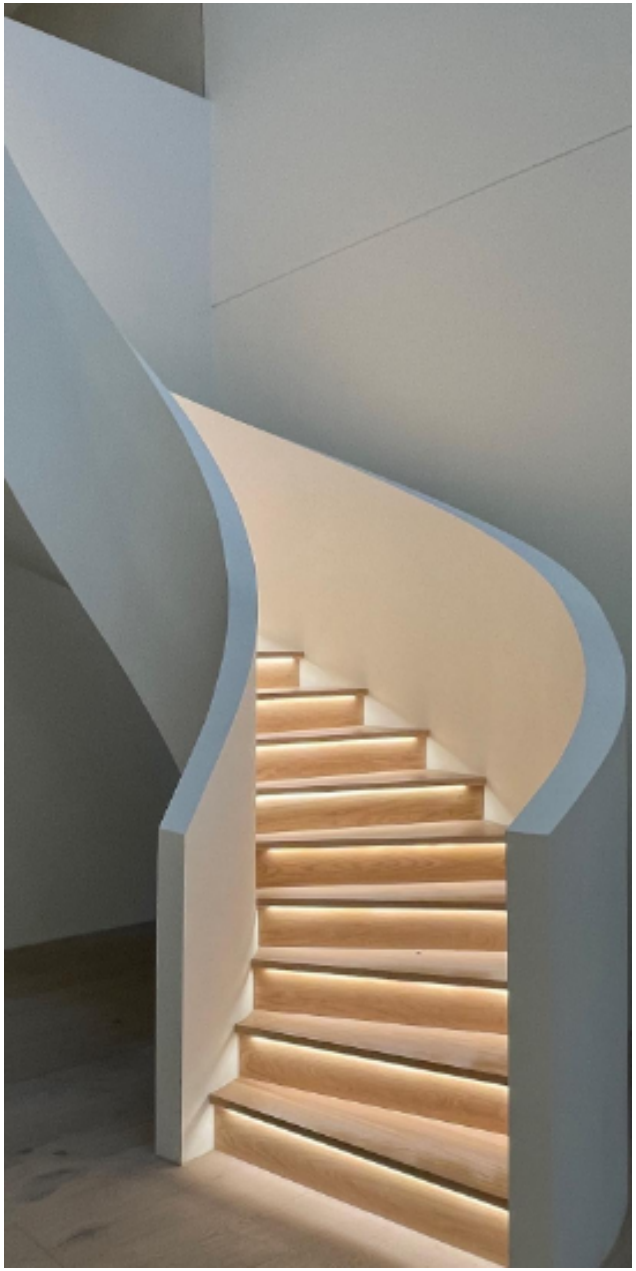
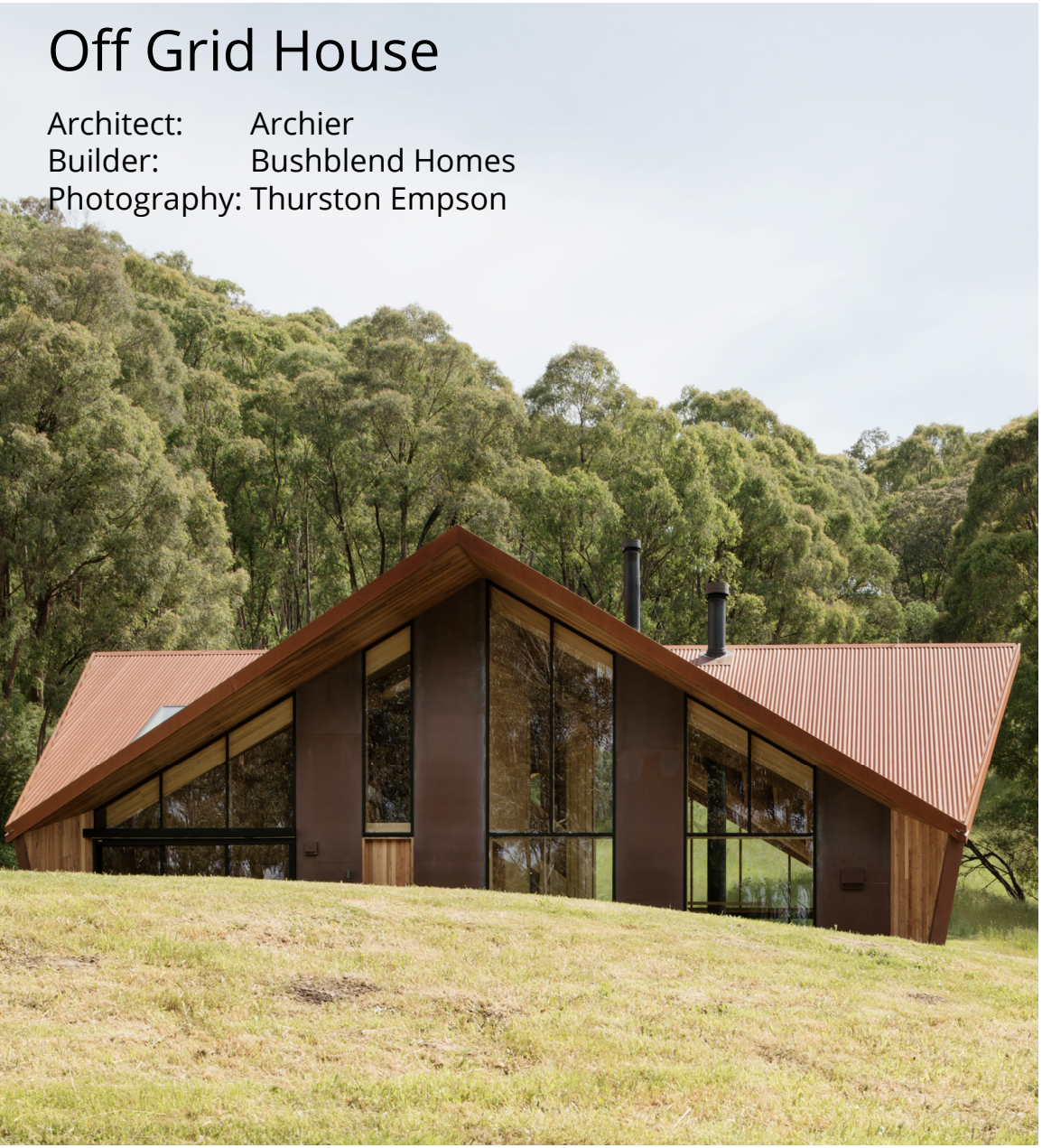

ASH


MASSLAM
ASH
LARGEST VERTICALLY INTEGRATED
HARDWOOD PROCESSOR IN AUSTRALIA.
9 separate on-site manufacturing facilities
(including robotic CNC machines for Mass Timber)
Certified System
Environment
ISO 14001
Certified System
Health & Safety
AS 801
Responsible
Wood
RW/1-31-215
PEFC
PEFC/21-31-215
Sustainably Grown
Australian Made



Off Grid House

Architect: Archier
Builder: Bushblend Homes
Photography: Thurston Empson

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Hundegger
Hundegger

Gippsland Performing Arts Centre

Architect:	Jackson Architecture
Design	Directors: Katsieris Origami
Builder:	Beacon Constructions
Installer:	TGA

Bendigo Govhub (Galkangu)

Architect:	Lyons
Builder:	Icon / Fairbrother
Installer:	Standstruct

Westfield Knox

Architect: Scentre Group
Builder: Scentre Group
Installer: Standstruct


OZMOSIS
DANGERFIELD
GRAND OPENING
SALE
asics


Westfield
ASH

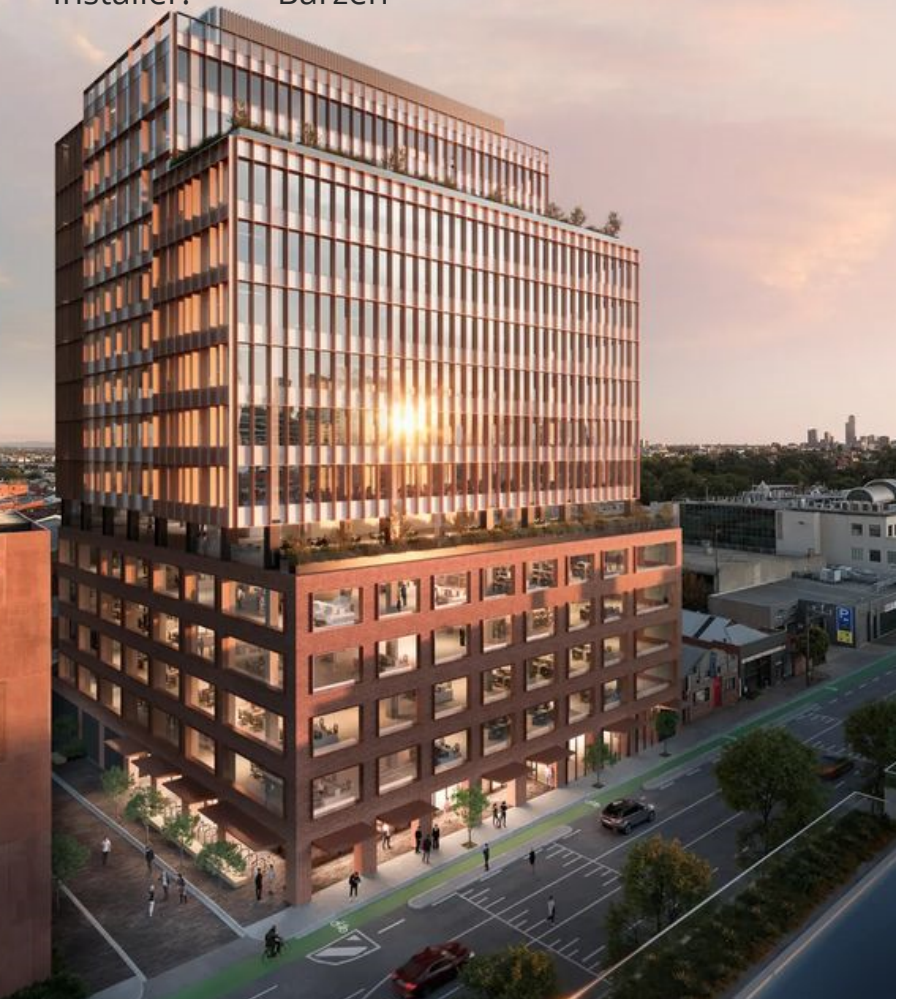

Chatime

Shipwright Arms Hotel

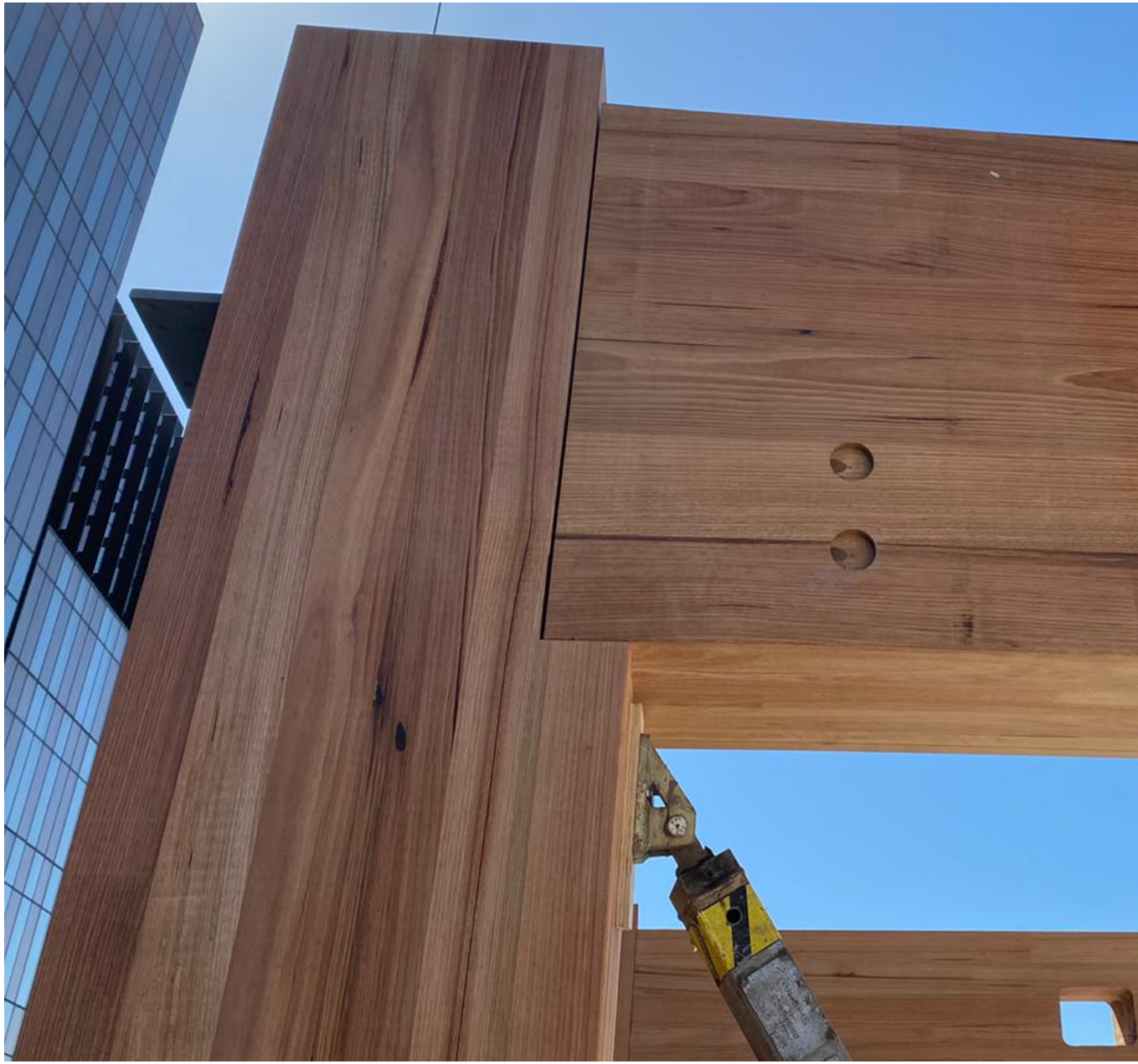
Architect: Circa Morris-Nunn
Builder: Macquarie Builders

T3 Collingwood

Architect: Jackson Clements Burrows Architects
Developer: Hines
Builder: Icon
Installer: Barzen

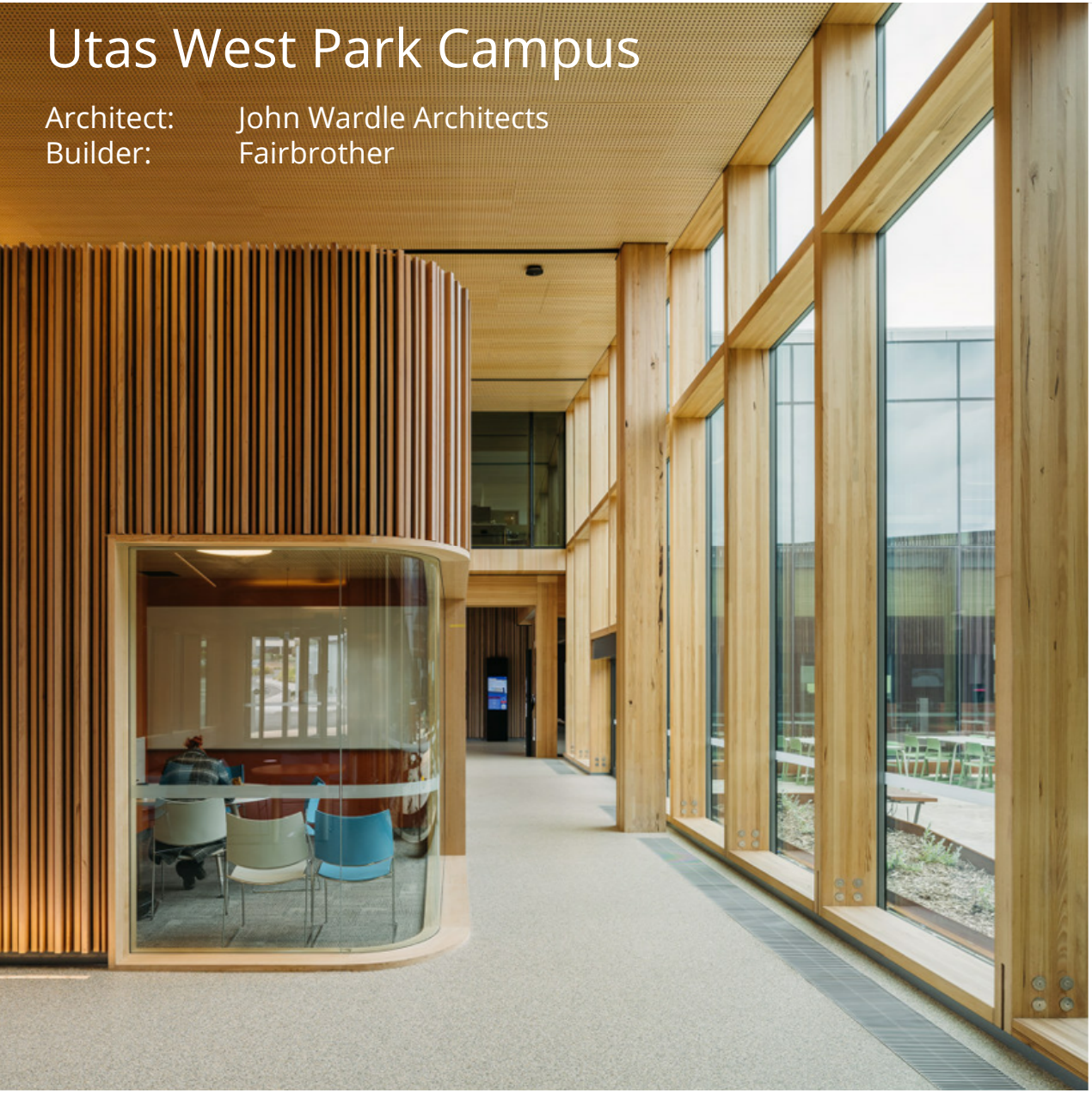



ICON
Offices For Le
T3COLLINGWOOD.
Hines



Utas West Park Campus

Architect: John Wardle Architects
Builder: Fairbrother



TIMBER

PLANTATION OAK

Utas Willis St

Architect: John Wardle Architects
Builder: Fairbrother

Mass Engineered Wood Construction Innovation

Timber Concrete Composites (TCC)

- More efficient use of materials
- Longer spans
  (conventional steel/concrete grids)
- Eliminate transfer slabs
- Enhanced acoustic performance
  (less additional materials)
- Enhanced vibration performance
- Enhanced durability/water
  management during construction

Timber Concrete Composites (TCC)

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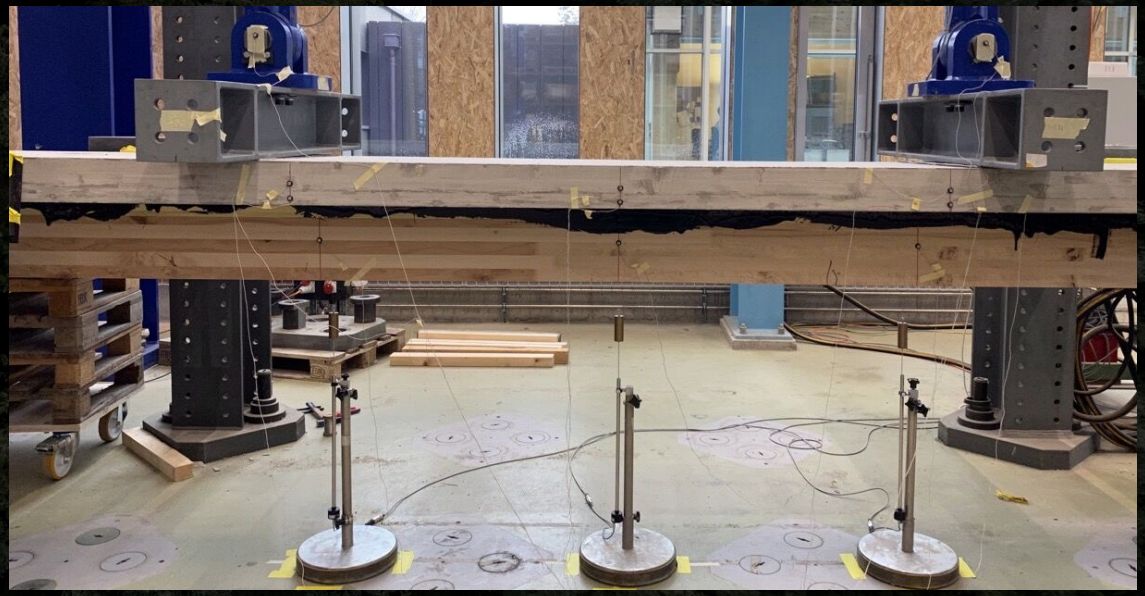
- University ETH Zurich
- Full composite action?
- Epoxy connections/bond



Box Beams

- More efficient use of matierals
- Lighter structure
- More intensive production
- Less redundancy
- Less material for connections
- More susceptible to moisture change and movement in service

Long Span Systems

- Limitless possibilities
- Timber has good all-round strength and stiffness
- Great strength to weight ratio
- Beautiful structures
- Architecture/structure are one and the same

Post-tensioned Systems

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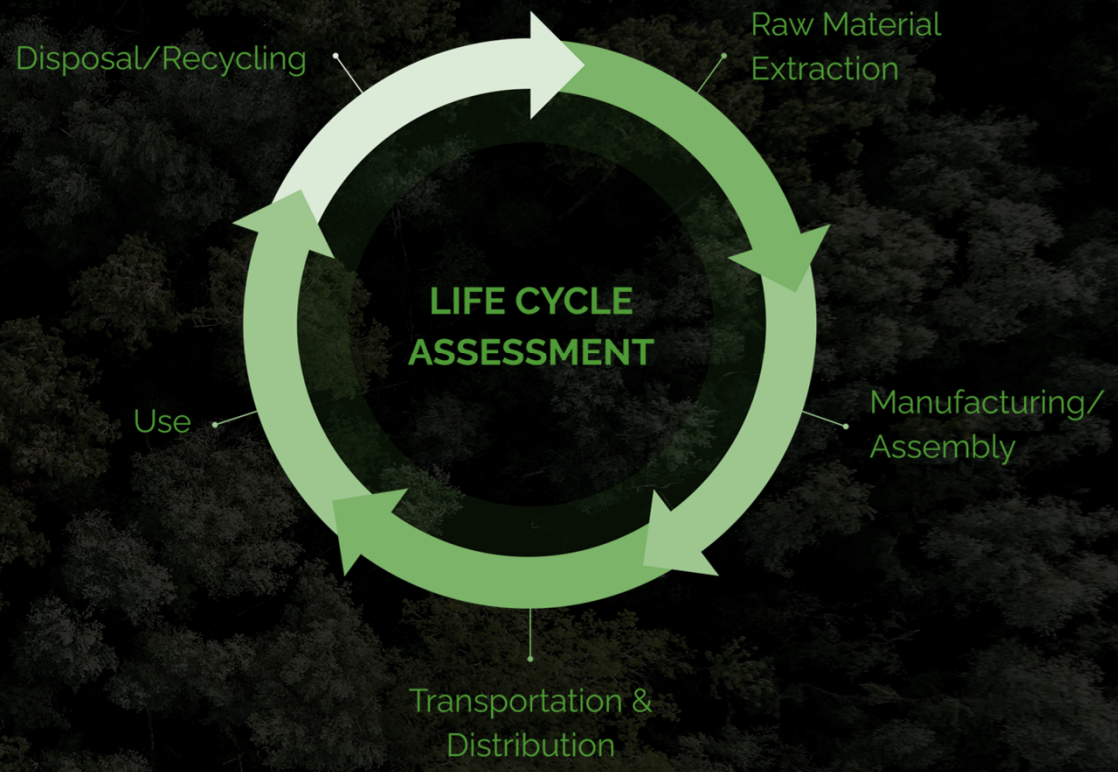
- Long spans
- Lateral stability (Earthquake)
- Replaceable fuses
- Long-term creep/losses/relaxation (re-tensioning?)

Pre-fab Panelised Solutions

- Modular
- Volumetric
- Enhanced performance
- Speed of construction

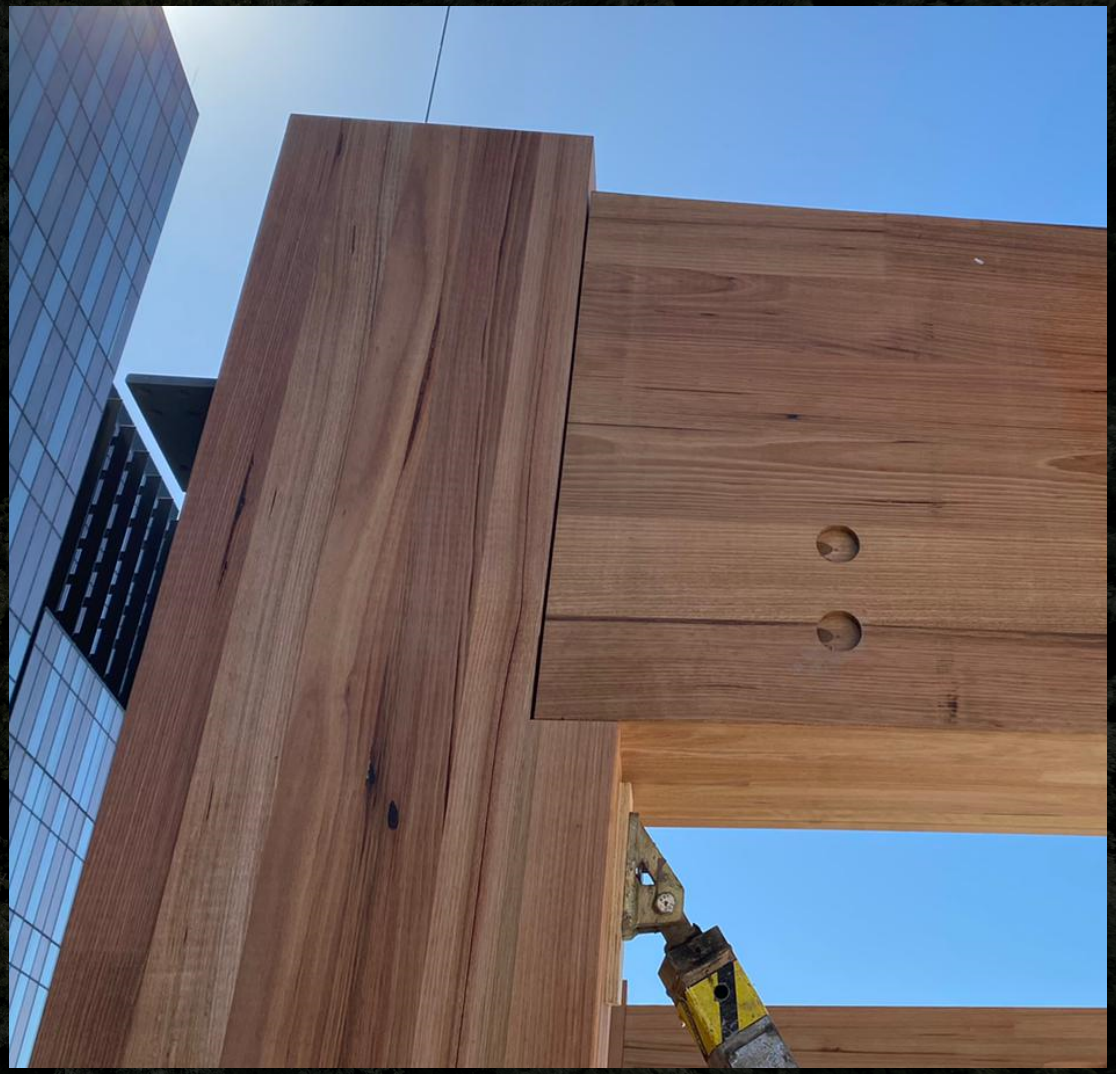
Life Cycle Assessment – Cradle to Grave

- LCA tools
- EPDs
- Biogenic Carbon?
- Structure may be finished product (no lining/cladding)
- Biophilia/Wellbeing



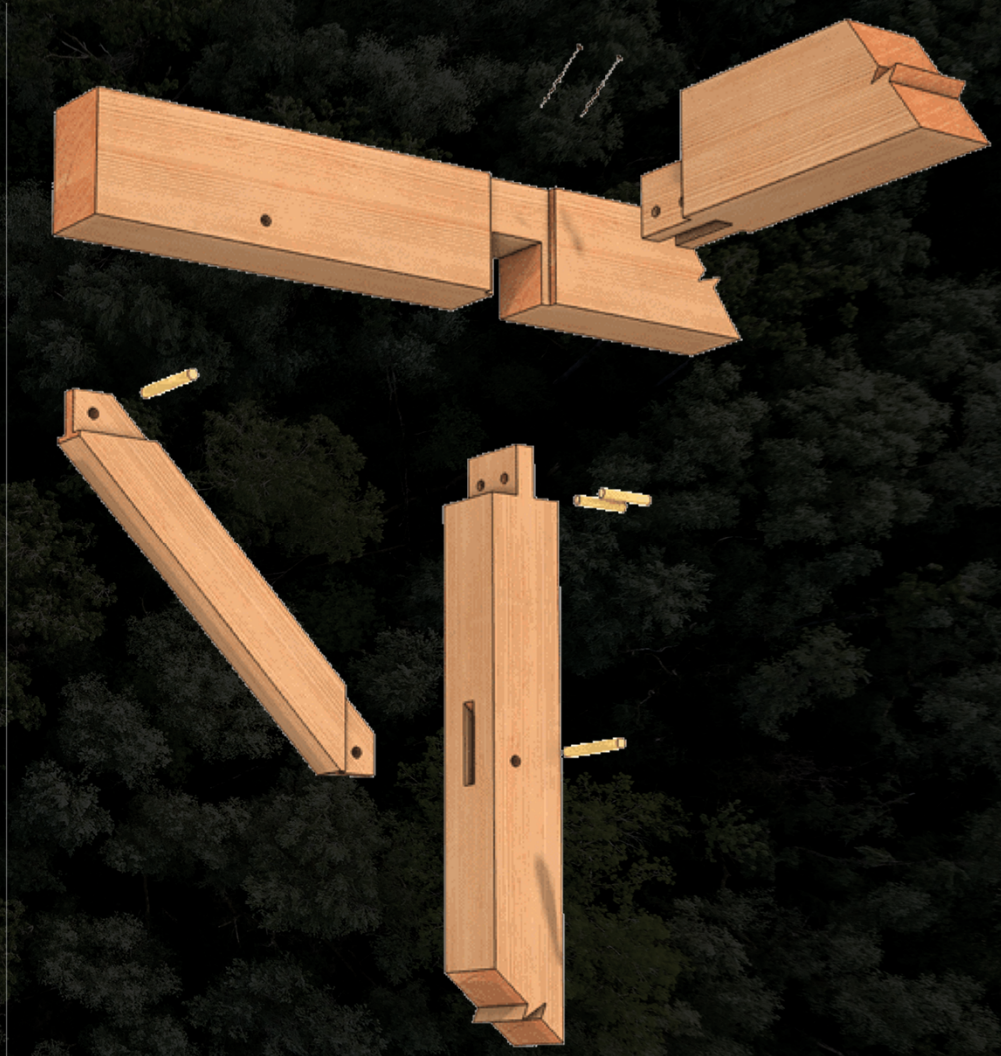
Detailing (DfMA)

- Simplified, efficient connection detailing
- Utilising material characteristic/properties
- Less cost
- Enhance speed of construction



Disassembly

- Planning for the future
- Bracketry and fasteners can be removed and replaced
- Members/components can be re-machined
- Easier than concrete!



Water Management

- Appreciation for and improvement to Tanking
- Temporary drainage
- Concrete topping slabs?
- Best approach I have seen to date at T3 Collingwood - Icon

Artificial Intelligence (AI)

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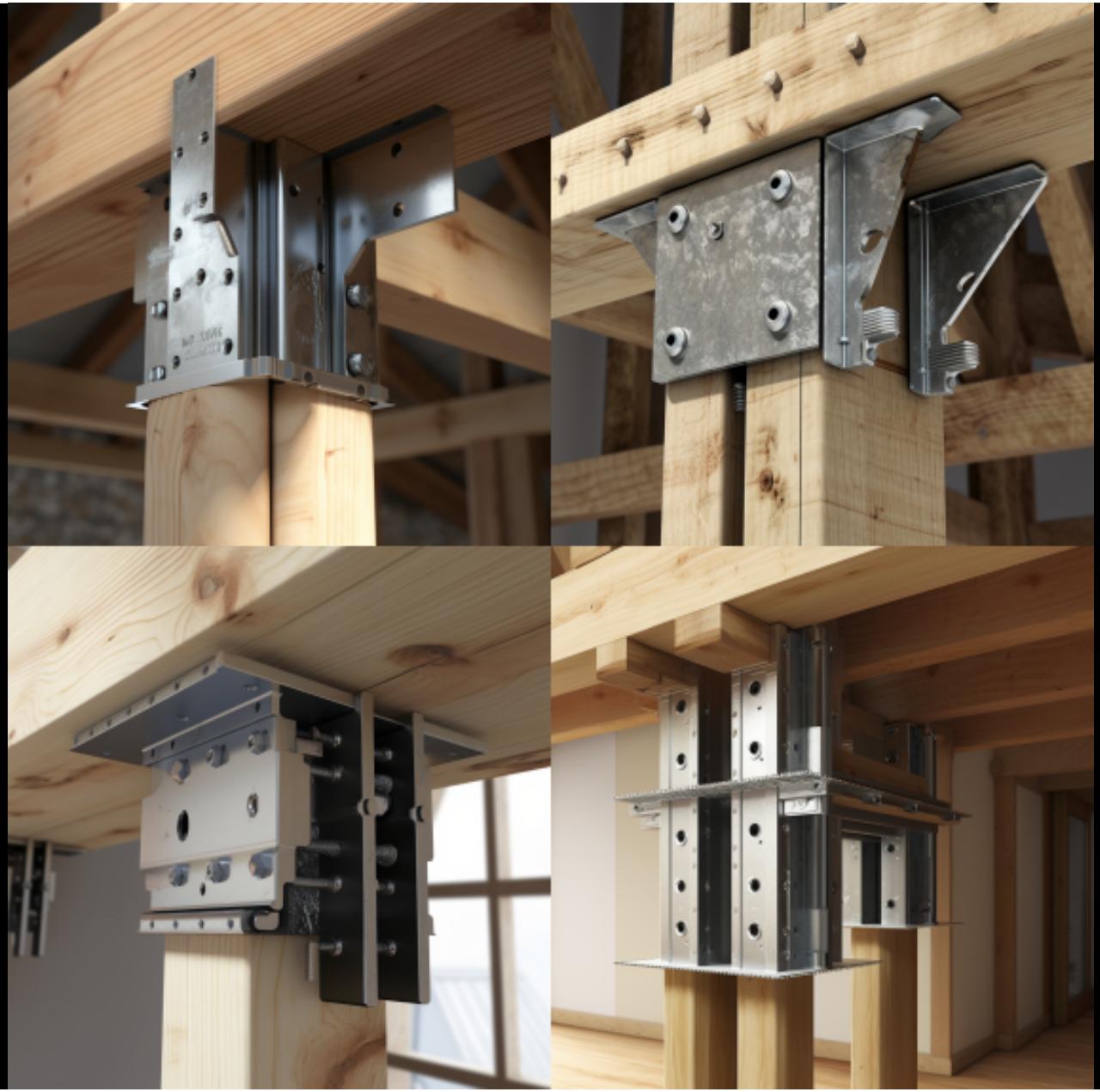
- Parametric modelling
- Architecture/Interior design tools
- BIM enhancement
- Coordination/management
- Faster and greater variation of analysis
- More efficient and optimised designs
- Defect recognition and analysis
- Higher level of complexity will be more viable
- Streamlines sustainability/LCA assessment



Advanced Timber Composites (ATC)

- Longer spans (conventional steel/concrete grids)
- Eliminate transfer slabs
- Service reticulation
- DtS fire resistance (with expressed timber soffit)
- Enhanced acoustic performance (less additional materials)
- Enhanced vibration performance
- Enhanced durability/water management during construction
- Efficient use of fibre
  ~60% reduction of fibre compared with a hypothetical CLT panel of equivalent stiffness
- Sustainable

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Advanced Timber Composites (ATC)

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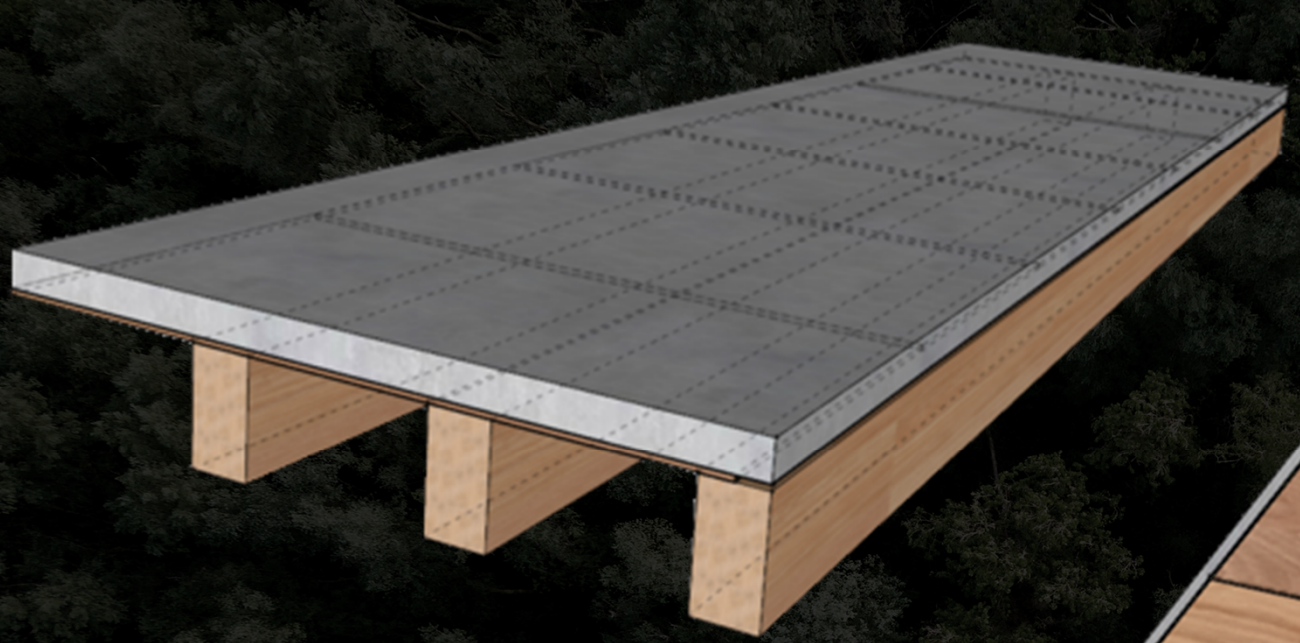
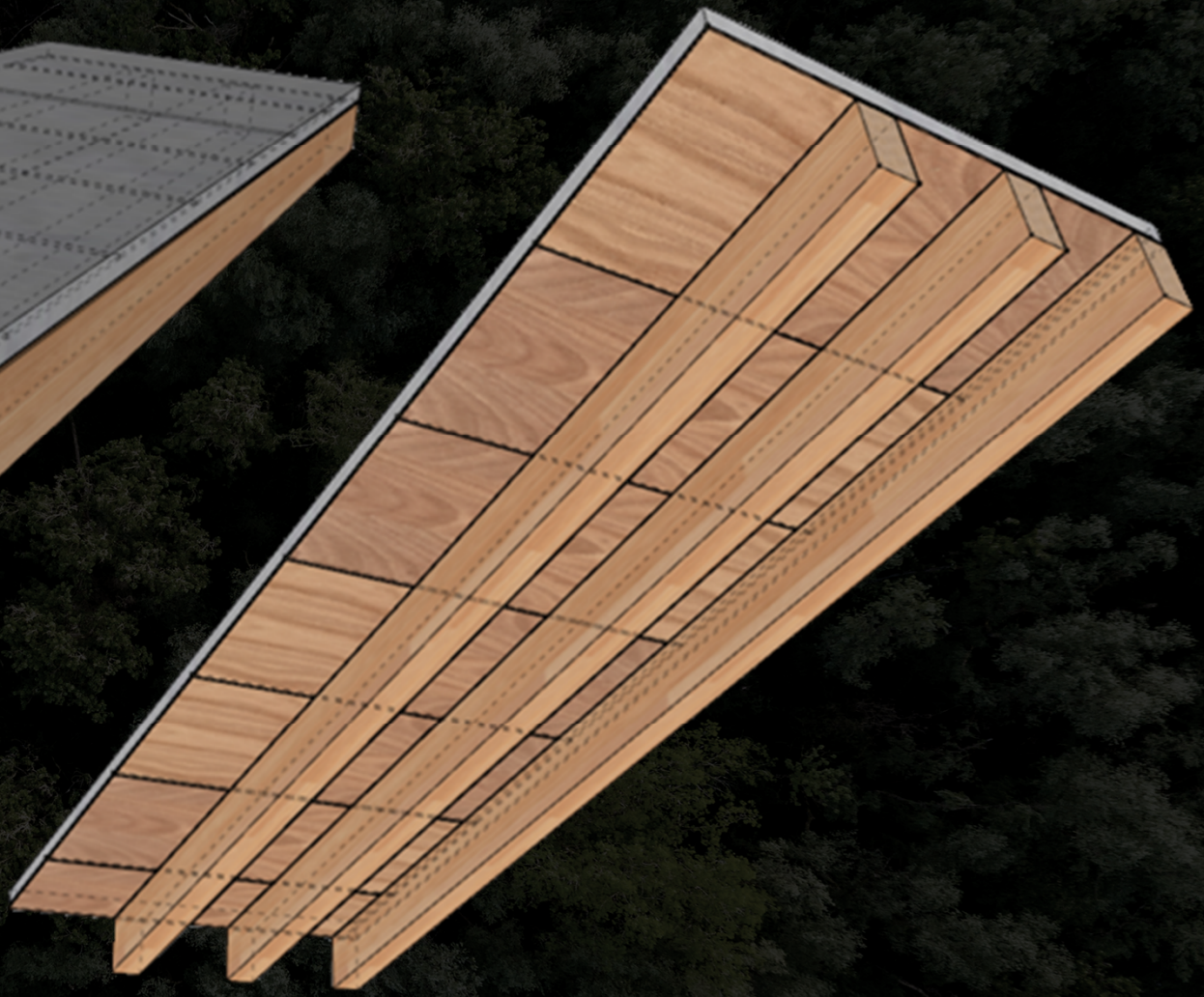


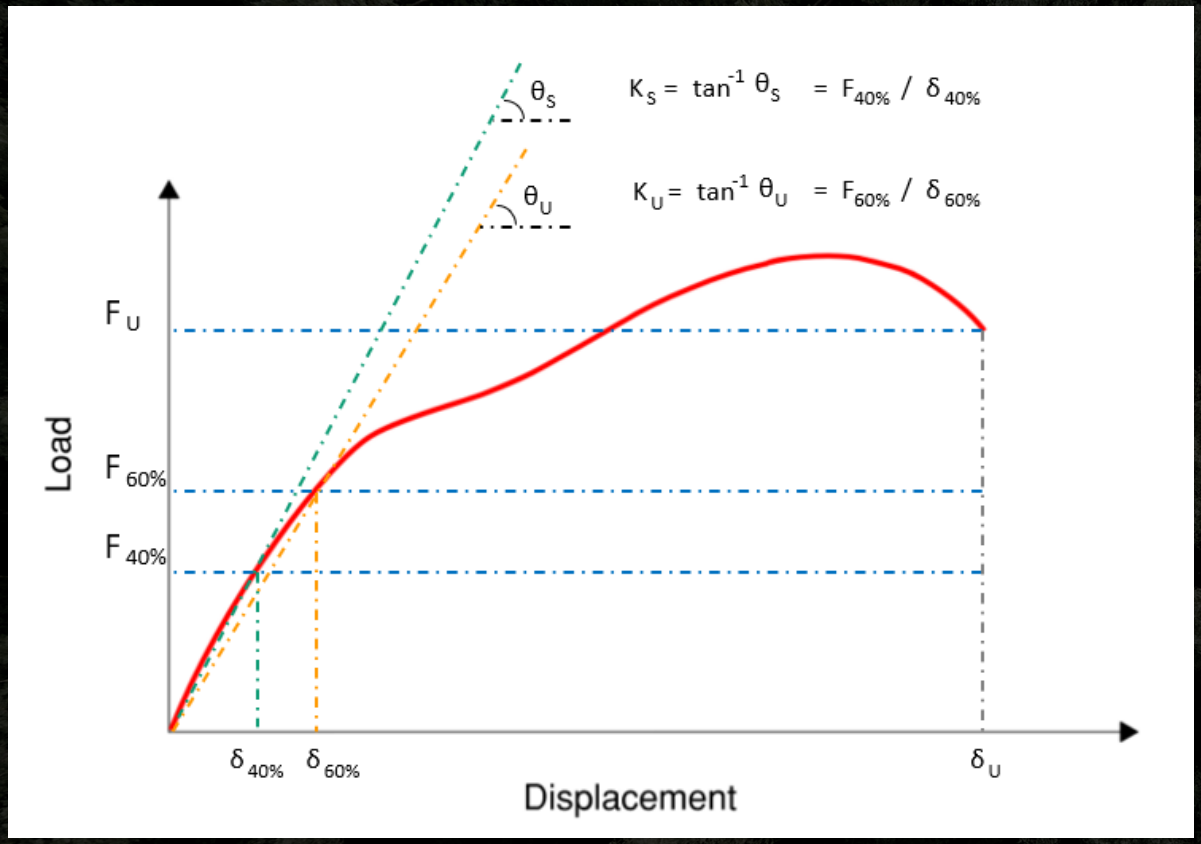


Advanced Timber Composites (ATC)

Advanced Timber Composites (ATC)

ATC Testing

- Shear connector stiffness
  – load vs displacement testing

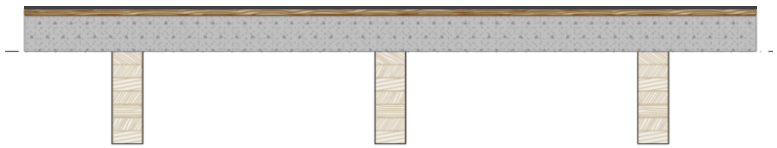


ATC Testing

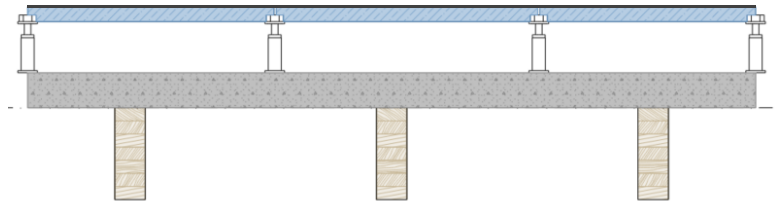
- Fire testing
- 2 hr DtS fire solution with expressed soffit

ATC Testing

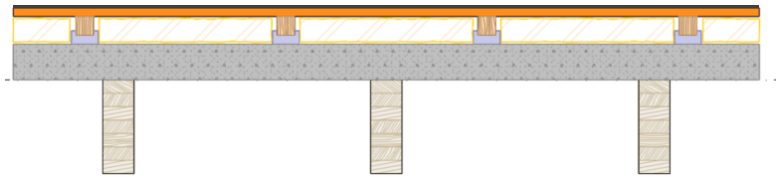
- Acoustic testing
- Fewer additional materials required



$L_{n,w}$ (C_I) = 56 (0) dB



$L_{n,w}$ (C_I) = 54 (1) dB



$L_{n,w}$ (C_I) = 45 (3) dB

R_w ($C;C_{tr}$) = 57 (-1; -5) dB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Thank You
Certified System
Environment
ISO 14001
Certified System
Health & Safety
AS 801
Responsible
Wood
PEFC
PEFC/21-31-215
Sustainably Grown
Australian Made