



The ECO-SEE external wall panel is made up of a specially developed timber frame, which incorporates ECO-SEE insulation and internal coatings. The panel has been developed to improve the indoor air and environment quality of buildings through the use of materials that capture VOCs and regulate humidity.

Name of product	ECO-SEE external wall panel	
Function of product	External timber frame wall panel	
Form	Pre-fabricated panel	
Elements		
1. ECO-SEE wall liner. There are three liner finishes; Photocatalytic Lime, Clay, Photocatalytic Timber Boards.		
2. ECO-SEE external panel timber frame. The timber frame is made up of two sections; an outer chamber formed with timber I-Joists and an inner chamber. The two are separated with an OSB diaphragm which controls water vapour movement into the colder outer chamber while still allowing the moisture buffering properties of the inner insulation to be coupled with the internal environment.		
3. Outer layer of ECO-SEE insulation uses either factory installed hemp fibre or Nesocell cellulose, which is blown in on-site.		
4. Inner layer of ECO-SEE insulation uses enhanced Sheep's Wool insulation. This inner blanket helps to buffer humidity and to degrade VOCs, which permeate through the vapour permeable internal liner.		
5. External cladding provides weather protection to the external ECO-SEE panels. Cedar cladding is shown but a wide range of materials and finishes can be used.		
Structures and construction		
Dimensions of product	Panel sizes vary to suit building design and openings for doors and windows. Example panel size 0.35 x 2.6 x 4.5m.	
Thermal properties		
Thermal transmittance (U-value)	W/(m ² ·K)	Typically 0.15W/(m ² ·K)
Acoustic properties		
Sound reduction index	dB	52
Fire Safety		
Reaction to fire	Lime and clay finishes provide a non-combustible surface finish.	
Resistance to fire	ECO-SEE clay liner uses 9mm MgO board which has been shown to provide a 90 minute fire resistance.	
Environmental properties		
Embodied energy (% renewable)	MJ/kg	
GHG emissions	kg CO ₂ eq	