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HIGH-PERFORMANCE PRE-FAB CONSTRUCTION





Our Vision

High-Performance, Energy Efficient
And Sustainable Homes

Why LAROS?



The LAROS Group have been working on high-performance, sustainable buildings for over a decade through LAROS Technologies. We provide world class building supplies that are vital in constructing the very best sustainable Passive Houses. LAROS Consulting are experts in building physics and ensure that LAROS Structures' buildings perform to the highest standards, and provide a healthy living space for their occupants year round. When building with LAROS Structures, you are also building with LAROS Group.

The Process

1. We work with you, your architect, and builder to design your home and plan out each panel.

2. The panels are built in our Canberra factory by qualified carpenters with over 15 years of industry experience.

3. Once built, we prepare for the rough in of electrical and plumbing, as well as all the ducting and penetrations required for our ventilation systems. This ensures complete airtightness for all these penetrations. This is unlike regular CLT or SIPS pre-fab, as none of this needs to be done on site, bringing you to lockup sooner.

4. We insulate and wrap each wall section with Earthwool® and ProClima Extasana®, to ensure the project is fully weatherproof immediately after installation.

5. The roof structure is built, insulated, and also wrapped in ProClima Mento®. Battens for cladding and roofing are installed on the roof and wall sections.

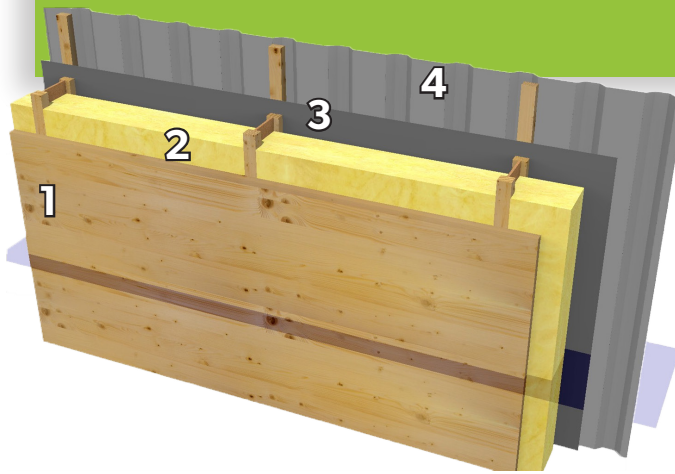
6. The panels are transported to site and assembled using European engineered timber connectors. From delivery to lockup is only 1-2 weeks.

7. You enjoy your beautiful new, sustainable, and high-performance home.



*Our standard panel size is 6 x 2.5m, but we can make each and every wall, roof or floor to your desired dimensions.

The Structure



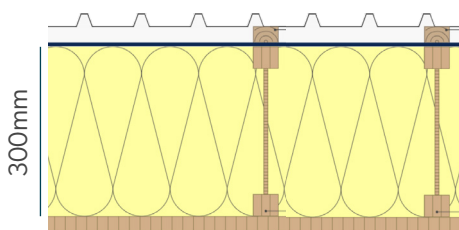
- ① Tilly 3-Ply Solid Timber Panel
- ② Earthwool® Insulation
- ③ ProClima Solitex Extasana®
- ④ External Cladding



We have chosen only the best materials for each component within the structure.

Tilly Solid Timber Panel

The Solid Timber Panel forms the heart of the structure, so we've ensured that it is made from the best material available. Timber is one of the oldest building materials for a reason. It is both structurally strong, as well as very environmentally friendly, with minimal carbon footprint. Mass timber is a strong carbon sink, locking away CO₂ for the life of the building and all of Tilly's timber is PEFC certified, from sustainable Austrian forests. Their Solid Timber Panel is especially strong, made from several cross laminated layers of timber, glued together with alternating grain directions. This provides it with similar strength to concrete, without the weight. This results in a high load bearing and sustainable material. Further, the timber will provide a high-quality finished surface internally. No need for plasterboard and painting.



The roof and floor structures are built to the same high-performance standards.

Earthwool® Insulation

Earthwool® Insulation provides the perfect balance of comfort, cost, performance, sustainability, and health. Earthwool® is made from up to 80% recycled glass and bound together using a biobased technology. It makes for a healthier and safer home, as it is non-combustible, rot-proof, odourless, non-hygroscopic (will not absorb atmospheric moisture), does not sustain vermin and will not encourage the growth of fungi, mould or bacteria. All while providing excellent thermal performance and insulation for your home.

ProClima External Wraps

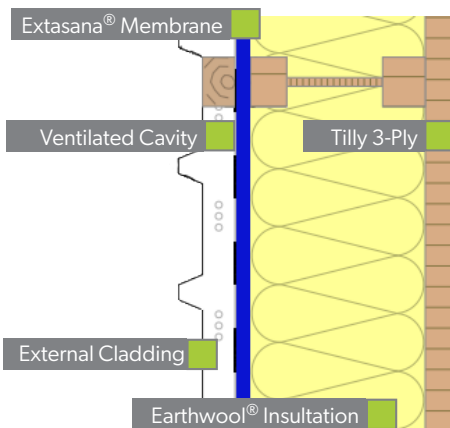


The ProClima wraps on both the walls and roof provide excellent airtightness and weathertightness. This allows the insulation to perform at its best and stops any air leakage in or out of the structure. Further, these membranes are vapour permeable, allowing for the outward drying of any moisture within the structure.

External Cladding

Due to the care in which the wall structure is made, the external cladding only acts as a rain shield. Therefore, there is no compromise to the thermal performance no matter what external finish is applied, giving you endless options.

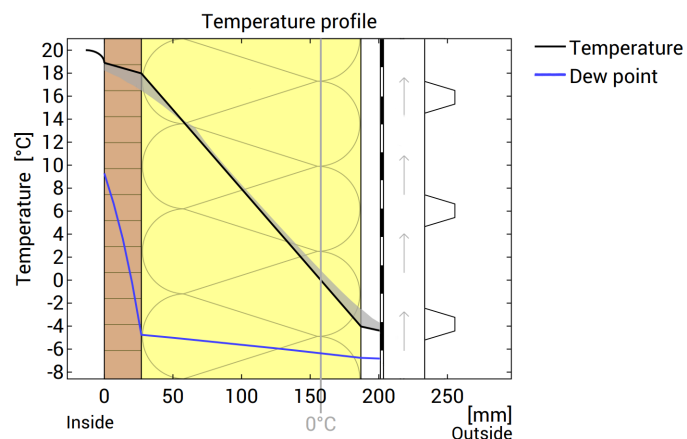
The Performance



The panel system has been designed to provide a high-performance and healthy building.

The Solid Timber Panel, Earthwool® and ProClima membranes combine to make a 230mm wall with an R-Value of 5.27 m²K/W, providing excellent thermal protection and keeping you warm in winter and cool in summer. This is more than double typical performance of standard 90mm stud frames.

In addition to this, the structure will have an airtightness of $0.5 \leq m^3/m^2/hr @ 50 PA$. This keeps your conditioned air inside and ensures that the insulation is performing at its best. The airtightness and inclusion of the vapour permeable membrane also result in a controlled diffusion gradient through the walls and roof. The result is a self-drying structure with zero risk of condensation or rot forming in the wall or roof under any conditions. This is not just healthy for the building, but for the occupants as well.



Interested?

Pay us a visit, email or call

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