

When your sister becomes your client, it could easily spell disaster. But a Queensland construction director found that building his sister's house not only strengthened their relationship, but also springboarded his own career.

handmade
concrete
benchtop

Photo: Rix Ryan Photography

Story: Annie Reid

sister act

For David James, director of Thirdson Construction, building a new home for his sister Esther would be a challenge as she was extremely specific in her brief. She wanted to use as much recycled timber as possible, adopt the highest certified products throughout, and to know from where every material originated.

'Her concept was to build an off-grid sustainable home with a low environmental impact,' says James, whose business is based in Ipswich, Queensland. 'She was driven to build something unique.'

She wanted to create a generous house to comfortably entertain their family of 12 siblings, while still operating sustainably.

Working with Aardvarc Architects, they were ready to take on a house located on a battle-axe block in the backyard of an existing house. A compact site of 615 square metres including driveway, the site sits within a character area with strict local government planning restrictions, which instigated four months of design approval negotiations.

'It tied in with the whole concept of reuse and reducing impact by doing urban infill and creating a new home within a suburban backyard,' James says.

Although the house was modest with a spacious living, dining and kitchen area, two bedrooms and two bathrooms, James' response was to create something out of the box.

And that required looking outside Queensland for the next stage – producing the house's core thermal mass. Enter Aardvarc's Mick Helen, whose idea of a structural solid brick wall in the middle of the house would effectively capture the sun's 6.5 hours of penetration each day, heating and cooling the house year-round.

'But there aren't many brick buildings here left to be recycled,' James says, laughing. Instead, he shipped over 3000 recycled, dry pressed, solid bricks from Sydney, each one a different shape and size together creating a rustic provenance with a modern touch.

Graffiti was once sprayed onto the bricks too, which James and his team used as a feature.

'It was a bit of fun to try and blend the colours into the wall,' he says.

The rest of the lightweight structure is fashioned from timber. The house is elevated on a timber sub-floor, which kept costs down and is more renewable than concrete and steel.

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Locally sourced plantation pine framing, and selected old-growth hardwoods made up the structure, alongside a vast recycled timber deck that comprises 60 per cent of the house's floor space – cleverly extending indoor/outdoor living without adding extra rooms.

With all other timber species having to be sourced locally where possible with FSC certification as a minimum standard, the house includes a generous 3.5km of timber throughout. 'We also recycled onsite with offcuts and waste from the structure used in furniture and cabinetry in the house,' James says.

The dynamic roofline brings the wow factor. The spotted gum, solid hand pitched roof is split into >



Photo: Greg Harm



Photo: Rix Ryan Photography

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DAVID JAMES, THIRDSOON CONSTRUCTION DIRECTOR



Ipswich house at a glance

Builder: Thirdson Construction

Location: Ipswich, Qld

Materials:

- Maximises passive design principles for heating and cooling
- Breezeway Altair Louvre Window louvres for crossflow ventilation and circular drafting with clerestory windows
- Cladding CHH Shadowclad plywood and Colorbond Corrugated Zinalume
- Onsite grey water system to gardens
- 7Kw solar panels to offset power usage.

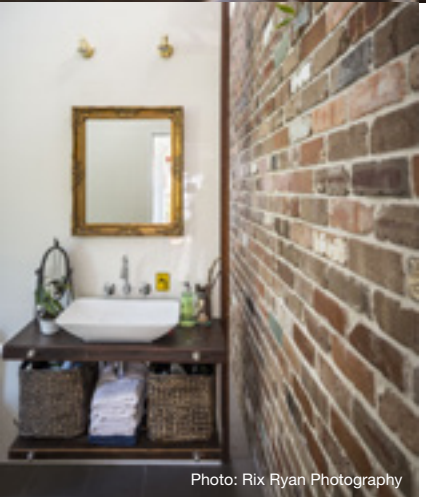


Photo: Rix Ryan Photography



CHH Shadowclad plywood

Photo: Rix Ryan Photography

two parts – upper and lower – allowing natural light to flood through the centre and creating the house's distinctive eaves.

All the spotted gum was cut onsite into specific shapes, rather than prefabricated and assembled in minutes, with a few adjustments along the way to meet the council's character requirements. 'There were a lot of string lines and maths going on,' he says with a grin. 'It's a bit of a work of art.'

Another innovative step was utilising rainwater, more common in a rural setting but virtually non-existent in the city. 'It's just not done,' he says. 'People don't connect their entire house to rainwater.'

The house now includes 15,000 litres of rain storage, a triple filtration system, all the fixtures of the house plumbed to rainwater, rains to mains back up, and a greywater system that disperses rather than stores greywater.

During the project, James and his team had to read the plumbing code to the plumbing inspectors to convince them how to make it work, and then do battle with the block's boundary distances with a lack of certainty on greywater dispersal requirements.

Back inside the house, there was more heavy lifting – but this time, it was James himself who was joined by his brother Tom to lend a hand with labour. For example, they carried 600kg of concrete upstairs in buckets to create the 3.6m-long kitchen island bench. Then they hand-made and finished it with a mechanical diamond polish on top of the surface, at a cost of \$1230. 'It's like making

engineered stone but with standard concrete materials for the same bench,' he says.


With the compact block size, meticulous planning was key, and everything had to be scheduled for craning, access and avoid overloading their storage area.

A major consideration was the mango tree on the walk up to the entry. Its location meant they had to work around it and carry a lot of the materials into the site themselves. 'It was a bit of a challenge craning materials to the roof,' says James.

Another clever touch was keeping soil excavation to a minimum by taking some for a 'pad' to prop up the upper part of the house. In doing so, the house is open at the front and on two sides with extensive glazing that takes in views to the north over the city, and then the hills to the north.

Within 10 months, the house was finished and so successful the council came on board, using it as an example of great infill that meets its character requirements in a modern interpretation.

For James, the third son in the family (hence the business name), the house also became a springboard to clients with a similar ethos, carving a reputation for sustainable building.

But the final say is left to Esther, who enjoyed the process so much, she's now full-time on the books as Thirdson's building designer. James adds: 'This project was great. It's a rare opportunity to experience a building even after it's built.' www.thirdsonconstruction.com.au 

louvres for crossflow ventilation



Photos: Rix Ryan Photography



THE OVERALL DESIGN BY AARDVARC ARCHITECTS IS DRIVEN BY A DESIRE TO PRODUCE AN ENERGY EFFICIENT HOME WITH A LOW ECOLOGICAL IMPACT