

The Sunflower Community

Bayswater

Project Summary

Bayswater Early Years Hub has been designed as an amalgamated community building, giving a feeling of connectivity and identity to its users. Providing services such as early years day care, maternal health and a series of supporting services to families, who are traditionally underrepresented in this area.



The project also known as Sunflower, comprises two U shaped building forms orientated to maximise the use of sunlight. The curved floorplan adapts the analogy of a sunflower 'turning towards the sun', balancing the idea of a space with civic presence and comfort in a local community.

The design incorporates economic, social and environmental sustainability initiatives, allowing it to run off grid and have a 100+ year lifecycle. It sets a new benchmark for environmental design in local government and is part of the greater movement to normalise environmentally sustainable design in "everyday buildings".

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Brief

The principles underpinning the design of Bayswater Early Years Hub 'Sunflower' originated from the client vision and through a collaborative approach involving the client, key stakeholders and our practice. The result was a shared vision to create a building which minimises human impact on the environment with an eco-centric design – with the user experience and the surrounding environment being the key drivers for the built space.

Design description

Sunflower brings together early learning spaces, maternal healthcare, allied health, a series of supporting services and community rooms. The facility harmoniously intersects with the existing residential streetscape through the use of a refined material palette, boxed framed windows and a pitched roof. Positioned at the centre of the local community amongst the existing community reserve, a school and a bowling club, Sunflower has created a new civic identity for the area and reinforced social connection.



A major element in the design as consideration to the potential future needs of the community for it to be adaptable to changing requirements. The balance of the program and the principles of proportion and orientation have been achieved by dividing the building into two main forms with linking bridges. The building takes on two U-shaped masses 'turning toward the sun' which are arranged to create a journey through the building that allows for ease of wayfinding, reduced circulation and a functional program with minimal dead space. Sunflower has a focus on tactility, light and the experience of built form. The design is both dynamic and innovative and gives way to delight and joy to all use the facility.

In a fluctuating market, careful monitoring of the project budget was required to enable the project vision to come to fruition. The project team designed to achieve a balance between cost and a high-end architectural outcome to meet the brief.



The application of passive design principles, access to natural light for internal spaces and solar control, reduces reliance on artificial lighting and cooling. Solar arrays, batteries, rainwater harvesting, and other sustainable initiatives form the building as a whole. The project provides Council with economic sustainability with reduced running and maintenance costs and has the ultimate goal of achieving a 100+ year building lifecycle and improved ecology for health and wellbeing. This building has become the flagship project for Knox City Council and setting a new benchmark for environmental design in the local council space, as well as across Victoria and Australia.

The success of this project relied on the coordination of the entire project team to create flexible space illustrating the design vision as well as creating a seamless transition for play and adventure between the interior and exterior areas.

The combination of the client brief and a thoughtful architectural response, results in multiple experiences for the users of the space. It is welcoming, playful, warm and light, providing moments of reflection, moments of laughter, and moments to breathe. It is a centre for learning, for the community and for the children. It is a centre for the future.

Reasons for material selection

The Materials were selected in consideration of their ESD value, durability, lifecycle and end of life recyclability. The durability of materials and ease of maintenance was considered important to reduce the maintenance costs over their life. Consideration was also to materials with low toxicity to minimise.

Materials with recycled content and ability to be fully recycled at end of life were sought for internal finishes to allow for adaptation of space over the life of the building, with natural reclaimed timbers, plasterboard with recycled content, magnesium oxide board, carpet tiles with recycled content, reclaimed bricks, steel structure being the main internal material elements each being able to be reused or recycled at the end of their respective use.

Sustainability Initiatives

Sunflower has set a new ESD benchmark for Knox City Council with positive results leading Council to rewrite their ESD policies to bring them into alignment with the new benchmarks . The project exceeds the NCC/BCA code requirements for energy efficiency with at least double the required R value of insulation used in the project and integrated designed air sealing of the building envelop using Enviroseal Proctorwrap as an internal lining to the light weight wall structures to achieve a maximum 2 m3 per hour per metre squared @ 50 Pa (commercial building) air movement from building out or in. 100% Freshair is delivered to the building internal spaces via air to air heat exchange units to maintain internal air quality and thermal comfort of occupants.

Sustainable initiatives include design with 'structure free' open span for future adaptability/flexibility; air sealed envelope; maximised fresh air with heat recovery, specification of locally sourced and recycled materials; recycling of demolished building; natural and low toxicity materials; recycled materials and with recycled content; solar array; centralised service area; battery storage; rainwater harvesting; native plantings and durable landscape; heat pumps and passive design strategies.

Sustainability is achieved through a reduced environmental impact to operation and maintenance, strengthening social interaction and for a building that is designed to continue to perform for the community and environment. Sunflower shows best practice environmental design can be achieved by local government and is part of the greater movement to normalise environmentally sustainable design (ESD) in "everyday buildings" Continuing to push the boundaries of the typical.

Key design challenges

The main challenge for the project was aiming to accommodate multiple stakeholder requests including the broader community inputs and balancing these with the ESD benchmarks, set budget, and project goals to provide a Community facility which enhances the end user's experience of our built environment and the ecology of our land.

Key Info

Category: Community Building

Project: Bayswater Early Years Hub or 'Sunflower'

Architect: K20 Architecture

Client: Knox City Council

Completion: March 2019

Floor area: 1820sqm

Project address: 41 Phyllis St, Bayswater VIC 3153

Project team: Circon Constructions, Vert Engineering, SDP Consulting, Hansen Partnership, Philip Chun associates, Oganica Engineering
Photography: Peter Bennetts