



Crescent House: Sensorial Delight by the Sea

Background

A play of geography, geometry and light, Crescent House is a singular, undulating sculpture that weaves through lush, coastal gardens to reveal enchanting views across Sydney Harbour to distant Middle Head.

AT A GLANCE

Architecture: Matthew Woodward Architecture

Builder: Builtform

Structural Engineers: SDA Structures

Images: Murray Fredericks Photography

The Challenge

Designed and built for a young family, the home takes full advantage of its northerly aspect, panoramic vistas and direct access to the Harbour foreshore.

“The brief was to create a future-ready home that captured various opportunities to entertain, relax and rest amongst gardens and Harbour views,” says architect Matthew Woodward.

Although the building form itself is relatively simple, the level of detail and expression in the concrete ensures this home presents to the world as anything but ordinary.

Solution/Outcome

The overall design aesthetic is minimalist, characterised by the use of monochromatic materials incorporating fragments of greenery, brass and reddish tones. This palette encourages continuity with the colours of the external garden, blurring the delineation between inside and out.

Once entered, the house is experienced as a sequence of volumes through mass, concrete and whiteness. Playful plasticity of form provides thoughtful connections across the various spaces and landscapes areas.

The materials were also chosen to withstand the elements and age gracefully in their setting.

In this context, concrete was the perfect choice - balancing the structural challenges, durability requirements and sensorial aspirations of the clients.

“They (the clients) wanted to express and honour off-form concrete as a true reflection of the building process, relaying a story of the construction process throughout the home,” Woodward says.



The site is a relatively tight lot, narrow and long in proportion, constrained by neighbours either side and the Harbour foreshore at the rear. Primary access for construction was via the narrow street frontage at the highest point of the site.

The geological morphology consisted of Sydney Harbour sandstone, which provided opportunity for stable bearing for the house's foundations directly onto bed rock.

Concrete was poured for the floor and roof structures, with a mixture of core-filled concrete block walls and concrete blade columns.

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Andrew Piva - B.E Architecture

For the most part, the formwork in the soffits was expressed and joint lines considered to align with various building components.

Burnished concrete topping slabs with expressed stainless-steel strip joints were poured to contain in-floor hydronic heating and to achieve a controlled floor finish.

Stairs were a mixture of poured monolithic concrete treads for internal and formed on-site pre-cast planks for the side access stair, allowing natural ventilation to flow through to service corridors.

Complex geometry and radial forms were constructed using a mixture of standard formwork, integrated with profile polystyrene mouldings supplied by Ezytube.

Woodward says craftsmanship was critical at the connection between form mouldings and plywood formwork to ensure tightness of joints for a seamless off-form appearance. The process of deconstructing the overall geometry into segment of parts allowed uniform complex volumes to be constructed.

Passive solar heating and cooling is a feature of the design through thoughtful site-responsive planning, considered location of openings, external shading devices and thermal mass.



BENEFITS OF USING CONCRETE:

- Off-form, in-situ slabs/roofs and external walls
- Exposed concrete soffits and internal walls
- Burnished concrete floor toppings
- Internal and external stairs