

Stream: Integrated Water Cycle Management

Abstract: Retrofitting the Suburbs - Applying Whole of Water Cycle Management (WWCM) Strategy into an Apartment Development in Inner Melbourne to Improve Climate Resilience

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ABSTRACT

WestWyck ecovillage occupies the building and grounds of the former Brunswick West Primary School in inner suburban Melbourne. The vision the Westwyck is to create a redevelopment that showcases world's best practice sustainable development guided by certification to the Bioregional One Planet Living international framework.

We have created a showcase of Whole of Water Cycle Management (WWCM) for the site. Our Water Cycle Management strategy aims to reduce water use for the development below the standard Victorian Yarra Valley water benchmark by 75%, and to implement best practice stormwater management using water harvesting, raingardens, and greywater recycling. The site includes building 14 new apartments and adaptive reuse of the old school building creating 5 individual units.

The world's tropical zones are expanding, pushing the subtropical ridge arid climate zone further over Southern Australia. This means that less rainfall can be expected for Southern Australia over time, it also means that when rain does fall, it is likely to be more intense. Given that this is currently taking place, and that climate will continue to move significantly before most of the building occupants' mortgages are paid off (~2045), alternative water strategies are a key priority for forward-thinking residential developments.

By treating greywater and not just harvesting rainwater, we will be drought proofing the development so that the site can thrive in El-Nino and drought years, in addition we will reduce stormwater impacts in high rainfall years. This project will lock in water and environmental performance for this development for many decades to come. We will provide a great case study example for other designers, engineers and developers on how WWCM can be implemented in high density urban re-development sites.