

# **Bakery Hill/ Bridge Mall Urban Renewal Project:**

## **One Planet Sustainability Assessment**

## Prepared for

Ballarat City Council

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## Prepared by

Ironbark Sustainability

Suite 8, 70-80 Wellington St, Collingwood 3066

ABN: 51 127 566 090

Ph: 1300 288 262 | [info@realaction.com.au](mailto:info@realaction.com.au) | [www.realaction.com.au](http://www.realaction.com.au)

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## About Ironbark Sustainability

Ironbark Sustainability is a specialist consultancy that works with government and business around Australia by assisting them to reduce energy and water usage through sustainable asset and data management and on-the-ground implementation.

Ironbark has been operating since 2005 and brings together a wealth of technical and financial analysis, maintenance and implementation experience in the areas of building energy and water efficiency, public lighting and data management. We pride ourselves on supporting our clients to achieve real action regarding the sustainable management of their operations.

Certified



Corporation

Ironbark are a certified B Corporation. We have been independently assessed as meeting the highest standards of verified social and environmental performance, public transparency, and legal accountability to balance profit and purpose.

## Our Mission

The Ironbark mission is to achieve real action on sustainability for councils and their communities.

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## 1. Introduction

Bakery Hill and Bridge Mall precinct is the most significant entry point to the Ballarat CBD from the east and is a historic site of national significance as the location of the raising of the Eureka Flag.

The City of Ballarat is identifying how best to transform the Bakery Hill precinct into a thriving, inclusive and sustainable city gateway and urban heart for Ballarat.



In July 2019, Council engaged Ironbark Sustainability to provide assistance within the design process to integrate sustainability through the use of the One Planet principles.

## 2. One Planet Framework

The One Planet framework is the most versatile framework available for demonstrating a commitment to sustainability. It has been used by hundreds of local councils, governments and organisations around the world to address the sustainability of new developments, precincts, events, organisations and communities.

It provides a framework for assessing the sustainability of programs against a simple concept: *do we consume more or less than our share of one planet's worth of resources?*

The One Planet framework addresses all major aspects of environmental, social and economic sustainability in an understandable and pragmatic way. The framework is complementary to existing processes and is not designed to replace the current policies and practices in place.

### One Planet in Action



The One Planet framework has been used in over 50 countries, including to underpin the most sustainable Olympics ever (London 2012) and to inform the Rio+20 Earth Summit outcomes document.

Australian councils that have completed One Planet Council gap analyses at the City level include the Cities of Yarra, Moreland, Bayside, Surf Coast, Wodonga, Greater Geraldton (WA), Subiaco (WA), North Sydney (NSW), and Wollongong (NSW).

The framework has also been used to guide the development of Sydney's Barangaroo development and Melbourne's WestWyck EcoVillage and The Commons.

In this way, the framework enables council to assess, benchmark and monitor its sustainability performance and identify opportunities and set measurable targets that will be achieved by current, updated and new sustainability policies across councils.

## 2.1 The Ten One Planet Principles

Linked to key metrics and indicators such as ecological foot-printing and the social determinants of health, the ten principles used by One Planet Living address everything from zero carbon and zero waste, through to culture, health and happiness (Table 1).

Together, the principles provide a holistic framework to help councils and organisations examine the sustainability challenges faced, develop appropriate solutions and communicate the actions being taken to key stakeholders such as colleagues, the community, the supply chain, clients, customers and local and national government.

**Table 1: The 10 One Planet principles**

Principle	Description
<b>Zero Carbon</b>	Making the precinct energy efficient and supplying all energy with renewables
<b>Zero Waste</b>	Reducing consumption, re-using and recycling to achieve zero waste and zero pollution
<b>Sustainable Travel and Transport</b>	Reducing the need to travel and encouraging walking, cycling and low-carbon transport
<b>Sustainable Materials and Products</b>	Using materials from sustainable sources and promoting products which help people reduce consumption.
<b>Local and Sustainable Food</b>	Promoting sustainable humane farming and healthy diets high in local, seasonal organic food and vegetable protein.
<b>Sustainable Water</b>	Using water efficiently, protecting local water resources and reducing flooding and drought
<b>Land and Nature</b>	Protecting and restoring natural systems for the benefit of people and wildlife
<b>Culture and Community</b>	Nurturing local identity and heritage, empowering communities and promoting a culture of sustainable living.
<b>Equity and Local Economy</b>	Creating safe, equitable places to live and work which support local prosperity and international fair trade
<b>Health and Happiness</b>	Encouraging active, social, meaningful lives to promote good health and wellbeing

## 2.2 Approach to this Analysis

This gap analysis includes a review and assessment of Council's current and planned actions, policies and targets relating to the Bakery Hill Precinct against each of the ten One Planet principles, including the specific goals associated with each principle. Based on this information, current actions and policies related to the precinct and the principle are collated as well as gaps or opportunities for improvement.

Ultimately Council can choose to integrate all or some of the principles within the final design process, however, as an initial scan, assessment against all ten principles makes sense. As the

precinct design develops, the One Planet approach can also be used to provide a monitoring and evaluation framework to ensure that the desired outcomes are being achieved.

### 3. Opportunity Scan

The opportunities scan aims to collate Council's current and proposed targets and practices as they link to the One Planet goals and then to identify further key opportunities to explore.

Based on this analysis and the discussion during the Council workshop there are three high level opportunities that are worth highlighting here, before delving into the depth of each One Planet Goal in the following pages.

#### Key Opportunity 1: Yarrowee River

The biogeographic location of the precinct is dominated by the headwaters of the Yarrowee River. In Figure 1 the area within the green oval include the Yarrowee River and floodplains. The Yarrowee trail continues to the north-east of the precinct and there is an opportunity to physically connect the River through the precinct.

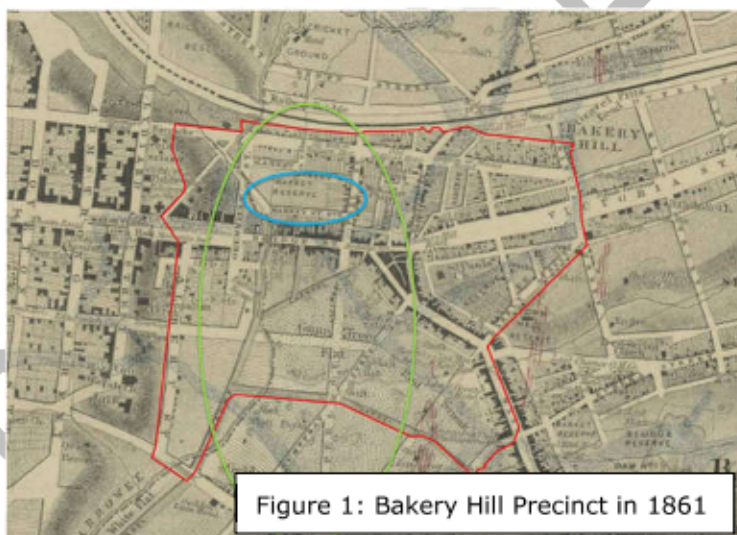


Figure 1: Bakery Hill Precinct in 1861

This connection can enable a physical connection to landscape and environment, provide key public space and storytelling about the region, its' history and natural heritage. The physical connection to indigenous culture and to the great dividing range provide ample opportunities to expand on this. A link to the Yarrowee trail and increased urban public space can enhance health and activity and lead to improved community connectedness within the precinct and the City generally.

#### Key Opportunity 2: Food culture and history

The precinct has a long history of food. The area circled in blue in Figure 1 from 1861 is the market area from 1861. For many years the area has also been home to the Bridge Mall Farmers Market and the Yarrowee River would have been a magnet for indigenous people to harvest food for millennia.

Council has clear strategies and ambitions to provide community leadership around promoting food that is local, sustainable and delivers that drives leading management for



Figure 2: Yards Park Market Precinct Washington DC



waste management. Importantly this focus can be a primary means of precinct activation drives improvement in community connectedness and improved health and happiness. The precinct as a community food hub for generations is a natural focus for these ambitions.

### **Key Opportunity 3: Leading Environmental Planning Standards**

The redevelopment of the precinct provides an opportunity for Council to establish leading standards around the construction and design practices for all developments. Opportunities 1.1 and 4.2 on the following pages are two key actions that will define the standards for new buildings (1.1) and infrastructure such as roads, footpaths and drains (4.2).

The defining of standards are only the start to this process, over the coming decade establish clear processes for evaluation of development applications and ensuring compliance will be required in order to bring these standards to life. However, the importance cannot be over-stated, for example in constructing a road the choice of different approved specifications can lead to a 60% reduction in greenhouse gas emissions from the construction phase.





### 3.1 Zero Carbon: making buildings energy efficient and supplying all energy with renewables

Council's current and proposed targets and practices link to the One Planet goals set out by Bioregional Australia (2017). Further examples for key opportunities are provided in the Best Practice section below.

One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
1. Buildings and processes are energy efficient compared to a stated local or national benchmark.	Design, construct and operate best practice green building standards (Targets for 2050, Response to Feedback – Bakery Hill & Bridge Mall Precinct)	<p><b>Opportunity 1.1: Environmentally Sustainable Design (ESD) requirements in planning policies</b></p> <p>The planning scheme provides a key lever through which to achieve a Zero Carbon precinct by ensuring that the energy usage of new buildings and extensions is minimised. 17 Victorian councils now include ESD policies in their planning scheme, including 4 with ESD requirements. These requirements are being linked to demonstrated, long-term outcomes. ESD requirements can be introduced at a precinct scale, as is being done at Fisherman's Bend in the City of Melbourne (see Best Practice section below).</p> <p><b>Opportunity 1.2: Climate-sensitive precinct design and landscaping</b></p> <p>Council can consider:</p> <ul style="list-style-type: none"> <li>• Landscaping that provides shading in appropriate locations</li> <li>• Passive solar design</li> <li>• Ensuring a diversity of dwelling sizes and types so that people are able to select the smallest dwelling size that meets their needs. Noting that in Docklands a key learning was to provide a variety of building sizes in order to reduce wind tunnels and increase sense of well-being of pedestrians in the precinct.</li> </ul>



One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
2. 100% of energy consumed is supplied by non-polluting renewable energy generated onsite or offsite.	A zero net emissions precinct, including 100% renewable energy generation, storage and distribution (Targets for 2050, Response to Feedback – Bakery Hill & Bridge Mall Precinct)	<p><b>Opportunity 1.3: Achieve renewable energy generation in the most cost-effective manner</b></p> <p>Renewable energy generation can be encouraged through a number of interventions, which may be of varying efficacy. Council should examine the scope for and cost for each intervention type, for example:</p> <ul style="list-style-type: none"> <li>• Power Purchase Agreements (PPAs) to support large-scale renewable energy projects off-site and deliver renewable energy at a cost effective price.</li> <li>• Incentivising the installation of solar/solar+storage onsite</li> <li>• Collaboration with industry stakeholders to deliver this outcome</li> <li>• Planning options to enforce this requirement</li> </ul>
3. Vulnerable people are able to reduce fuel costs and adverse impacts on health from poorly heated or ventilated buildings.	Not explicitly addressed, but the precinct aims to have a diversity of income levels, age, education levels and backgrounds with at least 5% of new dwellings being affordable, including both community and private housing (Targets for 2050, Response to Feedback – Bakery Hill & Bridge Mall Precinct).	<p><b>Opportunity 1.4: Energy saving programs</b></p> <p>Council can ensure that existing sustainability education programs (e.g. Smart Living Ballarat) showcase the precinct and engage with its businesses and residents. Suggested areas of focus include those in existing buildings (where audits and retrofits may achieve substantial energy savings) and vulnerable groups (e.g. those receiving affordable housing).</p> <p><i>Also see Opportunities 1.1, 1.2 and 1.3</i></p>

## Best Practice Example

### ESD at the Fisherman's Bend Precinct

- Target of net zero emissions by 2050
- New zoning introduced in October 2018
- Application requirements include a Sustainability Management Plan, addressing ESD, Waste and Water Management
- Green Star certification required for all new builds and extensions over 50m<sup>2</sup>
  - 1-9 dwellings or 50 – 4999m<sup>2</sup> = 4 Star
  - 10+ dwellings or 5000m<sup>2</sup>+ = 5 Star
- New developments must achieve a BESS score of at least 70% as well as at least 3 ESD innovations, selected from:
  - Gas-free dwellings (some gas fittings may be justified for non-residential uses)
  - Substantially exceed Indoor Environmental Quality guidelines
  - 7 star NatHERS\* average for medium-density dwellings and 7.5 star NatHERS average for high-density dwellings
  - A rooftop with a mix of communal open space, landscaping and solar PV; or a rooftop with maximised solar PV
  - Other significant innovations, as approved by Council



## 3.2 Zero Waste: reducing consumption, re-using and recycling to achieve zero waste and zero pollution



The below table shows how Council's current and proposed targets and practices link to the One Planet goals set out by Bioregional Australia (2017).

One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
1. Reduce wasteful consumption	<ul style="list-style-type: none"> <li>Council vision to achieve zero recoverable waste to landfill by 2040 (The City of Ballarat Resource Recovery and Waste Management Strategy 2018-22 RRWM Strategy))</li> </ul>	<p><b>Opportunity 2.1 – Connect the community waste education role into the precinct planning, development and management</b></p> <p><i>See also: Opportunity 2.4 – Include waste targets in precinct planning</i></p> <p><b>Opportunity 2.2: Plastic free program within the precinct</b></p> <p>Include requirements for eliminating single use plastics in all relevant businesses in the precinct. Aim to have a plastic waste free precinct by 2040.</p>
2. Maximise upcycling, reuse and recycling	<ul style="list-style-type: none"> <li>Implement actions under the Viable Resource Recovery Markets areas of the RRWM Strategy with a particular focus on construction waste</li> </ul>	<p><b>Opportunity 2.3 – Include recycled materials and low greenhouse emission construction practices within infrastructure works</b></p> <p>Significant opportunities to improve the sustainability of infrastructure projects including drainage, road and path construction can be made. This can be implemented through improved specifications and ongoing measurement of impact, evaluation, reporting and improvements.</p> <p><i>See also: Opportunities 1.1, 2.5 and 4.2</i></p>



One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
3. Zero waste to landfill	<ul style="list-style-type: none"> <li>Council vision to achieve zero recoverable waste to landfill by 2040 (The City of Ballarat Resource Recovery and Waste Management Strategy 2018-22)</li> <li>Support Waste to Energy Plant (Carbon Neutral Action Plan, 2019).</li> </ul>	<p><b>Opportunity 2.4: Include waste targets in precinct planning</b></p> <p>Setting and communicating a waste target is an important way to achieve momentum towards reducing waste. For example:</p> <ul style="list-style-type: none"> <li>Zero waste precinct by 2040 (connecting to Council vision in the RRWM Strategy)</li> <li>Best practice infrastructure development</li> </ul> <p><b>Opportunity 2.5: Establish best practice waste management within new commercial and residential developments</b></p> <p>By establishing leading practice for waste management, number and types of bins and waste collection processes within new developments the practice is established when new owners take residency minimising the need for future change management activities.</p> <p><i>See also: Local and Sustainable Food section.</i></p>
4. Zero pollutants to enter air, water and soil		<p><b>Opportunity 2.5: Ensure stringent management plans in place for all development.</b></p> <p><i>See also: Sustainable water and air quality requirements embedded within Opportunity 1.1</i></p>

## Best Practice Example

### City of Yarra Proudly Plastic Free Program

Proudly Plastic Free is a whole of community plan to reduce the use of single use plastic packaging. Starting with businesses in North Fitzroy Village and aims to reduce their plastic use by 50%.

It aims to eliminate takeaway containers, straws, bags, cutlery, plates, cups, coffee cups and water bottles.

The targeted business can pledge to go Proudly Plastic Free and Council will help them switch packaging away from single use to reusable products by encouraging customers to bring their own takeaway containers and coffee cups. There is a defined process and specific benefits to the businesses involved.



### 3.3 Sustainable Travel and Transport: reducing the need to travel and encouraging walking, cycling and low-carbon transport

The below table shows how Council's current and proposed targets and practices link to the One Planet goals set out by Bioregional Australia (2017). Further examples for key opportunities are provided in the Best Practice section below.

One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
1. It is easy and attractive for people to walk and cycle for the majority of journeys	<p>Prioritise public and active transport (Targets for 2050, Response to Feedback – Bakery Hill &amp; Bridge Mall Precinct).</p> <p>Walkability score of 80% is achieved from homes and workplaces (Targets for 2050, Response to Feedback – Bakery Hill &amp; Bridge Mall Precinct).</p> <p>Partner with the community to develop a user focussed cycling network (Ballarat Strategy, 2015)</p> <p>Utilise the concept of the '10 Minute City' to support walking and cycling to key destinations and local neighbourhoods, including through community driven 'Neighbourhood Links' (Ballarat Strategy, 2015)</p> <p>Improve CBD connections, including provide multiple connections between key locations such as the Ballarat Railway Station, Bridge Mall, and Sturt Street</p>	<p><b>Opportunity 3.1: Connect the precinct to other parts of the City using dedicated bike paths</b></p> <p>Key links include along Grenville and Sturt Streets and connection through to the Yarrowee trail provides additional benefits for activity and health.</p> <p><b>Opportunity 3.2: Leverage the Neighbourhood Links Program to ensure the precinct includes safe, convenient and logical connections between key local places that prioritise pedestrians and cyclists rather than cars.</b></p> <p>Design options flagged in the Ballarat Cycling Action Plan (2017) include: slower vehicle speeds, minimising crossing points and conflict areas with turning vehicles, pedestrian crossing improvements, which also benefit cyclists, avoiding new roundabouts, clear and legible wayfinding and road markings, exploring opportunities for separation, where possible.</p> <p><b>Opportunity 3.3: Activate the locations by encouraging walking and cycling</b></p>

One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
	<p>shopping precincts (Ballarat Cycling Action Plan, 2017).</p> <p>Council will aim to provide bike parking throughout Ballarat in all public locations where the need is identified (Ballarat Cycling Action Plan, 2017).</p> <p>Developments will continue to be encouraged to include end-of-trip facilities and bicycle parking as part of their project plans (Ballarat Cycling Action Plan, 2017).</p>	
<p>2. Citizens are less dependent on cars</p>	<p>Build a less car-dependent community with a more sustainable transport system (Ballarat Strategy, 2015).</p> <p>Focus on people rather than cars in managing supply and demand of car-parking (Ballarat Strategy, 2015).</p>	<p><b>Opportunity 3.4: Require new developments to provide for active and low-carbon transport and provide a Green Travel Plan</b></p> <p>Examples include: EV parking, bike spaces (including weather-proof bike storage for residents), foot paths, car share spaces.</p> <p><b>Opportunity 3.5: Incentivise developments that reduce the reliance on cars</b></p> <p><b>Opportunity 3.6: Reduce the precinct footprint design to service cars</b></p> <p>Currently the precinct has around 30-40% of all land area dedicated to cars (either car parks or roads. Council can introduce targets to reduce this footprint down to 10 or 20% through repurposing land for public space or other uses and undergrounding car parks. Consideration of future use for car parks when vehicle automation and the wide spread use of EVs occurs.</p>



One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
3. Public transit, car-sharing and car clubs are widely available	<p>Work with the state government to improve public transport services and mode share in Ballarat, including transitioning to low emission buses and public transport (Carbon Neutral Action Plan, 2019).</p> <p>Ensure land use supports the viability of frequent public transport, in partnership with Public Transport Victoria (Ballarat Strategy, 2015)</p>	<p><b>Opportunity 3.5: Continue to review opportunities to better connect the Bakery Hill Precinct to the existing public transport network (both intra- and inter-city), particularly as the Ballarat Integrated Transport Plan is developed.</b></p>
4. Low and zero-carbon vehicles including electric cars are the norm	<p>Become Electric Vehicle and eBike ready in large public carparks, further considering possibility for solar panels shading and incentive mechanisms to support delivery of the CBD Smarter Parking Plan (Carbon Neutral Action Plan, 2019).</p>	<p><b>Opportunity 3.5: Work with the Central Victorian Greenhouse Alliances and other regions to plan for EV destination charging infrastructure</b></p> <p>The CVGA and other regions are in the process of commissioning advice on local government's role in EV infrastructure. Consider and where, relevant commit to the recommendations from this process.</p> <p><b>Opportunity 3.6: Encourage EV charging facilities within new developments</b></p>
5. Citizens understand the impact of air travel and alternatives are easily available	None found.	



### 3.4 Sustainable Materials and Products: Using materials from sustainable sources and promoting products which help people reduce consumption.

The below table shows how Council's current and proposed targets and practices link to the One Planet goals set out by Bioregional (2017). Further examples for key opportunities are provided in Best Practice section below.

One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
1. Sharing resources is easy and accessible in order to reduce consumption of natural materials.		<b>Opportunity 4.1: Promote and connect the precinct to the repair café</b>  The Repair Cafe Ballarat is currently based just outside the precinct at the Ballarat Tech School and can be easily connected into new residents to build community connectedness and reduce waste. The Café has expert volunteers with repair skills in all types of fields. Community members can bring in clothes, electrical appliances, bicycles, crockery, toys or anything that can be carried into the venue to be repaired.
2. Every material and product is selected for positive social and environmental benefit or for reducing negative impact.		
3. Materials and products are not toxic to humans or wildlife at any stage in their lifecycle.		See Opportunity 1.1

One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
4. A circular economy is supported with upcycling, reuse and recycling prioritized.	Implement actions under the Viable Resource Recovery Markets areas of the RRWM Strategy with a particular focus on construction waste	<p><b>Opportunity 4.2: Improve Infrastructure requirements in planning policies</b></p> <p>The planning scheme provides a key lever through which to achieve a Sustainable Materials and Products for infrastructure elements. The IS Rating Scheme (IS) provides a comprehensive rating system for evaluating sustainability across the planning, design, construction and operational phases of infrastructure programs, projects, networks and assets.</p> <p><i>See Opportunity 2.3</i></p>





### 3.5 Local and Sustainable Food: Promoting sustainable humane farming and healthy diets high in local, seasonal organic food and vegetable protein.

The below table shows how Council's current and proposed targets and practices link to the One Planet goals set out by Bioregional Australia (2017). Further examples for key opportunities are provided in the Zero Waste Best Practice section below.

One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
1. It is easy and attractive for people to enjoy fresh, local, seasonal, healthy produce	<p>Improve community knowledge and skills to grow and prepare healthy meals (Food Strategy, 2019; Health and Well-being Plan, 2017)</p> <p>Support community food system programs (Food Strategy, 2019)</p> <p>Support planting of edible gardens in public areas through the Nature Strip Policy and Guidelines (Food Strategy, 2019)</p> <p>Trial planting of food trees in public reserves (Urban Forest Action Plan)</p> <p>Collaborate with surrounding local government authorities to support industry development of a coordinated local food supply chain (Food Strategy, 2019)</p> <p>Support inclusive community events which focus on celebrating nutritious and local foods (Food Strategy, 2019)</p> <p>Increase, access to, availability and affordability of healthy foods (Health and Well-being Plan, 2017)</p> <p>Support food outlets and key settings including early childhood services, schools, community groups and sports clubs to provide and promote healthy food and drink choices (Health and Well-being Plan, 2017)</p>	<p><b>Opportunity 5.1: Support food growing within the precinct</b></p> <p>There are many ways to achieve this include:</p> <ul style="list-style-type: none"> <li>• Within the planning process encourage new buildings to include sunny garden spaces; explore use of rooftops for communal gardens</li> <li>• Plant fruit producing street trees and edible public vegetation</li> </ul> <p><i>See Key Opportunity 2</i></p>
2. Diets are high in vegetable protein	Not currently addressed	

One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
3. Sustainable farming is commonplace, supports biodiversity and builds soil	<p>Farming does not occur within the precinct. However, the Food Strategy, 2019, includes relevant actions such as:</p> <ul style="list-style-type: none"> <li>• Encourage use of current promotional platforms to raise the profile of local producers</li> <li>• Support alternative retail opportunities for local producers including farmers markets and farm gate sales</li> </ul>	<p><b>Opportunity 5.2: Facilitate opportunities for supporting sustainable farming</b></p> <p>Support the Bridge Mall Farmers Market and celebrate stall holders who drive sustainable farming practices within their businesses and the region.</p> <p>Support local business to source food locally</p>
4. Farming of livestock is humane	Farming does not occur within the precinct.	<i>See Opportunity 5.2</i>
5. Food waste is minimised	<p>Consider introducing Food Organics, Green Organics (FOGO) collection (Carbon Neutral Action Plan, 2019)</p> <p>Reduce food and packaging waste (Food Strategy, 2019), including by registering for Compost Revolution and promoting shared composting sites</p>	<i>See Opportunity 2.4</i>

### 3.6 Sustainable Water: Using water efficiently, protecting local water resources and reducing flooding and drought

The below table shows how Council's current and proposed targets and practices link to the One Planet goals set out by Bioregional Australia (2017). Further examples for key opportunities are provided in the Best Practice section below.

One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
1. For everyone to have access to clean drinking water	Increase the number of water drinking taps in public spaces (Food Strategy, 2019)	<p><b>Opportunity 6.1 Expand this definition to include and act to improve water quality outcomes</b></p> <p>Consider a wide range of measures to deliver reduce flooding and water quality issues downstream including a wide range of water sensitive urban design practices, for example:</p> <ul style="list-style-type: none"> <li>the use of permeable surfaces,</li> <li>'rain gardens' and other design options as part of infrastructure improvements to public spaces</li> <li>the use of trees as "water pumps" to remove stormwater from the sites and reduce downstream water quality problems</li> </ul> <p><i>See Opportunity 2.2</i></p>
2. Water is used efficiently and returned to the environment clean	Seek to encourage the innovative use of stormwater for tree planting, particularly in highly urbanised locations (Urban Forest Action Plan, 2019)	<p><b>Opportunity 6.2 Zero water use for Precinct infrastructure</b></p> <p>Require all Council infrastructure and facilities have either no or low water requirements, and where it is required that water is collected onsite.</p> <p><i>See Opportunity 1.1 and 4.2</i></p>
3. Water is managed sustainably and risk of flooding and drought is reduced	Planning Scheme Amendment in design currently (ensure flood prone areas in precinct are addressed appropriately within this amendment) (Better Flood Planning process 2019)	



### 3.7 Land and Nature: Protecting and restoring natural systems for the benefit of people and wildlife

The below table shows how Council's current and proposed targets and practices link to the One Planet goals set out by Bioregional Australia (2017). Further examples for key opportunities are provided in the Best Practice section below.

One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
1. A positive contribution to local biodiversity and wildlife corridors	<p>Provide 1 hectare of green space across the precinct (Targets for 2050, Response to Feedback – Bakery Hill &amp; Bridge Mall Precinct)</p> <p>Tree planting to deliver 40% urban forest canopy coverage (Targets for 2050, Response to Feedback – Bakery Hill &amp; Bridge Mall Precinct)</p> <p>Develop a CBD urban greening plan to inform regeneration plan: street and park trees, green walls, green roofs, pocket parks, increased permeability. Integrate into asset renewal and capital works projects and 10-year planting program (Urban Forest Action Plan, 2019)</p>	<p><b>Opportunity 7.1: Strategic Planning and Design to include requirements for green infrastructure and spaces</b></p> <p>Including for Council urban renewal and streetscape designs as well as requirements for private development within the precinct</p> <p><i>Also see Opportunities 1.1 and 5.1</i></p>
2. Maximise carbon sequestration in the soil and biomass		<p><b>Opportunity 7.2: Selection of natural construction and landscaping materials</b></p> <p>Include natural materials in landscaping and construction projects that can break down and add to soil biomass.</p>



One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
3. Maximise the synergies between agriculture, forestry, biodiversity and carbon storage		<i>See Opportunity 5.2 and 7.4</i>
4. Enhance 'ecosystem services' such as providing clean water and clean air	A climate resilient community where the urban heat island effect is reduced, and green infrastructure is embedded into the design of public spaces and buildings (Targets for 2050, Response to Feedback – Bakery Hill & Bridge Mall Precinct).	<b>7.3 Implement smart city environmental data system</b> <ul style="list-style-type: none"> <li>Collect, assess and act upon data for health of waterways, air and land within the precinct.</li> </ul>
5. Citizens recognise the value of nature including its value to human health	Green or open space within 100 metres of dwellings (Targets for 2050, Response to Feedback – Bakery Hill & Bridge Mall Precinct).	<b>7.4 Connect the Precinct to the biogeographic story of the region through:</b> <ul style="list-style-type: none"> <li>Developing natural habitats that connect to the story of the Yarrowee River and as the starting point/foothills of the Great Dividing Range and its' incredible current and past natural history.</li> <li>Injecting interpretive information physically on site as well as digitally on the web</li> <li>Encourage local businesses to consider the story of how they present (e.g. local park is named after natural features etc.)</li> </ul> <i>See also: Opportunity 8.3</i>



### 3.8 Culture and Community: Nurturing local identity and heritage, empowering communities and promoting a culture of sustainable living.

The below table shows how Council's current and proposed targets and practices link to the One Planet goals set out by Bioregional Australia (2017). Further examples for key opportunities are provided in the Best Practice section below.

One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
1. Creating a sense of place and belonging	New buildings to achieve architectural excellence (Targets for 2050, Response to Feedback – Bakery Hill & Bridge Mall Precinct).	<p><b>Opportunity 8.1 Development of parks and community open spaces within the precinct</b></p> <p>Through design, aim to influence new and existing neighbourhoods so that the public space encourages a range of opportunities for social interaction.</p> <p><b>Opportunity 8.2 Community events related to the local heritage and environment</b></p> <p>Complement the community spaces through targeted events that celebrate and create a sense of space and connection.</p> <p><i>See also: Opportunity 7.4</i></p>
2. A high proportion of people active in the community life		
3. A strong local culture and celebration of heritage		<p><b>Opportunity 8.3 Connect precinct to story of the local history and biogeographic region</b></p> <p>Including the connection to the Burrumbeet balug clan of the Wathaurung people (affiliated with Bunjil, the eagle) and recent history since European settlement.</p> <p><i>See also: Opportunity 7.1</i></p>
4. A new culture of sustainability		<i>See also: Opportunity 7.4</i>



### 3.9 Equity and Local Economy: Creating safe, equitable places to live and work which support local prosperity and international fair trade

The below table shows how Council's current and proposed targets and practices link to the One Planet goals set out by Bioregional Australia (2017). Further examples for key opportunities are provided in the Best Practice section below.

One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
A diverse community where there is opportunity for all, across abilities, gender, race, age and sexual orientation	A diverse community, including a mix of income, age, education levels and backgrounds (Targets for 2050, Response to Feedback – Bakery Hill & Bridge Mall Precinct).	<b>Opportunity 9.1: Consider other aspects of diversity, such as gender and sexual orientation</b>
A vibrant and resilient economy where a significant proportion of money is spent locally	Increase the diversity of commercial tenancy mix (Targets for 2050, Response to Feedback – Bakery Hill & Bridge Mall Precinct).  Host an additional 600 new jobs (Targets for 2050, Response to Feedback – Bakery Hill & Bridge Mall Precinct).	<b>Opportunity 9.2 Promote night-time economy to improve community connectedness</b>  There are many benefits in activating the night-time spaces and economy including improved employment local opportunities, community connectedness and health and happiness. This activation can be done in many ways, however, by linking this to the key opportunities around the Yarrowee River and the food culture this will enhance and build upon many of the other elements identified within this Analysis.  <i>See Opportunity 5.2 and 7.4</i>
International trade that is conducted fairly and without exploitation		<b>Opportunity 9.3: Encourage companies within the precinct and their suppliers to adopt the fair-trade supply chains</b>



### 3.10 Health and Happiness: Encouraging active, social, meaningful lives to promote good health and wellbeing

The below table shows how Council's current and proposed targets and practices link to the One Planet goals set out by Bioregional Australia (2017). Further examples for key opportunities are provided in the Best Practice section below.

One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
1. Increase, or maintain high levels of physical, social, mental and emotional health.	<p>The Health and Wellbeing Plan (2017) identifies three key priorities: healthy eating and active living; improving mental health, and preventing violence and injury. The following strategies identified are particularly relevant to the Bakery Hill precinct:</p> <ul style="list-style-type: none"> <li>Design of public spaces: <ul style="list-style-type: none"> <li>Provide access to water in public spaces.</li> <li>Encourage cycling and walking by improving connectivity of paths, improved safety and amenity</li> <li>Use design principles which enhance safety and wellbeing for development and upgrades of community spaces and facilities</li> <li>Ensure new facilities are planned following Universal Design guidelines to encourage access for all ages and abilities.</li> </ul> </li> <li>Capacity building:</li> </ul>	<p><b>Opportunity 10.1 Follow the design principles and strategies outlined in the Health and Well-being Plan (2017) when designing public places within the precinct.</b></p> <p>Including:</p> <ul style="list-style-type: none"> <li>providing spaces for active recreation and linkages to other recreation opportunities outside of the precinct (e.g. to the Yarrowee trail)</li> <li>providing spaces for sitting and chatting, shade and play that interweave but provide different spaces for different people and needs (e.g. childrens garden as per the Melbourne Botanic Gardens vs quiet sitting and relaxing under a tree!)</li> </ul> <p><b>Opportunity 10.2 Leverage opportunities for capacity building around the health and wellbeing priorities as part of the Bakery Hill Precinct project</b></p> <p>Including:</p> <ul style="list-style-type: none"> <li>Providing organised events and activities for different ages and groups</li> </ul>



One Planet goals	Current targets/practices (to be embedded into precinct design)	Opportunities
	<ul style="list-style-type: none"> <li>Support food outlets and other key settings to provide and promote healthy food and drink choices.</li> <li>Build capacity and skills to allow residents to make healthy food and drink choices, including growing and preparing healthy foods</li> <li>Support community members to develop skills which encourage a return to an active lifestyle, participation in diverse sports or increased levels of physical activity.</li> <li>Support key settings including schools and workplaces to promote mental health, wellbeing and resilience</li> </ul>	<p><i>See also, opportunity 3.1 and 9.2</i></p>
<p>2. Increase, or maintain high levels of life satisfaction by fostering good social and environmental conditions and a positive attitude among citizens.</p>	<p>Provide opportunities for activities that develop a sense of belonging; and provide/promote access to facilities where local community members can meet (Health and Wellbeing Plan, 2017).</p> <p>Encourage and promote alcohol and drug free community events (Health and Wellbeing Plan, 2017).</p> <p>Celebrate the 'diversity advantage' of the Ballarat as an Intercultural City, including enhancing culturally and linguistically diverse communities' participation in various opportunities and providing opportunities for all residents to enjoy an intercultural, cosmopolitan Ballarat (Intercultural City Strategic Plan, 2018)</p>	<p><b>Opportunity 10.3 Consider expanding precinct-level community engagement program, for example through the Engaging Communities Program</b></p> <p>Previous examples are provided at <a href="https://mysay.ballarat.vic.gov.au/engaging-communities">https://mysay.ballarat.vic.gov.au/engaging-communities</a></p> <p><i>See also Opportunity 8.1 and 8.2</i></p>

## 4. References

- Bioregional, 2017, One Planet Goals and Guidance for Cities and Regions. Available at: <https://www.bioregional.com/resources/one-planet-living-goals-and-guidance-for-cities-and-regions>.
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