

Hervey Bay House QLD

December 2002

This case study was written at the time when InfraBuild (formerly Liberty OneSteel) was part of OneSteel. In that context, in some instances within this case study reference may be made to OneSteel.

Hervey Bay

HOUSE



Colin J Clark Essentially Residential have been building quality homes in Queensland for 25 years so when it came to designing and constructing their own home it was an opportunity to put to work all that their company represented - and the result is simply awe inspiring.

Since its completion, The Point Vernon home has achieved a long list of acknowledgments, including five regional Queensland Master Builder Awards and the state award for Individual homes \$800,000 to \$1 million. In the Housing Institute of Australia Awards (HIA), it took out another five regional awards and two state achievements. Other awards are sure to follow.

The home fronts The Esplanade, a main thoroughfare that runs along the beach at Point Vernon, and it's at the front of the house that the Clark's have located their swimming pool. Given the need for privacy, one could be forgiven for thinking it an odd choice, but one look at the swimming pool, and the Clark's reasoning becomes obvious.

The pool, which is 4 metres wide and 12 metres long, is accessed from the first level of the home, which overcomes the privacy problem. It has a nautical theme and has been designed as a feature to be enjoyed from both inside and outside the house.

Looking at the pool from the street, it resembles an "inside-out" boat, with the main frame fabricated from steel and the exterior finished with 150X40 Spotted Gum.

From the lower bar level, where you'd expect to look at the base of the boat, you look into two 700x600 viewing windows which give you an unexpected insight into the swimming pool. With this home, it's the little details that add to the overall impression of quality, and they haven't been overlooked with the pool. At the push of a button, aerated bubbles rise in front of the windows adding to the overall nautical ambience.

Once Michelle and Colin had decided on the boat theme, Engineer Des Newport Consulting Engineers in Brisbane was engaged as the structural engineer through Gymer Bailey Architects .

According to Des, the challenge was in making the concept work not only structurally but also as a swimming pool.

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To optimally achieve the nautical theme, the majority of the skeleton frame was fabricated using OneSteel Universal Beams, around 8 tonne in total. According to Des, using all timber for the pool would have been cumbersome, and the effect not nearly as dramatic.

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Timber sleepers were then slotted into the steel skeleton providing the formwork for the reinforced concrete pool that was finally sprayed with a pebble coat interior finish.

Once the concept had been derived, G.S Engineering at Hervey Bay took over with the fabrication. According to owner Doug Baldwin, the swimming pool frame was unlike any project the company had ever embarked on.

"From achieving the different heights in the water level to transporting the finished structure by road and then the delicate operation of fitting it into the centre of the house with only a 50mm gap—the whole project was a challenge, but the result speaks for itself"

With the house located by the beach and the pool salt water, there were special considerations relating to corrosion resistance and G.S Engineering worked directly with Bay Powder Coating to come up with a solution.

According to Justin Mortimer of Bay Powder Coating, the job involved a five stage coating process. To ensure quality control, the pool frame was delivered to Bay Powder Coating in large sections (around 40 sections in total). The

fabricated sections were then class 3 sandblasted to white metal and metal sprayed with a thermal metal spray of 15% aluminium and 85% zinc to around 150 micron thickness. In problem areas, such as wear points and places where salt water could puddle, the spray was applied to a thickness of 300 microns, leaving just 50mm bear at the ends for welding.

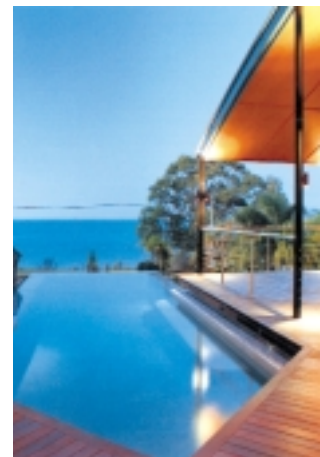
G.S Engineering then fabricated the entire structure before it was transported back to Bay Powder Coating where two coats of a 2 pac high build epoxy primer were applied. The coating process was completed with two topcoats to ensure the structure would not only withstand the weather, but looked good.

While the home is a showcase of timber, steel columns were incorporated within the home's structure to support the floor to ceiling glass windows, which offer views over the Pacific Ocean. Forty RHS 75x75 columns surround the internal structure of the house, and at 17 metres in length, begin at the cellar level and take in the four levels of the home. The steel structure within the timber cladding has been engineered for concealment and enables the large cleans spans for living areas as well as maximising the north facing glass windows.

The use of a steel frame made for large open living areas, and the stairwell leading to the upper levels became a feature of the home, and it is here steel channel was used as a lightweight steel frame. It was buffed, undercoated and then painted to fit in with the colour scheme of the home.

The stainless steel rails and cabling fabricated by Arcon Engineering contribute to what is, in all regards, a spectacular residence.

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BUILDER

Colin Clark
Essentially
Residential

ARCHITECT

Gymer Bailey

ENGINEER

Des Newport
Consulting Engineer

FABRICATOR

GS Engineering