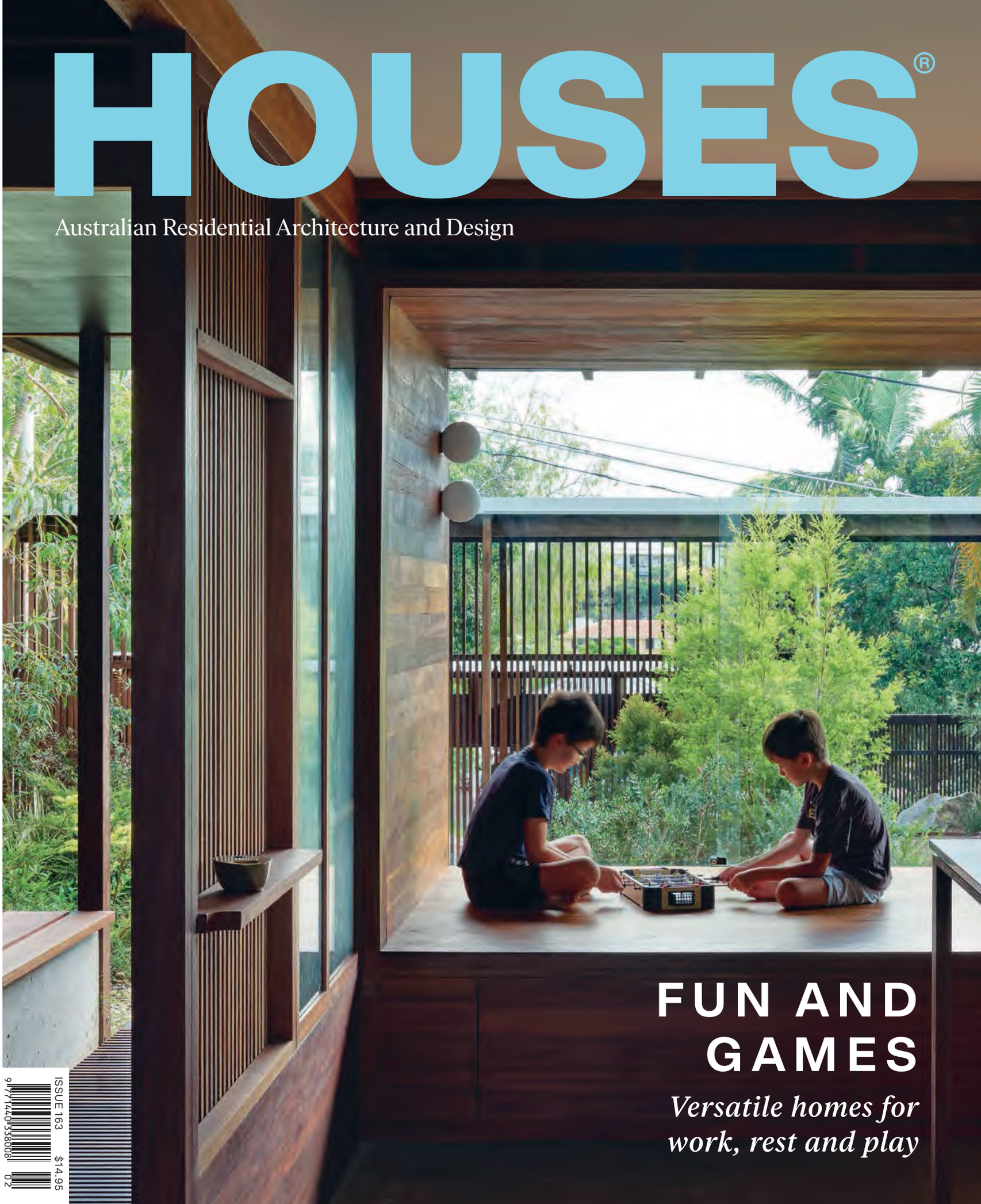
HOUSES®

Australian Residential Architecture and Design



FUN AND GAMES

Versatile homes for work, rest and play

HOUSES

Australian Residential Architecture and Design — *Issue 163*

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HOLOCENE HOUSE

BY C PLUS C ARCHITECTS AND BUILDERS, JASE SULLIVAN AND DUNCAN GIBBS

BEYOND BAWA

Green in more ways than one, this new home in Sydney explores the synergy of architecture and landscape in its vision for more sustainable living.

Words by Bronwyn Marshall
Photography by Renata Dominik, Michael Lassman

Elevated on a dramatically sloping site in Manly, Holocene House was designed for a family with an ambitious brief for a climate-positive home. The aim, shared by client and architect-builder, was to redefine conventional approaches to residential sustainability, embracing permeability, material innovation and the potential symbiosis between architecture and landscape. "We weren't designing to tick sustainability boxes," explains C Plus C Architects and Builders director Clinton Cole. "This was about real-world carbon reductions – how the house performs, how it breathes, and how it integrates into its natural and social context."

Where conventional builds often focus on enclosing a structure for energy efficiency, Holocene House instead explores the benefits of a permeable approach – one that is well-suited to Sydney's climate. Also unconventional is its orientation: unlike most homes in Manly, which are oriented almost exclusively toward the best view, Holocene House opens sideways along its long, north-eastern edge to a pool, deck and terraced garden that occupy half of the site. A distinctive canopy – inset with mesh, planters and fibre-reinforced plastic panels – responds to the movement of the sun through and across the site, filtering light, creating shade during summer, and permitting the house to adapt to seasonal change.

The house is oriented north–south, ensuring sunlight reaches all parts of the home throughout the day. Openings provide adequate cross-ventilation for thermal comfort, eliminating the need for mechanical airconditioning. Materials, from structure to finishes, were sourced to lower the home's carbon footprint: a lower-carbon concrete skeleton is layered with recycled timbers sourced from demolished houses; low-VOC plywood and cabinetry made from reconstituted paper pulp further reduced the environmental impact. Bushfire controls also required robust, non-combustible materials. Externally, charred timber cladding (shou sugi ban) and galvanised steel elements create a tactile yet durable envelope.

01 A linear plan unfurls down the southern side of the site. Photograph: Michael Lassman.

02 Living spaces open out to a natural pool, one part of a creek-inspired landscape design.

03 A distinctive canopy lined with plants, mesh and fibre-reinforced plastic panels creates varied light and shadow.

Photographs 02, 03: Renata Dominik.

02

03

Holocene House is built on the land of the Gayamaygal people.

Kai'ymay/ Sydney, NSW

New house

4 Family

4

3 + 1 powder room

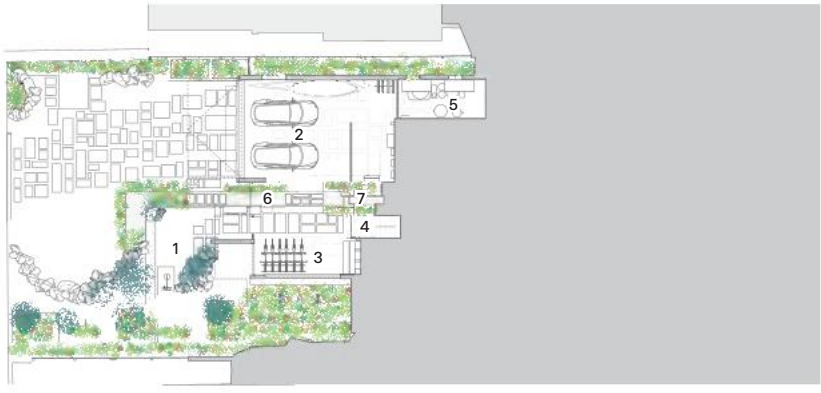
M² Site 697 m² House 227 m² External 975 m²

Design 15 m Build 24 m

Beyond its sustainability credentials, the house is manifestly green. The house is enveloped in terraces, roof terraces, rock gardens, a productive garden, even a bubbling creek. A collaboration between C Plus C and landscape architect Duncan Gibbs was crucial to the concept of a rainforest creek, with inspiration drawn from Sydney's own natural streams and sandstone escarpments. "The idea was to abstract the natural water flow from the escarpments, integrating it into the site," Duncan explains. A series of water features includes ponds at the rear of the site, a natural pool at its centre, and a watercourse in the front garden – all undertaken by Land Forms, which specialises in natural pools, looped ecosystems and landscaping installation. This approach balances aesthetics with ecological benefits, cultivating endangered indigenous plant species and creating habitats for local wildlife, including a wildlife corridor for bandicoots who reside in the neighbouring national park.

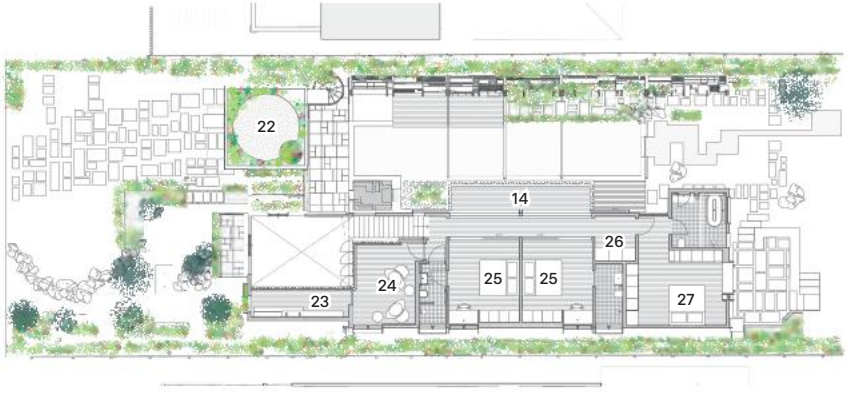
The landscape also acts as an extension of the home. "The house and garden aren't separate," Duncan says. "They co-inhabit the site with the family, creating a dynamic environment that changes with the seasons." The rooftop garden and planting screens further soften the architecture, filtering light and creating intimate outdoor spaces. Over time, plants will envelope the canopy, softening the mass of the home and embedding it further into the landscape.

As its own unique system, Holocene House represents how architecture can embody a living philosophy of sustainability, energy generation and reuse, as well as having a minimal environmental impact. As Clinton observes, "This house was born from a desire to create real-world carbon reductions, and a living environment that feels as natural as it is efficient."

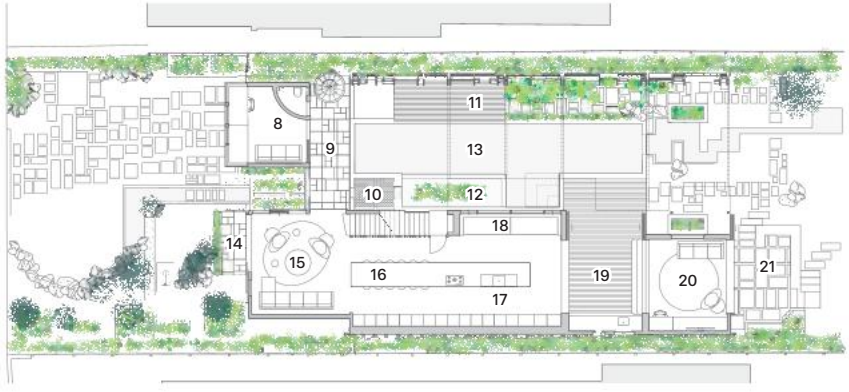


Ground floor 1:400

04



Second floor 1:400



First floor 1:400

1 Outdoor shower
2 Garage
3 Bike storage
4 Entry
5 Plant
6 Waterfall
7 Pond
8 Home office
9 Terrace
10 Cargo net
11 Pool deck
12 Polishing pond
13 Pool
14 Balcony
15 Living
16 Dining
17 Kitchen
18 Day bed
19 Outdoor dining
20 Art room
21 Courtyard
22 Rooftop garden
23 Library
24 Guest room
25 Bedroom
26 Laundry
27 Main bedroom

04 A home office and roof deck occupy the northern corner. Photograph: Renata Dominik.

05 Timber shutters open the guest room to the void above the living space. Artwork: Elsbeth Shaw.

06 Openings throughout the house encourage cross-ventilation for thermal comfort.

07 Stained-glass windows frame a different perspective of Sydney's famed ocean views.

Photographs 05, 07: Renata Dominik; 06: Michael Lassman.

Products

Roofing: Custom Orb from Colorbond in 'Monument'
External walls: Spotted gum in shou sugi ban charred finish; Custom Orb from Colorbond in 'Monument'; Barestone from Cemintel
Internal walls: Adobo vulcanised timber ceilings in Cutek Interior 'Ultra Matt'; birch plywood in Osmo Polyx Oil 'Japan Black' stain; Cemintel Barestone
Windows: Louvres from Breezway; Aneeta sashless windows
Doors: Recycled hardwood frames and rails with clear double-glazed glass and Cemintel Barestone infill
Flooring: Envisia lower-carbon concrete from Boral, burnished; recycled hardwood in Bona Traffic 'Matt'; kiln-dried hardwood stairs in Cutek Interior 'Ultra Matt'
Kitchen: Laminated recycled hardwood benchtop in Orange Oil; joinery in plywood in Osmo Polyx Oil 'Amber' and Paperock; Vola tap in 'Natural Brass'; Miele ovens and dishwasher; Bora cooktop; SubZero integrated fridge-freezer;
Bathroom: Vogue tiles from Classic Ceramics in 'Azzuro,' 'Laguna' and 'Mastice'; Garonne limestone cobbles, tumbled, from Eco Outdoor; Brodware taps and accessories in 'Brushed Brass' and 'Natural Brass'; Studio Bagno basin; Apaiser bathtub and basin in 'Cotton'
Heating and cooling: Haiku fans from Big Ass Fans
External elements: FRP canopy panelling; recycled hardwood walls and ceilings; kiln-dried hardwood deck; Paperock joinery; double-glazed tinted glass in recycled hardwood frames; sandstone steps; desert masonry garden beds

07

Section 1:400

0 5m

Architect and builder
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Project team Clinton Cole, Hayden Co'burn, Nathan Krstevski, Loretta Law, Alex Bonic, Damien Arnup, Tallon Creber Structural engineer ROR Consulting Engineers Landscaping and natural pool builder Land Forms Landscape architect Duncan Gibbs Geotechnical engineer Witt Consulting Plumbing and hydraulic services J. H. Gordon Plumbing Doors and windows Architectural Hardwood Joinery Carpenter (framing, flooring, linings) North South Carpentry Carpenter (joinery and finishes) Red Oak Carpentry Painter Orange Painting Glazier Gerry's Glass Tiler (bathrooms) Northset Tiling Roofer Flash Metal Roofing Photovoltaic consultant Solarpro Interior stylist Jase Sullivan