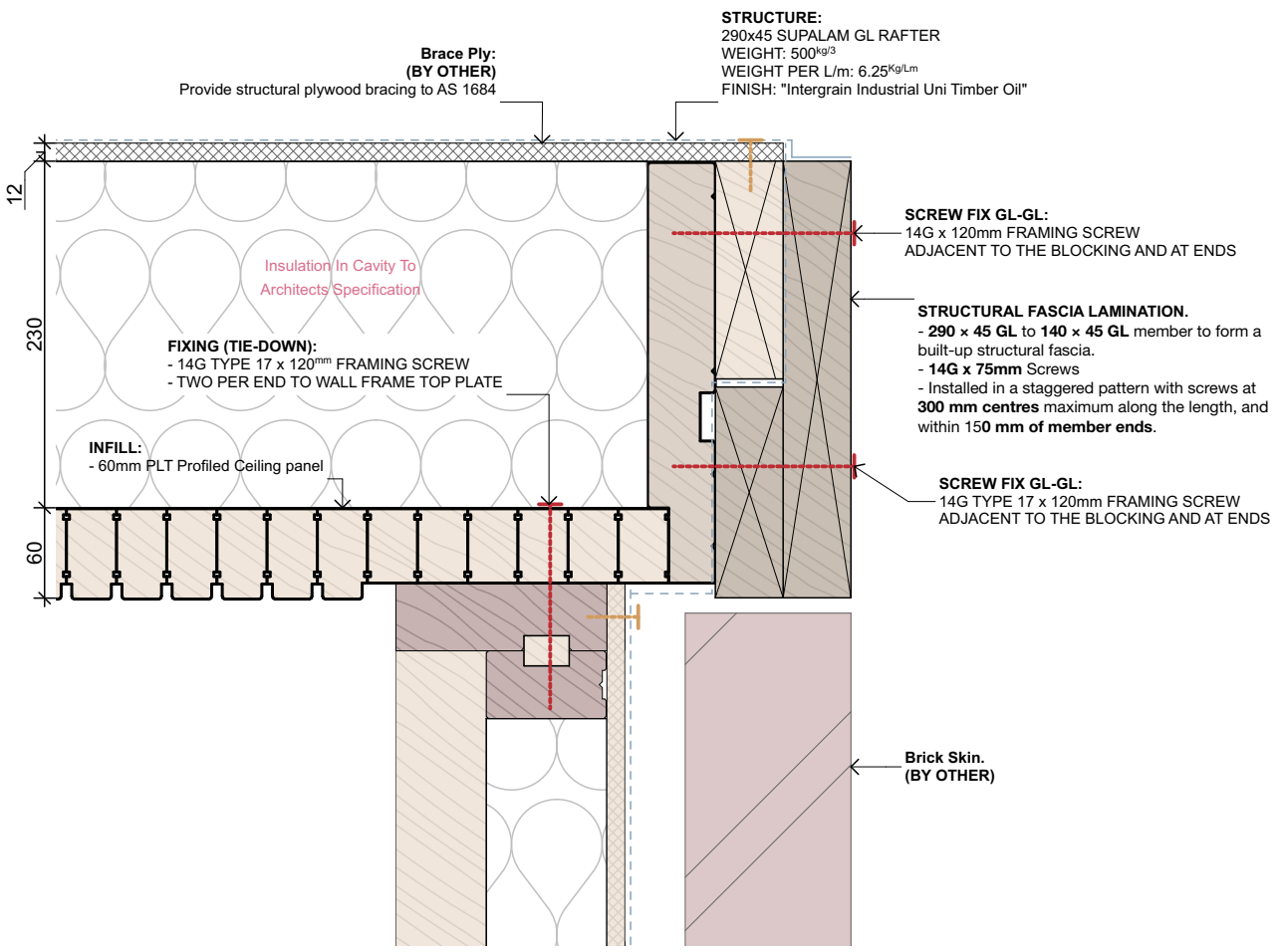
Mid-Span Notched Beam (Visually Continuous Condition)

Mid-span notched beam: where a continuous expressed ceiling is required across a longer span, a recessed insert beam can be used to support abutting roof modules while keeping the ceiling line visually continuous. Temporary propping is required until the insert beam and permanent fixings are complete.



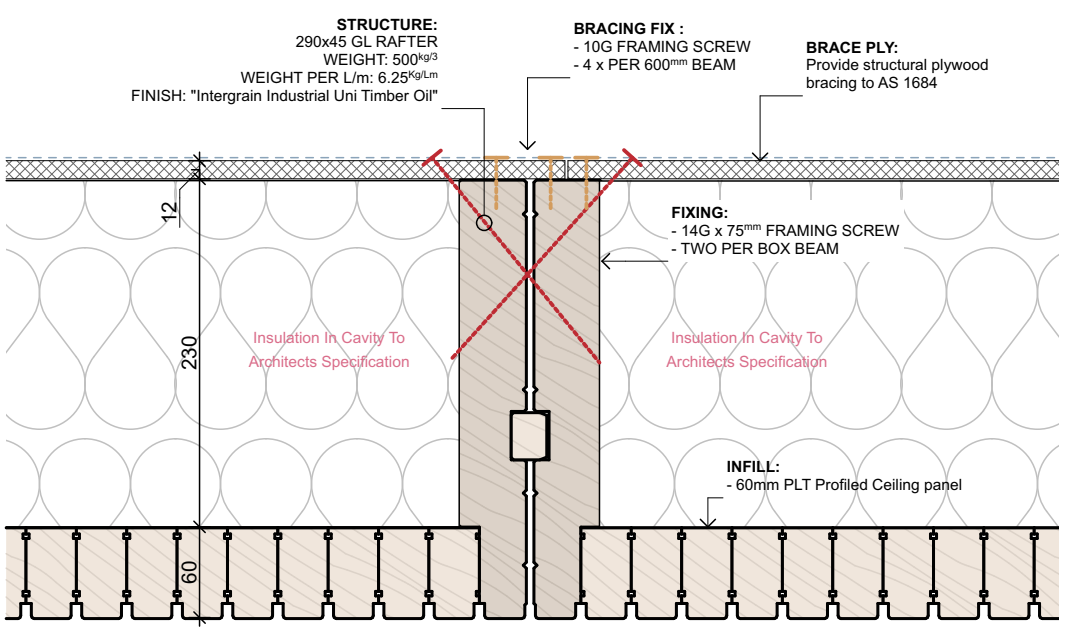
Panel End-to-End Connection

Panel end-to-end connection: opposing roof beams align over a supporting wall and are tied back through the GL uprights to the double top plate, with the ceiling profile machined flat at the joint for a clean junction.



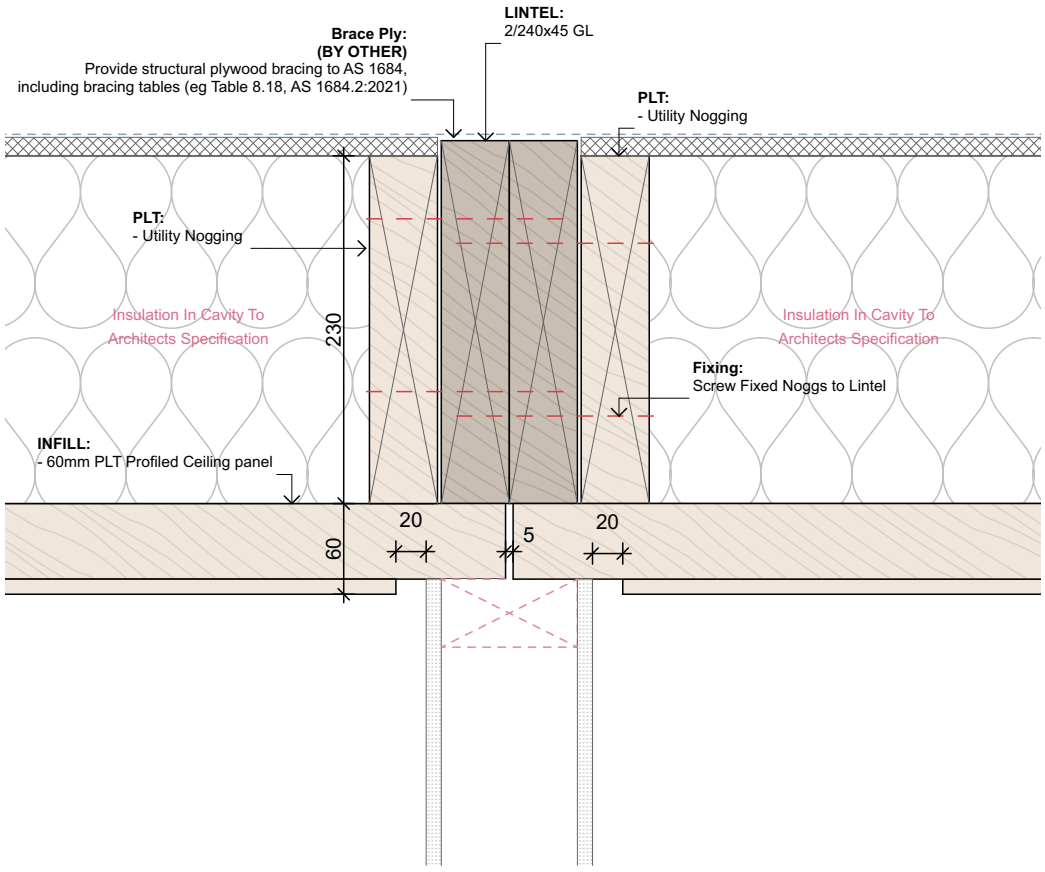
Capping Fascia and Brick Veneer Interface

Fascia provides a clean edge termination at the outer wall while allowing the cladding, cavity, and roof build-up to continue independently.



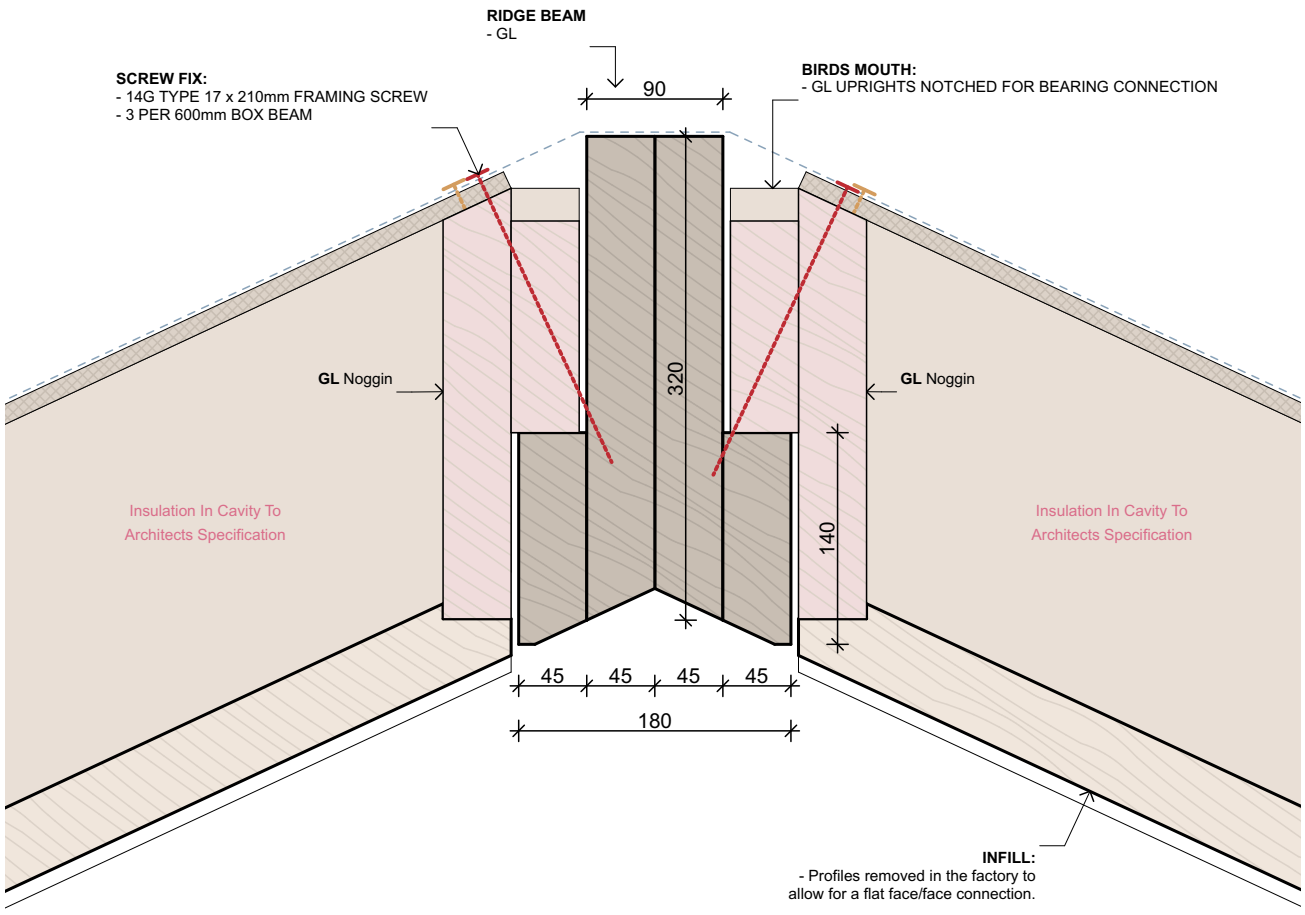
Typical Panel-to-Panel Connection

Adjacent roof beams are connected internally with a shared non-structural batten, screw-fixed through the GL members and bridged by sheet bracing over the top of the joint.



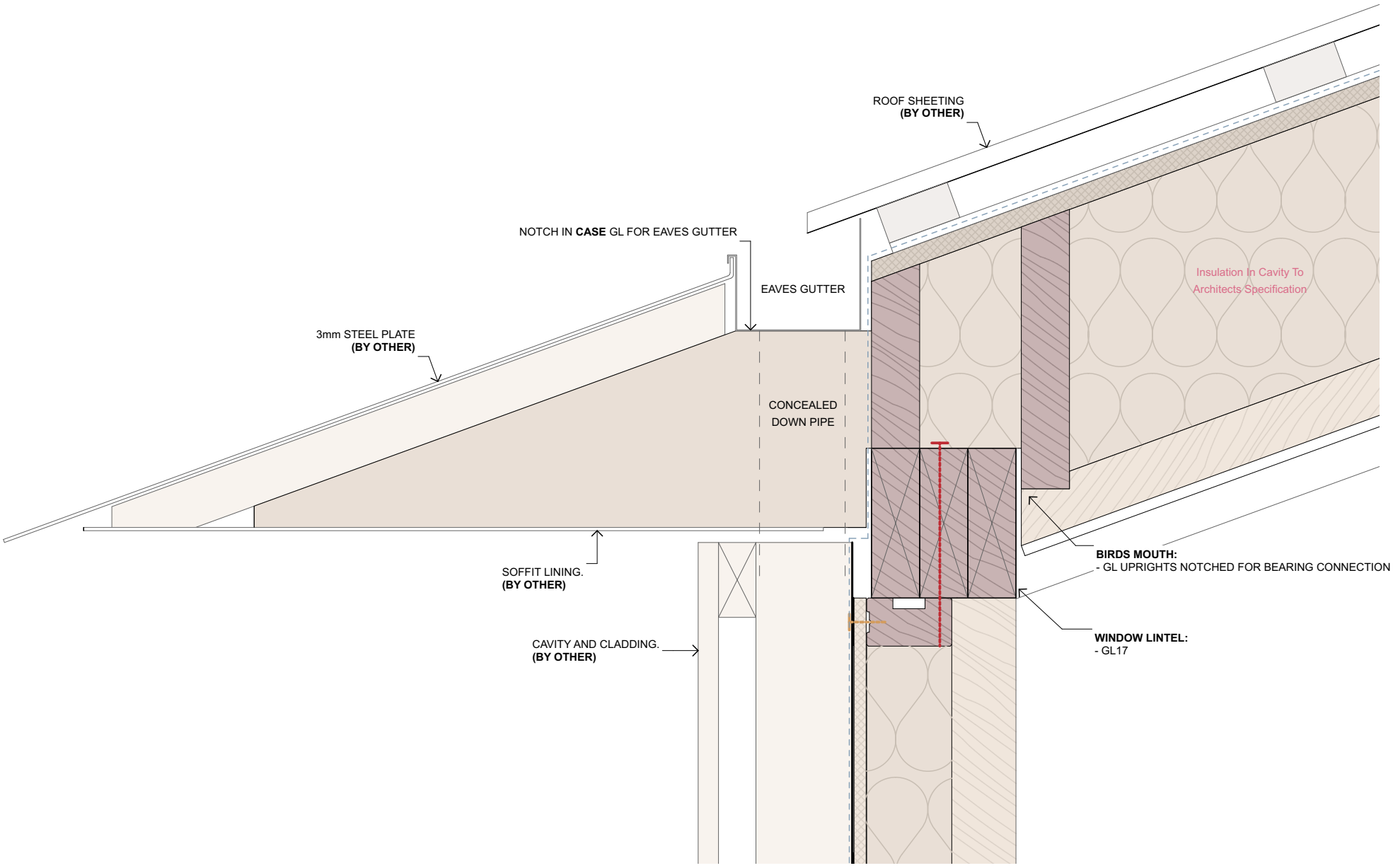
Mid-Span Notched Beam (Visually Continuous Condition)

Where a roof run exceeds the practical maximum module length but a continuous exposed ceiling is desired, opposing CASE Roof Beams can terminate against a central notched insert beam fixed to the supporting lintel. Noggings close out the cavity on each side of the insert beam. Temporary propping is required until the insert beam and all permanent fixings are installed and the connection is fully stabilised.



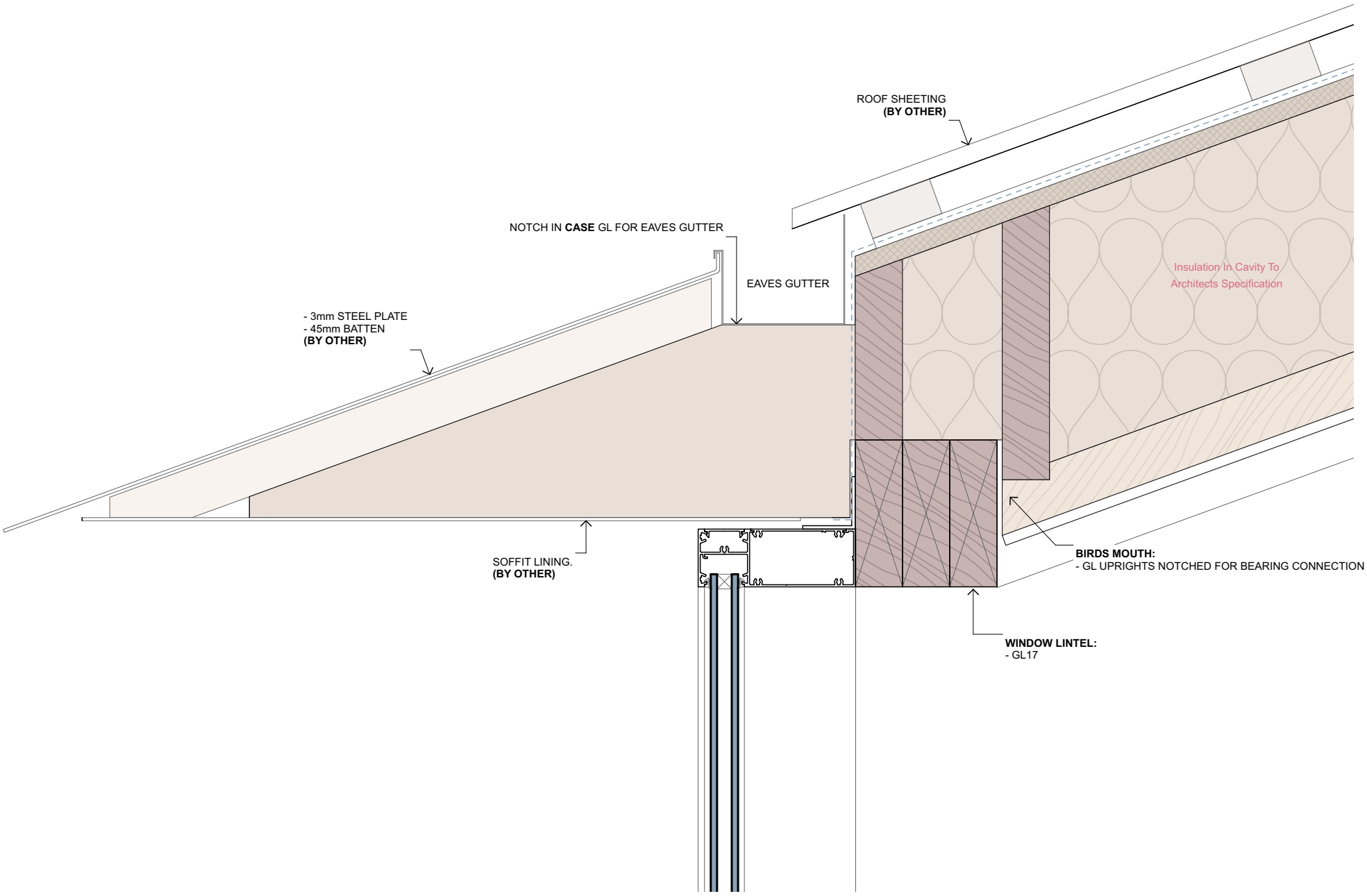
HIP RIDGE BEAM

Detail at the junction of two sloping CASE Roof Beams meeting over a glulam ridge beam. The GL uprights are birdsmouthed to achieve bearing onto the ridge, with utility noggings closing the cavity and the profiled ceiling panel trimmed back for a clean face-to-face junction. Fixing to the ridge beam is by long structural screws as detailed and must be verified against the project roof geometry and loads.



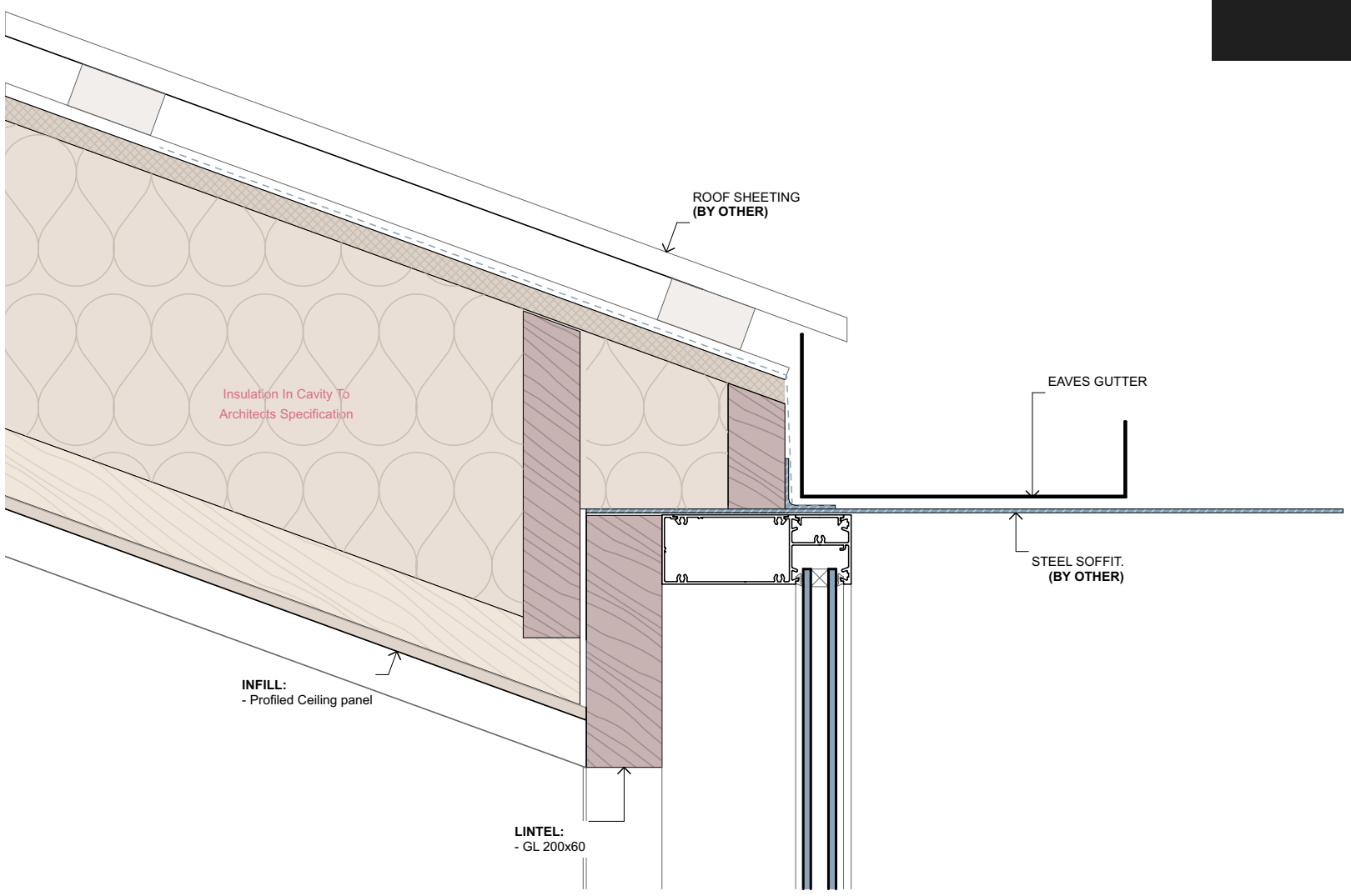
CONCEALED EAVES GUTTER

Concealed gutter detail at the eaves where the CASE Roof Beam runs over a wall with a window lintel below. The outer GL section is notched locally to accommodate the gutter profile and concealed downpipe zone, while roof sheeting, soffit lining, steel closure plate and cladding build-up are coordinated by others. Maintain clear falls, overflow strategy and flashing continuity across this junction.



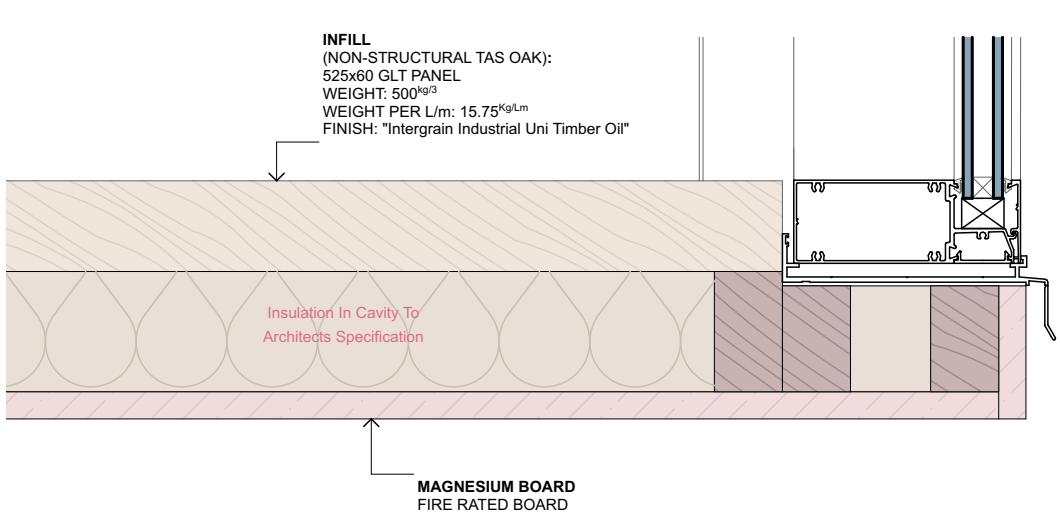
CONCEALED EAVES GUTTER GLASS FACADE

Concealed gutter detail aligned with a glazed facade below. The gutter and fascia build-up are coordinated above the glazing frame, with the CASE Roof Beam bearing back to the wall via the window lintel. Allow for frame tolerances, waterproofing continuity, thermal movement and access for gutter maintenance when developing the project-specific facade detail.



EXPRESSED EAVES GUTTER GLASS FACADE

Expressed eaves gutter at the glazed facade, with the CASE Roof Beam lining panel carried through to the edge condition and the gutter set beyond the glazing line



FLOOR DETAILS

Detail showing the CASE Floor Beam expressed as the finished floor surface, with Tasmanian oak infill, cavity insulation and magnesium board lining below. Expressed junctions between modules require a considered detail to accommodate movement and expansion gaps. Where required, joists may be locally notched in the direction of span to achieve flush window thresholds, subject to structural design and coordinated waterproofing.

Sample Unit (Indicative Finish)

Representative sample of the PLT Roof Beam demonstrating the profiled ceiling surface and typical laminated hardwood appearance. Variations in grain, tone, and feature are inherent to the material and form part of the finished aesthetic.

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