

# METRA<sup>®</sup>

PANEL SYSTEM  
*walls · ceilings · floors*

*Trusted by kiwis for over 25 years.*

RESIDENTIAL | CEILINGS | COMMERCIAL | RETIREMENT



# Panel system for reduced build times and durability.

Trusted by kiwi's for over 25 years, Metrapanel has been the preferred modular panel housing system for over 9,000 projects across the residential, commercial and retirement sectors. Pre-cut to simplify and speed up construction, the Metrapanel System was developed to create a frameless interior system which replaces timber-frame and plasterboard.

Projects built using the Metrapanel System are constructed by Licensed Installers throughout New Zealand. Metrapanel is a product produced by LaminexNZ where the panel is made from compressed wood fibre derived from plantation pine, and heat compressed with an exclusively formulated resin. Our re-manufacturing plant then converts the raw board to preprimed Metrapanel after applying two coats of specially formulated sealant.

Metrapanel's engineered 2.45m x 7.35m wood panels means there are fewer sheet joints than would be found under timber-framing and plasterboard systems. The property owner benefits from smooth, strong and durable walls, resulting in extensive maintenance cost savings over time.

## Key features.

Metrapanel buildings take less time to complete and therefore cost less – labour charges are lower, the stopping cost is minimal, finance costs are reduced, and your quote isn't padded to allow for bad weather days.

**Plan range that is Lifemark certified and 7/10 Homestar rated.**

Metrapanel product available in three sizes; 36mm walls, 25mm floors and ceilings, and 18mm linings.

**Durability and impact resistance, with 640kg/m<sup>3</sup> density which is easily able to achieve a level 5 finish.**

As a self-insulated product, energy efficiency benefits are provided – 28% savings in cooling and 4% saving in heating energy compared to a typical 94mm traditionally framed home.

**Metra Inter-tenancy Wall Design and Construction boasts a FRR 30/30/30 fire resistance rating and STC61 sound insulation, which can achieve a 1S Fire Rating classification for the NZBC and 1 for the NCC upon application of additional specified Resene coatings.**

Metrapanel buildings are suitable for all Wind Zones up to and including Very High.

**Speed of construction by up to 40–60%, perfected 6 week turnaround for an average 160–180sqm home.**

More floor space can be achieved with the same footprint, providing larger rooms or an extra small room like an ensuite, office or walk-in wardrobe.

**Design flexibility for tailoring the design to individual needs.**

Environmentally conscious recyclable product, with reduced wastage as offcuts can be used for shelving, treads and rises, bath cradles and wardrobe organisers.

## Scope of use.

Metrapanel can be used as a stand-alone product, or complimentary to other systems leveraging a hybrid approach.

The system can be used in the following applications:

**Residential** (including a standard plan range from 55–117m<sup>2</sup> smaller scale dwellings to 251m<sup>2</sup> for family homes, or up to 317m<sup>2</sup> for extra spacious living).

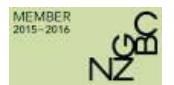
**Ceilings** (including a Working-from-Heights ceiling solution, with Metrapanel ceiling diaphragms that can be up to 12m long).

**Commercial** (including internal office fit outs and partitioning, modular components such as bathrooms for high rise structures and purpose built factories, storage units and two storey apartment complexes using I.T Walls).

**Retirement** (including individual units, duplexes, multi-storey complexes, communal facilities and hospitals).

**Education** (including classrooms, gymnasium, school facilities and student accommodation).

**Transportables** (including minor dwellings, baches, traditional farm style cottages, granny flats, classrooms and subdivided properties). A factory built environment can deliver a 153sqm transportable house in 4–6 weeks.





# Repeatable quality.

## Supplier of exclusive panel.

Supporting Metrapanel for innovative building construction, LaminexNZ forms part of the Laminates and Panels division of Fletcher Building Products Ltd. LaminexNZ and Metrapanel are strategic partners with a strong 25-year history. Utilising a large format Superfine® particleboard panel manufactured at the LaminexNZ plant in Taupo, Metrapanel and LaminexNZ have worked closely to engineer products specifically for the requirements of the Metrapanel system.

With the combined expertise of LaminexNZ manufacturing, and the Metrapanel passion and vision for building construction, this provides New Zealand with an innovative panel construction system perfect for modular homes.

Richard Pollington, General Manager



## Supplier of specific coatings.

Supporting Metrapanel since 2003, Resene is respected as an ethical and sustainable company and acknowledged as a leading provider of innovative paint and colour technology. Working with Metrapanel for over a decade, the professional team has invested a significant amount of research towards the development of coating technologies produced for the Metrapanel system.

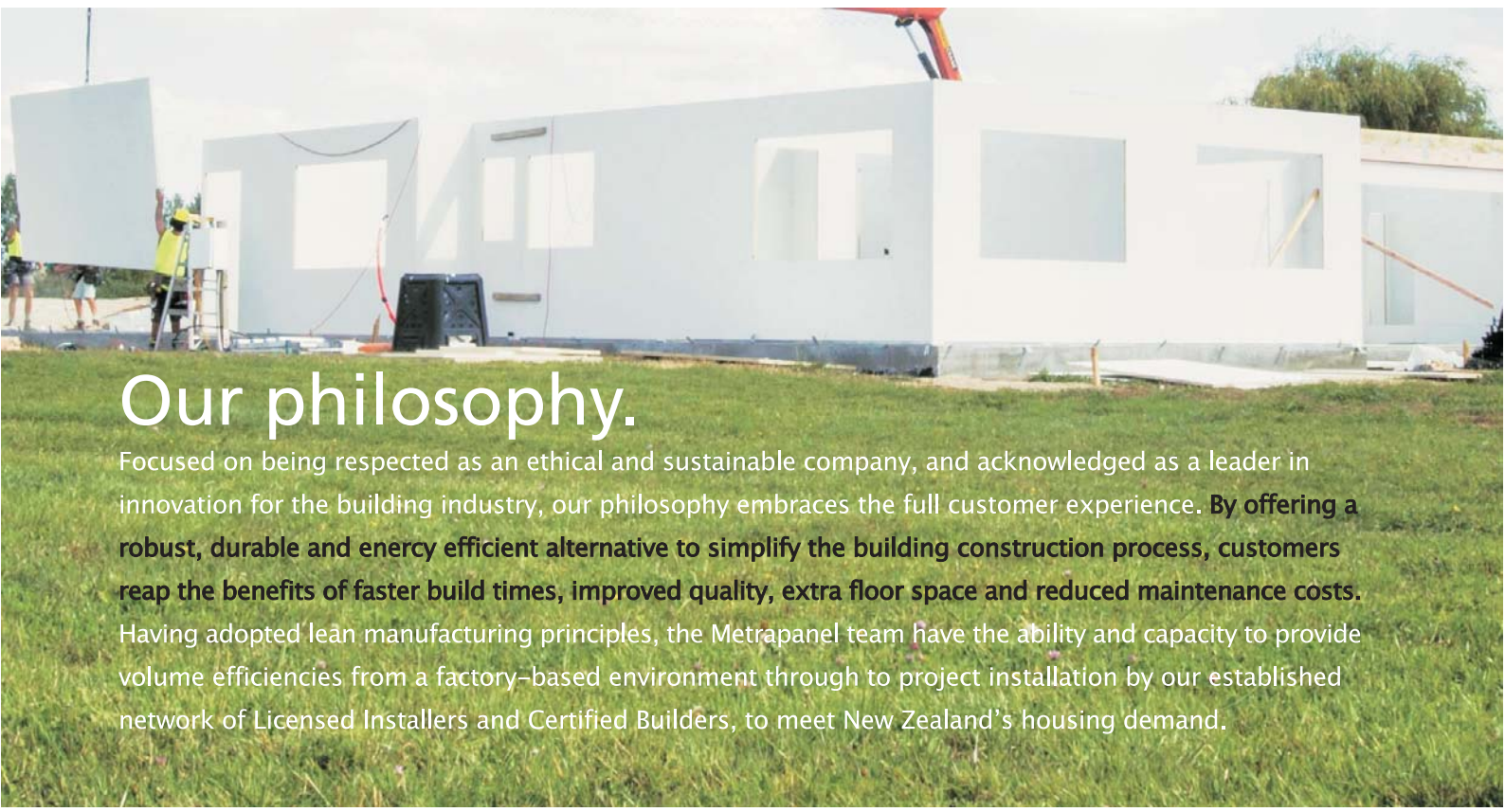
With the combination of Resene Coating Technologies' wealth of paint and coatings knowledge, and the extensive resources of the Resene Technical and Research & Development team, the opportunities for the Metrapanel system will continuously evolve and add value to the New Zealand construction industry.

John B. Kilby, Business Development



## Our philosophy.

Focused on being respected as an ethical and sustainable company, and acknowledged as a leader in innovation for the building industry, our philosophy embraces the full customer experience. **By offering a robust, durable and energy efficient alternative to simplify the building construction process, customers reap the benefits of faster build times, improved quality, extra floor space and reduced maintenance costs.** Having adopted lean manufacturing principles, the Metrapanel team have the ability and capacity to provide volume efficiencies from a factory-based environment through to project installation by our established network of Licensed Installers and Certified Builders, to meet New Zealand's housing demand.

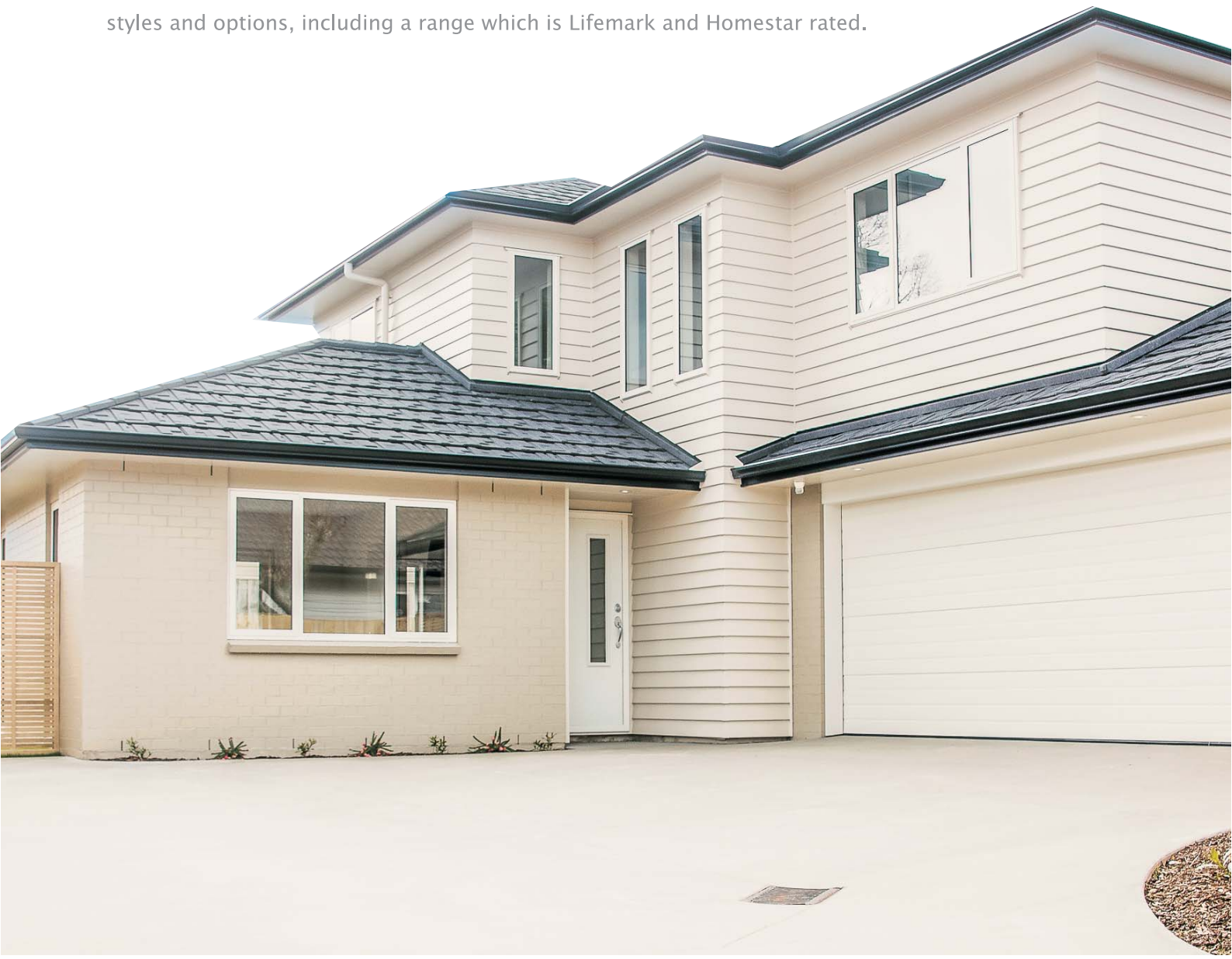


# For more house and a stronger house.

Residential homes are one of the most common applications of the Metrapanel system. On completion, between a prefabricated home and a traditionally built home, it is very difficult to tell the difference. What is important is that your home is durable, with a superior quality finish that stands the test of time. Metrapanel walls stay true to their original form with no warping or nail popping occurring over time.

A home built using the Metrapanel system benefits from more floor space and a density of 650kg/m<sup>3</sup>, therefore you really do get more house and a stronger house for your money! As well, you save 28% on cooling energy and 4% on heating energy compared to a typical 94mm traditionally framed home.

Metrapanel Installers can offer a 6 week turnkey solution for an average 160-180sqm house chosen from an extensive plan range that covers many styles and options, including a range which is Lifemark and Homestar rated.







## Falling-from-Heights issues are solved.

Utilise Metrapanel ceilings as the "Falling-from-Heights" safety solution for your next project! The future of the building industry means creating a bracing element with the ceiling. There is no wastage, the ceiling acts as a diaphragm which can be used for the internal bracing element with the walls, as well as providing extra storage space in the attic which is safe to walk on.

According to PrefabNZ bad weather can cause delays of more than 13% of construction time, however primer sealed for moisture resistance up to 30 days, METRAceilings act as a weather tight lid to work under in varying conditions – as soon as wrap is installed, the frames can begin the drying process even before the roof is on.

With finalist placings in industry health and safety awards and the ability to be utilised on steel or stick frame builds, a Metrapanel ceiling is the obvious choice.





## Controlled costs means no surprises.

The Metrapanel system can be applied in a variety of different ways within the commercial sector, from internal office fit outs and partitioning, to modular components such as bathrooms for high rise structures, as well as purpose built factories, storage units, 2–3 storey apartment complexes and student accommodation facilities.

Metra Inter-tenancy Wall Design and Construction boasts a FRR 30/30/30 fire resistance rating and STC61 sound insulation, which can achieve a 1S Fire Rating classification for the NZBC and 1 for the NCC upon application of additional specified Resene coatings. Its 640kg/m<sup>3</sup> density offers complete impact resistance and noise reduction between rooms, along with the benefits of maintenance cost savings which makes Metrapanel perfect for commercial environments.



# More houses can be built using the same labour resources.

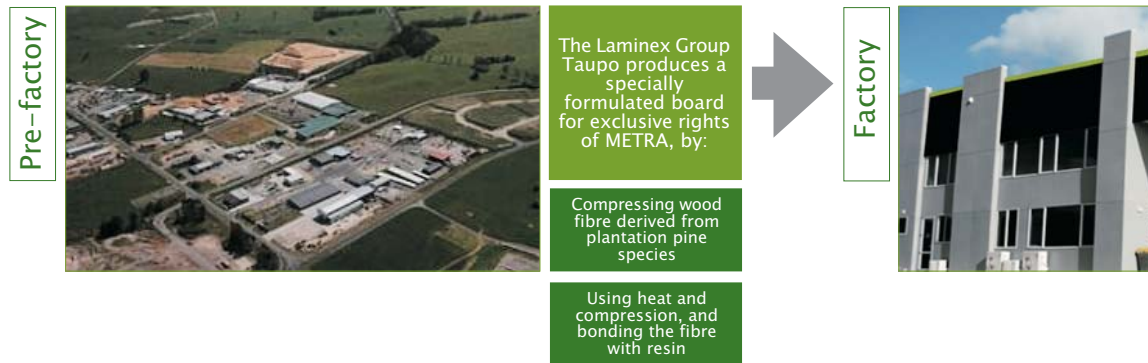
The Metrapanel system has been utilised for over eight retirement projects New Zealand wide, including four hospitals. According to PrefabNZ, prefab methodology can reduce the build cost on a new home by up to \$15K-\$32K for a 157sqm house. With the Metrapanel system you save time which means saving money, and more houses can be built using the same labour resources.

From a refurbishment point of view, it's very quick to refresh Metrapanel walls as the durability of the product prevents damage from walkers and other ailments – a light sand and coat of paint is usually all that is needed.

With design options which are both Lifemark and Homestar rated, we take pride in providing a product that aids in producing healthy homes that serve the lifetime of the person and their individual needs. From individual units, duplexes and multi-storey complexes, to communal facilities and hospitals, tenants reap the benefits of a naturally insulated product with superior insulation from heat, cold and noise. As well, the property owner receives durability advantages resulting in ongoing low maintenance costs.

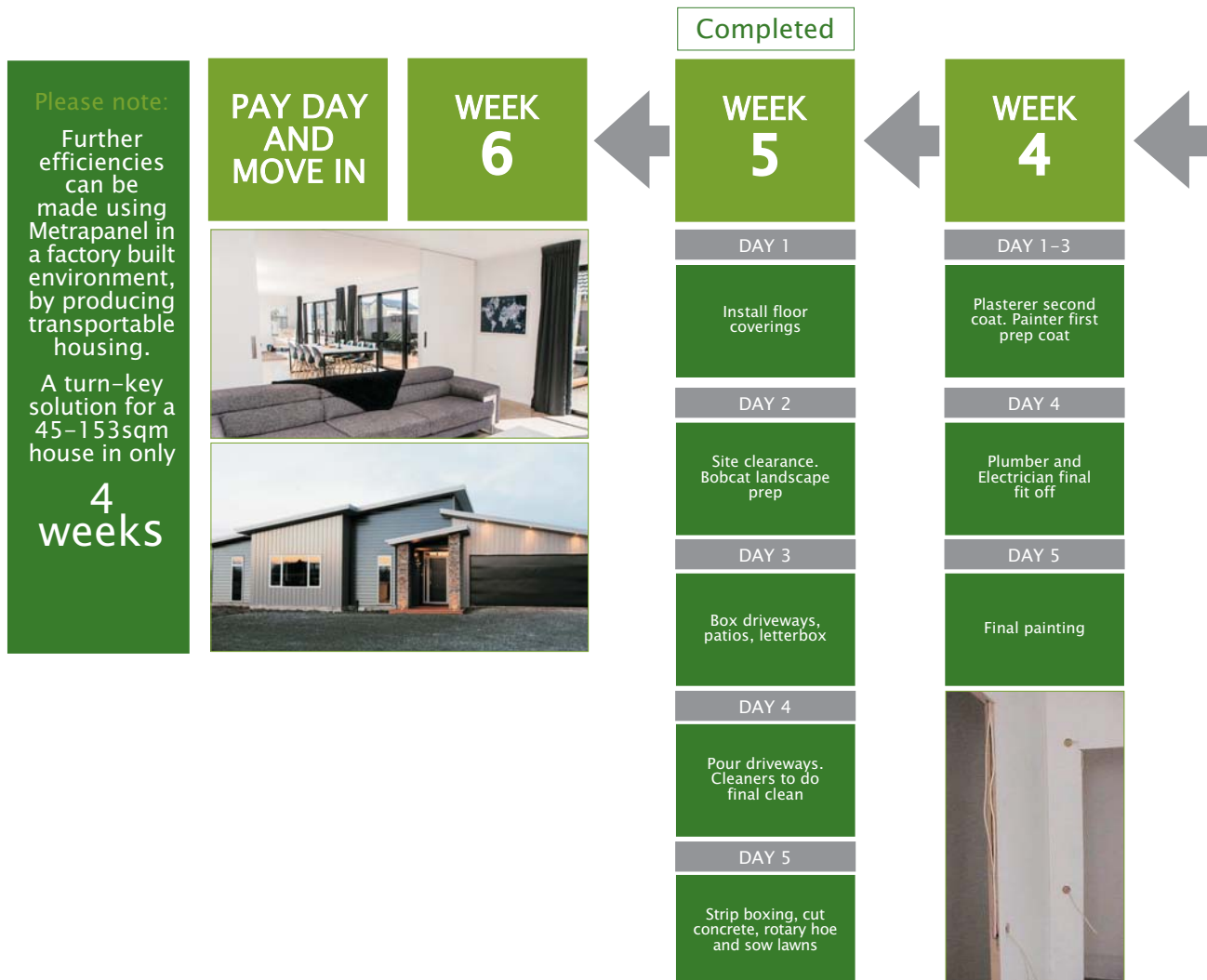


# The Metrapanel way...



## Overall Project Process

Based on an average size house (160–180m<sup>2</sup>) and a team of three







METRA is a remanufacturing plant which converts the raw board to Metrapanel

Two coats of specially formulated sealant are applied to the panel



Installer sends through plans for pricing, along with a Quotation Request Form. Plans priced within 5 days

Pricing

Architect drawings converted to panel plans and approved by installer

Site Access Form and Door Schedule provided. Delivery date arranged

Panel plans precision cut with CNC machine, flat packed ready for delivery

Panel Prep

Split into three stages, 'pricing, panel prep and build', the Metrapanel process is seamless and efficient - resulting in your build being completed 40-60% faster than traditional construction methods. From week 3 the build can be at lock up stage, and from here the finishing work is similar to that required for conventional timber framed houses.



Build Prep

WEEK 1

DAY 1-5

Builder puts concrete, timber or METRA floor down

Plumbing and Electrical services. Drains laid for connections



WEEK 2

DAY 1

METRA walls are positioned and METRA ceilings secured into place

DAY 2

METRA ceilings are screwed off and trusses are fixed to METRA ceilings

DAY 3

Frame soffit ready for fascia. Plumber and Electrician first fix

DAY 4

Cut out windows and fit exterior battens. Grind out for plastering

DAY 5

Roof installation / fascia installed. Exterior insulated and building wrapped



WEEK 3

DAY 1

Tape window openings. Install flashing and windows. Apply trimmers around garage door opening

DAY 2

Garage door installed. Spouting installed. Bathroom prep and any extra linings installed

DAY 3

Plasterer first coat applied. Fit kitchen units and bathrooms. Start external cladding (time frames can vary)

DAY 4

Hang interior doors. Start finishing lines

DAY 5

Plumber and Electrician start fit off. Complete finishing lines. Install hardware. Clean out for Plasterer/Painter next week

# Options to suit.

Engineered 36mm walls are used to create the interior surface as well as the structural and bracing elements of the building. The walls are strong and durable, providing a beautifully smooth Level 5 finish. They are provided already prepared to the desired specifications, with door and window openings marked and scissor cut. METRAwall Standard and Acoustic options are available depending on their purpose and application. The Acoustic options aim to reduce sound transmission between rooms with the STC ratings referring to Sound Transmission Class and measure of sound insulation.

## METRAwalls.

**METRAwallsStandard36;** Primary wall type used for interior walls. METRAstandard36 is a 36mm thick self-supporting single wall panel.

**METRAwallsStandard1Sfire-rated;** This product can achieve a Classification 1S Fire Rating for the NZBC and 1 for the NCC upon application of additional specified Resene coatings.

**METRAwallsAcousticSTC50;** For noisy areas such as music rooms, home theatres and media centres.

**METRAwallsAcousticSTC61;** For Inter-tenancy walls between separate household units.

### METRAwall Inter-tenancy solution.

Metra Inter-tenancy walls are constructed to provide structural support and both fire and sound insulation between habitable spaces from one dwelling to another. This Inter-tenancy Wall Design and Construction boasts a FRR 30/30/30 fire resistance rating, and STC61 sound insulation.

### METRAextrusions.

Utilising extrusions in a Metrapanel build can provide economic benefits by significantly reducing plaster costs and cracking on joins. Options include;

- Standard 36mm H-section
- 36mm corner jointer
- Square-post corner mould
- Round post corner mould

### METRAwall Insulation solution.

Metrapanel is compatible with all usual cladding systems, masonry, timber, brick or exterior panels. By combining conventionally fitted joinery and exterior cladding (as per timber framed buildings) with Metrapanel, a thermal insulation rating of up to R6.0 can be achieved. Options include;

**METRAwalls-standardR2.0;** This option has 70mm Black Pearl polystyrene between 70x50 timber battens.

**METRAwalls-ecoR3.0;** For cladding. This option has 90mm Black Pearl polystyrene between 70x45 timber battens. A 20mm HD polystyrene packer is fitted over the 70x45 timber battens.

**METRAwalls-blackheartR6.0;** Requires two layers of Metrapanel. There is no thermal bridging of the Black Pearl polystyrene layer as the 45x45mm timber battens are on the exterior.

## METRAceilings.

Compatible with traditional stick or steel frame building methods, METRAceilings reduce falling-from-height issues in residential construction. In comparison to traditional plasterboard ceilings, the solid 25mm thick engineered wood panels provide a safe platform for builders to eliminate Health and Safety issues on site. No ceiling fixings are required from inside the house, so nail popping is prevented and stopping reduced, and with the ceiling acting as a diaphragm there is minimal movement (no twisting or warping). As netting isn't required there are no extra health and safety costs.

## METRAfloors.

For suspended timber floors, 25mm Metrapanel floor panels may be used. METRAfloors can span the full width of transportable homes up to 7.3m wide, making the house stronger and more stable when transporting.



# Working smarter - not harder.

## Speed and simplicity.

Saving time saves money, more houses can be built per year with the same labour resources.

## Repeatable quality.

Controlled conditions and trained teams.

## Cost certainty.

Means no surprises.

## Minimal maintenance costs.

Ongoing cost savings due to a strong, durable product.

## Reduced labour.

Overcome ageing and reducing number of skilled tradesmen on-site.

## Safer building sites.

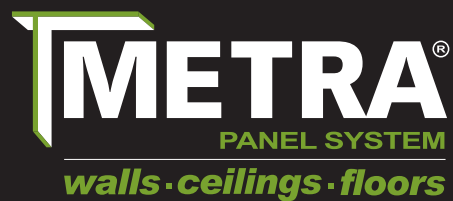
Reduce number of people onsite by 60-80%.

## Safe ceiling system.

Safe working platform and weather tight lid.



There's no going back.



[metrapanel.co.nz](http://metrapanel.co.nz) 0800 156 100