



# One Planet Action Plan Evermore Apartments Annual Review

[28-JAN-2019]



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## 2. Message from Director

Yolk Property Group are proud of the success achieved at Evermore Apartments, being the first built form project in Western Australia to achieve One Planet Living recognition in 2017.

Designed around One Planet Living's 10 key principles, Evermore apartments have been designed and constructed to allow residents to easily transition into a lifestyle based around One Planet Living guidelines. Evermore apartments not only allow residents to easily assimilate into a lifestyle that promotes living within the finite resources of the planet but aligns them as part of a community striving to achieve the same common goal.

Evermore Apartments are set to become a benchmark by which other developments and communities look to when measuring their success.

Yolk Property Group continues to strive for ways to better achieve the goal of creating more sustainable communities, building on the lessons learnt at Evermore Apartments, rolling out successes within the project across other land and built form projects.

### 3. Message from Bioregional

#### **Suzette Jackson, One Planet Lead Australia Bioregional Australia**

Evermore WGV is an ambitious project that seeks to drive positive change for the resident community.

Evermore WGV addresses all One Planet Living 10 Principles, exceeding best practice against numerous principles and performing significantly better than standard practice across many principles.

The design and construction of the residential apartments provide many benefits in terms of low energy demand, shared onsite communal facilities for transport, energy generation, local food, sharing equipment and socialising. The design and construction phase utilised regional organisations and local trades providing economic benefit to the local economy.

The communal design contains shared garden, storage and outdoor dining facilities as well as transport infrastructure that challenges mainstream approaches to transport modes with car share, electric vehicle infrastructure and bicycle facilities.

The team have created a community focused development and will deliver One Planet information sessions for new residents along with a quarterly survey.

Renewable energy onsite, along with battery storage and renewable energy purchase through the council of residents will enable residents to live a low carbon lifestyle, where healthy food is sourced locally, and consumption reduced.

Evermore have worked with key regional stakeholders such as LandCorp, City of Fremantle, and Curtin University to innovate, integrate research and pursue the One Planet Living goals. I

congratulate the team for their achievements to date and encourage them to continue to monitor the performance in operation.

The first implementation of the One Planet Living framework by Yolk Property Group has seen them challenge the status quo and develop leadership in this sector. I look forward to Yolk Property Group's next One Planet Living development, driving positive change and delivering improved impacts for community.

I recommend Evermore for recognition as a Global Leader, for consideration by Bioregional.

## **Ben Gill, Bioregional International Technical Manager**

Evermore is part of the WGV development, the first development in Western Australia to be recognised as a Global Leader in One Planet Living. It was therefore expected that Evermore would also meet the standards and ambitions of the original WGV One Planet Acton Plan. While Evermore's initial OPAP did commit to meeting these targets, it was vague in some areas leaving some doubt over delivery.

This Annual Review demonstrates that Evermore has truly lived up to the aspirations at WGV, by creating a low car community, with a community focus and almost 100% powered by renewable energy. The commitment they have shown in engaging with their suppliers is also impressive – it is fantastic to see a contractor producing a One Planet Living report on completion.

Furthermore, Yolk have demonstrated their desire to influence the planning system and wider industry to ensure that new communities in Perth make sustainable living easy affordable and attractive.

On subsequent developments we'd recommend a more holistic approach to sustainable materials – the use of GGBS is excellent, but other strategies can be used to further minimise the quantities of cement required. Additionally, in such a water-stressed area, water reuse could be incorporated, and affordability addressed directly. Though it is important to note that the WGV development as a whole has a highly effective strategy on both these projects.

On balance the achievements at Evermore set it apart as a Global Leader in One Planet Living – and we look forward to learning more about the operational performance in the subsequent review to be undertaken in partnership with the residents.

## 4. Yolk Property Group

Yolk Property Group is Western Australia's sustainable development expert. The company continues to break new ground in green development through use of state of art technology, influencing all future sustainable developments. Yolk is pioneering the use of shared solar and photovoltaics battery systems in strata residential developments. Working with other industry partners including Curtin University, Landcorp, CSIRO, CRC and Arena, Yolk Property Group continues to push the boundaries and implement industry firsts into the companies' developments. Whether utilising alternative energy technologies, incorporating green initiatives or minimising negative environmental impacts, Yolk Property Group is committed to sustainable development.

## 5. Introduction to Evermore Apartments

Yolk Property Group's Evermore project is situated within WGV estate, a highly sustainable 2.13ha residential estate, located at the former Kim Beazley School in White Gum Valley, 3 kilometres from Fremantle. Through Evermore, Yolk Property Group aimed to demonstrate leadership in design, innovation and sustainability, with the development an opportunity to prove the demand in the marketplace for highly-sustainable apartments trialling new technology and environmental initiatives.

The intention with Evermore was to deliver the most sustainable apartment development in Western Australia and it has been recognised for achieving a number of firsts. It is the first apartment development for sale in Australia to utilise shared solar and battery technology in a strata-setting, with the project playing a role in a pilot program at WGV estate led by Curtin University examining how to increase the uptake of solar photovoltaics in strata residential developments. Research from the project has enabled the development of a governance framework and micro-grid system for solar PV and batteries in strata residential developments, a first for Australia. The project aims to go above and beyond standard sustainability practices currently employed in the industry, creating apartments others will use as a benchmark. Every aspect of the development is shaped by Yolk Property Group's goal to make these apartments as sustainable and close to zero-carbon as possible. Bioregional's One Planet Living is an international sustainability initiative based on the idea of living within the limits of the planet's natural resources and the One Planet Living framework for sustainability guided every aspect of development, ensuring the focus was never solely on the end-product, but the way in which residents would live and interact in the apartments after building was complete. Evermore was recognised by the Bioregional

Australia Foundation as a One Planet Community and national leader for a commitment to sustainable living – making it the first apartment development in Western Australia to receive this honour. Yolk Property Group aimed to demonstrate sustainability and affordability could be delivered hand in hand, with a focus on minimising ongoing costs. The overall net effect of the energy efficiency initiatives at Evermore will result in an expected 30 percent reduction in running costs and a considerable reduction in carbon emissions. It has been forecast the solar PV and battery technology will produce approximately 80 percent of the apartments' power and with so much power off the grid, residents are less affected by fluctuations in energy prices. Realtime measurement and recording of water and power consumption will further give residents greater control over their energy usage and ensure maximum energy efficiency. Ongoing affordability was a key focus from project inception. Ongoing strata fees are anticipated to be circa \$1,000 per unit, considerably less than similar sized projects due to an effective reduction in ongoing running costs through: the removal of the need for common power; energy efficient design; real-time measurement and recording of power and water consumption; and a reduction in water use due to the community bore. Residents can also take advantage of communal bicycles and a WGV estate communal car with a free 1-year membership to every resident of Evermore. Yolk Property Group's Evermore development offers apartment living where it is easy, attractive and affordable for a resident to lead a sustainable lifestyle, highlighting that lifestyle, quality, sustainability and affordability can be delivered side by side



Figure 1: Evermore Apartments, WGV

## 6. Awards and Recognition

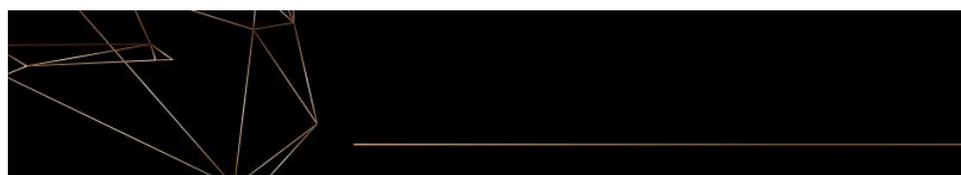
Throughout the project lifecycle, Evermore apartments have attracted significant local, interstate and international interest. Numerous PHD students (through CUSP) are utilising data obtained from Evermore apartments and residents to complete their thesis, industry partners look to Evermore for guidance and the industry as a whole recognises the significant achievements of the development. Several highlights are outlined below.

### 6.1. UDIA AWARDS

Yolk Property Group proudly entered Evermore apartments in the prestigious UDIA awards for Excellence 2018, taking out the award for affordability and a finalist in the sustainability category, recognising the significant achievements the project team delivered across both affordability and sustainability.



Figure 2: YPG Team - UDIA Awards



#### AFFORDABLE DEVELOPMENT AWARD

# WINNER

EVERMORE APARTMENTS - WGV  
BY YOLK PROPERTY GROUP

#### SPONSOR



Government of Western Australia  
Department of Communities

#### About the Project

Yolk Property Group's intention with Evermore was to deliver Western Australia's greenest apartment development. It was the first apartment development for sale in Australia to utilise shared solar and battery technology in a strata-setting and was the first apartment development in Western Australia to be recognised by the Bioregional Australia Foundation as a One Planet Community and national leader for a commitment to sustainable living.

Evermore aims to go above and beyond the standard sustainability practices currently employed in the industry, creating apartments other developers will use as a benchmark.

Through Evermore, Yolk Property Group has demonstrated that sustainability and affordability can be delivered hand in hand, minimising carbon footprints and ongoing running-costs. Evermore is an innovative development that makes it easy, attractive and affordable for residents to lead sustainable lifestyles.

#### Judges' Comments

Demonstrating passion and leadership in design, innovation and sustainability, Evermore Apartments are an example of simple but well executed design that offers a range of affordable products, in a sought-after location for service and essential workers, with half being one-bedroom configuration.

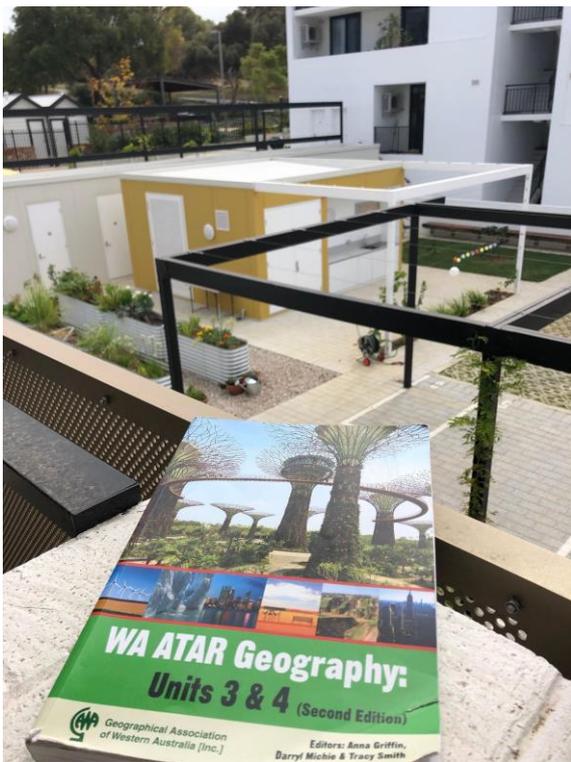
Affordability was a key focus from the outset, including minimising ongoing costs through cross ventilation design, the installation of solar and battery storage systems and innovative governance systems to allow apartment owners to sell electricity to each other, has resulted in an impressive 80% reduction in energy consumption.

Affordability has certainly not come at the expense of quality or amenity, with the central courtyard providing off-street parking and a welcoming place for residents to meet and engage.



Figure 3: UDIA Awards for excellence - Affordability - Winner - Evermore Apartments

## 6.2. Year 12 Geography



The project team were excited to hear that Evermore apartments have been utilised as a case study within some Year 12 geography classes in Western Australia. To quote Andrew Graham, Project Director at Yolk Property Group:

*“Over the school holiday period we were really proud to hear that Evermore apartments were used as a great example of sustainable development in some Year 12 Geography classes within Western Australia. Pushing the boundaries in development leads to examples for the next generation to follow and become the norm. Between us all we can make a difference to future generations so as to continue to make Australia a great place”*

## 6.3. BCPG Thailand

Lessons learnt during the development of Evermore apartments are being utilised by project partner Powerledger across various other projects within their portfolio. Management of BCPG Thailand were taken on a personal tour of Evermore apartments, with a particular focus on the batteries, solar and trading technology during a visit to Perth in late 2018.



Figure 4: PowerLedger Team, BCPG Management and Evermore Residents

## 6.4. Synergy

Evermore apartments electric car charger was installed and commissioned by E-Station, utilising their E-Charge network technology, providing Evermore residents the option of maintaining the charging station as a closed or open network. Synergy employee's electric share car was the first to be charged utilising the system.



Figure 5: Synergy Commissions Evermore's Electric Car Charger

## 6.5. Today Tonight



Figure 6: YPG Director Tao Bourton outlining Evermore features

Evermore Apartments, and project partner PowerLedger, were featured on Channel Sevens Today Tonight in late 2018. Yolk Property Group Director Tao Bourton was interviewed, outlining the features of Evermore apartments and the benefits to residents of the industry first power solution.

## 7. One Planet Living

To assist in creating a sustainable future, the One Planet Living framework proposes 10 guiding principles of sustainability as a framework. The Evermore Apartments have been developed as a One Planet Community, based on the ten principles and supported by the actions identified in the Evermore Apartment - One Planet Action Plan. The 10 One Planet Living Principles are:

 Health and happiness	Encouraging active, social, meaningful lives to promote good health and wellbeing
 Equity and local economy	Creating safe, equitable places to live and work which support local prosperity and international fair trade
 Culture and community	Nurturing local identity and heritage, empowering communities and promoting a culture of sustainable living
 Land and nature	Protecting and restoring land for the benefit of people and wildlife
 Sustainable water	Using water efficiently, protecting local water resources and reducing flooding and drought
 Local and sustainable food	Promoting sustainable humane farming and healthy diets high in local, seasonal organic food and vegetable protein
 Travel and transport	Reducing the need to travel, encouraging walking, cycling and low carbon transport
 Materials and products	Using materials from sustainable sources and promoting products which help people reduce consumption
 Zero waste	Reducing consumption, reusing and recycling to achieve zero waste and zero pollution
 Zero carbon energy	Making buildings and manufacturing energy efficient and supplying all energy with renewables

## 8. Summary of Progress

Evermore apartments commenced construction in mid-August 2017 and practical completion was achieved on the 7<sup>th</sup> August 2018. Settlements commenced one month later, and residents began moving into the apartments from the middle of September 2018.

Residents were quick to take ownership of their new homes, with individual apartments handed over to residents throughout September and October of 2018 and the management of the complex handed over to the strata company in September 2018. The first EGM was held at Sullivan’s hall (adjacent to Evermore apartments) on the 23<sup>rd</sup> of January 2019 and the Council of Owners was formed with 7 members (the maximum number permitted).

Significant progress has been made during the construction phase of the apartments with 9 out of 10 principles on track to reach 2020 targets.

Achieving Zero Waste targets has been identified as having overly optimistic targets, which have been revised accordingly. Table 1 provides a summary of progress made to date, detailed progress is outlined in subsequent sections.

One Planet Principle	2020 Outcome	Progress activities
Health and happiness	To Promote a healthy living environment.	Low VOC paints, sealants etc used throughout building during construction; Healthy living materials used throughout construction; Highly sustainable and/or recycled flooring options with Low VOC measurements that exceeded targets. Landscaping completed including over 50% native species, 22 fruit trees, rosemary hedging and communal vegetable planters; Community pod installed.
	To increase or support high levels of physical, social, mental, and emotional health.	Facilities installed to promote active lifestyle amongst residents (community hub, bikes, vegetable gardens etc); Fair work conditions promoted throughout construction;
Equity and local economy	To promote diversity and equality of opportunity across all abilities, gender, race, age, and sexual orientation	17% of apartments are BCA accessible; Promoted throughout construction with 35 (construction) apprentices employed and a female contract administrator appointed;

	To create a vibrant and resilient economy where a significant proportion of money is spent locally	All subcontractors engaged were local (Perth) tradesmen; 35 construction apprentices employed onsite.
	Encourage residents to engage in fair trade and local economy programmes	100% of construction materials sourced locally; Priority given to subcontractors utilising locally produced materials (EG aluminium frames); OPL handover packs populated for residents.
Culture and community	To encourage active citizenship	Ribbon cutting ceremony held with various stakeholders, Mayor of Fremantle cut ribbon;
	To enhance local culture, heritage, and sense of place	15 neighbours introduced at “meet the neighbours’ event” held at adjacent park; Strata EGM held at Sullivan’s hall (with over 90% of residents in attendance), Council of Owners elected with maximum number of members; Community garden committee established.
	To nurture a new culture of sustainability	Landgate waste reduction event attended by construction and development team; Briefing seminar scheduled for Solar and Water system in early 2019 (to be held at Sullivan’s hall); OPL handover packs provided to residents and Strata Manager.
Land and nature	To ensure a positive contribution to local Biodiversity	Onsite landscaping completed with a total 29 native trees across a range of species; 61% of remaining landscaping is native species with 16 different varieties.
	To maximise the synergies between agriculture, forestry, biodiversity, and carbon storage	22 fruit trees planted (4 variants); 8 Community vegetable planters installed; Rosemary utilised for hedging.
Sustainable water	To reduce water consumption in the building	Water saving devices installed throughout; Fortnightly tracking of water usage during construction;
	To use water from non-potable water supply	Community bore connected to landscaping, ensuring that landscaping is watered from non-potable water source;

		Construction cement utilised 100% recycled (non-potable water); Construction cement utilised 100% recycled water (non-potable).
	To reduce water consumption for irrigation	Sub surface waterwise drip irrigation installed and connected to non-potable water supply.
	To contribute to sustainable water management and flood risk mitigation in the surrounding area	100% of stormwater is captured onsite through various initiatives, in particular permeable paving used throughout complex.
Local and sustainable food	Access to food growing space	22 fruit trees planted (4 variants); 8 planter boxes for communal herb / vegetable garden installed; Communal vegetable and herb planters have been planted out by residents / gardening committee.
	Edible landscaping	30% of landscaping planted was edible species; Additional fruit trees have been planted by the gardening committee; Additional herbs and vegetables planted throughout landscaping by gardening committee.
	Encourage sustainable and healthy purchasing habits	Healthy eating posters throughout lunch rooms; No food truck permitted onsite throughout construction; Healthy eating included in on-site induction;
Travel and transport	Enable a sustainable transport carbon footprint	Electric car charging station installed; Access to electric car share platform secured with free access to residents for first year; Contractors encouraged to car pool, utilise public transport and cycle to site; Yolk Property Group and Harris Architects either car pooled to site or cycled; Materials sourced locally to reduce transport emissions.

	Reduced private car ownership	Two apartments sold without car bays (scooter bay only); Two communal bicycles provided to residents.
Materials and products	To reduce the embodied energy of construction materials.	Architects specified low embodied materials recommended by CUSP.
	To promote materials and products that are non-toxic to humans or wildlife at any stage in their lifecycle, from raw material through to manufacturing, use and end-of-life.	Positive products utilised throughout the project with the only exception being PVC as no available alternative. Exceeded Portland Cement reduction target.
	To promote local economy and to reduce the transportation impacts of products.	All construction materials were sourced locally (Western Australia), Aluminium frames were not available locally, so a local manufacturer was engaged to fabricate them.
Zero waste	To maximise upcycling, re-use, and recycling	Onsite recycling maximised, waste and recycling bins provided in lunch room; 80% of construction waste was recycled (separate waste recycling contract signed with Cleanaway); Unused products and offcuts transported to local reuse facility for recycling/repurpose (reducing carbon emissions associated with recycling).
	To reduce the proportion of the construction waste which is sent to Landfill	80% of construction waste has been recycled (diverted from landfill) through specific contract with Cleanaway).
	To aim for zero waste to landfill	Apartments are currently unoccupied, construction waste sent to landfill was reduced to 20% (compared to current industry standard of 0%).
Zero carbon energy	To encourage the use of energy efficient appliances and domestic hot water	31 fans installed across 24 apartments; Energy efficient appliances installed throughout apartments.
	To encourage buildings that have energy efficient façade	Average NATHERS Rating of 6.2 (high was 7.6 and low was 5), against an average target of 6.0.

	To use energy efficient heating and cooling systems	<p>Apartments designed to provide cross ventilation and north facing aspect to 100% of apartments;</p> <p>Air Conditioning was offered as an option, fans were encouraged as an alternate (with 31 being installed in total);</p> <p>Energy efficient (reverse cycle) systems installed where selected as an option.</p>
	To maximise onsite renewable energy production and use	<p>54 kw hr solar array installed;</p> <p>Solar array forecast to produce 75+% of residents power requirements (excess energy is feed back into the grid);</p> <p>150 kw hr battery storage system installed (previously planned 120 kw hr);</p> <p>Battery and solar system forecast to supply up to 50% of residents total energy requirements p.a.;</p>
	To use 100% renewable energy with no carbon emissions	<p>Estimated solar energy production equal to 75% of residents' needs, surplus green energy will be feed back into the grid;</p> <p>All energy drawn from the grid produced from 100% renewable sources with contract signed with Cleantech Energy;</p> <p>Evermore apartments energy requirements are therefore 100% renewable.</p>

Table 1: Summary of Key Targets

KEY:	Complete	On Track	At Risk
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## 8.1. Plans for 2019

Yolk Property Group have established the Evermore Apartments OPL Action plan and built the foundations of a sustainable community which residents will be proud to call home. Strata and resident handover manuals were propagated to facilitate the handover of the complex and its facilities ensuring they are maintained and achieve best use. Yolk Property Group have made every effort to provide a framework for residents to participate in a One Planet Living community, however it is ultimately up to the residents, through the council of owners to commit to living a One Planet Lifestyle and maintaining accreditation. With the formation of the council of owners, Yolk Property Group will conduct a One Planet Living consultation and handover with the newly formed council of owners in early 2019.

## 9. Evermore Apartments One Planet Action Plan

Evermore apartments One Planet Action plan was developed in 2017 with a goal of creating a community that will be easy, attractive, and affordable for a resident to lead a One Planet lifestyle, living within their fair share of our one planet's resources.

This first annual review largely focuses on the construction and handover phase of the development, highlighting the key initiatives that have been put in place to provide residents the capacity to live a One Planet Living lifestyle. Occupancy of the apartments commenced in September 2018 and is now at 85% occupancy.

Key successes during the construction phase of the development include:

- Upgrading the Battery storage system from 120 kw hrs to 150 kw hr's;
- Female contracts administrator appointed (Anna);
- Over 35 apprentices inducted to site;
- Onsite healthy eating material displayed in lunch room, facilities provided to allow for reheating of healthy meal alternatives, no food truck permitted onsite;
- 100% of materials procured from local suppliers with an emphasis on sourcing locally manufactured materials;
- No trees removed from site, professional arborist engaged to prune tree on Cower Mews ensuring no long-term damage;
- 100% of trades inducted onsite completed OPL induction;
- Cement wash bags utilised onsite;
- All wood sourced from renewable sources;
- Car-pooling and public transport utilised;
- Several contractors walked/cycled to site.

While the implementation of the One Planet Action plan has been largely successful, the development team have experienced some set-backs, including:

- The inability to source 100% green energy during the construction phase (not available on a temporary power supply);
- 100% recycling targets were overly optimistic as no allowance was made for cross contamination of waste products. Recent changes within the recycling industry also added unexpected challenges. Jaxon Construction achieved a rate of 80%, this still represents a significant achievement off the identified base of 0% (current industry standard).

## 10. Review of One Planet Action Plan

This section reviews the progress against the targets set out in the 2017 One Planet Action Plan.

Some targets have been revised and reasoning has been provided.

Green	Substantially or entirely completed, or a high degree of certainty over deliverability
Yellow	On track for a long-term target
Red	Substantially incomplete, behind schedule or doubt over delivery

## 10.1. Health and happiness

Encouraging active, sociable, meaningful lives to promote good health and wellbeing.



	2020 outcome	Indicator	Target	Performance
HH1	To Promote a healthy living environment	VOC Limits (g/l)	< 16g/l	Low VOC paints, sealants etc used throughout building; Two flooring options provided to residents, recycled concrete and natural cork. Both options substantially exceeded VOC targets.
HH2	To increase or support high levels of physical, social, mental, and emotional health	% of residents exercising at least twice a week	80%	Communal garden beds installed; Communal bikes installed (including bike repair station); Communication mediums established.

### Key Activities 2018

Low VOC paints, sealants and flooring have been used throughout the construction process with average VOC limits below the 16g/l target. During construction, while the building remained unoccupied, monitoring of resident exercise has not been able to be carried out, however the following initiatives have been put in place to encourage healthy living and exercise by residents:

- Bike racks, bike repair station and community bikes;
- Communal vegetable garden beds and fruit trees;
- Onsite Community notice board for busy bees, local Yoga classes etc;
- Private Facebook page established for residents to communicate activities and join local community clubs etc.

During construction of the apartments healthy eating has been promoted onsite with no food trucks permitted onsite and One Planet Living inductions conducted with all sub-contractors.

### Plans for 2019

Occupancy of the apartments will commence during late 2018 and the complex will be handed over to the strata company and council of owners in early 2019. Once this occurs the strata company will ensure that any maintenance works are carried out utilising low VOC products (strata handover will include specification information). The council of owners will conduct quarterly surveys to track resident participation in weekly exercise.

## 10.2. Equity and local economy

Creating safe, equitable places to live and work which support local prosperity and international fair trade.



	2020 outcome	Indicator	Target	Performance
EE1	To promote diversity and equality of opportunity across all abilities, gender, race, age, and sexual orientation	Houses with accessible features	10%	Complete – 17% of apartments are accessible (as per BCA requirements).
EE2	To create a vibrant and resilient economy where a significant proportion of money is spent locally	People shopping locally	20%	Target was exceeded during construction with 100% of contractors engaged by the builder being local (Perth based) contractors.
EE3	Encourage residents to engage in fair trade and local economy programmes	% of residents considering this in purchase decisions	95%	On track – 100% of supplies has been sourced locally. Handover manual includes section about shopping locally.

### Key Activities 2018

Evermore apartments aimed to create a diverse community, which people of all walks of life could call home, with a mix of one, two and three-bedroom apartments (17% of which are Building Code of Australia accessible apartments) a vibrant and diverse community has been established that will complement the broader WGV estate.

During construction, 100% of building products, as well as 100% of trades were sourced locally by Jaxon construction. Jaxon also engaged 35 apprentices, representing 7% of the workforce and appointed a female contract administrator to the project.

### Plans for 2019

Evermore apartments offer residents access to numerous local markets and businesses, the handover pack will include details of local businesses as well as the importance of shopping locally and sourcing fair trade products. Council of owners will conduct quarterly surveys relating to the percentage of goods being sourced locally.

### 10.3. Culture and community

Nurturing local identity and heritage, empowering communities, and promoting a culture of sustainable living



	2020 outcome	Indicator	Target	Performance
CC1	To encourage active citizenship	Involvement in local community events	3 p.a.	Ribbon cutting ceremony held with various stakeholders, Mayor of Fremantle cut ribbon;
CC2	To enhance local culture, heritage, and sense of place	Number of neighbours known by name	19	15 neighbours introduced at “meet the neighbours’ event” held at adjacent park; Strata EGM held at Sullivan’s hall (with over 90% of residents in attendance), Council of Owners elected with maximum number of members; Community garden committee established.
CC3	To nurture a new culture of sustainability	Participation in sustainability related events	4	Landgate waste reduction event attended by construction and development team; Briefing seminar scheduled for Solar and Water system in early 2019 (to be held at Sullivan’s hall);

#### Key Activities 2018

Yolk Property Group held a “get to know your neighbour” introduction to Evermore apartments at the adjacent park. 15 owners attended along with key Yolk Property Group and Jaxon personal – feedback was extremely positive.

Yolk Property Group and Jaxon personal attended the Landgate waste management and reduction event held at the adjacent hall, implementing ideas from the event into the construction process.

To encourage an active community, numerous initiatives have been implemented, including:

- Community notice board;
- Community Facebook page;
- Community gardens.

Evermore apartments Extraordinary General Meeting was held in January, with over 90% of residents in attendance. The Council of Owners was established with 7 members (the maximum number permitted).



Figure 7: Ribbon Cutting

Yolk Property Group officially launched Evermore Apartments in early September 2018, holding a ribbon cutting event upon completion of the project. In attendance were various industry partners, community members, construction team, development team, sales team and the Fremantle Mayor (Brad Pettitt). The Mayor officially cut the ribbon during the ceremony, followed by a

walk-through of the apartments, highlighting the features and industry firsts. Stakeholders were then provided the opportunity to meet with the construction and development team and have one on one discussions. Total attendance was in excess of 50 people.

Rather than planting out the community vegetable gardens, Yolk Property Group opted to provide a \$200 voucher to residents, to be utilised to purchase seedlings and plants. Residents were encouraged to hold a busy bee and participate in establishing the communal vegetable gardens. An Evermore community garden committee has since been established and residents planted seedlings throughout the vegetable planters, establishing the community gardens.



Figure 8: Spring Planting of Community Planters

## Plans for 2019

A resident information seminar will be held with residents and industry partners (including WGV CRC Living Laboratory, Solar Balance, PowerLedger and Yolk Property Group) during the first quarter of 2019. The seminar will showcase the technology implemented at Evermore apartments, provide residents with a demonstration of the online reporting platform and provide an opportunity for residents to ask questions they have in relation to the hardware and technology.

## 10.4. Land and Nature

Protecting and restoring land for the benefit of people and wildlife.



	2020 outcome	Indicator	Target	Performance
LW1	To ensure a positive contribution to local Biodiversity	Number of native species	>10	Onsite landscaping completed with a total 29 native trees across a range of species; 61% of remaining landscaping is native species with 16 different varieties
LW2	To maximise the synergies between agriculture, forestry, biodiversity, and carbon storage	Number of food plant species	>4	22 fruit trees (4 variants) were planted and 8 vegetable planters were installed in June 2018 as part of the landscaping works. Landscaping utilised rosemary for sections of hedging. Residents have since established the community vegetable gardens.

### Key Activities 2018

Landscape West was engaged to complete the common area landscaping. Landscape plans were developed in conjunction with (and approved by) Josh Byrnes Associates, who is the White Gum Valley Estate Landscape Architect. Landscaping was installed using Waterwise sub-surface drip irrigation, connected to the community bore (non-potable water supply), numerous sections of permeable paving were installed, and 8 community vegetable planters were installed. Onsite composting facilities have been provided, to reduce waste and provide a natural source of fertiliser for landscaping and vegetable planters.

See below photos of landscaping, fruit trees and communal vegetable planters.



Figure 9: Evermore Citrus Walk



Figure 10: Evermore Community Veggie Planters



Figure 11: Evermore Creepers



Figure 12: Evermore Landscaping and Permeable Paving

## Plans for 2019

Responsibility for maintaining the gardens and diversity of species will become the responsibility of residents, the complex has been irrigated (utilising the community bore – 100% recycled water) to ensure plant species survive. The use of chemicals will be minimised through the use of the onsite composter. The total number of edible plants maintained moving forward will be largely up to the residents, however it is anticipated that this can easily number in the dozens with a substantial community garden area installed. The council of owners will be responsible for conducting a quarterly survey of plant species on site.

## 10.5. Sustainable water

Using water efficiently, protecting local water sources and reducing flooding and drought.



	2020 outcome	Indicator	Target	Performance
SW1	To reduce water consumption in the building	Kl/person/year	34 pp	Evermore apartments have only recently commenced occupation and usage statistics are not yet available, however water saving devices installed; Water use reduced throughout construction, 100% of water used in concrete mixes was from non-potable water supplies and recycled water.
SW2	To use water from non-potable water supply	% of water from potable	75%	Community bore connection installed to provide water to landscaping and garden area from non-potable supply.
SW3	To reduce water consumption for irrigation	Kl/person/year	35	Waterwise sub-surface drip irrigation installed has been installed.
SW4	To contribute to sustainable water management and flood risk mitigation in the surrounding area	Captured/treated on-site	100%	100% of stormwater is being captured on-site, replenishing the community bore for use on landscaping and replenishing the water table.

## Key Activities 2018



Figure 13: Section of Permeable Paving

Evermore apartments have been fitted with water saving devices and the community bore has been connected to the landscaping irrigation system, which when combined with state-of-the-art water saving drip systems is anticipated to exceed water reduction targets. All stormwater is captured onsite, feeding into the community bore or onsite soak-wells (which replenish ground water). Permeable paving has been utilised through large sections of the project, reducing the urban heat island effect and replenishing ground water reserves.

Remote water reading meters have been installed and will provide residents online (near real time) access to water usage – enabling residents to monitor water usage within their household.

During construction an onsite waste water system was utilised to provide trades the ability to “wash-out” their equipment without any harmful residue entering the ecosystem and all water used in cement production was from non-potable sources.

## Plans for 2019

Occupancy of Evermore apartments commenced in late 2018, maintenance of equipment will be paramount. A three-month maintenance contract has been entered into with the landscaper to ensure ease of transition from York Property Group to the Strata Company. The landscaper will conduct a handover with the Strata at the end of the three-month period, at which point the Strata can negotiate an ongoing maintenance contract.

The project partners will hold a training seminar within 6 months of practical completion (allowing residents time to move in and settle) to provide detailed information on how to access and use the online monitoring software, as well as best practice advise.

The council of owners will be able to monitor aggregate usage as frequently as required and provide updated best practice advise to residents, quarterly surveys to include aggregate water usage statistics.

Residents should ensure they replace any tap fittings and appliances with water saving devices.

## 10.6. Local and sustainable food

Promoting sustainable humane farming and healthy diets in local, seasonal organic food and vegetable protein.



	2020 outcome	Indicator	Target	Performance
LFS1	Access to food growing space	% of households	100%	13 fruit trees planted in common spaces, 8 planter boxes installed for community herb/vegetable garden.
LFS2	Edible landscaping	% of landscaped trees edible	30%	30% edible landscaping achieved with numerous fruit trees planted and community vegetable planters installed.
LFS3	Encourage sustainable and healthy purchasing habits	% of households	100%	Healthy eating posters installed in lunch rooms. No food truck was permitted onsite; Handover Pack has been provided to residents.

### Key Activities 2018

All households within Evermore will have access to edible trees and the communal herb/vegetable garden. Initial plans were to have 30% edible landscaping, this has been reduced slightly to 25%, the reasoning behind this is edible trees have a much higher water requirement and the project has attempted to find a balance between providing edible trees and reducing water usage. 13 out of the 56 trees planted are edible, the council of owners can re-access this target in 2019 and increase if water usage does not present an issue.

### Plans for 2019

Community vegetable gardens to be established with a variety of vegetables and herbs planted. The council of owners will complete a quarterly survey confirming the percentage of edible trees onsite and review water usage applicable to maintaining these trees, additional edible trees can be planted if the council of owners are confident it will not be detrimental to water usage targets.

## 10.7. Travel and transport

Reducing the need to travel, and encouraging walking, cycling and low carbon transport.



	2020 outcome	Indicator	Target	Performance
SM1	Enable a sustainable transport carbon footprint	Tonne co2e/capita	2.54	Secured residents' access to electric car sharing platform. Installed electric car charger. Two community bikes provided.
SM2	Reduced private car ownership	Number per household	<1	Parking allowance for 0.92 cars per household. Initiatives in place to ensure reduced need for car ownership within the community; Design of car park allows for repurposing of parking area as car ownership declines.

### Key Activities 2018

Yolk Property Group have secured residents access to the White Gum Valley Car Share platform (first year's access is free) to reduce the need for resident household to purchase a second car. Additionally, an electric car charging station has been installed to encourage uptake of EV cars, this is connected to the community PV system providing green recharging. Two apartments have been sold with only scooter bays, further reducing the number of resident cars. Two community bicycles have been provided for residents use, as well as onsite bike storage and a repair station. Downtown Fremantle can be reached in under 10 minutes by bicycle.



Figure 14: Evermore Community Bikes

The layout and design of the car parking areas provide residents the opportunity to easily repurpose these spaces in the future as household car ownership declines and onsite parking requirements reduce.

Details of these initiatives are being provided to residents through the handover manual, which will also include information about alternative transport options (uber, home delivery and public transport) which can be further enhanced through pooling options (car-pooling to work, one delivery for multiple households).

## **Plans for 2019**

The council of owners will conduct quarterly surveys to ascertain the level of car ownership within the complex as well as the uptake of alternative transport options. The EV charging station is individually metered to allow for ongoing analyse of usage and uptake. Platforms (Evermore community Facebook page and community noticeboard) have been setup to allow for communication of new ideas/technologies/changes within the community.

## 10.8. Materials and products

Using materials from sustainable sources and promoting products which help people reduce consumption.



	2020 outcome	Indicator	Target	Performance
ST1	To reduce the embodied energy of construction materials.	GJ/dwelling	750	The project sourced and utilised a 70/30% Portland cement/ Granulate Ground Blast Furnace Slag – achieving the target 30% reduction in embodied energy.
ST2	To promote materials and products that are non-toxic to humans or wildlife at any stage in their lifecycle, from raw material through to manufacturing, use and end-of-life.	% of 'positive' products	95%	Positive products utilised throughout the project wherever available. Toxic materials avoided in construction with the exception of some PVC; All timber utilised was from 100% renewable sources.
ST3	To promote local economy and to reduce the transportation impacts of products.	% of goods local	10%	All goods used during construction were sourced locally, exceeding targets.

### Key Activities 2018

During construction of Evermore apartments no materials were used from the Red List unless no alternative was available (PVC was the only product that was unable to be replaced).

Jaxon Construction utilised 100% local trades, taking extra precautions to ensure products were sourced locally.

Embodied energy target met through use of specialty Portland Cement / Granulate Ground Blast Furnace Slag mix.

### Plans for 2019

List of toxic materials to be avoided (as per the Red List, which is provided in handover material);

Council of Owners to conduct a quarterly survey as to residents' proportion of local goods.

## 10.9. Zero waste

Reducing consumption, reusing, and recycling to achieve zero waste and zero pollution.



	2020 outcome	Indicator	Target	Performance
ZW1	To maximise upcycling, re-use, and recycling	% of total	100%	Unused items sent to recycling yard during construction. Residents encouraged to upcycle and use community share platforms.
ZW2	To reduce the proportion of the construction waste which is sent to Landfill	% of total	100%	80% waste reduction achieved through a range of practices to reduce onsite waste, including prefabricated units, materials ordered to size, and sorting and recycling waste on site.
ZW3	To aim for zero waste to landfill	Kg/resident/year	0	A range of mechanisms identified in the resident handover pack.

### Key Activities 2018

Yolk Property Group ensured that the builder maximised on-site re-usage as much as possible, where items could not be reused onsite, they have been sent to a reuse facility, to be utilised at other projects.

80% of construction waste was diverted from landfill, a significant achievement against the industry standard (baseline) of 0%. A range of initiatives undertaken to reduce waste, including prefabricated units, strict ordering processes (only ordering materials required) and onsite sorting and separation of waste.

A resident handover pack has been completed and provided to residents, compost tumblers have been installed to ensure no organic materials are sent to landfill and to be used as onsite fertiliser. Three bin systems have been installed in all dwellings to maximise uptake of resident recycling.

### Plans for 2019

Current regulations provide for 8 recycling bins and 8 general waste bins, which have been provided as required by the City of Fremantle. The council of owners will monitor requirements and reduce waste bin numbers where appropriate. Over 50% of household waste is organic in nature and it is anticipated that this will be captured through the 3-tier bin system and placed in the composter. The City of Fremantle is in the

process of introducing green waste bins, the council of owners will monitor compost production, and should onsite requirements be exceeded swap out some waste bins for green refuse bins.  
Council of owners to monitor waste on a quarterly basis, average number of bins placed kerbside to be noted to provide for waste to landfill calculations.

## 10.10.Zero Carbon Energy

Making buildings and manufacturing energy efficient and supplying all energy with renewables.



	2020 outcome	Indicator	Target	Performance
ZC1	To encourage the use of energy efficient appliances and domestic hot water	Kwh/year/apartment	4380	Efficient appliances installed, 31 fans installed.
ZC2	To encourage buildings that have energy efficient façade	Nathers rating	6+	Achieved average rating of 6.2
ZC3	To use energy efficient heating and cooling systems	Cooling Star rating	5-star	Reverse Cycle AC utilised. Installations kept to a minimum and fans maximised.
ZC4	To maximise onsite renewable energy production and use	% of total	50%	On track to exceed likely 75%+ average. Battery installation increased from 120 kw hr to 150 kw hr.
ZC5	To use 100% renewable energy with no carbon emissions	kgCO2e/resident/year	100%	Agreement signed with Cleantech energy to provide 100% renewable grid energy.

### Key Activities 2018

The design of the apartments provides cross flow ventilation and northern aspect to 100% of apartments, reducing the need for artificial heating and cooling. Apartments achieved an average NATHERS rating of 6.20 with 31 fans installed across the 24 apartments and energy efficient appliances installed.

Yolk Property Group have secured upgraded battery storage from the original 120 kw hrs to 150 kw hrs, 54 kw hr Solar panels have been installed and commissioned. The solar array is projected to produce just over 80,000 kw hrs p.a. Remote meter reading services have been installed and commissioned and an information seminar will be held with residents in early 2019. All additional power drawn from the mains grid is being drawn from 100% renewable sources, with a contract for renewable power signed with Cleantech Energy.



Figure 15: Evermore Battery System

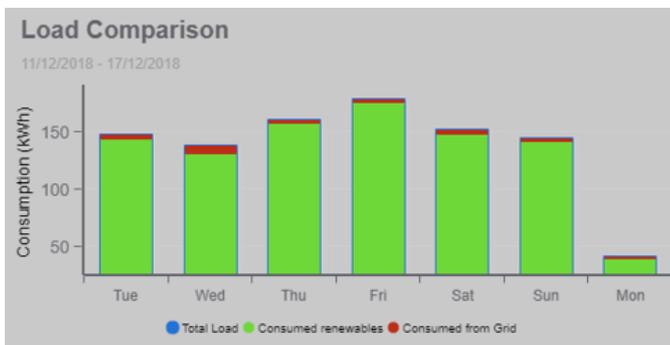


Figure 16: Typical weekly energy usage (Summer months)

The solar and battery system was energised and became fully operational on the 6<sup>th</sup> November 2018. Typical usage statistics show between 2-3 kilowatt hours imported from the grid daily (during summer months) with remaining power requirements being supplied from the solar and battery system.

## Plans for 2019

Remote reading of power provides residents the ability to track their usage in 30-minute increments, which in turn allows residents to adjust usage patterns to best align with solar production.

Council of owners will be able to monitor total energy production produced onsite and report on actual production figures. Strata Company / Council of Owners to maintain 100% green (renewable) power contract. While current forecasts indicate that the target of 50% onsite production is likely to be exceeded, with current estimates suggesting as much as 75% of resident's needs will be generated onsite, subsequent reports will be able to compare actual production rates to these forecasts and the baseline target.