

Fraser's Property Template

# Raising the bar on sustainability at Burwood Brickworks Shopping Centre

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## Raising the bar on sustainability at Burwood Brickworks Shopping Centre

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## Frasers Property Australia (FPA)

- An Australian division of the multi-national Frasers Property Limited.
- We are a **market leader** in **complex mixed-use master planned** developments.
- We have a strong track record, with **145,000+** homes delivered in Australia **since 1924**.
- We are committed to **Community Development**, with dedicated resources to improve our **customer's experience**.
- We are a **global sustainability leader**: our net zero commitments are approved by the Science-Based Targets Initiative.
- We have **assets under management** valued at **A\$2 billion** in Australia.

# Some of our sustainability credentials



Named one of The Australian Financial Review's **Sustainability Leaders** for 2022 and the **winner** of the **Property & Construction** category.



11 Frasers Property communities are certified under the Green Star Communities tool and four have achieved a **6 Star** rating, representing **World Leadership** in sustainability.



We have maintained **the highest GRESB 5-star rating since 2018**. Our sustainability approach underpins our global leadership position



Our commitment to be **net zero carbon** in development and operation by **2028** has been approved by the global Science-Based Targets Initiative.



As at May 2023, the proportion of total green corporate facilities for Frasers Property's Australian platform is an **industry-leading 100 per cent**.



With the support of the Australian Government's ARENA, we are **delivering 51 net zero energy** demand homes at Ed.Square in NSW.





# Project Inception

*“What if every single act of design and construction made the world a better place?”*

Living Building Challenge®

## Design Competition

The project was the outcome of a design competition held together with the Living Future Institute in Australia (LFIA).

The competition was held in 2016 and ideas were requested for a suitable building typology that had not undertaken Living Building Challenge® before.

The Burwood Brickworks Shopping Centre was selected as it was project typology that was inclusive of all and could be enjoyed by the general public.



## Project Details

- Located on Wurundjeri Country
- 13,000sqm shopping centre that formally achieved Living Building Challenge® Petal Certification in April 2021
- The main trade area for the retail centre is in excess of approximately 110,000 people (Source: CommBankIQ)
- Building design is done by NH Architecture in partnership with Russell and George for interior design and Wurundjeri-willam artist Mandy Nicholson for the ceiling mural and façade work
- Shopping centre was opened in December 2019



## Project Details

- Burwood Brickworks is an 18-hectare infill site and previously was home to a Brickworks.
- The community is comprised of 753 homes – which have all sold out.
- 2.5 hectares of parkland and open space.
- The development is approx. 85% complete and due for completion this year (2023)
- The shopping centre offers community facilities such a childcare centre and community room that can be booked by the public



# Green Star Certification

## Green Star design and As Built

6 Star Green Star Design and As Built rated.

Achieved 85.5 points (75 points needed to achieve a 6 Star rating).

Undertaking the Living Building Challenge® provided a lot of synergy between Green Star requirements and Living Building Challenge® requirements and we were able to use a 'cross walk' approach.

The building excelled in the management, energy, material and innovation scoring highest possible points within the Green Star certification.

## Green Star Communities

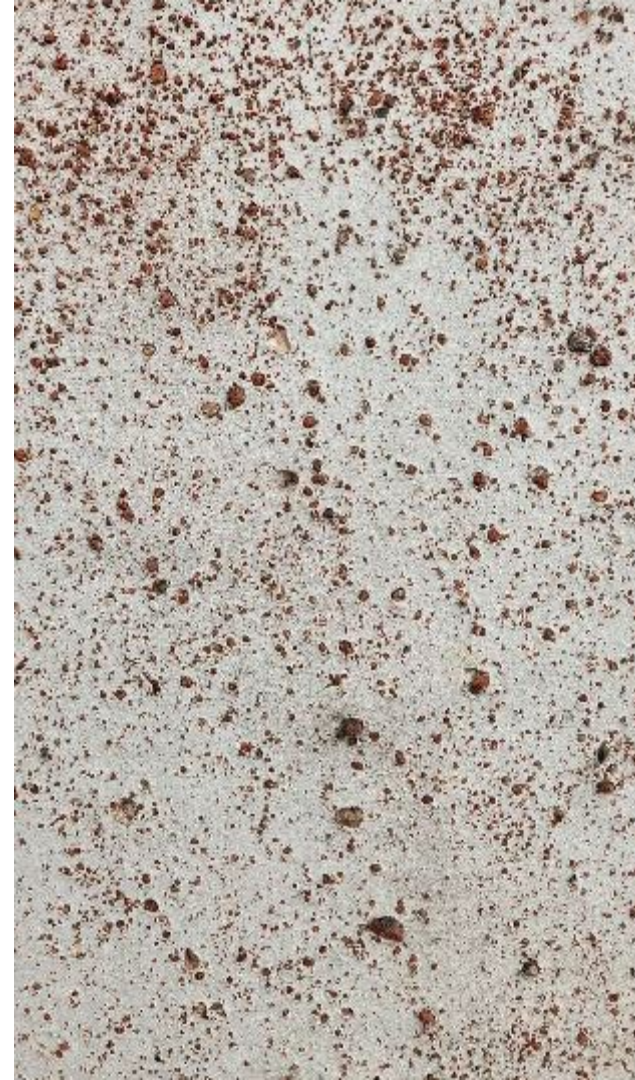
6 Star Green Star Communities rated.

Solar PV Arrays provided on each townhouse and apartment building to service communal areas.

Apartment buildings feature embedded networks operated by Real Utilities to provide 100% carbon neutral energy to residents' homes.

50%+ of homes have a 7 Star energy rating, with the remaining homes all achieving a minimum 6.5 Star NatHERS.

Dedicated Community Development Manager.

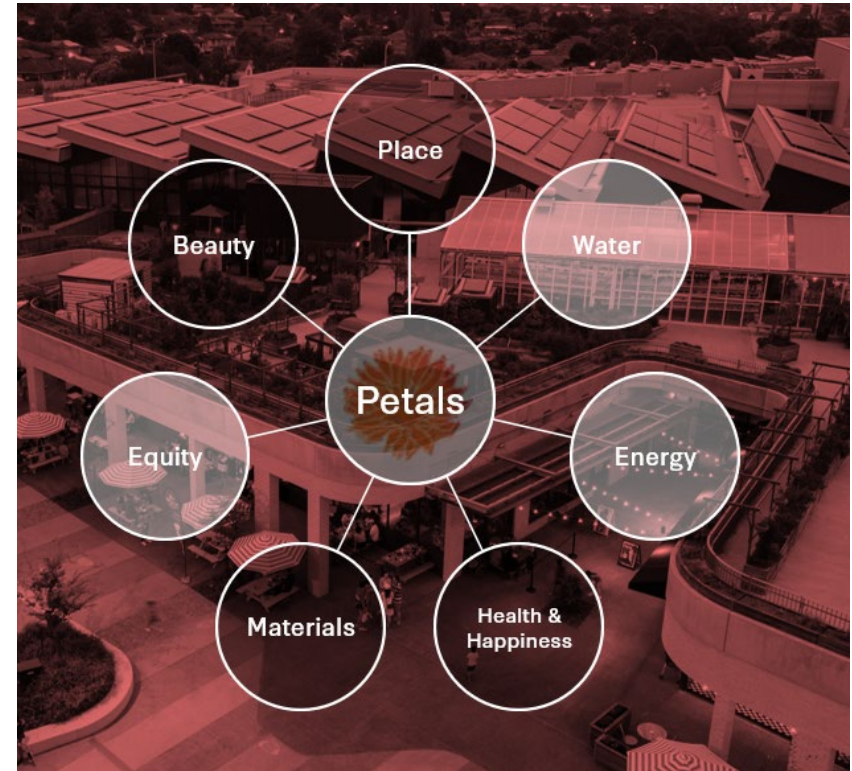




# What does 'Good' Look like?

## Petal Certification

- Burwood Brickworks Shopping Centre achieved *Petal* Certification in 2021 and was the first Retail Centre to do so.
- We achieved the Place, Beauty, Material and Health and Happiness Petals.
- The intent was to cover different aspects of sustainability to help raise the bar for industry and create a learning opportunity for us as an organisation.





# Place Petal

## Restoring a Healthy interrelationship with nature

- A significant area of the centre is dedicated to food-productive landscaping.
- This is achieved through a 2,500 sqm rooftop urban farm, heavily landscaped car park and a North facing pot-plat wall of 260 medium-sized citrus trees
- Bicycle storage facilities provided onsite as well as End of Trip Facilities for staff and public
- Provision electric vehicle charging stations
- FPA also contributed into the Living Future Habitat Exchange, helping purchase and forever protect the 40,000-hectare Lonco Vaca Property in Argentina, important for several species including the Guanaco, fox, condors, puma and the endangered Andean cat.



# Health and Happiness Petal

Creating an environment that optimises physical and psychological health and wellbeing for staff and shoppers

- A combination of windows, louvres, and skylights in the building provide fresh air and daylight to all regularly occupied spaces.
- Solar tubes were installed within 'land-locked' tenancies to allow for access to natural light.
- Incorporating biophilic design: use of natural materials such as timber and cork, access to greenery, fresh air, and natural light.
- Air quality: key initiatives including no smoking, limits on VOCs, environmentally-certified cleaning products and regular air-quality testing





# Materials Petal

## During Design and Construction

- The LBC® prescribes a 'Red List' of ingredients including formaldehyde, bisphenol-A, lead, mercury and PVC.
- All timber used is Forest Stewardship Council (FSC) certified or salvaged.
- Materials were sourced as locally as possible:
  - Over 20% of materials sourced from within 2000km
  - Over 30% of materials sources from within 5000km
  - Over 25% of materials sourced from within 9000km
- Substantial reduction in landfill waste during construction and operation – construction processes diverted an average 99% of building waste from landfill.
- Project also accounted for total embodied carbon through a one-off offset post completion in 2020.
- All materials that was used at the time of completion has been offered out as a public resource in the form of 'Greensheet'.

## In Operation

- Over ten streams of waste are recycled



# Beauty Petal

Beauty + Spirit

Inspiration + Education

- Burwood Brickworks contributes to the community's sense of place through public art.
- A unique ceiling artwork by artist Mandy Nicholson depicting elements of Wurundjeri country, celebrates the existence of Aboriginal culture within an urban context.
- Natural materials, indoor plants and availability natural light all contribute to the sense of beauty.
- The experience is extended beyond visual, with scented entrances that evoke a sense of 'Country' as advised by artist Mandy Nicholson.
- Bird song and sounds of nature are played at the entrances, bathrooms offering visitors a natural ambience.
- Educational material about operation and performance of the centre is shared through tours and "open days", public education programs, and via the website.





# Equity

## Contribution to a more equitable design

- Building design considers a human scale.
- Public realm is accessible to everyone, and step-free access to all public areas of the building.
- Project does not block access to, nor diminish the quality of fresh air, sunlight, and natural waterways for any adjacent developments.
- Two organisations who were part of the project team (Cundall and Viridis) have obtained the JUST label from Living Building Challenge® that promotes social transparency.





# Energy

## Energy Efficiency Initiatives

- Rooftop solar panels (1MW) contribute towards the energy needs of the building together with 100% renewable energy purchased through our in-house retailer Real Utilities.
- Project avoids combustion for non-essential uses and is a part of an embedded energy network.
- A central HVAC system is installed to eliminate any impacts of installation of inefficient supplementary systems in tenant fitouts.
- All appliance, fittings were vetted to be high-efficiency and the major supermarket was requested to install doors on their refrigerators – this has since become a standard design on their supermarket chain.

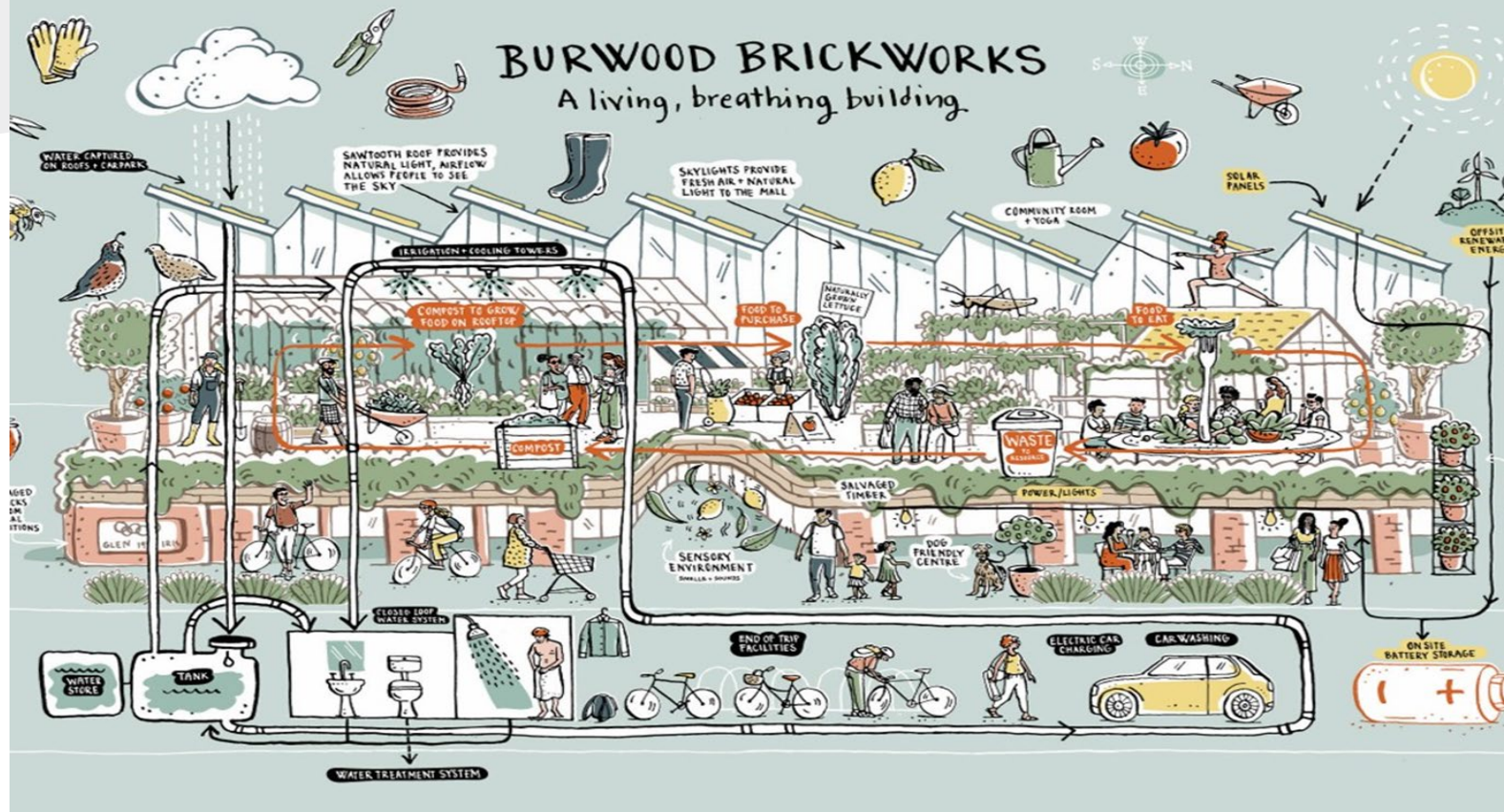


# Water

## Water Efficiency Initiatives

- Water tank under the at-grade car park to capture rainwater to service non-potable water use
- Stormwater is managed on site, to eliminate water pollution to adjoining neighbours
- Natural hydrological conditions has been carefully studied and considered in the landscaping and stormwater design of the centre
- All water fittings and fixtures are high efficiency to minimize water usage

# At a glance





# Challenges

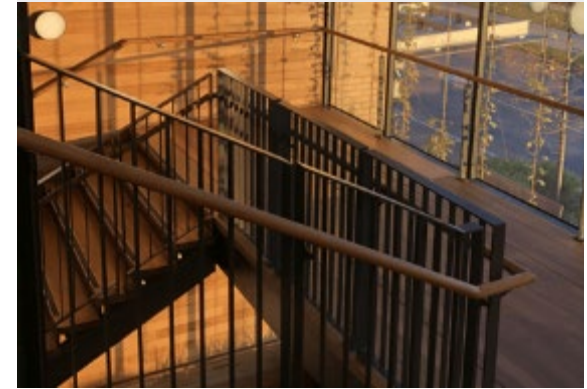
## What were aspects that made certification difficult?

- Several petal requirements extended to tenants (ex: material requirements) at the time of completion.
- Larger tenants (ex: supermarkets) had standard design briefs which needed to be amended to meet requirements. Smaller tenants needed additional support on how to meet requirements.



- Tenant market was not quite ready for some requirements such as 'gas free cooking' for which exemptions had to be made.
- Certain Living Building Challenge® requirements were difficult to meet because of market constraints and product availability at the time (tapware that met the red list requirements).

- Some initiatives that were implemented were not practical because of local regulations (ex: grey and blackwater recycling).
- As it was not attempted before there was a lot of 'on the project' learning and as a result was very much a labour of love.



# Tenant and Community Engagement

## Involving the community in the legacy

- A special tenant fitout guide was created to encourage tenant take-up of high sustainability aspirations of the centre
- Our main supermarket tenant amended their standard design brief and implemented some of these requirements as standard design.



Free garden workshops

Find out more >



Free weekly mall walkers group

Find out more >

- Feedback suggests that the greenspace and biophilia offered within the shopping centre makes it an attractive space to spend time in.
- There is a dedicated community development team and events are held regularly to help build cohesion and connections with local residents.

- Regular community groups such as the 'mall walkers group' build on the retail centre being a thriving social hub.

- Ongoing commitment to providing tours, opening the building to industry and sharing the knowledge of the design and operational journey.

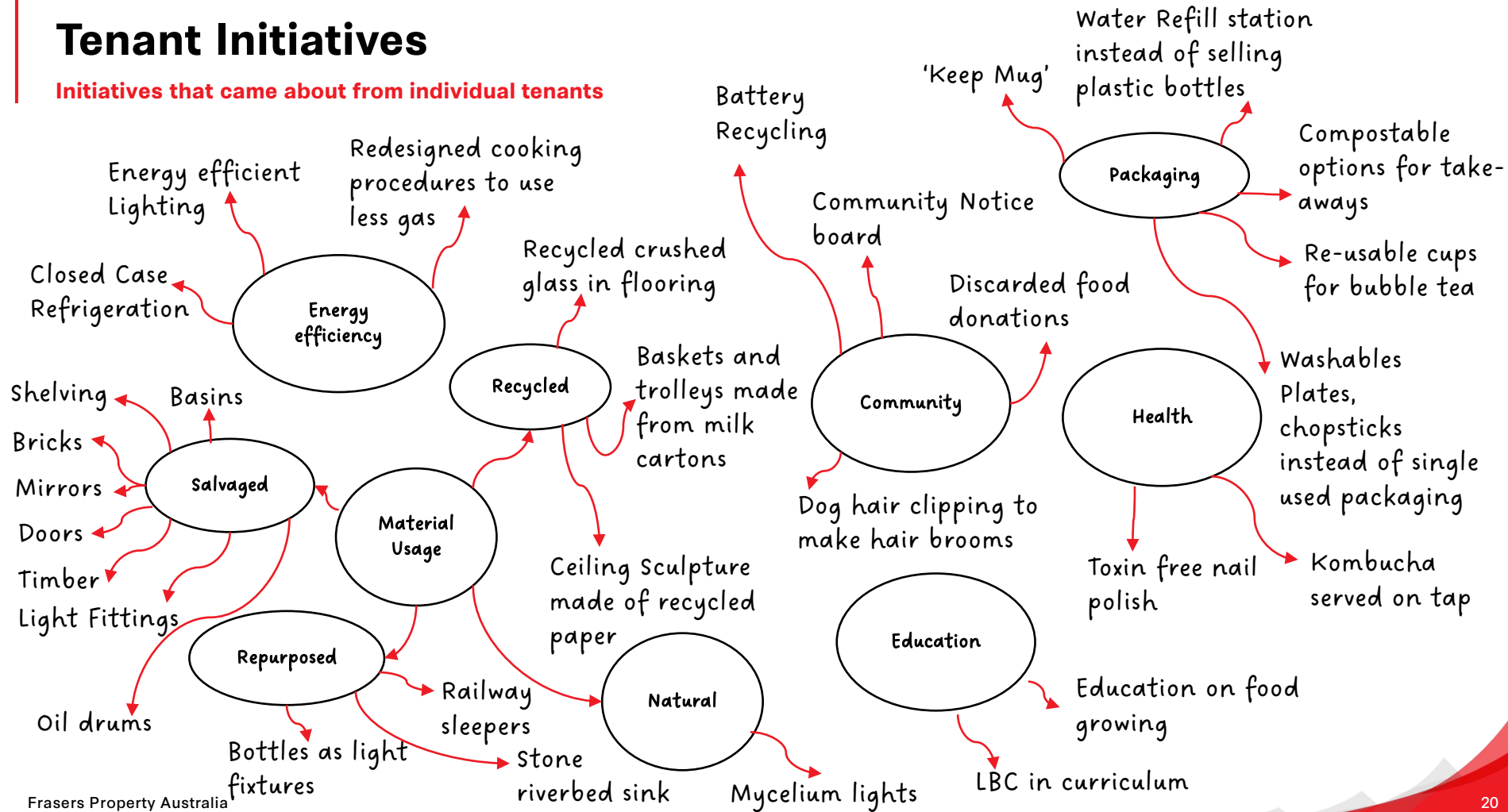


Free storytime every month

Find out more >

# Tenant Initiatives

## Initiatives that came about from individual tenants







# Conclusion

In undertaking a 'pilot project' and something that has never been attempted before it demonstrates what is possible but also where the gaps lie within the industry, market and in our own thinking.

Burwood Brickworks Shopping Centre may have been the first of its kind in many aspects, however the final intent is for it to not be the last.

It is a testament to what can be achieved when the limits of business as usual are questioned and is a depository of 'lessons learnt' so that others can follow suit and improve upon what has been done.



## Better together: thank you to our partners

- Hacer Group (Principal Contractor – Retail & apartments)
- Burbank Urban (Principal contractor – Medium Density)
- NH Architecture (Project Architect – Retail)
- Hayball (Project Architect & interiors – Apartments 1-4)
- Rothelowman (Project Architect & Interiors – Apartments 5-6)
- DKO (Project Architect & Interiors – Medium Density)
- ADP (Services Engineers)
- Tract (Town Planning)
- MDG (Landscape – Residential & POS)
- Group GSA (Landscape – Retail)
- Spencer Group (Structural)
- Reeds (Civil design & Stormwater strategy)
- Rokon (Principal contractor – Civil Works)
- CJ Arms (Hydraulic)
- Aquacell (MABR)
- Cundall (Green Star)
- Aquacell (MABR)
- Cundall (Green Star – Retail)
- Stantec (Green Star – Residential & Estate)
- Delta Q (Independent Certifier)
- Mandy Nicholson (Artist)
- Balarinji (Cultural Heritage)
- Russell & George (Interiors – Retail)
- Electrolight (Lighting)
- Right Angle Studio (Creative Consultant)
- Strategic Spaces (Signage)
- Wise McBaron (Communications)
- Savi Communications (Branding)



# Thank you

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<https://www.frasersproperty.com.au/Living-Building-Challenge/Home#Story>