



PROJECT

02

Tilt Panel
HOUSE
by Irving Smith
Jack Architects

• NELSON •

Nelson-based architect Jeremy Smith has designed a house deriving from the investigation into the opportunities afforded by concrete tilt panel construction.

Photography by [Patrick Reynolds](#)

- 01 The northeast elevation of the Tilt Panel House with Tasman Bay beyond.
- 02 The northwest elevation's timber sun-shading device softens the massive concrete panels.
- 03 Looking from the outdoor living through to the kitchen and dining space.
- 04 For the most part the lower level is open, apart from a single diagonal wall that separates the kitchen from the living space.

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Architects often explore and exploit the boundaries emplaced by the restrictions of building, and Jeremy Smith has followed suit through the design of the Tilt Panel House. Concrete tilt panel construction, which is often a commercial approach to fabricating buildings, was used by Smith as a way to provide a durable, cost efficient and thermally sustainable solution for the four bedroom family house on a new suburban subdivision in Nelson.

The angular wrapping of the profiled steel that shapes the roof and the southeast elevation creates the house's more interesting form. The house's dominant structure, however, is the rectangular box determined by the construction method, which was created using two-storey preformed insulated concrete panels with glazing placed in between the sections. While much of the sculptural form was in response to the building method, it also seems to reference both the house's immediate and extended landscape: where immediately a dense forest reserve borders the sea; and further afield where Nelson is shaped by mountains that surround Tasman Bay.

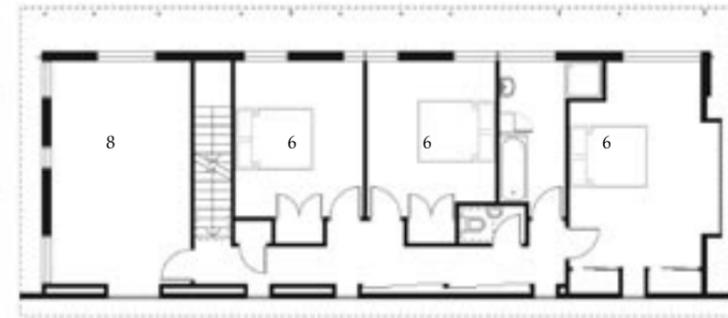
Inside, the box shape enables a straightforward plan. On the lower level, the recent tendency to have one large rectangular open living space has been avoided through the use of a diagonal wall, while upstairs three bedrooms and an office are carefully divided (in nearly equal measures) along the northwest face. The concrete is exposed to much of the house's interior and its permanence is in contrast to the fitted plywood ceiling panels, the painted plaster board and the soft furnishings, which feel as though they can promptly be changed like a piece of clothing dependent on mood, owner and fashion of the time.

The temporal nature of the interior materials extends to the external timber sun-shading device that, in time, will alter through weathering or at the owners' request. Through the art of foreshadowing, the impermanence of the timber is tangible in the present day, casting flitting shadows on internal spaces and softening the solid concrete façade. Through the persistent investigation of a building method's stereotypes, Smith has designed an affordable house that possesses temporal and enduring qualities. 

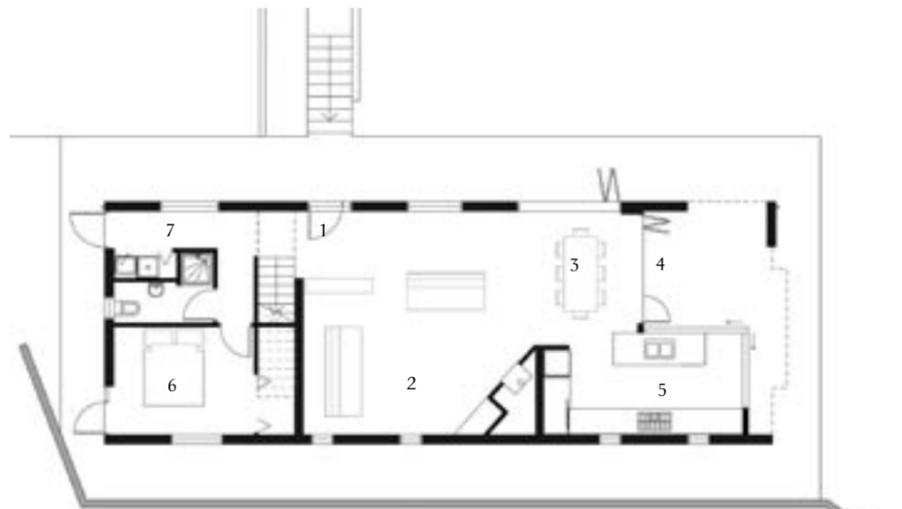
05 The staircase. The exposed concrete contrasts the light plaster walls and bright art.



Northwest elevation



Upper level plan



Ground level plan

- 1 Entry
- 2 Living
- 3 Dining
- 4 Outdoor living
- 5 Kitchen
- 6 Bedroom
- 7 Laundry
- 8 Office

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06 Looking from the studio out towards Tasman Bay.

07 The master bedroom. The timber shading frames the bedroom's windows and the view.

08 The bathroom. The raw material palette derives from the use of the concrete panels.

Architect

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Practice profile

ISJ focuses on design-led responses to site, climate and lifestyle, blending buildings and landscapes together to form a seamless whole.

Project team

Jeremy Smith, Chris Jones

Consultants

Engineer: WR Andrew

Quantity surveyor: Ian Thomson

Builder

Toby Gaskin Builders

Subcontractors

Concrete tilt panels: Thelin Construction

Metalwork: Sharland Engineering

Roofing: Freeman Roofing

Electrical: Omega Electrical

Plumbing: Tim Miller Plumbing

Aluminium joinery: Insite

Glazing: Tasman Glass

Joinery: Waimea West Joinery

Products

Roofing: Colorsteel roofing

External walls: Thermomass insulative concrete panels, Aquellux S clear finish; Eterpan fibre-cement cladding

Internal walls: Concrete panels, Aquellux S clear finish; Gib®, Resene paint finish

Internal ceilings: Decortech perforated ply, factory clear finish

Windows and doors: APL Residential and Metro series

Flooring: Polished concrete; Cavalier Bremworth carpet

Climate control: Escea gas fire

Kitchen: Varenna 'Alea' kitchen, Studio Italia

Time schedule

Design and planning: 9 months

Construction: 9 months

Project areas

Site size: 1300m²

Building area: 225m² + garaging