





Hepburn
SHIRE COUNCIL



ACKNOWLEDGEMENT OF COUNTRY

Hepburn Shire Council acknowledges the Dja Dja Wurrung as the Traditional Owners of the lands and waters on which we live and work. On these lands, Djaara have performed age-old ceremonies of celebration, initiation and renewal. We recognise their resilience through dispossession and it is a testament to their continuing culture and tradition, which is strong and thriving.

We also acknowledge the neighbouring Traditional Owners, the Wurundjeri to our South East and the Wadawurrung to our South West and pay our respect to all Aboriginal peoples, their culture, and lore. We acknowledge their living culture and the unique role they play in the life of this region.



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COMMUNITY ENGAGEMENT SO FAR ON SUSTAINABLE HEPBURN



Caring for and healing Country

Dja Dja Wurrung peoples (Djaara) see all the land and its creatures in a holistic way that is interconnected with each other and with the people. For us, Dja Dja Wurrung Country (Djandak) is a cultural landscape – it is a living entity, which holds the stories of creation and histories that cannot be erased. Imprinted on it are the lore, totemic relationships, songs, ceremonies, and ancestral spirits, which give it life and hold significant value to Djaara. Our Martiinga kuli (ancestors) looked after this Country and we are required to do the same. Caring for Country is vital for maintaining our culture.

“ But over the years, our lands have been exploited and misused, and our people driven off the land and away from their Country. Unsustainable development changed fire regimes and mining have changed the nature of our Country and caused it harm. We have a duty to care for our Country and feel ashamed and sad that it is currently suffering. When the Country suffers, we suffer.

Our Dhelkunya Dja (Healing Country) Plan reaffirms our goals and obligations to care for Country and describes our People's aspirations as the Traditional Owners of Djandak. Our Vision is for the health and wellbeing of our people to be strong and underpinned by our living culture. Our Vision is for our lands and waters to be in good condition and actively managed to protect our values and to promote the laws, culture and rights of all Djaara.

Sustainable Hepburn presents an important opportunity to walk together and heal Country for the Hepburn Shire part of the Dja Dja Wurrung Nation. Successful implementation of *Sustainable Hepburn*, through working in partnership with Djaara as the Traditional Owners, gives life to the Dhelkunya Dja Country Plan, puts spirit back into Country and creates a future that respects our past generations, and those yet to come. This will also deliver the thriving, safe, just, and prosperous local communities, living within planetary boundaries, at the heart of *Sustainable Hepburn*.

Rodney Carter

CEO (Chief Executive Officer) Dja Dja Wurrung Group
Dja Dja Wurrung Clans Aboriginal Corporation



Mayor leadership statement

During the Hepburn Together process in 2020/21, we heard loud and clear from our local community that environmental sustainability is the number one priority closely followed by liveability. We love where we live and we wish to protect what we love, both now and for future generations. Council committed to developing an environmental strategy – *Sustainable Hepburn* – that acknowledges the interconnected nature of climate change, biodiversity and waste management. We are excited to present *Sustainable Hepburn* to you, Council's updated commitment to further reduce our corporate greenhouse gas emissions, protect and enhance our local biodiversity, transition to a low waste Shire and become more resilient to the impacts of climate change.

“ I believe that together we can make a world of difference if we reduce our impact on the environment and ecosystems, advocate for more sustainable and regenerative processes and make meaningful changes to adapt to a changing climate.

There is so much knowledge and sustainable action already occurring in Hepburn Shire, and we applaud the progressive actions underway across the community. Our opportunity is to build on the momentum, extend our ambition and work together in partnership. This is not something we can do alone – council, community, businesses must all chip in for a more *sustainable Hepburn*.

The benefits of acting now reach far beyond lifestyle choices. The sooner we act, the better chance we have of surviving and also thriving. There are many opportunities at a local level to engage and be the change we wish to see in the world. Given the challenges experienced as a result of COVID-19, we have an opportunity to recover in a way that builds a stronger local and more circular economy, building skills and knowledge so our municipality can grow viable and sustainability businesses in ways that give our future generations the chance they deserve to live in a prosperous world. Future generations will hold us accountable to the commitments we make today.

Council is committed to implementing *Sustainable Hepburn* 2022-26 and will actively involve you, our community in its implementation. We look forward to building stronger partnerships with you, enabling you to deepen the work we are already so proud of.

I commend to you this strategy, *Sustainable Hepburn* and sincerely look forward to seeing what we can achieve together today, for a better tomorrow.

Cr Tim Drylie

June 2022



Executive summary

The Hepburn Shire community is renowned for community leadership in grassroots environmental action and identifies strongly with the Shire’s “beautiful natural environment that supports forests, bushlands, and rich agricultural land that is supported by a sustainable conscious and committed community”. The Traditional Owners of the Hepburn Shire, Djaara (Dja Dja Wurrung People), have lived on their traditional lands and cared for Djandak (Country) over many thousands of years.

The local community voiced environmental sustainability as their number one priority during the Hepburn Together – Community Vision process of 2020/21 and again during community engagement for the development of this strategy. Hepburn Shire is home to some of Victoria’s most biodiverse forests, deep volcanic soils, with high annual rainfall making this region one of the most ecologically and agriculturally productive areas in our state.

Hepburn Shire Council is proud of the achievements made towards environmental sustainability across the Shire - in the community, in partnership with other agencies and at Council. *Sustainable Hepburn* builds on efforts to date and updates three major Council strategies:

- Waste Management and Resource Recovery Strategy 2014–21
- Biodiversity Strategy 2018–21
- Towards Zero Emissions Roadmap 2017-21

Council is proud to partner with numerous organisations across the community such as the community-led Hepburn Z-NET project which has been underway in the Hepburn Shire since early 2018. This project is building on a long-standing community work in emission reductions and provides a holistic framework for quantifying and addressing greenhouse gas emissions locally. Through use of this comprehensive, open-source blueprint, the Z-NET Community Transition Plan has been developed: articulating Hepburn Shire’s plan to reach net-zero emissions by 2030.

Hepburn Shire Council mandated carbon neutrality from Council operations in 2021, which is soon to be achieved through the installation of renewable energy, energy efficiency and offsets. Council is an active member of Central Victorian Greenhouse Alliance (CVGA), the Victoria Government's Take2 Initiative and the Climate Council of Australia's Cities Power Partnership.

There are many projects contributing to the uptake of renewable energy and the reduction of energy use and greenhouse gas emissions across the Shire. One of these is Solar Savers – a project where Council purchases photovoltaic systems for low-income households at no upfront cost to the household. This program includes bulk procurement and vetting of solar PV systems/providers, project management on behalf of vulnerable households making loan terms longer, allowing households to be 'cash flow positive' from the outset. This program is extremely well subscribed within the Shire with 80 households receiving solar systems over the past 3 years. Council also supports the Hepburn Solar Bulk Buy which drives solar uptake and is another strong Community-Council partnership including Hepburn Z-NET and other local partners. In early 2022, the Hepburn Shire community reached 42% renewable energy use. This is in comparison to the Victorian state average of 29% renewable energy use. The difference between local and state-wide renewable energy use is, in part, a result of the Shire's commitment to transition to zero-net carbon emissions by increasing local solar and wind power generation.

Council has been proactive in trialling approaches to reduce waste to landfill with an organic waste trial in the township of Clunes achieving a reduction of organic waste to landfill of around 40%. Council will need to develop local solutions to the Recycling Victoria policy which will see glass separated from recyclables and

organics diverted from landfill. The sooner we establish local approaches to value waste as a resource, the sooner we can develop the circular economy as a viable local market to benefit the local community.

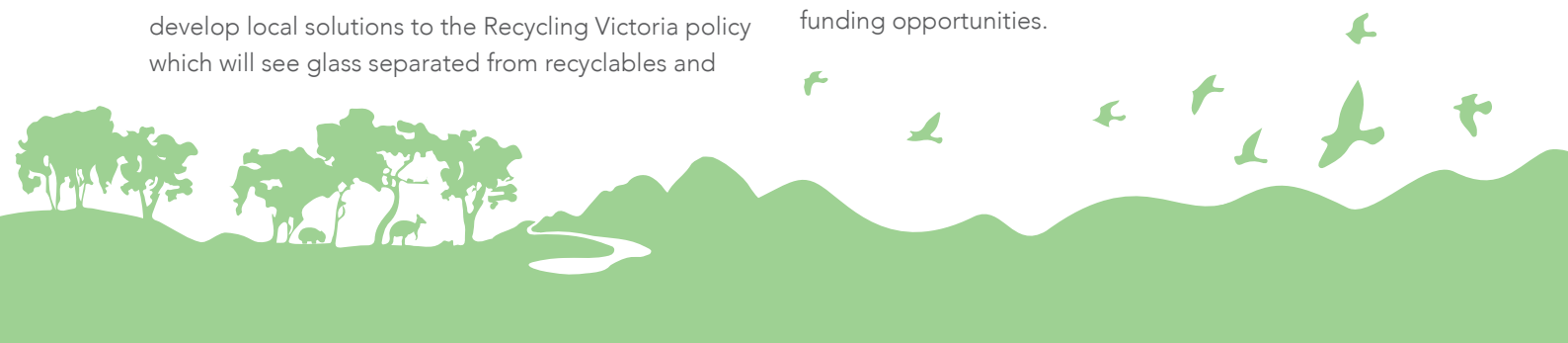
Our natural environment and biodiversity is precious for its unique ecology in its own right, and for the services it provides us as humans. Given climate changes predicted for our region, protecting and enhancing our natural environment builds resilience with nature which in turn enables our survival, for the fresh air and water it gives us for example.

This strategy can be read like a story:

- Our local Hepburn context,
- Why we need to act,
- The strategic themes and their context,
- How we developed the strategy
- Action plans and opportunities for each *Sustainable Hepburn* theme.

This strategy has been developed with multiple authors. We appreciate the input of Council staff, the broad Hepburn community, DJAARA, and other agencies for bringing *Sustainable Hepburn* to life. We are thankful for the hard work and collaborative efforts of the *Sustainable Hepburn* Community Reference Group members who developed the action plans with us in Section 8. The action plans are testament to their personal investment and belief that we can indeed make a difference.

We believe these actions will build on and add value to work already achieved and underway, while enabling council and community to leverage *Sustainable Hepburn* and the commitment it makes for future funding opportunities.



Introduction to a Sustainable Hepburn

We love where we live, Hepburn Shire. Caring for our natural environment by reconnecting with nature, reducing impacts associated with our lifestyles and regenerating disturbed landscapes is fundamental to the health and wellbeing of our community, the natural systems that sustain us, a thriving local economy and resilience in the face of future challenges.



"Think Global Act Local", accurately reflects the intent of this strategy. Thriving, safe, just, and prosperous local communities, living within planetary boundaries, is at the heart of *Sustainable Hepburn*.

Environmental sustainability is the Hepburn community's top priority, and Hepburn Shire is known for its progressive and proactive communities walking their talk. The forests, bushlands, and rich agricultural land define our identity and connect us to each other. It is also what draws visitors to the Shire. Tourism contributes over \$106 million annually¹ to the Shire's economy and is also one of our largest employing sectors. *Sustainable Hepburn* recognises that although we depend on our ecosystems and biodiversity for life, they are vulnerable to the choices we make. We are pushing our natural systems; our waterways, plants and animals, and forests - beyond their ability to cope. Therefore, it is increasingly important to achieve a balance between people and place.

The Traditional Owners of the Hepburn Shire, Djaara (Dja Dja Wurrung People), have lived on their traditional lands and cared for Djandak (Country) over many thousands of years. Dja Dja Wurrung Country is a cultural landscape that is more than just tangible objects. Dja Dja Wurrung peoples see all the land and its creatures in a holistic way that is interconnected with each other and with the people.

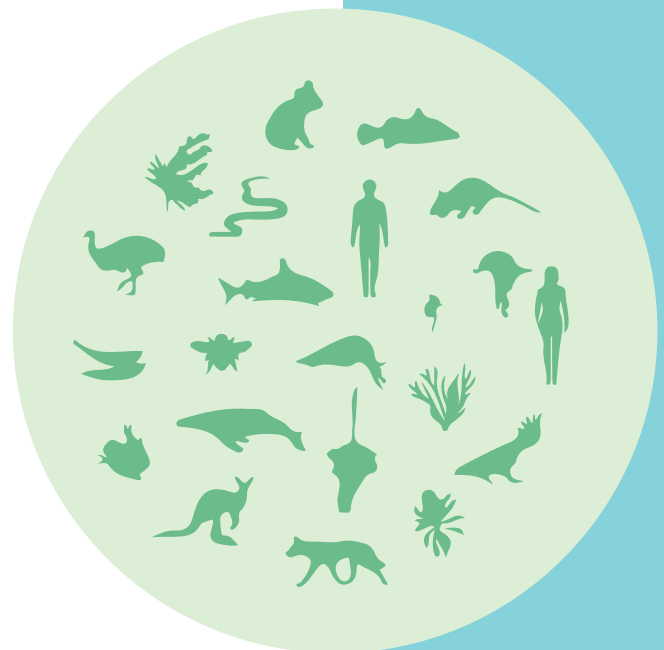
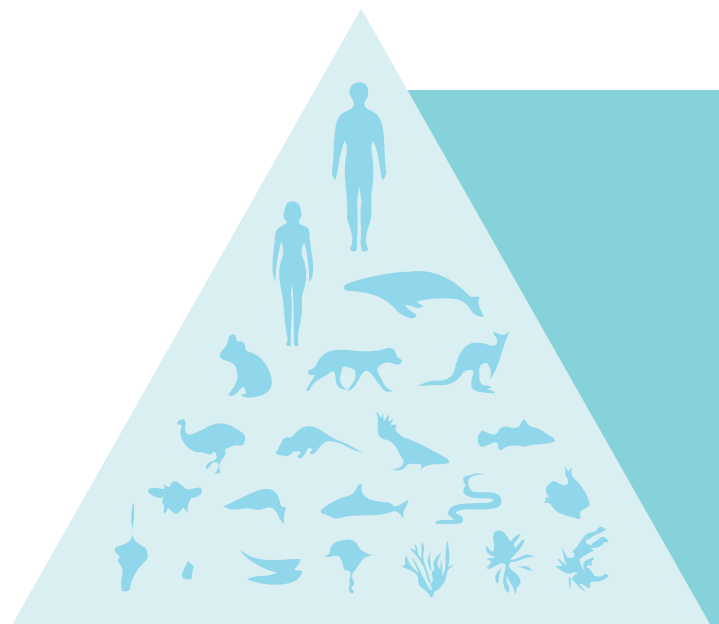
The separation between people and Country is having a profound impact on the health and resilience of our natural environment, compromising the natural cycles that sustain us. Djaara believe they are an integral part of the ecosystem and value the balance of natural resources. *"When the Country is sick, we are sick"* (Dhelkunya Dja Country Plan 2014-2034²).

¹ Attachment-8-Hepburn-Shire-Events-Strategy-2020-2025-Separate.pdf

² Dhelkunya-Dja-Country-Plan-2014-2034 Djaara (Dja Dja Wurrung Clans Aboriginal Corporation)

The impacts of colonisation on Country have left a legacy of significantly altered landscapes. A long history of agricultural development, urban settlement and mining has left fragmented ecosystems and led to the loss of many species of plants and animals. Changed fire regimes have affected the cycling of nutrients and the composition of species and led to increased fire fuel loads that pose dangers to people and ecosystems. Widespread clearing has caused much of the productive topsoil to erode and allowed the establishment of many pest animals and plants that are displacing and preying on our native species. This transformation is continuing – driven by both natural and human caused factors.

We are in a climate emergency and at the time of writing, climate scientists warn that we are already perilously close to tipping points that could lead to cascading and irreversible climate impacts. Significant urban growth and climate change including the increasing variability in rainfall and extreme weather events will continue to challenge the repair and ongoing management of Country. The financial sustainability of local governments following the impacts of COVID-19 will be an ongoing challenge and we need to be creative in our efforts to do more with less.



If design and planning processes consider natural systems that include people, animals, resources, and plants equally – similar to an Indigenous world view – this would make a significant contribution to a more sustainable future world.

Human-centred or Country-centred: Image: Diagram adapted from German architect Steffen Lehmann, Eco v Ego diagram 2010

Sustainable Hepburn is Hepburn Shire Council's updated commitment to environmental sustainability.

Sustainable Hepburn is Hepburn Shire Council's updated commitment to environmental sustainability. It acknowledges that we have entered the Anthropocene, a new era where humans shape every aspect of the biosphere. This means humans now rival natural forces in shaping the functioning, processes, and dynamics of the Earth system. In taking an interconnected view of sustainability, we hope to emphasise that sustainability underpins everything we do, that it should form the basis of future investment, decision making and future planning. *Sustainable Hepburn* takes the view that if we act now, we can reduce future costs. Policy change is coming and if Hepburn Shire can be on the front foot we can design approaches to issues, like seeing waste as a resource, in ways that suit our community.

Sustainable Hepburn is an invitation as well as a provocation. We have much to do to protect and to regenerate our planet and to nurture our Shire, where we love to live. In doing so we can build trusted networks, have fun, learn from each other, and celebrate our achievements.

Sustainable Hepburn acknowledges the interconnected relationship between many facets of environmental sustainability and as such, proposes action on four key themes. Each theme shares elements of crossover which each other, providing an opportunity for deeper collaboration and partnership both within Council and between Council and community.

- ▶ Beyond zero emissions
- ▶ Natural environment and biodiversity
- ▶ Low waste
- ▶ Climate resilience

This shift in mindset requires us to work in new and different ways. Sustainability is no longer the sole responsibility of a specific person or department. To regenerate and heal our natural environment requires a huge collective effort; new governance structures that break down silos, facilitates genuine accountability and reviews and improves processes and systems that no longer serve our ambitions.

Together in partnership, we believe we can make a difference to a more *Sustainable Hepburn*.



Trentham Falls

SECTION 1

THE COMMUNITY WANT A SUSTAINABLE HEPBURN



Hepburn Shire Council

Community Vision and Council Plan 2021-25

Sustainable Hepburn does not exist in a vacuum - it delivers on community sentiment and priorities.

In 2021, Hepburn Shire Council embarked on an extensive engagement process with a broad cross-section of the local community to develop a Community Vision for the next 10 years. Hepburn Together, brought the voice of the community to Council. The community's goals, aspirations and priorities have been captured to develop the Community Vision and helped shape Council Plan 2021-25, which is the strategic commitment and blueprint for Council's work for the next four years.

Hepburn Community Vision:

The five top words used by community in the 306 responses to describe the Shire's identity included: *diverse, community, sustainable, inclusive, and connected.*

We heard how important environmental sustainability is to our community during the Hepburn Together Community Visioning process. Environmental sustainability was the top community priority reported during community consultation on Hepburn Together (2020-21), closely followed by Liveability.

Question 14. If you, or your group had to choose your top three priority areas for the Hepburn Shire community to address over the next 10 years what would they be (please rank your top 3 priorities)?

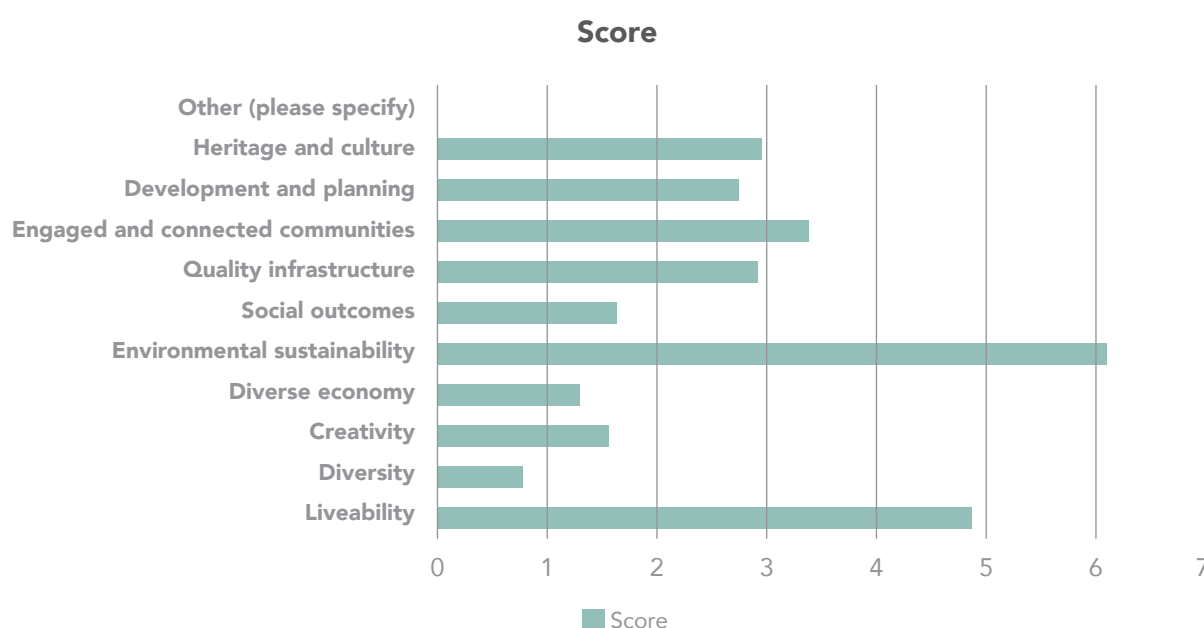


Figure 1: Hepburn Together community feedback on top three priority areas for Hepburn Shire community

During community engagement activities undertaken specifically for *Sustainable Hepburn*, people were asked to indicate to what extent they agreed with the following statement: "Hepburn Shire residents and ratepayers described the identity of the Shire as a beautiful natural environment that supports forests, bushlands, and rich agricultural land that is supported by a sustainable conscious committed community". 80% of respondents indicated they either agreed or strongly agreed.

When asked to what extent they agreed with the "Hepburn Shire residents and ratepayers want to see a protected natural environment that is supported by strong climate action, effective emergency management and weed management and the protection of wildlife with a connected network of bike paths", 85% of respondents either agreed or strongly agreed. See Appendix 1 for a report on community feedback that was collected during the development of *Sustainable Hepburn*.

Hepburn Shire Council - Council Plan 2021-25

Priority statements and strategies in the Council Plan 2021-25 support the five Focus Areas outlined in the Community Vision and set out Council's operational priorities for the next four years.

Sustainable Hepburn is a new strategy referenced in Council's 2021-25 Council Plan.

- It falls under Focus Area 1 – A resilient, sustainable, and protected environment:
- 1.5.1 *Develop and implement the Sustainable Hepburn strategy to align waste, sustainability, and biodiversity*

Sustainable Hepburn updates three existing Hepburn Shire Council strategies which expired in 2021:

- [Waste Management and Resource Recovery Strategy 2014–21](#)
- [Biodiversity Strategy 2018–21](#)
- [Towards Zero Emissions Roadmap 2017-21](#)

The local identity statement from the community:



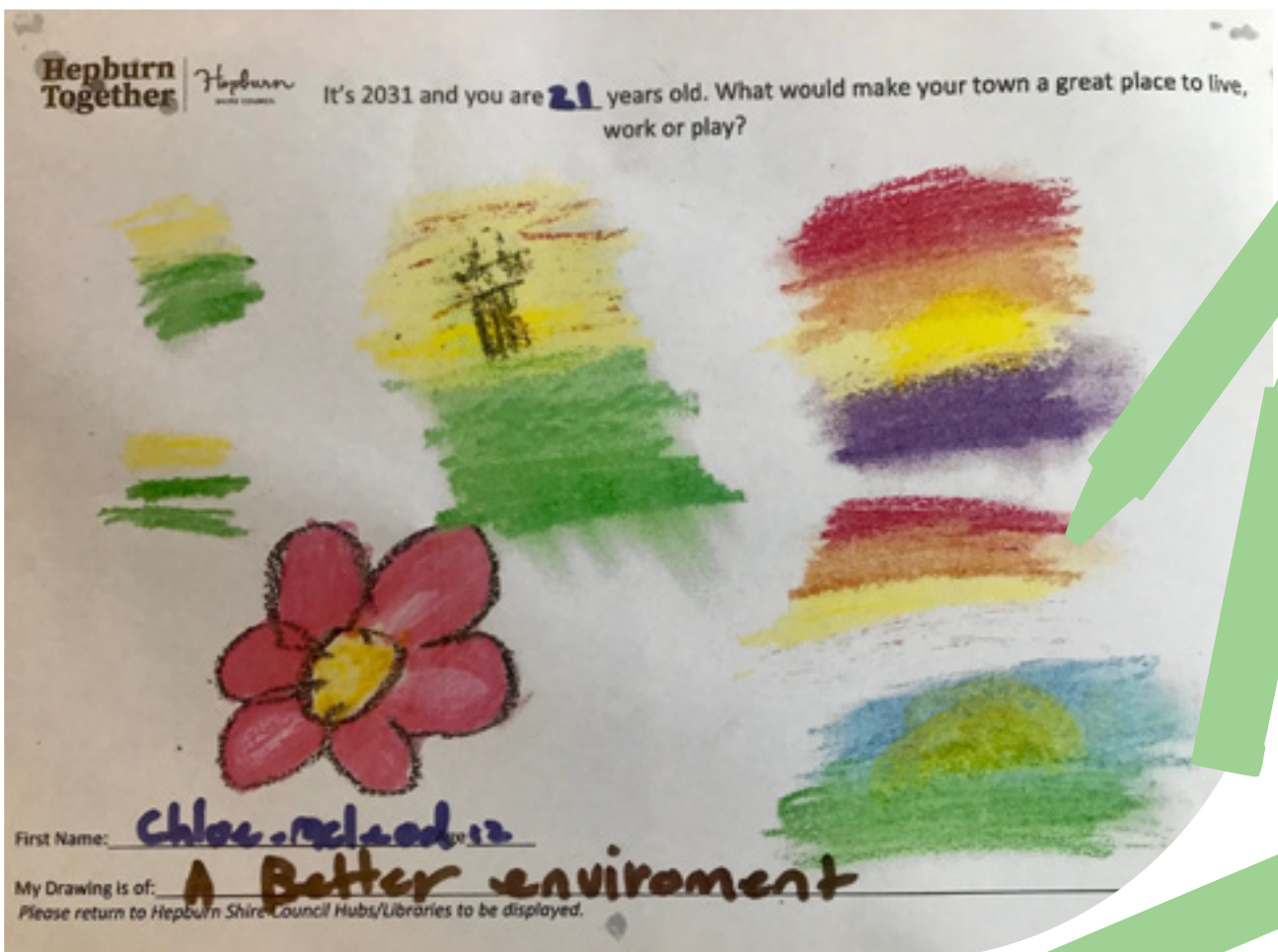
The beautiful natural environment that supports forests, Caagricultural land that is supported by a sustainable conscious and committed community (45.80%).

10 year Community Vision:

Hepburn Shire an inclusive rural community located in Dja Dja Wurrung country where all people are valued, partnerships are fostered, environment is protected, diversity supported and innovation embraced.







Image: Friends of Trentham planting



Where Sustainable Hepburn fits into Council's strategic planning framework

Community Vision: 2021-2031	Hepburn Shire, an inclusive, rural community located in Dja Dja Wurrung country where all people are valued, partnerships are fostered, environment is protected, diversity supported, and innovation is embraced			
Focus areas	1. A resilient, sustainable and protected environment	2. A healthy supported and empowered community	3. Embracing our past and planning for the future	4. Diverse economy and opportunities
Hepburn Shire Council Plan 2021-25				
Relationship with <i>Sustainable Hepburn</i>				
Priority statements	<ul style="list-style-type: none"> • Adapt to and mitigate climate change to reach net zero community emissions by 2030 • Prioritise environmental management, protection and regeneration • Transition to ecologically sustainable and accountable tourism • Develop meaningful policies and strategic partnerships that link sustainability and public health • Protect and regenerate the natural resources of the Shire including the soils, water and ecological systems from both current and future threats 			
Strategic indicators	<ul style="list-style-type: none"> • Climate change and public health • Community connection • Future proofing assets and services from climate change impacts • Djaara • Sustainable local economy • Circular economy 			
Strategy	1.5.1 Develop and implement the <i>Sustainable Hepburn</i> Strategy to align waste, sustainability and biodiversity			

Figure 2 illustrates how Sustainable Hepburn fits into Council's strategic planning framework.

	 BEYOND ZERO EMISSIONS	 BIODIVERSITY AND NATURAL ENVIRONMENT	 LOW WASTE	 CLIMATE RESILIENCE
Sustainable Hepburn themes	Achieve and maintain beyond zero net emissions from council activities by installing and purchasing renewable energy, increasing energy efficiency, designing for local climates, offsetting where appropriate and providing options for low fossil fuel-based activities	Protect and enhance biodiversity values across the Shire through restoration of natural environmental values, appropriate land use, knowledge sharing, and improved capacity of Council	Reduce waste to landfill, increase and improve recycling and extend services across the Shire for reuse of materials and develop circular economy opportunities	Council's infrastructure, services and the community can adapt to the impacts of a changing climate, know what actions to take in extreme weather, are more informed about climate risk and water is valued as a vital natural resource
Overarching Sustainable Hepburn objectives	<ul style="list-style-type: none"> • Ensure all decisions are made through a sustainability and climate change (emergency) lens • Ensure good planning / governance for implementation of <i>Sustainable Hepburn</i> actions • Incentivise sustainability and climate action for local businesses and the community • Increase the profile of Hepburn Shire as a "sustainable destination" and encourage businesses in the area to do more to reduce impact of climate change, adapt to the challenges climate change will present 			
Sustainable Hepburn objectives per theme	<ul style="list-style-type: none"> • Transition Hepburn Shire to a Circular Economy • Reduce Council transport emissions and enable electric vehicle uptake across the shire • Reduce emissions and improve energy efficiency of Council buildings and assets, and support the improvement of residential and business building stock • Increase renewable energy & storage capacity for Council operations and support the Hepburn Z-NET Community Transition Plan. • Sequester carbon locally • Amplify emissions reductions impact through effective partnering at local, regional state level and beyond • Tell the story of a Beyond Zero Shire to inspire and involve the Hepburn community and beyond. 	<ul style="list-style-type: none"> • Ensure good planning / governance of biodiversity actions • Prioritise protection of existing biodiversity & habitat on both Council controlled and private land • Increase extent, connectivity & integration of natural ecosystems • Identify & reduce threats to biodiversity • Improve Council's and community's connection to and understanding of biodiversity • Strengthen connection to DJAARA • Promote agrobiodiversity approach in the shire for farmers, hobby farmers and backyard growers 	<ul style="list-style-type: none"> • Reduce waste to landfill and make improvements to kerbside collection • Better operating Transfer Stations • Be part of a thriving circular economy • Walk our talk – Council to incorporate zero waste objectives into contractual purchases and services • Provide education and awareness to the community on transitioning to a low waste shire 	<ul style="list-style-type: none"> • The Hepburn community is better connected, prepared and engaged for climate related impacts • Hepburn Shire Council is better prepared for climate related impacts • Re-localise Hepburn Shire: improve security of basic needs for locals from locals • Ensure intergenerational equity of resources across Hepburn Shire

SECTION 2

AN INTERCONNECTED APPROACH TO ENVIRONMENTAL SUSTAINABILITY



Climate change impacts and biodiversity loss are two of the most important challenges and risks for human societies; at the same time climate and biodiversity are intertwined through mechanistic links and feedbacks.

Climate change exacerbates risks to biodiversity and natural and managed habitats; at the same time, natural and managed ecosystems and their biodiversity play a key role in the fluxes of greenhouse gases, as well as in supporting climate adaptation.⁴

Waste produced by our society has traditionally been treated in landfill sites, generating methane, and contaminating soil and water when not managed properly. The prevalent throw away culture means that humans as a rule live beyond their planetary footprint. If everyone around the world lived as Australians do, we would need 4.48 Earths to sustain us.⁵

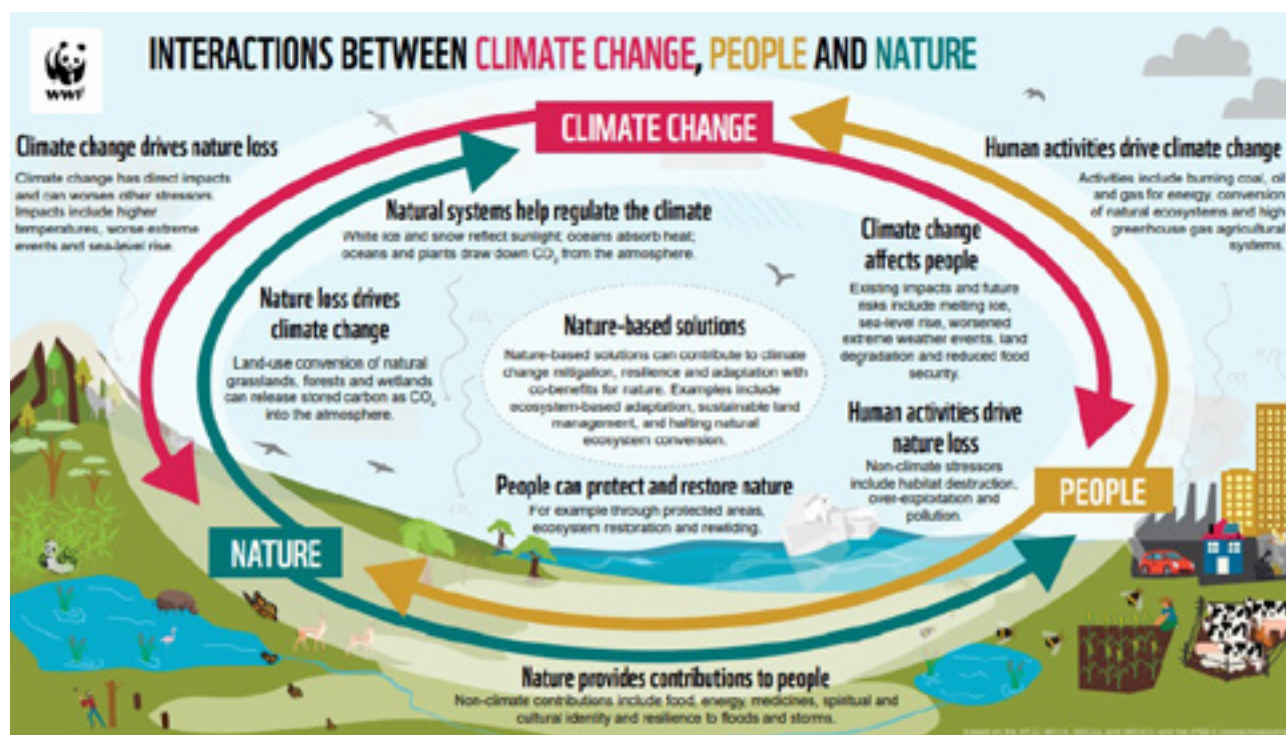
The impact humans are making on our planet is contributing to an uncertain future, which is where climate resilience come in. We need to work out how to improve our resilience to a changing climate, to reduce not only the likelihood but also the consequence of negative impacts.

Despite the interconnections between climate change, biodiversity and waste, organisations often compartmentalise the work across these themes for structural reasons – it is often easier to work in silos because that is the way the systems, we work within have been set established.

Sustainable Hepburn is taking a different approach and in doing so hopes to aid collaboration across council departments, sectors, generate co-benefits and produce deeper long-lasting action.

Figure 3 below illustrates the relationships and interconnection between the four themes of *Sustainable Hepburn*:

- Beyond zero emissions
- Natural environment and biodiversity
- Low waste
- Climate resilience



⁴ IPBES-IPCC co-sponsored workshop report on biodiversity and climate change ipbes_ipcc_wr_12_2020.Pdf

⁵ Global footprint network ecological footprint - global footprint network

Fig 3: Relationships between Sustainable Hepburn's four themes"

Relationships between each Sustainable Hepburn theme	Beyond Zero Emissions	Low Waste	Biodiversity and Natural Environment	Climate Resilience
 <p>BEYOND ZERO EMISSIONS</p>	<p>Reducing GHG emissions mitigates the likelihood and also consequence of climate change occurring.</p> <p>Achieving beyond zero net emissions means sequestration or neutralising any residual emissions that can't be eliminated and increasing our positive impact overall</p>	<p>Reducing GHG emissions from waste disposal and material production:</p> <ul style="list-style-type: none"> • Methane from organic waste (Methane is 28 times more powerful as a GHG than carbon dioxide, over a 100-year period) • Emissions generated in production of materials 	<p>Reducing GHG emissions reduces the likelihood and consequence of climate change impacts on the natural environment such as species extinction, increasing heat, extreme weather events and associated impacts like coral bleaching.</p>	<p>Reducing GHG emissions to a "safer" level reduces the likelihood and consequence of climate change impacts (such as extreme weather) that impacts upon our ability to survive and thrive.</p>
 <p>LOW WASTE</p>	<p>Reducing waste to landfill, recycling more and developing a circular economy reduces emissions required to manufacture goods and keeps goods in the system instead of being thrown away. Methane can be safely captured and used as a form of energy.</p>	<p>Reducing waste to landfill, composting, increasing recycling and reuse of materials:</p> <ul style="list-style-type: none"> • Reduces GHG emissions • Reduces impact of producing/manufacturing materials • Creates opportunity for a circular economy and transition out of primary material 	<p>Reducing waste, recycling and reusing more, means there is less waste in landfills and less risk of contamination in our soils and waterways.</p> <p>Effective and well promoted waste transfer programs reduces incentives for illegal dumping in bushland areas.</p>	<p>Less organic waste in landfill means less methane is generated and less likelihood of us reaching the 2-degree threshold of global warming. Climate change impacts caused by human activities are predicted to increase resulting in a focus on climate resilience – how to build resilience to a warmer and more hospitable world.</p>
 <p>BIODIVERSITY AND NATURAL ENVIRONMENT</p>	<p>The natural environment can sequester carbon and take it out of the atmosphere to reduce likelihood and consequence of climate change and its impacts.</p>	<p>The natural environment can help regenerate impacts of toxicity caused by waste pollution and contamination. It can offset emissions generated by methane.</p>	<p>Biodiversity and the natural environment have an intrinsic right to exist unto itself. Countries are starting to give "nature rights" to ecosystems and waterways, honoring this. Biodiversity and the natural environment also provide multitudes of ecosystem benefits to humans. These include clean air and water, health and wellbeing, food, climate regulation, pollination, and ecotourism (to name a few).</p>	<p>Biodiversity and the natural environment assist with the regulation of climate however the current rate and magnitude of change in climate, compounded by other pressures, are beginning to seriously challenge the natural adaptive capacity of our biodiversity.⁶</p> <p>Building ecosystem resilience by protecting biodiversity, maintaining and re-establishing ecosystem function and connectivity, and reducing threats to biodiversity, we are supporting the capacity of the natural environment to support life on earth in a changing climate.</p>
 <p>CLIMATE RESILIENCE</p>	<p>Climate resilience isn't only about our ability to absorb stresses and maintain function in the face of external stresses imposed upon it by climate change but to learn from, re-organise, and evolve into more desirable configurations that improve the sustainability of the system. In identifying the systemic issues driving climate change, climate resilience will hopefully assist humans in addressing the root causes and make beneficial changes.</p>	<p>It is estimated that 7.3 million tonnes of food is wasted in Australia each year, costing the economy more than \$20 billion annually.⁷ Food waste is a climate injustice. It contributes to methane emissions and climate change. Australia has set a target to halve food waste by 2030, which is one of the UN's sustainable development goals.</p> <p>Climate resilience highlights the equity issues of climate impact (not everyone is impacted equally) and the root causes of inequality.</p>	<p>Biodiversity and the natural environment play a major role in building climate resilience and provide many ecosystem services which assist our adaptation to climate change impacts. These include shading our houses and streets to keep us cool when it gets hot, slowing down floodwater, reedbeds to clean greywater, providing inspiration through biomimicry for design and more. In fact, humans' resilience to climate impacts would be near impossible without biodiversity and the natural environment. Maintaining our natural environment for future generations is vital insurance in the face of ongoing change</p>	<p>Climate resilience is about knowing what to do to adapt, survive and thrive in the face of a changing climate. It requires us to understand the actions needed to make our communities and ecosystems more resilient to major, long-term or irreversible environmental changes.⁸</p> <p>Acting now to build our climate resilience not only reduces the potentially devastating costs of future climate impacts and disasters, but also creates immediate and lasting benefits for our health, economy, and environment. Climate resilience brings with it a lens of climate justice and makes sure we look out for those who are less able to look after themselves.</p>

6 Resilience | Australia State of the Environment Report

7 National Food Waste Baseline - Executive Summary - March 2019 (awe.gov.au)

8 Building Victoria's Climate Resilience (climatechange.vic.gov.au)

UN Sustainable Development Goals



Transitioning towards more sustainable and resilient societies also requires an integrated approach that recognises that these challenges—and their solutions—are interrelated.

The Goals are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. Achieving sustainable development is the most important challenge facing

our generation. In 2015, the Australian Government, together with all United Nations member states, committed to an overarching framework for global development, titled Transforming Our World: The 2030 Agenda for Sustainable Development (the 2030 Agenda). It sets out 17 ambitious goals supported by 169 targets and 231 indicators designed to measure progress at a national level.

Embedding the Goals into the way we think, plan, design and act reminds us that social equity, justice and inclusion go hand in hand with environmental sustainability, leaving no one behind.

“

Hepburn Shire Council understand the importance of realizing these goals and will use them to support our future planning

Council Plan 2021-25

”

SECTION 3

CONTEXT SETTING - OUR HEPBURN SHIRE



Hepburn Shire is a small rural shire with a population of 16,157 and covering 1472km². The local Indigenous population is approximately 1,300.

The Shire includes townships, Clunes, Creswick, Daylesford, Hepburn Springs and Trentham and villages of Glenlyon, Allendale, Leonards Hill, Kingston, Lyonville, Smeaton, and other small settlements.

Hepburn Shire has a rich cultural history which began with Traditional Owners, Dja Dja Wurrung. During Victoria's gold rush era of the mid-19th century, the local indigenous population suffered greatly because of the population influx. It is believed that by 1854, Creswick had a population of 25,000.

POPULATION 2021

16,157

PROJECTED
POPULATION 2036

17,700

AREA

1,470km²

AVERAGE AGE

50



MALES

48%



FEMALES

52%

19% 0 – 19 YEARS

15% 20 – 39 YEARS

31% 40 – 59 YEARS

27% 60 – 79 YEARS

8% 85+ YEARS

In 1851 gold was found in the bed of Wombat Creek, now Lake Daylesford. Council first formed in 1859 and the population of Daylesford rose to approximately 7000.

A large timber industry, was established to support the huge demand for building, fuelling homes and industries and as supports in the deep lead mines. Timber was also supplied to the burgeoning Melbourne area. The local native forests throughout the wider area were denuded and the Wombat Forest took 50 years to recover.¹⁰

As gold production declined and the population diminished, the railway came in 1883, offering options for employment, travel and transporting goods. The railway also offered the beginning of a tourist industry, which is still important to the area today. Many guest houses operated in the late 1890's and early 1900's. The health benefits of mineral water drew visitors as did the cool climate.

Nowadays in Hepburn Shire, tourism supports an estimated 798 jobs, which is 16.5% of total employment in the region. The largest sub-sector in Hepburn is the Accommodation & Food Services with 618 jobs supported by tourist's expenditure. When compared to other regions such as Central Highlands (6.7%), Victoria (6%) and Australia (6.3%) Hepburn Shire reliance on tourism employment is extremely high.¹¹



Hepburn Shire 'Panoramic view of the township of Clunes,' Victoria c1854-62 – State Library Victoria

¹⁰ Short History of Daylesford - Updated Nov 2019 (visithhepburnshire.com.au)

¹¹ S133_Hepburn_Shire_Council_Redacted.pdf (parliament.vic.gov.au)

Sustainability in Hepburn Shire

Dhelkunya Dja | Healing Country Plan

Dhelkunya Dja 2014-2034 (Djaara Healing Country) Plan reaffirms Djaara's goals and obligations to care for Country and describes their People's aspirations as the Traditional Owners of Djandak (Country).¹²

Their Vision is for the health and wellbeing of Djaara people to be strong and underpinned by their living culture. The Vision is for Djaara lands and waters to be in good condition and actively managed to protect their values and to promote the laws, culture, and rights of all Dja Dja Wurrung People. In addition to goals for self-determination and cultural practices, Dhelkunya Dja includes:

- GOAL 5: Rivers and Waterways
"Our rivers and waterways are healthy and meet the needs of our people".
- GOAL 6: Land
"Our upside-down country is healthy again".



Image: Daylesford Repair Café

Local community sustainability groups and action

The Hepburn Shire community is renowned for its progressive community leadership in grassroots environmental action. Community led action is empowering and provides agency in decisions impacting diverse livelihoods.

The Shire is home to many sustainability groups who are leading community action for on ground action and awareness raising, such as the Trentham Sustainability Group, Transition Creswick, Relocalise Hepburn, Hepburn Seed Savers, Daylesford Repair Café, local Landcare groups and Wombat Forestcare to name a few. These groups work across many of the towns and villages around the Shire and are vital in helping Council and the broader community in developing and implementing local sustainability projects.

The Daylesford Repair Cafe is a community run pop-up space aimed at repairing things instead of throwing them away. All the fixers are volunteers. They have skills to repair mechanical, electrical, and digital items, as well as clothing, furniture, and household and gardening equipment. Knives and tools can be sharpened as well as bicycles repaired. Every item for repair is weighed to record how much is being saved from landfill.¹³

Hepburn Wholefoods Collective is a not-for-profit community group which aims to support a vibrant and secure community food system. They sell wholefoods in the Daylesford and Hepburn area to provide a connection between growers and their community.

Stocked goods are sourced from local farms, and preference is to buy organic and biodynamic food straight from growers. Community members pay an annual fee and then bring their own containers to stock up their pantry. The shop is staffed by volunteers and is usually open four days a week for two hours at a time.¹⁴

¹² [Djaara \(Dja Dja Wurrung Clans Aboriginal Corporation\)](#)

¹³ [Daylesford Repair Café Goes to Glenlyon and joins with Hepburn Seed Savers - The Wombat Post](#)

¹⁴ [Hepburn Wholefoods Collective - Daylesford, Hepburn, Central Victoria - Organic bulk wholefoods for the Daylesford region.](#)

The Friends of Trentham Creeks and Reserves work in the town and close surrounds of Trentham. They have undertaken extensive weed removal and revegetation of Stoney Creek, which runs through the town. The group has also built the walking track 'The Wombat Trail', a 12 km walking and cycling trail that starts in the town and passes through nearby forest. They have also installed historical and interpretative signage, including the towns Avenue of Honour. The group has worked on Trent Creek in Trentham, conducting weed removal and planting species such as the rare Brooker Gum. Trentham Primary School Students are involved in this project.

Community groups such as these not only result in sustainability outcomes for the Shire but build community agency and connection between people. Living in more cohesive and connected communities can improve the quality of life when times are good and save lives in the event of a disaster. Connected communities are more likely to pull together and help each other out.¹⁵

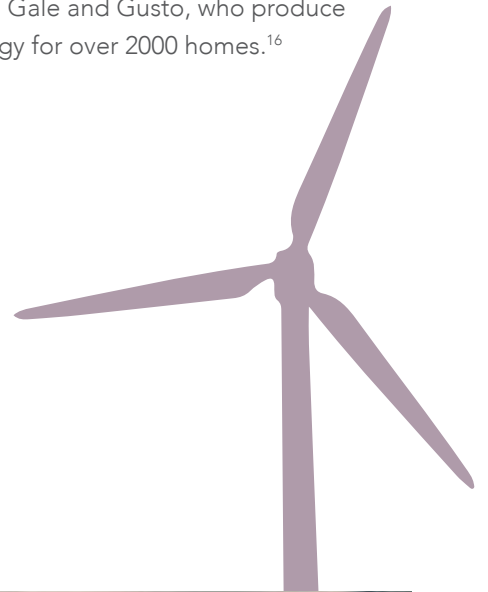


Image: Hepburn Seed Savers photo credit Sarah Hines

15 Aldrich, Daniel & Surattee, Naufal & Sim, Norio & Tan, Elaine. (2020). Building Community Resilience: Social ties and connections. 59.

Hepburn Shire is home to Hepburn Wind, the owner and operator of Australia's first community-owned wind farm, at Leonards Hill, just south of Daylesford.

In addition to active community groups Hepburn Shire is home to Hepburn Wind, the owner and operator of Australia's first community-owned wind farm, at Leonards Hill, just south of Daylesford Victoria. The 4.1 MW wind farm hosts two turbines called Gale and Gusto, who produce enough clean energy for over 2000 homes.¹⁶



¹⁶ [About Hepburn Wind](#)

Hepburn Z-NET

Hepburn Z-NET, the community-led Hepburn Shire Zero Net Emissions Transition project was carried out throughout 2018. Building on a long history of sustainability initiatives and encompassing much of the great work already undertaken, Z-NET has helped to highlight the local challenges and opportunities for the Shire to transition to zero net emissions by 2030. In 2019 a blueprint of the Shire's emissions, with strategies to cut these in homes, workplaces, farms, transport and tourism. These strategies were co-developed with community members, considering locally appropriate options to reach zero-net energy by 2025 and zero-net emissions by 2030.¹⁷

Hepburn Shire Council worked to support the project during its development, and formally endorsed its outcomes and ongoing support in late 2018. Council now provides the role as secretariat for the Z-NET Roundtable.

Partnerships between community, industry and government are proving vital in the successful implementation of projects. The centrality of partnership to successful project outcomes needs to occur at both local and regional levels. Locally, collaboration between community groups and Council is supporting a targeted rollout of residential projects such as distributed rooftop solar photovoltaic (PV) systems, waste reduction projects, and household energy efficiency improvements. Regionally, high impacts projects for electric vehicle (EV) charging, streetlight upgrades, procurement of renewable energy, and regenerative land management are underway. Without this collaborative approach, delivery of many of these projects would be cost or resource prohibitive.

¹⁷ Z-NET | Z-Net (hepburnznet.org.au)

¹⁸ Inequality - OECD

¹⁹ S133 Hepburn Shire Council Redacted.pdf (parliament.vic.gov.au)

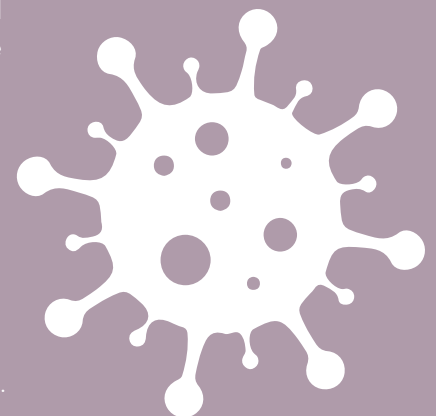
The COVID-19 context

We are currently experiencing the convergence of three disruptive and interconnected forces: the economic crisis brought on by COVID-19, rising social inequality and the climate and biodiversity emergency.

Prior to the COVID-19 pandemic, Australia had enjoyed almost three decades of uninterrupted economic growth. This period of stability and prosperity has allowed many Australians to enjoy an unprecedented quality of life. The distribution of this growth, however, has not been even. The Australian Council of Social Services (ACOSS) has shown (as of 2015) that economic inequality in Australia has increased over the last three decades, peaking in 2007-2008.¹⁰ As of 2018, Australia's economic inequality was slightly below average for OECD nations, higher than Belgium, Germany, and Sweden, but lower than Great Britain or the UK.¹⁸

The impacts of the COVID-19 pandemic have had a devastating effect on Hepburn Shire local businesses especially during the lockdowns, with low to no visitation leading to significant reduction in tourism related businesses income, employment opportunities and event cancellations. Regional Tourism figures show significant decrease, of 48% across the region. In the September 2020 quarter over 52% of businesses within Hepburn Shire had applied for JobKeeper.¹⁹

COVID-19 has exposed fault lines existing in the social fabric of our community, highlighting vulnerabilities and inequality. It has also illustrated the fragility of supply chains for basic needs and services. The effects of the pandemic are still being felt across Hepburn Shire with businesses struggling to find staff, who have either moved out of the area due to the high cost of living and low wages or have moved into other industries for employment.



SECTION 4

WHY WE NEED TO ACT – FROM GLOBAL TO LOCAL



Our climate is changing

Victoria's Climate Change Act (2017) requires the Government to 'take strong action to build resilience to, and reduce the risks posed by, climate change and protect those most vulnerable.'²⁰

Policy objectives of the Climate Change Act 2017 include:

1. To reduce the State's greenhouse gas emissions consistently with the long-term emissions reduction target and interim emissions reduction targets;
2. To build the resilience of the State's infrastructure, built environment and communities through effective adaptation and disaster preparedness action;
3. To manage the State's natural resources, ecosystems and biodiversity to promote their resilience;
4. To promote and support the State's regions, industries and communities to adjust to the changes involved in the transition to a net zero greenhouse gas emissions economy, including capturing new opportunities and addressing any impacts arising from the need to reduce greenhouse gas emissions across the economy;
5. To support vulnerable communities and promote social justice and intergenerational equity.

There are three fundamental messages based on established legal principles relating to risk and liability management:

- 1 Statutory authorities, including local government, have a duty of care in exercising their functions and powers to manage foreseeable risks.
- 2 Climate change hazards and risks are significant and foreseeable, so decision-makers are accountable for considering these matters in making a decision as part of exercising their duty of care.
- 3 Good decision making is enabled by acting as a 'reasonable person' in making decisions guided by law.

Climate change risks include both physical and transition risks:

- Physical risks arise from the increased frequency and severity of extreme weather events, long term changes in weather patterns, and sea level rise. They have serious implications for land use planning, infrastructure, transport, food and water security, and human health.
- Transition risks arise from the social and economic changes associated with adjusting to a low-carbon economy. They include policy, legal, technology, market, reputational, social and financial risks.

The projected impacts of climate change cut across almost all areas of local government responsibility, including the critical assets, infrastructure and essential services that Councils provide for their local communities. As a result, increasing attention is being paid to climate change adaptation and the role of local governments in managing climate risks.²¹



²⁰ Climate Change Act 2017 (Vic), preamble

²¹ Local-Government-Roles-and-Responsibilities-for-Adaptation-under-Victorian-Legislation_Guidance-Brief.pdf (climatechange.vic.gov.au)

We are in a Climate Emergency!

Hepburn Shire Council declared a Climate Emergency in 2019 along with 110 local government jurisdictions around Australia.²²

Climate change is accelerating with deadly consequences. The ecological systems that have sustained human life and societies for generations are being severely damaged by increasing heat and worsening extreme weather events.²³

The legally binding Paris Agreement came into force in 2016. Signatories to the Paris Agreement have agreed to halt warming to 1.5°C or well below 2°C above pre-industrial levels. Yet global heating is already approaching 1.2°C above pre-industrial levels and it is accelerating.

- Human influence has warmed the climate at a rate that is unprecedented in at least the last 2000 years
- Global surface temperature will continue to increase until at least the mid-century under all emissions scenarios considered by the Intergovernmental Panel on Climate Change (IPCC)
- Global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in CO₂ and other greenhouse gas emissions occur in the coming decades.

“The climate emergency is evolving faster than predicted. We must accelerate our response, with ambition and urgency. We are sleepwalking to climate catastrophe. This is the battle for our lives.”

António Guterres
UN Secretary General

- Even under a very low emissions scenario (assuming global reductions in emissions from the 2020's reaching net zero emissions by 2050, and negative emissions thereafter) there is now less than a 50% chance of limiting warming to 1.5°C.
- The Paris Agreement aims to halt warming to 1.5°C or well within 2°C above pre-industrial levels. But the world is already close to 1.2°C above pre-industrial levels, and the speed of heating is accelerating.

²² [Climate emergency declarations in 2,094 jurisdictions and local governments cover 1 billion citizens - Climate Emergency Declaration](#)

²³ <https://www.climatecouncil.org.au/wp-content/uploads/2021/04/aim-high-go-fast-why-emissions-must-plummet-climate-council-report-210421.pdf>

Emissions reduction – climate change mitigation

The Intergovernmental Panel on Climate Change (IPCC) – the authoritative UN body charged with assessing our knowledge of climate change – says that to have a 50% chance of keeping global warming to 1.5°C by century's end, global CO₂ emissions must halve in a decade (by 2030), reach net zero in the 2050s and go net negative thereafter. Methane emissions would also have to halve by 2050 in these scenarios.²⁴ To date, commitments by countries around the world are nowhere close to being on track to limit global heating.



Since the publication of the IPCC's special report in 2018, emissions of greenhouse gases into the atmosphere have continued, and even increased.

Annual global emissions of CO₂ for 2018 and 2019 exceeded 42 billion tonnes per year and were the highest annual emissions of CO₂ ever recorded. The report does find that growth in greenhouse gas emissions slowed to 1.3% per year in the 2010s, compared to 2.1% in the 2000s.

Although emissions in 2020 fell by 7% due to the response to the COVID-19 pandemic, this fall in emissions is too small and too temporary to significantly slow global warming, and global emissions are already rising again following easing of COVID-19 restrictions.

The Bureau of Meteorology recently gave evidence to the Senate Standing Committee on the Environment and Energy that shows Australia is on track for 4.4°C of warming this century. This would be catastrophic for our health, economy, and environment. Many areas would be unliveable and mass extinctions would take place. Climate change is projected to increase the magnitude and frequency of extreme weather events.

These will affect urban infrastructure systems for energy, transportation, telecommunications, water and wastewater, solid waste, and food production.

If warming is to be limited to 1.5°C, there is a need to reduce greenhouse gas emissions dramatically, starting immediately. Almost all proposals consistent with limiting warming to 1.5°C also involve actively extracting CO₂ from the atmosphere and storing it securely, so that emissions are net zero around 2050. The more slowly we reduce our emissions over the coming decades, the more CO₂ we will need to extract from the atmosphere later in the century.

In early 2022, the Hepburn Shire community reached 42% renewable energy use.²⁵ A large portion of the power generation has come from household solar with a total of 17,840MWh over the year. Hepburn Wind generated a further 10,150MWh. This is in comparison to the Victorian state average of 29% renewable energy use. The difference between local and state-wide renewable energy use is, in part, a result of the Shire's commitment to transition to zero-net carbon emissions by increasing local solar and wind power generation.



²⁴ IPCC finds the world has its best chance yet to slash emissions – if it seizes the opportunity (theconversation.com)

²⁵ Hepburn Shire hits 42% renewables - Hepburn Shire Council

Climate change: means more extreme weather across Australia

- According to the IPCC report, there is high confidence that the intensity, frequency, and duration of fire weather events will increase.
- A projected increase in heavy and extreme rainfall in most places in Australia, particularly in the north.
- A projected increase in river flood risk almost everywhere in Australia.
- Under a warmer climate, extreme rainfall in a single hour or day can become more intense or more frequent, even in areas where the average

rainfall declines.

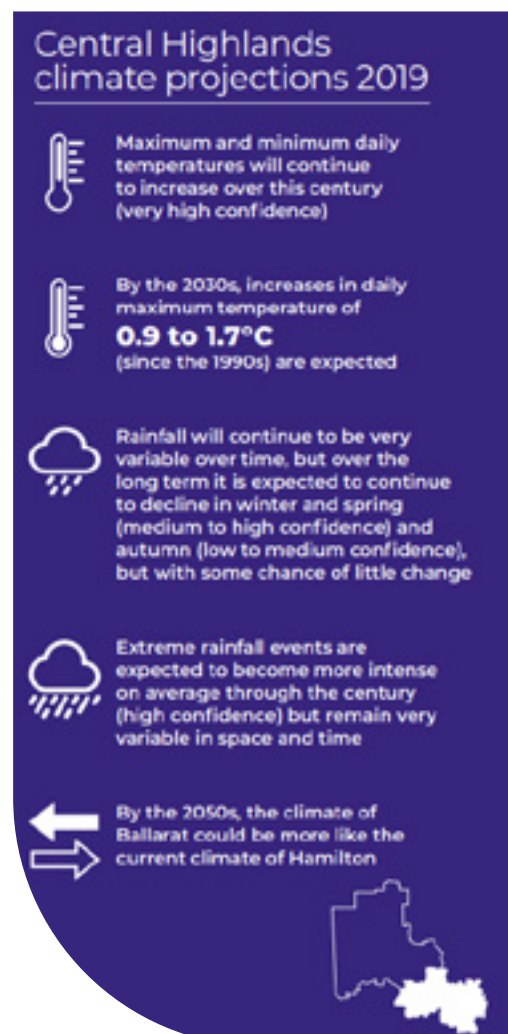
- Sandstorms and dust storms are projected to increase throughout Australia (medium confidence)
- Projected reduction in mean rainfall, particularly in the cool season, increase in aridity, and increase in meteorological and agricultural and ecological droughts (medium confidence).
- A 1 in 50-year weather event will occur roughly:
 - > Every 6 years at 1.5°C
 - > Every 3-4 years at 2.0°C
 - > Nearly every year at 4°C

Local climate change impacts – Central Highlands

Australians will experience climate change mainly through weather and climate extremes.

In 2019 the Victorian Government partnered with the Commonwealth Scientific and Industrial Research Organisation (CSIRO) to help communities prepare for climate change by developing local-scale climate projections data for Victoria at a five-by-five-kilometre scale.

Projections for Central Highlands and Wimmera Southern Mallee are depicted in figures 3 and 4. They conclude the climate of Horsham may be more like the current climate of Deniliquin by 2050 and Ballarat's climate may be more like that of Hamilton.



Rainfall

Over time, annual rainfall totals are likely to decline, particularly under high emissions, with the greatest drying in spring. By late-century under high emissions, the climate change trend becomes obvious compared to natural variability with a median of 24% decrease in annual totals, larger (31%) in spring.²⁶

Heavy rainfall events are expected to continue to become more intense, as warmer air can hold more water vapour (a 7 per cent increase in atmospheric moisture for every degree of global warming).²⁷

Hot days

From 1981-2010 the number of days above 35 degrees Celsius in Daylesford were on average 3.8. In a medium emissions scenario, the number of hot days is projected to be between 4.4 to 12.2 (av 8.9) and in a high emissions scenario, 7.6 to 17.6 (av 9.8) hot days.

Fire weather

Fire weather has become more dangerous in southern Australia since the mid-1900s. In addition, fire seasons have become longer and commenced earlier over this time. This is likely to continue, with the severity of ongoing changes dependent on the emissions pathway that the world follows.

For example, there is high confidence that the number of fire days where the Forest Fire Danger Index is greater than the 95th percentile for 1986–2005 is predicted to increase at Ballarat by a median value of 12.4 days per year by the 2050s under high emissions (or a 68% increase).



Image: June 2021 storm damage near Trentham Victoria

²⁶ [Central-Highlands-Climate-Projections-2019_20200219.pdf \(climatechange.vic.gov.au\)](#)

²⁷ [What are the impacts of extreme weather and climate events? - CSIRO](#)

Climate adaptation and resilience



A heating planet

Climate change has been described by the World Health Organization (2015) as the greatest threat to global health in the 21st century.

The unfolding climate crisis requires an immediate response to protect the health, safety and wellbeing of Victorians, now and into the future.

Dr. Brett Sutton
MMBS MPHTM, FAFPHM,
FRSPH, FACTM, MFTM
Victorian Chief Health Officer



The inertia of the climate system – The long lifetime of CO₂ in the atmosphere means that its climate warming effect responds to a reduction in CO₂ emissions only gradually, over many years. It also takes centuries to millennia for the Earth system to fully respond to changes in the greenhouse effect. This means that if atmospheric greenhouse gas concentrations were to stop increasing and remain constant from now on, it would take centuries to millennia for the warming of the planet to cease.

Climate adaptation refers to adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts.²⁸ It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change. In simple terms, countries and communities need to develop adaptation solutions and implement action to respond to the impacts of climate change that are already happening, as well as prepare for future impacts.²⁹

Irrespective of tipping points, climate change adaptation efforts will be less costly and disruptive to society, and will stand a better chance of success, if warming can be limited to 1.5°C rather than 2°C or higher.³⁰

In Australia we have already entered a new era of megafires, more powerful storms and deadly heatwaves. We are witnessing dramatic damage to the ecological systems that sustain human life and our society.

From the Black Summer bushfires causing massive air pollution across major cities; to widespread flooding from intensifying rainfall events; to increasing damage to agricultural landscapes from worsening droughts and fires; and to the long-term decline in rainfall across the population centres of the southwest and southeast of Australia – the climate change crisis is now all around us and is accelerating.

²⁸ [What do adaptation to climate change and climate resilience mean? | UNFCCC](#)

²⁹ [What do adaptation to climate change and climate resilience mean? | UNFCCC](#)

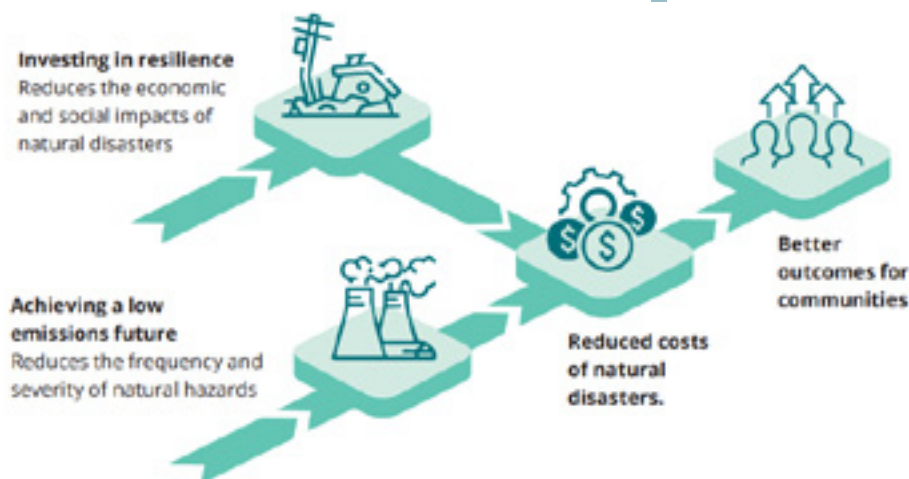
³⁰ [Climate Extremes | » Briefing notes](#)



Image: Cattle stand in a field under a red sky caused by bushfires in Greendale, on the outskirts of Bega, New South Wales, Australia, on January 5, 2020.

It is becoming increasingly obvious that in addition to reducing emissions we need to prepare for a changing climate and more extreme weather. This is where climate adaptation and resilience come into play. Future scenario planning is a helpful tool to better understand the potential impacts on the systems we have designed to sustain life, such as agricultural systems for food production, energy systems, building design and operation, the way we work and more.

Achieving a low emissions future coupled with increasing investment in resilience to natural disasters will deliver better outcomes for communities.³¹



³¹ Special report_Update to the economic costs of natural disasters in Australia.pdf (australianbusinessroundtable.com.au)

The Australian economy is facing \$1.2 trillion in cumulative costs of natural disasters over the next 40 years even under a low emissions scenario.

This shows there is the potential for large economic gains from investments to improve Australia's resilience to natural disasters. Targeted investments in both physical (such as infrastructure) and community (such as preparedness programs) resilience measures are predicted to significantly reduce the increasing costs of natural disasters. Investments in disaster resilience can be effective in lowering these costs, particularly if investments are maintained over a number of years.³²

The Grampians Region Climate Adaptation Strategy 2021-25

refers to four key assumptions:

1. Adapting to a changing climate requires a strategic and coordinated approach, mobilising the people, organisations and communities of the Grampians Region around shared goals and outcomes.
2. Climate change is complex, affecting the landscapes, built environments, businesses, communities, and people of the Region in diverse ways.

3. There are multiple plausible climate futures for the Region, depending in part on global factors (especially the extent of greenhouse gas emissions worldwide) and in part on local factors (especially the quality of the strategic approach to adaptation).

4. Community cohesion and behaviour change are necessary for successful adaptation in the Region and must be factored into every goal and action.

Extreme weather for Hepburn Shire

Bushfire is a significant risk for the Shire with Creswick, Daylesford, Hepburn Springs, and Trentham all identified as high bushfire risk townships. Balancing bushfire management with vegetation and landscape values, and settlement are key challenges.

Flooding impacts the Shire's settlements. Clunes and Creswick were two of the worst affected regional townships in the flood events of 2010-11. Widespread storms experienced in June 2021 resulted in storm damage primarily across the east and central areas of the shire. Many thousands of trees (possibly more), including many large old habitat trees, fell in the storm impacting on native fauna that rely on tree hollows.

The impacts resulting from this event were:

- 53 residences damaged
- 5 houses and 9 cabins destroyed - uninhabitable (all primary residences)
- 39 dwellings impacted but habitable
- 9 vehicles impacted
- 153 private properties with fencing damaged
- 57 dangerous trees at risk of falling on dwelling or access.

On 5 January 2022, a significant storm event resulted in flooding in the Creswick township and storm damage in Creswick surrounds and crop damage in the Dean area. The impacts resulting from that event included:

- 180 primary residences damaged
- 45 primary residents severely damaged/uninhabitable
- 55 residents displaced (as at 24/2/22- seven weeks after the flood)
- \$25m+ direct cost losses to the agricultural sector
- \$10m+ damage and losses to the business sector.

³² Australian Business Roundtable for Disaster Resilience & Safer Communities (ABR) commissioned report: Building Resilience in Our States and Territories (2017), p. 20.

The June 2021 and January 2022 storm events impacted approximately 45% of the Shire's footprint, as per the map below.³³



Image: January 2022 storm events impacted approximately 45% of the Shire's footprint.

Due to more extreme weather events, flooding impacts are expected to increase and a consistent Shire-wide approach to flood mitigation is needed.

Considering climate change in all land use and development decisions is essential to ensuring that emission reduction goals are realised reducing the likelihood of climate change, as well as planning for future changes that we cannot curtail. This will include minimising: pollution to air, soil, and water; the use of non-renewable resources; solid waste generation; or other activities resulting in detrimental environmental outcomes.

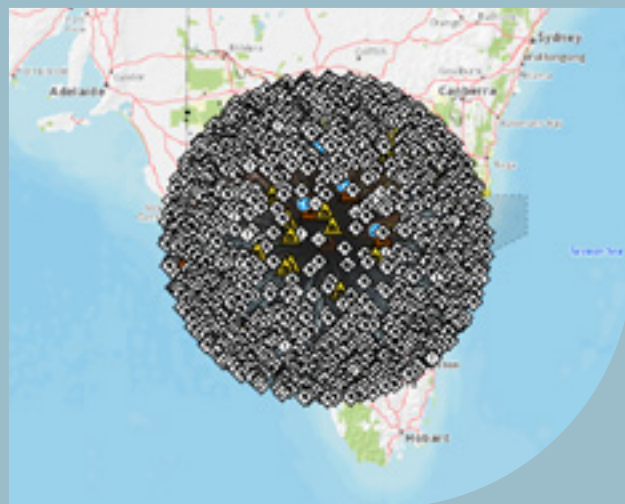


Image above: from VicEmergency App shows more than 2000 incidents across the state – 10 June 2021.

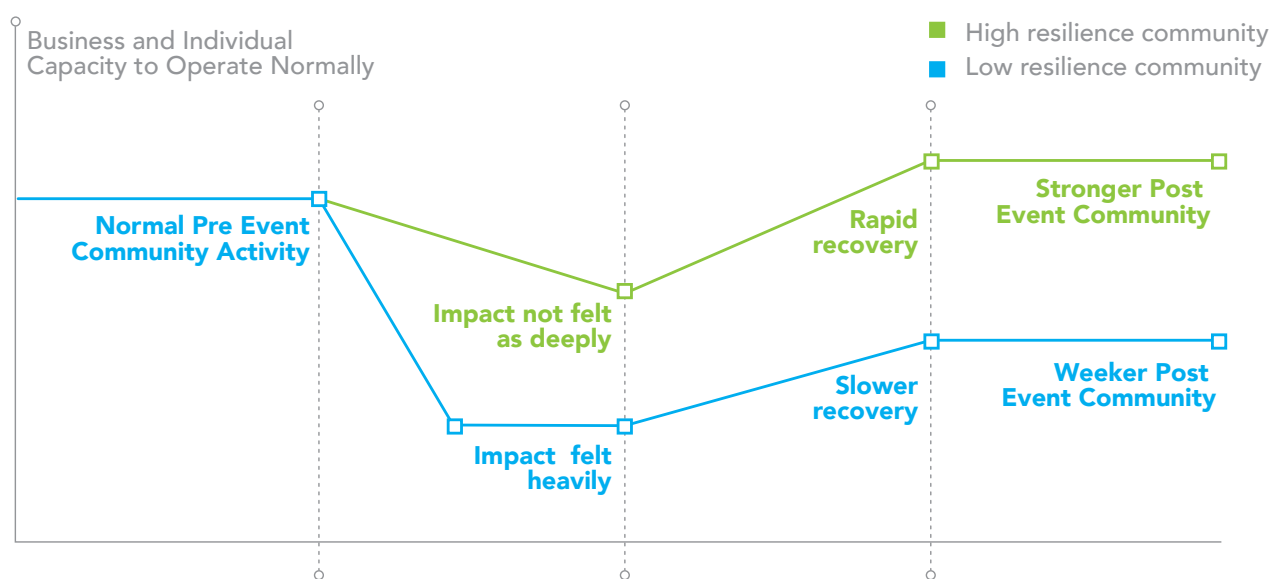
Image left: Orto Farm, Blampied VIC. Making homes more resilient to the impacts of climate change, can include passive design where natural elements are utilised to warm and cool the home. Advantages are increased liveability and comfort and less money spent on energy.

³³ Storm and Flood Recovery - Hepburn Shire Council

Community resilience

Social capital refers to networks of formal and informal organisations, combined with strong community leadership, which can be drawn on in times of need. Social capital has been shown to save lives, encourage the sharing of information and resources, provide a basis for the planning and implementation of tasks, and ensure appropriate self-advocacy on the basis of need. Social capital can be invested in and drawn on in times of need.³⁴

A significant body of evidence shows that resilient and prepared communities are more likely to withstand the negative impacts of natural disasters. Likewise, strong social capital correlates to a more effective recovery. Local government can enable community resilience by supporting community leadership, facilitating genuine and deliberative community engagement and sometimes getting out of the way so that the community can determine what their priorities and needs are and seeking funding to lead action themselves.



Source: Insurance Council of Australia (2008)



³⁴ Natural Disaster Roundtable Paper Web version January 2014.pdf (australianbusinessroundtable.com.au)

Biodiversity is fundamental to life

Biodiversity is the term given to the variety of life on Earth.

It is the variety within (i.e., genetic diversity) and between all species of plants, animals and micro-organisms and the ecosystems within which they live and interact. Biodiversity comprises all the millions of different species that live on our planet, as well as the genetic differences within species. It also refers to the multitude of different ecosystems in which species form unique communities, interacting with one another and the air, water, and soil.

Threats to global biodiversity

The rate of global change in nature during the past 50 years is unprecedented in human history. The direct drivers of change in nature with the largest global impact have been (starting with those with most impact):

- changes in land and sea use
- direct exploitation of organisms
- climate change
- pollution
- invasion of alien species.

Those five direct drivers result from an array of underlying causes – the indirect drivers of change – which are in turn underpinned by societal values and behaviours that include production and consumption patterns, human population dynamics and trends, trade, technological innovations and local through global governance.

Unprecedented changes in climate and biodiversity, driven by human activities, have combined and increasingly threaten nature, human lives, livelihoods, and well-being around the world. Biodiversity loss and climate change are both driven by human economic activities and mutually reinforce each other. Neither will be successfully resolved unless both are tackled together.

While the world has been battling the COVID-19 pandemic, there has also been a biodiversity extinction crisis unfolding in our cities and across the planet. It is the world's sixth mass extinction.

A mass extinction occurs when the Earth loses three quarters of our species in a geologically short interval. Biologists have suggested that given the current devastating loss of species, we have entered another mass extinction period, only the sixth experienced on Earth over the past 540 million years.³⁵



³⁵ How our cities should respond to the biodiversity extinction crisis | Pursuit by The University of Melbourne (unimelb.edu.au)

Benefits of biodiversity and the natural environment

Biodiversity is important to humans for many reasons. Biodiversity is also considered by many to have intrinsic value—that is, each species has a value and a right to exist, whether or not it is known to have value to humans.

Ecosystem services are defined as the direct and indirect contributions of ecosystems to human wellbeing, and have an impact on our survival and quality of life. Biodiversity is fundamentally important for human health because 'it helps to regulate climate and flooding, filters air and water, enables soil formation and mitigates the impact of natural disasters. It also provides timber, fish, crops, pollination, ecotourism, medicines, and physical and mental health benefits.³⁶ Estimates in 2011 suggest that ecosystems actually provide the equivalent of \$125 trillion in services per year.³⁷

Contact with nature also has health benefits—increased attention, energy and tranquillity, and significantly decreased anxiety, anger, fatigue, and sadness are all associated with exposure to natural environments.³⁸ Natural places such as parks provide opportunities for outdoor recreation, spiritual and cultural heritage connection, physical, mental, and social health benefits, and neighbourhood amenity.³⁹

In June 2021, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the Intergovernmental Panel on Climate Change (IPCC) collaborated for the first time addressing the synergies between mitigating biodiversity loss and climate change, while considering their social impacts, and stated that this integrated approach offers the opportunity to maximize benefits and meet global Sustainable Development Goals.

Changes in biodiversity, in turn, affect climate, especially through impacts on nitrogen, carbon and water cycles. "The evidence is clear: a sustainable global future for people and nature is still achievable, but it requires transformative change with rapid and far-reaching actions of a type never before attempted, building on ambitious emissions reductions.

Solving some of the strong and apparently unavoidable trade-offs between climate and biodiversity will entail a profound collective shift of individual and shared values concerning nature – such as moving away from the conception of economic progress based solely on GDP growth, to one that balances human development with multiple values of nature for a good quality of life, while not overshooting biophysical and social limits." Prof. Hans-Otto Pörtner, co-chair of the Scientific Steering Committee.

Figure 4: Benefits of nature from Living Melbourne: Our metropolitan urban forest



³⁶ [Natural environment and health - Australian Institute of Health and Welfare \(aihw.gov.au\)](https://www.aihw.gov.au/reports/health/natural-environment-and-health) from UN 2019

³⁷ [Changes in the global value of ecosystem services - ScienceDirect](https://www.sciencedirect.com/science/article/pii/S0926641019300011)

³⁸ Bowler, Diana & Buyung-Ali, Lisette & Knight, Teri & Pullin, Andrew. (2010). Bowler et al. 2010.

³⁹ <https://www.parks.vic.gov.au/-/media/project/pv/main/parks/documents/about-us/valuing-victorias-parks/valuing-victorias-parks-report-accounting-for-ecosystems-and-valuing-their-benefits.pdf?la=en&hash=6259F14F477AC64BD19E7783E29EC7FF8C5B506>



*Image: Water sampling in Hepburn Shire
Photo credit: Scheltema*

Natural environment and biodiversity in Hepburn Shire

Key Threats to local Biodiversity
(from North Central Catchment Management
Authority Regional Catchment Strategy):

- Clearing for agriculture, urban or other uses
- Global warming/rapid climate change
- Invasive plants and animals
- Over-grazing by stock, feral animals, and native herbivores
- Salinity
- Soil disturbance
- Habitat fragmentation and isolation
- Alterations to natural fire regimes
- Altered hydrology
- Inappropriate timber and firewood harvesting practices
- Off-site effects of nearby land-uses
- Predation by foxes, feral cats and wild dogs

Dja Dja Wurrung priorities

•RETURN OF MURRUP

Important Murrup (spirit) to return to Country are those that are connected with our Stories and identity.

FOOD AND FIBRE PLANTS

Returning food and fibre to the landscape....is key to ensuring healing of Djandak (Country).

WI (FIRE)

Wi is a tool Djaara use in many ways and its use is always guided and informed by Our Lore as it has been for millennia.

GATJIN (WATER)

Water has spirit ... It must be respected as an entity in itself that knows where it needs to go.

CLIMATE CHANGE

Climate change is not new to Djaara peoples – cultural practices of land management including fire, forest care and water health have been utilised to adapt and mitigate past climate change events.

‘WALKING TOGETHER’ TO CARE FOR COUNTRY

Djaara want to build partnerships, including with private landholders and engage with the broader community to raise cultural awareness.



The benchmark for fostering biodiversity was set by the Dja Dja Wurrung Ancestors who lived here and cared for this Country in a sustainable way for over 30,000 years, pre-colonisation.

Hepburn Shire Council
Biodiversity Strategy 2018-2021





Hepburn Shire's natural environment

There are three bioregions within the Hepburn Shire – the Goldfields, Victorian Volcanic Plains and Central Victorian Uplands bioregions. Bioregions classify the land based on a combination of climate, geology, soils

and vegetation. They are key divisions used in Victoria for biodiversity conservation and align closely with land capability for agriculture and forestry and as such influence where people live and work.

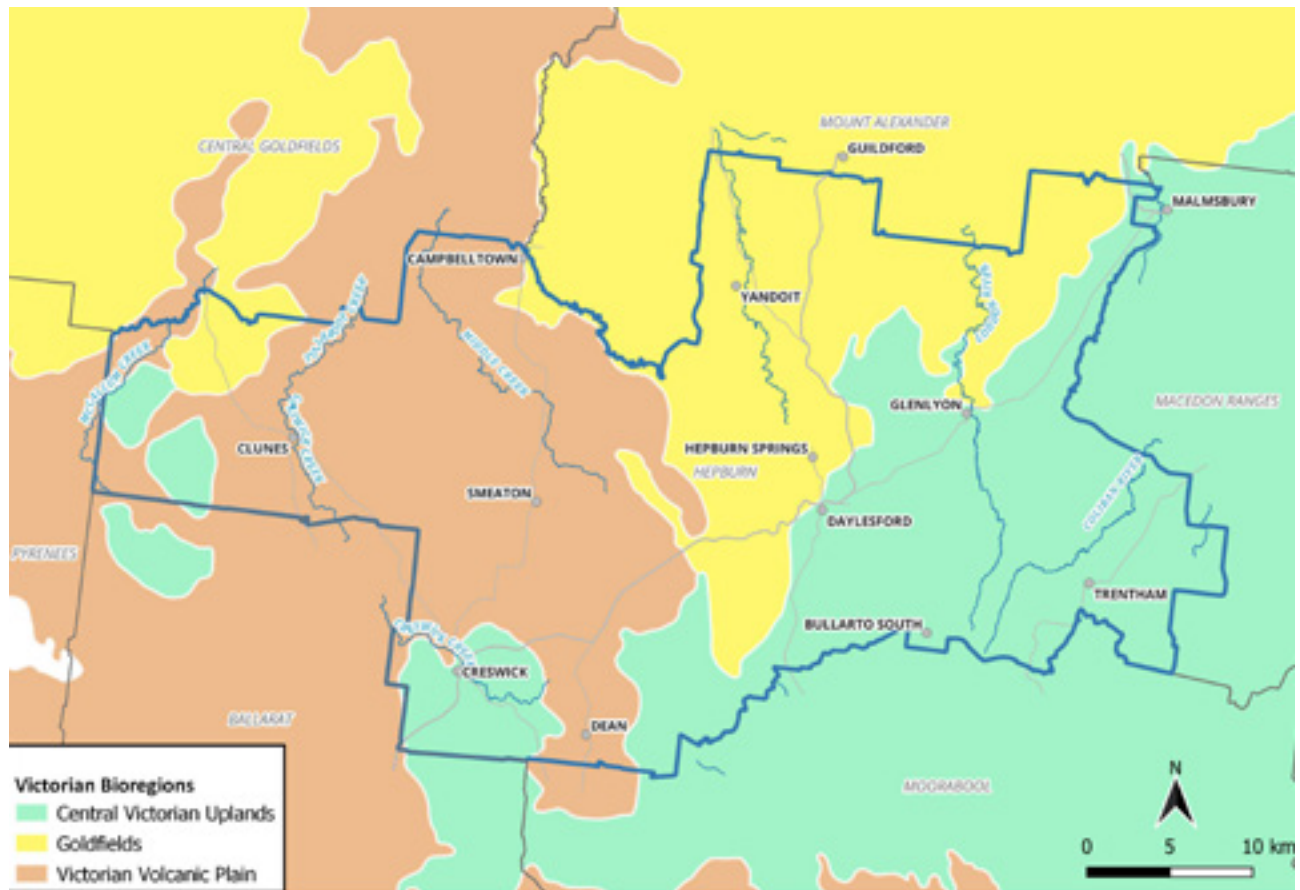


Figure 5: The three bioregions of Hepburn Shire

The native vegetation of the Shire supports rich biodiversity. There is an estimated 707 native plant species and 252 native animal species with many more likely to be found with further surveys. Of these species, 41 plant and 37 animal species are rare or threatened. There are at least 29 eucalypts, 27 acacias, 63 orchids, 74 peas, 100 daisy species, 122 grasses, 38 mammals, 206 birds, 17 reptiles and 11 amphibians.

Significant species include the endangered Spiny Rice-flower (*Pimelea spinescens* subsp. *spinescens*),

the threatened Brush-tailed Phascogale (*Phascogale tapoatafa*), Powerful owl (*Ninox strenua*), the Striped legless lizard (*Delma impar*) and the rare Yarra gum (*Eucalyptus yarraensis*). Rare species unique to the area include the Wombat Leafless Bossiaea and the Wombat Bush-pea. The native species compete with around 266 weeds and 20 introduced animals.⁴⁰

⁴⁰ Hepburn-Biodiversity-Strategy-2018-2021.pdf



Image: Endangered Powerful Owls

Over the past 150 years, extensive areas of Victoria have been converted to agriculture, native and plantation forestry and urban development. In a Victorian context, Hepburn Shire retains a relatively high portion of native vegetation (approximately 46%) along with associated fauna and ecological processes. (See Fig 6)

The remnant vegetation is unevenly distributed across the Shire and native vegetation on fertile soils of the volcanic plains and river valleys today consist of only small, highly fragmented remnants within a rich agricultural landscape.

Council directly manages some large reserves within the main townships (Fig 8) and also has responsibility for management of vegetation management along

Council managed roads (see Fig 9). Through its planning and compliance roles it has an influence on the management of the approximately half of the native vegetation in the Shire that occurs on private land. (See Fig 7)

Much of the forested areas have been modified by cycles of clearing, logging and regrowth from past mining and forestry operations. Introduced pests and animals, incremental development and climate change threaten biodiversity in the Shire. Countering these trends have been the efforts of many residents to retain and enhance the biodiversity on their properties and groups aiming to enhance the protection of public lands.

67,305 ha or 46% of Shire area is mapped as remnant vegetation (dark green).

32,887 ha (49%) of remnant vegetation in Hepburn Shire occurs on private property (dark green)

Map of the Sydney metropolitan area showing public land and native vegetation. The map includes labels for various regions like Central Goldfields, Mount Alexander, and Malmesbury, and cities like Campbelltown, Tullume, and Glenlyon. A legend indicates Public Land (light green) and Native vegetation - modelled extent 2005 (dark green). A scale bar shows 0, 5, and 10 km, and a north arrow is present.

Figure 8: Hepburn Shire land tenure

Council has a responsibility for Crown Land reserves where it is Committee of Management

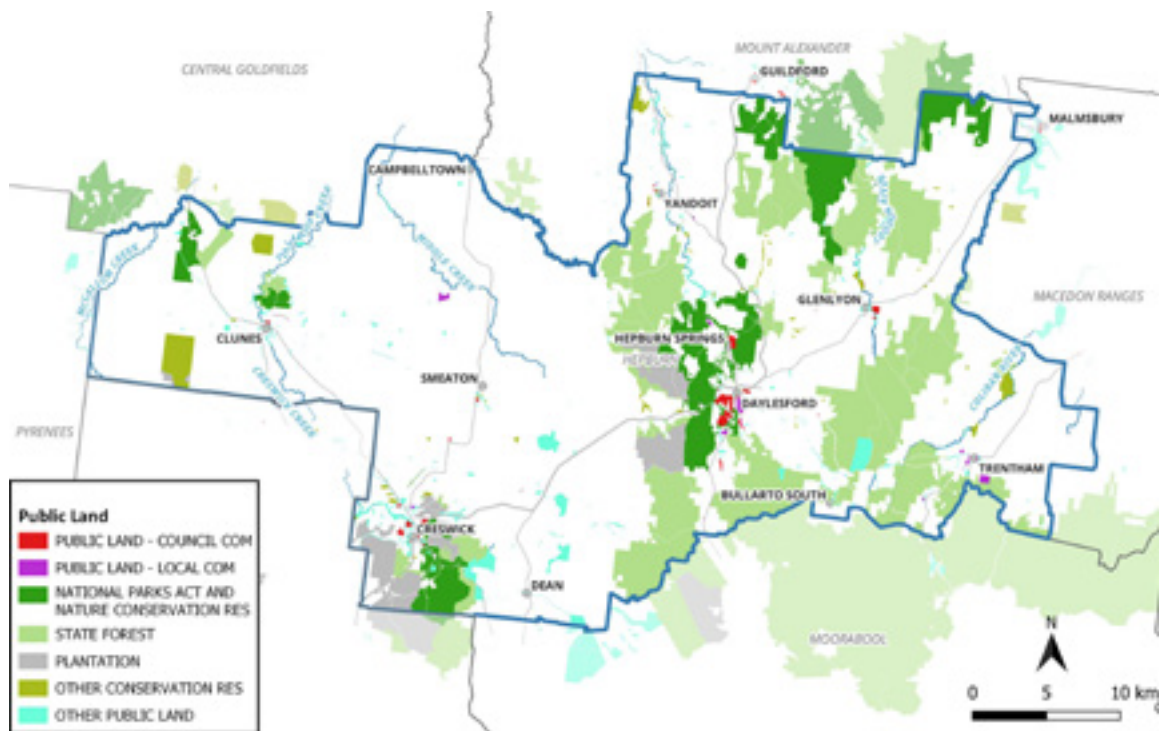
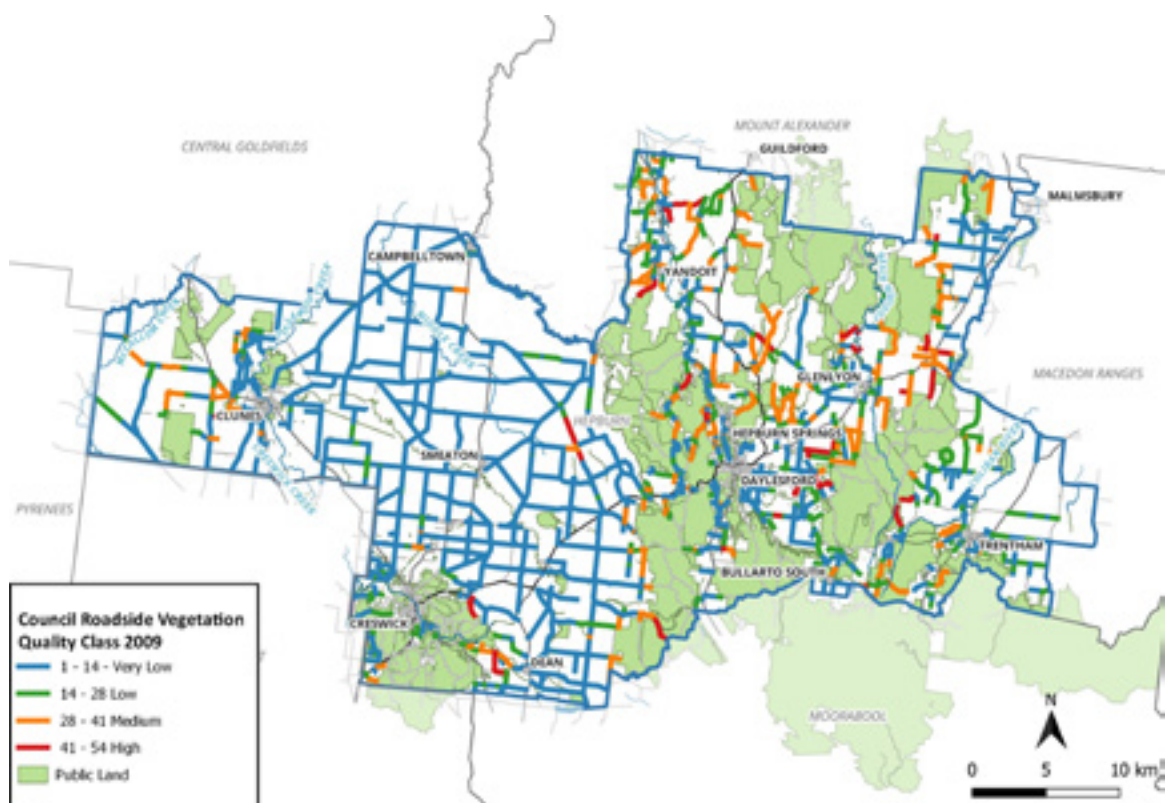


Figure 9: Hepburn Shire Council roadside vegetation quality score

Council has a responsibility for roadside vegetation of Council-managed roads. Vegetation quality of these roads was assessed in 2009. (Source: North Central Catchment Management Authority)



Biodiversity and Climate Adaptation

The Hepburn Shire with its cooler, higher altitude areas and groundwater, has considerable importance as a refuge for biodiversity in a warming and drying climate (Insert reference: Cunningham, S., Hemayet, H., & Harmen, R. (2016). Hepburn Biodiversity Strategy and Action Plan 2016 Background Paper). This is a role the Hepburn region already plays during drought in Australia's naturally variable climate. However, as anthropogenic climate change intensifies, the stressors on biodiversity in the Shire (such as increased fire weather, drought, climate variability and extreme weather events) pose an even greater threat to these biodiversity refuges highlighting an even stronger case for their protection.

The Grampians Regional Climate Adaptation Strategy 2021 identifies climate adaptation for biodiversity as "building species and ecosystem resilience and functionality for long-term viability".

Actions within the Natural environment and Biodiversity theme that contribute to climate adaptation can be found under the following objectives:

- Prioritise protection of existing biodiversity and habitat on both council managed and private land;
- Identify and reduce threats to biodiversity;
- Increase extent, connectivity and integration of natural ecosystems.

Partnership and coordination with community and other agencies for climate adaptation for biodiversity is considered through objectives:

- Improve council's and community's connection to and understanding of biodiversity;
- Strengthen connection to Djaara.

Within the Climate Resilience theme, Objectives such as "Ensure intergenerational equity of resources across Hepburn Shire, includes Actions that can contribute to biodiversity adaptation such as a "Climate resilience plan for greenspaces" that include raingardens, shading and wetlands.

Figure 10: Public Land Management Map

Public Land Management with draft VEAC changes 2022

Source State Government of Victoria

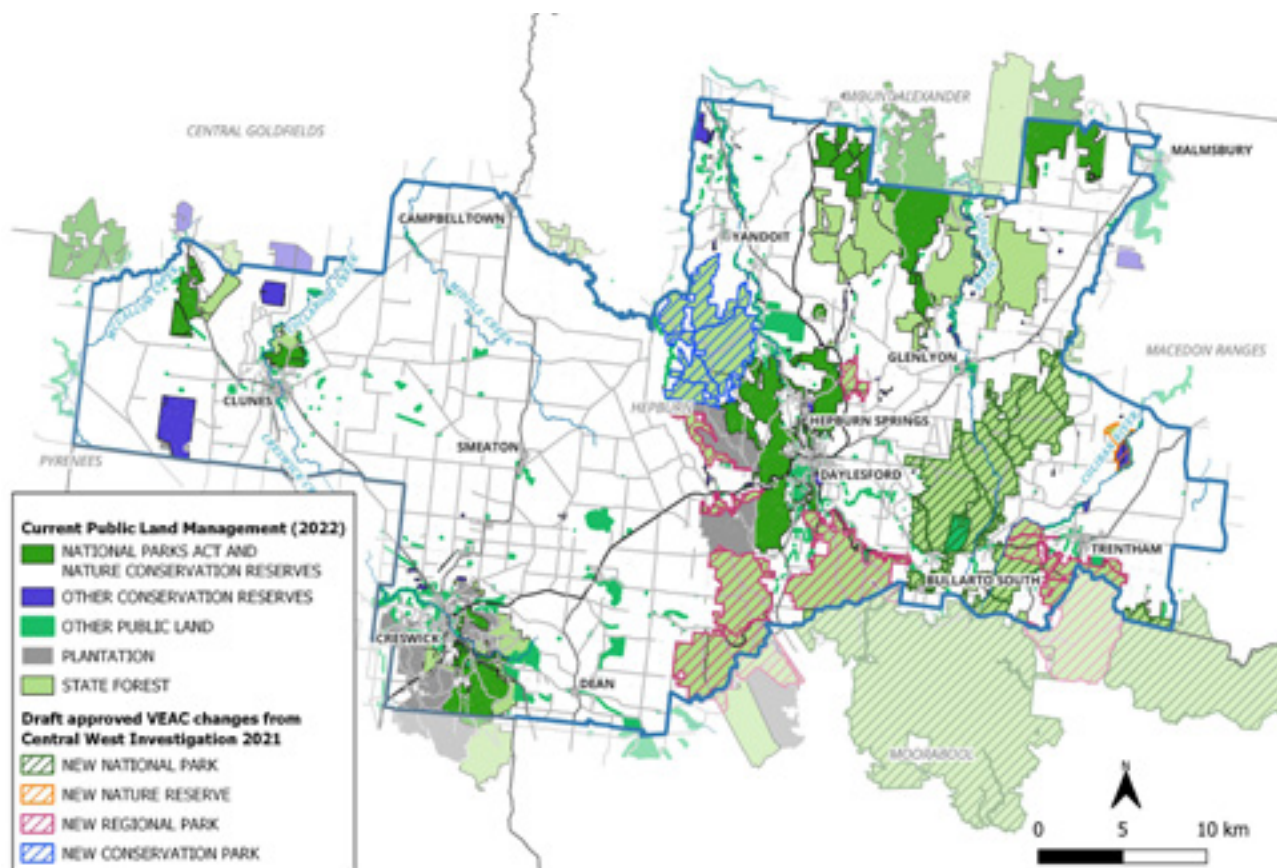




Image: Autumn soft light Daylesford landscape R Reeve



Waste is a resource

Decisions about how goods (such as food, plastic packaging, and building materials) are produced, transported, used, and disposed can make a significant difference in the amount of the resources used, greenhouse gases emitted, environmental impacts created, and waste produced.

According to the United Nations Environment Programme's International Resource Panel, up to half the global greenhouse gas (GHG) emissions stem from the extraction and processing of materials, fuels, and food. Reducing, reusing, recycling, and composting are strategies that can lessen the environmental impact of goods.⁴¹

Of particular concern is organic waste such as food in landfill. When food waste ends up in landfill, the bacteria helping to decompose it release methane instead of carbon dioxide. This is because there is no oxygen in the depths of a pile of landfill rubbish.

Methane is 28 times more powerful as a greenhouse gas than carbon dioxide, over a 100-year period.⁴²

A recent report by the UN Environment Programme noted that 'the atmospheric concentration of methane is increasing faster now than at any time since the 1980s' and that the 'Paris Agreement's 1.5°C target cannot be achieved at a reasonable cost without reducing methane emissions by 40–45 per cent by 2030'.⁴³

Since methane only remains in the atmosphere for around a decade on average, the effect on the amount of methane in the atmosphere, and the benefit to efforts to limiting warming to 1.5°C, would be immediate.



Image: ABC's War on Waste, the landmark series that sparked action across the country to cut Australia's staggering waste levels. In 2017 the program reached 4.3 million viewers across Australia and broke records on social media

⁴¹ [Global Environment Outlook 6 | UNEP - UN Environment Programme](#)

⁴² [SVS: Sources of Methane \(nasa.gov\)](#)

⁴³ [Key Findings | United Nations](#)

Victorian government policy changes: Recycling Victoria

Victoria, like many other states and nations, exports large amounts of recycled materials. Approximately 1.27 million tonnes of paper, plastic, and cardboard each year is sent to overseas markets such as China and Malaysia. This includes 30 per cent of all recycling collected from Victorian households. In 2018, China placed and enforced strict contamination thresholds on its import of recycled materials. This caused widespread disruptions to global recycling markets — including our own.

Recycling Victoria represents the Victorian Government's action plan to reform our waste and recycling system over the next decade. It includes a complete overhaul of our recycling system, with reform to kerbside recycling, the introduction of a container deposit scheme, new investment in industry and the creation of waste management as an essential service. Underpinning this state government policy is to create new innovative markets for cutting-edge recycling and growing an advanced manufacturing sector that makes products from recycled materials. Beyond recycling, this shift aims to fundamentally transform Victoria's

economy by investing in a highly skilled workforce, connected supply chains, exceptional design and engineering expertise, innovative infrastructure, education and research and development. Recycling Victoria aims to help Victorians reduce, reuse, repair and recycle and strengthen our economy—setting up a more sustainable future for our state.

Circular economy

Central to this shift is developing a circular economy. A circular economy continually seeks to reduce the environmental impacts of production and consumption, while enabling economic growth through more productive use of natural resources. It allows us to avoid waste with clever design and effective recovery of materials that can be reused. It promotes more efficient business models that encourage intense and efficient product use, such as sharing products between multiple users, or supplying a product as a service that includes maintenance, repair and disposal. The value people obtain from the resources used to create goods and services increases. It transforms our linear economy mindset—take, use, and throw away—and fosters innovation and productivity that invigorates existing businesses and creates new ones, delivering more jobs and more growth for local, regional, state, and global economies.⁴⁴



Figure 11: Recycling Victoria is the Victorian Government's 10-year policy and action plan for waste and recycling.

44 Recycling Victoria A new economy.pdf (www.vic.gov.au)

Victoria's transition to a circular economy will be guided by four goals spanning the life cycle of materials (make, use, recycle and manage). Each goal is designed to maximise value and minimise waste.

Goal 1

Design to last, repair and recycle. Generate less waste in businesses through innovation and design; use recycled materials in products and consider impacts across product life cycles; and support business to explore new circular economy business models.

Goal 2

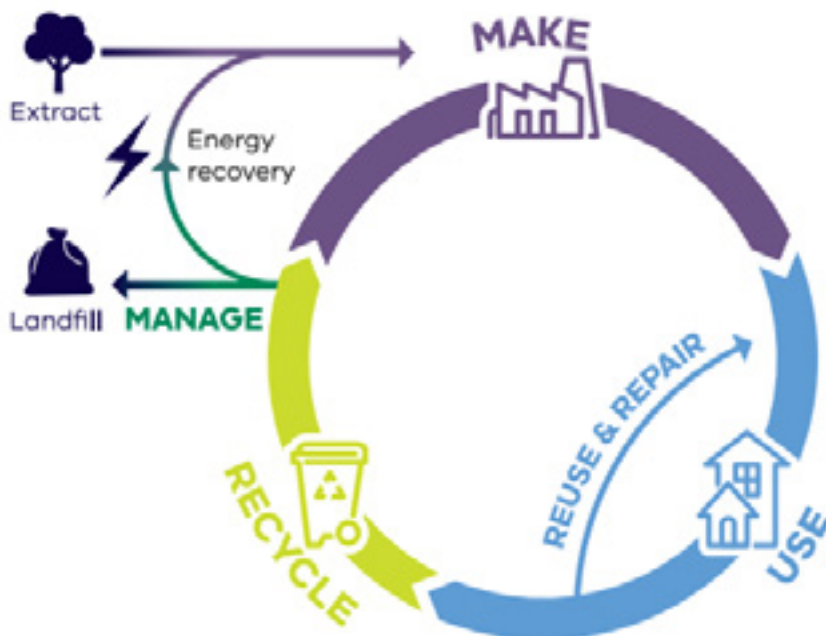
Use products to create more value. Help people make smart purchasing decisions and extend the life of products and support the reuse economy, repair goods where possible.

Goal 3

Recycle more resources. Reform kerbside collections to generate more value from waste; improve the separation of recyclable materials; develop markets for recovered materials; plan for and boost investment in recycling infrastructure; embed the waste hierarchy in the management of materials; support the development of appropriate waste to energy facilities.

Goal 4

Reduce harm from waste and pollution. Protect communities and the environment from high-risk and hazardous wastes.



For Hepburn Shire, getting on board with *Recycling Victoria's* Goals before they become mandated, will allow us to explore the opportunities at a regional and municipal level in a way that suits the citizens of our Shire.

There are choices we can make to suit our local context, creating local economic activities to get on board with a circular economy. The *Sustainable Hepburn* Low Waste action plan outlines local actions for our local community.

Figure 12: Recycling Victoria Circular Economy

Waste and resource management in Hepburn Shire

Key statistics on waste management in Hepburn Shire:

Landfill is the least preferred way to get rid of rubbish in Australia.

Almost half the total waste (49%) managed by Hepburn Shire Council (HSC) is collected through the kerbside system which is provided as a weekly residual waste collection and a fortnightly recyclables collection in the main townships. The residual waste is disposed at the regional landfill owned by City of Ballarat in Smythesdale and the recyclables are sent for sorting and processing to various Material Recovery Facilities (MRFs). A large number of households are not provided with a kerbside service and are instead issued with vouchers to allow disposal of waste at the transfer stations.

- About 480kg of household waste is generated in Hepburn Shire per service versus average Australian 540kg of household waste per service.
- More than 10,000 bins are emptied each week (residential, commercial, public).
- Services include approximately 8,000 landfill, 8000 recycling, 1000 organic, 280 commercial.
- About 4,200 tonnes of material is sent to landfill each year, to Smythesdale Landfill (near Ballarat).
- A recent audit of landfill bins across Hepburn Shire showed that over 40% (2019), and up to 56% (2021) is food or garden material.
- About 2,500 tonnes of material is recovered each year for recycling and sent to a Materials Recovery Facility. Approximately 160 tonnes of material from kerbside is sent for recycling each month.

- Materials for recycling are transported to Ballarat, combined with other recycling, and then transported to a Materials Recovery Facility (MRF).
- Recycling contamination across the Shire is approximately 25.8% (2021 bin survey result) versus 26.5% (Grampians Region 2019 survey) or Barwon Southwest Region 2018 audit rate of 16%.
 - > glass fines were considered 6.8% of contamination
 - > Bagged recycling 1.8%
 - > Top contaminants: broken glass (less than 50mm), non-recyclable paper, non-recyclable plastics, organic material (food and garden), bagged material
- Hepburn Shire Council commenced a trial of kerbside organics (food and garden) collection in Clunes (township) from March 2021.
- In nine months of using the trial organics service, Clunes residents have prevented more than 100 tonnes of food and garden organics from going to landfill and it is being processed locally at Creswick Transfer Station. Material collected through the Clunes organics trial is processed into compost using in-vessel compost units.
- In survey respondents self-reported a 41% reduction in their landfill bin, which is in line with the bin survey (2019) where at least 30% of Hepburn Shire Council region's landfill bin being organic waste.



Image: Smythesdale Landfill (near Ballarat)

During 2020-21, a Community Reference Group was established to provide input into Council's Local Law 2: Salvaging at council waste transfer stations. The group developed salvaging guidelines with a focus on improving the existing accessibility to reusable goods left at Council's waste Transfer stations. The guidelines outline the items that can be dropped at transfer stations for free and establish self-service salvaging areas for building materials, fencing materials, plumbing equipment, garden equipment, and other reusable items. Tip shops at each of the transfer

stations will continue. Metal scrap piles will be off limits to all but transfer station staff.

The guidelines outline ways to:

1. Improve operations at Transfer Stations to maximise rescue of materials going to landfill and improve sales at Tip Shops
2. Educate and promote information to the community about all waste streams
3. Other recommendations such as ways to incentivise reuse and recycling.

SO WHAT?

The risk of not taking action

The economic benefits of emissions reduction far outweigh the costs of extreme weather events if nothing is done to tackle climate change.

A Climate Council report states that extreme weather events have cost Australia \$35 billion over the past decade, which is double the cost in the 1970s. By 2038, these events, as well as the impacts of rising sea levels, could cost the Australian economy \$100 billion every year.⁴⁵

Sixty of the world's central banks, including the Reserve Bank of Australia, have warned that without action on climate change, global gross domestic product (GDP) could fall by 25 per cent by 2100. This would be reduced to 4 per cent if global heating is limited to 2°C.⁴⁶

The Australian Prudential Regulation Authority (APRA) has been advising large financial institutions about the financial risks posed by climate change and the

possibility of future lawsuits if no action is taken.

According to APRA, banks and insurers are preparing for worsening bushfire seasons and more extreme weather events. This will push up the cost of insurance premiums and lead to millions of people being uninsured, with resulting pressure on the financial system. In response, institutions are moving away from investing in or lending to climate-damaging projects and shifting towards technologies for efficient and clean energy, sustainable farming, and carbon drawdown - processes that draw carbon out of the atmosphere and lock it away such as in soils. To date, more than 135 globally significant banks – including Australia's Big Four – and insurers have announced they will divest from coal mining and/or coal-fired power plants.

The cost of renewable energy technology also dropped over the past decade, with solar, wind and batteries now 87 per cent, 55 per cent and 85 per cent cheaper than in 2010.⁴⁷ UK think tank Ember reported that in 2021, 10 per cent of the world's electricity production came from solar and wind.

Technology is not a silver bullet. To have a chance of halving global emissions by 2030, we must use fewer high-carbon products and adopt less emissions-intensive lifestyles. Like all other changes required, these cannot be incremental, the IPCC says.⁴⁸

Protecting and enhancing the natural environment and biodiversity is important to improve ecosystem resilience to the changing climate as well as

⁴⁵ [The Deadly Costs of Climate Inaction | Climate Council](#)

⁴⁶ [Reserve Bank warns of 25% GDP loss by 2100 unless action taken on climate change | Reserve Bank of Australia | The Guardian](#)

⁴⁷ ['Transformational change' needed in all regions and sectors now to mitigate climate change: IPCC - ABC News](#)

⁴⁸ [IPCC finds the world has its best chance yet to slash emissions – if it seizes the opportunity \(theconversation.com\)](#)

maintaining the ecosystem services nature provides. Improving our waste management and considering waste as a resource reduces the impact of the greenhouse gas methane while providing an opportunity for new local economies.

Australia is vulnerable to a range of natural hazards including bushfires, storms, tropical cyclones, floods, coastal inundation and earthquakes and Hepburn Shire is no exception as we have experienced. Yet, natural hazards on their own are not disasters. Disaster occurs when natural hazards intersect with people and things of value, and when the impacts of hazards exceed our ability to avoid, cope or recover from them.⁴⁹

By working closely with affected communities to assess risks and vulnerabilities to natural hazards, better planning can ensure that appropriate natural disaster resilience measures are incorporated into managing both current communities, as well as future developments. All of these risks provide opportunities and the sooner we can embrace change, the sooner we can mitigate the risk and cost of inaction.



Making precautionary decisions

The principal approach for dealing with uncertainties and information gaps regarding risks is the precautionary principle. Climate change adaptation includes decisions that incorporate precautionary responses to consider future risk and hazards such as fire, heat, flooding, and sea-level rise.

A precautionary decision-making response evaluates whether risks can be minimised to an acceptable level based on the best available evidence and adopts a prudent approach to refuse proposals if risks of harm are considered too high.

Call to action

Our response must match the scale and urgency of this worsening situation.

Walking our talk and rolling up our sleeves for a more *sustainable Hepburn* has so many benefits. By thinking global and acting local, we can cherish where we live, respect our community members, and demonstrate to future generations that we cared.



⁴⁹ Royal Commission in Natural Disaster Arrangements (2020)

SECTION 5

SCOPE OF THIS STRATEGY



Role of Council

To ensure that *Sustainable Hepburn* is a living strategy and guides future work, Council commits to the following principles:

RESPECTING OUR TRADITIONAL OWNERS

Develop a meaningful and strategic partnership with Dja Dja Wurrung to identify and collaborate on our shared priorities

LEADERSHIP: WALKING OUR TALK

Reducing impact of operations, walking our talk, innovation

CAPACITY: A SUPPORTED AND KNOWLEDGEABLE WORKFORCE

Staff have the capacity, tools, skills, and resources to make a positive difference

COLLABORATION: WE WORK TOGETHER TO GET THINGS DONE

We maximise outcomes through partnerships, collaboration, and advocacy

PRIORITISE: WE ALLOCATE THE NECESSARY RESOURCES TO IMPLEMENT THIS STRATEGY

Budget allocation, funding opportunities

INCLUSIVE: WE LISTEN, WORK, AND LEARN WITH OUR COMMUNITY

Thriving local community groups, community education and skill sharing, community resilience



Sustainable Hepburn implementation

The *Sustainable Hepburn* Strategy will be implemented through Council's annual action plans. The annual action plans will prioritise actions and add more detail than seen in the strategy. Preparing action plans annually also allows Council to be flexible enough to make the most of opportunities that cannot be foreseen. Progress on the action plans will be assessed in the annual action plans.

Control...

- Council has direct control of and responsibility for

Influence...

- Council can influence behaviour and actions

Advocate...

- Council can advocate for change in policy, programs, funding from other government organisations and community groups



Existing government frameworks & where we fit in

Legislation and frameworks	Climate Change	Natural environment and biodiversity	Low Waste
Australian Government	<p>Renewable Energy Amendment Bill 2019 (Vic) – VRET 2030 Target: Renewable Energy Targets for generation of 40 per cent by 2025 and 50 per cent by 2030</p> <p>Emissions target</p> <p>Net Zero 2050</p>	<p>Environment Protection and Biodiversity Conservation (EPBC) Act</p> <p>Australia's Biodiversity Conservation Strategy 2010 – 2030 (Commonwealth of Australia 2010)</p> <p>Native Title Act 1993</p>	<p>National Waste Policy Action Plan 2019</p>
Victorian Government	<p>Climate change Act 2017</p> <p>Victorian Climate Change Strategy</p> <p>Reduce state's emissions from 2005 emission levels by 28-33% by 2025</p> <p>Interim emissions target for the period 2026–2030 is to reduce 45–50% below 2005 levels by the end of 2030</p> <p>Net-zero emissions by 2050</p> <p>Victorian Renewable Energy Target (VRET) to 50 per cent by 2030</p> <p>Public Health and Wellbeing Act</p>	<p>Victoria's Flora and Fauna Guarantee Act 1988</p> <p>Protecting Victoria's Environment - Biodiversity 2037</p> <p>Biodiversity Response Planning – Loddon – Mallee DELWP Region</p> <p>Including Fact Sheets for the following 'Landscapes of Interest'</p> <p>Daylesford- Wombat – Creswick - Muckleford, Coliban-Campaspe</p> <p>Upper Loddon</p> <p>Mooloorort-Smeaton</p> <p>Maryborough-Paddys Ranges</p> <p>Victorian Catchment and Land Protection (CaLP) Act 1994</p> <p>Guidelines for the removal, destruction or lopping of native vegetation (DELWP 2017)</p> <p>Victorian Planning and Environment Act 1987</p> <p>Traditional Owner Settlement Act 2010</p> <p>Aboriginal Cultural Heritage Act 2006</p> <p>Victoria's Climate Change Strategy 2021-2050</p> <p>The Victorian public health and wellbeing plan 2019–2023</p> <p>Healthy Waterways Strategy 2018–28 and Integrated Water Management Framework 2017</p> <p>Water for Victoria</p>	<p>Victorian Planning and Environment Act 1987</p> <p>Victoria's Climate Change Strategy 2021-2050</p> <p>The Victorian Public Health and Wellbeing Plan 2019–2023</p> <p>Recycling Victoria Policy 2020</p> <p>Environment Protection Act 2017 (new powers July 2021)</p> <p>Circular Economy (Waste reduction and recycling) Act 2021</p> <p>Waste Management Policy (E-Waste) 2019</p> <p>Victorian Plastic bag ban</p>
Regional	<p>Grampians Region Climate Change Strategy</p> <p>Grampians Region Draft Climate Adaptation strategy</p>	<p>North Central Regional Catchment Strategy 2021-27</p> <p>North Central Catchment Management Authority Native Vegetation Plan</p> <p>Dhelkunya Dja: Dja Dja Wurrung Country Plan 2014-2034</p> <p>Joint Management Plan for the Dja Dja Wurrung Parks: Strategy (Draft for consultation April 2018)</p> <p>Munganin Gadhaba – Achieve Together. DELWP Aboriginal Inclusion Plan 2016-2020</p> <p>Recognition and Settlement Agreement Dja Dja Wurrung 2013</p>	<p>Grampians Central West Waste & Resource Recovery Group (ends June 2022 – to become Recycling Victoria details TBC)</p>
Local	<p>CHW Draft Integrated Water Management Strategy</p> <p>Hepburn Z-NET Community Transition Plan 2019 – 2029</p> <p>Hepburn Shire Planning Scheme</p> <p>Hepburn Wind MOU</p>	<p>Hepburn Shire Council Plan 2021-25</p> <p>Hepburn Planning Scheme</p> <p>Biodiversity strategy</p>	<p>Hepburn Shire Council Plan 2021-25</p> <p>Hepburn Planning Scheme</p>

SECTION 6

COMMUNITY INVOLVEMENT IN SHAPING THIS STRATEGY



The development of the *Sustainable Hepburn Strategy* has been informed by:

Council staff workshops

Hepburn Shire Council staff were engaged across multiple departments to identify opportunities for Council to lead by example and demonstrate leadership in environmental sustainability.

Broad engagement

Online and in-person engagement activities were held between December 2021 and February 2022. The activities focused on engaging with the Hepburn community about the integrated sustainability narrative for *Sustainable Hepburn*, and to hear about priority areas, needs and the community's level of ambition for environmental sustainability action. The engagement captured broad views and perspectives from the community about their vision for sustainability and actions across the four key strategic themes.

Focused engagement

During the preparation phase of the *Sustainable Hepburn* project, 40 community groups were identified as having an interest in at least one of the four key strategic themes. These groups were contacted on numerous occasions by both email and phone. Six online focus groups were convened represented by 14 community groups.

Community Reference Group (CRG)

Following on from the broad engagement, a group of 25 community members from across the Shire were appointed to ensure that the development of the strategy adequately reflected the interest, needs, priorities and sentiment of the Hepburn community (five members were not able to participate for the entirety of the CRG). The Community Reference Group met in February and March over four sessions. These sessions were framed by the broad engagement findings and together the members worked collaboratively to create action plans relating to the four key strategic themes. The CRG workshops were facilitated by Capire Consulting Group (Capire) on behalf of Hepburn Shire Council.

Engagement activities were impacted by the Omicron outbreak of COVID-19 however the CRG was able to meet in person for three of four workshops.

CRG Members

Along with the 20 community members four Councillors participated in the CRG with one sitting in each of the technical working groups. Five Council officers were also included as representatives of each of the *Sustainable Hepburn* themes with technical expertise across the four themes.

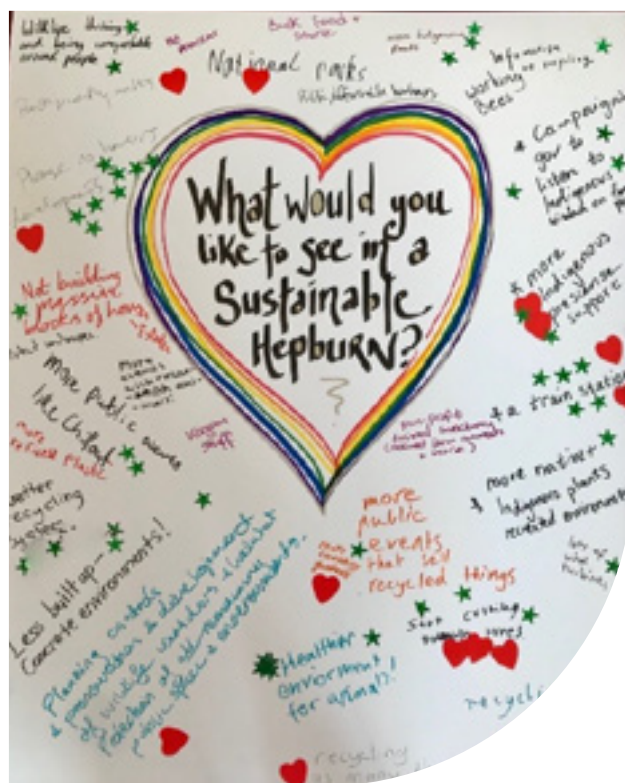


Image: commenting on Sustainable Hepburn during Chillout 2022



Figure 13: Sustainable Hepburn Community Reference Group members

The broad engagement delivered strong participation across all sectors of our community. An overview of the engagement activity and participation is included below.

Activity	Count
Participate Hepburn Survey (individual responses)	84
Participate Hepburn Survey (group responses)	11
Stakeholder workshops	19
Community pop up sessions	133
Youth sessions	41
Participate Hepburn Social Map	58
Participate Hepburn Visioner	39
Total	385

A report on input and feedback received from the broad community is provided in the Community Engagement Report (Appendix 1).

DJAARA involvement

An overarching guiding principle throughout the project has been to partner with and enable Traditional Owners to lead and manage Country within Hepburn Shire. With this principle in mind, Council Officers began discussions with DJAARA representative early in December 2021 as to their desire and capacity to be involved in this project given our shared environmental priorities.

Summary of Actions Taken

- Inclusion of Country Plan on Participate Hepburn site.
- Survey content reviewed by DJAARA and inclusion of an additional survey question on their request.
- Presentation by DJAARA staff to the *Sustainable Hepburn* CRG.

We thank the staff at DJAARA for their time, expertise and knowledge.

Sustainable Hepburn Community Reference Group



What we heard

The CRG heard from Council leads on work underway and already progressed towards *Sustainable Hepburn's* strategic themes. They were presented with feedback from broad community engagement and priorities, heard from Djaara on their aspirations for environmental sustainability and worked together to develop action plans for each of the *Sustainable Hepburn* themes.

The action plans developed by the CRG have been refined only lightly by Council staff to retain the integrity of the level of engagement commitment made to the CRG. The action plans are the commitment by Council to operationalise this strategy and can be found in Section 8 of this strategy.

Hepburn Shire Council sincerely thanks the *Sustainable Hepburn* CRG for their dedication and hard work in working together to develop the action plans.

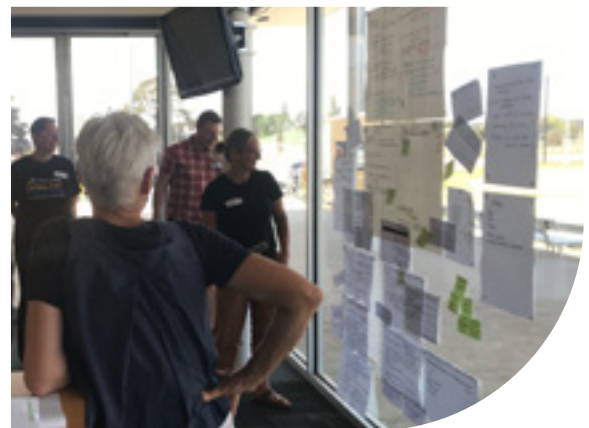


“

As a member of the Sustainable Hepburn CRG, I feel grateful to have been involved in developing the strategy and proud of what we have produced, particularly as it addresses Climate Resilience for the first time, making it quite innovative. I’m looking forward to my continued involvement, assisting Council to deliver on the actions that will assist our Shire to thrive in challenging times we face, today and into the future.

Michelle Stephenson
Sustainable Hepburn CRG member

”



SECTION 7

SUSTAINABLE HEPBURN'S STRATEGIC THEMES AND THEIR CONTEXT



Theme: Beyond Zero Emissions



Council's role

Reduce corporate emissions

- Existing Council target: Net-zero corporate emissions by 2021 (from Towards Zero Emissions Roadmap 2017-2021)
- Reduce emissions from council assets and service delivery
- Policy development, guidelines, and direction for Council to include climate change in decision making

From Council Plan 2021-25

- Undertake actions to support Council's declaration of a climate emergency including bi-annual reporting to community on local actions and projects which are delivering upon climate change mitigation, while ensuring that the levels of activity remain consistent with the importance of the climate emergency
- Continue to support the objectives of the Hepburn Z-NET and the Hepburn Wind MOU to achieve the target of net zero community emissions by 2030
- Review procurement policies and procedures to ensure they provide a focus on sustainable practices
- Promote the use of environmentally sustainable practices through planning practices and the Environmentally Sustainable Development Policy
- Support community transition to zero emissions through the Towards Zero Community Grants Program and/or any other Grant funding program

Council's progress to date

Hepburn Shire Council's previous plan to reduce Council's corporate emissions, Towards Zero Emissions Roadmap 2017-2021, outlined Council's ambition to reach zero net emissions by 2021. It included specific actions to reduce energy consumption, together with some projects to reach this goal.

- Towards Zero implementation progressed well with net-zero emissions being well within reach for council by the end of the strategy period (end of financial year 2021). Given changing project parameters and different opportunities being presented with greater impact, some actions were not completed however new actions were undertaken. Changing project parameters included The Rex no longer going ahead / upgrades of key sites, Local Government Power Purchase Agreement, unviability of waste to energy development.
- Primarily Towards Zero was not implemented as originally structured because of a shift in energy market trends and an increased focus toward community projects with high impact. Recent Sustainability Officers have spent time on Hepburn Z-NET projects such as

Hepburn Solar Bulk Buy, Solar Savers, Towards Zero Community Grants, street lighting upgrades, and building an electric vehicle charging network because these projects provided significant emission reduction and future proofing with relatively low capital outlay for Council.

- Hepburn community emissions are much larger than Council, and so there is benefit on focussing on that (via Z-NET) rather than spending big money on some of our old, low usage sites.

HEPBURN TOWARDS ZERO EMISSIONS ROADMAP



- Made effective progress towards zero emissions in a manner that is responsive to a changing market, including installing solar PV and doing energy efficiency works on Council buildings.
- Co-delivered Community-Council partnership projects such as Hepburn Z-NET, Hepburn Solar Bulk Buy and Solar Savers to produce collaborative sustainability wins.
- Towards Zero Community Grants: 5 grants and over \$67,000 awarded to emissions reduction projects over the past two years.
- Formed strong partnerships with other councils to enable ground-breaking emissions reduction in a strategic manner at minimal cost to council, taking into account emissions trends (eg. Procuring 100% renewable energy from local generators).
- Transition of Council fleet to electric vehicles – First EV purchased in 2019, two more by mid-2022.
- Retrofitted streetlighting 'Lighting the Regions' with LED technology making significant cost savings.
- Undertaking a feasibility study in early 2022 to understand the potential for community-scale neighbourhood batteries.
- Planned the roll-out of new public fast charging stations for electric vehicles.
- Collaborated with other councils in the region and the local community to provide practical support for farmers and land custodians to explore regenerative farming techniques, increase soil carbon and water retention, and reduce fossil fuel use and other emission sources.

Council-led emissions reduction activities	Community collaboration on emissions reduction
Major Road Lighting – Lighting the Regions (Reduced energy use, reduced cost to council, reduced emissions)	Hepburn Z-NET: Community-led zero-net emissions (Hepburn community action on climate change, capacity building, resilience, collective impact)
Power Purchase Agreements: (100% renewable energy (reduced cost and risk to Council, leadership)	Hepburn Solar Bulk-Buy (Lower energy bills for local residents, increased community accessibility, community benefit sharing model)
Electric Vehicles into Fleet Transition (Leadership, internal behaviour change)	Energy Savvy Upgrades (household energy audits, lower energy bills, increased livability, energy efficiency rebate)
Solar Savers (Lower energy bills for pensioners and concession card holders, increased community accessibility to solar)	Healthy Landscapes - Regenerative Agriculture (PRAC) (Regional collaboration, capacity building for farmers/land custodians)
Council buildings upgrades (Leadership, internal behaviour change)	Neighbourhood Battery Initiative project – 'Community Sparks' (feasibility of mid-scale batteries, potential solutions to energy system barriers)
Towards Zero Community Grants (Emissions reduction, incentives for community groups to improve public spaces, community accessibility)	Public EV fast-charger rollout (Charging network for local EV drivers, attract tourism)



Council's corporate greenhouse gas emissions inventory 2020/21

Scope	Source	2015/16 tCO ₂ -e	2020/21 tCO ₂ -e
Scope 1 emissions	Natural gas	61.6	83.8
	Transport fleet petrol LPG & ULP	51	42.3
	Transport fleet petrol (LPG)	15	-
	Transport Fleet (Diesel)	109	166.7
	Heavy vehicles/machinery (diesel)	531	506.4
	Heavy vehicles (biodiesel)	46.2	-
Scope 2	Electricity (inc streetlights)	781.6	413
Scope 3	Electricity transmission losses	71	44.7
Scope 4	Natural gas	4.7	6.5
Totals		1671	1263

Key points:

Strong gains from solar installations, electrifying assets and purchasing clean electricity

- 24.42% reduction on 2015/16 tCO₂-e (tonnes carbon dioxide equivalent) levels
- 40% reduction on base level from 2012/13 (2102 tCO₂-e)
- On track for 71% decrease on base levels once second renewable energy contract signed in mid-2022.

Hepburn Shire signs on to Emissions Reduction Project

Hepburn Shire is one of 46 Victorian councils to sign on to VECO, the Victorian Energy Collaboration, the largest ever emissions reduction project by local government in Australia.

VECO, will provide 45 per cent of all Victorian Councils' electricity requirements with 100 per cent renewables, reducing greenhouse emissions by 260,000 tonnes of CO₂-e every year. Provided by Red Energy, the 240GWh of clean power is equivalent to powering 48,000 homes with renewables or removing the emissions from 90,000 cars every year. Initiated by and facilitated with the Victorian Greenhouse Alliances, VECO recognises the benefits of renewable energy for the environment and the economy.

VECO is expected to save councils up to 35 per cent on their electricity bills, based on current costs. By joining the project, Hepburn Shire will power 60 per cent of its total energy use with 100 per cent renewables, including streetlights, libraries and community buildings. Council is looking to source its remaining electricity load from other renewable energy suppliers.

May 2021



Hepburn Shire Council allocates funds to support Pension Card holders in installing solar panels, helping them to reduce their energy bills, keep cool in the summer and lower their household emissions. Solar Savers is the independent organisation that manages this program alongside Hepburn Shire Council and solar installer, Macedon Ranges Solar Power.

Partnerships

Hepburn Z-NET

In order to mitigate the impacts of climate change, Hepburn Shire Council and community groups have committed to a target of 100% renewable electricity supply, zero-net energy and zero-net emissions by 2030.

Z-NET is Zero-Net Emission Transition, an open-source pathway for a local community to set targets and achieve zero-net emissions.

Hepburn Z-NET is a collaborative partnership bringing together community groups, organisations, experts, and council to shift the Hepburn Shire to zero-net energy by 2025 and zero-net emissions by 2030.

This requires careful consideration of opportunities to manage and reduce greenhouse gas emissions, while also looking to carbon sequestration opportunities locally and supporting community led alternative energy infrastructure.



Central Victorian Greenhouse Alliance (CVGA)

The CVGA works across Central and Northern Victoria to support local government with climate change mitigation and adaptation activities. It represents 13 councils and helps to develop and implement innovative regional initiatives to benefit their local communities and the economy.

Over the past five years, the Alliance has led projects worth over \$50m worth in our region. They advocate on behalf of our member councils to ensure the voice of local government is heard strongly in state and federal policy settings.

The CVGA is one of the Local Government Alliances in Victoria representing 75 of the state's 79 Councils



Theme: Natural environment and biodiversity



Council's role

Council exercises its stewardship of Hepburn Shire's natural environment via three roles, largely determined by land tenure. (See Figure 8)

► Control and management

Hepburn Shire Council exercises control and management for the natural environment and biodiversity where Council owns the land and where it is a "Committee of Management". Activities include developing and implementing planning policy, managing Council reserves and Council roadside vegetation, community education and the delivery and support of specific environmental programs.

► Influence

Council has an important role in influencing other land management agencies and organisations to achieve best environmental outcomes. Council may also influence the land management practices of private land via programs that reward sustainable practices and through its role in writing and implementing planning policy that seeks to conserve the biodiversity of the Hepburn Shire.

► Advocacy, partnerships and education

Council can advocate and promote information about programs of other government organisations and community groups. Partnerships with other

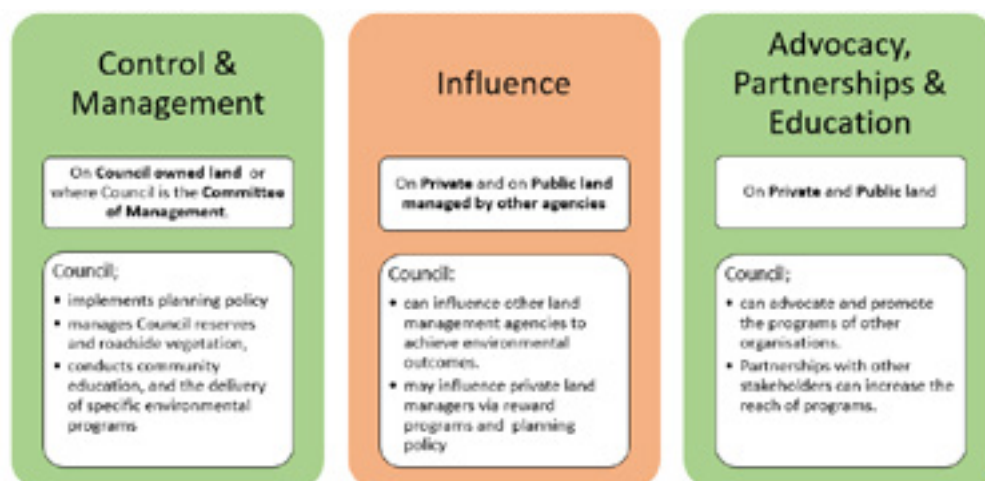
stakeholders can increase the reach of these programs and result in resource efficiencies. The protection of biodiversity is enhanced by coordinated action across a range of land tenures making partnerships a priority for Council.

From Council Plan 2021-25:

- Protect and regenerate the natural resources of the Shire including soils, water, and ecological systems from both current and future threats
- Pursue the environmental and sustainability objectives outlined in Council's Municipal Planning Scheme
- Review Environmental significance Overlays
- Adopt and implement a Tree Management Strategy to protect existing trees and increase planting of new trees
- Develop a meaningful and strategic partnership with Dja Dja Wurrung to identify and collaborate on our shared environmental priorities
- Continue environmental services with an increased focus on weed management and roadside vegetation management including development and implementation of a Roadside Conservation Strategy
- Support the implementation of the Integrated Water Management Plan

Biodiversity: Council's role

Council exercises its stewardship of Hepburn Shire's natural environment via three roles, largely determined by land tenure:



► Biodiversity – Principles

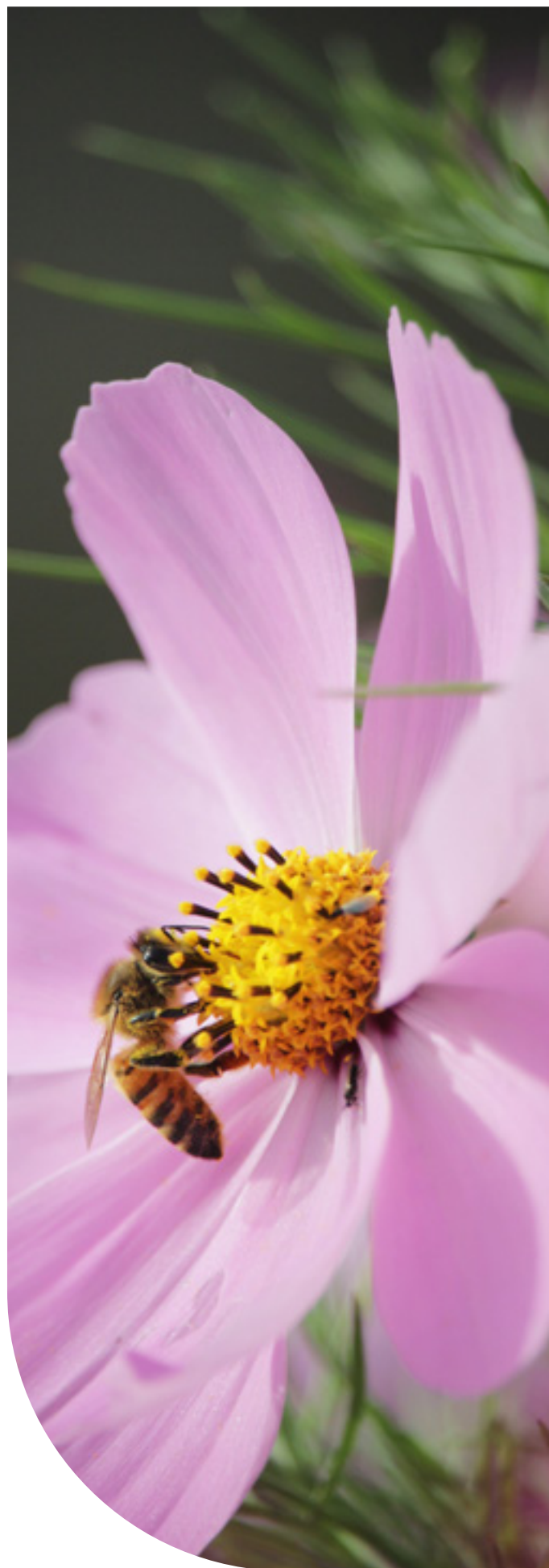
- Seek and respect the diversity of viewpoint, skill, and experience that all stakeholders can bring to biodiversity issues and seek partnerships with key stakeholders for biodiversity projects.
- When considering proposals that impact biodiversity, explore mitigation options in the following order: avoid, minimise, improve, and offset. (See right).
- Conduct biodiversity activities with a holistic approach to environmental protection by considering the range of environmental and social impacts and opportunities that may result from the proposed action.
- Employ an adaptive management approach, i.e., where significant unknowns exist, design actions such that it is possible to learn from the outcomes.

Mitigation Hierarchy

The Mitigation Hierarchy is a tool for decision-making around proposals to protect or clear land with biodiversity value.

This hierarchy is more or less embedded within native vegetation regulations but also reflects principles of ecological conservation and restoration:

- 1 Avoid** – Measures taken to avoid creating impacts. Avoidance is the easiest, cheapest and most effective way of reducing potential negative impacts on biodiversity.
- 2 Minimise** – Minimisation measures are those taken to reduce the duration, intensity and impact of works when the impacts cannot be completely avoided.
- 3 Improve** – Improvement measures are taken to improve degraded or affected ecosystems following exposure to works and other impacts. Improvement measures include Restoration and Rehabilitation.
- 4 Offset** – These are measures taken to compensate for any adverse impacts if the three previous steps of hierarchy mitigation cannot be met.



Council's progress to date

Good progress was made on the 33 actions in the Hepburn Shire Council's 2018 Biodiversity strategy, including many that are recurrent or under implementation. Some highlights of the 2018-2022 period include;

- Oversight annual state Roadside Weed and Pest Plant funding (33K in 2021-22) * allowing a structured approach to weed control to commence on a selection of biodiverse roadsides.
- Oversight of CFA funded fuel reduction (primarily of woody weed) in Wheatsheaf and Lake Daylesford in 2021 (150K) under the Safer Together program.
- Supplied ecological restoration design for projects at Lake Daylesford Reserve, Lake Jubilee Reserve, Hepburn Springs Reserve
- Supplied training and program support for approximately 20 volunteers employed under the Working for Victoria program (COVID-related employment program)
- Provided ecological expertise to storm recovery operations from June 2021 storm.
- Developed Biodiversity input to the review of the Hepburn Planning Scheme and Municipal Strategic Statement to balance future growth with the preservation of our heritage and environment. Strategic planning is now following up the many actions arising from this review.
- Contributed development of Firewood collection and verge planting bylaws
- Participation in review of Regional Catchment Strategy (NCCMA) and Biodiversity Response Planning (DELWP)
- Participated in agency networks including the Victorian Gorse Network and Central West Biodiversity Network *
- Provided expert review input to Council's statutory planning processes*
- Developed guidelines for and implemented an annual \$24,000 grants program for groups conducting biodiversity actions. This has funded 19 projects up to 2021
- Oversaw the expansion and implementation of the annual Landcare grant program which supports up to 20 environment groups through provision of \$1000 each annually.
- Raised awareness and curiosity in local nature through weekly Hepburn Naturewatch Facebook Posts (weekly since Oct. 2019) *
- Partnered in development of Hepburn Gardens for Wildlife which up to April 2022 developed a program and trained approximately 30 mentors for provision of wildlife gardening advice*
- In partnership, ran workshops on Blackberry control, Rabbit control, Biological weed control and Citizen Science data.
- Collaborated to create a Regenerative Agriculture project*

* = Ongoing activities



Grow Wild: a publication aided by Hepburn Shire Biodiversity Grant

Developments since 2018

Some significant events have taken place since the previous Biodiversity Strategy (2018-21). These have influenced Council action in the biodiversity area or are likely to do so in the coming years.

- Following a 4-year process, in 2021 it was announced that a new 44,700-hectare national park would be established between Daylesford and Bacchus Marsh and almost 3000 hectares would be added to the existing Hepburn Regional Park. The new Wombat-Lerderderg National Park will help to improve the protection of threatened species, including the Greater glider while providing eco-tourism values for the region. The parks will result in significant increase in Council's interface with Parks Victoria managed reserves.

- In 2021 the Regional Catchment Strategy for the North Central Catchment Management Authority was completed. Hepburn Shire contributed to development of this strategy and of the update of Biodiversity Response Planning by DELWP Loddon Mallee Region. These important regional strategic processes determine conservation priorities for these agencies and the stakeholders they support, including Hepburn Shire.
- In 2021 the Review of the Hepburn Planning Scheme was completed. This report and the resulting action plan includes several biodiversity directions to be carried out in succeeding years.
- Two significant weather events in 2021, the June storm that affected much of the Shire, resulting in massive loss of standing tree cover, and floods in Creswick in December, have had significant ongoing ecological impacts and commitment from the Shire to mitigate the resulting impacts.

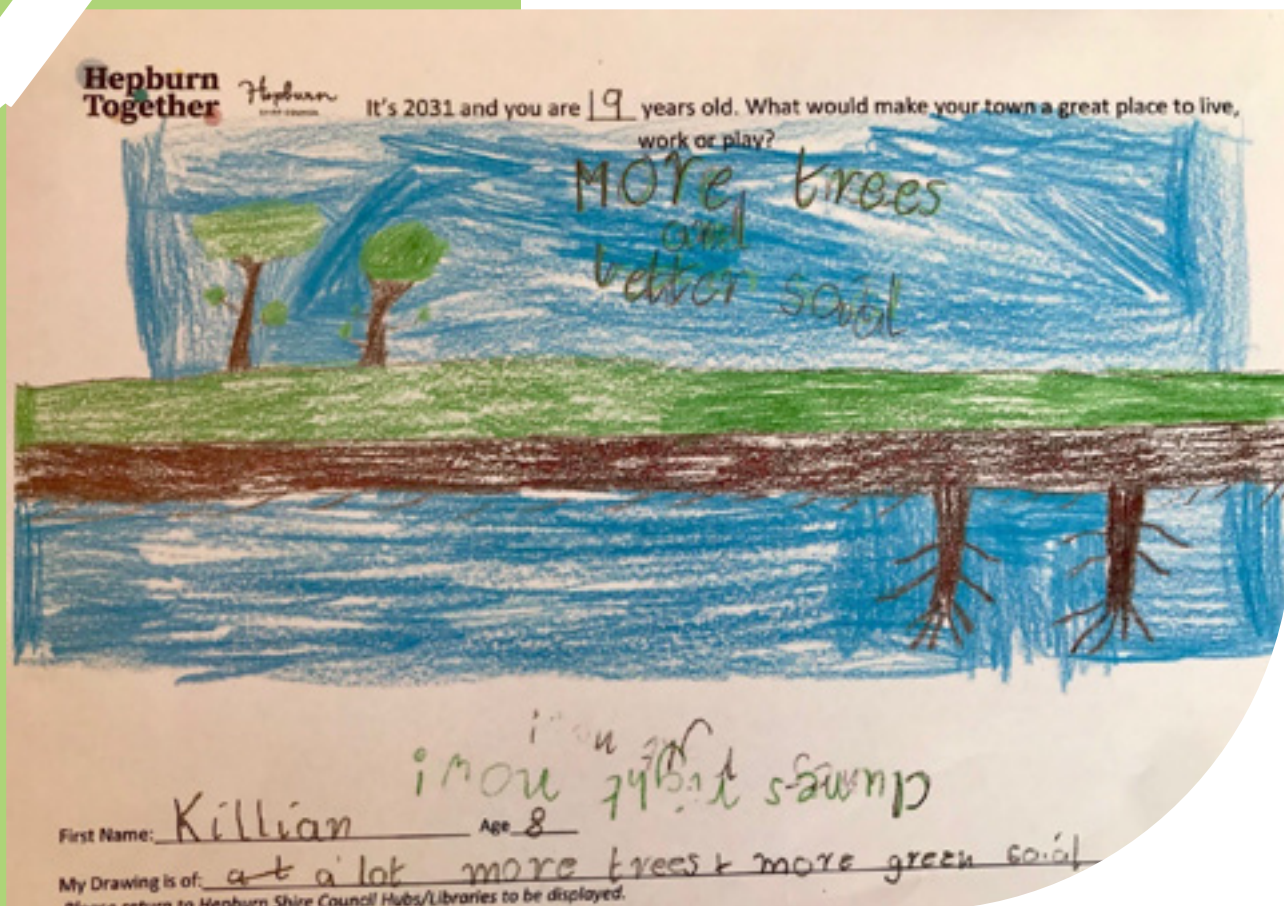


Partnerships

Hepburn Shire has partnered with numerous stakeholders to further biodiversity projects in recent years. Some significant partnerships include;

- An ongoing Gardens for Wildlife program for the Shire has developed through a partnership with local community members group and the network of Community Neighborhood Centres. This has developed a mentor training program which has trained over thirty residents to provide wildlife gardening suggestions.

- Extensive woody weed control along Wheatsheaf roadside and Lake Daylesford reserve has been carried out through a grant and partnership with the CFA Safer together program in 2021 and 2022.
- The Practical Regenerative Agricultural Communities program is being delivered as a partnership between Hepburn Shire Council, Macedon Ranges Shire Council, the City of Greater Bendigo, A Healthy Coliban Catchment project (North Central Catchment Management Authority and Coliban Water), Melbourne Water and the Upper Campaspe Landcare Network.



It's 2031 and you are 19 years old. What would make your town a great place to live, work or play?

“ More trees and better soil. ”

Killian - Age 8

Theme: Low waste



Council's role

The legislative roles that Council must perform with regards to waste management include:

Council is required to offer the following services under the Circular Economy (Waste Reduction and Recycling) Act 2021:

- Municipal residual waste service
- Municipal recycling service
- Municipal recycling service for glass (by 2027)
- Municipal food organics and garden organics service (by 2030)

From Council Plan 2021-25:

- Annual reduction in tonnes of waste to landfill per capita
- Review waste services to ensure alignment with the new Victorian government's circular economy policy and program (Recycling Victoria):
 - > Cut total waste generation by 15 per cent per capita by 2030.
 - > Divert 80 per cent of waste from landfill by 2030, and an interim target of 72 per cent by 2025.
 - > Halve the volume of organic material going to landfill between 2020 and 2030, with an interim target of 20 per cent reduction by 2025.
 - > Ensure every Victorian household has access to food and garden organic waste recycling services or local composting by 2030
 - > Removing glass from recycling stream by 2027



Council's progress to date

Since the adoption of the Waste Management and Resource Recovery Strategy in 2014, the waste team at Council have progressed actions in the following areas.

Improving Kerbside Performance

Rural kerbside service was extended throughout the shire to around 1,250 properties in 2015/16.

Education

A Waste Education Officer was recruited in November 2019 to work with community, schools and businesses to reduce waste to landfill and maximise effective recycling practices.

Council launched a new truck art competition to celebrate the arrival of a new kerbside collection service being provided by Suez Recycling and Recovery across Hepburn Shire in 2021. The theme for the competition was 'reducing landfill'. Xanthe Dalton from Daylesford College was the winner of the Secondary School division. The Hepburn Kindergarten class of 2021 won the Primary School division. The student creations are now displayed on two of the kerbside collection trucks.



Image: Truck Art Winner – Seniors – Xanthe Dalton Daylesford College

Image: Truck Art Winner – Junior – Hepburn Kindergarten Class of 2021



Waste: Current kerbside services offered

Currently Council provides the following residential kerbside collections services:

- Townships receive a 240L recycling collection on a fortnightly basis and a 120L general waste (landfill) collection on a weekly basis.
- Rural properties outside of the main town centres receive their 240L recycling and 140L general waste (landfill) on a fortnightly basis plus two tip vouchers. Some properties without collection access receive 12 tip vouchers instead (one tip voucher equates to 0.5m³).
- Commercial properties can elect to receive a 240L recycling collection on a fortnightly basis and a 240L general waste (landfill) collection on a weekly basis.

Waste: What's in the bins? (From 2021 bin audit)

- **Landfill:** 11% recyclable; 56% organics; 33% general waste – nappies, soft plastics, residual items.
- **Recycling:** 74% recyclables; 24% general waste; 3% organics
- **Organics** (Trial in Clunes only): 99% organics (food and garden); 1% contamination

Shire Transfer stations

Hepburn manages three transfer stations in Hepburn Shire: Creswick, Daylesford, Trentham. These allow residents to drop off materials if they do not have access to kerbside services or for materials not suitable for kerbside bins.

Transfer stations offer the following services:

- Collection of household waste and recycling, mattresses, green waste (no noxious weeds), hard waste, tyres. Bricks, concrete, rubble, and paint (only at Daylesford).
- Asbestos is not accepted at any transfer station or commercial quantities of waste.
- Free Green waste offered during November at all Transfer Stations to prepare for fire season.
- Free community recycling: e- waste, scrap metal, batteries, oil, light globes
- Free mulch collection at transfer stations when it is available.
- Tip shops operate at all three sites to reduce waste to landfill.



Image: Composting organics at Creswick Transfer station

- All transfer stations are capped former landfill sites requiring regular maintenance and monitoring.

Community Recycling Stations: Hepburn Shire Council Customer Service Centres/Hubs accept small e-waste, printer cartridges, batteries, and light globes for convenience.

Low waste Shire opportunities

Currently, the waste management system is largely managed by individual councils. With almost 3 million households across Victoria, living in 79 different Council areas, rolling them out in stages is the best way to transition to a new system.

Over the next three years, Victoria's landfill levy is set to almost double, to create a strong incentive to reduce waste sent to landfill, recover more, and drive new technologies.

At Hepburn Shire Council we need time to access the right infrastructure – such as bins, trucks and processing facilities. Any service changes will be communicated well in advance.

Non-negotiable requirements for Hepburn Shire to comply with Victorian government policy changes:

- Rollout of organics service – kerbside or drop-off (by 2030)
- Glass service separate to mixed recycling – kerbside or drop-off (by 2027)
- Alignment with new Victorian government waste policies

Future directions

The **Container Deposit Scheme (CDS)** is a 'take-back' program for commonly littered drink containers offering cash rewards to community groups, charities, and individuals.

The CDS is expected to reduce the amount of litter in Victoria by half and be introduced by 2023. A 10-cent refund will be given for the return of aluminum cans, cartons, and glass bottles (150mL to 3 litres). Return locations will include shops, reverse vending machines, depots.

The CDS will accept a range of glass drink bottles. This will influence how the future glass service is delivered.

Partnerships

Neighbouring councils partner on joint procurement opportunities, sharing of disposal facilities, sharing knowledge, education material. The Grampians region jointly commissioned a study on removing organics from landfill demonstrating a working model for the region.



Theme: Climate resilience



Council's role

Climate resilience intersects with the Beyond zero emissions theme as Beyond zero emissions works to mitigate the likelihood of climate change while Climate resilience looks to lessen the consequence of climate change impacts and assist our preparedness for challenges to come.

Climate resilience and adaptation are also linked in that adaptation speaks to changing the way we go about our lives in accordance with our changing climate and resilience enables us to thrive through change.

Climate change adaptation responsibilities under the Climate Change Act 2017 (Vic) and Local Government Act 2020 (Vic) require local government to have a duty of care in exercising their functions and powers to manage foreseeable risks. Given that climate change hazards and risks are significant and foreseeable, decision-makers are accountable for considering these matters in making a decision as part of exercising their duty of care. Good decision making is enabled by acting as a 'reasonable person' in making decisions guided by law.⁵⁰

Developing a Council Plan is a requirement of the Local government Act and Council's overarching strategic mechanism. *Sustainable Hepburn* is a priority in Hepburn Shire Council's Council Plan 2021-25.

Council Plan 2021-25 includes the Municipal Health and Wellbeing Plan which has relevant touch points to the *Sustainable Hepburn* strategy and the Climate resilience theme. These include community connection, connection to nature, the effects of climate change on public health and a resilient community who has the ability to participate in its local democracy.

Specific priorities related to a climate resilient Shire within Council Plan 2021-25 include:

- Adapt to and mitigate to climate change to reach net zero community emissions by 2030
- Contribute to the implementation of the Grampians Region Adaptation Strategy
- Undertake appropriate Municipal Emergency Management Planning to prepare for and respond to natural disasters
- Increase community understanding of the risks of climate change to public health through communication and education
- Continue services to build strong, safe, and resilient communities

Climate resilience is also fostered through the implementation of Council's Planning Scheme (environmentally sustainable design) and through partnerships on priorities such as integrated water management to protect the Shire's water security.

Council's progress to date

To date Council has not had a formalised or collated approach to climate resilience. There are however programs aimed at improving climate resilience for council buildings, developments within the Shire and building community climate resilience to climate change impacts such as extreme weather.

Sustainable Hepburn provides the opportunity to link and build on work to build climate resilience into Council buildings and the services it delivers as well as providing streamlined guidance to the community on how to be better prepared for local climate change impacts.

⁵⁰ [Local-Government-Roles-and-Responsibilities-for-Adaptation-under-Victorian-Legislation_Guidance-Brief.pdf \(climatechange.vic.gov.au\)](#)



Planning scheme amendment

Council commenced a review of the Hepburn Planning Scheme in 2020, with Council resolving to support the new scheme in March 2021. The Minister for Planning has approved the Hepburn Shire C80hepb Planning Scheme Amendment, which was gazetted on 10 February 2022.

Within the Planning Scheme Amendment is an environmentally sustainable design (ESD) policy that specifies sustainability guidelines that 'could' be incorporated into non-residential and residential developments. At this stage these are simply guidelines, however this is a very good start to strengthening these directions in the scheme in the future. A key success with the introduction of this policy is that it applies to a minimum of one dwelling on a lot. The ESD guidelines include energy performance, integrated water management, indoor environment quality, transport, waste management and urban ecology.⁵¹

Under this clause is the statement to Encourage the appropriate use of alternative water sources (including greywater, rainwater and stormwater). This is also a policy direction and not a mandate.

⁵¹ [Hepburn Planning Scheme Amendment C80hepb - Hepburn Shire Council](#)

⁵² [Flooding Amendment C77 - Hepburn Shire Council](#)

Flood and Bushfire overlays

FLOOD

The Hepburn Shire Planning Scheme has recently been updated with a revised extent of the LSIO (land subject to inundation overlay). There were flood studies undertaken as part of this work. Amendment C77hepb has now been approved by the Minister for Planning (Victorian government) and was gazetted on Thursday, 31 March 2022.⁵²

The Amendment affects flood-prone land in Creswick and Clunes and certain rural localities and small settlements across the Hepburn Shire.

As a result of flood events in 2010 and 2011 in and around the townships of Clunes and Creswick, the Hepburn Shire Council and the North Central Catchment Management Authority jointly engaged consultants to undertake flood modelling and prepare reports to inform on appropriate flood mitigation and planning controls to minimise flood risk to life, property, community infrastructure and the environment.

The Amendment amends the overview, key issues, objectives and strategies to address flood risk in the Hepburn Shire and to include the Creswick Flood Mitigation and Urban Drainage Plan, February 2012 and the Clunes Flood Mitigation and Urban Drainage Plan, June 2013 as background documents within Clause 21.09 (Environment and Heritage).

BUSHFIRE

Council has an obligation under the Country Fire Authority Act to contribute towards community safety. Council's role is to undertake fire prevention measures within the municipality and ensure its residents take every opportunity to clean up their property to minimise any fire hazards.

Council is currently in the process of undertaking a flora and fauna study in Creswick with the intent to undertake same in other townships. The Creswick study will feed into the Creswick Structure Planning work.

A bushfire assessment for Creswick is planned as part of this work. Engagement with the community is currently underway for the Creswick Structure Plan.⁵³

Emergency management

Council has an ongoing responsibility for the well-being of the community and plays an important role in supporting emergency management.

The Emergency Management Act 1986 requires Municipal Councils to have a Municipal Emergency Management Plan (MEMP) that outlines the strategies for how we will prevent, prepare, respond, and recover from emergencies within the Shire. Council convenes a Municipal Emergency Management Planning Committee which includes Council representatives, emergency response agencies such as the CFA, SES (State Emergency Services) and VicPol, recovery agencies such as the DHS and Red Cross and local community groups. The committee has the responsibility to develop and maintain the MEMP.⁵⁴

Community resilience

The Shire's swimming pools provide free entry to the community during the months of December to March each year. Pool opening hours are extended when the air temperature forecast by the Bureau of Meteorology at 4:00pm is more than 30 degrees Celsius providing an accessible refuge for the community during a heatwave.

Swimming pools are closed on days declared by the CFA a Code Red day.

COMMUNITY SPARKS

The Central Victorian Greenhouse Alliance (CVGA) has been funded to plan community batteries across the Hepburn Shire as part of State Governments' Neighbourhood Battery Initiative.

The program, called 'Community Sparks' will assess the feasibility of five community battery sites in the Hepburn Shire, work on a decision-making tool for regional communities and will also explore a single potential battery site for six other local governments in the region. Hepburn Shire makes an ideal candidate for community batteries because of our high solar penetration and work to reach zero-net emissions by 2030. Two Hepburn Z-NET partners, Hepburn Wind, and the Hepburn Shire Council, will be working with the community and CVGA to deliver this program.⁵⁵

It is estimated
that every
\$1 spent on
adapting to
climate change
now saves
society an
average of \$6
in future costs.



⁵³ [Structure plans | Participate Hepburn](#)

⁵⁴ [Microsoft Word - DOC 18_31296 \(Revision 7\) Attachment 7 ~Municipal Emergency Management Plan \(without Appendices\) August 2018 \(hepburn.vic.gov.au\)](#)

⁵⁵ [Neighbourhood Battery Initiative | Z-Net \(hepburnznet.org.au\)](#)

Partnerships

Department Environment Land Water and Planning (DELWP) – Building Victoria’s Climate Resilience

DELWP has supported the development of Regional Adaptation Strategies across six Victorian regions including the Grampians Region (which includes Hepburn Shire).

Council has committed to supporting the implementation of the Grampians Region Adaptation Strategy 2020-25 which has the following goals:

- Our regional responses to climate change are coordinated, resourced and evidence based.
- Our Region’s biodiversity and natural ecosystems are protected and resilient.
- The Grampians economy is sustainable and climate ready.
- Regional farming is well-adapted to the changing climate.
- Our built environment is more resistant to weather extremes.
- Individuals and communities proactively reduce their climate-related risk.
- Our vulnerable people are supported to adapt to climate change

Central Highlands Water (CHW) Daylesford and Hepburn Springs, Clunes, and Creswick Integrated Water Management draft plan

The Daylesford & Hepburn Springs, Creswick, and Clunes Integrated Water Management (IWM) Draft Plan has been developed with stakeholders to establish a basis for ongoing collaboration and a clear direction for water management in these townships. The plan will provide guidance on how an IWM approach can meet broader environmental and social objectives while ensuring that these towns continue to be great places to live, work and enjoy.

Hepburn Shire Council has provided input into the development of the Draft IWM Plan recommending elevating Djaara aspirations around water management (from Dhelkunya Dja Country Plan 2014-2034), a stronger reference to climate change impacts and resilience given climate projections for the region) and a stronger reference and consideration on water security for the Shire.

Adaptation X Z-NET

Council was successful in its Expression of Interest submission for the Grampians Region Climate Adaptation Strategy - Adapt Grampians Grants Program 2021-2022. This funding will leverage and expand on the Hepburn Z-NET mitigation model to develop an approach to climate change adaptation that is place-based and locally appropriate. It will provide a replicable process for other regional local government areas (LGAs).⁵⁶



⁵⁶ [Regional Climate Change Adaptation 2021-22 projects](#)

SECTION 8

STRATEGIC THEMES – OPPORTUNITIES & ACTION PLANS



Recommendations from the Sustainable Hepburn CRG

Strategy term

The CRG recommended the strategy term is from 2022 (i.e., initiated in 2022/23) through to 2026/27 (i.e. 4 years).

Form an ongoing Sustainable Hepburn CRG or Advisory Committee to keep building community participation and agency throughout the Shire.

There were at least nine members from the CRG who are interested in being included in an ongoing *Sustainable Hepburn* CRG to meet up at agreed intervals throughout the strategy lifecycle.

The momentum to keep the work of the CRG could take the form of a community champions model which will help to engage additional community members who would like to be involved in the implementation of the *Sustainable Hepburn* Strategy.

Create a Sustainable Hepburn hub/portal and make it easy for the community to connect into it.

CRG Members have made it clear that the community is poised and ready to act however what is lacking is clear communication on how to get involved, where to share information, what actions need doing, and who is leading various efforts. There is an opportunity for Council to create a reliable "one stop shop" where information can flow in and out of. New community members can be directed to the hub to register interest, offer skills, and contribute ideas. This does not need to be a physical hub; it could exist on a digital platform.

Sustainable Hepburn Overarching actions

There are a suite of actions relating to each theme around "embedding sustainability and climate change awareness and action within council culture", "governance for implementing the strategy", "communication," and "community involvement". Having a series of actions that sit in an "overarching action" would assist in articulating the synergy between strategic themes and raising the profile of such actions within the finalised strategy.



BEYOND ZERO EMISSIONS



BIODIVERSITY AND NATURAL ENVIRONMENT



LOW WASTE



CLIMATE RESILIENCE

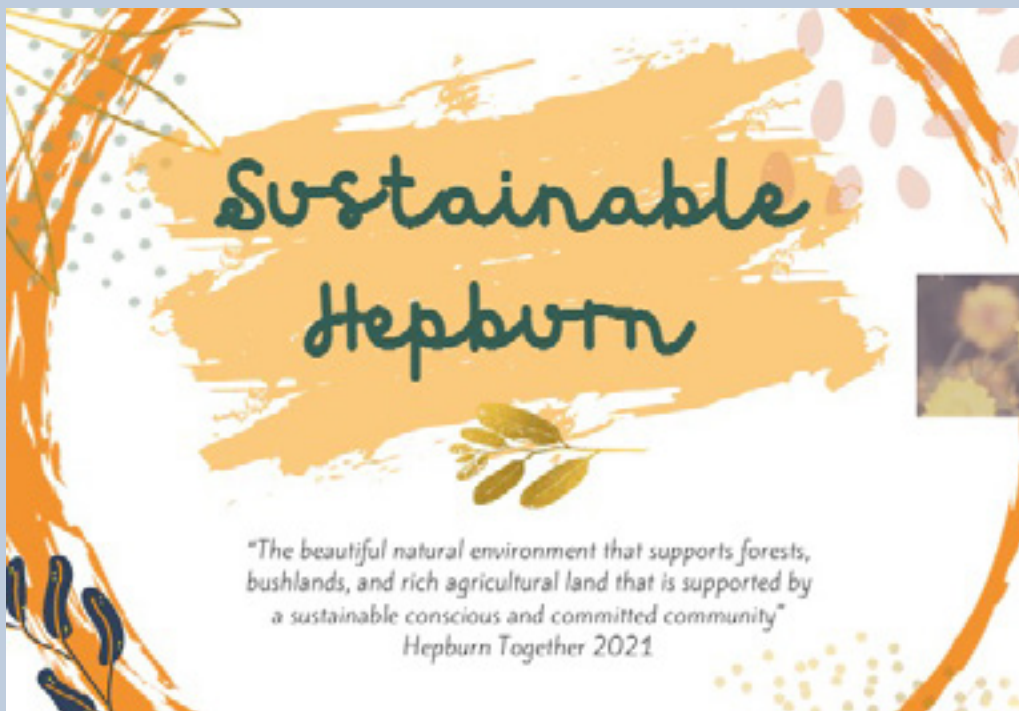
Overarching Sustainable Hepburn Opportunities and action plan

Given the interconnecting nature of the four Sustainable Hepburn themes and the recommendation above, there are opportunities and actions that speak to all themes, enabling co-benefits and deeper outcomes.

Most of these relate to embedding environmental sustainability and climate change understanding, awareness and action into Council culture, investment and decision making.

The objectives guiding the overarching *Sustainable Hepburn* actions include:

- Ensure all decisions are made through a sustainability and climate change lens
- Ensure good planning / governance for implementation of *Sustainable Hepburn* actions
- Incentivise sustainability and climate action for local businesses and the community.





ORTO Farm, Blampied - Low emissions and climate resilient home



Sustainable Hepburn THEME	OBJECTIVES	ACTIONS (How we will achieve the outcomes)	WHAT WOULD SUCCESS LOOK LIKE?	COUNCIL'S ROLE - Deliver - Partner - Facilitate	PROJECT PARTNERS i.e. Business community	TIMELINE (year)				Related Sustainable Hepburn theme
						1	2	3	4	
SUSTAINABLE HEPBURN OVERARCHING ACTIONS	Ensure all decisions are made through a sustainability and climate change lens	Develop a HSC Sustainability and Climate Change (emergency) policy	A Sustainability and climate change policy is developed, adopted, and embedded in all operations by Council in 2022. Subsequent framework is applied to 80% of council decisions	Deliver Partner	Djaara	x	x			All themes
		Embed the Sustainability and Climate Change Policy into the HSC Planning Scheme	Everywhere you look within Shire you see sustainable property development occurring and the green urban spaces increasing Amend HSC Planning Scheme to incentivise development applications which address Sustainable Building Design and Rain & Greywater harvesting/reuse	Deliver and partner	DELWP Djaara	x	x	x	x	All themes
		Embed sustainability and climate change into council decision making processes. Develop a Sustainability / Climate change Decision Making Framework to assist council officers and Councillors to consider implications of decisions on climate change. <i>Embed into council processes such as council reports, budget development and capital works projects.</i>	80% of all council reports and capital works bids are assessed per year against decision making framework by end of 2023.	Deliver	Djaara	x	x	x	x	All themes
		Build a council culture that recognises climate change action and sustainability as a priority. Develop and deliver climate emergency capacity building program to all council staff (include Djaara Cultural Values)	Councillors and Executive, model behaviours by applying the framework, always questioning and enunciating consequences of decisions and actions. Require senior staff to do the same. 80% of all council staff attend training by 2023	Deliver	Djaara	x	x	x	x	All themes
	Ensure good planning / governance for implementation of Sustainable Hepburn actions	Create and maintain a Sustainable Hepburn Steering Committee within Hepburn Shire Council with representation of each Department responsible for actions to aid collaboration and momentum in implementing actions	Sustainable Hepburn Steering Committee is established with Terms of Reference in place before September 2022	Deliver		x	x	x	x	

SUSTAINABLE HEPBURN OVERARCHING ACTIONS

Sustainable Hepburn THEME	OBJECTIVES	ACTIONS (How we will achieve the outcomes)	WHAT WOULD SUCCESS LOOK LIKE?	COUNCIL'S ROLE - Deliver - Partner - Facilitate	PROJECT PARTNERS i.e. Business community	TIMELINE (year)				Related Sustainable Hepburn theme
						1	2	3	4	
	Incentivise sustainability and climate action for local businesses and the community.	Create the annual or bi-annual Sustainable Hepburn awards to celebrate achievements made in projects and actions taken by various sectors across the Shire (i.e., business, community, education).	25 applications to the awards	Deliver Facilitate	Sustainability Victoria Sponsorship partners to be defined	x	x	x		All themes
	Increase the profile of Hepburn Shire as a "sustainable destination" and encourage businesses in the area to do more to reduce impact of climate change, adapt to the challenges climate change will present	The scope of the awards would be the four themes of the Sustainable Hepburn strategy. Sponsorship would be sought from partners to financially assist the awards program.			Djaara					
		Create a Sustainable Hepburn Community Grants program to support the community and others to act on the Sustainable Hepburn themes.	50 applications for grants	Deliver	Sustainability Victoria Hepburn Wind	x	x			All themes
		Work with the local tourism industry to reduce impact and build greater resilience to climate change, so that Hepburn is viewed a leader in the field: <ul style="list-style-type: none">Investigate sustainability certification schemes (using criteria based around Sustainable Hepburn themes) of holiday accommodation and tourism activities.Liaise with Daylesford Macedon Tourism (DMT) on delivering a series of events to assist tourism businesses to reducing impact and adapting to climate change impacts.	Sustainability Certification is highly sought after with 60% of businesses in Shire registering	Deliver Partner Facilitate	Daylesford Macedon Tourism	x	x	x		All themes

Beyond zero emissions

Opportunities and action plan



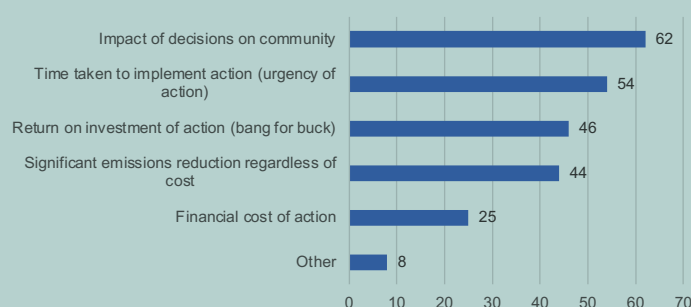
This theme will focus on priorities and actions that will reduce Council's corporate emissions to net zero and beyond. The subgroup has defined their priorities in response to this focus by developing seven key action statements:

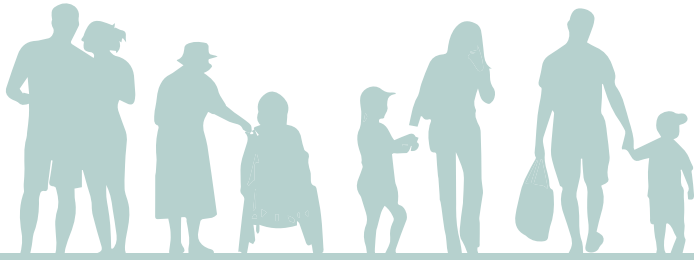
- 1 Transition Hepburn Shire to a Circular Economy
- 2 Reduce Council transport emissions and enable electric vehicle uptake across the shire
- 3 Reduce emissions and improve energy efficiency of Council buildings and assets, and support the improvement of residential and business building stock
- 4 Increase renewable energy & storage capacity for Council operations and support the Hepburn Z-NET Community Transition Plan.
- 5 Sequester carbon locally
- 6 Amplify emissions reductions impact through effective partnering at local, regional state level and beyond
- 7 Tell the story of a Beyond Zero Shire to inspire and involve the Hepburn community and beyond.

Broad community feedback that relates to this theme includes:

- Community provided suggestions for renewable energy and suggested ways to increase energy efficient buildings and infrastructure.

What criteria should Council use to prioritise actions and make decisions to reduce future greenhouse gas emissions?





What community and strategy partners can do

▶ to reduce greenhouse gas emissions:

- Participate in Hepburn Z-NET and contribute to Hepburn Shire reaching zero-net energy by 2025 and zero-net emissions by 2030
- Retrofit homes with energy efficient appliances and fixtures; install solar panels and batteries; and progressively remove gas appliances at the end of their working life
- Support Hepburn businesses to transition to 100% renewable electricity and increased energy efficiency

- Support locally owned renewable energy generation and storage projects, including:
 - Partnering with housing agencies
 - Solar Savers – zero interest loans for solar
- Advocate for the community partnership in renewable energy development projects (e.g. solar farms require 20% local community ownership)
- Advocate for:
 - Victorian Renewable Energy Target
 - Finance products and options for low-income households to gain access to renewable energy and housing upgrades
 - Minimum rental energy efficiency standards for rental housing
 - Minimum Energy Performance Standards



Sustainable Hepburn THEME	OBJECTIVES	ACTIONS (How we will achieve the outcomes)	WHAT WOULD SUCCESS LOOK LIKE?	COUNCIL'S ROLE - Deliver - Partner - Facilitate	PROJECT PARTNERS i.e. Business community	TIMELINE (year)				Related Sustainable Hepburn theme
						1	2	3	4	



Beyond Zero Emissions

Transition Hepburn Shire to a Circular Economy

Develop a circular economy framework and implementation roadmap for the Hepburn Shire

Research and development into circular economy models and opportunities for local application providing outputs such as a circular economy framework, local case studies and a roadmap to lay the foundation for on-ground projects in partnership with local stakeholders.

Deliver
Partner
Facilitate

Council teams – EcoDev, Artisan Agriculture, Waste & Resource Recovery, Sustainability.
Business community
Local community
Other LGAs and regional partners
Sustainability Victoria

x x



Integrate circular economy principles across Council operations

Knowledge sharing and capacity building workshops held across Council resulting in a cross-Council working group to progress circular economy opportunities.

Deliver

HSC

x x x x



Work with local and regional stakeholders to deliver circular economy outcomes

Partnership project that establishes strong collaboration locally and with our regional and other partners to build capacity, innovation, and on-ground activities to strengthen our circular economy.

Deliver
Partner
Facilitate

Business community
Local community
Sustainable Victoria / Vic Gov
Circular Economy Victoria
Ellen MacArthur Foundation

x x



Reduce Council transport emissions and enable electric vehicle uptake across the shire

Develop HSC Fleet Transition Plan to Zero Emissions Vehicles

A comprehensive Fleet Transition Plan for all 140+ Council vehicles including heavy and plant.

Exploration of options for reducing emissions in existing heavy vehicles while viable replacements are not available – ie. Carbon reduced or carbon neutral fuels, behaviour change program for drivers.

Deliver
Partner

Central Victorian Greenhouse Alliance (CVGA)
Greenhouse Alliance & Climate Emergency Australia national network of Councils
Climate Council/Cities Power Partnership
Other LGAs
State Government
Federal Government
ARENA
University sector

x



Replace Council Pool Fleet (light passenger vehicles) with electric vehicles (EVs) by 2025

Replace shared vehicle fleet with light passenger EVs, enabling multiple Council teams to utilize EVs, showing leadership and reducing running costs while reducing carbon emissions and local pollution levels.

Deliver

State Government
Federal Government
Local partners such as CVGA for a bulk buy

x x x x



Enable electric vehicle charging infrastructure across the Shire




















An effective network of EV charging stations installed across Hepburn to stimulate uptake and support Council, community and visitors using EVs.












Deliver
Partner

Hepburn Z-NET
Vic Gov
Business community

x x x x

Sustainable Hepburn THEME	OBJECTIVES	ACTIONS (How we will achieve the outcomes)	WHAT WOULD SUCCESS LOOK LIKE?	COUNCIL'S ROLE - Deliver - Partner - Facilitate	PROJECT PARTNERS i.e. Business community	TIMELINE (year)				Related Sustainable Hepburn theme
						1	2	3	4	

 Beyond Zero Emissions	Reduce emissions and improve energy efficiency of Council buildings and assets and support the improvement of residential and business building stock.	Develop a Carbon Neutral Buildings Plan. (Or a BERP – Buildings Emissions Reduction Plan)	A clear plan for reducing emissions and building performance across Council assets to complement existing activities.	Deliver	Sustainability Victoria		x			 
		Build capacity within the local community to deliver a range of sustainable buildings services locally.	Partner with local and other stakeholders to provide training and practical experience across a range of vital sustainable buildings and energy efficiency areas such as energy audits, ecologically sustainable design, retrofitting and strategic planning.	Deliver Partner Facilitate		x	x	x	x	 
		Reduce energy consumption and transition from gas.	Commonly utilized buildings management practices and a reduction of gas-powered heating, cooking, and hot water units in Council buildings.	Deliver Partner Facilitate	Internal teams – assets, facilities etc. Local community groups and businesses leasing buildings from Council.	x	x	x	x	 
		Pilot program to improve residential homes to 10-star rating.	Deliver small pilot to retrofit approximately 10 residential properties to a 10-star building performance rating.	Deliver Partner Facilitate				x	x	 
	Increase renewable energy & storage capacity for Council operations and support the Hepburn Z-NET Community Transition Plan.	Continue to explore energy storage and distributed energy generation options across Council operations.	Council increases renewable energy generation capacity, adds storage capacity and works with other council units around opportunities such as waste to energy projects.	Deliver Partner	Business community CVGA Victorian and Federal Govs	x	x	x	x	
		Support Hepburn Z-NET to reach its 2025 goal of net-zero emissions from energy use Shire-wide.	Continue to partner with the community on the Hepburn Z-NET project.	Partner Facilitate	Hepburn Community Business community Vic/Fed Govs	x	x	x	x	
	Sequester carbon locally.	Develop a local carbon sequestration (in-setting) and carbon off-setting strategy.	Endorsed carbon sequestration strategy in place.	Deliver	Universities & NRM sector, Parks Vic & DELWP Djaara consultation in strategy development			x	x	 Djaara consultation in strategy development
		Partner and support local in-setting projects that sequester carbon within the Hepburn Shire.	Local carbon farming projects occurring that Council can partner in or support. Revegetation (using indigenous provenances of native flora) of local areas, riparian ecosystems, and degraded crown land.	Partner Facilitate	Hepburn Z-NET Regional partners such as other LGAs, Water Authorities, Landcare, local farmers, universities, state and federal govt.	x	x	x	x	
		Biochar pilot: Collection, conversion to biochar and local sequestration of 'waste' timber biomass from agricultural sector and other available sources within the Shire.	A program in place to support the creation of biochar and addition of the biochar resource to local farming and residential properties.	Partner Facilitate	Agricultural sector, DELWP		x			   
		Explore a carbon credit system to encourage local farmers and other groups to increase soil carbon and/or plant trees.	Increased levels of locally sequestered carbon occurring across the Shire and the region.					x		   

Sustainable Hepburn THEME	OBJECTIVES	ACTIONS (How we will achieve the outcomes)	WHAT WOULD SUCCESS LOOK LIKE?	COUNCIL'S ROLE - Deliver - Partner - Facilitate	PROJECT PARTNERS i.e. Business community	TIMELINE (year)				Related Sustainable Hepburn theme
						1	2	3	4	
 Beyond Zero Emissions	Amplify emissions reductions impact through effective partnering at local, regional state level and beyond.	Council leadership and support for communications initiatives, not limited to developing and implementing a consistent emissions accounting methodology to calculate and report publicly Council's emissions every 12 months.	Effective monitoring and evaluation of HSC emissions Council reports on its annual emissions from operations in an accurate and transparent manner every 12 months.	Deliver Partner Facilitate	Hepburn Z-NET Local community groups Business community CVGA Cities Power Partnership Climate Emergency Australia Local media outlets	x				  
		Ensure sufficient resourcing within Council to ensure capacity to deliver matches ambition.	Additional staffing resources to deliver the HSC sustainability and climate action program and partnerships with the Hepburn community.	Deliver		x				
	Tell the story of a Beyond Zero Shire to inspire and involve the Hepburn community and beyond.	Develop an effective communications and engagement strategy for a Beyond Zero Emissions Shire and Sustainable Hepburn more broadly.	Empower local people to tell the story by increasing collaboration and engagement with the Hepburn Shire community, generating inclusivity and participation in Council initiatives and Community-Council partnerships such as Hepburn Z-NET. Strengthened local media outlets.		Hepburn Community & Djaara Sustainability groups Hepburn Z-NET Business community	x				  
		Sustainable Hepburn Day – an annual event bringing together the many groups and individuals the make Hepburn a sustainable Shire.	Wide participation from Community, Council, and local businesses to provide updates on progress, build capacity and knowledge, and celebrate our successes.	Deliver Partner Facilitate	Hepburn Community & Djaara Sustainability groups Hepburn Z-NET Business community		x			  



Natural environment and biodiversity

Opportunities and action plan



This theme focuses on priorities and actions that protect and enhance biodiversity values across the Shire. This working group has defined their priorities in response to this strategic theme by developing seven objectives:

- 1 Ensure good planning / governance of biodiversity actions
- 2 Prioritise protection of existing biodiversity & habitat on both Council controlled and private land
- 3 Increase extent, connectivity & integration of natural ecosystems
- 4 Identify & reduce threats to biodiversity
- 5 Improve Council's and community's connection to and understanding of biodiversity
- 6 Strengthen connection to DJAARA
- 7 Promote agrobiodiversity approach in the shire for farmers, hobby farmers and backyard growers.

Broad community feedback that relates to this theme includes:

- Natural environment and biodiversity were the second highest rated priority, next to waste, for community members
- Participants in the individual online survey ranked actions in order of importance with "better management of roadsides and reserves to reduce threat posed by environmental weeds" as a top priority
- People agreed with actions to manage weeds and protect the natural environment
- Balancing future growth with the preservation of heritage and environment
- Supporting community actions and awareness
- Support for Landcare grants program





What community and strategy partners can do

▶ to protect and enhance biodiversity:



- Assist Traditional Owners to manage public land and deliver natural and cultural resource management strategies on Country
- Get to know your local native species of flora and fauna (see [Grow Wild](#) and [Wombat Native Plants](#))
- Create Wildlife friendly Gardens to attract pollinators and create habitat for native animals
- Avoid removal of native vegetation on your property
- Farmers to increase native vegetation on farms and consider how new vegetation corridors can be linked to existing remnant vegetation on your property and neighbouring properties
- Volunteer in a Landcare group (or similar) and tree planting programs to restore habitats and repair landscape health
- Advocate for increased native vegetation on public land to support threatened species habitat
- Advocate for more native revegetation along waterways to improve habitat for local fauna, decrease nutrient loads and decrease sedimentation in waterways





Natural Environment & Biodiversity

<p>Ensure good planning / governance of biodiversity actions</p>	Update Hepburn Council Biodiversity Strategy every 4 years with minor review annually	Improved proportion of biodiversity actions/outcomes achieved compared 2018-2021 Biodiversity Strategy as identified in June 2022 evaluation	Deliver	DJAARA Landcare & other community groups NCCMA Academics	x	x	x	x	
		Strategy is distributed & has broad public awareness	Deliver	Public – draft consultation process	x	x	x	x	
	Develop & implement a monitoring & evaluation plan. Report annually to Council & the public.	Monitoring plan developed Annual reports delivered to Council and public	Deliver		x	x	x	x	
	Council review policies and procedures on enforcement regarding biodiversity protection	Review of policy and procedure conducted, and improvements implemented	Deliver	DELWP		x	x		
	Supply significant biodiversity data gathered as part of council activities and projects to state government biodiversity databases	Increased Records of threatened or significant species on Victorian Biodiversity Atlas	Deliver	DELWP	x	x	x	x	
	Prioritise protection of existing biodiversity & habitat on both Council controlled and private land	Significant Tree Register is updated and maintained	Deliver	DJAARA Landholders Council workers Parks Engineering DELWP		x			
		Significant Trees and Large old trees considered in Vegetation Protection Overlay (VPO)	Deliver				x		
		Significant Tree register and VPOs are used strategically to avoid loss of large old tree loss	Facilitate and Deliver		x	x	x	x	
	Establish Hepburn Environment Fund to progress currently unfunded works	Fund established and promoted and funds available to initiate identified projects	Facilitate, Partner	Community		x	x	x	
	Pursue funding opportunities to accelerate and leverage council and community investment	Increase in grant-funded works	Deliver, Partner	DELWP					
	Continue Council's Community Biodiversity and Landcare grants to community	Eligible projects continue to be fully subscribed and successfully implements	Deliver, Partner	Community groups	x	x	x	x	
	Improve Council capacity for prompt and effective enforcement of illegal vegetation removal	Reduced illegal clearing due to increased awareness of greater risk of enforcement	Facilitate			x			
		Increased officer time, skill, and equipment available to follow up reports	Deliver						
		Greater visibility of enforcement action	Deliver						
	Mapping of biodiversity features under township structure planning processes	Flora and Fauna Assessments completed for major towns	Deliver		x	x			
	Shire-wide mapping of biodiversity features of relevance to planning	Mapping conducted and included as reference document to Environmental Significance Overlays	Deliver	DELWP, Community		x	x		

Sustainable Hepburn THEME	OBJECTIVES	ACTIONS (How we will achieve the outcomes)	WHAT WOULD SUCCESS LOOK LIKE?	COUNCIL'S ROLE - Deliver - Partner - Facilitate	PROJECT PARTNERS i.e. Business community	TIMELINE (year)				Related Sustainable Hepburn theme
						1	2	3	4	
 Natural Environment & Biodiversity	Increase extent, connectivity & integration of natural ecosystems	Develop a Landscape Connectivity Plan and biolink overlay in planning scheme that prioritises & places additional protections on biodiversity	Landscape Connectivity Plan	Partner Deliver	DJAARA, NCCMA, ARI, Landcare					
			Biolink Overlay (ESO) in Planning Scheme							
			Implementation of Plan actions							
	Identify & reduce threats to biodiversity	Develop Weed & Pest Management Strategies	Weed Management Strategy completed to include below outcomes	Deliver	Ag Vic, Landcare Community, DELWP/PV					
			<ul style="list-style-type: none"> Chemical minimisation demonstrated Increased education/compliance regarding landowner obligations under CALP ACT Fire protection notices under CFA ACT to reduce weed infestations that create a fire risk A minimum of hectare/kms of road to treated annually for environmental weeds. Owners of pine plantations to be made responsible for supervised and careful removal of pine trees which have spread beyond their boundaries. Council Involve local people and visitors in weeding specific areas Audit of current weed control measures conducted Increase grant application for weed control works Develop/promote options for legal disposal of noxious weeds 	Deliver						
			Pest Management Strategy	Deliver	AAg Vic, Landcare Community, DELWP/PV					
			Cat curfew, with associated education and enclosure incentives	Deliver, Facilitate	Community					
			Collation of accessible online advice on biodiversity threats and actions.	Deliver	Community groups Academics					
			Regular social media/newsletter including reporting of project results that is archived to online resources.	Deliver	Community groups					
	Improve Council's and community's connection to and understanding of biodiversity.	Increase information resources and biodiversity engagement that builds community capacity in particular the results of activities.	Increase in face-to-face workshops/events.	Deliver	Community groups					

Sustainable Hepburn THEME	OBJECTIVES	ACTIONS (How we will achieve the outcomes)	WHAT WOULD SUCCESS LOOK LIKE?	COUNCIL'S ROLE - Deliver - Partner - Facilitate	PROJECT PARTNERS i.e. Business community	TIMELINE (year)				Related Sustainable Hepburn theme
						1	2	3	4	
 Natural Environment & Biodiversity	Strengthen connection to DJAARA	Promote awareness about DJAARA approaches to and knowledge of biodiversity ('All Bunjil's creations') through online resources, media and events.	Increased awareness and support for DJAARA priorities in land management	Partner	DJAARA Community Groups	x	x	x	x	
			Re-naming of places/ features with cultural and usually ecological significance	Partner	DJAARA RAP Committee Community					
			Increase in environments where Dja Dja Wurrung identify that they as First Peoples and murrup ('spirits') feel safe.	Deliver Partner Facilitate	Everyone	x	x	x	x	
		Broaden Council and community relationship and interaction with DJAARA	Increased numbers of Hepburn Council staff, community and Dja Dja Wurrung people identifying they have an active and healthy relationship	Deliver	DJAARA RAP Committee	x	x	x	x	
			Number of engagements with DJANDAK business	Partner	DJANDAK	x	x	x	x	
		Have Dja Dja Wurrung Cultural priorities recognised in biodiversity management decision making	DJAARA involved in Strategic Planning processes	Partner	DJAARA	x	x	x	x	
	Promote agrobiodiversity approach in the shire for farmers, hobby farmers and backyard growers.	Employ an Agroecology Officer to support all scales of farming that promotes and sustainably uses biodiversity	Agroecology Officer employed and number of interactions with farmers and groups	Deliver	AFSA VFF		x			
		Support more diverse, heritage seed & breed	Survey community re seed & breed use to determine baseline and follow up to measure increase	Deliver	Artisan Ag Project Seed Savers Garden societies RBTA AFSA	x				

*Weed Management Strategy to include the following points:

- Any weed program or strategy should minimise chemical use
- Increase education/compliance regarding landowner obligations under CALP ACT for regionally prohibited controlled weeds
- Issue fire protection notices under CFA ACT to reduce weed infestations that create a fire risk
- Establish a minimum of hectare/kms of road to treat annually for environmental weeds.
- Owners of pine plantations to be made responsible for supervised and careful removal of pine trees which have spread beyond their boundaries into native areas etc. This to be strictly enforced as necessary.
- Involve local people and visitors in weeding specific areas/weeding weekends
- Council sponsored community days to actively reduce weeds in particular locations such as cemeteries.
- Analyse existing general and local information regarding weed control (targeted to main local weeds) and test and report on results.
- Seek as much grant money and human resource options as possible (link to *Sustainable Hepburn Environment Fund*)
- Council allocates one day per month when noxious weeds can be dropped off at a designated location, where they will be shredded and then taken to compost. A monthly drop off would reduce large volumes of weeds dropped off at one time such as happens with the green waste at the tip in November.

Glossary

AFSA	Australian Food Sovereignty Alliance
CALP act	Catchment and Land Protection act. Purposes include; <ul style="list-style-type: none">• sets up a framework for the integrated management and protection of catchments;• to encourage community participation in the management of land and water resources;to set up a system of controls on noxious weeds and pest animals; (includes designation of noxious weed controls)
DBH	Diameter at Breast height – standard measurement of trunk circumference (1.3m)
DELWP	Department of Environment Land, Water and Planning
GBF	Global Biodiversity Framework
GMW	Goulburn Murray Water Manages water related services in a region by the Great Dividing Range in the south and the River Murray in the north
NCCMA	North Central Catchment Management Authority Established in 1997 under the CALP act and also has powers under the Water Act 1989. Core function is delivery of Regional Catchment Strategy; overarching strategy for all involved in land, water, and biodiversity management
RBTA	Rare Breeds Trust of Australia
RAP	Reconciliation Action Plan
VFF	Victorian Farmers' Federation



A low waste Shire

Opportunities and action plan



This theme focuses on the reduction of waste to landfill as a community. The subgroup has defined their objectives in response to this focus by developing four key action statements.

- Reduce waste to landfill and make improvements to kerbside collection
- Better operating Transfer Stations
- Be part of a thriving circular economy
- Walk our talk – Council to incorporate zero waste objectives into contractual purchases and services
- Provide education and awareness to the community on transitioning to a low waste shire

Broad community feedback that relates to this theme includes:

- A low waste shire was the theme which rated as a top priority for community.
- Clear instructions on top of the bin on what can and can't be recycled
- People want actions with the biggest sustainability benefit.
- Participants offered practical solutions to minimising waste in cafes, schools, hotels, and homes
- Participants wanted to see recycling services improved and increased with more opportunities and access for reusing mater











What community and strategy partners can do

▶ to be Low waste:

- Commercial and industrial businesses can seek new opportunities to use waste as a resource and reduce waste generation
- Avoid disposal of 'waste' materials and products by practising the 5 Rs of refuse, reduce, reuse, repurpose, and recycle
- Divert food and organics from landfill by using kerbside FOGO collection or backyard composting
- Avoid plastic bag shopping and single-use plastic
- Buy products with less packaging to influence suppliers
- Actively support retailers who offer take-back old products or recycling schemes for end of life consumables



Sustainable Hepburn THEME	OBJECTIVES	ACTIONS (How we will achieve the outcomes)	WHAT WOULD SUCCESS LOOK LIKE?	COUNCIL'S ROLE - Deliver - Partner - Facilitate	PROJECT PARTNERS i.e. Business community	TIMELINE (year)				Related Sustainable Hepburn theme
						1	2	3	4	
 Low Waste	Reduce waste to landfill and make improvements to kerbside collection	Roll out FOGO to urban areas. Investigate for rural areas.	Removal of organic material from the landfill bin	Deliver	Community and contractors	x	x	x	x	
		Remove glass from commingled recycling	Removal of glass from mixed recycling bin	Deliver	Community and contractors	x	x	x	x	
		Transition to fortnightly landfill collection schedule	Reduction in waste to landfill and cost to residents for landfill service	Deliver	Community and contractors	x	x	x	x	
		Trial soft plastics drop off	Residents able to drop off soft plastics at transfer stations	Deliver	Community and contractors	x				
		Review Clunes Hard Waste service	Provide an equitable service for all	Deliver	Community		x			
		Investigate alternative solutions for families with children/nappies	Reduce impact of fortnightly waste service for households with nappies	Deliver	Community	x				
		Review public litter bin schedule and number of bins	A solution which works under "Recycling Victoria" Clear signage on public litter bins Reduce contamination in public recycling bins	Deliver	Community			x		
		Reduce plastic consumption in shire	Partner with business and community and advocate for plastic free solutions	Partner	State government, Community, Traders	x	x	x	x	
	Improve operations at Transfer stations	Implement Hepburn Shire Salvaging guidelines	Install signage, update website	Deliver		x				
		Improve the layout and flow of our transfer stations	Traffic management plan, better signage	Deliver		x				
		Review Transfer Stations hours	Transfer staff having ability to: 1. Have multiple staff on site at all times for improved safety and better customer service. 2. Access training with all staff present. 3. Have regular team meetings with all staff present			x				
		Capture more granular data of material entering the transfer stations. <i>Undertake annual waste audits to track performance and identify areas for improvement.</i>	Having access to objective data on the type of materials the move through the transfer stations.	Deliver						
		Develop best practice model for regional transfer stations	Having a best practice guide developed for regional transfer stations to strive to create.	Partner	State government Neighbouring LGAs			x		
		Implement changes to improve Shire tip shops	Implement better storage for saleable materials, standard pricing and a more inviting tip shop.	Deliver		x				
		Investigate the potential for recovery of clean concrete and soil at each of the transfer stations	Provide recycled materials locally	Deliver Partner	State government Neighbouring LGAs		x			

Sustainable Hepburn THEME	OBJECTIVES	ACTIONS (How we will achieve the outcomes)	WHAT WOULD SUCCESS LOOK LIKE?	COUNCIL'S ROLE - Deliver - Partner - Facilitate	PROJECT PARTNERS i.e. Business community	TIMELINE (year)				Related Sustainable Hepburn theme
						1	2	3	4	
 Low Waste	Improve operations at Transfer stations (cont.)	Review Tip Voucher System	Design a better functioning tip voucher system	Deliver	Community					
		Minimise illegal dumping	Develop incentives and stronger penalties to discourage illegal rubbish dumping (eg: Asbestos collection sites, Paintback scheme) Less rubbish in the natural environment	Deliver Partner						
	Lead and enable a thriving local circular economy	Investigate social enterprises at transfer stations and the opportunity for a Resource Education centre at MRF	Create an expression of interest for a resource recovery social enterprise	Deliver Partner Facilitate	Businesses Community State government	x	x			
	Walk our talk – Council to incorporate zero waste objectives into contractual purchases and services	Update Procurement policy to avoid purchase of disposable single use goods, minimal waste in products and packaging and waste free events	Council staff are educated and empowered to avoid waste generation through purchasing behaviour and disposal	Deliver						
	Provide education and awareness to the community on transitioning to a low waste shire	Develop schools and early-childhood initiatives to include resource recovery education	Primary and High School students receiving education and engagement on low-waste initiatives	Partner	Resource Smart Schools	x	x	x	x	
		Develop and deliver community education program	Complete council run education program and partner with community groups Waste avoidance and behaviour change campaigns for community groups, businesses, schools Educational materials for HSC website (what goes in your bins, composting / worm farms etc, Transfer Stations). Support initiatives through libraries, childcare, business and real estate agents for short term stays.	Deliver Partner Facilitate	Local community groups Sustainability Victoria	x	x	x	x	 
		Re-brand Council's waste department to reframing waste as a resource	Implement branding that describes resource recovery rather than waste	Deliver	Community Hepburn Shire Council	x				
		Celebrate success stories	Putting a face/name to the council team Videos from engaged members of the community	Deliver / Partner	Community Hepburn Shire Council	x	x	x	x	
		Assist community and businesses in reducing contamination	Conduct bin inspections and follow up on contaminated bins. Contaminated bin owners notified and supported to assist improvement. Regular bin audits to provide feedback. <i>Strengthen compliance for Commercial, restaurants and B&B operators to meet appropriate standards for no/low contamination in recycling, organics and landfill.</i> <i>Investigate options for rebates for households to reduce waste initiatives - such as cloth nappies, sanitary items, compost bins, textiles.</i>	Deliver/ Partner	Business Residents Hepburn Shire Council	x	x	x	x	

A climate resilient Shire

Opportunities and action plan



This theme focuses on priorities and actions that will prepare Council's services, infrastructure, and the community for the impacts of a changing climate. The specific focus of this theme is to work towards achieving and maintaining:

- Greater understanding of the risk and vulnerability of council assets and service delivered to the community because of extreme weather events
- Climate proof future residential developments from avoidable emissions, extreme heat, flooding, and fire
- Water resilience and integrated water management
- Build disaster and community resilience to connect, inform and prepare communities to know what action to take in the event of extreme weather and related disasters

Members of this working group also recommended that the theme's name be changed from Climate and Water Resilience to Climate Resilience, as climate implicitly includes water.

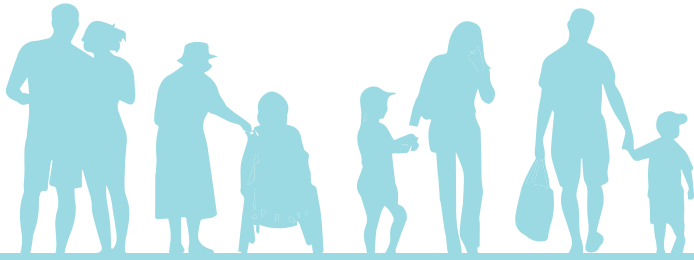
The *Sustainable Hepburn* Community Reference Group proposed the following objectives for the Climate resilience theme:

- The Hepburn community is better connected, prepared and engaged for climate related impacts
- Hepburn Shire Council is better prepared for climate related impacts
- Re-localise Hepburn Shire: improve security of basic needs for locals from locals
- Ensure intergenerational equity of resources across Hepburn Shire

Broad community feedback that relates to this theme includes:

- Community voiced concerns over recent natural disasters and wish to better prepare the community for future events.
- Participants in the individual online survey ranked actions in order of importance with "Local renewable energy supply" as a top priority for Council to focus on to ready services and assets for the impacts of climate change.
- Actions that focus on communication and education
- Climate proof future development and infrastructure
- Water resilience and integrated water management











What community and strategy partners can do to be climate resilient:

- Get to know your neighbours and join a local community group
- Understand your local risks (heat, flooding, bushfire risks to name a few) and download the [VicEmergency](#) app
- Create a climate resilient home using good solar passive design, insulate against the heat and cold (and save money on electricity)
- Create an [emergency plan](#) and know what to do if you experience a disaster

- Learn about the origins of your food purchases and who and how it is produced
- Grow food and create pollinator habitats within your backyard, including practicing organic and permaculture gardening techniques
- Support local farmers and producers by buying locally and sustainably grown and produced food
- Install water tanks and adopt water saving behaviours in your homes and businesses
- Construct a frog pond or rain garden in your backyards
- Businesses can increase water efficiency and/or adopt recycled water and stormwater for non-potable water uses



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						1	2	3	4	
 Climate Resilience	The Hepburn community is better connected, prepared for and engaged for future climate related impacts	Develop a Shire wide "better prepared/know your neighbour" program to build stronger local awareness and understanding of climate change impacts such as extreme weather events. This will include: <ul style="list-style-type: none">Awareness raising workshops including scenario planning for future disastersMap the extent, reach and capacity of existing community services and organisations to jointly produce a working plan for climate preparedness and emergency responseHold community BBQs at Refuge centresEncourage residents to keep a phone book for contact with neighbours	Our community is empowered to face unknown climate related impacts as they have the capacity and resources to prepare for many situations Joint community shire response plan developed by 2023	Deliver Facilitate Partner	ES CFA Forest Management Djaara HSC Community Life		x	x	x	
		Develop climate resilience guidelines for future landuse and building design in a changing climate including ideas to future proof your lifestyle	Climate resilience guidelines are developed and published for the community and a workshop series is facilitated	Deliver Partner	Z-NET		x	x		 
		Create Shire wide Community Resilience Hubs. Community Resilience Hubs are community-serving facilities that provide information and services to build resilient communities before, during, and after emergency events. As climate change brings more flooding, heat waves, and severe storms, Community Resilience Hubs will complement existing emergency response services and, communities year-round by promoting health, providing meeting spaces, educating the community about risks and emergency preparedness. Resilient power systems are a critical feature of Community Resilience Hubs since they will need to operate and provide services such as refrigeration, cell phone charging, food, water and communications during outages.	Community regularly uses CRHs to congregate to prepare for the unknown as they feel ownership and see the value in being involved	Deliver Partner	SES CFA Forest Management Djaara HSC Emergency Management and Community Life		x	x	x	
		Support the Community Sparks community battery project	Feasibility completed for five community battery sites in Hepburn Shire completed, work on a decision-making tool for regional communities and implementation of one trial site for scalability	Partner	CVGA	x	x	x		
		Partner in the development of the Adaptation X Z-NET program	Leverage and expand on the Hepburn Z-NET mitigation model to develop an approach to climate change adaptation that is place-based and locally appropriate	Partner Facilitate	Z-NET	x	x	x		

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						1	2	3	4	



Climate Resilience

The Hepburn community is better connected, prepared for and engaged for future climate related impacts (cont.)

Engage telecommunications companies to build back up / spare capacity into communications systems in the event of blackouts and disasters.

Ability to communicate with each other and emergency services during major climate related events

Telcos agree to increase their backup capacity at towers within HS.

Facilitate
Partner

Telcos

x

x



Hepburn Shire Council is better prepared for future climate related impacts

Undertake a vulnerability assessment on the risks to council assets and services given projections of more extreme weather.

Council assets and service delivery is resilient in the face of climate related impacts.

Accompany this with a risk management plan prioritising action and advocating for reduced insurance premiums.

Secure funding from State &/or Federal government to upgrade infrastructure to withstand severe weather events.

Deliver

Insurance companies

x

x



Work with DJAARA on flood, fire and storm mitigation practices.

Djaara practices are the norm in our flood, fire and storm mitigation demonstrating resilience and reduction in impacts

Facilitate knowledge sharing between Djaara and other indigenous groups with local groups/organisations interested in learning their practices.

Deliver
Partner
Facilitate

Djaara
SES
CFA
VicForests

x

x

x

x



Reduce social impacts of a changing climate and extreme weather by future proofing social services such as social housing and mapping existing community groups and services identifying gaps

All Hepburn Shire residents are assured of housing, services and support to protect them from the impacts of climate change

Produce a Community Group/ Service Directory

Develop targets to increase social housing within the Shire.

Deliver
Partner
Facilitate

Community Groups e.g., Good Grub Club

x

x

x

x

Re-localise Hepburn Shire: improve security of basic needs for locals from locals

Improve resilience of communications systems particularly to withstand or have back up during storms or fire.

Ability to communicate with each other and emergency services during major climate related events

Telcos provide a quality of service or agree to increase the backup power available to towers.

Partner

Telcos

x

x

Investigate local energy supplies and battery storage for reliability and back up during power outages.

80% of energy needs of households, community centres and businesses are maintained during climate related events

Engage with Powercor to determine feasibility and cost of installing community batteries within the Shire to provide power in the event of a transmission line damage, and build in grid robustness

Partner

Powercor
Breaze
CFA
SES

x

x

x

x



Sustainable Hepburn THEME	OBJECTIVES	ACTIONS (How we will achieve the outcomes)	WHAT WOULD SUCCESS LOOK LIKE?	COUNCIL'S ROLE - Deliver - Partner - Facilitate	PROJECT PARTNERS i.e. Business community	TIMELINE (year)				Related Sustainable Hepburn theme
						1	2	3	4	



Climate Resilience

Re-localise Hepburn Shire: improve security of basic needs for locals from locals (cont.)	Relocalise Hepburn Ensure local food & water security before, during and post climate related events through Community Resilience Hubs being well stocked with non-perishables and water tanks.	Enough food and water supplies available for impacted community for one week post climate related event	Deliver	Local community groups Sponsors (local Coles, Blakes, IGA for non-perishable food) Sponsor water tanks for Hubs?? Or apply for grant	x	x				
Ensure intergenerational equity of resources across Hepburn Shire	Explore the opportunity to introduce "Rights of Nature" with DJAARA	Our Shire respects our environment and has made it a legal entity ensuring protection as it is at the centre of all decisions	Deliver	Blue Mountains Shire Council (their experience of introducing 'Rights of Nature') DJAARA	x	x	x			
	Develop a local share economy to reduce the impact on lifestyle due to climate change and also to connect community with each other (link with community resilience hubs) i.e., share homes, cars, tools, food, gardens. Focus on social equity and inclusion – climate justice. This could include community to community mentoring workshops.	All shire residents have access to the same resources no matter how much they earn.	Deliver Partner	Community Groups	x	x				
	Investigate raising revenue to invest in climate resilience actions and protect/improve the local environment (eg tourism/bed and planning/development levies)	An increased revenue stream to deliver Hepburn Shire Council Sustainability Goals	Deliver	Tourism businesses Developers		x	x	x		
	Protect Shire wide water security and align with DJAARA water policy	Everyone in shire has access to affordable high quality drinking water today and into the future. Water leaving Hepburn Shire cleaner than it arrived.	Deliver Partner Facilitate	Djaara Water Authorities Landcare groups Cleanup Australia	x	x	x	x		
	Develop and implement a climate resilience plan for greenspaces looking at ecosystem services nature provides in an urban setting to provide greater resilience to climate change impacts: - Raingardens - Shade trees, streetscapes etc - Implement greening main st plan - Restore wetlands	As we experience more drought and less rainfall our shire remains green and shaded through WSUD principles (green and blue infrastructure) designing our towns providing a haven for residents while extending nature	Deliver	Djaara Landcare groups Residents	x	x	x	x		
	Ensure we value all resources that enter our Shire – we no longer refer to anything as waste, instead it is a resource and reuse/recycle/upcycle etc keeping it in the Shire	Embraced and demonstrating leadership in adopting a 'Circular Economy' within the shire to reduce waste and value it as a resource and see new businesses emerging creating local employment	Deliver Partner	Sustainability Victoria DELWP	x	x	x	x		
	Integrate the UN Sustainable Development Goals (SDGs) into Council's Integrated Planning Framework	Council and community better understand intergenerational equity and can apply the SDGs to live in a way that doesn't compromise future generations from having the same ability to live a thriving life.	Progressing targets within the SDGs guide Council's future investments and guide the development of future Council Plans.	Regional partnerships Djaara		x	x	x		



Image: Brandon Morgan

APPENDIX 1

COMMUNITY ENGAGEMENT SO FAR ON SUSTAINABLE HEPBURN



Background summary

The *Sustainable Hepburn* project builds on community sentiments gathered during the Hepburn Together – Community Vision (2020-21) consultation process where the community identified environmental sustainability as their top priority closely followed by liveability. As a result, the new Council Plan 2021-25 includes the following Focus Area: “A resilient, sustainable and protected environment: A responsive, adaptive and resilient community that addresses changes to our climate and biodiversity”. The *Sustainable Hepburn* project strives to develop an integrated strategy linking key sustainability themes in the strategic narrative, highlighting the interconnection between climate change (emissions reduction, adaptation, and

resilience), managing waste, and biodiversity.

Broad engagement purpose

Online (via Participate Hepburn) and in-person community engagement activities were held between December 2021 and Feb 2022. The activities focused on engaging with the broad Hepburn community about the integrated sustainability narrative for *Sustainable Hepburn*, and to hear about community priorities, needs and the community’s level of ambition towards environmental sustainability. The engagement captured broad views and perspectives from the community about a vision for sustainability and actions across the four strategic themes:

> A beyond zero emissions Shire

Individual survey results

Demographics

Figure 2 and Figure 3 show the age and gender of the participants who undertook the survey compared to the 2016 census data for Hepburn Shire. They tell us we had a higher range of participants over 40 years in age and slightly higher percentage of females than males. Figure 4 indicates that Birch ward was the largest location

PARTICIPANT AGE RANGE

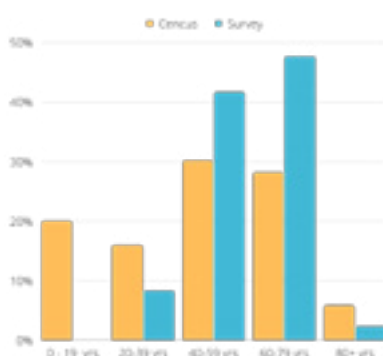


Figure 2: Age of survey participants

PARTICIPANT GENDER



Figure 3: Gender of survey participants

PARTICIPANT LOCATION

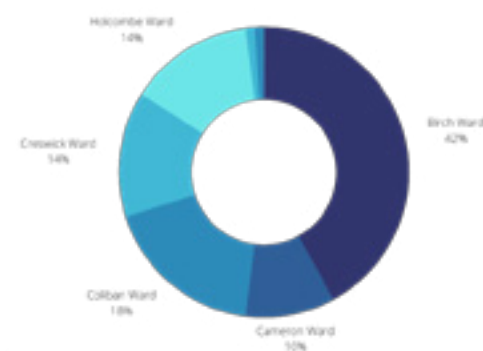


Figure 4: Location of participants

Agreement on overall statements

Individual survey respondents were asked 'To what extent do you agree with the following statements from what we heard during the Hepburn Together engagement project conducted throughout the Shire in 2020/21?' A

Hepburn Shire residents and ratepayers described the identity of the Shire as a beautiful natural environment that supports forests, bushlands, and rich agricultural land that is supported by a sustainable conscious committed community.

Hepburn Shire Council values an environment that is characterised by diverse landscapes, fresh air, forests, and lakes that support the community's connection to nature.

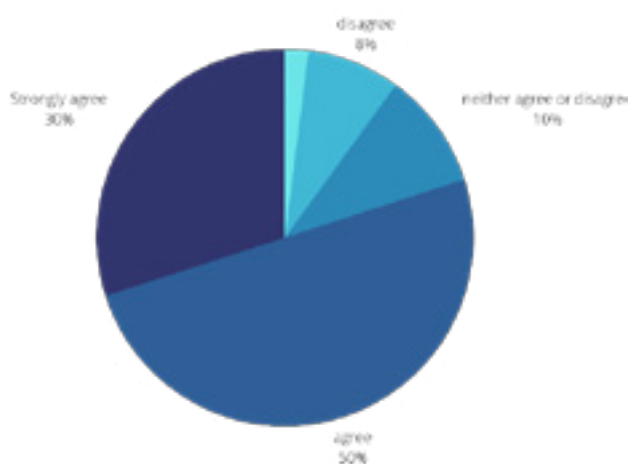


Figure 5: Individual survey results (n=84)

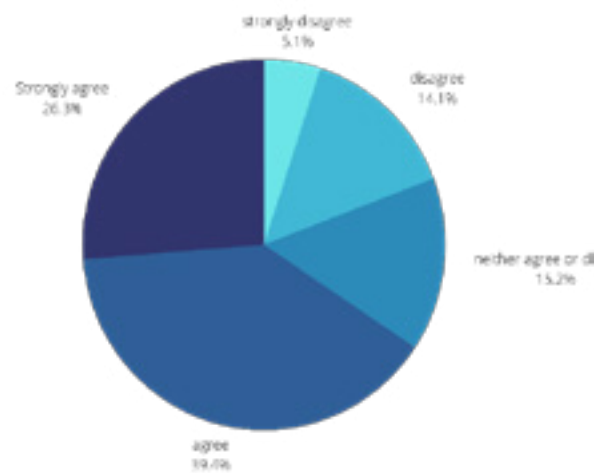


Figure 6: Individual survey results (n=84)

Hepburn Shire residents and ratepayers want to see a protected natural environment that is supported by strong climate action, effective emergency management and weed management and the protection of wildlife with a connected network of bike paths.

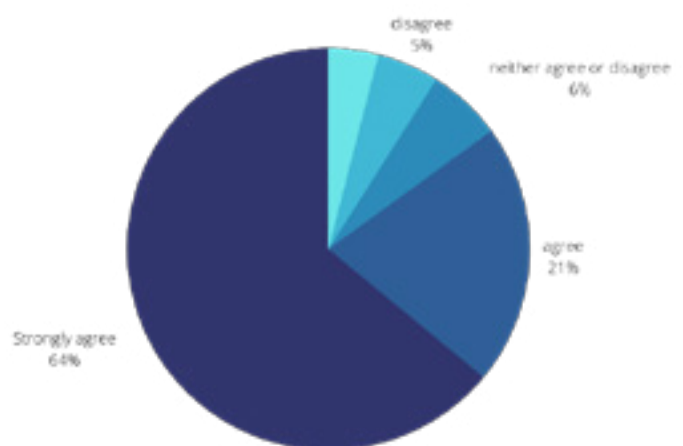


Figure 7: Individual survey results (n=84)

What's missing from the overall statements?

Below is a summary of individual survey responses indicating what's missing from the three statements displayed in Figures 5, 6 and 7.

- Address the environmental impacts from land subdivision, housing estates and building developments and reflect this in the planning scheme.
- Increase opportunities for recycling and circular waste management including separate collections for compostable waste, recyclables, soft plastics, and landfill. Reusing materials in well-organised transfer stations is a key aspect of sustainability and needs to be an integral component of our Hepburn sustainability plan.
- Provide clear facts and messaging to help local sustainable practices for businesses and residents.
- Increase First Nations' management and leadership whilst protecting culturally significant areas.
- Focus on weed management and eradication such as along roadsides which helps reduce fire risk.
- Build community connections and initiatives around food security using community gardens, school growing programs, and goat herds.
- Encourage sustainable transport by supporting electric vehicles, improved biking paths, walking paths and trails around towns and bushlands.

What would help you to take greater action on waste reduction, biodiversity, water, and climate protection?

Figure 8 provides an overview of the results from the individual survey question which asked participants to rank the actions that would help them take greater action on waste reduction, biodiversity, and climate change.



Figure 8: Individual survey results

What are the biggest sustainability opportunities available to Hepburn Shire?

Error! Reference source not found. indicates that the community identified "Council and the community to work collaboratively" as the biggest opportunity for sustainability.



Figure 9: Biggest sustainability opportunities for Hepburn Shire

What are the biggest sustainability challenges that face us as a community?

Highlights that individual online survey participants identified "the impacts of climate change events such as heatwaves" as the biggest challenge faced by community.

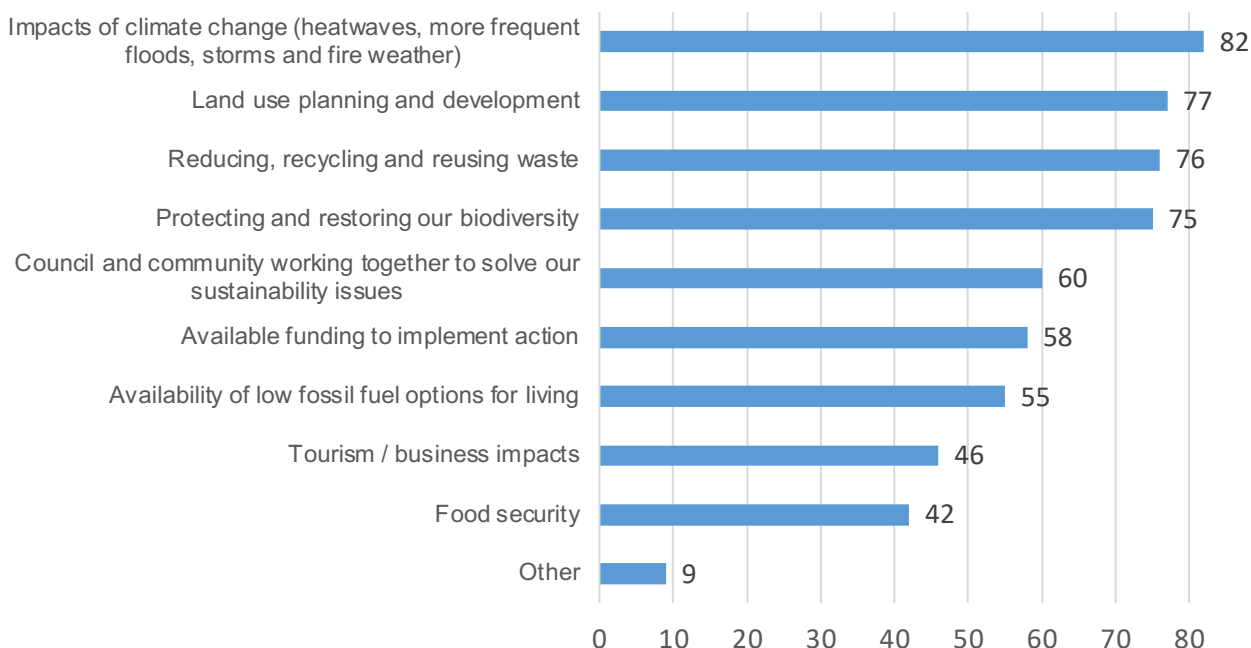


Figure 10: Sustainability challenges for Hepburn Shire

Hepburn locations participants enjoy

Participants who contributed to the *Sustainable Hepburn* map, pinpointed locations they enjoy throughout Hepburn Shire. In total there were 58 interactions from 38 people. The most popular towns included Creswick, Daylesford and Glenlyon.

Learning about Traditional Owner land management practices

Individual survey respondents were asked 'How could the community best learn about Traditional Owner land management practices.'

The participant's responses fitted within three main categories:

- Share knowledge
- Involve Traditional Owners
- Value and incorporate traditional practices.

Figure 13 provides a summary of responses.

<p>Council engaging, promoting, and listening to Traditional Owners when making council decisions on planning and land management.</p> <p>Council shares feedback with the community about how they are changing practices in line with local Aboriginal land management methods.</p>	<p>Create a booklet that shares knowledge of local plants which would detail what is useful to protect biodiversity and support local flora and fauna, where to buy them, how to care for them, the benefits of growing them, and which plants are edible.</p>
<p>Build awareness and connection to country by running community events lead by Traditional Owners and the Dja Dja Wurrung Council. This could include sharing land management and practices such as cultural burning practices, not using pesticides and protecting waterways. This could be done through interactive hands-on demonstrations and workshops, bush explorations/walk and talks, training sessions, café mornings, show and tell pub afternoons and events at the Hepburn Soundshell.</p> <p>Sessions could also be offered at schools.</p>	<p>Provide free signs to all landowners that acknowledges the Country they are on.</p> <p>More opportunities for Traditional Owners to play a role in community events like community markets around Hepburn Shire.</p>
<p>Dja Dja Wurrung Council and their land management team are the first option for any land management contracting services.</p>	<p>More opportunities to share Traditional Owner knowledge and Dja Dja Wurrung history of the area through newsletters, Council website, social media, publications, rate notices, community forums, noticeboards, letterbox leaflets and local historical societies.</p>
<p>Traditional Owners would be employed to work in the State Forests and reserves to help manage weeds and reduce fire risk.</p> <p>They would also work with landholders and farmers, and integrate their experience and knowledge into the Council Reconciliation Action Plan</p>	

Figure 13: How the community can best learn about Traditional Owner land management practices

A low waste Shire

Overview

A low waste shire was a theme which rated as a top priority for participants. This was clearly reflected in the level of engagement on the 'other' questions, visioner responses, pop-up engagement, and focus group discussions. Below is a summary of the responses to the survey questions and focus group discussions that related specifically to lowering waste.

Rank in order of importance how Council and community can work together to reduce contamination in recycling, so it doesn't end up in landfill?

Indicates that survey participants in the individual online survey want council to clearly communicate what can and can't be recycled by providing instructions on the bins.



Figure 14: How Council and community can work together to reduce contamination in recycling, so it doesn't end up in landfill

Rank in order of importance how Council should make decisions about future kerbside waste collection services?

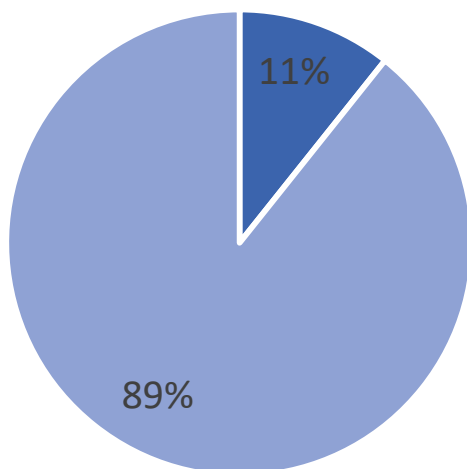
Figure 15 shows that survey participants in the individual online survey ranked "biggest sustainability benefit" as the number one key decision-making factor for future kerbside waste collection services.



Figure 15: how Council should make decisions about future kerbside waste collection services

Which statement do you agree with more?

Figure 16 below highlights participants in the individual online survey valued recycling and will go to greater effort to get it right.



- I want recycling instructions to be as simple as possible, even if that means more items go into my household rubbish bin
- I want to recycle as many items as possible, even if that means I need to carefully read recycling instructions and take greater effort getting it right

Figure 16: Statement responses

Opportunities identified

The opportunities and focus areas listed below are summarised from the focus groups and visioner question (12 responses) on the Participate Hepburn webpage.

Participants offered practical solutions to minimising waste in cafes, schools, hotels, and homes such as:

- offering small kitchen waste bins with bags
- compost using kitchen/green waste
- providing a magnet list to remind people what can be recycled
- an education campaign for the community to discourage landfill (see link for further reference).

Participants wanted to see recycling services improved and increased with more opportunities and access for reusing materials such as:

- continue creating and offering firewood from storm damage
- less focus on risk management at the tip and remove all impediments to the proper running of the tip shop and the tip in general
- free up regulatory constriction of existing willingness in community to creatively reuse materials at transfer stations
- having a recycling drop off point such as bins at transfer stations for recycle types - glass, electrics / batteries, cardboard etc.
- support a container deposit scheme <https://www.vic.gov.au/container-deposit-scheme> to reduce plastic bottle and drink can litter
- green waste bins throughout the shire and free green waste recycling which can be sold on for mulch etc.
- free weed disposal Sept-Dec at Transfer stations.

A beyond zero emissions Council

Overview

Below is a summary of responses from the survey questions and focus group discussions that relate specifically to zero emissions.

What criteria should Council use to prioritise actions and make decisions to reduce future greenhouse gas emissions?

Figure 17 below highlights that the individual online survey respondents highly rated wanting Council to prioritise actions and make decisions to reduce future greenhouse gas emissions based on the impact those decisions will

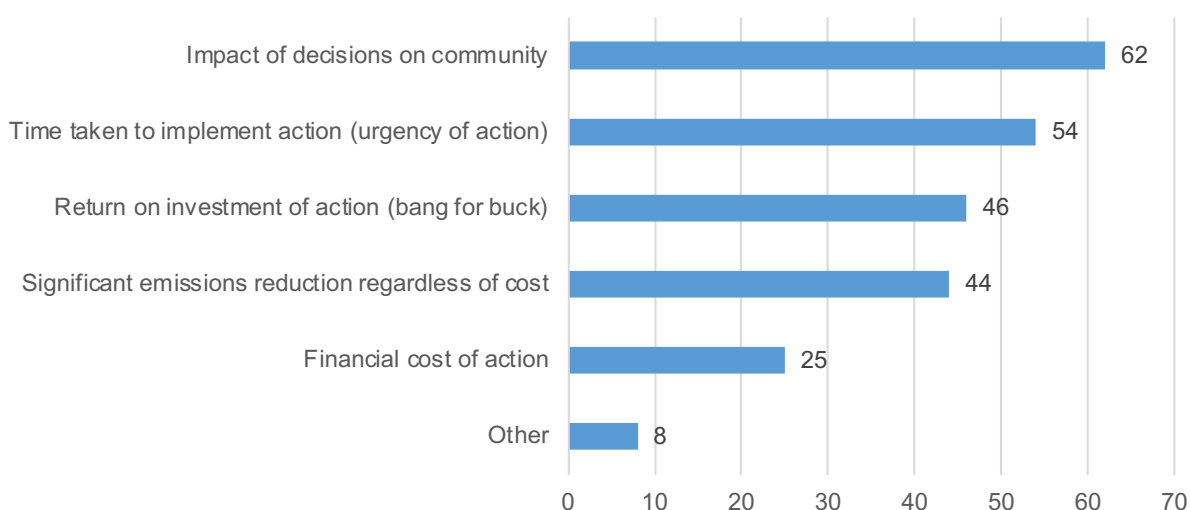


Figure 17: criteria Council should use to prioritise actions and make decisions to reduce future greenhouse gas emissions

Opportunities identified

The opportunities and focus areas listed below are summarised from focus groups discussions and visioner question (9 responses) on the Participate Hepburn webpage.

People provided suggestions for renewable energy which included:

- a community battery for feeding home rooftop solar excess into and a microgrid for residents; so renewable energy doesn't have to travel far
- renewable energy from solar for local use over transporting wind energy all the way from WestVic
- support wood as the most important renewable and dispatchable energy to complement wind and solar at domestic and commercial scales

- small towns with their own electricity hub; have been to meetings at Mollonghip where they have expertise to push the project; expertise is needed.

People suggested ways to increase energy efficient buildings and infrastructure including:

- landlords should support sustainability through rental properties
- solar, (small) wind turbines, R6 insulation and double glazing on all public buildings - halls, churches, sports, and park buildings etc.
- people want to see more promotion and support for building energy efficient homes reflected in planning schemes.

Natural environment and biodiversity

Overview

Biodiversity and natural environment appeared to be the second highest rated priority, next to waste, for participants. This was also demonstrated in the mapping exercise (Figure 12) which attracted 58 responses from 38 people.

What Biodiversity actions are most important for people?

Figure 18 highlights how participants in the individual online survey ranked actions in order of importance with "better management of roadsides and reserves to reduce threat posed by environmental

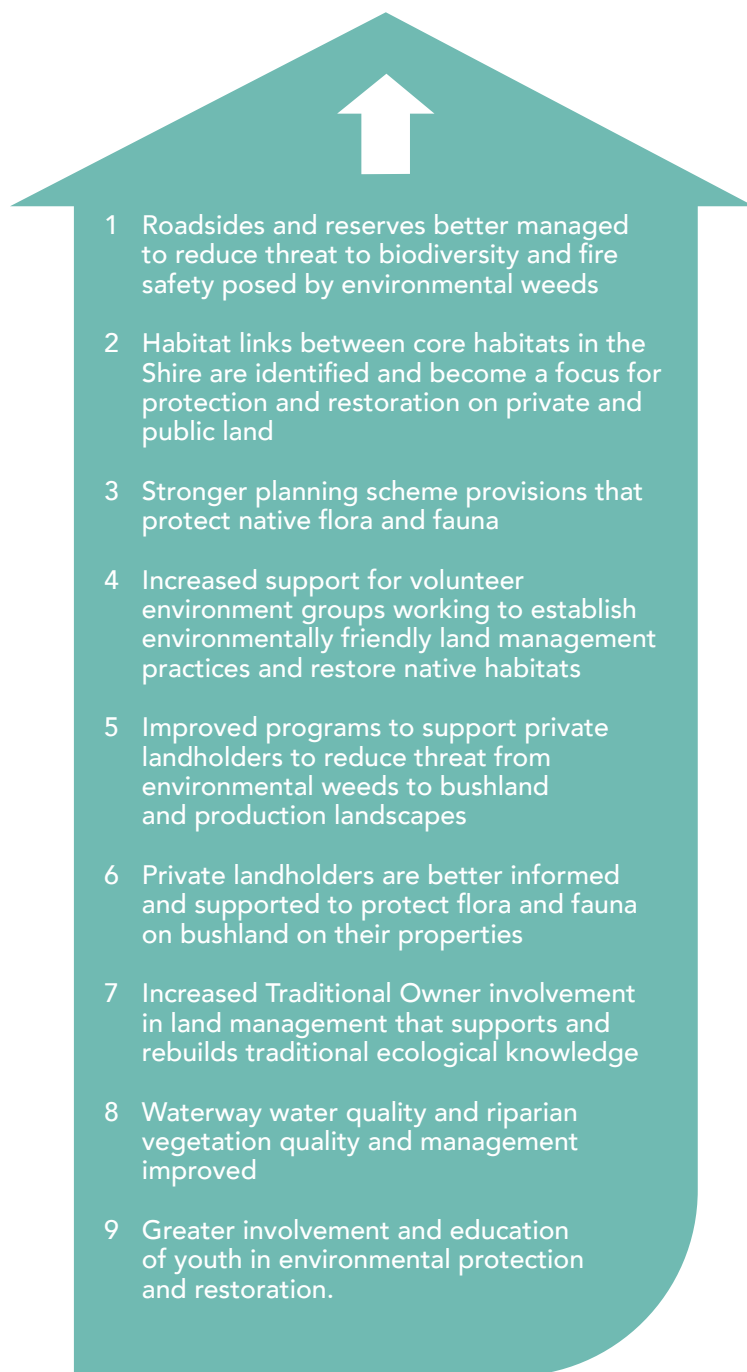


Figure 18: Biodiversity actions are most important for people

Opportunities identified

The opportunities and focus areas listed below are summarised from focus group discussions and visioner question (11 responses) on the Participate Hepburn webpage.

People agreed with actions to manage weeds and protect the natural environment including:

- Reduce land clearing and logging to support ecosystems. Create a tree management policy and program to prioritise protection instead of removal. This may include a significant tree register.
- Provide funding for long-term targeted roadside weed management, and management of council's many parks and reserves is essential.
- Control weeds (such as blackberries) by using interactive Weed mapping à Send, snap, solve.
- Recognise the value of naturalised (non-native) flora and fauna contributing ecological services and harvestable wild resources.
- Provide enhanced programs to support improved management by private landholders, to reduce threat from environmental weeds to existing vegetation.

Balancing future growth with the preservation of heritage and environment by:

- Copy Anglesea and halt development outside current town boundary.
- Council planning (housing and 'new' farming practices) that protects good long-term land use.
- Planning scheme amendment to further protect native vegetation and limit further threat to vegetation and biodiversity.
- Create biodiversity corridors.

Supporting community actions and awareness by:

- developing a Bush Playground at a suitable location in Trentham, multi-generational planning, and building, focus on children, education for all
- make Glenlyon Dam a demonstration site for Traditional Owner vegetation management strategies e.g., cool burn
- There should be Council incentives (i.e., resources/training) to landowners for the removal of blackberries along shared roadsides and tracks.

Improving the capacity of Council by:

- Landcare grants program
- Maintaining existing biodiversity team at Council

Protect animals

- save owls
- ban rat poison and promote humane traps.

A climate and water resilient Shire

Overview

Participants voiced concerns over recent natural disasters and wish to better prepare the community for future events.

Rank in order of importance the areas you think Council should focus on to ready our services and assets for the impacts of climate change?

Figure 19 highlights the that participants in the individual online survey ranked actions in order of importance with "Local renewable energy supply" as a top priority for Council to focus on to ready services and assets for the impacts of climate change.

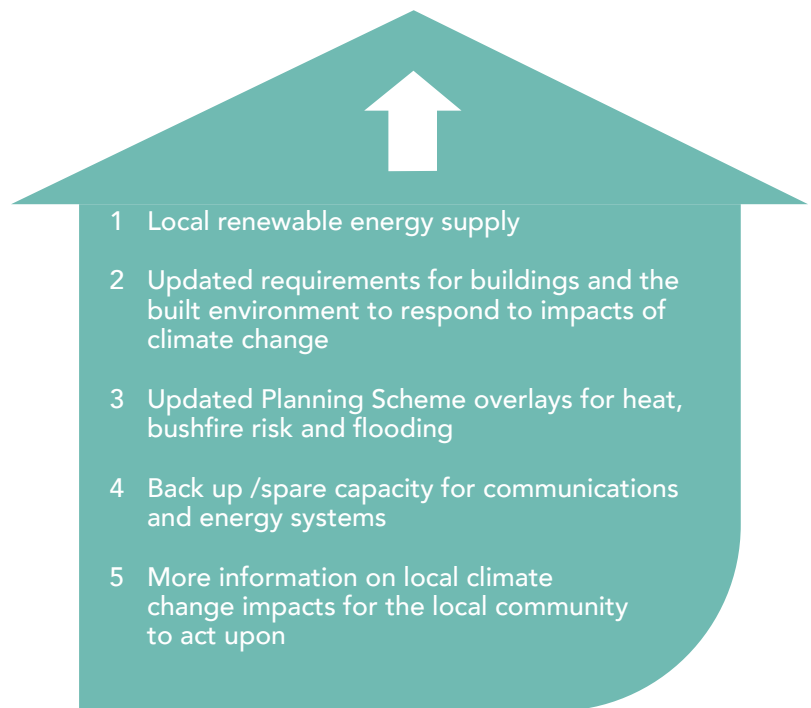


Figure 19: areas Council should focus on to ready services and assets for the impacts of climate change

Opportunities identified

The opportunities and focus areas listed below are summarised from focus group discussions and visioner question (7 responses) on the Participate Hepburn webpage. Opportunities included:

Communication:

- establishing better community communication in emergency events
- information sessions delivered to primary schools
- Council meets with residents in highly vulnerable locations near Wombat Forest to agree on fire safety resources and measures.

Climate proof future developments:

- updated planning scheme overlays for heat, bushfire and flooding
- storm and heat design planning for builders and developers and retrofitting the built, biological, and behavioural fields of existing households for greater resilience using the Retro Suburbia framework.

- support new build building innovations that value practical solutions over fashionable solutions such as that ban dark roofs which become heat banks similar to California
- thin forests appropriately to reduce fire risk
- roadside and reserves managed to prevent fire risks.

Water resilience and integrated water management including:

- water reform
- clear drainage ditches and waterways and open up waterways to reduce the risks of flooding
- strategic partnerships with Council / Coliban / NWCMA / Goulburn-Murray planning on water issues
- higher Step 2 and 3 water rates
- provide greater limits on bore use.

Place-based pop-up events summary

81 people participated in eight pop up events held in four locations across Hepburn Shire between 3rd and 12th February.

The purpose of the place-based pop ups was to ensure a range of users were engaged while also highlighting any geographic trends. Participants were asked to engage with a series of six posters (Figure 21) which replicated questions from the individual online survey. Each participant was given eight stickers that they could place on any of the items on each poster to signify its importance to them.

The engagement findings for each location has been summarised below including the number of participants and any trends or key discussions that were highlighted within those places.

Clunes

17 interactions took place by 11 females and six males across two pop up sessions.

Key highlights included:

- They valued decisions with the biggest sustainability benefits
- Suggested actions included updated requirements for building developments, hard rubbish collections and education.
- Participants were most interested in their natural environment and biodiversity, including roadside management, increased support for volunteer environment groups, habitat links, increased traditional owner involvement and greater education.
- Reducing waste was also noted.

Daylesford

31 interactions took place by 24 females and seven males across two pop up sessions.

Key highlights included:

- They valued decisions with the greatest sustainability benefit for the community.
- Noted biggest challenges were impacts of climate change, reducing waste and working together with council.
- They supported having local and renewable energy, as well as low fossil fuel options.

Trentham

19 interactions took place by eight females and 11 males across two pop up sessions.

Key highlights included:

- They valued decisions with the biggest sustainability benefits and supported emissions reduction regardless of cost.
- Trentham participants strongly supported creating a low waste shire by strengthening policy, Council leadership and developing clear instructions.
- Participants also praised local renewable energy and sourcing building materials for developments locally.
- Actions included greater education and involvement of young people.

Creswick

14 interactions took place by seven females and seven males across two pop up sessions.

Key highlights include:

- The main priority was emissions reduction, regardless of cost.
- Trentham participants recognised a low waste shire is a current challenge.
- Taking actions such as updated requirements for buildings to respond to climate change, experts sharing knowledge, Council and community working together, and users paying for waste removal.

Hepburn

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