Merri-bek Civic Centre
90 Bell Street
Coburg Victoria 3058
T: (03) 9240 1111

Postal Address
Locked Bag 10
Brunswick Victoria 3056

merri-bek.vic.gov.au

5 March 2026

Attn: Environment and Planning Standing Committee
Parliament House, Spring St
EAST MELBOURNE VIC 3002
Email: raea@parliament.vic.gov.au.

To whom it may concern,

Merri-bek City Council Submission to the Parliamentary Inquiry into renewable and affordable energy for apartments

Merri-bek City Council welcomes the opportunity to provide a submission to the inquiry into renewable and affordable energy for apartments.

The municipality of Merri-bek is located between 4 and 14 kilometres north of the Melbourne central business district and is home to 191,747 people with 48% of people living in apartments.

We applaud the Committee for undertaking the inquiry to investigate how we can expand renewable and affordable energy to the approximately 1.2 million Victorians living in multi-unit dwellings.[1] In the face of rising utility prices, the negative health impacts of fossil gas, and growing climate change vulnerability, the need for all-electric, thermally comfortable, and efficient homes is more pressing than ever. As work continues to build and upgrade standalone homes to meet Victoria's net-zero emissions and adaptation targets, people living in apartments, units, villas and townhouses are being left behind, even as the number of Victorians living in these dwellings grows.

We recommend a comprehensive package of measures including immediate action to overcome barriers to energy upgrades in strata with available and proven technologies, as well as innovation research to support future transformation in the sector as Victoria transitions to a net zero economy.

In particular, we call on the Victorian Government to:

- Implement changes to the Owners Corporation Act to create the enabling environment for affordable energy for apartments.
- Provide funding and support to Owners Corporations to undertake energy audits and electrification plans.
- Develop an Apartments Electrification Strategy as part of the Gas Substitution Roadmap.

The following submission has been prepared by officers and is based on endorsed Council policies.

[1] https://www.unsw.edu.au/research/city-futures/our-research/projects/2024-australasian-strata-insights

Recommendations Summary

Merri-bek City Council makes the following recommendations:

1. Share publicly the insights and learnings into delivery of the Victorian Solar for Apartments program.
2. Incorporate funding for advisory services and electrification plans for apartment owners into future state government apartment energy programs.
3. Establish a Strata Commissioner.
4. Reduce the resolution requirements in the Owners Corporation Act for sustainability items.
5. Clearly define sustainability items in the Owners Corporation Act.
6. Require all tiers of Owners Corporations to plan for efficient electrification via the maintenance plan and fund.
7. Provide funding and support to Owners Corporations to undertake energy audits and electrification plans.
8. Create a Strata Data Hub.
9. Develop and provide education and training standards.
10. Establishment and delivery of a public information campaign.
11. Implement targeted programs to support apartment energy upgrades using proven technologies and design solutions.
12. Prioritise investment in local renewable and electrification technologies that overcome technical challenges for apartments.
13. Consult with apartment rental providers and strata sector representatives to investigate mechanisms to effectively and fairly overcome barriers to minimum standards compliance.
14. Progressively strengthen the Rental Minimum Standards to limit the opportunities for exclusions.
15. Public housing renewal should focus on retrofit and refurbishment to reduce cost compared to demolition and rebuild while providing affordable and efficient energy options for vulnerable residents.
16. Develop an Apartments Electrification Strategy as part of the Gas Substitution Roadmap.
17. Require DNSPs to provide network capacity information to apartment buildings when requested at zero cost, and within 20 business days.
18. Consult with facilities management professionals and representatives of the strata sector to design Victorian Energy Upgrades activities, guidance materials, and communications, to be tailored for strata buildings.
19. Ensure the transition of all embedded networks to the established renewable energy obligations in 2027.
20. Develop a clear timeline to remove gas embedded networks and regulate the gas network removal to ensure apartment owners are not unfairly charged.
21. Approve the "Elevating ESD Targets" planning scheme amendment lodged by 24 councils in July 2022.
22. Develop planning guidance and fast-track pathways for renewable energy retrofits in existing apartment buildings.
23. Require developers to demonstrate how new apartment developments will support residents' access to affordable renewable energy.

Conclusion

Thank you for the opportunity to provide feedback to the Parliamentary Inquiry into renewable and affordable energy for apartments. By putting in place the enabling governance legislation and alignment with other Victorian Government initiatives our residents will live in apartments that are comfortable, affordable to run, and able to respond to a changing climate.

Should you require further information please contact Victoria Hart, Manager Sustainability and Climate via vhart@merri-bek.vic.gov.au.

Yours sincerely

Pene Winslade
DIRECTOR PLACE AND ENVIRONMENT

Alignment with current Merri-bek Council policies

Our Zero Carbon Merri-bek 2040 Framework sets out Council's vision for a zero carbon future by 2040. Given that the impacts of climate change are escalating rapidly, Council, in 2021, adopted more ambitious targets to achieve 75% emissions reduction by 2030 (against 2011/12 baseline), net zero by 2035 and drawdown ('negative emissions') by 2040. For Council (corporate/operational) emissions we have a highly ambitious target range of between 80 – 100% reduction by 2030 (precluding offsets, against 2011/12 baseline).

Our Goal for a community that is efficient and 100% renewably powered energy. Achieved by:[2]

- The buildings we live and work in are highly energy efficient – well insulated and built or retrofitted for comfort
- Households and businesses generate, store and export renewable electricity locally
- Homes and businesses are powered only by electricity, following a supported phase-out of gas

Council's Climate Emergency Action Plan 2025-2030 has key priorities:

- Evolve and expand responsive and evidence-based programs and initiatives to ensure disadvantaged and/or at-risk residents are not left behind.
- Continue collaboration to support residents / owners of existing apartments to transition to be energy efficient, electric, powered by renewables and resilient.
- Planning and compliance to achieve zero carbon, climate resilience and circularity in new homes, commercial and industrial developments

Merri-bek's Climate Risk Strategy describes how Council will proactively plan for and respond to the inevitable impacts of climate change. Our Vision is that, by 2030:

- Council competently, accountably, and responsively manages climate risk, and
- Merri-bek is climate-resilient, leafy and liveable; with
- A climate-ready and resilient community with no one left behind.

The Merri-bek Planning Scheme is the statutory planning document that controls land use and development across the municipality. The Planning Scheme's Municipal Planning Strategy (Clause 02.provides the strategic directions for sustainable communities and Clause 15.01-2L-05 03-4) encourages environmentally sustainable design in development, including energy efficiency. It recognises that sustainability principles reduce living costs, improve liveability, reduce emissions and build climate resilience. Strategic directions commit to shifting towards zero net carbon emissions and adapting to climate change.

[2] Zero Carbon Merri-bek Framework 2040

Inquiry Focus Areas

A. Recent developments in energy supply and technology options for these dwellings over the last four years

Merri-bek applauds the Victorian Government's recent leadership in addressing climate change and creating safe, affordable to run and resilient homes through initiatives such as updates to the minimum energy efficiency standards for rental properties, Gas Substitution Roadmap, Solar Victoria rebates, Victorian Energy Upgrades program and SECV Energy Planner. However, we need to ensure that the benefits of these initiatives are shared by all building types. These programs (with the exception of Solar Victoria's Solar for Apartments program) are developed for standalone houses and are not easily transferrable to strata buildings.

To address the gap in dedicated energy upgrades programs for strata properties, in 2022, Merri-bek, in partnership with Yarra City Council, commissioned the research project *Unlocking Sustainable Strata* (see Appendix 1). The project brought together collaborators to learn, trial and design effective solutions for people who live in existing apartments and townhouses so they can benefit from energy upgrades to ensure their homes are healthy, comfortable and affordable to run.

The *Unlocking Sustainable Strata research* identified three key areas that need to be addressed:

- Technical sustainability advice and support
- Navigating legislation and governance
- Community building and communication guidance

There are some proven technologies and upgrade solutions for individual apartment lots and common areas. To share these opportunities as part of the *Unlocking Sustainable Strata* project a series of guides were developed to show what sustainable options residents can take, and what apartment owners and Owners Corporations can do.

There are simple guides for:

- Townhouses
- Low-rise apartments
- Medium-rise apartments
- High-rise apartments
- Apartments Guide to Electrification

In theory, owners can make some upgrades to their apartment independent of the Owners Corporation but this is not always straight forward. For example:

- In most (but not all) plans of subdivision, windows (at least in part) form part of the common property.
- Roof space is typically (but not always) part of the common property which can limit opportunities to install solar.
- Some apartment owners report having limited capacity to electrify their apartment due to old electrical infrastructure within the broader building and/or due to limited electricity supply from the grid.
- Some apartments and units have hot water systems as part of their lot but would rely on common space if, for example, they switched to a heat pump hot water.

There are technical and financial barriers specific to apartments that need to be addressed to enable these residents to access technologies such as batteries, hot water heat pumps, induction cooktops and energy efficiency measures of double-glazing, insulation and draught-proofing.

B. Barriers and inequities experienced by Victorians in such dwellings, including renters and social housing tenants, when accessing renewable and affordable electricity compared with other households

The process of implementing apartment building retrofits requires technical sustainability knowledge, an understanding of strata legislation, and the ability to engage, educate, and convince a large group of people to agree and invest their money. This complexity creates a huge number of barriers to retrofitting apartments to improve thermal comfort, sustainability and ease cost of living pressures.

Barrier 1. Lack of technical sustainability advice and support for apartments

While technologies and industry for solar, batteries, electric and efficient appliances for standalone houses have matured this is not the case for apartments. The current lack of technical sustainability advice and support specific to apartments is a major barrier for apartment owners and Owners Corporations. There is a need for providers of independent advice who can conduct energy audits and provide costed apartment electrification plans. Alongside this we need to build the capacity of industry to provide services to the apartment sector.

The Victorian Solar for Apartments program has provided an avenue to grow solar industry capacity to service apartments. The insights learnt from rolling out the program will be valuable in the design and development of future programs targeting apartments. Any future programs will need to address the lack of sustainability advice and support by incorporating and funding advisory services into future programs.

Recommendation: Share publicly the insights and learnings into delivery of the Victorian Solar for Apartments program.

Recommendation: Incorporate funding for advisory services and electrification plans for apartment owners into future state government apartment energy programs.

Barrier 2. Difficulty navigating Owners Corporation legislation and governance

For apartment residents to receive the benefit of affordable and renewable energy we need to create the enabling regulatory environment. From our *Unlocking Sustainable Strata* research the biggest barrier is the governance arrangements for apartments and support for Owners Corporations.

The Victorian Government's 2025 review of the *Owners Corporation Act* provides an opportunity to address some of the barriers strata residents face and to create the enabling environment for more apartment residents to live in healthy, safe and environmentally sustainable homes. We look forward to hearing from the Victorian Government on the outcomes of the review.

As noted in our submission to the review the following governance reforms need to be made to be made to create the enabling environment for affordable energy for apartments.

Recommendation: Establish a Strata Commissioner

We recommend the establishment of a Strata Commissioner and a dedicated regulatory body (as seen in NSW and QLD) to:

- Support strata governance, enforce compliance and manage disputes.
- Ensure consumer protection and professionalism in strata management, including promoting transparency in insurance, management fees and financial services.
- Ensure strata rights and unique needs are adequately addressed in all government policies and programs.

As part of the regulatory body establish an advisory committee of strata owners, residents, industry bodies, and service providers to inform government policy.

Recommendation: Reduce the resolution requirements in the Owners Corporation Act for sustainability items

Feedback from residents trying to implement sustainability items is the high threshold required for change and the need for a special resolution. This was an issue for many during Solar Victoria's Solar for Apartments program.

This barrier can be overcome by:

I. Reducing the resolution type to an ordinary resolution
II. Reducing the quorum to at least 25% of eligible voters present in person proxy (as in NSW)
III. Vote to be made by simple majority

The following sections will need to be updated to enable this change:

- Section 24 Extraordinary fees and charges
- Section 25 Power to borrow money
- Section 52 Significant alteration to common property requires special resolution
- Section 53 Upgrading of common property

Recommendation: Clearly define sustainability items in the Owners Corporation Act

In consultation with sustainability and energy experts, more clearly define "sustainability items" in the Act. This will include inclusion of electrification items such as hot water heat pumps, electric vehicle chargers, reverse-cycle heating and cooling as well as energy efficiency measures such as insulation, shading, and high-performing windows to improve the thermal comfort and reduce the energy bills for residents.

Recommendation: Require all tiers of Owners Corporations to plan for efficient electrification via the Maintenance Plan and Fund

Currently only Tier 1 and Tier 2 apartments are required to have a maintenance plan and maintenance fund. This requirement should be extended to all tiers and include:

- Completion of an energy audit and electrification plan
- A statutory requirement to obtain a 3, 5 or 10 year road map, funded through the maintenance plan
- Set time frame for adoption in advance of the net zero by 2045 Victorian Government target
- Report on progress of implementation at each AGM
- Sale of Land Act and Owners Corporation Certificate (151) for statutory disclosure of plan and to be included in contract of sale

Due to the lack of knowledge and as many Owners Corporations have not planned for an energy audit and electrification plan government support is needed.

Recommendation: Provide funding and support to Owners Corporations to undertake energy audits and electrification plans.

Barrier 3. Community building and communication guidance

Recommendation: Create a Strata Data Hub

Common feedback from residents on owner's corporations is the need to access information such as proformas and guides to short-cut the research owner's corporation committees generally need to undertake. There is also a desire to share resources and learnings that early-mover Owners Corporations have undertaken so that others do not have to start from scratch.

This can be addressed with the development of a digital registry for key strata records, ensuring owners and committees have direct and ongoing access to essential information. For example, guidance on how a committee can inform and campaign to their Owner's Corporation about a major energy upgrade decision that is going to a ballot. To get cut-through, communication is needed in the lead up to and during the legislated 14 days the ballot is open. Engaging the whole owner's corporation in this ballot process is a huge challenge given the sheer number of people, and the fact that many do not live on site.

Recommendation: Develop and provide education and training standards

Many residents buy an apartment not realising they are now responsible for the maintenance of a significant asset. There is little understanding of the legal obligations to participate in the management and maintenance of the building. Typically, the function of a building's Owners Corporation relies on a small set of overworked volunteers tackling a huge range of issues such as insurance, resident disputes, maintenance, budgeting and financial management, maintenance, collective decision-making, and compliance.

Apartment owners would benefit from:

- Tailored, free or low cost, and easily accessible training for Owners Corporation committee members to improve governance, financial oversight and dispute management.
- Development of training requirements and standards for strata managers to enhance professionalism and accountability.

Recommendation: Establishment and delivery of public information campaign

Establish a long-running communications campaign to raise the profile of obligations for living and owning in residential strata titled buildings including:

- Development of public information resources for new buyers to understand their rights and obligations, and require real estate agents to disclose these rights and obligations as a clear part of the sale process.
- Development of resources and information relevant to the diversity of people living in strata titled and apartment buildings, including renters and people who speak a language other than English.
- Funding opportunities for people living in and owning in strata communities to connect and to learn from each other and experts.
- Using co-design methodologies to ensure public education address the needs of strata and apartment building communities.

C. Options to increase access to renewable and affordable electricity for these dwellings, including shared rooftop solar, balcony or façade solar, community batteries and virtual power plants

New technology options should be investigated at the same time as rolling out proven technologies and addressing the regulatory and systematic barriers noted above. For many existing apartments there is currently not a turnkey product to upgrade to electric appliances. For example, apartment buildings with centralised gas hot water find it difficult to move to electric. There is a need to invest in local renewable and electrification technologies that overcome technical challenges for apartments. We have seen this success with technologies such as SolShare – a behind-the-meter solar sharing hardware which has provided a solution for the installation of solar on apartments.

Improving the energy efficiency and thermal performance of both new and existing apartments must be prioritised alongside the expansion of renewable energy generation. Higher performing apartments reduce overall energy demand, lowering bills and easing pressure on the electricity system. The technologies, products, and design expertise needed to deliver better thermal performance are already widely available, making this a practical and immediate opportunity for lowering energy bills.

Recommendation: Implement targeted programs to support apartment energy upgrades using proven technologies and design solutions.

Recommendation: Prioritise investment in local renewable and electrification technologies that overcome technical challenges for apartments.

D. The likely impacts of those options on different groups of Victorians, including by tenure type, income, housing type and location, on the type, affordability and reliability of energy they receive.

Renters

According to a 2023 peer reviewed report from AHURI Apartments in Australia are more likely than other dwelling types to house renters: 65% of all apartments are rented and 27% of all Australian renters live in apartments, despite apartments making up only 13% of all dwellings (ABS, 2017). For private apartments (excluding social housing), almost half (48%) are rented compared to 26% owner occupied (with the balance unoccupied or used for other purposes).

Private apartments are also more likely to house migrants (57%), people who speak a language other than English at home (50%) and single-person households (35%). Private apartments also house a substantial proportion of lower income households. Of all private apartment households living in buildings of four or more storeys, 39% have a household income in the bottom two quintiles.

Merri-bek has a high proportion of renters with 34.7% of households living in private rentals. Rental housing tends to be of poorer quality than other dwellings, particularly in terms of energy efficiency.[3]. Renters are also at risk from the current and future impacts of climate change.

[3] Warm, cool and energy affordable housing policy solutions for low income renters

A University of Melbourne Master of Geography research thesis on *Extreme Heat and Renters in Merri-Bek* reveals:[4]

- The top impacts that respondents felt in the extreme heat were (in order) 1) feeling too hot, 2) not sleeping, 3) feeling unwell, 4) worrying about others in the home, and 5) worrying about pets.
- The majority (62%) of respondents had access to some form of air conditioning or evaporative cooling.
- The majority (65%) of people with some form of air conditioning reported barriers in using it. The most common barriers were (in order) 1) it being too expensive to run, 2) it not working effectively, 3) it being broken.
- A little over a third (37%) of respondents had made a request of their landlord related to extreme heat. The most common requests were to 1) install and 2) repair air conditioning
- Of the people who made requests of their landlord related to the heat, the majority, 55%, had it rejected, 20% had it accepted, for 18% it was still being considered, and the remainder weren't sure of the outcome
- The top action that respondents supported from the government was requiring landlords to provide air conditioning or other cooling methods - 79% of respondents.

Merri-bek welcomes the introduction of new minimum energy efficiency standards for rental properties to come into effect in phases from 1 March 2027. However, there are exemptions for apartment rental providers where it is "not be practical to install an energy efficient heater - because of owner's corporation rules, or costs, for example". This may deter upgrades to rented apartments.

There is a need for consultation with apartment rental providers and strata sector representatives to investigate mechanisms to effectively and fairly overcome any barriers and publicise the solutions. The Rental Minimum Standards should also be progressively updated to limit the opportunities for exclusions. Otherwise, apartment renters will continue to be at a huge disadvantage.

Recommendation: Consult with apartment rental providers and strata sector representatives to investigate mechanisms to effectively and fairly overcome barriers to minimum standards compliance.

Recommendation: Progressively strengthen the Rental Minimum Standards to limit the opportunities for exclusions.

Social Housing

Efficient and affordable heating and cooling is a critical factor in the health and wellbeing for the majority of social housing residents in Merri-bek who are elderly and/or live with disability and chronic illness. An RMIT research study, *Barkly Street Public Housing Estate- Future Visions*, heard from elderly residents expressing dissatisfaction with the lack of cooling which includes the limitations on opening windows for ventilation. The study recommended that public housing renewal programs focus refurbishment and retrofit and that alignment with the Victorian Government's climate commitments should be integrated into all works on the state's significantly ageing social housing stock.

Recommendation: Public housing renewal should focus on retrofit and refurbishment to reduce cost compared to demolition and rebuild while providing affordable and efficient energy options for vulnerable residents.

[4] Opening the Window: The Political Economy of Private Renting and Extreme Heat in Merri-bek

E. any legislative, regulatory, planning or market reforms that could support the implementation of options, consistent with Victoria's legislated emissions reduction and renewable energy targets.

Victorian Gas Substitution Roadmap

We applaud the Victorian Government's announcement on new building electrification regulations, which from January 2027 requires all new homes and commercial buildings to be built all-electric and from March 2027, the replacement of broken gas hot water appliance with an electric alternative. However, for many apartment buildings an electric alternative is currently not available or too costly which exempt apartments from the regulations.

Too often apartments are seen as an add on to standalone residential homes or commercial buildings reforms. To overcome this as part of the Gas Substitution Roadmap a dedicated Apartments Strategy needs to be developed to ensure that apartment residents are not left behind in the electrification transition.

Recommendation: Develop an Apartments Electrification Strategy as part of the Gas Substitution Roadmap.

Access to data from electricity distributors

A common issue we hear from apartment owners is the lack of publicly available information on network capacity from electricity distributors. This is especially the case when apartment owners are looking to switch to electric appliances or installing EV infrastructure such as EV chargers which require transformer upgrades. To gain information from their electricity distributors of their building and surrounding network capacity comes at considerable cost. Any transformer upgrades also come at considerable cost to the Owners Corporation.

Recommendation: Require DNSPs to provide network capacity information to apartment buildings when requested at zero cost, and within 20 business days.

Victorian Energy Upgrades Program

The Victorian Energy Upgrades (VEU) program has effectively reduced emissions and lowered energy bills for thousands of households and businesses. However, the current program design does not adequately address the technological, operational, and governance arrangements specific to strata buildings. These buildings have unique decision-making structures, infrastructure constraints, and upgrade processes that differ significantly from standalone homes and commercial or industrial sites. To maximise the program's reach and equity, VEU activities relevant to strata should be tailored and clearly distinguished from other property types. Opportunities for upgrades must also be communicated in a way that is accessible to Owners Corporations, and the process for identifying qualified, strata-appropriate suppliers made simpler.

Recommendation: Consult with facilities management professionals and representatives of the strata sector to design Victorian Energy Upgrades activities, guidance materials, and communications, to be tailored for strata buildings.

Embedded Networks

The Victorian Government is addressing issues with embedded networks and residents being locked into long-term contracts for their electricity and gas. Providers running embedded networks established on or after 1 January 2023 must ensure:

- 100% of electricity consumed at the site by residential customers is met from a mix of on-and off-site renewable sources
- A minimum of 5% of electricity consumed by residential customers at the site is met from on-site renewable energy generation.

Existing embedded networks are not yet subject to this same renewable energy obligation, with the current timeline for transitioning the licensing framework indicating the obligation will be rolled out more broadly in 2027.[5]

Recommendation: Ensure the transition of all embedded networks to the established renewable energy obligations in 2027.

Recommendation: Develop a clear timeline to remove gas embedded networks and regulate the gas network removal to ensure apartment owners are not unfairly charged.

Planning and Environmentally Sustainable Developments

The planning system plays a critical role in ensuring new apartment developments are built to support renewable energy and energy efficiency from the outset, rather than requiring costly retrofits later.

Merri-bek City Council and many other Councils across Victoria have been applying environmental building standards to new buildings approved via the planning system since 2010 onwards. This is known as the Sustainable Design Assessment in the Planning Process and has been formalised through Environmentally Sustainable Design (ESD) planning policies. Merri-bek's ESD planning policy was introduced into the Merri-bek Planning Scheme in November 2015. Since this time, Council successfully reduced energy bills for residents in Merri-bek as the energy efficiency of new apartments and townhouses have greatly improved.

The success of the ESD planning policy in reducing energy usage and increasing renewable energy in new homes across Merri-bek (and Victoria) has been in part halted by the recent introduction of the State Government Amendment VC267. As documented in the May 2025 *Inquiry into Victoria Planning Provisions amendments VC257, VC267 and VC274*, the 'turning off' of the ESD policy for townhouse developments have reduced the ability for Council's to improve the energy performance of homes. Since the planning changes were introduced in July 2025, Merri-bek have observed a significant decrease in the ESD in planning applications without a discernible increase in the number of building approvals for dwellings.

In comparing applications between the 2024/25 and current 2025/26 we observed the following:

- Average NatHers rating down 0.7%
- Solar PV provided down 86.2%
- EV charging spaces down 83.4%
- Gas-free development up 4.8%
- Natural ventilation down 77.3%

[5] https://engage.vic.gov.au/download/document/21003

- Double-glazed windows down 77.6%

The energy performance of new townhouses have reduced significantly since the local ESD policy has been ‘turned off’. This will lead to higher cost of living for those living in these apartments. Prior to the amendments, Merri-bek's experience was that our dwellings achieved between 7.3-7.4 NatHERS ratings compared with 2025/26 average of 7.0 stars.

Elevating ESD Planning Scheme Amendment

On 21 July 2022, 24 Victorian councils, including Merri-bek and led by the Council Alliance for a Sustainable Built Environment (CASBE) jointly lodged the "Elevating ESD Targets" planning scheme amendment seeking to introduce stronger, measurable sustainability standards for new buildings.

As of February 2026, more than three and a half years after lodgement, the 24 councils are still awaiting a response from the State Government. This delay means apartment developments continue to be approved without adequate sustainability measures, necessitating costly future retrofits for apartment owners.

The Merri-bek Planning Scheme encourages environmentally sustainable design (Clause 02.03-4) and explicitly notes that sustainability elements should be incorporated at planning approval stage "to improve outcomes that may otherwise be compromised if left to be considered at the building approval stage and to reduce difficulties or costs associated with retrofitting the development." However, without mandatory requirements, these policy objectives often fail to translate into meaningful outcomes. With the growth of strata buildings in Merri-bek the absence of strong planning controls represents a significant missed opportunity.

Recommendation: The State Government approve the "Elevating ESD Targets" planning scheme amendment lodged by 24 councils in July 2022.

Recommendation: Develop planning guidance and fast-track pathways for renewable energy retrofits in existing apartment buildings.

Recommendation: Require developers to demonstrate how new apartment developments will support residents' access to affordable renewable energy.

Appendix 1 *Unlocking Sustainable Strata* Report

CONFIDENTIAL DRAFT
Version: 04
Date: 17 DECEMBER 2022

UNLOCKING SUSTAINABLE STRATA REPORT

Exploring barriers and opportunities to retrofitting for all-electric, zero carbon, sustainable and comfortable multi-residential homes

HIP V. HYPE
Merri-bek City Council
CITY OF YARRA
strata community association VIC
The Knight

UNLOCKING SUSTAINABLE STRATA

Unlocking Sustainable Strata brings together collaborators to learn, trial and design effective solutions so people who live in existing apartments and town houses benefit from sustainability retrofits and enjoy comfortable, efficient homes.

We seek systemic change and on-ground action.

Acknowledgement

We respectfully acknowledge that every apartment building in Australia exists on traditional Aboriginal lands which have been sustained for thousands of years.

We honour their ongoing connection to these lands, and seek to respectfully acknowledge the Traditional Custodians.

Disclaimer

This document and any information provided have been prepared in good faith based on the best and most up-to-date advice available. The costings, energy use and pay back periods are indicative only, based on information current at the time of publication and will likely fluctuate in the future.

Unlocking Sustainable Strata and its partners cannot be held liable for the accuracy of the information presented in this document. Any images included are for illustrative purposes only.

FOUNDING PARTNERS

HIP V. HYPE Sustainability

HIP V. HYPE Sustainability provides advice that is commercially grounded, yet ambitious. We pursue exceptional outcomes that are socially, economically and environmentally sustainable and enable action across government, institutions and organisations.
Our responsibility is to leave our cities and regions in a better condition than we found them.

The Knight

The Knight is an Owners Corporation, Strata and Body Corporate management company with offices in Melbourne and Geelong. We pride ourselves on our commitment to strong family values and real hands-on experience. This enables us to give you a more personal, supportive and effective Body Corporate service.

Merri-bek City Council

Merri-bek City Council, located in the inner north of Melbourne, five kms from the central business district, are a leader in sustainability and are always looking to improve services to create a better future for our planet, our city, our community and our children.

City of Yarra

City of Yarra is an inner metropolitan municipality, home to a diverse community of approximately 100,000 people. Yarra was one of the first Council's to declare a climate emergency, recognised the planet's climate is already too hot and that effort is needed across all levels of government, businesses, and communities to address the climate crisis.

Strata Community Association Victoria

Strata Community Association Victoria SCA (VIC) is the pre-eminent member-based association for the Victorian Owners Corporation industry. With almost 800 members, SCA (VIC) represents more than 80% of all professional owners corporation managers, along with industry suppliers.

Lead Author
Amy Brand

Contributors
Liam Wallis
Julie McLean
Nicholas Abbe
[PK] Peter Kaylor
Alex Smale
Gregor Evans
Mel Miller-Yule
Michaela Skett
Alice Mulleeney
Kate Nicolazzo
William Anstee
Donna Luckman
Sam Green
Louis Manley
Sara van der Meer
Dominique Hess
Hugh Butcher

Contents

THE STORY SO FAR

This report is the culmination of phase one of the Unlocking Sustainable Strata project, which consisted of:

1.

Sustainability audits for 12 multi-unit residential buildings, covering townhouses, low, medium and high rise apartments. Sustainability solutions for both common areas and homes were investigated

2.

Consultation with participating owners corporations about the sustainability visions and challenges in their buildings

3.

The development of Unlocking Sustainable Strata infographics to showcase the sustainability opportunities likely to be available in each of the four building typologies, covering both common areas and private homes

4.

The development of A Guide to Electrifying Your Apartment Building or Townhouse which, along with the infographics, will be freely available for use by owners corporations, strata managers and other stakeholders

5.

Two stakeholder workshops to ensure this report reflects the experience and needs of the sector

This project builds on experience from previous projects, Sustainable Living in the City and Smart Blocks, led by the City of Melbourne with support from Strata Community Association Vic.

REPORT PURPOSE

This report seeks to expose the sustainability challenges particular to multi-unit residential buildings. It suggests potential solutions, the ways in which different stakeholders can contribute, and the support needed to unlock sustainable strata.

With this report we hope to garner support from across the strata sector, the sustainability sector and government to work on solutions to retrofitting multi-unit dwellings across Victoria.

In the face of rising utility prices, the negative health impacts of gas, and growing climate change vulnerability, the need for all-electric, low or zero carbon, thermally comfortable, and efficient homes is more pressing than ever.

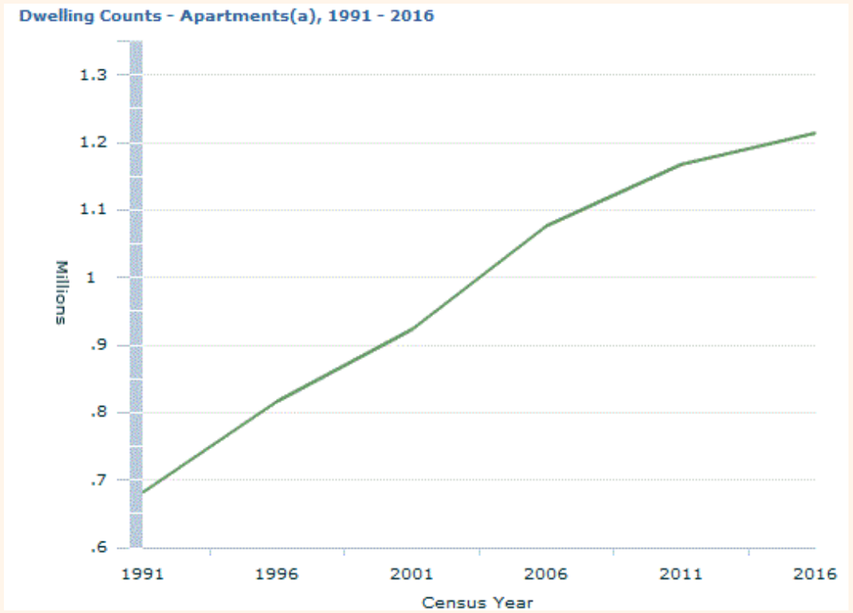
As work continues to build and retrofit standalone homes to meet Victoria's net-zero emissions and adaptation targets, people living in apartments, units, villas and townhouses are being left behind, even as the number of Australians living in these dwellings grows.

Of course, retrofitting multi-dwelling buildings is more challenging than retrofitting standalone homes but solutions do exist, as does the desire for improvement.

A concerted and collaborative effort is required to develop mechanisms - legislation, incentives, funding, programs - specifically to help retrofit these buildings.

MORE PEOPLE ARE LIVING IN APARTMENTS AND TOWNHOUSES

The apartment sector is expected to continue its growth trajectory. IBIS World forecasting for 2022-2027 states 'The multi-unit apartment and townhouse construction industry (in Australia) is forecast to regain solid growth over the next five years, as the economy gradually recovers from the COVID-19 pandemic.'



Census dwelling counts 1991 - 2016 flats, units and apartments

The number of people living in apartments is large and growing. According to 2021 Census data:

↑ **1 IN 4**

In 2021, more than 1 in 4 Victorians were living in apartments or townhouses (26%), up from 22.5% in 2011

26.8%

Nationally, 26.8% of people were living in apartments or townhouses in 2021

31.8%

In greater Melbourne the number is even higher, with 31.8% of people living in apartments or townhouses in 2021

Images: Allume SolShare system for apartments (left). Tess Kelly (above) ©

APARTMENT POPULATIONS ARE VULNERABLE TO HEAT STRESS

2017 research from The University of Melbourne demonstrated that if the power were to go off during a heat wave most of Melbourne's apartment blocks would fail international health standards.

Lead researcher and construction scientist Mr Chris Jensen says action is needed to encourage the retrofitting of existing buildings.

"The research highlights to the public that heat stress inside apartments is a real issue and that we need to do more to control for this, not only in new buildings, but also for existing buildings," says Mr Jensen. "It isn't a new problem, but climate change science expects more frequent and possibly longer heatwaves, so the health risk is only going to increase."

"What we need to be concerned about are existing apartment buildings that lack air conditioning and are susceptible to overheating, but we also need to be concerned about most buildings should a heat wave coincide with a power black out which would eliminate all air-conditioning."

The risks of power outages are real. During the January 2019 heatwave, over 200,000 homes across Victoria were affected by power blackouts.

"The research highlights to the public that heat stress inside apartments is a real issue and that we need to do more to control for this, not only in new buildings, but also for existing buildings."

Mr Chris Jensen

Renters remain at a bigger disadvantage.

From March 2023 rental properties must have a fixed, energy efficient heater in the main living area. However, in apartment buildings, the heater does not need to be energy efficient if:

- It would cost more than the average cost of installation
- It would cost more to meet other Acts or local laws
- The owners corporation rules prohibit it.

Without a broader focus on sustainability in apartment sector, apartment renters will continue to be at a huge disadvantage.

Source: Tenants Victoria and Consumer Affairs Victoria

Image: Tess Kelly ©

Multi-unit dwellings are in their very nature, complex:

1.

Owners corporation fees are sometimes inadequate to effectively maintain and manage the property.

2.

There are lots of stakeholders associated with each building, with varying priorities.

The priorities of a rental provider may be geared towards a return on investment. An owner occupier may be keen to invest in quality of life improvements, while others may not have the financial capacity to invest in common-good projects at all.

3.

Multi-residential buildings are governed by complex legislation which mandates different requirements depending on the size and nature of the owners corporation.

Within the legislation, a renter will be informed about the owners corporation rules and can make a complaint using the approved owners corporation complaint form.

4.

These buildings aren’t just infrastructure, they are people’s homes. Ideas about what is or isn’t appropriate at home varies for different people within an owners corporation, which can sometimes lead to conflict and an inability to make decisions.

5.

Each owners corporation has a unique (and sometime opaque) operating culture, which can make collective decision-making more challenging.

For a reminder about roles and responsibilities in strata please see appendix 2, page 28.

This complexity creates a huge number of barriers to retrofitting buildings to improve thermal comfort, sustainability and efficiency. However, given the need, we must look at these barriers and find ways to overcome them or turn them into opportunities.

The following pages outline the challenges to sustainability retrofitting in apartments, and the opportunities that could be harnessed.

These insights have been drawn from previous reports, and lived experience of apartment owners/renters, strata managers and program managers.

Image: Allume SolShare system for apartments ©

APARTMENT OWNER OCCUPIERS

Apartment owner occupiers own and live in the apartment and are part of the owners corporation.

Who's responsible?

It is important to note that no stakeholder has a clear, dedicated responsibility for driving and leading sustainability and efficiency improvements in apartment buildings, including the committee.

Challenges

- Knowing where to start. A sense it's too hard
- Finding trusted information tailored to the apartment context, which considers both technology solutions and the associated governance processes that need to occur
- Understanding and being able to sell the cost-benefit of retrofits to the committee/owners corporation
- Finding trusted sustainability suppliers that can work confidently within the apartment context
- Fear of 'rocking the boat' and causing conflict by wanting to make changes in the common area/ spend money (because people know they will run into each other around the building)
- Lack of confidence in navigating the necessary governance and decision-making processes
- Owners not being aware of their automatic role and obligations as a member of the owners corporation
- Understanding the boundaries of private and common property and the interplay between common and private property. E.g. Common hot water systems service the apartments or where a resident wants to pay for their own solar system the owners corporation still needs to be involved as the roof space is typically classed as common property
- A lack of strata specific sustainability funding that they can access and use to encourage action by the owners corporation
- In many buildings, water usage is not individually metered. Water costs are attributed to Owners based on a contribution schedule so there is less incentive to reduce water use as it does not result in a direct cost saving
- How to fairly distribute common property usage e.g. private solar panels on a common roof
- How to apply fair and equitable costs e.g. investing in shared electric vehicle charging infrastructure v. a standalone charger for a lot

Opportunities to leverage

- Can raise ideas with the owners corporation/ committee
- Can join the committee and can directly contact the Manager
- Direct benefit from cost saving and improved comfort resulting from efficiency upgrades in the apartment
- Efficiency upgrades in the common areas will result in lower owners corporation utility bills. Because the saving is for the owners corporation as a whole, the savings will not go directly back into the pocket of the owner. However, it will reduce overall and long-term running costs which could lead to lower or more stable owners corporation fees. Especially in larger owners corporations, there may be opportunities to monitor the utility saving costs, and reinvest these savings into other tangible benefits for the owners corporation. This could help to amplify the feeling of benefit
- Can benefit from the updated Owners Corporation Act 2021 which states 'An owners corporation must not make rules that unreasonably prohibit the installation of sustainability items on the exterior of a lot' (although these are challenges around defining what constitutes 'unreasonable')

Images: Image courtesy of City of Melbourne (left) ©. Kim Landy (top)

APARTMENT RENTERS

Renters rent the apartment from the owner. They are not part of the owners corporation.

Challenges

- Reduced incentive to invest in sustainability improvements as they will not have a physical experience of the benefits as they do not live in the building
- Knowing where to start. A sense it's too hard and not worth the effort given leases are typically only 12 months
- Finding trusted information tailored to the apartment context, and considers both technology solutions and the associated governance processes that need to occur within the apartment context
- Understanding and being able to sell the cost-benefit of retrofits to the committee/owners corporation
- Finding trusted sustainability suppliers that can work confidently within the apartment context
- Lack of confidence in navigating the governance processes in order to get decisions made and funds invested
- Not aware of their automatic role and obligations as a member of the owners corporation
- A lack of strata specific sustainability funding that they can access and use to encourage action by the owners corporation
- Reduced legislative obligations for apartments (under the minimum rental standard Victoria) to supply energy efficient heating

Opportunities to leverage

- Potential to leverage the strengthened minimum rental standards coming into effect in 2023 (however, the minimum standards are not fully enforceable in apartment buildings, see page 7 for details)
- Working with rental providers to access the Victorian Governments Home Heating and Cooling Upgrades Program aimed at rental properties

Images: Kim Landy (left). Louis Manley (above) ©

APARTMENT RENTAL PROVIDERS

Apartment rental providers own, but do not live in the apartment, They are part of the owners corporation.

Challenges

- Reduced incentive to invest in sustainability improvements as they will not have a physical experience of the benefits as they do not live in the building
- Not knowing where to start. A sense that it's too hard
- Finding trusted information tailored to the apartment context, and considers both technology solutions and the associated governance processes that need to occur within the apartment context
- Understanding and being able to sell the cost-benefit of retrofits to the committee/owners corporation
- Finding trusted sustainability suppliers that can work confidently within the apartment context
- Lack of confidence in navigating the governance processes in order to get decisions made and funds invested
- Not aware of their automatic role and obligations as a member of the owners corporation
- Do not directly control the decisions about the common areas of their buildings
- A lack of strata specific sustainability funding that they can access and use to encourage action by the owners corporation
- Reduced legislative obligations for apartments (under the minimum rental standard Victoria) to supply energy efficient heating

Opportunities to leverage

- Can raise ideas with the owners corporation/ committee
- Can join the committee and can directly contact the manager
- Efficiency upgrades in the common areas will result in lower owners corporation utility bills. Because the saving is for the owners corporation as a whole, the savings will not go directly back into the pocket of the owner. However, it will reduce overall and long-term running costs which could lead to lower or more stable owners corporation fees. Especially in larger owners corporations, there may be opportunities to monitor the utility saving costs, and reinvest these savings into other tangible benefits for the owners corporation. This could help to amplify the feeling of benefit
- Potential to make their investment property more appealing to future renters and buyers
- Access the Victorian Governments Home Heating and Cooling Upgrades Program aimed at rental properties
- Leverage tax benefits available to rental providers who make upgrades

Image: Amy Brand

COMMITTEE

The committee consists of elected lot owners or lot owners' proxies. The committee can make decisions on all matters delegated to it by the owners corporation except on matters that the owners corporation has determined must be decided at a general meeting.

What is a lot

A lot is a part of land, buildings and airspace on a plan of subdivision that can be separately owned and sold.

In multi-unit dwellings, most often, a lot will be an townhouse, a unit or an apartment within a broader building or complex.

Challenges

- Not knowing where to start and what interventions will maximise benefit
- Finding trusted technical information tailored to the apartment context that can be passed through to the owners corporation
- Finding trusted sustainability suppliers who understand the strata context
- A lack of strata specific sustainability funding
- Sustainability initiatives being seen by many owners as a nice to have (outside the Maintenance Plan)
- The need for majority approval by the committee or owners corporation, depending on the size/cost implications of the decision
- Physical limitations of the building (e.g. typically the space on the roof is not large enough to accommodate solar that can adequately cover the energy use of common areas and apartments). Many of Victoria's existing multi-unit residential buildings were not constructed with sustainability in mind and may be limited in what can be done to retrofit them to become more sustainable
- Having the time and skills to effectively communicate complex strata processes, technologies, costs, and benefits
- Engaging enough owners in the voting process for special and ordinary resolutions within the set time periods

Opportunities to leverage

- Has some independent decision-making powers (but more costly decisions to be referred to all owners as a special resolution)
- Likely to have knowledge of the necessary governance and decision-making protocols
- Generally understand the cultural norms and processes within their owners corporation
- Can benefit from the lift in property values
- Can sell the opportunity to keep their building competitive with newer buildings

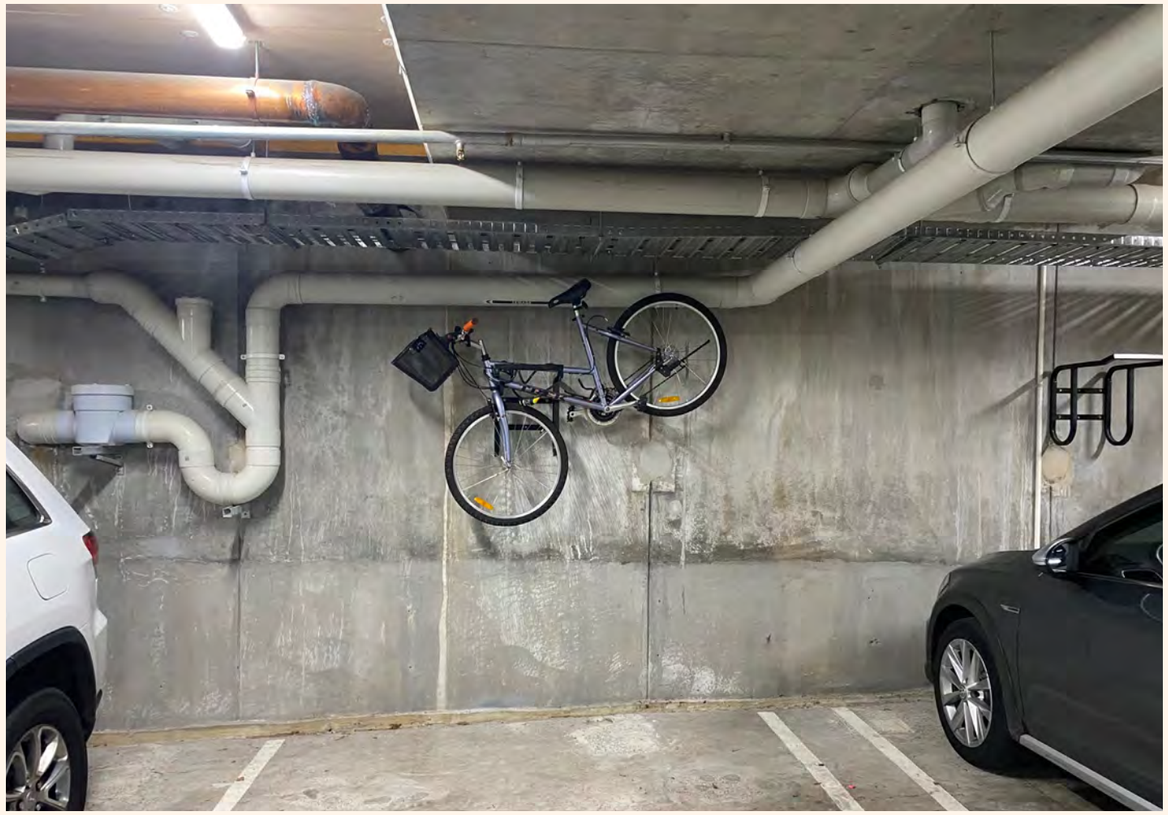
A Role for Councils

Melbourne research conducted by Swinburne University found that when asked about who was the one most trusted information provider to provide reliable and useful information about undertaking sustainable retrofits (for their apartment building), their local council (23%) was mentioned most often. This was followed by the owners corporation manager (15%), non-profit organisations (14%), industry association (9%) and the state government (7%).

Images: Kim Landy ©

OWNERS CORPORATION MANAGERS

Owners corporation managers are employed by the owners corporation to help manage the running of the building and the owners corporation in line with legislated processes.



Challenges

- The breath and depth of their role. Managers have to be across a huge amount of information across many buildings/owners corporations. It can be hard to find time to effectively support initiatives beyond core business, and to be adequately paid for their time
- The role of the manager is opaque, and in many cases, not well understood by owners. Much of the work done by the manager is invisible to the average owner. High expectations from some owners (who may expect the manager to be an expert on everything, including sustainability), can sometimes erode trust between the manager and the owner/s
- Finding trusted technical information tailored to the apartment context that can be passed through to the owners corporation
- Understanding and being able to explain the cost-benefit of retrofits to the committee/ owners corporation
- Finding trusted sustainability suppliers
- Lack of strata specific sustainability funding, programs or support they can promote to clients
- The manager has no decision-making powers and can only support the requests of the owners corporation/committee
- Managers are used to dealing with the complexity of the legislation but are not always proficient at communicating this in plain language
- Easy access to timely accurate information about upcoming sustainability legislation and trends (gas transition timeline, likely trajectory of electric vehicle uptake, timing for existing embedded networks being able to access GreenPower etc)

Opportunities to leverage

- Owners corporation managers are the only external and easily identifiable stakeholder who has contact details for all owners. Research by Swinburne University showed email was bay far the most preferred way of receiving information about sustainable retrofits
- They generally have a relationship and contact with committee members, and can play an influencing and advisory role
- They hold expert knowledge about governance and decision-making protocols as outlined in the Owners Corporation Act. They can guide owners corporations through their sustainability decision-making processes, with awareness to the cultural norms and processes within the buildings they manage. Importantly, they can remind owners that the Owners Corporation Act includes the directive that ‘An owners corporation must not make rules that unreasonably prohibit the installation of sustainability items on the exterior of a lot’
- They are in a position to distribute information and education about sustainability initiates to a large audience
- Could potentially develop sustainability services for their clients and build relationships with high-quality service providers

Images: Amy Brand (left), Kim Landy (top) ©

There are key points in the building management life-cycle where owners corporation managers could support sustainability outcomes.

On boarding new buildings

Collaboration with developers

If engaged early enough, strata managers may be able to influence:

- Ensuring the rules encourage or do not preclude sustainability retrofits
- Handover, ensuring the new strata manager receives adequate documentation about the buildings sustainability features
- Encourage developers to highlight sustainability features as part of the handover to residents, including at the Special General Meeting

Maintenance Plan development

Seek to work with Maintenance Plan contractors who are aware of sustainability and can schedule efficient, all-electric and sustainable technology replacements at end of life of current equipment.

Inaugural committee meeting

- Work with the committee to understand if they have a sustainability vision for the building.
- Work with committee to design community connection events and tools to help develop a resilient, caring community of residents and owners.

On boarding existing buildings

Review

Undertake a document review to:

- Check the owners corporation is on a negotiated electricity contract and are getting a good price
- Look for recent unusual spikes or jumps in utility usage. These might indicate infrastructure issues that the committee would need to investigate
- Understand any current issues or projects the committee is working on

Meeting the committee

- Understand if the committee has sustainability goals or ideas
- Provide sustainability education materials, including the outputs infographics and guides from the Unlocking Sustainable Strata project, and YEF's Solar for Apartments Guide
- If they are not already, recommend a switch to 100% renewable energy contract

Ongoing management

AGM

- Send out relevant sustainability education materials with the AGM papers
- Ensure any sustainability achievements are reported at the AGM in either the Manager or Committee Report

Committee meetings

- At the first committee meeting following the AGM, revisit priorities for the committee for the upcoming 12 months, including confirmation of any sustainability or community resilience projects
- Link committee members with trusted providers of sustainability services
- Managers can support committees to survey their communities at regular intervals understand the appetite for sustainability and priority projects.

Understanding the bigger picture

To help keep lot owners informed, managers need access to timely, accurate information about upcoming sustainability legislation and trends (gas transition timeline, likely trajectory of electric vehicle uptake, timing for existing embedded networks being able to access GreenPower etc).

Staying abreast of this information is a real challenge when sustainability is not the core business of an Owners Corporation Manager.

FACILITY MANAGERS

Facility Managers (FM) are employed by the owners corporation to manage the infrastructure and physical aspects of the building.

FMs are not the norm, and are generally only present in larger buildings. For many buildings FMs are only part time and will not spend a lot of time on-site

Facility Managers Good Practice Guide

There has been some attempt to raise sustainability knowledge within the FM sector through the Good Practice Guide. The Facility Management Association have generally been advocates for sustainability from a policy perspective but it's unclear how deeply sustainability and efficiency knowledge has penetrated into the sector.

Challenges

- The role of the FM varies from building to building. Some FMs take on a more technical, hands on role to ensure the infrastructure is optimised, while others are more focused on day-to-day building administration (e.g. helping residents who get locked out of their apartment and coordinating with cleaners)
- The FM may not see driving sustainability improvements as part of their role or have the expertise to provide advice and recommendations
- The FM has no decision-making power, beyond basic maintenance decisions, unless delegated by the owners corporation
- Finding trusted technical information tailored to the apartment context that can be passed through to the owners corporation
- Understanding and being able to explain the cost-benefit of retrofits to the committee/ owners corporation
- Finding trusted sustainability suppliers to recommend or refer to clients
- A lack of strata specific sustainability funding, programs or support that they can promote to their clients

Opportunities to leverage

- Working in partnership with Facilities Management Association to provide more sustainability and efficiency training to FMs
- FMs that work on-site regularly often have relationships with the committee and deep working knowledge of the building
- Well positioned to raise sustainability and efficiency ideas with the committee or engaged owners
- Providing sustainability services to clients could grow the reputation of the business or increase income (although this is yet to be fully tested)

Images: Image courtesy of City of Melbourne (left) ©. Kim Landy (top). ©

To be comfortable, affordable to run, and respond to climate change, our residential buildings need to be highly efficient, all-electric, powered with renewable energy, be warm in winter and cool in summer.

The technical solutions needed to achieve these ambitions are available in the marketplace today and can be applied to the strata sector.

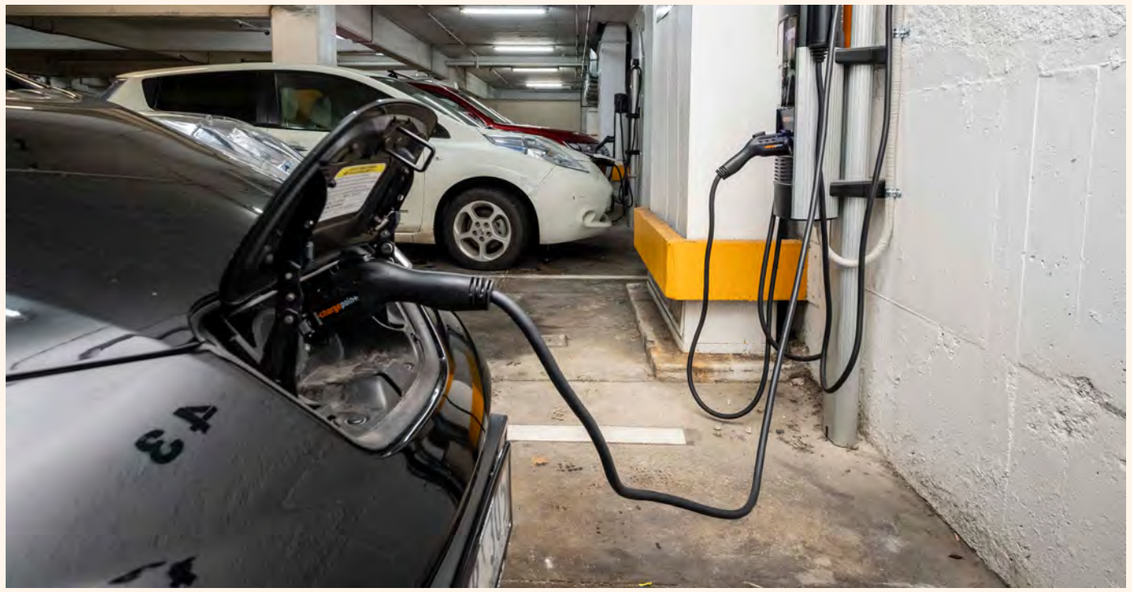
Image courtesy of City of Melbourne ©

As part of the Unlocking Sustainable Strata project, 12 sustainability audits were undertaken, across four typologies; townhouses, low rise, medium rise, and high rise apartment buildings. In addition to common area audits, six apartment/townhouse audits were undertaken to understand opportunities in private spaces.

Findings from the audits were combined with the information sets listed below to develop a master list of retrofit opportunities (see over page).

Information sets:

- Smart Blocks case studies
- Smart Green Apartment case studies
- SOCs and Blocks case studies
- Experience of HIP V. HYPE Projects and Sustainable Buildings teams in developing new sustainable apartments, and in delivering ESD assessments of new apartment buildings



Opportunities were categorised as being largely driven by the apartment owner or by the owners corporation.

Consideration was also given the to age of the building. Due to changes to the building code, buildings constructed after 2005 may find the opportunities with an asterisk were integrated into the original build.

Lastly, it was recognised that different opportunities are more relevant to particular typologies. As such, an opportunities infographic was developed for each building typology (see appendix 3).

A guide to electrifying your apartment building or townhouse

The world is electrifying but few multi-unit residential buildings have made the switch from gas to all-electric. To support this transition, the Unlocking Sustainable Strata project developed a strata specific guide.

Images courtesy of City of Melbourne ©

What Needs to be Retrofitted?

Apartment retrofit opportunities

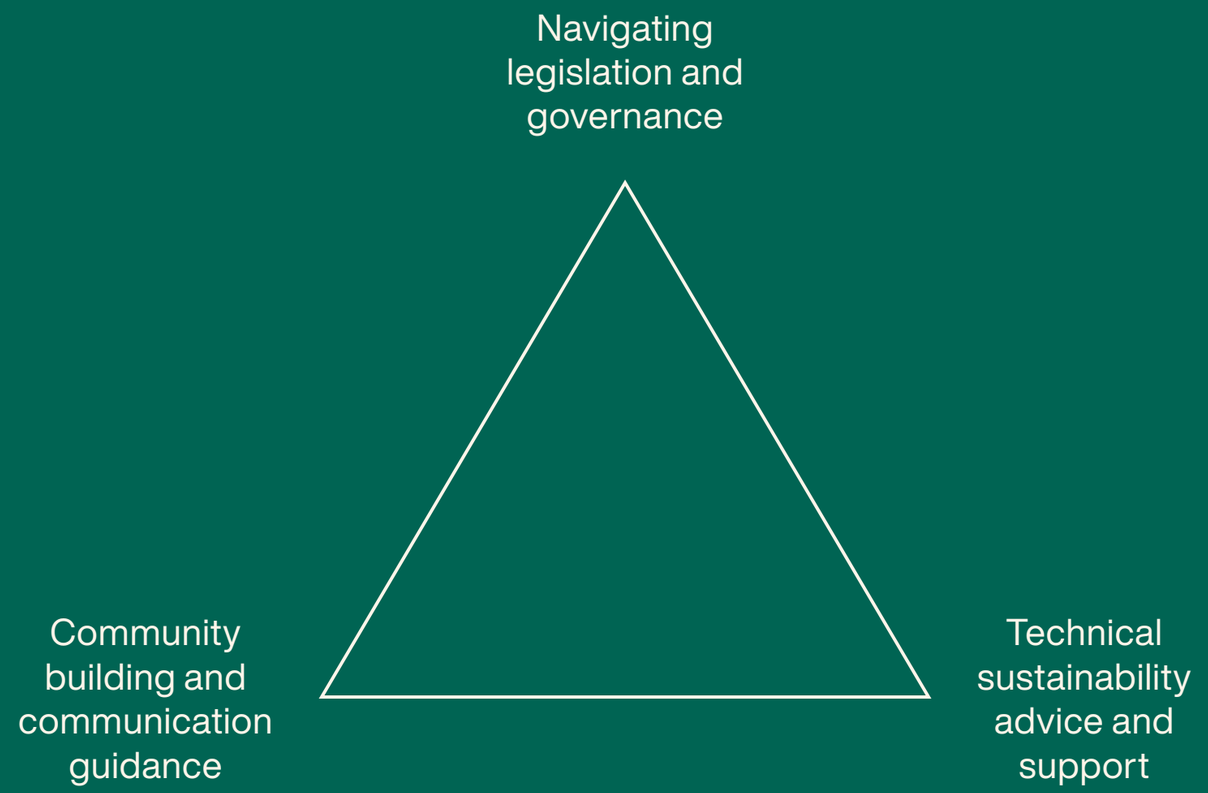
- Install double glazing
- Install external shading
- Insulate your ceiling (if you're on the top floor)*
- Reduce water use*
- Switch to all-electric cooking
- Switch to efficient, electric heating and cooling*
- Switch to LED lighting*
- Upgrade to an all-electric efficient hot water system

Owners corporation (common area) opportunities

- Buy renewable electricity for your common area
- Install a Building Management System
- Install a water tank*
- Install an efficient air conditioning system
- Install bike parking*
- Install or facilitate electric vehicle charging
- Install solar
- Let nature cool your building by planting trees, shrubs and vines
- Maintain your solar panels
- Start a community garden in your common area
- Switch to a centralised hot water heat pump
- Switch to LED lighting*
- Tune your building
- Turn food scraps into a resource by installing a common area worm farm or compost bin
- Upgrade outdoor lighting*

Image: Amy Brand

There are three key areas that need to be addressed to increase resilience and drive retrofitting in existing apartment buildings and townhouses.



Through the Unlocking Sustainable Strata project, a range of interventions were tabled and are summarised here, along with a potential model for how the interventions could be stitched together into an ongoing program.

Further investigation, and engagement with lot owners, is needed to refine the ideas and program model.

1. Develop a Repository

Developing and hosting a centralised, online repository of sustainable strata information, resources and case studies that is trusted, maintained and updated over the long-term.

2. Document Case Studies

Stories and case studies will be needed to build the confidence of committees and owners corporations to invest in retrofits. These stories and case studies should cover the technology, decision-making processes and financing across townhouse, low-, medium-, and high-rise buildings.

They will need to highlight the benefits experienced by a range of stakeholders, owner-occupiers, rental providers, renters and, if relevant, owners corporation managers where they experience increased job satisfaction in the process of supporting positive change.

3. Guides and Proformas

As momentum grows behind sustainability retrofits in apartments, there will be opportunities to produce and maintain proformas and guides to short-cut the research owners corporation committees generally need to undertake.

For example, guidance on how a committee can inform and campaign to their owners corporation about a major retrofit decision that is going to a ballot. To get cut-through, communication is needed in the lead up to and during the legislated 14 days the ballot is open. Engaging the whole owners corporation in this ballot process is a huge challenge given the sheer number of people, and the fact that many do not live on site.

Another example is retrofitting double-glazed windows. owners corporations want to maintain a consistent look to the building façade but cannot always raise enough funds to retrofit the entire building in one go. Developing a template for window retrofit guidelines will allow owners to retrofit their windows anytime their personal funds allow, without negatively impacting the look of the façade. The template would guide the committee to specify size, style, colour and acceptable materials for any window retrofits.

In coming years, the recently created guides (YEF's Solar for Apartments Guide, USS All-electric Guide and USS sustainability infographics) will need to be updated as new information and technology becomes available.

Image: Amy Brand

4. Education and Events

Apartment owners, particularly committee members or those retrofitting their own homes, will benefit from connecting with and learning from each other, suppliers and experts. This could occur at events and programs lead by Strata Community Association (SCA), local or state governments, or even more formal learning institutions such as TAFEs, or a combination.

5. Electrification Research

Apartment buildings need to electrify, including making the switch to electric vehicle charging infrastructure. Owners corporations need information so they can financially plan for electrification costs.

Currently, there is little research to help owners corporations understand and plan for electrification costs. Information about the electricity load profiles of existing buildings, how these load profiles will change with full electrification, and therefore the likely costs of upgrading electrical services, switchboards and substations.

Research is needed to address this need in low, medium and high-rise buildings, and case studies of buildings that switch to all-electric are need to drive confidence in the process. Electricity distributors have a role too and could participate in this research.

6. Climate Resilience

Develop a deeper understanding and awareness of climate resilience and adaptation needs in the apartment context.

With the growing frequency, severity, and duration of extreme weather events because of climate change, apartment buildings and communities need to understand and prepare for their unique risks.

Research from The University of Melbourne demonstrated that apartment residents are particularly exposed heat stress, which will only be exacerbated as heatwaves and consecutive hot days increase.

When buildings convert to all-electric, will they be able to supply enough electricity to ensure all residents can run their air conditioners?

Could solutions like the Climate Safe Rooms, along with back-up batteries, be applied in an apartment context to keep residents cool during heatwaves and keep them warm in winter?

7. Retrofitting Action Research

Action research to track and understand how retrofitting occurs in the apartment context, and what additional supports are needed to accelerate the process.

Due to the lack of ongoing programs for apartment owners and committees, there is a knowledge gap as to the process to drive sustainability retrofits, including the duration it takes to make and implement decisions.

Anecdotal evidence suggests long-lead times for decision making and a degree of burnout amongst committee members. Of course, strata managers are often involved in these processes, but they do not have the time or the remit to document, gather insights across buildings and report back. And in some cases, committees drive projects quite independently.

Action research could identify specific needs that will accelerate retrofits, and produce much needed case studies, stories and advice.

Image: Kim Landy ©

8. Community Connection

Alongside technical sustainability information, owners corporation committees need advice and resources to help them connect their community (this includes those living on-site and rental provider owners), and make good decisions together.

Community connection underpins climate resilience but in the context of strata, it's even more important. Community connection and the ability to work together is critical to good decision-making. In turn, good decision making is required to get the agreement and funding to undertake sustainability retrofits.

While some apartment communities are well connected, that's not always the case. Research undertaken during the covid-19 pandemic revealed high-levels of loneliness in apartment buildings, and insights about how this can be combated.

Action research is needed to understand how communities are created and maintained in apartment buildings, how to ensure renters are not left out, and what tools or supports are needed to make community building in apartments wide-spread.

9. Mentorship Program

The process of driving apartment building retrofits is long; requires a degree of technical sustainability knowledge; an understanding of strata legislation; and the ability to engage, educate, and essentially convince a large group of people to agree and invest their money.

This process is largely driven the committee, with support from their Owners Corporation Manager. Most committees are run by volunteers with limited time. Reports of burnout are relatively common.

A mentorship program could support representatives from owners corporations through the retrofit process, bringing in guest experts to walk them through all the different elements of the change process as described in paragraph one above.

The mentorship program would have co-benefits of connecting committee members across building so they can support each other, and the opportunity to document the experiences, needs and challenges of these owners corporations as they move through the process to help inform others following in their footsteps.

A mentorship program could be designed and then rolled out across multiple municipalities.

Image courtesy of City of Melbourne ©

10. Strata Sustainability Fund

Develop packages so that existing state sustainability funding is accessible and explicitly offered to apartments and townhouse complexes governed under the Owners Corporation Act. This council include Solar Victoria funding, electric vehicle charging programs and Victorian Energy Upgrades

11. A Partnership Approach

A partnership approach that includes SCA (Vic), State and local governments, could efficiently deliver a program which leverages the particular strengths, resources and communication channels of the different stakeholders to maximise impact.

Through partnership effective advice, education and mentorship could be delivered, alongside much needed research so that the strata sector can contribute to Victoria's emission targets and adaptation goals.

12. Re-Engage and Support FMA

Re-engage Facilities Management Australia to ensure FMs are increasingly upskilled in terms of sustainability. Update the Good Practice Facilities Management Guide and associated training.

13. Educate Maintenance Plan Consultants

Education for consultants engaged to develop Maintenance Plans for new buildings to ensure they are specifying efficient all-electric technologies at the end of life of current infrastructure.

14. Educate the Sustainability Sector — Consultants and Suppliers

Opportunities for the sustainability sector to better understand the opportunities and challenges of working with owners corporations. If demand for sustainability services in apartments increases, sustainability consultants and technology providers need to be equipped to deliver. Consultants and tech providers will be able to design better-fit solutions if they are engaged in dialogue about sector challenges and needs.

15. Embedded Network Legislation

Through the second phase of the Embedded Network Review, ensure the General Exemption Order makes it easy for existing buildings with embedded networks to access renewable energy at competitive rates.

Image courtesy of City of Melbourne ©

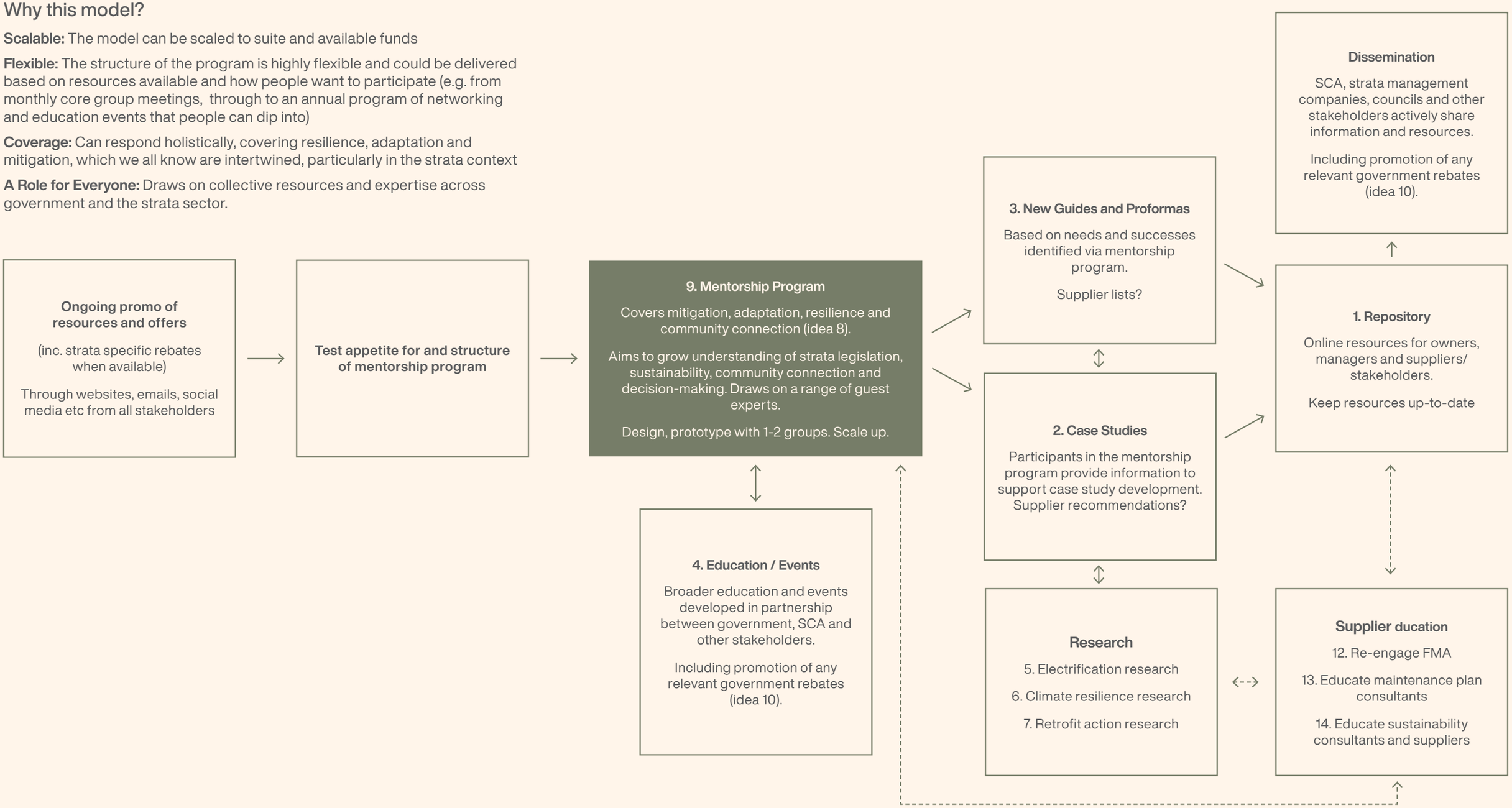
Why this model?

Scalable: The model can be scaled to suite and available funds

Flexible: The structure of the program is highly flexible and could be delivered based on resources available and how people want to participate (e.g. from monthly core group meetings, through to an annual program of networking and education events that people can dip into)

Coverage: Can respond holistically, covering resilience, adaptation and mitigation, which we all know are intertwined, particularly in the strata context

A Role for Everyone: Draws on collective resources and expertise across government and the strata sector.



APPENDIX

THIS REPORT HAS DRAWN ON INSIGHTS FROM PREVIOUS RESEARCH ALONG WITH PAST AND CURRENT APARTMENTS PROGRAMS.

Research, Reports And Information

- Multi-unit Residential Facilities Management Good Practice Guide, Facilities Management Australia (2012)
- Understanding the knowledge and information requirements for sustainable retrofits: A two stage study of apartment owners in Melbourne, Australia. Swinburne University of Technology (2012)
- Future Living Community Engagement Findings, City of Melbourne (2013)
- Apartments, Co-ownership and Sustainability: Implementation Barriers for Retrofitting the Built Environment, Journal of Environmental Policy & Planning (2013)
- Accelerating Net-Zero High-Rise Residential Buildings in Australia, Pitt and Sherry (2016)
- Greening Strata Title Schemes in WA, Curtin University (2011)
- Adapting strata and community title buildings for climate change, Griffith University and NCCARF (2013)
- Living well in greater density, FutureCities UNSW (2010)
- Consumer Affairs Victoria website, owners corporation pages
- Delivering Sustainable Solutions for Apartments, Final Report for the Higher Density Residential Efficiency Solutions (Hi-RES) Project, City of Melbourne (2012)

Past Programs and Initiatives

- City of Port Phillip, SOCS and Blocks: SOCs (Sustainable Owners Corporations) and Blocks which helps apartment blocks understand how they can improve the sustainability of the buildings are designed to work together with the community to take action on climate change
- Green Strata: NSW based sustainable strata program and advice led by Christine Byrne
- City of Melbourne, SLiC and Hi Res: Research projects into sustainable strata
- City of Melbourne/City of Sydney/Strata Community Association, Smart Blocks: A national programs, Smart Blocks provided an interactive online toolkit to guide energy improvements for common areas

Current Programs and Initiatives

- City of Sydney, Smart Green Apartments: An award-winning, targeted program that helps make buildings more energy and water efficient
- Waverley Council, Building Futures: A free Council program aiming to help selected larger strata buildings (35+ units) save money on their energy and water bills and to improve environmental performance

Image: Louis Manley ©

WHAT IS AN OWNERS CORPORATION?

Roles and decision-making in most multi-unit dwellings are governed by the Owners Corporations Act 2006. The Act is 188 pages long and sets out a complex set of regulations under which owners corporations function. While no more complex than any other legislation, it can be challenging for the everyday apartment owner to understand.

Following is a very high-level summary of key roles and decision-making mechanisms summarised from the [illegible]. It has been included to aid the comprehension of readers who are unfamiliar with the functions of owners corporations but is not intended to be instructional.

An owners corporation (formerly body corporate) manages the common property of a residential, commercial, retail, industrial or mixed-use property development.

An owners corporation must:

- Manage and administer the common property
- Repair and maintain the common property, fixtures and services
- Take out and maintain required insurance
- Raise fees from the lot owners to meet financial obligations
- Prepare financial statements and keep financial records
- Provide owners corporations certificates when requested
- Keep an owners corporation register

It must also:

- Carry out any functions and duties under the Owners Corporations Act 2006, the Owners Corporations Regulations 2018, the owners corporation rules and any other law or regulation
- Ensure compliance with the Act, the Regulations and the rules

The Four Levels of the Owners Corporation

The owners corporation operates at four levels:

1. The owners corporation, consisting of all the lot owners. It:
   + Keeps control of all decision-making
   + Can delegate powers, but only for matters that do not require a unanimous or special resolution or that are required to be dealt with
   + Can overturn an earlier decision of the owners corporation. Only the owners corporation can do this
   + Can appoint sub-committees to advise the owners corporation. Sub-committees cannot make decisions.
2. The committee, consisting of elected lot owners or lot owners' proxies. The committee can make decisions on all matters delegated to it by the owners corporation except on matters that the owners corporation has determined must be decided at a general meeting.
3. A delegate of the owners corporation. For example: the chairperson, the secretary, a committee member, a lot owner, or an employee of the owners corporation. **A delegate:**
   + Can make decisions within the limits set by the owners corporation
   + Cannot overturn a decision of the owners corporation or the committee.
4. A delegate of the committee. The committee may delegate to a lot owner, a manager or sub delegate to a member of the committee.

Decision-making in owners corporations

The owners corporation makes a decision or resolution when its members vote at a meeting or by ballot.

Decisions can be made by ordinary, special or unanimous resolutions, each requiring different percentages of the total votes.

Appendix 2:
Roles and decision making in strata

What about renters?

Renters do not have an official role in decision-making within the owners corporation.

They should receive a copy of the owners corporation rules when they move in and should be given contact details for the committee. Anecdotal evidence suggests this does not always occur.

The role of an Owners Corporation Managers

Many owners corporations use paid professional managers to assist with finances, insurance, administration, meetings and maintenance.

An owners corporation may appoint a manager to carry out any powers or functions it is able to delegate (matters that require an ordinary resolution and that do not require a general meeting). The owners corporation usually delegates powers to a manager in a contract or instrument of delegation. This enables the manager to make decisions on behalf of the owners corporation. The appointment must be in writing or through a written contract.

All professional managers must:

- Register with the Business Licensing Authority
- Be appointed by an instrument or by contract of appointment
- Act honestly and in good faith
- Have professional indemnity insurance
- Hold all owners corporation money in trust
- Account separately for money held for each owners corporation they manage
- Report to the owners corporation at each annual general meeting
- Report to the committee as required
- Lodge an annual statement with the Business Licensing Authority.

The role of a Facilities Managers

The Facilities Manager organises and coordinates the operational management of buildings and facilities in order to ensure the proper and efficient operation of all its physical aspects, creating and sustaining safe and productive environments for residents.

In residential buildings this is typically conducted at all times of the day, every day of the year.

The Facilities Manager can consist of a single individual or a team, with services able to be delivered by dedicated ‘in-house’ professionals or ‘out-sourced’ in whole or part to external providers.

Typically, facilities managers are only employed in larger multi-residential buildings.

More information

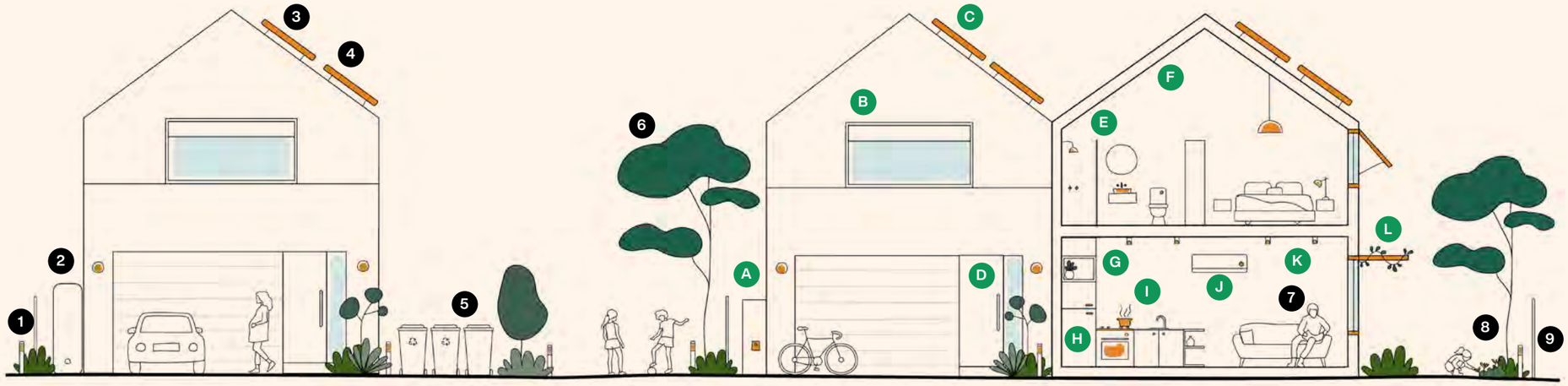
For more information about decision-making in owners corporations visit the Consumer Affairs Victoria website or read the Guide to owning, managing and living in an owners corporation.

For townhouse owners,
owners corporations & managers

UNLOCKING SUSTAINABLE TOWNHOUSES

You deserve an efficient, comfortable, safe and healthy home. You deserve clean energy and affordable bills. Identify the efficiency and sustainability opportunities that are right for your townhouse. Consult with your owners corporation committee about making improvements in the common area too.

Don't forget to check if you're eligible for Victorian Energy Upgrades or Solar Victoria rebates.



The Victorian Owners Corporation Act Supports Sustainability

Window shading, double glazing, split system air conditioners, and heat pumps all require external infrastructure visible from the outside of your building. You may need permission from your owners corporation prior to retrofitting these items.

Remember, the Victorian Owners Corporation Act states that "An owners corporation must not make rules that unreasonably prohibit the installation of sustainability items on the exterior of a lot".

Ready to retrofit, not sure where to start?

Share this guide with your owners corporation committee and manager to start the discussion. For more information about how to work with and make decisions with your owners corporation, visit the Owners Corporation on the Consumer Affairs Victoria website.

Plan for an All-Electric Building

We are living in the clean energy revolution. Rooftops are now resources and in the near future, an electric vehicle will act like a big battery. Our homes will be all-electric, powered by renewable energy and have cleaner indoor air that's good for our health.

It's important that apartment buildings aren't left behind. Unlocking Sustainable Strata's Guide to Electrifying Your Apartment Building will help you and your owners corporation committee electrify common areas and private townhouses. It outlines the steps to take and provides options for the best all-electric retrofit technologies across heating, hot water, cooking and more.

WHAT YOUR OWNERS CORPORATION COULD DO

1. Upgrade outdoor lighting*
2. Install a water tank*
3. Install solar
4. Maintain your solar panels
5. Turn your food scraps into a resource
6. Let nature cool your building
7. Make it easy for residents to live sustainably
8. Start a community garden in your common area
9. Buy renewable electricity for your common area

WHAT YOU COULD DO IN YOUR TOWNHOUSE

A. Upgrade to an all-electric efficient hot water system
B. Install double glazing
C. Install solar
D. Draught proof your townhouse
E. Reduce water use*
F. Insulate your ceiling*
G. Switch to LED lighting*
H. Buy electric, energy efficient appliances
I. Switch to all-electric cooking
J. Switch to efficient, electric heating and cooling*
K. Buy renewable electricity
L. Install external shading

* If your building was constructed after 2005, these actions may not be relevant to you.

Illustration by Nayan Puri

Supported by: Merri-bek City Council, City of Yarra, strata community association VIC, HIP V. HYPE, The Knight

For townhouse owners,
owners corporations & managers

Got the basics? Check out our detailed outline below for more information to assist with your retrofitting journey.

OWNERS CORPORATIONS

1. Upgrade outdoor lighting*

Outdoor lighting can run up to 12 hours a day, consuming significant amounts of electricity. Switching to LED lights is one of the lowest cost, highest benefit actions you can take, using up to 80% less electricity.

When replacing or upgrading, make sure the waterproof seals around the fittings are intact and fitted properly.

2. Install a water tank*

Rainwater is a valuable natural resource. Using rainwater can reduce water bills, provide an alternative supply during water restrictions, and help maintain a green, healthy common area garden.

Slimline water tanks are a perfect solution for townhouse complexes where space is at a premium.

3. Install solar

The vast majority of Australians want their homes powered by renewable energy, so it's no surprise that we have the highest penetration of solar PV per capita in the world. The average solar system in Australia pays for itself within 4 years, and after that, the electricity it generates is free.

New Solshare technology is making it easy for owners corporations to install one solar system to power the common area and individual apartments. This means cutting electricity costs for common areas and for residents. The Yarra Energy Foundation has developed a Guide to Solar for Apartments to help you understand the process.

4. Maintain your solar panels

Solar PV and solar hot water systems require some maintenance to operate efficiently. The surface of the panels should be cleaned every 6-12 months. Many local solar businesses offer cleaning and maintenance services.

5. Turn your food scraps into a resource

Check if your council or waste contractor offers a food and garden organics collection to turn your food waste into compost. If not, consider a installing a common worm farm or compost. If well managed, these systems have little to no smell as they transform food scraps into nutrients that can be used in gardens.

6. Let nature cool your building

Concrete driveways and paving act like heat traps, making your townhouse hotter, increasing the need for air conditioning. Planting trees and plants through the common area will shade the concrete and help to reduce the temperature of air moving into homes.

Plants and soil provide a cooling effect through the process of evapotranspiration, and plants can also be used to provide shade and funnel cooling breezes. Shading to the north of a home should be provided by deciduous plants which lose their leaves in winter.

7. Make it easy for residents to live sustainably

Some sustainability upgrades - double glazed windows and window awnings - provide a huge benefit to residents. They also impact the look of your complex and therefore typically need approval from the owners corporation.

Often there is a desire to maintain a consistent look to the building facade. To do this, owners corporations can develop style guidelines that specify colours, materials, size of the windows or awnings. This gives owners the freedom to undertake upgrades, while respecting the visual amenity of other occupants.

8. Start a community garden in your common area

Communal gardens provide health and wellbeing benefits. Residents can access fresh food and green space, stay active maintaining the garden, and connect socially. Knowing your neighbours makes your complex safer and builds social resilience.

Start with a small garden, managed by a group of residents. Expand the garden as interest grows.

9. Buy renewable electricity for your common area

Become part of Victoria's clean energy transition and support the green economy. The Green Electricity Guide can help you select a sustainable electricity retailer.

TOWNHOUSE OWNERS

A. Upgrade to an all-electric efficient hot water system

Hot water systems are the second highest user of energy in Australian homes. Gas is no longer the most efficient way to heat water and is being phased out across Victoria to support the transition to zero emissions.

If you have a gas hot water system servicing your townhouse, the best replacement is a heat pump hot water system. Electric instantaneous hot water systems are also good, but cost more to run.

For more information, visit the A Guide to Electrifying your Apartment Building or Townhouse.

B. Install double glazing

Double glazing can improve the thermal performance of windows by around 30%, and reduce outside noise entering your townhouse.

Windows can be made from timber, aluminium or uPVC. Both timber and uPVC have excellent thermal properties. However, timber windows require maintenance, whereas uPVC windows do not.

C. Install solar

The vast majority of Australians want their homes powered by renewable energy, so it's no surprise that we have the highest penetration of solar PV per capita in the world. The average solar system in Australia pays for itself within 4 years, after that the electricity it generates is free.

You may want to install solar just for your townhouse, or you could talk to your owners corporation committee about installing solar for your whole complex using Solshare technology. Before installing solar, remember to check your Plan of Subdivision to see if you own the roof or if it belongs to the owners corporation.

D. Draught proof your townhouse

Up to 25% of winter heat loss from homes is caused by drafts (gaps and cracks in walls and around doors and windows). Draught proofing will make your home more comfortable and cheaper to heat and cool.

Draught proofing is something you may be able do yourself with products from your local hardware shop or you can employ a tradesperson. The Sustainability Victoria website has useful guidance.

E. Reduce water use*

Reducing hot water use will not only cut your water bills, it will also reduce your energy bills.

In Victoria we should be using a maximum of 155L of water per person per day. If you are using more than that, first make sure you have a modern, low flow showerhead. You can also upgrade your taps or you can DIY install flow restrictors from your local hardware shop. Lastly, replace your single flush toilet cistern with a low water, dual flush alternative.

When purchasing, look for the WELS water star rating on taps, showerheads, toilets, dishwashers and washing machines.

You could also look to install a rainwater tank to use for toilet flushing and/or to water your garden.

F. Insulate your ceiling*

Effective ceiling insulation is the best barrier against the summer heat and the winter cold, saving you up to 20% on your heating and cooling energy costs.

If you have a hatch into your ceiling space, you can have bulk insulation installed. Before calling an installer, check if you have any insulation already installed. If your insulation is older than 15 years, it will likely need to be replaced.

If your ceiling cavity can't accommodate insulation, and you have a dark coloured roof, consider working with your owners corporation to paint the roof in a light or reflective coating.

G. Switch to LED lighting*

LED lights use up to 80% less electricity. Switching to LEDs is one of the lowest cost, highest benefit actions you can take.

Halogen downlights and old incandescent bulbs are the most energy guzzling and should be replaced immediately. Fluorescent lights should also be switched to LED. This can be done on failure if funds are limited.

H. Buy electric, energy efficient appliances

Home appliances and equipment use an average of 25% of household energy. Buying highly efficient appliances will reduce ongoing electricity bills.

Energy star rating labels will help you purchase efficient appliances when shopping for an air conditioner, dryer, computer monitor, dishwasher, fridge, freezer, washing machine or TV. However, it is important to understand how to use the label, especially when comparing between different sized products.

I. Switch to all-electric cooking

Gas cooktops are inefficient and lead to poor indoor air quality. A child living with gas cooking in the home faces a comparable risk of asthma to a child living with household cigarette smoke. Switch to an induction cooktop and electric oven. For more information, see the Guide to Electrifying your Apartment Building or Townhouse

J. Switch to efficient electric heating and cooling*

Gas is no longer the most efficient way to heat your home and is being phased out across Victoria to support the transition to zero emissions. The best replacement is a split system air conditioner, which can also cool your home in summer. For more information, see the Guide to Electrifying your Apartment Building or Townhouse.

Ceiling fans are also a low cost way to cool your home, and can also be used in reverse during winter to push hot air down into living spaces.

During summer, remember to open all your windows when the temperature drops. This will cool your home overnight and reduce the need for air conditioning the following day

K. Buy renewable electricity

Become part of Victoria's clean energy transition and support the green economy. The Green Electricity Guide can help you select a sustainable electricity retailer.

L. Install external shading

Windows are the main source of heat gain into your home. Appropriate shading over windows and doors will help keep your home cool in summer, and allow sunlight in during winter. Shading is most effective when installed externally, so an awning will be more effective than an internal blind.

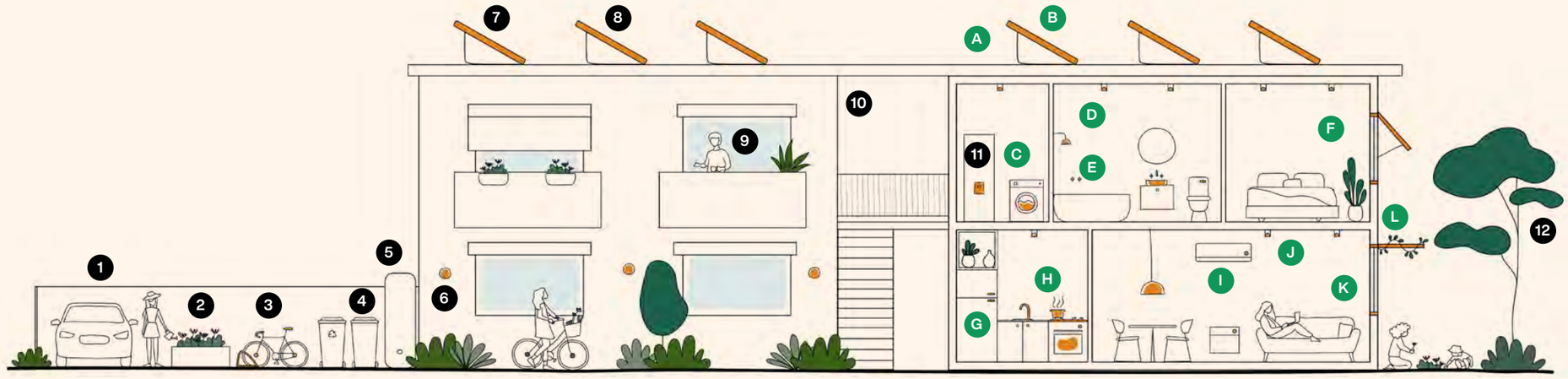
The type of shading you require will depend on the orientation of your windows and doors. The Your Home website provides advice to help you select the best solution.

Remember your owners corporation may have guidelines regarding changes to the building facade so remember to check with your owners corporation committee or manager before proceeding. Don't forget to talk with your neighbours too, they might like to follow your example.

UNLOCKING SUSTAINABLE APARTMENTS

You deserve an efficient, comfortable, safe and healthy home. You deserve clean energy and affordable bills. Identify the efficiency and sustainability opportunities that are right for your apartment. Consult with your owners corporation committee about making improvements in the common area too.

Don't forget to check if you're eligible for Victorian Energy Upgrades or Solar Victoria rebates.



The Victorian Owners Corporation Act Supports Sustainability

Window shading, double glazing, split system air conditioners, and heat pumps all require external infrastructure visible from the outside of your building. You may need permission from your owners corporation prior to retrofitting these items.

Remember, the Victorian Owners Corporation Act states that "An owners corporation must not make rules that unreasonably prohibit the installation of sustainability items on the exterior of a lot".

Ready to retrofit, not sure where to start?

Share this guide with your owners corporation committee and manager to start the discussion. For more information about how to work with and make decisions with your owners corporation, visit the Owners Corporation on the Consumer Affairs Victoria website.

Plan for an All-Electric Building

We are living in the clean energy revolution. Rooftops are now resources and in the near future, an electric vehicle will act like a big battery. Our homes will be all-electric, powered by renewable energy and have cleaner indoor air that's good for our health.

It's important that apartment buildings aren't left behind. Unlocking Sustainable Strata's Guide to Electrifying Your Apartment Building will help you and your owners corporation committee electrify common areas and private apartments / townhouses. It outlines the steps to take and provides options for the best all-electric retrofit technologies across heating, hot water, cooking and more.

WHAT YOUR OWNERS CORPORATION COULD DO

1. Install or facilitate electric vehicle (EV) charging
2. Start a community garden in your common area
3. Install bike parking*
4. Turn your food scraps into a resource
5. Install a water tank*
6. Switch to LED lighting*
7. Install solar
8. Maintain your solar panels
9. Make it easy for residents to live sustainably
10. Buy GreenPower for your common area
11. Switch to a centralised hot water heat pump
12. Let nature cool your building

WHAT YOU COULD DO IN YOUR APARTMENT

A. Insulate your ceiling (if you're on the top floor)*
B. Install solar
C. Upgrade to an all-electric efficient hot water system
D. Switch to LED lighting*
E. Reduce water use
F. Draught proof your apartment
G. Buy electric, energy efficient appliances
H. Switch to all-electric cooking
I. Switch to efficient electric heating and cooling
J. Buy renewable electricity
K. Install double glazing
L. Install external shading

* If your building was constructed after 2005, these actions may not be relevant to you.

Illustration by Nayan Puri

Supported by: Merri-bek City Council, City of Yarra, strata community association vic, HIP V. HYPE, The Knight

For low rise apartment owners,
owners corporations & managers

Got the basics? Check out our detailed outline below for more information to assist with your retrofitting journey.

OWNERS CORPORATIONS

1. Install or facilitate electric vehicle (EV) Charging

The transition to EVs has already begun, including a growing secondhand market. EVs are expected to match petrol vehicles on purchase price and range by the mid 2020s, so the demand for EV charging in apartment car parks is likely to skyrocket in just a few years.

EV charging can have a significant impact on your building's energy demand. The vast majority of EV charging is done at home overnight during off-peak times, when electricity prices are lowest. An EV charging installer will be able to determine the most appropriate solution for your building, taking future demand into consideration. Following, your committee can discuss whether charging stations will be funded by the owners corporation or by individual owners.

2. Start a community garden in your common area

Communal gardens provide health and wellbeing benefits. Residents can access fresh food and green space, stay active maintaining the garden, and connect socially. Knowing your neighbours makes your complex safer and builds social resilience.

Start with a small garden, managed by a group of residents. Expand the garden as interest grows.

3. Install bike parking*

More and more people are discovering the health, economic and environmental benefits of travelling by bike. Most new apartment buildings include bike parking so older buildings need to play catch up to maintain market appeal and to ensure bikes can be parked safely and in a tidy fashion in basements or other common areas.

Install bike hoops or racks to basements or common areas so bikes can be parked safely and securely, encouraging active transport. Bicycle Network Victoria or this guide from the City of Sydney can help find the right parking solutions.

4. Turn your food scraps into a resource

Check if your council or waste contractor offers a food and garden organics collection to turn your food waste into compost. If not, consider a installing a common worm farm or compost. If well managed, these systems have little to no smell as they transform food scraps into nutrients that can be used in gardens.

5. Install a water tank*

Rainwater is a valuable natural resource. Using rainwater can reduce water bills, provide an alternative supply during water restrictions, and help maintain a green, healthy common area garden.

Slimline water tanks are a perfect solution for apartment yards where space is at a premium.

6. Switch to LED lighting*

LED lights use up to 80% less electricity. Switching to LEDs is one of the lowest cost, highest benefit actions you can take.

Halogen downlights and old incandescent bulbs are the most energy guzzling and should be replaced immediately. Fluorescent lights should also be switched to LED. This can be done on failure if funds are limited.

7. Install solar

The vast majority of Australians want their homes powered by renewable energy, so it's no surprise that we have the highest penetration of solar PV per capita in the world. The average solar system in Australia pays for itself within 4 years, and after that, the electricity it generates is free.

New Solshare technology is making it easy for owners corporations to install one solar system to power the common area and individual apartments. This means cutting electricity costs for common areas and for residents. The Yarra Energy Foundation has developed a Guide to Solar for Apartments to help you understand the process.

8. Maintain your solar panels

Solar PV and solar hot water systems require some maintenance to operate efficiently. The surface of the panels should be cleaned every 6-12 months. Many local solar businesses offer cleaning and maintenance services.

9. Make it easy for residents to live sustainably

Some sustainability upgrades - double glazed windows and window awnings - provide a huge benefit to residents. They also impact the look of your complex and therefore typically need approval from the owners corporation.

Often there is a desire to maintain a consistent look to the building facade. To do this, owners corporations can develop style guidelines that specify colours, materials, size of the windows or awnings. This gives owners the freedom to undertake upgrades, while respecting the visual amenity of other occupants.

10. Buy renewable electricity for your common area

Become part of Victoria's clean energy transition and support the green economy. The Green Electricity Guide can help you select a sustainable electricity retailer.

11. Switch to a centralised hot water heat pump

Gas is no longer the most efficient way to heat water and is being phased out across Victoria to support the transition to zero emissions.

If your building has a centralised gas hot water system, switch to a heat pump. For centralised solar hot water systems, keep the existing solar system and replace the gas equipment with a new heat pump.

12. Let nature cool your building

Concrete acts like a heat trap, making your building hotter, increasing the need for air conditioning. Planting trees and plants throughout common spaces will shade the concrete and help to reduce the temperature of air moving into apartments.

Plants and soil provide a cooling effect through the process of evapotranspiration, and plants can also be used to provide shade and funnel cooling breezes. Shading to the north of a home should be provided by deciduous plants which lose their leaves in winter.

APARTMENT OWNERS

A. Insulate your ceiling (if you're on the top floor)*

Ceiling insulation is the best barrier against summer heat and winter cold, saving up to 20% on your heating and cooling energy costs. If you have a hatch into your ceiling, check if there is bulk insulation in place before calling an installer. If your insulation is older than 15 years, it will likely need replacing.

If your ceiling cavity can't accommodate insulation, and you have a dark coloured roof, consider working with your owners corporation to paint the roof in a light or reflective coating.

B. Install solar

See item 7 under Owners Corporation.

C. Upgrade to an all-electric efficient hot water system

Hot water systems are the second highest user of energy in Australian homes. Gas is no longer the most efficient way to heat water and is being phased out across Victoria to support the transition to zero emissions.

If you have a gas hot water system dedicated to your apartment, the best replacement is an electric instantaneous hot water system. For more information, visit the A Guide to Electrifying your Apartment Building or Townhouse.

D. Switch to LED lighting

LED lights use up to 80% less electricity. Switching to LEDs is a low cost, high benefit action.

Halogen downlights and old incandescent bulbs are the most energy guzzling and should be replaced immediately. Fluorescent lights should also be switched to LED. This can be done on failure if funds are limited.

E. Reduce water use

Reducing hot water use will not only cut your water bills, it will also reduce your energy bills.

In Victoria we should use a maximum of 155L of water per person per day. If you are using more, first make sure you have a modern, low flow showerhead. You can also upgrade your taps or you can DIY install flow restrictors from your local hardware shop. Lastly, replace your single flush toilet cistern with a low water, dual flush alternative.

When purchasing, look for the WELS water star rating on taps, showers, toilets, dishwashers and washing machines.

F. Draught proof your apartment

Up to 25% of winter heat loss from homes is caused by draughts (gaps and cracks in walls, and around doors and windows). Draught proofing will make your home more comfortable and cheaper to heat and cool.

Draught proofing can be done by a tradesperson or using products from your local hardware shop. The Sustainability Victoria website has some useful guidance.

G. Buy electric, energy efficient appliances

Home appliances and equipment use an average of 25% of household energy. Buying highly efficient appliances will reduce ongoing electricity bills.

Energy star rating labels will help you purchase efficient appliances when shopping for an air conditioner, dryer, computer monitor, dishwasher, fridge, freezer, washing machine or TV. However, it is important to understand how to use the label, especially when comparing between different sized products.

H. Switch to all-electric cooking

Gas cooktops are inefficient and lead to poor indoor air quality. A child living with gas cooking in the home faces a comparable risk of asthma to a child living with household cigarette smoke. Switch to an induction cooktop and electric oven. For more information, see the Guide to Electrifying your Apartment Building or Townhouse

I. Switch to efficient electric heating and cooling

Gas is no longer the most efficient way to heat your home and is being phased out across Victoria to support the transition to zero emissions. The best replacement is a split system air conditioner, which can also cool your home in summer. For more information, see the Guide to Electrifying your Apartment Building or Townhouse.

Ceiling fans are also a low cost way to cool your home, and can also be used in reverse during winter to push hot air down into living spaces.

During summer, remember to open all your windows when the temperature drops. This will cool your home overnight and reduce the need for air conditioning the following day.

J. Buy renewable electricity

Become part of Victoria's clean energy transition and support the green economy. The Green Electricity Guide can help you select a sustainable electricity retailer.

K. Install double glazing

Double glazing can improve the thermal performance of windows by around 30%, and reduce outside noise entering your apartment.

Windows can be made from timber, aluminium or uPVC. Timber and uPVC have excellent thermal properties. However, timber windows require maintenance, whereas uPVC windows do not so they are usually a better solution for apartments.

Windows are an intersection between private and common property. Work with your owners corporation to confirm any agreements around aesthetic guidelines and how the window retrofits will be funded.

L. Install external shading

Windows are the main source of heat gain into your home. Appropriate shading over windows and doors will help keep your home cool in summer, and allow sunlight in during winter. Shading is most effective when installed externally, so an awning is better than an internal blind.

The type of shading you require will depend on the orientation of your windows and doors. The Your Home website provides advice to help you select the best solution.

Remember your owner corporation may have guidelines regarding changes to the building facade so remember to check with your owners corporation committee or manager before proceeding. Don't forget to talk with your neighbours too, they might like to follow your example.

For mid rise apartment owners,
owners corporations & managers

UNLOCKING SUSTAINABLE APARTMENTS

You deserve an efficient, comfortable, safe and healthy home. You deserve clean energy and affordable bills. Identify the efficiency and sustainability opportunities that are right for your apartment. Consult with your owners corporation committee about making improvements in the common area too.

Don't forget to check if you're eligible for Victorian Energy Upgrades or Solar Victoria rebates.

The Victorian Owners Corporation Act Supports Sustainability

Window shading, double glazing, split system air conditioners, and heat pumps all require external infrastructure visible from the outside of your building. You may need permission from your owners corporation prior to retrofitting these items.

Remember, the Victorian Owners Corporation Act states that "An owners corporation must not make rules that unreasonably prohibit the installation of sustainability items on the exterior of a lot".

Ready to retrofit, not sure where to start?

Share this guide with your owners corporation committee and manager to start the discussion. For more information about how to work with and make decisions with your owners corporation, visit the Owners Corporation on the Consumer Affairs Victoria website.

Plan for an All-Electric Building

We are living in the clean energy revolution. Rooftops are now resources and in the near future, an electric vehicle will act like a big battery. Our homes will be all-electric, powered by renewable energy and have cleaner indoor air that's good for our health.

It's important that apartment buildings aren't left behind. Unlocking Sustainable Strata's Guide to Electrifying Your Apartment Building will help you and your owners corporation committee electrify common areas and private apartments / townhouses. It outlines the steps to take and provides options for the best all-electric retrofit technologies across heating, hot water, cooking and more.

WHAT YOUR OWNERS CORPORATION COULD DO

1. Install solar
2. Maintain your solar panels
3. Tune your building
4. Switch to LED lighting*
5. Switch to a centralised hot water heat pump
6. Install an efficient air conditioning system
7. Start a community garden in your common area
8. Buy GreenPower
9. Install a Building Management System (BMS)
10. Make it easy for residents to live sustainably
11. Turn your food scraps into a resource
12. Install bike parking*
13. Install or facilitate electric vehicle (EV) charging
14. Let nature cool your building

WHAT YOU COULD DO IN YOUR APARTMENT

A. Switch to LED lighting*
B. Upgrade to an all-electric efficient hot water system
C. Reduce water use*
D. Buy electric energy efficient appliances
E. Switch to all-electric cooking
F. Switch to efficient electric heating and cooling
G. Draught proof your apartment
H. Install double glazing
I. Install external shading

* If your building was constructed after 2005, these actions may not be relevant to you.

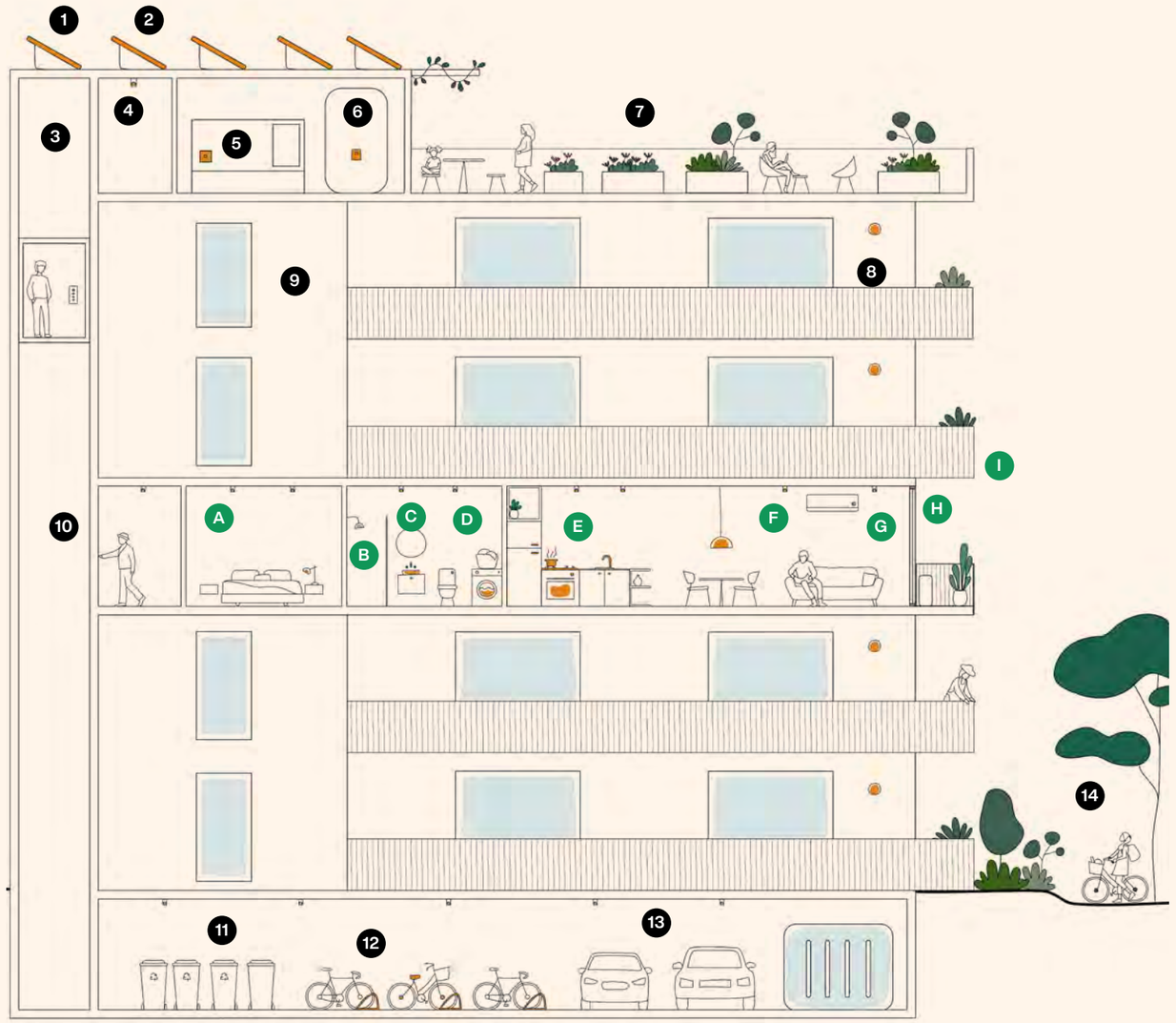


Illustration by Nayan Puri

Supported by: Merri-bek City Council, City of Yarra, strata community association vic, HIP V. HYPE, The Knight

Got the basics? Check out our detailed outline below for more information to assist with your retrofitting journey.

OWNERS CORPORATIONS

1. Install solar

The vast majority of Australians want their homes powered by renewable energy, so it's no surprise that we have the highest penetration of solar PV per capita in the world. The average solar system in Australia pays for itself within 4 years, and after that, the electricity it generates is free.

New Solshare technology is making it easy for owners corporations to install one solar system to power the common area and individual apartments. This means cutting electricity costs for common areas and for residents. The Yarra Energy Foundation has developed a Guide to Solar for Apartments to help you understand the process.

2. Maintain your solar panels

Solar PV and solar hot water systems require some maintenance to operate efficiently. The surface of the panels should be cleaned every 6-12 months. Many local solar businesses offer cleaning and maintenance services.

3. Tune your building

Buildings can commonly achieve a 15 - 30% reduction in energy use just by ensuring control set points are reset, based on demand and regularly servicing equipment to maximise performance.

Talk with your facilities management company to understand how your equipment is being tuned and maintained. The Good Practice Facilities Management Guide can help identify opportunities for improved building turning.

4. Switch to LED lighting*

LED lights use up to 80% less electricity. Switching to LEDs is one of the lowest cost, highest benefit actions you can take.

Halogen downlights and old incandescent bulbs are the most energy guzzling and should be replaced immediately. Fluorescent lights should also be switched to LED. This can be done on failure if funds are limited.

5. Switch to a centralised hot water heat pump

Gas is no longer the most efficient way to heat water and is being phased out across Victoria to support the transition to zero emissions. If your building has a centralised gas hot water system, switch to a heat pump. For centralised solar hot water systems, keep the existing solar system and replace the gas equipment with a new heat pump.

6. Install an efficient air conditioning system

Buildings with significant common areas or facilities, may have centralised heating supplied by gas fired boilers. Gas is no longer the most efficient way to heat and is being phased out across Victoria to support the transition to zero emissions. The best replacement for a centralised heating system is a VRF air conditioning system, which can also provide cooling during summer. Air-sourced heat pumps are also a good option. For single common area rooms, split system air conditioners are the best option.

7. Start a community garden in your common area

Communal gardens provide health and wellbeing benefits. Residents can access fresh food and green space, stay active maintaining the garden, and connect socially. Knowing your neighbours makes your complex safer and builds social resilience. Start with a small garden, managed by a group of residents. Expand the garden as interest grows.

8. Buy GreenPower

Become part of Victoria's clean energy transition and support the green economy. Historically, long running contracts with embedded network operators limited access to GreenPower. This is no longer the case. Sparked by Victorian embedded network regulatory changes and retailers recognising the switch to renewable energy is inevitable, embedded network operators are starting to offer GreenPower to existing customers. Contact your embedded network operator to ask about GreenPower offers. If none are available, let them know your owners corporation will switch to a new operator when your contract ends.

9. Install a Building Management System (BMS)

Poorly controlled and monitored buildings are unable to quickly and easily identify systems that are not working or working inefficiently. A Building Management System (BMS) is an 'intelligent' controller network installed to monitor and control a building's services, including how efficiently they are operating.

Reach out to your facilities management company to understand the benefits and application of a BMS in your apartment building.

10. Make it easy for residents to live sustainably

Some sustainability upgrades - double glazed windows and window awnings - provide a huge benefit to residents. They also impact the look of your complex and therefore typically need approval from the owners corporation.

Often there is a desire to maintain a consistent look to the building facade. To do this, owners corporations can develop style guidelines that specify colours, materials, size of the windows or awnings. This gives owners the freedom to undertake upgrades, while respecting the visual amenity of other occupants.

11. Turn your food scraps into a resource

Check if your council or waste contractor offers a food and garden organics collection to turn your food waste into compost. If not, consider a installing a worm farm. A well-managed worm farm has little to no smell and recycles food scraps in nutrients that can be used on gardens. Worm farms have been effectively used in apartment basement car parks in Melbourne.

12. Install bike parking*

More and more people are discovering the health, economic and environmental benefits of travelling by bike. Most new apartment buildings include bike parking so older buildings need to play catch up to maintain market appeal and to ensure bikes can be parked safely and in a tidy fashion in basements or other common areas.

Install bike hoops or racks to basements or common areas so bikes can be parked safely and securely, encouraging active transport. Bicycle Network Victoria or this guide from the City of Sydney can help find the right parking solutions.

13. Install or facilitate electric vehicle (EV) charging

The transition to EVs has already begun, including a growing secondhand market. EVs are expected to match petrol vehicles on purchase price and range by the mid 2020s, so the demand for EV charging in apartment car parks is likely to skyrocket in just a few years.

EV charging can have a significant impact on your building's energy demand. The vast majority of EV charging is done at home overnight during off-peak times, when electricity prices are lowest. An EV charging installer will be able to determine the most appropriate solution for your building, taking future demand into consideration. Following, your committee can discuss whether charging stations will be funded by the owners corporation or by individual owners.

14. Let nature cool your building

Concrete acts like a heat trap, making your building hotter, increasing the need for air conditioning. Trees and plants throughout common spaces will shade the concrete and reduce the temperature of air moving into apartments.

Plants and soil provide a cooling effect through the process of evapotranspiration, and plants can also be used to provide shade and funnel cooling breezes. Shading to the north of a home should be provided by deciduous plants which lose their leaves in winter.

APARTMENT OWNERS

A. Switch to LED lighting*

LEDs use up to 80% less electricity. Switching to LEDs is one of the lowest cost, highest benefit actions you can take.

Halogen downlights and old incandescent bulbs are the most energy guzzling and should be replaced immediately. Fluorescent lights should also be switched to LED. This can be done on failure if funds are limited.

B. Upgrade to an all-electric efficient hot water system

Hot water systems are the second highest user of energy in Australian homes. Gas is no longer the most efficient way to heat water and is being phased out across Victoria to support the transition to zero emissions. If you have a gas hot water system dedicated to your apartment, the best replacement is an electric instantaneous hot water system. For more information, visit the A Guide to Electrifying your Apartment building or Townhouse.

C. Reduce water use*

Reducing hot water use will cut your water bills and reduce your energy bills. In Victoria we should use a maximum of 155L of water per person per day. If you are using more, make sure you have a modern, low flow showerhead. Then upgrade your taps or DIY install flow restrictors from your local hardware shop. Lastly, replace your single flush toilet cistern with a low water, dual flush alternative.

When purchasing, look for the WELS water star rating on taps, showers, toilets, dishwashers and washing machines.

D. Buy electric energy efficient appliances

Home appliances and equipment use an average of 25% of household energy. Buying highly efficient appliances will reduce ongoing electricity bills.

Energy star rating labels will help you purchase efficient appliances when shopping for an air conditioner, dryer, computer monitor, dishwasher, fridge, freezer, washing machine or TV. However, it is important to understand how to use the label, especially when comparing between different sized products.

E. Switch to all-electric cooking

Gas cooktops are inefficient and lead to poor indoor air quality. A child living with gas cooking in the home faces a comparable risk of asthma to a child living with household cigarette smoke. Switch to an induction cooktop and electric oven. For more information, see the Guide to Electrifying your Apartment Building or Townhouse.

F. Switch to efficient electric heating and cooling

Gas is no longer the most efficient way to heat your home and is being phased out across Victoria to support the transition to zero emissions. The best replacement is a split system air conditioner, which can also cool your home in summer. For more information, see the Guide to Electrifying your Apartment Building or Townhouse.

Ceiling fans are also a low cost way to cool your home, and can be used in reverse during winter to push hot air down into living spaces. During summer, remember to open all your windows when the temperature drops. This will cool your home overnight and reduce the need for air conditioning the following day.

G. Draught proof your apartment

Up to 25% of winter heat loss from homes is caused by drafts (gaps and cracks in walls and around doors and windows). Draught proofing will make your home more comfortable and cheaper to heat and cool.

Draught proofing can be done by a tradesperson or using products from your local hardware shop. The Sustainability Victoria website has some useful guidance.

H. Install double glazing

Double glazing can improve the thermal performance of windows by around 30%, and reduce outside noise entering your apartment. Windows can be made from timber, aluminium or uPVC. Timber and uPVC have excellent thermal properties. However, timber windows require maintenance, whereas uPVC windows do not so they are usually a better solution for apartments.

Windows are an intersection between private and common property. Work with your owners corporation to confirm any agreements around aesthetic guidelines and how the window retrofits will be funded.

I. Install external shading

Windows are the main source of heat gain into your home. Appropriate shading over windows and doors will help keep your home cool in summer, and allow sunlight in during winter. Shading is most effective when installed externally, so an awning is better than an internal blind. The type of shading you require will depend on the orientation of your windows and doors. The Your Home website provides advice to help you select the best solution.

Remember your owners corporation may have guidelines regarding changes to the building facade so remember to check with your owners corporation committee or manager before proceeding. Don't forget to talk with your neighbours too, they might like to follow your example.

For high rise apartment owners,
owners corporations & managers

UNLOCKING SUSTAINABLE APARTMENTS

You deserve an efficient, comfortable, safe and healthy home. You deserve clean energy and affordable bills. Identify the efficiency and sustainability opportunities that are right for your apartment. Consult with your owners corporation committee about making improvements in the common area too.

Don't forget to check if you're eligible for Victorian Energy Upgrades or Solar Victoria rebates.

The Victorian Owners Corporation Act Supports Sustainability

Window shading, double glazing, split system air conditioners, and heat pumps all require external infrastructure visible from the outside of your building. You may need permission from your owners corporation prior to retrofitting these items.

Remember, the Victorian Owners Corporation Act states that "An owners corporation must not make rules that unreasonably prohibit the installation of sustainability items on the exterior of a lot".

Ready to retrofit, not sure where to start?

Share this guide with your owners corporation committee and manager to start the discussion. For more information about how to work with and make decisions with your owners corporation, visit the Owners Corporation on the Consumer Affairs Victoria website.

Plan for an All-Electric Building

We are living in the clean energy revolution. Rooftops are now resources and in the near future, an electric vehicle will act like a big battery. Our homes will be all-electric, powered by renewable energy and have cleaner indoor air that's good for our health.

It's important that apartment buildings aren't left behind. Unlocking Sustainable Strata's Guide to Electrifying Your Apartment Building will help you and your owners corporation committee electrify common areas and private apartments / townhouses. It outlines the steps to take and provides options for the best all-electric retrofit technologies across heating, hot water, cooking and more.

WHAT YOUR OWNERS CORPORATION COULD DO

1. Install solar
2. Maintain your solar panels
3. Tune your building
4. Switch to LED lighting*
5. Switch to a centralised hot water heat pump
6. Install an efficient air conditioning system
7. Start a community garden in your common area
8. Buy GreenPower
9. Install a Building Management System (BMS)
10. Make it easy for residents to live sustainably
11. Turn food scraps into a resource
12. Install bike parking*
13. Install or facilitate electric vehicle (EV) charging
14. Let nature cool your building

WHAT YOU COULD DO IN YOUR APARTMENT

A. Switch to LED lighting*
B. Upgrade to an all-electric efficient hot water system
C. Reduce water use*
D. Buy electric energy efficient appliances
E. Switch to all-electric cooking
F. Switch to efficient electric heating and cooling
G. Draught proof your apartment
H. Install double glazing
I. Install external shading

* If your building was constructed after 2005, these actions may not be relevant to you.

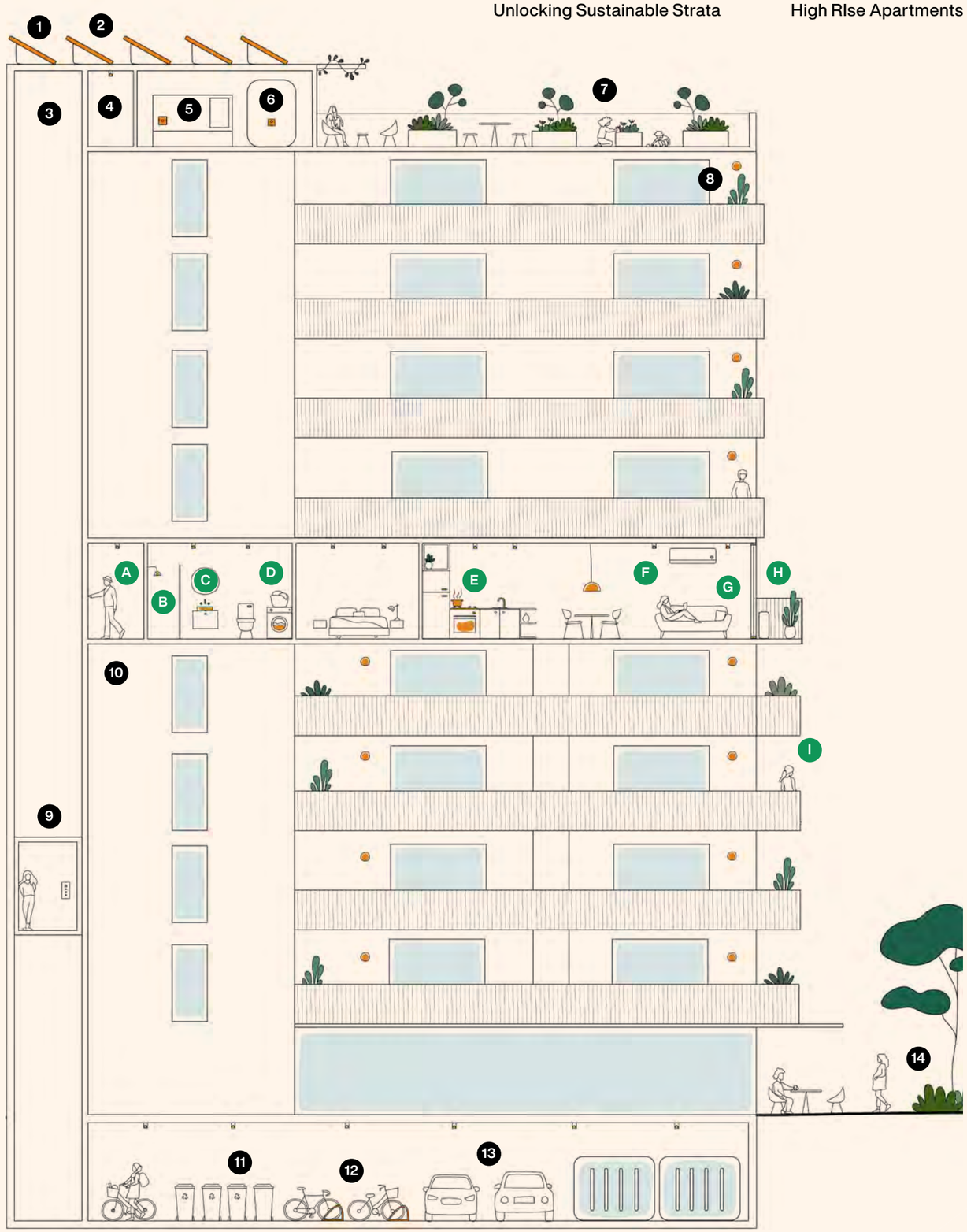


Illustration by Nayan Puri

Supported by: Merri-bek City Council, City of Yarra, strata community association vic, HIP V. HYPE, The Knight

For high rise apartment owners, owners corporations & managers

Got the basics? Check out our detailed outline below for more information to assist with your retrofitting journey.

OWNERS CORPORATIONS

1. Install solar

The vast majority of Australians want their homes powered by renewable energy, so it's no surprise that we have the highest penetration of solar PV per capita in the world. The average solar system in Australia pays for itself within 4 years, and after that, the electricity it generates is free.

New Solshare technology is making it easy for owners corporations to install one solar system to power the common area and individual apartments. This means cutting electricity costs for common areas and for residents. The Yarra Energy Foundation has developed a Guide to Solar for Apartments to help you understand the process.

2. Maintain your solar panels

Solar PV and solar hot water systems require some maintenance to operate efficiently. The surface of the panels should be cleaned every 6-12 months. Many local solar businesses offer cleaning and maintenance services.

3. Tune your building

Buildings can commonly achieve a 15 - 30% reduction in energy use just by ensuring control set points are reset, based on demand and regularly servicing equipment to maximise performance. Talk with your facilities management company to understand how your equipment is being tuned and maintained. The Good Practice Facilities Management Guide can help identify opportunities for improved building turning.

4. Switch to LED lighting*

LED lights use up to 80% less electricity. Switching to LEDs is one of the lowest cost, highest benefit actions you can take. Halogen downlights and old incandescent bulbs are the most energy guzzling and should be replaced immediately. Fluorescent lights should also be switched to LED. This can be done on failure if funds are limited.

5. Switch to a centralised hot water heat pump

Gas is no longer the most efficient way to heat water and is being phased out across Victoria to support the transition to zero emissions.

If your building has a centralised gas hot water system, switch to a heat pump. For centralised solar hot water systems, keep the existing solar system and replace the gas equipment with a new heat pump.

6. Install an efficient air conditioning system

Buildings with significant common areas or facilities, may have centralised heating supplied by gas fired boilers. Gas is no longer the most efficient way to heat and is being phased out across Victoria to support the transition to zero emissions. The best replacement for a centralised heating system is a VRF air conditioning system, which can also provide cooling during summer. Air-sourced heat pumps are also a good option.

For single common area rooms, split system air conditioners are the best option.

7. Start a community garden in your common area

Communal gardens provide health and wellbeing benefits. Residents can access fresh food and green space, stay active maintaining the garden, and connect socially. Knowing your neighbours makes your complex safer and builds social resilience. Start with a small garden, managed by a group of residents. Expand the garden as interest grows.

8. Buy GreenPower

Become part of Victoria's clean energy transition and support the green economy. Historically, long running contracts with embedded network operators limited access to GreenPower. This is no longer the case. Sparked by Victorian embedded network regulatory changes and retailers recognising the switch to renewable energy is inevitable, embedded network operators are starting to offer GreenPower to existing customers. Contact your embedded network operator to ask about GreenPower offers. If none are available, let them know your owners corporation will switch to a new operator when your contract ends.

9. Install a Building Management System (BMS)

Poorly controlled and monitored buildings are unable to quickly and easily identify systems that are not working or working inefficiently. A Building Management System (BMS) is an 'intelligent' controller network installed to monitor and control a building's services, including how efficiently they are operating. Reach out to your facilities management company to understand the benefits and application of a BMS in your apartment building.

10. Make it easy for residents to live sustainably

Some sustainability upgrades - double glazed windows and window awnings - provide a huge benefit to residents. They also impact the look of your complex and therefore typically need approval from the owners corporation.

Often there is a desire to maintain a consistent look to the building facade. To do this, owners corporations can develop style guidelines that specify colours, materials, size of the windows or awnings. This gives owners the freedom to undertake upgrades, while respecting the visual amenity of other occupants.

11. Turn your food scraps into a resource

Check if your council or waste contractor offers a food and garden organics collection to turn your food waste into compost. If not, consider a installing a worm farm. A well-managed worm farm has little to no smell and recycles food scraps in nutrients that can be used on gardens. Worm farms have been effectively used in apartment basement car parks in Melbourne.

12. Install bike parking*

More and more people are discovering the health, economic and environmental benefits of travelling by bike. Most new apartment buildings include bike parking so older buildings need to play catch up to maintain market appeal and to ensure bikes can be parked safely and in a tidy fashion in basements or other common areas.

Install bike hoops or racks to basements or common areas so bikes can be parked safely and securely, encouraging active transport. Bicycle Network Victoria or this guide from the City of Sydney can help find the right parking solutions.

13. Install or facilitate electric vehicle (EV) charging

The transition to EVs has already begun, including a growing secondhand market. EVs are expected to match petrol vehicles on purchase price and range by the mid 2020s, so the demand for EV charging in apartment car parks is likely to skyrocket in just a few years.

EV charging can have a significant impact on your building's energy demand. The vast majority of EV charging is done at home overnight during off-peak times, when electricity prices are lowest. An EV charging installer will be able to determine the most appropriate solution for your building, taking future demand into consideration. Following, your committee can discuss whether charging stations will be funded by the owners corporation or by individual owners.

14. Let nature cool your building

Concrete acts like a heat trap, making your building hotter, increasing the need for air conditioning. Trees and plants throughout common spaces will shade the concrete and reduce the temperature of air moving into apartments.

Plants and soil provide a cooling effect through the process of evapotranspiration, and plants can also be used to provide shade and funnel cooling breezes. Shading to the north of a home should be provided by deciduous plants which lose their leaves in winter.

APARTMENT OWNERS

A. Switch to LED lighting*

LEDs use up to 80% less electricity. Switching to LEDs is one of the lowest cost, highest benefit actions you can take.

Halogen downlights and old incandescent bulbs are the most energy guzzling and should be replaced immediately. Fluorescent lights should also be switched to LED. This can be done on failure if funds are limited.

B. Upgrade to an all-electric efficient hot water system

Hot water systems are the second highest user of energy in Australian homes. Gas is no longer the most efficient way to heat water and is being phased out across Victoria to support the transition to zero emissions. If you have a gas hot water system dedicated to your apartment, the best replacement is an electric instantaneous hot water system. For more information, visit the A Guide to Electrifying your Apartment Building or Townhouse.

C. Reduce water use*

Reducing hot water use will cut your water bills and reduce your energy bills. In Victoria we should use a maximum of 155L of water per person per day. If you are using more, make sure you have a modern, low flow showerhead. Then upgrade your taps or DIY install flow restrictors from your local hardware shop. Lastly, replace your single flush toilet cistern with a low water, dual flush alternative.

When purchasing, look for the WELS water star rating on taps, showers, toilets, dishwashers and washing machines.

D. Buy electric energy efficient appliances

Home appliances and equipment use an average of 25% of household energy. Buying highly efficient appliances will reduce ongoing electricity bills.

Energy star rating labels will help you purchase efficient appliances when shopping for an air conditioner, dryer, computer monitor, dishwasher, fridge, freezer, washing machine or TV. However, it is important to understand how to use the label, especially when comparing between different sized products.

E. Switch to all-electric cooking

Gas cooktops are inefficient and lead to poor indoor air quality. A child living with gas cooking in the home faces a comparable risk of asthma to a child living with household cigarette smoke. Switch to an induction cooktop and electric oven. For more information, see the Guide to Electrifying your Apartment Building or Townhouse.

F. Switch to efficient electric heating and cooling

Gas is no longer the most efficient way to heat your home and is being phased out across Victoria to support the transition to zero emissions. The best replacement is a split system air conditioner, which can also cool your home in summer. For more information, see the Guide to Electrifying your Apartment Building or Townhouse.

Ceiling fans are also a low cost way to cool your home, and can be used in reverse during winter to push hot air down into living spaces. During summer, remember to open all your windows when the temperature drops. This will cool your home overnight and reduce the need for air conditioning the following day.

G. Draught proof your apartment

Up to 25% of winter heat loss from homes is caused by drafts (gaps and cracks in walls and around doors and windows). Draught proofing will make your home more comfortable and cheaper to heat and cool.

Draught proofing can be done by a tradesperson or using products from your local hardware shop. The Sustainability Victoria website has some useful guidance.

H. Install double glazing

Double glazing can improve the thermal performance of windows by around 30%, and reduce outside noise entering your apartment. Windows can be made from timber, aluminium or uPVC. Timber and uPVC have excellent thermal properties. However, timber windows require maintenance, whereas uPVC windows do not so they are usually a better solution for apartments.

Windows are an intersection between private and common property. Work with your owners corporation to confirm any agreements around aesthetic guidelines and how the window retrofits will be funded.

I. Install external shading

Windows are the main source of heat gain into your home. Appropriate shading over windows and doors will help keep your home cool in summer, and allow sunlight in during winter. Shading is most effective when installed externally, so an awning is better than an internal blind. The type of shading you require will depend on the orientation of your windows and doors. The Your Home website provides advice to help you select the best solution.

Remember your owners corporation may have guidelines regarding changes to the building facade so remember to check with your owners corporation committee or manager before proceeding. Don't forget to talk with your neighbours too, they might like to follow your example.

UNLOCKING
SUSTAINABLE STRATA

HIP V. HYPE

Merri-bek City Council

CITY OF YARRA

strata community association VIC

The Knight