

Legacy Living Lab (L3)

Client Curtin University
Project Legacy Living Lab (L3)
Location Fremantle, Western Australia
Services Full Turnkey Solution



Overview

The L3 project aimed to apply the Circular Economy (CE) principals or reduce, re-use and recycle to the construction industry. The project was designed by 2 Curtin University PhD students and acted as the case study for their research.

The idea to create a CE prototype came about when there were abandoned steel frames that had been manufactured for a project where the principal builder went bankrupt. This left more than 30 steel frames that were due to be recycled, but we managed to use 8 for this project. We designed a building that could be disassembled and reconstructed on a new site, as a way to tackle the issue of waste in the construction industry.

The L3 building was designed as a place for innovation, where the building industry could meet with academia to solve problems facing the construction industry, as a dedicated space to test new products.

Solution

Fleetwood delivered a total of 8 modules (251 sqm) including 5 on the ground floor and 3 on the first floor. The building was designed to incorporate 4 functions within the space: Apartment display, prototyping, commercial and visualisation space. The apartment display space had finishes that would reflect the traditional homes that would be built in the development.

The building features a visualisation space where water and energy data from the host site can be displayed to show the community the peer to peer energy transactions. The prototyping and research space was used by students and companies that needed a work space to transition from start-up phase and were offered a professional place to work from.

Benefits

The site is quite unique as it runs off a communal battery. Each house will charge the battery throughout the day and draw off it during the night, with inputs and exports traded between the residents. The building was designed to serve as a community hub for the three years leading to the completion of the subdivision.

The building attracted the sponsorship of 30 businesses who donated time and materials so it was a collaborative effort to achieve such a high quality of finishes with such a limited budget. Fleetwood, their suppliers and subcontractors were very generous donating design time and products and cash contributions. Working closely with industry partners enabled us to try some new cost saving designs.

