

theFabric

# Net Zero Energy Homes

## Milestone 1 Knowledge Sharing Report



The views expressed herein are not necessarily the views of the Australian Government, and the Australian Government does not accept responsibility for any information or advice contained herein. This project received funding from the Australian Renewable Energy Agency (ARENA) as part of ARENA's Advancing Renewables Program.

The Fabric by Mirvac recognises the intrinsic connection of the Traditional Owners, the Yalukit Willam people, and value their historical contribution to managing the land, water, and natural and built landscapes.

The Yalukit Willam people maintain traditional ownership and have shaped the cultural history of the site for thousands of years. They have an inseparable bond with local land and the Bay.



## Project Overview

The award-winning team at Mirvac have taken a considered and innovative approach to create 'The Fabric', a benchmark community of contemporary homes located at 188-198 Blackshaws Rd, Altona North VIC. The Fabric community will include both townhomes and apartments and over 1 hectare of parks and open space.

The Fabric was successful in securing a funding agreement with the Australian Renewable Energy Agency (ARENA) in February 2019, under their Advancing Renewables Program. The Fabric has committed to delivering minimum 7-Star NatHERs rated, fully electric, Net Zero Energy Homes in Stage 1 of the project through incorporation of sustainability initiatives in design and construction.

The aim of the partnership between Mirvac and ARENA is to accelerate the Net Zero Energy Homes concept by providing feedback on cost effective design opportunities in addition to live market testing to gauge the acceptance and sales strategies for these homes.

Mirvac released Stage 1 to the market in October 2019 and has experienced strong sales results. Construction of the homes is due to commence Mid - 2021 with completion anticipated for Mid -2022. This report will provide industry stakeholders with knowledge and learnings around marketing and sales strategies, customer perceptions and key challenges and lessons learnt in the pre-development phase of delivering fully electric 7-Star Net Zero Energy Homes.

**Report prepared by:**  
Mirvac (VIC)

**Agreement commencement date:**  
13th November 2019

**Agreement completion date:**  
1st September 2024

**Date submitted:**  
1st May 2021

**Project website:**  
Project website - <https://thefabric.mirvac.com/>

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# 7-Star Net Zero Energy Townhomes at The Fabric

- 7 star NatHERS energy rating
- 5kWp of solar PV for 3 and 4 bedroom homes
- 3.8kWp of solar PV for 2 bedroom homes
- Smart energy monitoring
- Energy efficient LED lighting
- Induction cooktop
- Dishwasher minimum of 4 energy stars
- High efficiency heat pump hot water system
- Well-sealed windows and doors to reduce draughts and maintain comfort
- High efficiency reverse cycle ducted air conditioning
- Provision for Electric Vehicle charge point in garage
- Performance double glazing for all windows



Artist's impression. Indicative only and subject to change and development approval. The artist's impression depicting landscaping and interiors are intended only as a guide and are not to be relied on as a representative of the final product. Furnishings/artwork/light fittings/plants shown are not included.

# Marketing Approach

The Fabric has implemented a clear and consistent brand strategy to promote an aspirational, but affordable choice for people looking for property in Melbourne’s inner-west. The Fabric brand positioning was developed to celebrate and contribute to the diversity and rich heritage in Altona North.

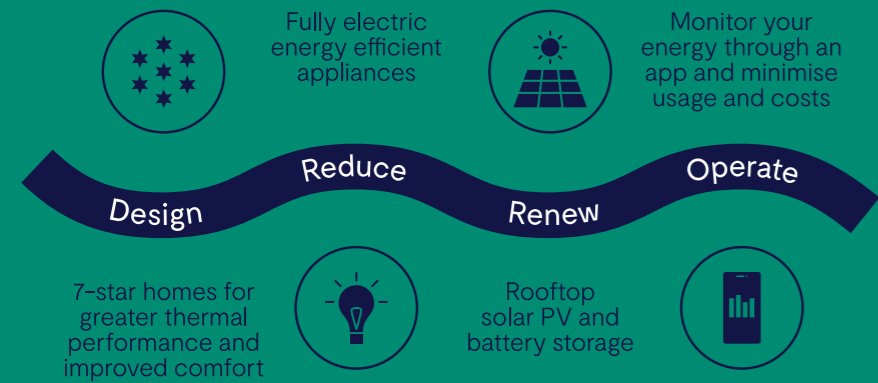
The project vision for The Fabric is strongly connected to the Mirvac values of diversity, community and place making, with the intent to deliver quality, architecturally designed sustainable and future ready Mirvac homes surrounded by green links, a central park and easy access to a range of established amenity.

The key objectives of the Sales and Marketing Strategy for the project are to:

- Create a strong value proposition for cut through to the target audience;
- Raise profile and brand awareness of The Fabric and Mirvac in Melbourne’s inner west; and
- Create a standout customer brand experience and sense of community that promotes the environmental and economic benefits of Net Zero Energy Homes in The Fabric community.

Delivering 7-Star NatHERs rated, fully electric, Net Zero Energy Homes is a point of difference and a key selling point over Mirvac’s competitors. As Net Zero Energy Homes is a relatively new concept for Mirvac and the wider industry, The Fabric team consulted with design and marketing strategy company Meld Studios to assist with the Marketing Strategy. Meld Studios held a five-day workshop where participants were interviewed, and strategies tested. This workshop concluded the following in relation to customer perceptions toward the sale of sustainable homes:

- Customers want tangible facts about the benefits to them with regard to comfort, health and economic savings instead of benefits to the environment.
- Customers want diagrams and simple non-technical language and explanations (refer example below).



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The Fabric took these learnings and applied them across different media methods to promote the benefits to the customer of Net Zero Energy Homes including:

- Project website – <https://thefabric.mirvac.com/>
- Preparation of digital sustainability focused brochures;
- Delivery of virtual sustainability presentation webinars; and
- Offering pre-selected Customer Options and Upgrade packages to all customers.

#### **Project Website:**

The Fabric project website has a dedicated 'Future Ready Living' section which provides customers with a snapshot of the benefits of 7-Star homes to comfort and health, a video guide explaining the NatHERs assessment tool, in addition to outlining the economic benefits of Net Zero Energy Homes. Customers are then directed to register their details in order to receive The Fabric sustainability brochure from Mirvac's Sales Team which includes more specific information.

#### **Sustainability Brochures:**

The Fabric released an initial sustainability brochure 'Your 7-star Net Zero Energy Townhome' at the start of 2020. This brochure was tailored specifically to Stage 1 and focussed on the following areas:

- Introduction of the Mirvac – ARENA Partnership.
- What is a 7-Star Net Zero Energy Home?
- Benefits of comfort, health, affordability, and adaptability to future technology of the homes.
- What our 7- Star Net Zero Energy Homes include.

The second sustainability brochure 'Your Sustainable and Connected Community' was released in late 2020. This brochure focussed on the wider sustainable and community initiatives for the entire Fabric community. Both digital brochures were delivered to customers via targeted Electronic Direct Mail (EDM) and were well received by customers, resulting in strong lead generation for the project.

#### **Customer Sustainability Webinar:**

The Fabric partnered with renowned sustainability consultants Hip V Hype to deliver an information session entitled 'Low Cost, 7-Star Townhomes in Altona North'. Due to COVID restrictions this presentation was held virtually via a Webinar. The presentation focused on educating customers around the benefits of Net Zero Energy Homes. This webinar was attended by existing purchasers, prospective customers, and various industry stakeholders. The presentation was interactive and gave Mirvac and Hip V Hype the opportunity to answer the many questions the attendees had. This 'face to face' approach was again well received and resulted in further enquiry and lead generation.

#### **Customer Upgrade and Options Schedule:**

The Fabric offers various upgrade items and packages which purchasers can select via the Customer Upgrade and Options Schedule. The Fabric implemented the 'Smart Energy Package' which consists of;

- Solar Panels and Battery Storage;
- Smart Energy Monitoring System; and
- Provision of Electric Vehicle Charge Point.

This Package was pre-selected in each Purchaser Customer Upgrade and Options Schedule at no extra cost. This strategy was utilised to display to Stage 1 Purchasers the inclusions they will receive as part of their Net Zero Energy Home at no additional cost to them.

# Sales Approach

The Fabric Sales Team received extensive training and information around Net Zero Energy Homes. This was an essential step to ensure the successful promotion of Net Zero Energy Homes. All Sales team members attended several sustainability briefings, presented by Mirvac's internal Sustainability Team, prior to the launch of Stage 1. A key focus of these briefings was Mirvac's partnership with ARENA and technical information regarding Net Zero Energy Homes, arming the Sales team with the knowledge to confidently and accurately explain the operation and benefits to customers. Mirvac's Sales Team have received praise from customers for their technical knowledge and expertise.

The Fabric Display Suite is located within the community and was opened to the public prior to Stage 1 launch in October 2019. The Display Suite is an integral part of the sales process and incorporates 'The Sateen' townhome display to positively illustrate key design features of the Net Zero Energy Homes as well as providing a typical selling zone. The Sales Team are able to demonstrate the inclusions of a fully electric home with particular emphasis placed on the provision of an electric induction cooktop over traditional gas cooktop. The Sales Team also completed a cooking course specifically tailored toward using induction cooktops only. This has provided the Sales team with further knowledge and expertise in explaining to purchasers the added benefits of induction cooktops over gas cooktops.

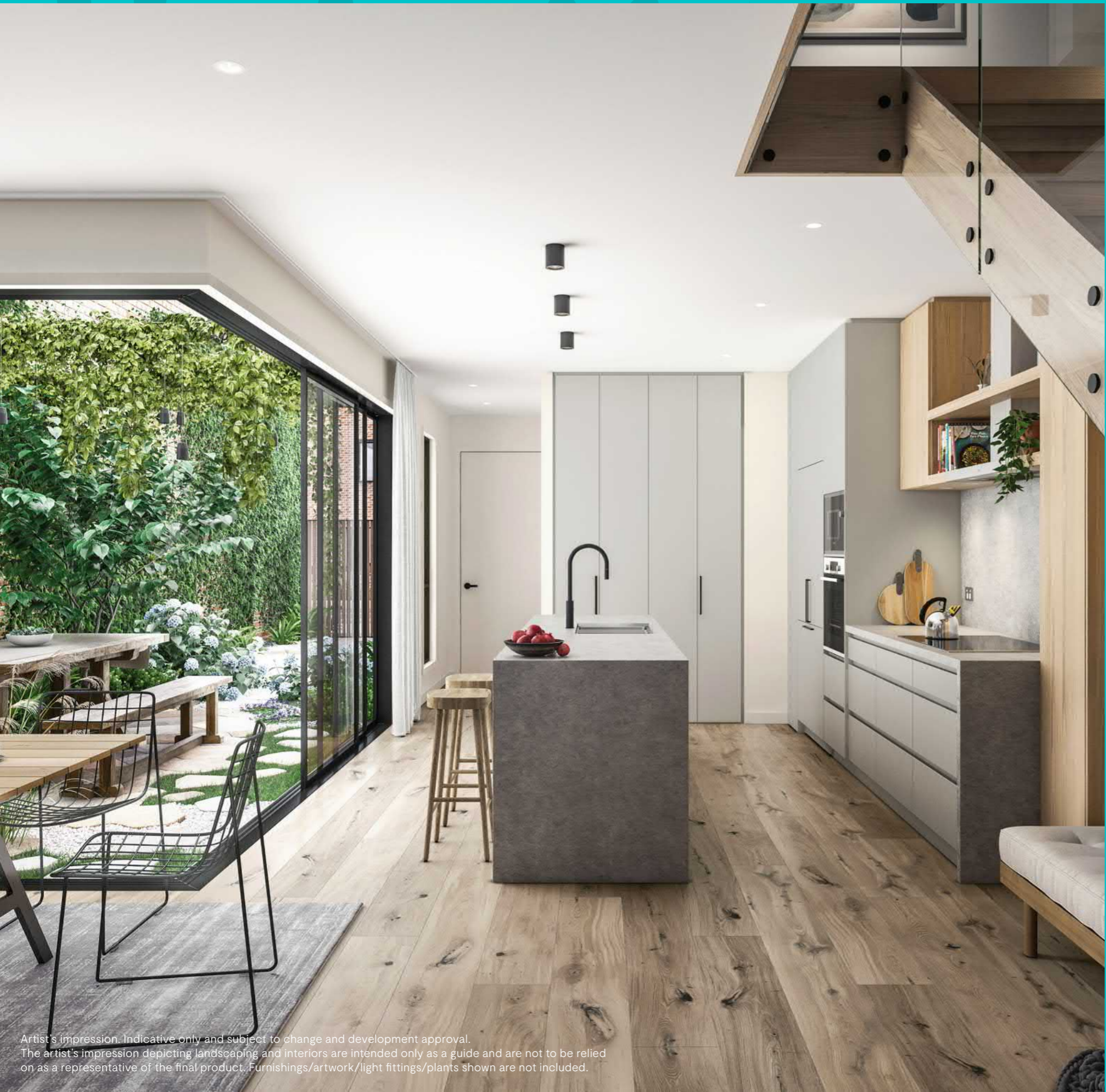
The Sales Team have formulated a sales process which features a section around the benefits of Net Zero Energy Homes and Mirvac's partnership with ARENA. The below communication strategy has been adopted to introduce the benefits of energy efficiency into sales conversations. The strategy is organised around core needs homebuyers often express; all year-round comfort, living in a well-lit home and savings. It aims to prompt an issue, show the need for a solution, and provide a solution.

Benefit	1) Ask	2) Grow the need	3) Solve the need	4) Point to features
Comfort	Have you ever lived in a home that was uncomfortably hot or cold?	Was this an issue for you?	We have designed this home to stay cool on hot days and cosy in winter. Notice how cold/hot it is outside, but how comfortable we are in here without air conditioning/heating. This is because (point to features in the next column).	<ul style="list-style-type: none"> <li>Doors and windows seal to stop draughts.</li> <li>High-performance glass (low-e, tinted or double-glazed) on doors and windows.</li> <li>Wood/PVC frames don't retain heat.</li> <li>The walls and roof have extra insulation.</li> <li>Orientated to avoid the harsh summer heat.</li> <li>The roof ventilation lets out hot air on warm days.</li> <li>Windows are designed to capture the cross breeze.</li> </ul>
Light	How important is a light home to you?	What do you see as the benefits of a light home?	This house is modern and bright. This is because (point to features in the next column).	<ul style="list-style-type: none"> <li>There are plenty of windows.</li> <li>Orientated to capture the best light.</li> <li>Bright LED lights.</li> </ul>
Savings	Do you wish your energy bills were lower?	How would lower energy bills benefit you?	This house is specifically designed to reduce the amount of electricity you pay for because (point to features in the next column).	<ul style="list-style-type: none"> <li>It's designed to stay naturally comfortable all year round without you using any power.</li> <li>When you do need to use the heating and cooling it is energy efficient.</li> <li>Much of the power you will use will come free from the sun via your solar panels and battery.</li> </ul>

“The Sales staff were very knowledgeable on the sustainability features and knew just the right amount of information to share. The whole sales experience was great and I was very impressed with the Mirvac Sales team and the project.”  
 – Stage 1 Purchaser.



The Fabric - Display Suite (188 - 198 Blackshaws Rd, Altona North VIC 3025)



# Customer Perceptions and Insights

In consultation with ARENA, The Fabric developed a Purchaser Survey with the objective to gain market research on purchaser perceptions of Net Zero Energy Homes. These surveys were completed by purchasers at the time of sale and the results and data compiled by Mirvac.

Key findings from the surveys include:

- None of the purchasers currently have an electric vehicle nor access to an electric vehicle charger in their current home, yet 60% said they would like to purchase an electric vehicle.
- 91% of purchasers currently use a gas cooktop. 66% of purchasers stated they prefer gas cooking over electric.
- Just over 50% of our purchasers indicated that they know what an 'energy rating' is.
- The majority of those purchasers who didn't know what an 'energy rating' is indicated that they would like to find out.

It is clear that gas cooking is preferred over induction cooktops. It was imperative that Mirvac specified a good quality and trusted brand of electric induction cooktop. During the sales process in the Display Suite, the Sales team were able to show purchasers the induction cooktop model they would receive and talk to the features. Purchasers who did not know what 'energy rating' referred to, were provided further information and education by the Sales team specifically tailored to the homes and offering. Feedback from the Mirvac Sales team is that the inclusion of induction cooktops has not been a deterrent to sale, with minimal concerns raised by prospective purchasers.

**"Some purchasers are hesitant about the induction cooktop as they prefer cooking with gas. However, once we talk about ARENA and the 'Sustainability Package' inclusions and benefits, they no longer see this as a deterrent"**  
- Maxine Thomson, Mirvac Sales Consultant.

At The Fabric 95% of purchasers are owner occupiers. The Fabric team has observed that when compared to investors on other projects, the owner occupier market are more engaged purchasers and are more concerned with the long - term cost savings of Net Zero Energy Homes as well as the environmental impact of their homes.

**"We chose to purchase at The Fabric because it ticks two of our boxes, A, its proximity to the city, where most of our work is, and B, it's built in a sustainable fashion, which is close to our hearts"**  
- Stage 1 Purchaser.

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# Key Challenges and Lessons Learnt

Delivering fully electric, Net Zero Energy Homes at a masterplanned community scale is an emerging concept. Mirvac has encountered several key challenges and lessons learnt during the pre-development phase of delivering these townhomes.

## Design:

- Achieving a minimum 7-star NatHERs energy rating for traditional terrace-style townhome product has involved Mirvac working closely with sustainability consultants to undertake iterative energy modelling to achieve the required rating. Key learnings through this process have included the importance of considering building orientation and glazing extents in the early design phase to minimise the additional construction costs associated with upgrading insulation within walls, floors, roof space and underslab.
- All two bedroom townhomes will be supplied with 3.8kWp of solar PV's on the rooftop with three and four bedroom townhomes supplied with 5kWp PV's. Placement of PV's has been challenging due to the restricted roof space available on tighter townhome product and overshadowing from antennae and other rooftop plant has had to be considered carefully. Furthermore, the townhouses being delivered include a combination of 2-storey and 3-storey product and overshadowing of roof space due to adjacent 3-story product has required upsized PV systems being installed on some 2-storey homes.

## Technical:

- The specified electrical appliances within the homes collectively draw significantly more electricity than a standard gas provisioned home. This has meant extensive consultation with the Electrical Authority on strategies to maintain standard single phase 40amp supply to the homes (3 phase provision is not standard in Victoria). As fully electric homes are an emerging concept, the Authorities have not had to fully consider the impacts of this increased demand on their supply capabilities previously and Mirvac will continue to work with the Authorities to ensure a suitable outcome is achieved.
- Sourcing a window supplier with the product offering which achieves the required insulation properties to achieve a minimum 7- Star NatHERs rating across all lots. Thermally broken double-glazed windows and doors have been specified and Mirvac has worked closely with a number of suppliers to ensure their product offering meets the appropriate U-values which are required to be achieved.

## Sales & Marketing:

- Purchasers did not always have sustainability as a focus when looking to buy at The Fabric, however through the sales process they have been educated by the Sales Team to understand the added value in purchasing a home with these leading sustainability initiatives.
- A challenge to be overcome is that purchasers are quite data driven and cost driven. It is beneficial to have the capacity and data to demonstrate to purchasers the potential savings which can be achieved by living more sustainably in an energy efficient home. Mirvac has partnered with energy technology group Red Grid to find ways to resolve this and provide purchasers with the ability to understand and control their energy consumption within the home.



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# Conclusion

The Fabric has seen strong sales results in Stage 1 due to the project's successful sales and marketing strategy around the benefits of Net Zero Energy Homes which has positioned Mirvac strongly against competitor projects in the local area.

Construction of the Stage 1 Homes is due to commence in June 2021. The focus of the project during construction will be managing the complexity of innovative building methods to deliver Net Zero Energy Homes on a large scale. In the next Knowledge Sharing Report, due upon completion of housing construction, Mirvac will explore and expand on technical, administrative, regulatory, and financial challenges encountered during construction and how these have been resolved.

Routley's Bakery, Newport.

[thefabric.mirvac.com](http://thefabric.mirvac.com)

**Important Notice**

This report has been prepared by Mirvac for the purpose of fulfilling its knowledge sharing agreement with Australian Renewable Energy Agency (ARENA). The report has been prepared using information collected from multiple sources throughout the Milestone 1 phase of the project. While care was taken in preparation of the information in this report, Mirvac makes no warranty as to the accuracy, validity or completeness of the information provided. Mirvac accepts no responsibility or liability for any loss or damage that may be incurred by any person acting in reliance on this information or assumptions drawn from it.

