

Christie Walk, Adelaide

Cooperative approach delivers community-focused eco-village

Snapshot

Location: Adelaide, South Australia.

Size: 2,000m² urban infill site accommodating 27 housing units and communal areas.

Business model: Cooperative project that capitalised on a niche market and received no financial contribution from government.

Financing: The deposit for the purchase of the land was funded by an individual in the cooperative, the remainder was debt financed. Construction was financed by a combination of private capital and an additional loan to the cooperative.

Sustainability: Key components include:

- highly efficient buildings, utilising passive solar design and innovative construction techniques
- solar hot water and communal solar PV system
- stormwater retention and reuse
- on-site food production in communal garden
- promotion of sustainable transport modes
- sustainable materials selection.

Critical success factors:

- The passion and commitment of the cooperative membership manifested in higher risk tolerance and acceptance of 'sustainability premium'.
- An innovative development process was adopted, including the creation of a range of separate entities to perform different roles.

Overview

Christie Walk is a residential infill development located close to the Adelaide CBD. The project was born out of the education and advocacy work of Urban Ecology Australia (UEA), a not-for-profit organisation focused on 'eco-city' development. When UEA failed to influence the sustainability outcomes of a major inner-city development, a passionate group of individuals decided to create their own eco-village to demonstrate what is possible.

The project consists of 27 housing units, including free-standing cottages, townhouses and apartments. It also features a communal garden, laundry, kitchen, meeting room, library and toilets. The site hosts an educational facility, the Centre for Urban Ecology.

A cooperative approach to development was utilised, financed by a combination of debt and personal capital. The success of the development relied heavily on the passion and commitment of the individuals involved. The creation of number of discrete entities was also a key factor in the successful delivery of the project.

The project has addressed environmental sustainability on a variety of fronts. Energy-efficient building design, water efficiency and management, on-site food production, sustainable transport and 'local living' have been delivered while fostering sustainable behaviour through a strong sense of community.

Community-driven demonstration

UEA wanted to demonstrate the potential of infill sustainable development. An ultimately disappointing role in a previous, large-scale, commercially driven redevelopment (Halifax Ecocity Project) motivated a core group within the organisation to consider a smaller, cooperative development. A strong level of public interest in the eco-city concept was revealed through work on other projects, including Halifax, and the group felt that a demonstration project was vital to achieving broader uptake.

The smaller, cooperative approach also allowed the development to be seen as a chance to create a sustainable community as well as sustainable buildings and infrastructure.

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Co-housing

A concept gaining popularity in Germany and the United States, co-housing provides an opportunity for individuals to pool resources to develop medium-density housing, rather than purchasing 'off-the-shelf' housing products. Bypassing a traditional developer allows the groups to build their needs into design, create a sense of community and, for some projects, achieve capital cost savings.

The smaller group of around 15 individuals formed a private housing cooperative to develop the project under an interpretation of the 'co-housing' model (see text inset). The cooperative went about finding and acquiring a 2,000 m² inner-city site in central Adelaide, and established a development process to deliver the village as planned. Favourable market conditions allowed a relatively low price to be secured for the land purchase.

The cooperative members came from a wide variety of backgrounds with various motivations around property ownership, from first home buyers to retirees looking to downsize. All shared a strong commitment to the environmental principles of UEA as well as a desire to live in a cohesive community.

Innovative development process

The cooperative development model meant that the individuals were all financially invested in the project from the early stages. The overall lack of experience in developing such a project, along with the relatively untested development model, meant the group had to innovate in number of ways to deliver the project. A number of entities were created or engaged to manage the development process:

- **Wirranendi:** The private not-for-profit housing cooperative, consisting of resident and non-resident members, was the primary group delivering the development. The group owns the land during construction, with individual properties then sold on a community title.
- **Ecopolis Architects:** A for-profit architectural firm, established by Paul Downton prior to the project being conceived.
- **Ecocity Developments Pty Ltd:** A not-for-profit ethical builder, set up to construct the project (using various subcontractors).

The creation of these independent entities enabled the project to have clearly articulated roles and responsibilities.

The project was designed and built using a range of innovative construction techniques and materials. The cooperative's members were closely involved throughout the development process, at times contributing 'hands-on' to construction. The project also utilised the broader network of UEA and benefited from the input of many volunteers, which, coupled with the direct involvement of future residents during construction, helped to reduce costs during this phase of the project.

Finance, risk and return

The deposit for the site was paid by one member of the cooperative, and a loan secured by the cooperative to purchase the site. This loan was secured through a community investment trust and was later taken over by the Bendigo Bank. This was partially due to the reluctance of other banks to provide finance to the project.

To finance the development, individuals placed their capital into a collective holding trust until construction. Once individual titles were created, funds were released from the trust to finance construction.

The 'community title' subdivision functioned well for the freestanding dwellings, with title created once the concrete slab was poured. However the current form of community title law meant that individual title for apartments would not be created until construction was complete. This meant that finance in the holding trust could not be accessed to fund the construction of the multi-unit buildings, and an additional loan had to be taken by the cooperative to fund up-front construction costs.

The project did not receive any public funding and was not driven by profit motivations. A profit-driven entity would have been exposed to additional risk that the cooperative approach largely mitigated. In the first stages of the project, the cooperative built for its members and so had a guaranteed market for the project, an assurance a commercial developer may not have had. By the third stage, which was developed and sold to external buyers in a more standard fashion, market demand had been established and so risk was minimised.

Ultimately, the project would not have been viable as a purely commercial proposition. Higher costs and risk, combined with the value attached by the cooperative to the importance of environmental and community outcomes, would have been difficult to manage for a commercial developer. Additionally, the cooperative was able to factor in the ongoing cost savings associated with building an energy and water-efficient development when evaluating the investment. A commercial developer would be unlikely to be able to capitalise on these ongoing cost savings.

Sustainability premium

The final housing costs at Christie Walk put the project close to the median Adelaide house price at the time. This noted, the significant additional time invested by the group represents a form of 'sustainability premium'; without this the project would not have come to fruition. Low land costs and low-interest loans secured by the cooperative also helped in keeping the costs down.

Resale values have been strong, which, combined with anecdotal evidence, suggests a market demand for both the sustainability and community aspects of the development.

Learning by doing

Unforeseen issues, (such as the timing of title creation), were encountered by the project throughout all phases. The cooperative accepted it was 'learning by doing' and so persevered regardless of various setbacks. It is unlikely that a commercial developer would have persevered in the same way without compromising the project's sustainability values, and this highlights the importance of the genuine commitment of the cooperative to the project's key principles.

While the pioneering nature of the project, and the subsequent early mover disadvantage, led to various increases in cost, the cooperative now feels that a future project could learn from these experiences and, by doing so, reduce costs significantly. This highlights the potential of this development model to deliver future affordability outcomes in addition to environmental sustainability and community development elements.

Conclusion

The successful delivery of Christie Walk relied heavily on the commitment and passion of the group involved, the support of external organisations and volunteers, and an innovative governance and development model. This noted, the project was conceived in the mid-1990s, and there has been a significant shift in the housing market's approach to sustainability since then, leading to a greater awareness and acceptance of sustainability considerations in residential development. Pioneering projects such as Christie Walk have demonstrated the possibilities for community-driven sustainable precinct development, both in design as well as business model and governance innovation. The lessons of Christie Walk present opportunities for other projects to recreate this approach with greater efficiency and subsequently greater potential value for participants.

Key environmental and social sustainability features

Christie Walk developed its sustainability concept around the idea of communal living. By creating shared spaces such as gardens and meeting rooms, space was used more efficiently in private dwellings, leading to additional environmental benefits. Some of the key sustainability features of the development include:

Energy-efficient design

- The dwellings have a planned lifetime of 100 years rather than 25 years which is the norm in Australia.
- All buildings were designed using passive solar design principles.
- A number of dwellings utilised innovative construction techniques and materials, such as straw-bale construction and aerated concrete.
- No active heating and/or cooling systems were installed, with buildings relying on passive heating, cooling and ventilation.

- Energy costs are up to 50% less than a 'business-as-usual' dwelling.

Energy supply

- Solar hot water systems service all buildings.
- There is a communally owned 5 kW solar photovoltaic (PV) system.

Transport features

- The amount of required car parking was reduced by 50% in agreement with the local council, on the basis of the site's proximity to essential services and public transport. Car parking is located in a centralised location rather than immediately adjacent to individual dwellings.
- The site itself is a car-free zone, fostering walking and cycling within the site and beyond.

Waste reduction and recycling

- Construction, particularly in paving and landscaping, utilised recovered materials from demolished structures on-site.

Water efficiency

- Stormwater from roofs and paved surfaces is collected in two 20,000L underground tanks. This is reused in toilet flushing and landscape irrigation.

Local food

- Despite its density, the development includes a small communal garden. This is important as a social resource as well as producing food on-site.

A sense of community

- The cooperative development model was founded on a desire to create a community, not just a series of buildings. This was achieved through the creation of shared spaces, including a pioneering roof garden, that promote interaction and community cohesion.
- Anecdotal evidence suggests that the sense of community is as important, if not more important, than the sustainability of the development in attracting interest and potential buyers.

For further information:

For more information about SV's Sustainable Precincts program, visit www.resourcesmart.vic.gov.au/precincts

www.urbanecology.org.au

www.ecopolis.com.au/christie.html

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