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At last, there is a unique residential building system which has been designed to offer a durable alternative to traditional construction methods: Litecrete lightweight precast concrete.

Litecrete precast concrete walls are solid panels, manufactured up to 7 metres high. They can be used as load-bearing external walls for single-storey or 2-storey dwellings.

Litecrete is manufactured using pumice aggregate, which provides an in-built insulation value. In 2023, the Residential Building Code H1 Energy Efficiency was updated, which increases roof, window, external wall and floor insulation R-values. There is now one external wall insulation value (R2.0) across all of New Zealand. Litecrete 150 mm thick panels comply with the Code when a 50 mm thick phenolic insulation board, such as Kooltherm K17 (or similar) is fixed to the internal Litecrete surface. The complete external wall is 200 mm thick = R 2.26.

Alternatively, the walls can be strapped with timber battens, insulation inserted in the cavities, and lined with plasterboard.

Panels for a typical 2-storey house can be installed in a day or so . . . see the "House in One Day" video on our website, or scan this QR code **>**

Litecrete panels form one integral wall; solid, and water-tight. This prevents leaks, drafts and cold spots, resulting in a more comfortable living environment.

By comparison, a timber-framed wall is a collection of components: cladding, timber frame, building paper, insulation and plasterboard - installed by a range of tradesmen, with a propensity at each process for air or water leaks. This can result in a loss of heating or cooling energy.



SOLID CONSTRUCTION

DESIGN OPTIONS

The Litecrete precast concrete system can cope with a broad range of design considerations; from old bungalow style to contemporary homes.

Litecrete panels are not always used for the total house façade. They can be used, for instance, on the entrance to the house only, or with complementary materials such as timber weatherboards, metal cladding, bricks and glass.

With a maximum panel size of 7 metres x 3.8 metres, the panels can be used for either single-storey or 2-storey dwellings. Being load-bearing, 2-storey wall panels will support insitu concrete or timber mid-floor systems.





PVC CONDUITS CAN BE CAST DURING PANEL MANUFACTURE TO ACCOMMODATE ELECTRICAL AND AV SERVICES.



QUIET AND COMFORTABLE

The mass of the concrete walls reduces noise entering the home and can typically reduce sound penetration by 80% when compared to timber-framed construction. A Litecrete home is often two-thirds quieter than a timber-framed house.



BUILDING CODE COMPLIANT

Litecrete 150 mm thick external wall panels have built-in insulation provided by the pumice aggregate used in the mix. To comply with the updated Building Code insulation requirements, a 50 mm thick Kooltherm K17 or similar phenolic insulating board is glued to the internal face of the Litecrete panel. Thus, the overall external wall thickness is 200 mm.



LOWER ENERGY BILLS

The same qualities that bring you the quiet and comfort of a Litecrete home also bring peace of mind in saving money. Litecrete homes can often reduce energy bills by up to 40% compared to timber-framed homes.

Make an investment in a home built with Litecrete and save money on energy bills at the same time.



REATURES



DURABILITY

Litecrete builds durable, long-lasting structures that will not rot, rust or burn. Life spans for concrete buildings products can be double or even triple those of traditional building materials.



MINIMAL WASTE

Litecrete panels are manufactured specifically for each project, reducing waste. After a concrete structure has served its original purpose, the concrete can be crushed and recycled.



ROT-PROOF

Litecrete is rot-proof. There are no organic materials used in the concrete mix. You will never, ever have to experience the trauma associated with "leaky home syndrome" if you build a home with Litecrete.



NO TOXIC MOULD

Exposure to toxic mould in homes and buildings has been blamed for ailments ranging from headaches to severe respiratory infections and immune system disorders. In addition to carpeting, mould can feed on plasterboard, timber joists and framing and other wood-based linings. Litecrete won't support the growth of toxic mould as there is no organic material in the Litecrete mix for it to feed on.

LONG TERM

These benefits of a concrete home means less cost to own than a timber-framed or monolithic clad home.

The beauty of a Litecrete home is that it requires far less work to keep it looking like new. Buying a home is probably the biggest single investment you'll ever make. Invest wisely. A Litecrete home will pay you back in terms of operating cost, resale value and quality of living. Over the long term, benefits like energy efficiency, fire and rot resistance and low maintenance reduce the cost of owning a Litecrete home.



SURFACE TEXTURES



STANDARD (F5)

Our standard smooth finish is most popular. We also offer a small range of textures, which can only be <u>applied to one surface.</u>

BAND-SAWN TIMBER TEXTURE

The band-sawn texture has been produced by setting up 150 mm wide American Ash timber planks in an 8x4 metre urethane rubber mould. There are no knots visible. The texture from the rubber mould is transferred into the panel surface. The rubber mat can be used over 200 times which, compared to the rough-sawn timber option below, is more sustainable.

Available as horizontal or vertical orientation.



<ROUGH-SAWN TIMBER TEXTURE

Concrete panels are cast on rough-sawn pine planks, typically 150 mm wide. With knots and grain variation plainly visible, this finish offers a more rustic appearance. Variable width planks can also be used to good effect. However, the timber planks can only be used seven or eight times before being replaced.

Available as horizontal or vertical orientation.



LINEAL REBATES

We can also offer simple lineal rebates, to break up the expanse of large panels.

Available in vertical, horizontal or diagonal orientation.

CUSTOM-MADE TEXTURES CAN ALSO BE PROVIDED, HOWEVER, THEY CAN ADD CONSIDERABLE COST TO THE PANEL COST.

EXTERNAL TREATMENTS

Cast on steel beds, the face of the panel is smooth as.

EXTERIOR SURFACE TREATMENTS CAN BE:

- Left as a natural concrete finish, in which case a clear matt finish sealer should be applied
- Painted or plastered with vapourpermeable systems
- Stained. Typically translucent, the figuring in the concrete surface will be visible through the stain

Note that pumice aggregate contains minerals which can sometimes result in more surface figuring than standard precast. Each batch of concrete can vary. There can be colour variation throughout a house lot of panels. This all adds to the character of the product.

If a consistent, blemish-free surface is required, then a cementitious paint or concrete stain should be considered. We recommend that designers and their clients visit our factory and view typical Litecrete panel surface finishes prior to the start of panel manufacture.





INTERNAL TREATMENTS

Internal treatments for external and internal walls.

When 150 mm external Litecrete panels are installed, the internal face is covered with K17 or similar insulating board, so the concrete is not visible. The plasterboard surface on the K17 sheet is usually painted.

However, Litecrete is often used for internal house walls. The internal face of Litecrete has a trowelled finish and for a superior surface we recommend that a 1-2 mm cementitious skim-coat is applied prior to painting or plastering.

If natural concrete finish is required, a clear, matt finish sealer should be applied to prevent the concrete from dusting. Timber textures are available on one panel face only.

ROUGH-SAWN
TIMBER FINISH ON
INTERNAL WALL

We don't build houses; we make panels and deliver them to site... and we're very good at what we do.

If you decide to use Litecrete, your architect/designer will send us the concept drawings so that we can give you an early estimate to see if it fits within your budget. With your approval, the designer will then proceed to complete the design and arrange for a structural engineer's input prior to applying for building consent. We will assist in detailing the panels. Before or after the building consent has been uplifted we will supply a formal quotation. Upon receiving the order acceptance we begin shop drawings for the panels, prior to manufacture, with delivery set at an agreed date.

SUPPLY

THE BUILDER ARRANGES FOR THE CRANEAGE AND INSTALLATION.

Pumice concrete is not a new phenomenon. Since the early days of the Roman Empire, lightweight concrete construction methods were employed. The beautiful coffered dome in the Pantheon was constructed using a pumice concrete mix and is still standing nearly 2000 years on.



Meeting the Building Code durability requirements of 50 years.

When used and installed in accordance with the limitations and instructions of the manufacturer, the Litecrete precast residential wall panel system can be expected to meet the NZBC durability requirements B2.3.1(a) of 50 years. Litecrete panels must be installed and finished as recommended and all coating systems and seals where specified are correctly maintained. DURABILE

OFFERING

What customers can expect from Litecrete



A CLEAR EXPRESSION OF INTEREST

Litecrete's estimating staff will tell you promptly whether or not we can assist you with your project. Usually, the answer will be positive, but if we are unable to assist for whatever reason we will let you know early.



HELP WITH FEASIBILITY

If your project is not yet designed, or is designed but you want to check buildability or other features, then you can expect us to provide you with the input that you need. Involve us early on in the design process to ensure economical and workable designs. We are willing to provide information and assistance to designers and contractors at any stage of the design process. We see our role as providing solutions to your construction problems - solutions which Litecrete is uniquely placed to provide. We don't expect you to use Litecrete everywhere, only where it is the best way of building, so expect frank advice whether Litecrete is a good solution or not.



A CLEAR OFFER

When it comes time to price the precast component of your project you can expect Litecrete to give you a clear and complete offer which spells out inclusions, exclusions and the commercial terms of the offer.



ACCURATE DESIGN & SHOP DRAWINGS

Shop drawings often require accessing information prepared by different parties (engineers, architects, various service providers) and incomplete or inconsistent information can lead to delays. Preparation of shop drawings will often be the first time these issues arise and sufficient time needs to be allowed to resolve them. We believe that our experience should be put to use in the interest of all parties and so you can expect us to propose alternatives to architectural and engineering detailing where possible to improve buildability, durability and aesthetics. Our customers have the last say, but in working with Litecrete you will be offered choices.



DESIGN RESPONSIBILITY

The structural capabilities of all precast components offered by Litecrete should be verified by the project consulting engineers. Litecrete does not, therefore, offer to provide structural certification.



QUALITY-ASSURED MANUFACTURE

One of Litecrete's great strengths is our experienced manufacturing staff. In an environment where employee turnover is minimal, many key employees have between 10 and 20 years' experience.

Over the years we have seen and solved just about every possible precast problem and this, coupled with our quality assurance programme, ensures the best outcomes.



ALLOW FOR ADEQUATE LEAD TIMES

Probably the single most important factor in ensuring problem-free execution of any Litecrete contract:

- Programme determination and production scheduling
- Preparation of workshop drawings and development of construction details, including revisions
- Contract documentation
- Sourcing of hardware and materials
- Approval of prototypes or samples
- Manufacture and curing of panels



SHIPPING

Delivering the product in full and on time is a critical phase of our customer service programme. We ensure that our interface with the site, transport providers and crane operators is as seamless as possible.

The amount of lead-time will depend on:

- Project size and design complexity
- Adequacy of details supplied
- Choice of finishes, rebates, etc
- Number of moulds and mould complexity
- Workload and resources required

ABOUT LITECRETE

Litecrete is manufactured and marketed by Wilco Precast, a Concrete NZ Certified manufacturer.

We're one of the largest precast suppliers to the Auckland, Northland, Waikato and Bay of Plenty markets for over 50 years. The plant is located at Papakura, South Auckland. Litecrete offers a complete lightweight precast concrete solution: design assistance, workshop drawing production, through manufacture to delivery.

PRODUCT QUALITY COMBINED WITH FIRST-CLASS CUSTOMER SERVICE

Litecrete ensures first-class customer service and the highest quality of precast. This is achieved by focussing on customer needs and through integrated and coordinated internal processes. The highly-skilled staff including engineers, draughtsmen, project managers and production personnel, coupled with a sophisticated production facility, ensures the best of precast concrete.







THE CURRENT PLANT CAPACITY IS 20,000 M³ OF PRECAST CONCRETE PER ANNUM



Our activities demand the best in experience, expertise, capability, reliability and quality.

Litecrete's prime objective is to provide products that meet the exact requirements and expectations of our clients. Wilco, Litecrete's parent, is one of a select few precast manufacturers who are Concrete NZ Certified. To achieve this, strict quality control measures are maintained along with the exacting standards of Telarc Quality Management, covering shop drawings and manufacture, thus ensuring a quality finish for the customer.

QUALITY











RD FINISH

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We see our involvement in precast concrete as an opportunity to provide creative solutions for the built environment, without in any way jeopardising the broader environment. For example:

WHY IS LITECRETE A SUSTAINABLE CHOICE?

- Litecrete is locally made using local products, minimising transport costs
- We only deliver to site the panels required; there is no waste
- The panels are installed rapidly, with fewer tradies on site: less waste
- Litecrete has a life cycle of 100 years plus







PARTNERS







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Complete

SUPPLY • FABRICATE • INSTALL

BRIDGEMAN C O N C R E T E

LITECRETE (NZ) LTD

66 Boundary Road Papakura Auckland 2244 Telephone (09) 295 1051 info@litecretesystems.co.nz www.litecretesystems.co.nz