**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**

Merri-bek
City Council

# Victoria's 30-year Infrastructure Strategy

## Submission to Infrastructure Victoria

June 2023

Merri-bek City Council

Merri-bek City Council – located between 4 and 14 kilometres north of the Melbourne central business district – is home to 174,502 people. Covering 51 square kilometres and including the suburbs of Brunswick, Brunswick West, Brunswick East, Coburg, Coburg North, Fawkner, Glenroy, Gowanbrae, Hadfield, Oak Park, Pascoe Vale, Pascoe Vale South and part of Fitzroy North, Merri-bek is a wonderfully diverse and vibrant community with a longstanding and proud history of leadership and advocacy on many social justice, environmental and community issues.

Merri-bek's growing population, forecast to reach 235,200 people in 2036, presents many challenges and the municipality, like others, will continue to experience demand for more infrastructure, services and resources to support evolving community needs.

Merri-bek forms part of the northern 'gateway' to Greater Melbourne's rapidly growing northern region.

Melbourne's north too is experiencing significant population growth through both greenfield development and infill development and densification. Predictions show that the Northern Growth Corridor represents a sizeable proportion of Melbourne's projected growth. By 2036, the regional population is projected to be close to 1.5 million, half a million more than in the region at present.[1]

Melbourne's north is:

- an economic powerhouse, producing over $40b worth of goods and services, growing by 4.7% per annum
- a robust and growing local economy, with 75,000 local businesses supported by over 360,000 local jobs
- home to over one million residents with annual population growth of 2.8% (compared to the national average of 1.6%)[2]

It is vital that the transport system and other infrastructure can support future growth and jobs while safeguarding and improving livelihood, liveability and action on Council climate emergency goals and realise the opportunities Melbourne's north offers to all of Victoria.

Infrastructure Victoria requested strategic ideas in four key areas that it believes are crucial to the next strategy.

- Doing more with less
- Navigating change and disruption
- Improving social equity through access
- Mitigating and adapting to our changing climate

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[1] Santec (2020) Northern Region Transport Strategy - Summary

[2] Northern Councils Alliance (2022) Release of: Northern Region Transport Plan and the Northern Region Transport Study – Bus Networking

Merri-bek City Council has 19 key priority ideas to be considered in Infrastructure Victoria's next 30-year Infrastructure Strategy.

1. **Upgrade the Upfield Rail Corridor and duplicate the line between Gowrie and Upfield to improve train frequency, accessibility, passenger experience and station amenity.**
2. **Reconfigure the city loop to separate the Upfield and Craigieburn lines to remove ongoing constraints to improved capacity, frequency and reliability for passengers along both lines.**
3. **Connect the Upfield rail line to Roxburgh Park and extend and electrify the line to Wallan with new stations to support the rapidly occurring residential, commercial and industrial development in the region.**
4. **Develop a Victorian Transport Plan that takes into consideration the Northern Councils Alliance Northern Region Transport Strategy and Northern Region Transport Study Stage 2: Bus Networks**
5. **Develop an efficient network of buses that connect communities to major precincts and health and education facilities**
6. **Urgently plan and fund the delivery of accessible tram stop upgrades and public transport accessibility improvements to rapidly progress towards the legislated 2022 accessibility targets**
7. **Prioritise planning for, and investment in, social and affordable housing delivery to drive improved health and equity outcomes**
8. **Rapidly renew dilapidated public housing properties to improve functionality, accessibility and energy efficiency**
9. **Review and improve the Development Contributions Plan (DCP) program to create a framework based on simplicity, flexibility, certainty and fairness to assist local government with the costs of efficient and timely delivery of required infrastructure for growing local populations.**
10. **Partner with local governments to fund pedestrian and cycling infrastructure and initiatives to increase cycling and pedestrian priority, safety and experience to create a safer community to move around in, encourage health and wellbeing and reduce greenhouse gas emissions.**
11. **Support the uptake and a coordinated rollout of electric passenger vehicles, buses, council fleets and charging networks.**
12. **Work with distributors, the Australian Energy Regulator (AER) and the Australian Energy Market Operator (AEMO) to address network constraints and plan for a renewable future.**
13. **Continue and grow the ambitions in the Victorian Government's Gas Substitution Roadmap**
14. **Support Local Councils to switch to electrification and build energy-efficient, renewable and climate resilient community facilities**
15. **Support retrofit requirements of residential properties to improve energy performance standards including a strategy to provide access to sustainable funding streams to support retrofits over the long term**
16. **Amend the Victorian Planning Scheme to elevate environmentally sustainable design targets for new buildings, encouraging a move towards net zero carbon development and support the transition of the energy sector to renewables**
17. **Increase guidance and funding for local government on drainage system infrastructure to mitigate the risk of floods through drainage infrastructure**
18. **Support the regional development of non-thermal advanced waste processing technologies, modern recycling infrastructure and mandatory product and material stewardship programs**
19. **Support and fund action to mitigate the Urban Heat Island Effect, including in State-funded infrastructure investments and State-owned open spaces**

These critical priorities are outlined further under the four key areas.

## Doing more with less

> Victoria needs to respond to increasing workforce, supply chain and financial constraints. We can influence productivity in specific infrastructure sectors, better use infrastructure, and help decision makers choose the right infrastructure to activate productivity growth. How should we do this?
>
> -*Infrastructure Victoria*

1. **Upgrade the Upfield Rail Corridor and duplicate the line between Gowrie and Upfield to improve train frequency, accessibility, passenger experience and station amenity.**

Single track service between Gowrie and Upfield stations creates significant bottlenecks and constraints to improved capacity, frequency and reliability for passengers.

Despite the importance of this corridor to the growth of Melbourne and the people it serves, the Upfield rail line has the poorest peak frequency in Melbourne's rail network, with train services historically running every 20 minutes during peak periods.

Upfield line stations Fawkner, Merlynston, Gowrie and Batman have been identified as having the most infrequent train services in the State, with Fawkner, Merlynston and Batman also identified as having some of the least punctual services.

Additionally, four northern train services beyond Coburg are among the lowest rated for commuter experiences, including Batman (rated 4.45 out of 10), Merlynston (rated 4.05 out of 10) and Fawkner (rated 3.88 out of 10); with Gowrie (3.64 out of 10) ranking the lowest for train services in Victoria.[3]

Public Transport Victoria (PTV) has previously projected the Upfield line to experience the largest yearly rise in passengers of all city trains between 2021 and 2031, with patronage set to grow by 5.3% a year over the decade.[4]

Whilst the State's Metro Tunnel project (due for completion in 2026), along with the removal of level crossings at Glenroy and Coburg, will enable new services along the Upfield line – 45,000 passengers every week, or 71% capacity, along the Upfield Line during peak periods for passengers, saving around five minutes time on the journey to the CBD[5] - Infrastructure Victoria's report indicated services "will reach capacity by the mid-2030s, particularly in the absence of a coordinated and timely reconfiguration of the City Loop…"[6]

Duplicating the Upfield rail line between Gowrie and Upfield stations will remove significant bottlenecks and constraints for the length of Upfield line, allowing for improved, capacity, frequency and reliability for passengers.

An increase in the number of train services in the Upfield corridor would create opportunities for the community to access a wider range of services using a rail system that provides a high-quality reliable alternative to driving a car.

Community benefit would also be realised through improved urban environments as the local road network is expected to realise reduced commuter traffic from growth suburbs to the north.

Upgrading the Upfield rail line by modernising Batman, Merlynston, Fawkner and Gowrie Train Stations as part of any duplication works would improve the commuter experience.

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[3] RACV (2020) On Track Survey Results – November 2019 to March 2020.
[4] The Age (6 November 2018) 'Sluggish Upfield upgrades still years away'
[5] Victorian Government (2021) Victoria's Big Build: Metro Tunnel Project Overview – Benefits for your train line (Upfield)
[6] Infrastructure Victoria (2021) Victoria's Infrastructure Strategy 2021-2051

Creating transport interchanges adjoining each of the Upfield line's stations that make provision for train, bus, tram, pedestrians, cycling and cars would provide direct connectivity between bus and train, and other forms of sustainable transport, enabling more people to reach the railway station without using a car.

Grade separation of train stations would greatly improve accessibility.

2. **Reconfigure the city loop to separate the Upfield and Craigieburn lines to remove ongoing constraints to improved capacity, frequency and reliability for passengers along both lines.**

The Upfield and Craigieburn train lines continuing to share the same City Loop tracks has been identified by Infrastructure Victoria as an ongoing constraint to improved capacity, frequency and reliability for passengers along both lines.

Victoria's Infrastructure Strategy 2021-2051 recommended:

> Within the next two years, complete a business case to reconfigure the City Loop, including determining its timing. Include planning for more frequent metropolitan services on the Craigieburn, Upfield, Frankston, and Glen Waverley services...[7]

The completion of the Melbourne Metro 1 will remove Sunbury line trains from the current loop, enabling more pathways for northern group trains to become available at North Melbourne Railway Station.

A coordinated and timely reconfiguration of the City Loop could also allow for the line to be extended further north to Wallan.

3. **Connect the Upfield rail line to Roxburgh Park and extend and electrify the line to Wallan with new stations to support the rapidly occurring residential, commercial and industrial development in the region.**

In Melbourne's booming northern region, rates of growth in Hume and Mitchell Shire are substantially higher than State Government projections. In Mitchell, lot creation over the twelve months (2021/22) is sitting at 120% higher than forecast. It is projected that Mitchell Shire's population will double almost every five years for at least the next 20 years. Mitchell Shire's growth areas alone will be home to approximately 65,000 people within ten years (up from approximately 20,000 currently) and ultimately will support a population of over 230,000. In Hume, the population was 246,850 in 2021.[8] The Hume community is expected to grow to 394,760 by 2041.[9]

The growth communities in Mitchell and Hume including Wallan, Beveridge, Lockerbie, Donnybrook and the future Cloverton Metropolitan Activity Centre (MAC), are currently serviced by diesel V-line services only as the electric line and metropolitan train services terminate at Craigieburn – this cuts passenger capacity by more than half given a V/Line train carries about 40% of the passengers of a comparable electric metropolitan train.

The V/line services were expected to reach capacity by 2030, but with higher than forecast growth occurring now, coupled with the State Government's fast-tracking of Precinct Structure Planning, reaching capacity is likely to be closer to 2025/2026.

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[7] Infrastructure Victoria (2021) Victoria's Infrastructure Strategy 2021-2051, p23

[8] Source: ABS 2021 Census

[9] Source: ABS Estimated Resident Population

Without an electrified Upfield extension to Wallan the communities of Melbourne's rapidly growing North will become increasingly reliant on the Hume Freeway. The Hume Freeway is already identified as one of Australia's most important and heavily used routes. Substantially increased residential and commuter use of the Hume Freeway will have significant adverse impacts on freight movements, bringing Melbourne's principal freight route to a standstill.

Merri-bek is home to over 46,000 jobs,[10] with the majority of these jobs located either side of the Upfield line and Sydney Road. Connecting the 90,000 residents[11] from Roxburgh Park and Craigieburn to the Upfield corridor, along with residents from the burgeoning suburbs of Lockerbie, Donnybrook, Beveridge and Wallan, could create a vibrant and job-rich Sydney Road corridor, providing direct (and more sustainable) access for residents to jobs and education in northern metropolitan Melbourne, a greater pool of workers for businesses in Brunswick and Coburg to access, and the potential for a significant uplift in retail and hospitality demand along the strip.

Greater connectivity through Melbourne's northern corridor will also support improved access to other major commercial and industrial precincts including Merrifield, the future Beveridge Intermodal Freight Terminal, and the future Cloverton MAC. The residential development occurring in Mitchell Shire in particular is very unlikely to provide sufficient local jobs for the size of the community and efficient, accessible commuter rail services will be vital to ensure that residents of these communities have equitable access to employment opportunities.

Extension and electrification of the Upfield line to Wallan will support desperately needed increased capacity at the existing Wallan and Donnybrook stations, along with the future Lockerbie (Beveridge) and Cloverton stations.

*Victoria's Infrastructure Strategy 2021-2051* recommended:

> exploring 'options and staging to extend metropolitan services to the Mitchell local government area, including possible station locations.[12]

Connecting the Upfield line to Roxburgh Park would allow full utilisation of the Upfield tracks and become the major corridor for suburban services from Wallan. It will significantly improve public transport network benefits and enable residents of the northern growth areas to easily access destinations, family, friends, and jobs in inner and middle Melbourne, reducing second car ownership in the northern growth corridor.

Stage 4 of the Rail Network Development Plan shows that with extension and electrification of the Upfield line to Wallan, the ultimate peak capacity of the Northern Rail Group lines will be:

- 18 trains per hour on the Craigieburn Line (via Broadmeadows)
- 12 trains per hour (3 V/Line + 9 suburban) via Upfield.[13]

This represents a quadrupling of Upfield services from the current three trains per hour. Such a large increase in capacity would provide critical improvement to the Upfield line that has the poorest peak frequency in Melbourne's rail network.

**4. Develop a Victorian Transport Plan that takes into consideration the Northern Councils Alliance Northern Region Transport Strategy and Northern Region Transport Study Stage 2: Bus Networks**

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[10] id community demographic resources (2022) City of Moreland Economic Profile
[11] id community demographic resources (2022) Hume City Community profile
[12] Infrastructure Victoria (2021) Victoria's Infrastructure Strategy 2021-2051
[13] Public Transport Victoria (2012) Network Development Plan – Metropolitan Rail, p24

The Northern Region Transport Strategy (NRTS) and Northern Region Transport Study Stage 2: Bus Networks clearly outline investment priorities that will improve public transport connectivity and encourage sustainable transport growth across the northern region. Investment prioritisations should also include consideration of electrification of the fleet, and associated charging infrastructure (see idea 11).

Melbourne's north is a large and complex area, home to 20% or Melbourne's population (population 1,077,725) and 12% of jobs. By 2036 the regional population is projected to be close to 1.5 million.

The NRTS identified key issues in the northern metropolitan region including:

- Unreliable public transport
- Poor connections in growth areas
- Inadequate bicycle infrastructure
- Poor east to west connections
- Congestion on roads
- Safety concerns on public transport

Melbourne's north hosts large employment centres including La Trobe University and Melbourne Airport and includes the key precincts of Broadmeadows, Epping and Cloverton. The road and rail connections link the north to Melbourne's CBD and the Port of Melbourne as well as the rest of metropolitan Melbourne, regional Victoria and the nation.

It is vital that the transport system can support future growth and jobs while safeguarding and improving livelihood, liveability and action on Council climate emergency goals.[14]

*Victoria's Infrastructure Strategy 2021–2051* recommended:

> In the next year, develop and publish Victoria's integrated transport plan. Require the transport and strategic land use plans to align with each other.[15]

Development and publication of a Victorian Transport Plan that takes into consideration the recommendations in the Northern Region Transport Strategy will assist the state in addressing key transport challenges for the short and longer term.

### 5. Develop an efficient network of buses that connect communities to major precincts and health and education facilities

Melbourne's northern region is underserved by public transport, and consequently suffers from higher levels of traffic congestion. This impacts access to education, employment, health and other services for all residents, but will be felt most acutely in the northern growth corridor.[16]

In many areas in the north, public transport is unreliable or unavailable and there is poor connection in growth areas. Most residents drive to work, with only 10.9% of households in the north using public transport daily. Adding to the pressure, residents face long commute times. Those without cars have limited access to employment across the region and protracted time spent travelling into the CBD has implications for health and social needs.[17]

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[14] Santec (2020) Northern Region Transport Strategy - Summary

[15] Infrastructure Victoria (2021) Victoria's Infrastructure Strategy 2021-2051, p21

[16] Movement & Place Consulting (2022) Northern Region Transport Study Stage 2: Bus Networks p5

[17] Northern Councils Alliance (2022) Release of: Northern Region Transport Plan and the Northern Region Transport Study – Bus Networking

Specific to Melbourne's northern region, Northern Region Transport Study Stage 2: Bus Networks focuses on strategic improvements to the bus networks. It recommends key actions that will significantly improve connectivity across the region, including:

- **Improvements to existing SmartBus Routes**, in particular one that terminates at Melbourne Airport to improve access to jobs, education and health services, as well as maximise patronage and connectivity in the north.
- **Implementing a Suburban Rail Loop Bus**, providing a continuous, rapid and direct east-west public transport connection from Melbourne Airport to Box Hill, mimicking the proposed alignment of SRL north stations.
- **Improvements to key destination - Melbourne Airport** and the surrounding business park, a key employment hub in the north, with over 20,000 employees. Existing public transport services do not meet the needs of shift workers, as many businesses operate 24/7. Public transport improvements are urgently required to improve employee access.
- **Improvements to key destination - La Trobe University**, poorly served by public transport compared to other universities. The university is planning significant growth with a private sector partner and this needs to be provided for with improved public transport. Lowering the need to drive to campus would reduce congestion in connecting roads across the region.
- **Services required in growth areas – Mitchell Shire**. Wallan and Beveridge (Mitchell Shire) will house over 200,000 people by 2051. This growth will create a jobs deficit, requiring residents to travel 10 km to 25 km to access jobs and services. If these trips are by car, the Hume Highway will be overwhelmed. Direct public transport connections to key employment areas in the region are needed.

While there are long-standing issues facing communities in Melbourne, including the north, an efficient network of buses can be implemented quickly, and will pragmatically and practically improve transport connection between jobs, health, education and larger transport nodes.

## Improving social equity through access

> *Victoria should be a great place for everyone who lives here, no matter where that is. What improvements or changes should be made to make access to infrastructure fairer?*
>
> *-Infrastructure Victoria*

### 6. Urgently plan and fund the delivery of accessible tram stop upgrades and public transport accessibility improvements to rapidly progress towards the legislated 2022 accessibility targets

One in six, or 18%, of people live with disability in Australia.[18]

The current lack of accessibility on the tram network significantly constrains the movement of people with mobility issues. A person with a mobility restriction cannot have an accessible tram journey without both a level-access stop and a low-floor tram.

The Commonwealth Disability Discrimination Act 1992 (DDA) requires that all tram stops must be fully compliant with the Disability Standards for Accessible Public Transport 2002 (DSAPT) by 31 December 2022, and all trams must be DSAPT compliant by 31 December 2032.

In 2018-2019, the Victorian Auditor General's Office audited accessible tram services in Victoria and found that:

- 73% of tram stops did not provide level access
- 62% of trams did not provide a low floor for level access
- the Department of Transport in Victoria (now the Department of Transport and Planning) had not met legislated targets for accessible tram infrastructure and cannot comply by 31 December 2022.

In Merri-bek, the proportion of tram stops that do not provide level access is even higher, with 89% of stops not providing level access.

VAGO also stated that the Department of Transport, based on the trend to date, was also at risk of not meeting the 31 December 2032 tram compliance requirement.[19]

*Victoria's Infrastructure Strategy 2021-2051* recommended:

> Plan for and fund public transport accessibility, including tram stop upgrades and fund public transport accessibility improvements to infrastructure and services, including for priority tram and bus stops, to make substantial progress toward the legislated 2032 accessibility targets.[20]

Improving accessibility would also deliver improvements not just for those with mobility issues but for others, including those with health issues that make steps difficult, as well as parents with prams or passengers with personal shopping trolleys.

### 7. Prioritise planning for, and investment in, social and affordable housing delivery to drive improved health and equity outcomes

Given the scale of the challenge to house those in need after decades of under-investment, the State Government should urgently finalise the 10-Year Strategy for Social and Affordable Housing to identify clear targets and communicate policy priorities, and invest in social and affordable housing to meet those targets.

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[18] Australian Government (2022) Australian Institute of Health and Welfare – People with disability in Australia

[19] Victorian Auditor General's Office (2020) Accessibility of Tram Services

[20] Infrastructure Victoria (2021) Victoria's Infrastructure Strategy 2021-2051, p22

Victoria's Infrastructure Strategy 2021-2051 contained a welcome recognition that social and affordable housing needs to be recognised as part of the essential social infrastructure to ensure there is equitable access for all community members.

All new public and social housing should be at least 7.5 stars, all-electric and renewably powered, thus creating homes that have reduced living costs, reduced greenhouse gas emissions and are comfortable for their tenants to live in.

Sustainability Victoria's research into the health impacts of climate change (2020) shows that most healthcare professionals identify poor quality housing for the most vulnerable people as an issue in relation to climate change health impacts.[21]

Commitments made by Homes Victoria through Big Housing Build funding indicate significant new social housing due for delivery in the next 3-5 years. However, there is a strong indication from the Victorian Government that the well of capital funding for social and affordable housing is going to be allowed to run dry at a time when new applicants to the Victorian Housing Register continue to outpace the delivery of new housing.

Merri-bek Council supports the use of the planning system to bolster the delivery of social and affordable housing through mandatory contributions by landowners and developers, as outlined in Victoria's Infrastructure Strategy 2021-2051:

> Within the next two years, change and actively apply planning regulations to provide affordable rental housing for Victorians on very low incomes in places with good access to public transport and services, when they are re-zoned for more intensive residential use.[22]

To effectively plan for the delivery of social and affordable housing, Victoria's Infrastructure Strategy 2021-2051 recommended:

> In the next year, set a transparent state-wide social housing growth target to reach and maintain at least the national average of 4.5 social housing dwellings for every 100 households by 2031.[23]

In 2021, the State Government invited submissions for input into a 10-Year Strategy for Social and Affordable Housing. The draft strategy has not progressed based on the rationale that it is best to wait for the policy settings of a national housing and homelessness plan which may not be finalised until sometime in 2024.

In Merri-bek alone, we need at least 1,000 social homes to be delivered by 2036 and the unmet need for affordable housing is significant and increasing.

A housing needs analysis found the unmet need for affordable housing in Merri-bek in 2016 was estimated at between 4,000 and 7,300 dwellings. As Merri-bek continues to gentrify, without intervention, increasing numbers of households will continue to be pushed out to more affordable locations like Hume and Whittlesea. This unmet need for affordable housing is forecast to increase by a further 3,000 households to 2036. To meet this level of need, up to 26% of the forecast 38,000 new dwellings required in Merri-bek by 2036 would need to be affordable housing.[24]

Merri-bek Council's Affordable Housing Action Plan 2022-26 contains commitments to take action to increase the provision of social and affordable housing. [25]

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[21] Sustainability Victoria (2021) Better social housing protects the vulnerable and the environment
[22] Infrastructure Victoria (2021) Victoria's Infrastructure Strategy 2021-2051, p21
[23] Infrastructure Victoria (2021) Victoria's Infrastructure Strategy 2021-2051, p24
[24] SGS Economics & Planning (2019) Supplying Homes in Moreland, p10
[25] Merri-bek City Council (2022) Affordable Housing Action Plan 2022-26

## 8. Rapidly renew dilapidated public housing properties to improve functionality, accessibility and energy efficiency

The State Government should set goals and investment commitments to renew ageing public housing stock.

*Victoria's Infrastructure Strategy 2021-2051* recommended:

> Rapidly renew dilapidated public housing properties to improve functionality, accessibility and energy efficiency with a priority to renew at least half of all older low-rise apartments and older three bedroom detached dwellings by 2031.[26]

And:

> Continue to deliver a long-term program of modifying social housing to be climate-resilient by improving the energy efficiency and energy affordability of residences.[27]

Merri-bek has around 1,600 social housing properties.[28] In Coburg North, Glenroy and Brunswick West in particular, there is substandard public housing more than fifty years old where residents shiver in winter and swelter in summer.

All new public and social housing should be at least 7.5 stars, all-electric and renewably powered, creating homes that have reduced living costs, reduced greenhouse gas emissions and are comfortable for their tenants to live in.

Sustainability Victoria's research into the health impacts of climate change shows that most healthcare professionals identify poor quality housing for the most vulnerable people as an issue in relation to climate change health impacts.

- 95% of healthcare professionals identified people in poor quality housing as one of the most vulnerable groups in relation to climate change health impacts
- 95% of healthcare professionals believe quality of housing and its thermal capability will become more important as extreme temperatures increase
- 77% healthcare professionals report that cold or heat exposure dur to thermal quality is a problem in Victoria (40% say a major problem). [29]

Sustainability Victoria's 'Energy Savvy Upgrades' and 'Energy Smart' programs, which retrofitted 1,500 public housing properties with thermal and energy efficiency upgrades, and the Healthy Homes project, which retrofitted 1,000 homes of those with health issues, found that a relatively minor upgrade (average $2,809) had wide ranging benefits over the winter period.

- Exposure to cold temperatures was reduced by 43 minutes per day, with householders twice as likely to report that their home felt warmer over winter
- Gains in thermal comfort were obtained despite a significant reduction in gas used and no change to electricity use
- Associated benefits in health included reduced breathlessness and improved quality of life, particularly its mental health and social care aspects

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[26] Infrastructure Victoria (2021) Victoria's Infrastructure Strategy 2021-2051, p22
[27] Infrastructure Victoria (2021) Victoria's Infrastructure Strategy 2021-2051, p26
[28] Id community (2021) City of Merri-bek Social Atlas – renting social housing
[29] Sustainability Victoria (2021) Better social housing protects the vulnerable and the environment

- Health benefits of the upgrade were reflected in cost savings, with $887 per person saved in the healthcare system over the winter period.[30]

The State Government should utilise the findings of the Healthy Homes program to set standards to improve the thermal efficiency of new public and social housing. This will improve the health and wellbeing of residents as well as reduce their energy bill stress.

Merri-bek Council's Affordable Housing Action Plan 2022-26 contains commitments to take action to improve the quality of all affordable housing, including existing social housing dwellings, and accelerate the roll-out of thermal comfort / energy efficiency upgrades for public and community housing.

[30] Sustainability Victoria (2022) The Victorian Healthy Homes Program Research findings - Abstract

## Navigating change and disruption

> *Victoria's infrastructure planning must adapt to emerging changes and disruptions in technology, population, community preferences and ways of working. What ideas do you have about how Victoria can better plan and use infrastructure in conditions of uncertainty?*
>
> *-Infrastructure Victoria*

**9. Review and improve the Development Contributions Plan (DCP) program to create a framework based on simplicity, flexibility, certainty and fairness to assist local government with the costs of efficient and timely delivery of required infrastructure for growing local populations.**

The State Government's Development Contributions Plan (DCP) Program offers a mechanism for developer contributions to assist the funding and delivery of new and upgraded infrastructure as local communities grow.

The current DCP system however is too cumbersome and requires significant effort from councils in the preparation and justification of municipal DCPs. This is particularly true for established, inner-metropolitan areas such as Merri-bek compared to green field development in growth areas. This is reflected in the limited number of DCP's in operation in the inner and middle metropolitan municipalities. Of the 31 inner and middle ring councils in Victoria, seven councils have active DCPs, two are in progress of working through the planning system and three are in preparation.

*Victoria's Infrastructure Strategy 2021-2051* recommended:

> In the next two years, complete a review of Victoria's many infrastructure contributions schemes to create a consistent and efficient system that contributes to Victorian and local government infrastructure costs. A revised infrastructure contribution system can apply more broadly, including in established suburbs, growth areas, peri-urban areas, and regional cities.[31]

The Victorian Auditor General's Office (VAGO) tabled an audit, *Managing Development Contributions*, in 2020, examining whether development contributions provide required infrastructure to new and growing communities as intended.

VAGO found that while DCPs can deliver significant financial benefits over their life span, they can take a long time to set up and place a high administrative and cost burden on councils.

VAGO concluded that Victoria's development contributions are not delivering the infrastructure needed by growing communities to support their quality of life and that the DCP program is unnecessarily complex, costly and time-consuming for councils to use.[32]

The current system is not reflective of infrastructure planning with regard to Councils' capital works program and does not respond to changing needs. Flexibility needs to be carefully balanced with the need for certainty while ensuring that contributions cover new development's fair share of usage. In essence contributions should not be kept low to allow for flexibility.

Council supports the notion that a range of items from "List of Allowable" items within a DCP can be selected to allow flexibility in delivery across an area and may not need to be as closely linked to a capital works plan as the current system. The ability to review the list more frequently as required is also supported; however, further information is required as to how this can be streamlined to alleviate the likelihood of a costly and lengthy traditional planning scheme amendment process.

Other limitations of the current DCP that need revising include:

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[31] Infrastructure Victoria (2021) Victoria's Infrastructure Strategy 2021-2051, p21

[32] Victorian Auditor General's Office (2020) Managing Developer Contributions

- The contributions cap for community infrastructure to help with the delivery of very expensive community infrastructure projects in a rate caped environment.
- Expansion of allowable items to include infrastructure projects that will reduce our overall environmental impact in the areas of energy and water efficiency, such as renewable energy generation supply networks, precinct based waste treatment, and precinct based integrated water harvesting and treatment systems to reduce potable water consumption and the quality of stormwater flowing into our creeks and waterways

A robust local development contribution system is key to the efficient and timely delivery of required infrastructure to our growing local population. There is a real need to review the current DCP framework and revise it to work for metropolitan councils.

## Mitigating and adapting to our changing climate

> *Victoria must prioritise adapting infrastructure to climate change and reducing infrastructure-related emissions. How should we do this?*
>
> *-Infrastructure Victoria*

**10. Partner with local governments to fund pedestrian and cycling infrastructure and initiatives to increase cycling and pedestrian priority, safety and experience to create a safer community to move around in, encourage health and wellbeing and reduce greenhouse gas emissions.**

In *Victoria's Climate Change Strategy*, the Victorian Government committed to increasing active transport mode share to 25% by 2030.[33]

*Victoria's Infrastructure Strategy 2021-2051* also recognised the need for a focus on, and an increase in funding, in active transport:

> Over the next five years, partner with local governments to fund pedestrian infrastructure network upgrades to connect people to priority places, including central Melbourne, the Monash National Employment and Innovation Cluster, other activity centres and train stations.

And:

> In the next year, begin developing better walking and cycling information and data. In the next three years, incorporate this data and information into Victorian Government transport models for strategic and project planning, and project appraisal to guide investment decisions.[34]

To achieve the Victorian Government's target of 25% active transport mode share by 2030, investment in and prioritisation of active transport infrastructure will be required.

The benefits of increased participation in active transport include:

- reduced greenhouse emissions due to less trips by car
- reduced congestion on roads
- greater community health and wellbeing
- more inclusive, vibrant and healthy places for Victorians to live.

The transport sector accounts for 16% of local greenhouse emissions.[35], so enhancing local active transport options can help significantly reduce Merri-bek's carbon footprint.

In terms of health and wellbeing, half of Merri-bek's adults are overweight, a high proportion have heart disease, and less than half meet physical activity guidelines.[36] Improved active transport experiences can help to combat historic socio-economic and health challenges by helping encourage more active day to day lifestyles throughout neighbourhoods.

Safe, comfortable routes are key to encouraging 'interested but concerned' non-cyclists. This is particularly true for under-represented groups such as women, children and older people.

A study conducted by Monash University and VicHealth showed 83% of Moreland residents were classified as 'interested in cycling but concerned' and likely to ride a bike more often if separated bike paths were provided.[37]

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[33] State of Victoria (2021) Victoria's Climate Change Strategy, p39
[34] Infrastructure Victoria (2021) Victoria's Infrastructure Strategy 2021-2051, p21
[35] Snapshot Climate (2021) Australian Emissions Profiles - Merri-bek
[36] Merri-bek City Council (2020) 'Health and wellbeing profile'
[37] Merri-bek City Council (2021) 'New bike lanes and shared zones in Moreland'

Education and behaviour change initiatives are also important in transitioning the community to active transport modes.

Merri-bek's Ride & Stride program has captured the rapidly growing community demand for safer walking and cycling infrastructure. Merri-bek's Ride & Stride program is an innovative behaviour change program designed to get more kids riding, striding and scooting to school. By developing and fostering a culture of healthy, active travel in young people, the Ride & Stride program hopes to drive generational change towards a safer, more sustainable transport network in Merri-bek.

The monitoring and evaluation of these programs has revealed a clear, consistent appetite for better pedestrian and cycling infrastructure in the Merri-bek community:

- over 90% of families and residents want to see total street space reallocation for walking and riding outside school gates through the 'Open Streets' program
- more than 100 families have taken up free e-cargo bike loans to shift away from driving to school
- parent feedback cites car traffic and lack of safe active transport infrastructure as the number one concern for their child's journey to school.

The success of any transport behaviour change program is limited by the infrastructure that supports it. Over 4,000 students, families, and residents over two years of delivering the Ride & Stride program have asked for safer infrastructure to support their change in travel behaviours.

Walking and cycling infrastructure is often considered primarily the responsibility of local government. One exception to this approach is complementary cycling infrastructure delivered alongside major road or rail projects. While local governments do play a key role in delivering cycling infrastructure, the state government has a crucial role with regards to infrastructure on arterial roads, priority at traffic signals and routes that span multiple local government areas.

*Victoria's Infrastructure Strategy 2021-2051* recommended:

> In the next year, start delivering road space reallocation initiatives to better support and enforce priority movement through streets and places. Adopt a five-year target for delivery of more ambitious road space reallocation initiatives. Legislate for faster, simpler, and more consultative road space reallocation in government decision-making.[38]

Merri-bek would welcome state government work to reallocate road space to support sustainable transport modes in appropriate locations. Merri-bek requests that consultation with local communities be a key part of any such changes.

**11. Support the uptake and a coordinated rollout of electric passenger vehicles, buses, council fleets and charging networks.**

Transport is the second largest source of emissions in Victoria accounting for 25% of the state's emissions. It is also the fastest growing source of emissions.[39]

*Victoria's Climate Change Strategy* pledges to accelerate the transition to zero emissions vehicles by setting a 50 per cent ZEV target for all new light vehicle sales by 2030.[40]

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[38] Infrastructure Victoria (2021) Victoria's Infrastructure Strategy 2021-2051, p21

[39] Victorian Government (2021), Victoria's Climate Change Strategy, p10

[40] Victorian Government (2021) Victoria's Climate Change Strategy, p11

While around half of consumers say they are considering an EV for their next vehicle purchase according to a survey by the Electric Vehicle Council[41], there are still significant barriers that will impact their decision. According to the AVC survey[42], the most significant barriers are:

- purchase cost of an EV compared to a petrol/diesel vehicle (87%)
- current accessibility to charging infrastructure (85%)
- range of EV models to choose from (77%)
- driving range per charge compared to a tank of petrol/diesel (69%)
- convenience of recharging an EV (66%).

With the introduction of EV charging stations, many parts of Melbourne's north are likely to need upgrades to the electricity network to accommodate this forecast growth – not just in EV stations but electricity demand more broadly.

Working with distribution network service providers is one of the biggest barriers councils face in rolling out a public EV charging station and charging infrastructure for council electric fleets at depots. Key barriers include:

- high application fees (solely on a site-by-site basis)
- no ability to discuss plans outside the application process
- no public knowledge of an area's electricity charging capacity
- no public plans to consider public EV charging holistically.

As an early adopter, Merri-bek rolled out a network of 16 public chargers to encourage the uptake of electric vehicles. These are powered by 100% zero-emissions renewable electricity from the Crowlands Wind Farm. Community uptake of EVs is evolving rapidly, and Merri-bek Council receives requests from residents for more EV public and private off-street charging. The provision of a charging network and other initiatives will help speed the transition to EVs.

Merri-bek strongly encourages the improvement in electric vehicle infrastructure to accelerate the uptake of zero emissions vehicles to decarbonise the transport system.

Investment prioritisations should also include consideration of electrification of the bus fleet, and associated charging infrastructure (see idea 4), and eventual move to green hydrogen as the technology becomes available.

There is an opportunity for the Victorian Government to work with Councils and distribution network service providers to drive innovation in public charging, improve processes and deliver a public and Council charging EV network.

### 12. Work with distributors, the Australian Energy Regulator (AER) and the Australian Energy Market Operator (AEMO) to address network constraints and plan for a renewable future.

The Victorian Government has set legislated targets to reduce Victoria's emissions by 75 - 80% by 2035 and brought forward the date to achieve net-zero emissions from 2050 to 2045.[43]

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[41] Electric Vehicle Council (2021) Consumer Attitudes Survey 2021

[42] Electric Vehicle Council (2021) Consumer Attitudes Survey 2021

[43] Victorian Government (2023) Victoria's 2035 Emissions Reduction Target, p3

Alongside this, the Victorian Government has committed to increasing the 2030 Victorian Renewable Energy Target to 65% and setting a Victorian Renewable Energy Target of 95% renewable electricity generation by 2035.[44]

At the electricity transmission level, significant progress and prioritisation has been made for the required planning and investment occurring to enable more wind, solar and storage. However, attention and focus is required at the distribution level.

Enabling the export of solar linked with the increased demand due to electrification will be a key to Victoria achieving its legislated renewable energy and emissions reduction targets under the Renewable Energy (Jobs and Investment) Act 2017 (REJI Act). The role that customers and consumers will need to play, and supporting customers in being active elements of the system, will also be key.

*Victoria's Infrastructure Strategy 2021-2051* recommended:

> Support augmentation of critical electricity transmission infrastructure by 2027–28 to accommodate new renewable energy generation and improve network resilience and reliability through interconnection with other states.[45]

Localised energy generation and storage will become vitally important in the years to come, yet the infrastructure and the way that upgrades are planned still lies in the 20th century. Electric vehicles with bi-directional power flows (e.g. V2X technologies) could unlock a vast amount of portable energy storage from car batteries. In addition, rooftop solar will continue to increase in capacity.

The State Government should be proactive in quickly evolving and adapting the electricity distribution network to support this transition to a decentralised grid. The transition also needs to be designed in a way that is equitable and fair to all.

**13. Continue and grow the ambitions in the Victorian Government's Gas Substitution Roadmap**

The Victorian Government should continue and grow its implementation of the Gas Substitution Roadmap, whilst supporting an equitable and just transition for everyone.

The Victorian Government should scale up proven, reliable and low-cost solutions such as energy efficiency and electrification. This will enable the Victorian State Government to meet its own legislated whole-of-economy, net zero emissions target by 2050, meet its renewable energy targets, and be responsive to climate change.

Investing in energy efficiency initiatives and electricity from renewable sources will also avoid locking-in gas consumption. The phasing out of gas is an opportunity for Victoria to position itself as a leader, attracting businesses, jobs, investment, and innovation to Victoria. The next decade will be critical in meeting net zero by 2050.

Electrification can meet the technical needs of most sectors and be reliably zero-carbon with renewable energy. We would not assume that gas will be decarbonised at scale instantly instead that gas will be phased out with the installation of electric appliances.

Since this transition is inevitable, it should take place at pace and in a planned and equitable manner. As a diverse community all programs should support all cultural and socio- economic groups. It is important to incentivise people and businesses to switch early and to invest in energy efficiency and electrification and to provide support for people on a low-income.

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[44] Victorian Government (2023) Victorian Renewable Energy and Storage Targets

[45] Infrastructure Victoria (2021) Victoria's Infrastructure Strategy 2021-2051, p18

Merri-bek has a successful history of engaging with developers to encourage all-electric buildings and has developed a strong body of evidence showing that gas-free developments are technologically feasible, commercially viable and acceptable to the people who live in them. Merri-bek is seeing a growing trend for all-electric builds with no gas connections across a range of development scenarios and typologies.

State Government, industries and communities should not invest in new gas infrastructure, in order to avoid stranded assets. The State Government should ensure that gas companies contribute to moving to truly zero-carbon energy supply sources and infrastructure. While gas is being phased out, remaining gas supplies should be prioritised for industries which find it particularly expensive or difficult to transition away from gas.

Consideration also needs to be given to environmental remediation of old gas infrastructure and surrounding land to protect the environment and local communities.

**14. Support Local Councils to switch to electrification and build energy-efficient, renewable and climate resilient community facilities**

Merri-bek is already acting to phase out gas from both council operations and supporting the community to do so. Merri-bek has strategies and programs in place that would be assisted by the Victorian Government implementing the Gas Substitution Roadmap. Council is also willing to participate in any trials or pilots that assist the transition and to share our story through case studies, tours and other communications.

State Government funding for local councils to remove gas from sites with high consumption, particularly leisure centres/swimming pools, and build energy-efficient, renewable and climate resilient community facilities would reduce the corporate carbon footprint of community buildings.

Additionally, the State Government should:

- Provide minimum performance standards for heat pumps to enable easy and standardised assessment of the performance of heat pumps.
- Encourage Distributed Network Service Providers (DNSPs) to make the process of upgrading sub-stations more transparent and less costly for first-movers who transition sites from gas to all-electric.
- Incentivise DNSPs to invest in network augmentation - knowing that buildings will eventually transition off gas, to all electric.
- Provide modelling on future gas prices to assist Councils in making informed decisions on capital investments to enable electrification.
- Require timely disclosure of aggregated real time data from electricity distribution businesses.
- Invest in energy efficiency in existing buildings and homes. It is a “no regrets” measure that reduces demand for heating, reduces bills and improves comfort.

Although Merri-bek Council has reduced its overall carbon emissions by 70% since 2010/11, gas consumption currently contributes to around 30% of our (remaining) corporate carbon footprint.

Merri-bek Council is committed to ensuring all buildings are electric-only and is taking advantage of scheduled work to transition all sites off gas, with electric heat pumps (for provision of domestic hot water, and heating water) capable of meeting the necessary heat demand at the vast majority of Council facilities.

Heated aquatic centres can account for much of a council’s gas consumption. This is true for Merri-bek, with four heated aquatic centres accounting for 89% of our gas consumption. Electrification of aquatic centres is both relatively new and expensive in comparison to a typical gas-fired boiler.

The key barriers to heat pumps for aquatic centres are the extra plant room required, heritage restrictions, and the need to upgrade electrical infrastructure to deal with higher electricity demand.

Upgrading electrical infrastructure varies and is hard to estimate, but distributors can charge up to $350,000 to upgrade local sub-stations. As first movers of switching from gas to all-electric, Council pays for the upfront costs for distribution upgrades.

Modelling suggests that all-electric aquatic centres are marginally cheaper to run than gas-powered centres. As a result, the payback period is greater than 15 years. The up-front investment to ensure that an aquatic centre is all electric is estimated from $1 million to $4 million.

Merri-bek Council is committed to moving all its sites off gas, noting that with budget constraints this may take some time to achieve. To date, Merri-bek Council:

- Has installed electric heat pumps at six sports pavilions, two community centres and our main administrative offices.
- Is currently investing in a $37 million major redevelopment of our Fawkner Aquatic Centre - this will be the first all-electric aquatic centre in Merri-bek.
- Opened the new Glenroy Community Hub in 2022, Australia's first passive house public building, that also achieves Living Building Challenge Petal certification. The airtight and thermally-efficient building envelope has largely eliminated heating and cooling bills and keeps the building comfortable year-round. As a net positive energy building, the hub generates more energy than it consumes. 125% of energy needs are met via solar PV and storage.

The Hub demonstrates Merri-bek Council's community and sustainability leadership and is part of Council's action on climate change. Council invested in a public building that will benefit its immediate community and become a demonstration project for other councils and public institutions

**15. Support retrofit requirements of residential properties to improve energy performance standards including a strategy to provide access to sustainable funding streams to support retrofits over the long term**

With the average Australian home performing at 1.7 stars[46], the enormity of the retrofit requirement within the residential sector to improve energy performance standards cannot be understated. Many households are also experiencing significant cost of living pressures, which are likely to prevent them acting to improve their energy performance.

*Victoria's Infrastructure Strategy 2021-2051* recommended:

> In the next three years, increase minimum energy efficiency standards to reduce energy use and costs in rented homes. During the next 15 years, keep updating these standards to reflect new cost-effective measures, and improve renters' ability to make home energy efficiency improvements.[47]

From March 2023, Victorian rental properties must now have a fixed, energy efficient heater in the main living area. Council supports the continued review and updating of energy efficiency standards in rented homes to improve home energy efficiency. However more needs to be done to ensure that rental properties are healthy, safe and affordable to live in. Fifteen years is too long for incremental increases to be made to the energy efficiency of rental homes. We recommend that by 2025 that mandatory minimum energy efficiency performance standards for rental properties be introduced, this could utilise the Victorian Residential Efficiency Scorecard as a measurement tool. Minimum standards should also support the

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[46] COAG Energy Council (2019) Report for Achieving Low Energy Existing Homes

[47] Infrastructure Victoria (2021) Victoria's Infrastructure Strategy 2021-2051, p18

electrification of rental properties so that they are not left behind in the transition and bear the brunt of increases in gas supply costs.

Any increase in minimum standards for rental properties also needs to remove the disadvantage for rental apartments. With the current minimum standard, 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.

The variation for apartments should be removed so that people living in apartments are not disadvantaged.

The State Government can support improved energy performance standards and progress towards energy efficient buildings by:

- Mandatory disclosure of energy performance of residential properties at point of sale and lease.
- Mandatory disclosure of energy performance for all buildings when they are sold and leased.
- Devise sustainable funding mechanisms to allow for all residents and households to have access to finance for energy performance improvement.
- All new public and social housing is at least 7.5 stars, all-electric and renewably powered.
- Provide further funding to address climate vulnerability among existing social/ public housing tenants.
- Remove any minimum standards variation that disadvantages apartment renters.

A future strategy needs to include how the Victorian Government can provide access to sustainable funding streams to support retrofits over the long term. Prioritisation should be given to populations with increased vulnerabilities and low-income homes.

**16. Amend the Victorian Planning Scheme to elevate environmentally sustainable design targets for new buildings, encouraging a move towards net zero carbon development and support the transition of the energy sector to renewables**

Current and future land developments for all types of uses will impact sustainability for years to come. Introducing requirements through planning schemes is an effective and low-cost way to influence the built environment that will result in lasting improvements to sustainability and quality of life.

In lieu of adequate state policy, Councils from across Victoria have joined forces via the Council Alliance for Sustainable Built Environment (CASBE) to push for more sustainable design within planning requirements. On 21 July 2022, 24 member councils lodged a request for authorisation with the Minister for Planning seeking to progress a joint amendment to introduce planning provisions that elevate sustainability requirements for new buildings, including key community infrastructure, encouraging a move towards net zero carbon development and supporting the transition of our energy sector to renewables. The request for authorisation is currently sitting with the Department of Transport and Planning.

The key environmental themes that are addressed and proposed for the Amendment include:

- **Operational Energy** - Involves development prioritising energy efficiency initiatives to address and minimise a development's demand on the energy grid and peak energy, as well as emissions to air through fossil fuel reduction which is attributed towards greenhouse gas emissions and climate change impacts. Prioritised in line with the following hierarchy:
  - Thermal performance and passive design measures
  - Energy efficient systems (e.g., heating, cooling and ventilation) and appliances

  - Onsite renewable energy generation
  - Offsite renewable energy purchasing and/or carbon offsets.

- **Embodied carbon** - Involves the use and sourcing of materials and design techniques to reduce the amount of embodied carbon embedded in Victoria's buildings.
- **Sustainable transport** - Directs the adoption of sustainable transport and low emission vehicle measures such as electric vehicle infrastructure, an increase in active transport and end of trip facilities such as bicycle parking and storage spaces.
- **Integrated water management** - Directs water efficiency and potable water demand reduction, as well as the management to holistically address stormwater quantity and quality onsite prior to stormwater discharge from the development to local waterways.
- **Climate resilience** - Consideration of a development's risk to climate change impacts such as the urban heat island effect, flooding and the management of stormwater, as well as peak energy and potable water demand.
- **Green infrastructure** - Implementation of green infrastructure design measures, including tree canopy retention, improvement and planting of appropriate species, to positively contribute towards the ecological value, biodiversity, health, and public realm amenity of a development, as well as societal and communal impacts.
- **Indoor environment quality** - Involves thermal comfort and safety requirements, natural ventilation and access to clean, fresh, air, with minimal exposure to harmful indoor air pollutants, as well as ensures that key areas of a development have access to daylight and sunlight to improve amenity, liveability and workability functions.
- **Waste and resource recovery** - Consideration and selection of appropriate materials which have limited environmental and transportation impact, as well as support the waste hierarchy through waste avoidance, minimisation, reuse, recycling and recovery.

### 17. Increase guidance and funding for local government on drainage system infrastructure to mitigate the risk of floods through drainage infrastructure

Merri-bek acknowledges that flooding and high rainfall events will always occur and have been occurring since before European settlement. However urban development has changed forever the way our city responds to floods and climate change is causing more intense downpours, with extreme rainfall events expected to become more intense by the end of the century.[48]

Victorian Government stormwater policies are implemented almost exclusively through land use planning policy and building codes. This approach focuses on mitigating the risk of floods through drainage.

Local government is responsible for most drainage infrastructure. Prior to the late 1970s, drainage systems were only required to accommodate water from storms with a 5-year Average Recurrence Interval (ARI). From that point on, drainage systems in new land developments have been required to accommodate much higher stormwater flows, of up to a 100-year ARI.

Most of Melbourne's middle-ring councils, including Merri-bek, were developed in the 1970s, and as a result their drainage systems are only designed for 5-year ARIs. Combined with intense development, which increases the proportion of impervious land, this increases the risk of flooding. To tackle this issue and achieve Water Sensitive Cities objectives and those contained in the Healthy Water Ways strategy and the Catchment Scale Integrated Water Management Strategy, developed by the Integrated Water Management Forums, will require high level planning, guidance and funding from State Government.

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[48] Victorian Government (2019) Victoria's Climate Science Report, p31

For many years, planning schemes within metropolitan Melbourne have included schedules for Land Subject to Inundation Overlays (LSIO). Melbourne Water is the Floodplain Management Authority and is responsible for the waterway flood mapping that generates the mapped extents for these LSIOs.

The current LSIO planning control in the Merri-bek Planning Scheme was introduced more than two decades ago. It is not known if Melbourne Water has done a review of its flood mapping for Merri-bek's waterways and/or whether this includes climate change considerations.

Metropolitan Melbourne's Floodplain Management Authority should increase funding, resourcing and have a long-term action plan to lead floodplain management across all of metro Melbourne. If local councils are to assess planning permit applications, in their role as a local drainage authority, tailored guidelines may be required for each local catchment. Therefore, Melbourne Water needs to take an active role in capacity-building across the local government sector and leading the preparation of guidelines for consistent decision-making within its Port Phillip and Western Port areas of responsibility.

With local government funding and resources limited, the State Government should increase guidance, and funding in order to meet water-sensitive city targets and encourage water authorities to upgrade the main drains to help manage flooding.

**18. Support the regional development of non-thermal advanced waste processing technologies, modern recycling infrastructure and mandatory product and material stewardship programs**

The Victorian Waste to Energy Framework supports waste to energy to divert waste from landfills and places a one million tonne cap on the amount of waste that can be heat treated to make energy. It also supports industry investment to develop new infrastructure and technologies.

Merri-bek City Council views waste-to-energy as a far less desirable option than waste reduction, re-use and recycling. In line with the objectives of the waste hierarchy and principles of a circular economy, Merri-bek City Council supports the regional development of non-thermal advanced waste processing technologies such as anaerobic digestion, mechanical biological treatment and in-vessel composting where the outputs produced can be captured and used.

Merri-bek City Council does not support the development of thermal waste-to-energy technologies such as incineration, gasification, combustion, pyrolysis and plasma arc for the disposal and treatment of waste.

Energy produced through waste-to-energy facilities is not renewable as the feedstock comes from finite resources such as oil. Waste-to-energy facilities can have the perverse outcome of locking in waste generation through their requirement for the continual supply of feedstock. Additionally, investment in waste-to-energy facilities can divert funding away from other resource recovery infrastructure. As the electricity grid in Victoria progresses towards 95% renewable by 2035, the purported greenhouse gas benefits diverting waste from landfill to generate electricity are eroded. This is especially the case if organic waste has been source separated for recycling, leaving higher proportions of plastic and other high embodied carbon materials in the waste-to-energy feedstock.

Such an approach does not align with the goal of creating a regenerative and sustainable system for resource use. The State Government should instead:

- Increase capability of material sorting and recovery through investment in modern recycling infrastructure, with greater oversight of the material throughputs via increased regulation and mandatory measures. Ensuring cleaner recovery streams will mean they are better able to compete with virgin materials for remanufacturing.
- Implement robust and mandatory product and material stewardship programs (across products flowing to Municipal Solid Waste, Commercial, Industrial and Construction and Demolition waste

streams) to drive waste avoidance at source, through products and materials re-designed as services, for reuse, repair, recovery and remanufacture. The State Government must urge the Federal Government to use its powers under the *Recycling and Waste Reduction Act 2020* to establish such mandatory product stewardship for all products that generate waste, with clear and binding targets to drive action by industry.

Infrastructure that enables all sectors of the economy to undertake these activities is required to deliver on the ambition of a circular economy.

**19. Support and fund action to mitigate the Urban Heat Island Effect, including in State-funded infrastructure investments and State-owned open spaces**

Heatwaves are a silent killer. Over the last century, heatwaves have caused more deaths across Australia than bushfires, cyclones, earthquakes, floods and severe storms combined. Australia's mortality data indicate that over the past four decades there has been a steady increase in the number of deaths in summer[49].

Greater Melbourne is facing increasing temperatures. This includes higher daily top temperatures, more days above 35°C, and more heatwaves. For example, on average between 1981 and 2010, Greater Melbourne experienced 8.3 days a year above 35°C. By the 2050s under high emissions this is expected to increase to between 13 and 21 days a year over 35°C.[50]

In addition to affecting community wellbeing, extreme heat events are costly to the economy. Extreme heat events already cost the Victorian economy on average $87 million a year, and this cost is projected to rise as heatwave events become more frequent.[51]

The State Government can contribute to the reduction of the UHIE by:

- leading coordinated landscape-level approaches to urban greening and green infrastructure
- adopting best practices for heatwave and climate-resilient infrastructure
- funding projects to establish urban forests in State-owned open spaces such as roadside reserves
- investigating solutions to the Urban Heat Island Effect in key locations such as Sydney Road, including pilots and incentives for green infrastructure such as green walls and green roofs in private development and public infrastructure
- upgrading public buildings used by the community such as kindergartens and health centres to perform well during heatwaves
- providing best practices, training, and guidance to local Councils and other owners of community infrastructure on climate resilient asset management
- trialling and vetting resilient and cooling materials such as aggregates for roads, use of reflective paint, permeable roads

Reducing and responding to the Urban Heat Island Effect (UHIE) is a priority for Merri-bek City Council, and other suburban councils that have a highly urbanised environment.

During heatwaves most parts of the Merri-bek can be four to seven degrees warmer than surrounding rural areas. Detailed analysis of Merri-bek's UHIE vulnerability has found that there is an overall high UHIE across the municipality and a high number of extremely hot places; with very few cool places.[52]

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[49] Climate Council (2016) The Silent Killer: Climate change and the health impacts of extreme heat
[50] Victorian Government (2019) Greater Melbourne Climate Projections 2019
[51] Victorian Government (2019) Victoria's Changing Climate
[52] Merri-bek City Council (2016) Urban Heat Island Effect Action Plan

The analysis highlighted that Merri-bek has a community that is vulnerable to this heat. During long periods of hot weather the UHIE increases heat stress in the community. Most affected are the elderly, the very young and those with pre-existing medical conditions.

The suburb of Gowanbrae is among the hottest suburbs in Merri-bek. From thermal imaging taken during the January 2014 heatwaves, surface temperatures in Gowanbrae ranged between 47°C to 51°C compared with 43 °C to 45 °C in Glenroy across the Moonee Ponds Creek.[53] Gowanbrae has surrounding public open spaces along the Metropolitan Ring Road and reserves downstream of Jacana wetlands that offer opportunities for increasing urban tree canopy.

Sydney Road is also one of the hottest areas in Merri-bek City Council. Surface temperatures during the January 2014 heatwaves reached up to 64 °C with many areas above 55 °C[54]. Cooling Sydney Road can have multiple benefits on invigorating economic activities, safeguarding the health of people using public and active transport, and protecting the road from extreme heat.

Local Councils would benefit from guidance and standards on climate resilience in asset management including accounting for the reduction of the useful life of assets due to climate impacts, integration of building vulnerability assessments in condition assessments, and prioritisation and resourcing of retrofit programs. Some Victorian councils are embarking on these programs but largely without support and guidance from the State.

A barrier to councils adopting climate resilient materials is the lack of vetting and regulation of new products in the market as well as updating/refreshing of standards (such as VicRoads, now the Department of Transport and Planning). There is appetite to trial new products in roads, footpaths, and so on, that contribute less to UHIE, but barriers include the time it takes to know if products are performing and potentially unforeseen risks such leaching of microplastics. State-led trials and lists of vetted products can signal to the market that new sustainable and resilient products are supported and can mitigate risks faced by councils in adopting unvetted products.

[53] Merri-bek City Council (2014) Analysis of thermal imaging for January 14, 2014 10am through Merri-bek City Council's GIS platform moreMaps
[54] Ibid.