BENALLA
RURAL CITY COUNCIL

BENALLA RURAL CITY

ENVIRONMENT STRATEGY 2016 – 2020



BENALLA
RURAL CITY

Environment and Sustainability Policy

Purpose

The Environment and Sustainability policy together with the Environment Strategy have been developed to help us to protect our environment and safeguard its ability to support our community into the future. To achieve this, the Environment Strategy outlines a proactive and strategic approach to environment and sustainability matters and identifies priorities for management.

The purpose of the Environment and Sustainability Policy is to:

- Provide guidance, consistency, direction and with environmentally ethical consideration to Council activities including; and
- Demonstrate accountability to rate payers;
- Demonstrate the application of elements of best practice environmental management including consideration of the quadruple bottom line (refer Figure 1).

Figure 1: The quadruple bottom line in sustainable development
This takes into consideration four factors; environmental, social, cultural and economic impacts. The relationship between these four factors work together to meet environmental, financial, cultural and social responsibilities to ensure the quality of life for residents now and for generations to come.

Environment Strategy

Scope

The 2010-2015 Environment Strategy aimed at improving the environmental performance of the Benalla Rural City Council in the delivery of its services, infrastructure and other operations. Themes addressed in the Environment Strategy included:

- water conservation and reuse
- energy production/conservation
- greenhouse gas emission reduction and offset
- waste generation and recycling
- native vegetation conservation & management

This updated Environment Strategy retains the scope of the original and applies to all Council activities and is binding upon Councillors, Council Staff, as well as contractors and consultants while engaged by Council.

Principles

Council recognises that developing an Environment and Sustainability Principles to accompany the Environment Strategy will enhance the ability of Council to achieve a number of environmental sustainability objectives relating to Council operations and the community.

Council (as an organisation) will facilitate:

- **Participation:** Early and honest engagement with the community around significant actions and will participate in environmentally sustainable activities where appropriate.
- **Working together**: Development and maintenance of relationships to achieve our goals – includes using local service providers where possible.
- **Justifiable:** All works will consider the environmental impact and will be subject to Council risk assessment mechanisms and legislative requirements. This includes an environmental, social, cultural and economic analysis where appropriate (i.e. for projects likely to have significant impacts or costs).
- **Empowerment:** Education and information will be designed to support individuals to take action in their own way.
- **Respect**: Council will respect different views and ideas, try to accommodate them where possible, and provide a reasonable explanation where it's not possible.
- **Accountability**: Council will be accountable for the actions it delivers and the immediate outcomes that are expected to be attained.
- **Continuous improvement**: Council will show leadership in environmental sustainability, monitor its progress, report to the community, and involve the community in planning for improvement.

Councillors, Staff, contractors and consultants will:

- Ensure that activities are conducted in accordance with this policy;
- Follow all departmental environmental procedures, signage and guidance;
- Foster a culture of environmental responsibility at work by reducing consumption of resources and complying with environmental regulations;
- Reuse and recycle resources, where possible, to minimise waste-to-landfill and further reduce our impact on the environment; and
- Limit our greenhouse gas emissions by minimising energy use in our offices and making environmentally responsible travel decisions; and
- Respect all natural and cultural heritage areas - threatened species and communities, historical, cultural and Indigenous heritage and areas of high conservation value.

Foreword

On behalf of Benalla Rural City Council I would first like to begin with acknowledging the Traditional Owners and Custodians of the land in which we live and we pay our respects to their elders, both past and present.

Following on from commitments made in the 2010-2015 Environment Strategy, and after twelve months of development, Benalla Rural City Council is pleased to present this second edition of the Environment Strategy to the community. Council has had a number of successes in implementing its Environment Strategy over the past five years – a testimony to the planned approach to environmental management reflected in the original Environment Strategy. This updated Environment Strategy will guide Council for the next five years.

Council is proud to say that this Environment Strategy has been developed through consultation with our staff and the community. One of the main goals of the first Environment Strategy was to capture the community's ideas, thoughts and suggestions on the future direction Council would take in relation to environmental sustainability, as well as reflecting our own vision and mission in the way Council operates. This updated Environment Strategy has also been informed by community and stakeholder input.

The Environment Strategy is an important tool for Council to strategically manage its environmental impacts and obligations over the next five years, and beyond. The outcomes and actions it contains support a healthy environment, for a healthy Benalla Rural City community.

Cr Justin King
Mayor

Acknowledgments

Council would like to extend a sincere thank you to all stakeholders and members of the community who have had input into the development of this version of the Environment Strategy. Your contributions have directly influenced a number of actions in the Strategy.

List of Acronyms

Acronyms have been used in tables and throughout the Action Plan. In text all names are in full for ease of reading.

BRC – Benalla Rural City
BRCC – Benalla Rural City Council
BSFG – Benalla Sustainable Futures Group
CFA – Country Fire Authority
DEDJTR – Department of Economic Development, Jobs, Transport and Resources
DELWP – Department of Environment, Land, Water and Planning
DEPI – Department of Primary Industries (former)
GBLGBRG – Goulburn Broken Local Government Biodiversity Reference Group
GBCMA – Goulburn Broken Catchment Management Authority
GBGA – Goulburn Broken Greenhouse Alliance
Gecko CLaN – Broken Catchment Landcare Network
GMW – Goulburn Murray Water
MAV – Municipal Association of Victoria
NELGEN – North East Local Government Environment Network
NEWRRG – North East Waste and Resource Recovery Group
NEW – North East Water
RDV – Regional Development Victoria
SES – State Emergency Services
SMT – Senior Management Team of Benalla Rural City Council
VFF – Victoria Farmers Federation
VLGA – Victorian Local Governance Association

Contents

Section One - Introduction

The Benalla Rural City Council has developed this Environment Strategy to help protect our environment and safeguard its ability to support our community into the future. To achieve this goal, the Environment Strategy outlines a proactive and strategic approach to environmental matters and identifies priorities for management. In adopting an Environment Strategy, Council aims to respond to environmental concerns held by the community and by other stakeholders.

The Environment Strategy is a high-level Council strategic document, sitting alongside the *Economic Development Strategy* and the *Municipal Public Health and Wellbeing Plan*, directly under the Council Plan. The Environment Strategy identifies a number of strategic directions and actions that Council plans to undertake over the next five years in order to meet the objectives of the Council Plan.

Environment Strategy Achievements

The first Environment Strategy was developed with the assistance of a Project Steering Committee that included representatives from Council, the Victorian Farmers Federation, the Benalla Sustainable Futures Group, the Department of Sustainability and Environment and the Goulburn Broken Catchment Management Authority.

A series of interviews were conducted with key Council staff in March 2011 to help identify some of the main environmental features and issues in the Benalla area. This information was combined with extensive research to develop a discussion paper which was released for public comment in April 2011. The discussion paper sought to outline the political and community contexts for the Environment Strategy, the role of Council in managing the environment, and potential directions that could be included in the Strategy.

The discussion paper was used as the basis for extensive consultations with residents and other key stakeholders in the community in April and May 2011. The community was asked to comment on the content of the discussion paper and, specifically, to give their ideas and suggestions as to the actions and directions that they felt should be priority for Council to focus on and include in the Environment Strategy.

The Environment Strategy was developed and consisted of two sections. The first section addressed the environmental and policy context while the second section contained an Action Plan, which set out the outcomes and actions planned to achieve the strategic directions.

Notable achievements in implementing the Action Plan since 2011 include:

- Partnership with Benalla Sustainable Futures Group to successfully deliver Sustainable Housing Forums in 2014 and 2015
- Development of a Roadside Vegetation Management Plan in 2014
- Firewood Policy developed in 2012
- A simple Pest Plant and Animal Plan endorsed by DEDJTR
- Fleet policy reviewed in 2014
- Environmental training for staff and councillors provided in 2013 and 2014
- Comprehensive street light retrofit with highly efficient lighting due to be completed by end 2015
- Climate Change Adaptation Action Plan developed and adopted in 2012
- Green Team established and working on corporate sustainability, including resource-use monitoring
- Waste Management and Minimisation Strategy developed and adopted in 2014
- Trial of urban organic waste collection commenced
- Dog waste system implemented around Lake Benalla
- Twenty six additional public recycling bins installed

- Three filtered water stations installed
- Cabomba cleared from Lake Benalla since 2013
- Domestic Wastewater Management Plan in development with funded trial at Baddaginnie in 2012/13
- Feasibility study and design for GPT on West Main Drain
- Rainwater collection tanks installed beneath Botanic Gardens and as part of Town Hall restoration
- Council scholarship to reward local students undertaking sustainability initiatives provided annually since 2011
- Management Plan developed for the former Lake Mokoan inlet channel that prioritises restoration for biodiversity and the establishment of a bicycle path connecting to Winton Wetlands

These achievements are evidence that the Benalla Rural City Council is committed to improving environmental management, corporate environmental performance, and environmental condition in the Benalla Rural City. They also show a commitment to working in partnership with staff, stakeholders and the community to achieve tangible results.

Framework and Scope of the Environment Strategy

The Environment Strategy sits alongside the *Municipal Public Health and Wellbeing Plan* and the *Economic Development Strategy*. Together, these strategic documents help Council to deliver on the Council Plan. There are several actions in this Environment Strategy that require the development of further strategic planning documents. The structure of environment-related plans and strategies is shown in Figure 1. Please note that not every environment-related plan and strategy is shown here. Rather, a selection is presented to show the different levels of strategic plans and their relationship to each other.

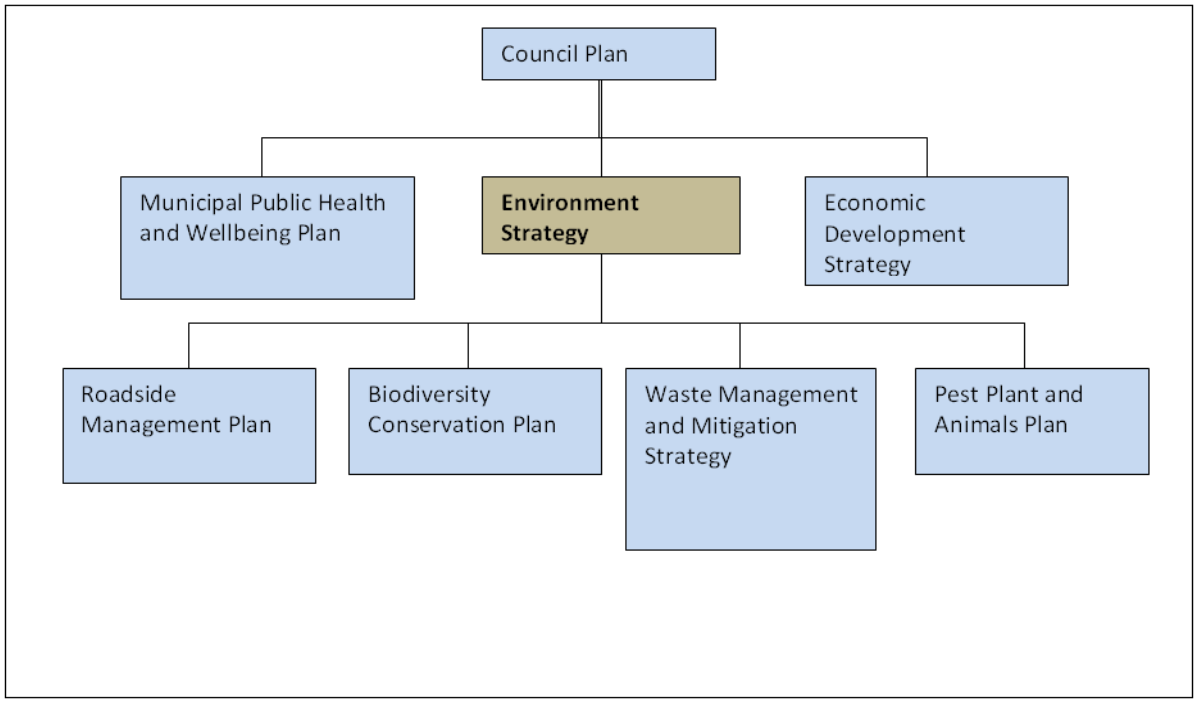

Figure 2 Council Environment Strategic Framework

The strategic directions, outcomes, and actions that form the strategic content of this document are contained in Section Three. The Environment Strategy has five strategic directions, with three or four high-level outcomes under each strategic direction. These outcomes are beyond the ability of Council to achieve on its own as they require the cooperation of a number of different players outside of Council. Council has identified these high-level

outcomes as indications of what the community considers to be important environmental goals. Strategic directions are outlined in Table 1, below, and the high-level outcomes for each Strategic direction are detailed in Section Three.

Table 1: Strategic Directions

Strategic Direction One	Strategic Direction Two	Strategic Direction Three	Strategic Direction Four	Strategic Direction Five
Appropriate land-use, development and biodiversity management	Acting to mitigate climate emissions and adapt to climate change impacts	Efficient waste management and resource recovery	Strategic and collaborative water management	Supporting and building community resilience and capacity

The Action Plan component of Section Three identifies the outcomes specific to Council that sit below the high-level outcomes. These represent the goals Council will achieve in delivering this Strategy. The Action Plan also identifies the defined, measurable actions designed to meet those outcomes.

The structure of the strategic content of the Strategy is depicted below:

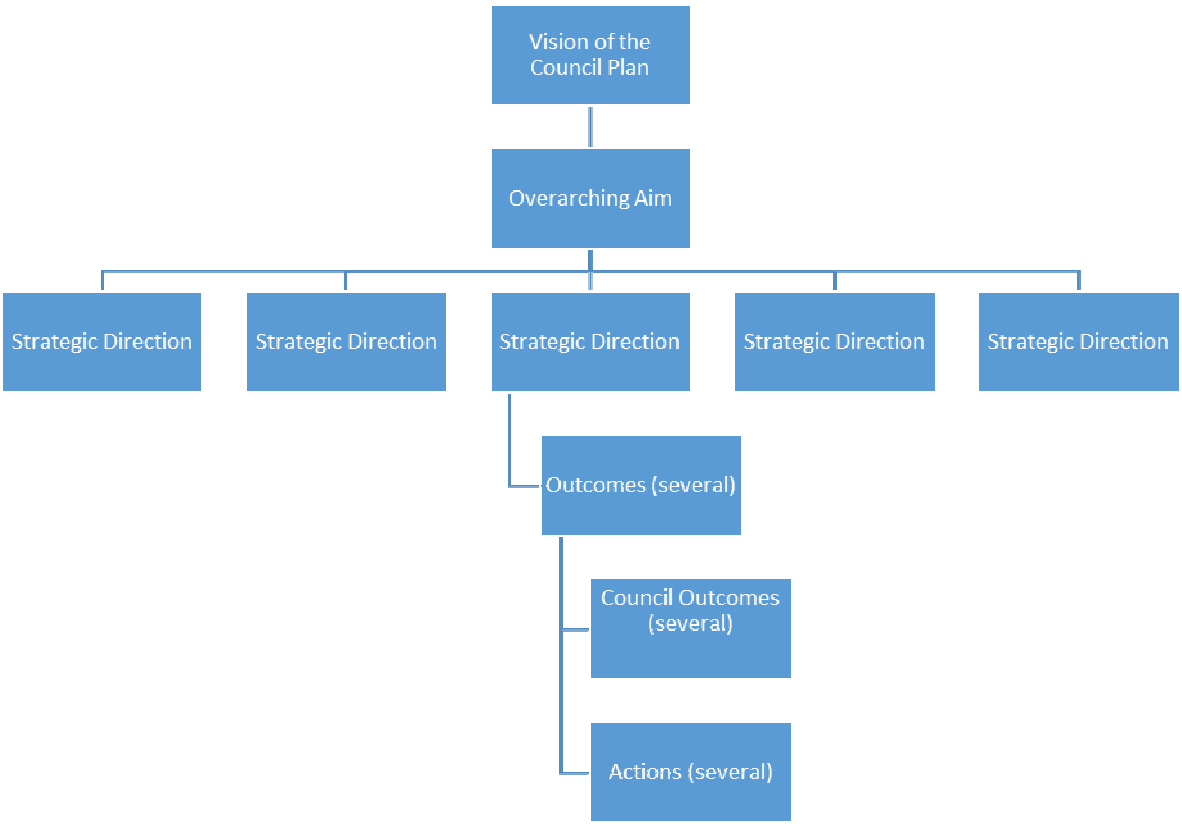

Figure 3: Structure of the Environment Strategy Action Plan

Outline of the document

The Environment Strategy is made up of three sections. It has been designed so that those who are familiar with environmental policy and with the environment and community of the Benalla Rural City may skip directly to Section Three, which outlines the strategic content of this Strategy.

Section One is an introduction that explains the process of developing the Strategy, the type of information contained in the Strategy and how the Strategy will be implementation.

Section Two contains the background and context of the Strategy in relation to environment and sustainability. It provides detail on the regional, State and Federal perspective, the community and environment in Benalla, and opportunities and threats to the health of the environment and, consequently, the community in Benalla.

Section Three presents the roles and responsibilities of the different parties involved in managing the environment in Benalla and the strategic directions, outcomes and actions that Council will implement over the next five years to care for our environment.

The Environment Strategy also contains a comprehensive Reference Section and Appendices information that support the content of the Strategy.

Governance

The Environment Strategy contains actions and performance indicators that are to be included in the work plans of relevant Council staff. A mid-term evaluation will be conducted in 2017/18 when the new Council Plan is developed. A report will be prepared each year, identifying progress on the various actions. This will be made publicly available through the Annual Report.

Principles Council will maintain in delivering the Environment Strategy

This is a strategy that aims to help ensure the sustainability of the Benalla community. Council will apply the following principles to the implementation of the Strategy.

- **Participation:** Early and honest engagement with the community around significant actions and will participate in environmentally sustainable activities where appropriate.
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Section Two - Background

This section contains the background necessary to understand the Strategy. It provides detail on the policy context, the community and environment in Benalla, the things that threaten environmental health and, consequently, the community of Benalla Rural City.

Attributes of the community

Benalla is located 200km north of Melbourne along the Hume Freeway. The Benalla Rural City area comprises 235,059 hectares and has an estimated population in 2014 of 13,597 people – less than the 2011 Australian Bureau of Statistics measured population of 13,643 people. Approximately 4,700 people live outside the main Benalla urban area spread across the seven small towns in the district and their associated rural areas. These towns include Baddaginnie, Devenish, Goorambat, Swanpool, Tatong, Thoona, and Winton.

Table 2: The Benalla Rural City Economy

Sector	Percentage (Current ES – 2006 ABS)	Percentage (2011 ABS)
Wholesale and Retail Trade	20%	15%
Manufacturing	19%	11%
Agriculture	12%	9.7%
Health and Community Services	10%	13%
Education	8%	7.8%
Construction	Not noted	8%

Table 2 outlines the main economic activities in Benalla. Agriculture is predominantly dry land cropping and pastoral (wool and beef), with significant tracts of irrigation along the Broken River. Irrigated horticulture is an increasingly valuable industry, particularly in the northern Warby Range area. The stone fruit industry is developing, as is viticulture and wine making. Tree production is emerging as a new enterprise in several agricultural operations. These trends have continued since the development of the original Environment Strategy.

The municipality has a strong industrial base located to the north and east of the Benalla urban area. The extensive range of industries is generally based on specialist manufacturing, processing of timber products, value adding to agricultural produce and providing a solid service industrial base for the broader region.

Community Groups

There are a number of community groups or associations operating in the Benalla Rural City that take an active interest in the environment. These groups are often a powerful way to engage, inform and involve the community in achieving positive environmental outcomes. Opportunities may lie with new and emerging community groups, Traditional Owner groups, school groups and youth groups within the municipality.

The current Environment Strategy identifies a number of community groups and organisations that are active in the Benalla area. They include:

- Benalla Sustainable Futures Group: Supporting increased sustainability in the community and among residents. Some of their actions include the running of a local food coop, and hosting of events such as the Sustainable Housing Forum and the Environmental Film Festival.

- Local branch of the Victorian Farmers Federation: Supporting local farmers
- Regent Honeyeater Group: Working with private landholders and the Benalla Rural City Council to increase the area of land with good quality tree cover to increase resilience of threatened species.
- GeckoCLan Landcare Network and several individual Landcare groups: Assisting farmers to be sustainable in farming practices and support larger landscape processes.
- Broken-Boosey Conservation Management Network: Working on a range of initiatives to support biodiversity
- Trust for Nature: Acquires private land to manage for biodiversity protection. TfN has two properties in or adjacent to the Benalla area.

Community aspirations and concerns

The first Environment Strategy included information on community aspirations for the environment, expectations of Council environmental management, and community environmental values. This information was gathered from a community survey and from six public-meetings held around the Benalla Rural City in 2011. Key points raised included the following:

- Early, meaningful, two directional and consistent engagement is needed.
- The Environment Strategy must be for the benefit of the community. Both environment and community values must be as important as economic benefit.
- The community sees the Planning Scheme as being instrumental in protecting productive land and natural assets important to the community.
- There is concern over threats from mining exploration.
- Building design should be efficient and visually amenable.
- Development should be curtailed around Lake Benalla.
- Sustainability should be a major consideration in subdivision design.
- The draft Roadside Management Plan should be reviewed and adopted – Council needs to work on resolving tensions between fire and environmental values, and on putting interim solutions in place for pest plant and animal management.
- Better, more strategic and holistic management for biodiversity assets is needed.
- Council should be a good neighbour in managing pest plants and animals.
- Council should encourage sustainable farming.

- Works crews should operate according to best practice and should conduct activities in a way that minimises impacts on native vegetation and on adjacent private land.
- The community needs clear information on the role of different water managers.
- Water use needs to be sustainable (better infrastructure, stormwater harvesting).
- Drainage is problematic – pollution into waterways from inadequate Gross Pollutant Traps and contamination of farmland and damage to roadside vegetation from inadequate maintenance of roadside drainage.
- Concern that septic tanks are causing pollution.
- Council should be a leader in sustainability in public buildings.
- Environmental education is important for trade people, Council, and community.
- Support is important for businesses and community groups to improve environmental performance.
- The community supports nature based tourism and recreation.
- Better recycling is needed – more options and commercial.
- Hard waste, e-waste and organic waste management must be improved.

As part of the evaluation of the Environment Strategy conducted in 2015 a community poster campaign was initiated. Posters asking four questions on environmental values were displayed around the municipality and pens were provided for residents and visitors to respond to questions directly on the posters. Compared with community participation in the development of the original Environment Strategy, the response rate was poor (57 respondents). However there were a number of issues that were consistently raised by survey respondents. These were:

- Reduction of waste and use of plastics is an important environmental concern and was mentioned by three respondents.
- Four respondents felt that Council has a role in encouraging renewable energy through solar on Council buildings and through provision of information.
- E-coli levels and weeds in Lake Benalla are a significant environmental concern.
- Some areas need a clean-up for amenity purposes. Sites mentioned include the Senior Citizens garden and the area around the Stock Bridge.
- One respondent feels cockatoo numbers in the Thoona area are too high and need to be managed through a culling program to support the health of native trees and other native parrots.
- One respondent felt Council must play a role in education of the community around environmental costs of over-consumption and waste.
- Weed control programs were mentioned as an important role of Council in managing the environment.
- One respondent felt that Council's role in environmental management should include environmentally ethical forms of investment of Council's funds.
- Three respondents felt that Council should move to make Benalla a plastic bag and disposable water bottle free town.
- Clean up of septic systems around the Lake was seen as an action Council could take to improve the environment.

Attributes of the environment

Seventy percent of rural land in the Benalla Rural City is freehold. The township of Benalla is located in the middle of the municipality. The south, east and north-east landscape retains a greater native vegetation cover whilst land to the north-west and west supports dry land and irrigated cropping.

The Benalla Rural City has four major reserve areas within its borders. These include part of the Warby Range section of the new Warby-Ovens National Park, the Mount Samaria State Park, the Reef Hills State Park, and the Winton Wetlands. The area of parks is 5%, while public land represents 30% of the municipality. Lake Benalla environs and the adjoining Benalla Botanical Gardens and Showgrounds are areas of high natural amenity within the urban area. Figure 4 shows the vegetation cover and different public land types in the Benalla Rural City.

The Benalla Rural City is in the upper catchment of the Broken River. There are several nationally important and RAMSAR (internationally significant wetlands) listed wetlands on the Murray that are affected by changes to the Broken River system.

The Winton Wetlands are an important wetland area established after the decommissioning of Lake Mokoan. The Wetlands have high conservation and ecotourism value and provide an important space for people to engage with the environment through walking, bird-watching, and cycling opportunities. The Benalla Rural City Council has recently acquired an old inlet channel of the former Lake Mokoan and is rehabilitating this strip of land to contribute to these values. Lake Benalla and Lake Nillahcootie, which borders Benalla Rural City in the south, are also important for their amenity values. Lake Nillahcootie is a water storage on the Broken River that influences down-river flows.

Drivers of environmental change and the case for active management

The first Environment Strategy identified important interactions between people and the environment and significant drivers of environmental change. It stated that the Benalla Rural City's social, cultural and economic sustainability relies on a healthy environment because of:

- The role of the environment in providing natural resources and products used by primary production industries.
- The role of the environment in providing the natural beauty and amenity that attracts residents and tourists to the Benalla Rural City.
- The role of the environment in providing the context for the rural atmosphere and culture.
- The role of the environment in providing eco-system services such as clean air, water, food and shelter

Drivers of environmental change identified in the first Environment Strategy include

- Development and changes in land-use
- Biodiversity that is patchy, fragmented, and often linear, meaning species are more susceptible to other stresses such as impacts of climate change and invasive species
- Impacts from climate change
- Weeds and pest animals
- Poor development and built environment planning resulting in greater levels of resource use than necessary
- Increasing population
- Intensification of agricultural production enterprise
- Poor waste management practices
- Increasing costs of resources

In the time since the Environment Strategy was developed in 2011 much work has been done by many different people, organisations, and agencies. People and groups of people have become more resilient and are putting in place strategies to allow them to cope with changes in the environment and climate. Some sites within the landscape have undergone management changes that have increased the resilience of those sites to environmental change and strengthened their function.

However, broadly speaking, the drivers of change remain accurate and work is continually needed to strengthen the resilience of communities and the environment so they will continue to function. The first Environment Strategy contextualised the drivers of change according to areas of concern, which are essentially topics or environmental issues. These include Rural Landscapes, Native Flora and Fauna, Sustainable Development, Water, Changing Climate and Environment, Resource Use, and Waste Management. These areas of concern were then used to develop the Strategic Directions. The remainder of Section Two provides updates on these areas of concern with regards to increased scientific understanding, changes to the policy context, and locally based change that may have occurred.

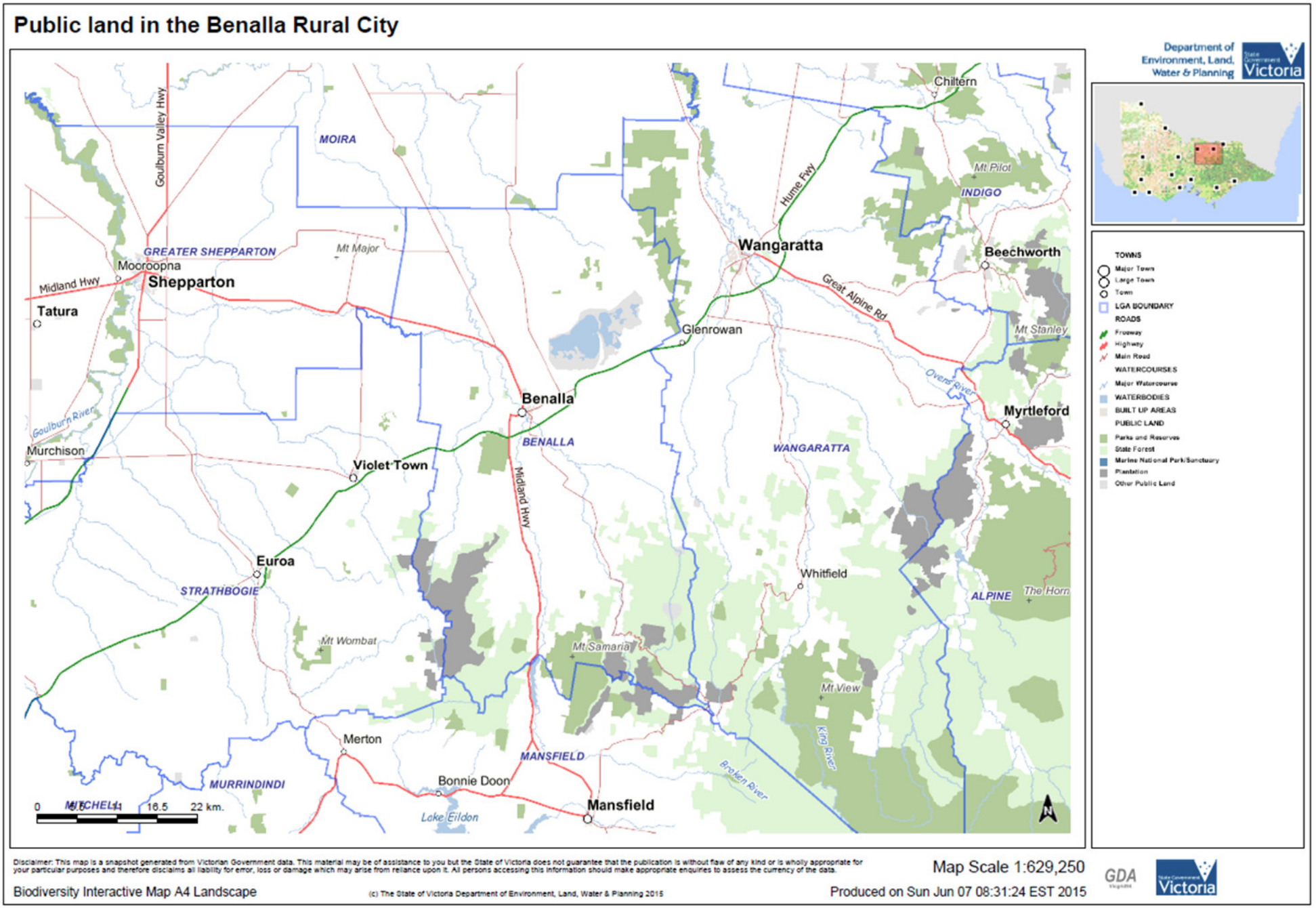

Figure 4: Public Land in the Benalla Rural City

Rural Landscapes

Rural land management is about balancing a range of needs to achieve the greatest economic and social benefit while sustaining natural resources. In recent history this has focused on supporting traditional primary production industries. Over the last two decades the cultural value of rural landscapes, recognition of the economic value of tourism, and the importance of natural resource protection and catchment health have all become increasingly important components of rural land management. Combined with global market pressures on food industries, we have also seen a rise in concern for food security.

Yarra Ranges (2013, 4) Liveable Communities Discussion Paper states that "there are a number of best practice principles that can be used to influence land use changes and development opportunities. These include urban consolidation and place making." Urban consolidation is more relevant for large urban areas, however place making is something that can help all municipalities to direct land use activity. It is a concept and a process whereby integrated approaches are used to form and highlight civic and physical assets. Place making can be used, as an example, to focus tourism activities in a certain area or satisfy people's cultural need for rural landscapes by directing people towards certain spaces, or to encourage rural lifestyle living within a defined geographic area. It can also be used to manage recreational use in natural environments.

Government policy position

The *Planning and Environment Act 1987* provides the legal framework that supports local government planning schemes. The State Government influences management of local landscapes through the State Planning Policy Framework, which is made up of State Planning Provisions and reference documents that form part of all Victorian planning schemes.

The Future Farming Strategy (2011) looks at the pressures on agriculture in Victoria and aims to develop the capacity of farm businesses to become more productive, competitive and sustainable. The Strategy provides for research and development, skills training, pest plant and animal management, and new product and market development.

Regionally, the Hume Strategy for Sustainable Communities and the Hume Regional Growth Plan outline the regional and State objectives for management of the landscape and direction for development. The Goulburn Broken Regional Catchment Strategy also looks at management of catchment landscapes, with a focus on catchment health rather than social and economic development.

Benalla Rural City Council approach to land management

The Benalla Planning Scheme is the principle mechanism used by the Council to effect landscape management. Where the State Government uses the State Planning Policy Framework, the Benalla Rural City Council plans and implements the Local Planning Policy Framework to legislate landscape management policies. The Local Planning Policy Framework is made up of Local Planning Provisions and reference documents to support local land management directions. These are underpinned by maps depicting zones and overlays that indicate how different planning provisions, both State and Local, are implemented spatially. In 2010 the Benalla Rural City Council adopted the Rural Living Study, which outlines areas most appropriate for lifestyle focused living.

Native Flora and Fauna

Biodiversity is the variety of plant and animal life, including micro-organisms, in a given location and is vital for conservation purposes as its diversity and function supports ecosystems and, importantly for people, ecosystem services. Without biodiversity (plants and animals) and the connections between them that make ecological communities (or ecosystems), water, air and soil quality would be non-existent, and our ability to support human life would decline or be removed altogether. We would also lose the opportunities for recreation and spiritual connectedness that are afforded by natural areas, along with a number of natural regulatory processes such as climate regulation and pest regulation. Plants and animals also have the right to exist in their own right and conservation and protection of biodiversity from human impact is an ethical responsibility of communities.

What we have

The Benalla Rural City contains areas of high value flora (plants) and fauna (animals). Some of these areas are large and diverse in geography and biodiversity while other areas are small, and often linear, and serve as important connectors between larger sized blocks. There are many ways of describing the value of biodiversity.

The following maps use data that looks at species composition (or diversity) and extent and attributes a score to describe areas as being high in biodiversity value or low. We can also look at how rare or abundant a given species or ecological community is, and value it that way, or we can look at how robust and resilient an area is and value it that way. Different ways of valuing biodiversity will result in different management priorities over a given area.

Attribute	Number June 2011 (VBA)	Number 2015 (VBA)
Native plant species	1318	1341
Exotic plant species	320	327
Rare or threatened plant species (VIC Advisory List)	71	72
Threatened plant species (EPBC Act)	6	6
Threatened plant species (FFG Act)	20	20
Native animals	462	464
Exotic animals	35 (incl. 7 aquatic fauna	35 (incl. 7 aquatic fauna)
Rare or threatened animal species (VIC Advisory List)	86	86
Threatened animal species (EPBC Act)	17	17
Threatened animal species (FFG Act)	57	57

Table 3 Flora and Fauna Statistics

For the Benalla Rural City, biodiversity conservation is about understanding the State and regional priorities for the area and identifying where Council managed land and private land has the potential to play an important role within State and regional priorities. Council impacts biodiversity through management actions on its own land or land for which it is the responsible party, which includes many roadsides, and through administration of the planning scheme to influence biodiversity on private land.

Council can also influence State and regional priorities through advocacy and participation in State and regional processes to identify strategic biodiversity management priorities.

Victoria is mapped into biogeographic regions (bioregions) that capture the patterns of ecological characteristics in the landscape. There are four bioregions in the Benalla Rural City, which is unchanged from when the current Environment Strategy was developed.

Each bioregion contains a number of Ecological Vegetation Classes (EVCs), which have been the basic mapping units used for biodiversity planning and conservation assessment at landscape, regional and broader scales in Victoria. There are 21 EVCs in the Benalla Rural City. EVCs are derived from large-scale forest type and plant community mapping and are based on (from Victorian Resources Online):

- Plant communities and forest types (including species and structural information)

- Ecological information relevant to the species that comprise the communities (including life-form and reproductive strategies)
- Information that describes variation in the physical environment (including aspect, elevation, geology and soils, landform, rainfall, salinity and climatic zones

Table 3 compares flora and fauna statistics from the 2011 Environment Strategy to now using the Victorian Biodiversity Atlas database. Of interest is the increase in exotic plant species.

In the time since the current Environment Strategy was developed a new way of integrating spatial information on biodiversity has been established. NaturePrint began as a product of the Victorian Biodiversity Strategy development in 2009 and aims to integrate of range of information that relates to biodiversity value.

Some NaturePrint information is available on the Biodiversity Interactive Map system and is a more informed way of assessing biodiversity values across landscapes. The map below shows how this information can be used for the Benalla Rural City to show areas that are high in natural values and areas that are low. This can be used at a finer scale to show where biodiversity protection can enhance landscape scale natural values.

Threats to biodiversity

The *Flora and Fauna Guarantee Act 1988* lists a number of threatening processes to biodiversity. For the Benalla Rural City Council, the most significant issues for biodiversity include the following:

- Invasive species outcompete for space and, in the case of predatory animals, can increase mortality and decrease reproductive success of native species. Invasive species are highly successful colonisers, meaning the can turn highly diverse and complex systems into much more simple systems with one or a small number of dominant species. Systems are much more resilient and ecosystem services much more healthy when they are diverse and complex.
- Climate change impacts include changes to rainfall and temperature that will impact climate conditions across landscapes, meaning certain species may no longer be able to survive if their water and nutrient needs are not met.
- Changes in land-use, particularly change of use of rural land from production enterprise to lifestyle blocks can impact biodiversity in that invasive species populations may no longer be managed. Land-use change can also positively impact on biodiversity where lifestyle owners are committed to revegetation of land.
- Fragmentation of natural landscapes increases stress on plant and animal species, increasing vulnerability of flora and fauna and decreasing eco-system health in fragmented landscapes.

What we know about how to manage biodiversity

There are thousands of academic papers on the protection of biodiversity – from individual species needs and threat abatement to theory on the conservation of complex systems and landscapes. Despite the large body of research, there is no clear method of biodiversity conservation for local government. There are, however, commonly agreed principles for biodiversity conservation. Yarra Ranges Council, in their Native Plants and Animals Discussion Paper released in 2013 to support the development of their Environment Strategy, have summarised several of the scientifically recognised principles of biodiversity conservation. These are presented below:

1. Biodiversity will be stronger and more resilient with greater levels of diversity.
    a. Species diversity and functional balance is critical to maintain ecosystem processes. Diversity of species brings with it a diversity of functions within an ecosystem such as structure, food, shelter and nutrient cycling, as well as increased resilience to external impacts.

b. Diversity of structure is critical in providing habitat for flora and fauna, for example: the presence of appropriate vegetation layers (trees, large shrubs, medium shrubs, small shrubs and groundcovers); tree hollows, which take at least 100 years to form naturally; logs and organic matter which assist in soil moisture retention as well as provide habitat. Consequently the regeneration of flora and fauna in degraded ecosystems is critical to maintain current and future populations.

c. Diversity of vegetation types is important to maintain habitat requirements for particular fauna species and other ecosystem processes, such as water cycles. For example the availability of refuge habitats during disturbance events, such as areas of long unburnt, damp or more productive vegetation, are vital for the persistence of flora and fauna populations.

2. Disturbance is part of a natural process of change and should be retained as part of an effective management regime.
   a. Natural fire regimes (frequency, intensity and season) have a critical influence on how ecosystems change over time (succession).
   b. The natural water regime (frequency, duration and depth of flooding) for waterways and wetlands is a critical component influencing habitat for flora and fauna species reliant on these environments.
   c. Mimicking natural disturbance regimes for human-induced disturbances such as planned burns, environmental flows, logging or grazing will increase species' resilience to disturbance.
3. Modified landscapes can still be managed in a way that increases biodiversity value. The following attributes are important points to consider when managing modified landscapes:
   - Higher total vegetation cover and cover of particular habitats are better.
   - Larger remnant vegetation patches are better than smaller ones, however small remnants can still be very important.
   - A mosaic of patches of different vegetation types, conditions and age-classes maximises habitat suitability for the largest range of species.
   - Circular or square patches are more resilient, protecting their cores from vulnerable edges, than narrow linear patches.
   - The greater the level of connectivity of remnant vegetation the greater opportunity for all fauna species and populations to access available habitat and for ecosystem processes to be maintained, particularly as climate change causes shifts in species distributions and ranges.
   - High disturbance activities adjacent to remnant vegetation will impact upon the health and function of the remnant.
   - Introduced predators and competitors reduce ecosystem stability.
4. Threatened species and ecosystems, keystone and indicator species
   a. Protect threatened species and their habitats as well as threatened vegetation communities from further decline.
   b. Identify species or landscape elements that have a disproportionate impact on the ecosystem i.e. keystone and indicator species or ecosystem engineers, and which deliver the best return on investment.

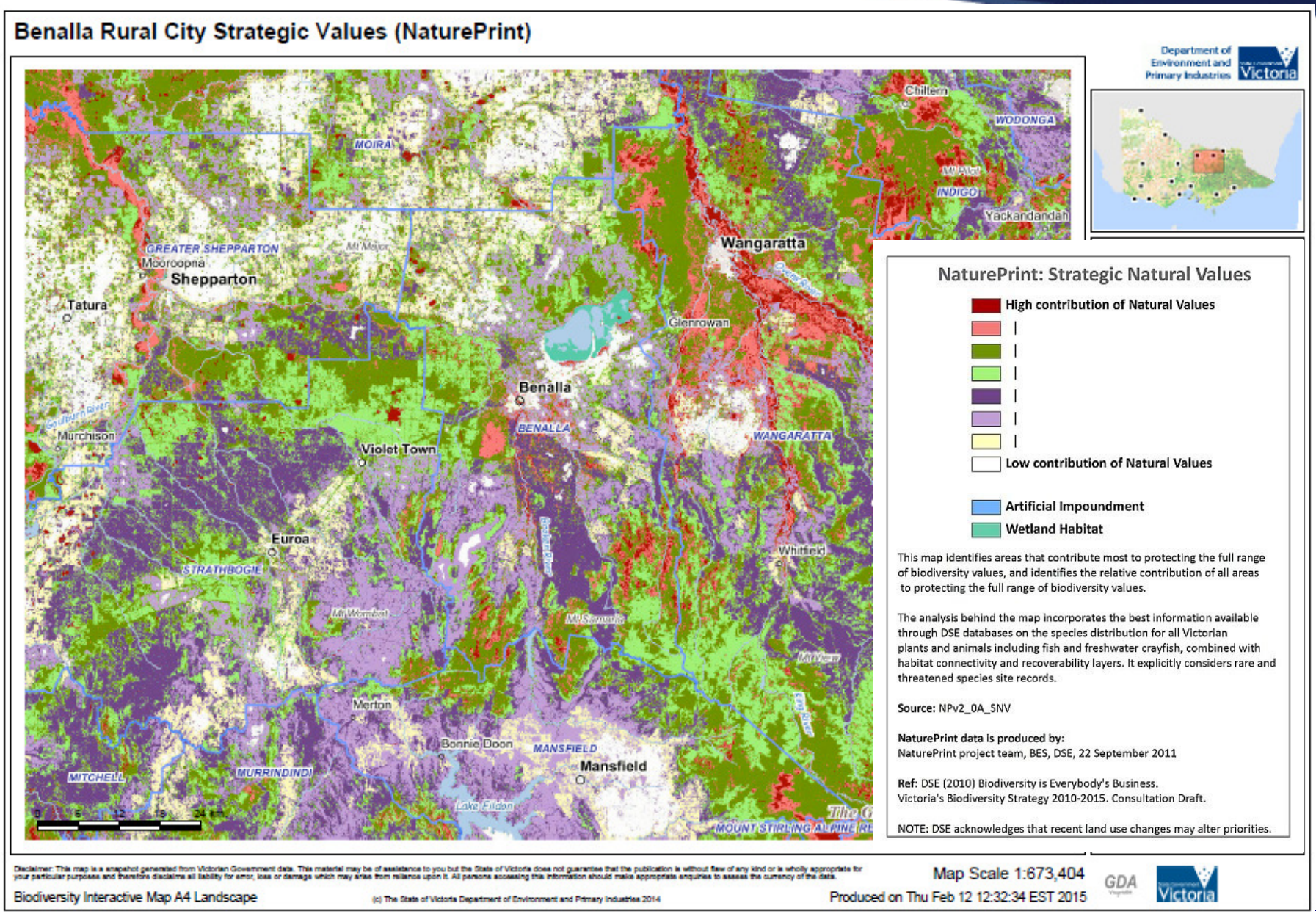

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Figure 5: Strategic Natural Values

Government policy and management directions

Federal Government

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the main piece of legislation that governs biodiversity protection in Australia, listing species and ecological communities deemed to be a Matter of National Environmental Significance. In the Benalla Rural City, there are four threatened ecological communities and 26 threatened species listed under the EPBC Act. The EPBC Act also identifies 38 invasive species, down from 47 species listed in 2011. The Broken Creek and Lower Broken River are both listed as Nationally Important Wetlands.

Victorian Government

In Victoria the *Flora and Fauna Guarantee Act 1988* (FFG Act) is the main statutory legislation for the protection of biodiversity. Action Plans for threatened species and threatening processes are prepared under the Act. The Victorian Government is currently developing a new biodiversity strategy, Protecting Victoria's Environment – Biodiversity 2036, which is aiming to provide a long term plan to stop the decline of native plants and animals and improve the health of the natural environment so it is healthy, valued and actively cared for.

The Government continues to maintain Victorian Advisory Lists of threatened species. The lists provide no legal protection for listed species but they do serve to inform native vegetation management. They also provide the documentation necessary to support and justify local environmental action that focusses on listed species. The Actions for Biodiversity Conservation (ABC) is another biodiversity management tool maintained by the Victorian Government. It is an internet-based information system that is used by DELWP to store information about the management of threatened species and communities across Victoria. It currently contains information on approximately 400 species and communities at more than 3000 locations across Victoria. The ABC is separate from the Victorian Biodiversity Atlas (VBA), which is a database maintained by DELWP that contains species' attribute information and records of species' distribution and abundance across Victoria.

Invasive species are legislated for under the *Catchment and Land Protection Act 1994* (CaLP Act), which declares identified weed and pest animal species under a range of categories designed to identify the responsible authority and the severity of restriction of the species. State Government policy, outlined in the Biosecurity Strategy and the Invasive Plants and Animals Policy Framework, takes a biosecurity approach. The approach focuses on keeping risk species out of Victoria and identifying and eradicating weed and pest animal species that are newly establishing. Established populations are contained to their current extent and biodiversity asset boundaries are protected from risks of invasive species. This approach is pertinent for local government as it provides an approach to prioritise investment and key messages to provide to the community. It also provides a framework to identify weed and pest animal management priorities within a given area.

The Native Vegetation Framework 'net-gain' approach was replaced in 2013 by a 'no net-loss' approach, whereby vegetation that is deemed necessary to remove by development must be replaced by vegetation plantings elsewhere (offsets). This policy is currently being reviewed to examine how the native vegetation clearing regulations have been functioning since 2013. A consultation paper has been released which outlines proposed improvements to the regulations including: strengthening the requirements around avoiding vegetation removal in the first instance; enableing greater consideration of impacts on key habitats and the biodiversity value of scattered trees; using site-based information on species habitat characteristics to supplement the mapped information; and improving the monitoring, compliance and enforcement of the regulations.

The removal of native vegetation is primarily regulated by the Victorian Planning Provistions (VPP) that sit under the Planning and Environment Act 1987. This policy has significant impact on local governments as applications to remove vegetation are overseen by Council administered Planning Schemes. *Permitted clearing of native vegetation: Biodiversity assessment guidelines* guide how impacts on biodiversity should be considered when assessing an application for a permit to remove, lop or destroy native vegetation. The Guidelines are an incorporated part of the State Planning Policy Framework.

Clause 12 of the Victorian Planning Provisions addresses biodiversity and native vegetation retention in developments. Clause 52.17 currently summarises the 'no net-loss' approach as being:

- To ensure permitted clearing of native vegetation results in no net loss in the contribution made by native vegetation to Victoria's biodiversity. This is achieved through the following approach:
  - Avoid the removal of native vegetation that makes a significant contribution to Victoria's biodiversity.
  - Minimise impacts on Victoria's biodiversity from the removal of native vegetation.
  - Where native vegetation is permitted to be removed, ensure that an offset is provided in a manner that makes a contribution to Victoria's biodiversity that is equivalent to the contribution made by the native vegetation to be removed.
- To manage native vegetation to minimise land and water degradation.
- To manage native vegetation near buildings to reduce the threat to life and property from bushfire.

The map below shows how NaturePrint is being used to guide native vegetation planning. Parcels of native vegetation are assessed for their contribution to biodiversity and given a score. Native vegetation sites can then be compared to other sites around Victoria for their contribution to biodiversity. This can then be used to make decisions around the removal of native vegetation within the planning process.

Regional Planning

At a regional level the Goulburn Broken Catchment Management Authority play an important role in strategic biodiversity planning. The Goulburn Broken Catchment Management Authority released a Biodiversity Strategy in 2010 that has the following goals:

1. Maintain extent and quality of all native habitat at 2005 levels in keeping with the goal of 'net gain' outlined in Victoria's Biodiversity Strategy 1997.
2. Increase the extent of native vegetation in fragmented landscapes by 70,000 ha by 2030 to restore threatened Ecological Vegetation Classes (EVCs) and improve landscape connectivity.
3. Improve the quality of 90% of existing (2005) native vegetation by 10% by 2030.

The Biodiversity Strategy expanded on Biodiversity Action Planning (BAP) by identifying priority landscapes. Under the zoning within the Biodiversity Strategy the Benalla Rural City contains largely fragmented natural systems, although there are areas that are high value natural assets and, as such, are a priority for biodiversity investment. The Warby Ranges, Strathbogies, and Broken River system are high priorities for investment. Most of the Benalla area is considered a high priority for restoration and including connectivity between more intact areas of biodiversity.

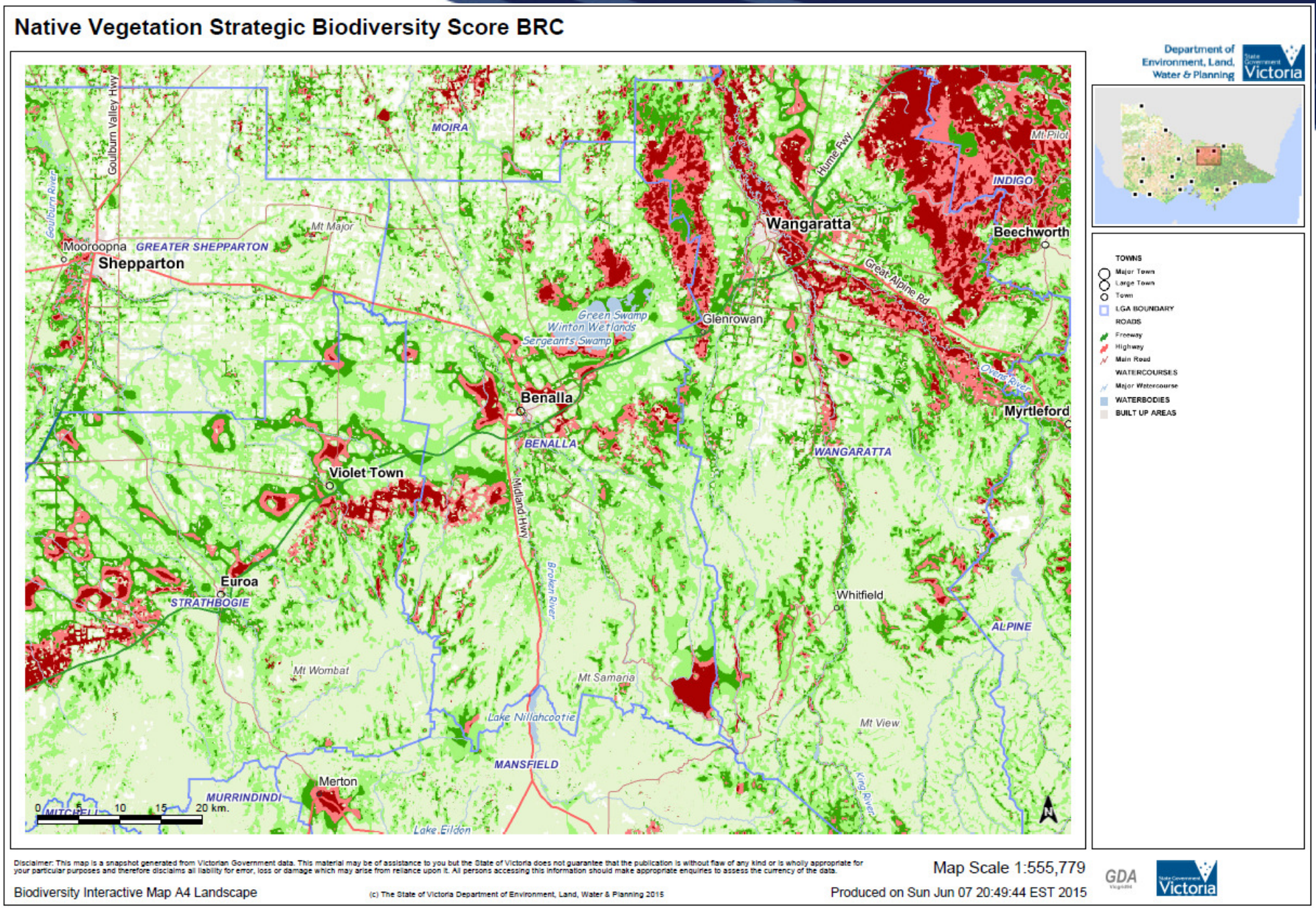


Figure 6: Strategic Biodiversity Score Benalla Rural City

The Benalla Rural City crosses five BAP zones, all of which have associated conservation plans. The conservation plans identify focal species (keystone species) and their ecosystem requirements, and biodiversity assets of the landscape. They are designed to help community groups and extension staff to prioritise natural resource management. The landscape approach articulated in the Biodiversity Strategy has largely superseded BAP-focussed management; however, the associated conservation plans are very useful for identification of biodiversity assets at a local level within priority landscapes.

The Goulburn Broken Catchment Management Authority recognises the importance of community involvement in biodiversity management and has worked with the community to identify community values and goals in natural resource management, articulated in the Community NRM Action Plan 2013 -2018. These complement and feed into goals identified in the Regional Catchment Strategy.

Local Government role and partnerships

Currently Benalla Rural City Council do not have a strategic approach to biodiversity management. Management of biodiversity is largely effected through collaboration and partnerships with regional networks, in particular the Goulburn Broken Local Government Biodiversity Reference Group and North East Local Government Environment Network. Council also supports community groups working towards biodiversity related goals such as Landcare and has a well established relationship with the Regional Honeyeater Group.

The Benalla Rural City Council has adopted a Roadside Management Plan to help prioritise the type of management afforded to different roadsides around the Benalla area. As roadsides represent a significant portion of highly threatened native vegetation, management of biodiversity on roadsides is crucial to protecting threatened species and vegetation types, and to maintaining connections between larger more intact areas of native vegetation.

Community Local Laws (2009) legislate for some threatening processes such as storm-water run-off from construction sites, waste management, and some burning off activities.

Sustainable Development and Resource Use

This section looks at the built environment and use of water and energy resources by Council and within the community. The sustainable built environment theme fits within the resource use theme in that sustainability in the built environment includes reducing our water and energy use. Council has two roles in reducing water and energy use in the built environment. One is through maximising efficiencies in their own buildings and facilities and the second is about influencing the community to maximise efficiencies through education. Council can also help improve community energy and water use levels through good rural and urban planning.

Issues associated with poor planning in the built environment

Impacts from the built environment can be separated into environmental impacts of individual buildings and impacts from the way buildings are arranged and sited in town planning or urban design. For example, a poorly designed building may have increased resource use due to a large heating requirement that could be reduced through use of better insulation and use of passive solar design. Poorly designed towns or subdivisions can increase environmental impacts through forcing people to drive rather than ride or walk where facilities for safe and enjoyable riding and walking are not provided.

Poor building design can:

- Increase energy use through higher heating and cooling needs.
- Increase water use through poorly designed water-using appliances and plumbing, and through water intensive landscaping.
- Decrease occupant health where adequate ventilation and moisture controls are not implemented.
- Decrease water quality through a lack of permeable surfaces to slow down storm water flows and through poor siting or maintenance of waste-water treatment in sites that are not connected to the town sewer.
- Have higher levels of 'embodied carbon', whereby building materials are created from carbon intensive materials (their manufacture is very carbon intensive), or through the need for transport of materials over long distances.

Poor urban design can:

- Not enable housing to be suitably orientated to allow optimum passive solar design
- Force people to use energy-using cars rather than walking, riding bikes, or using public transport through inadequate provisions that encourage the latter.
- Decrease public health through inadequate provision of green space and community facilities that encourage sport and exercise.
- Have an impact on the spiritual wellbeing of residents through a lack of green space.
- Decrease water quality through inadequate storm water management or inadequate waste water disposal.

Best practice sustainability within built environments

The Council Alliance for a Sustainable Built Environment (CASBE) is an association of Victorian rural and urban councils committed to developing the sustainability of the built environment within and beyond their municipalities. CASBE applies ecologically sustainable development (ESD) principles to the built environment through formal and consistent approaches within the planning system. They have recently release the Built Environment Sustainability Scorecard (BESS), which assesses the environmental sustainability of a new building or operation in the planning permit phase. BESS replaces the STEPS tool, which was an online scorecard to allow Council's to assess the sustainability of a proposed residential building as part of the planning process, and the Sustainable Development Scorecard for non-residential buildings.

Government influence over the built environment

The Government controls efficiency in buildings through a suite of different policy approaches:

- All new buildings must comply with the six star energy standard set out in the National Building Code. The standard relates to the thermal efficiency of a building – how effective it is at maintaining warmth or cool when outside temperatures are cold or hot.
- The national *Greenhouse and Energy Minimum Standards Act 2012* (GEMS Act) to regulate energy efficiency and labelling standards for appliances and other products.
- The national *Water Efficiency Labelling and Standards Act 2005* requires certain products to be registered and labelled with their water efficiency.
- A number of sustainability features are set out in Clause 11 of the Victorian Planning Provisions.
- Clause 15 of the Victorian Planning Provisions aims to create quality built environments that support the social, cultural, economic and environmental wellbeing of communities, cities and towns.
- Clause 16 of the Victorian Planning Provisions states that new housing should have access to services and be planned for long term sustainability, including walkability to activity centres, public transport, schools and open space
- Bushfire Management Overlay, which assigns a rating for sites as to their bushfire risk and instates requirements for buildings to increase their resilience to bushfire. Some requirements for bushfire resilient buildings, such as requirements for windows, also increase the thermal efficiency of the building. Others may reduce sustainability. For example by requiring use of a material that contains a high level of embodied carbon (steel) over material that may have a low level of embodied carbon (locally sourced timber).
- Clause 56.07 of the Victorian Planning Provisions outlines Integrated Water Management objectives.

Government and water authorities' positions on water use

Our Catchments, Our Communities is the first statewide strategy for integrated catchment management in Victoria. It has been developed by the Department of Environment, Land, Water and Planning (DELWP) and catchment management authorities to strengthen integrated catchment management across Victoria.
The strategy outlines the Victorian Government's commitment to manage catchments to benefit the environment, community and economy. The stated vision is a 'Healthy, sustainable and productive land, water and biodiversity maintained through integrated catchment management that is strongly community based, regionally focused and collaborative'.

Water use in the Benalla Rural City is managed by two statutory corporations under the provisions of the Victorian Water Act 1989, those being Goulburn Murray Water and North East Water. Goulburn Murray Water manages both regulated and unregulated river systems including water storage and delivery.

North East Water provides water and sewerage services and is a retailer, on-selling water from Goulburn Murray Water. A Water Supply Demand Strategy is completed by North East Water every five years and considers a number of possible scenarios for water usage and water availability over the coming 50 years. The Strategy identifies any potential future shortfalls in the supply demand balance and the best mix of measures to address the shortfalls. Goorambat may be subject to improvements in their water supply over the coming five years as North East Water is currently unable to meet service requirements. Currently Goorambat is supplied with a non-filtered groundwater system.

Urban environments and Council facilities in the Benalla Rural City

The Urban Design Framework, local laws and the planning scheme (particularly Clauses 21.06, 22.03) influence the built and urban environments in the Benalla Rural City. While sustainability features supporting town walkability, green space and overall sustainability are built into the Urban Design Framework and the Local Planning Policy Framework, there is little to really push the consistent inclusion of sustainable design features in the built environment.

The tables below show that Benalla Rural City's population grew by 1% between 2006 and 2011. In contrast, housing stock increased by 18% in the same timeframe. This contrast has implications for resource use and for development.

Table 4: Population comparisons since 2006

Population	2006			2011			Total % pop. increase
	Males	Females	Total	Males	Females	Total	2006-2011
Benalla Rural City	6,549	6,973	13,522	6,638	7,009	13,647	1%

Table 5: Comparison of dwelling type since 1996

Year	2006					
Dwelling type	House	Terrace	Flat	Other	Total	% Increase total dwellings
Number	4,808	154	330	38	5,330	
Year	2011					
Dwelling type	House	Terrace	Flat	Other	Total	% Increase total dwellings
Number	4,912	303	276	51	6,462	18% from 2006

In addition to privately owned dwellings, Council manages a number of assets across the Benalla Rural City. Buildings and facilities represent many opportunities to increase Council's sustainability through focussing on energy and water efficiency when implementing planned upgrades to buildings.

Council energy use

Energy use is one of the most significant ways Council can reduce its environmental impact. It can do this through three mechanisms:

- Increasing Council building efficiency
- Better fleet policy and management to reduce fuel use
- Adjusting procurement and purchasing policies so the items and services purchased by Council are comparatively low in resource use.

Council currently supports an in-house 'Green Team' to implement activities that achieve a reduction in resource use. Council, in conjunction with the Goulburn Broken Greenhouse Alliance, has changed its street lighting stock to a highly efficient street lighting system. Energy use is not currently tracked.

Council and community water use

The Benalla Rural City Council currently does not have a Sustainable Water Use Plan or a water-use reduction target. It is expected that the Environment Strategy will allow for water saving actions to reduce water use. Water use data is not currently tracked

In 2010/2011 the amount of used in communities serviced by North East Water was 1,150ML. In 2013/2014 it was 1,347ML – a difference of 15%. These figures do not include the approximate third of the Benalla Rural City population that are not connected to the North East Water supply.

Healthy Waterways

The health of waterways is critical to human and ecosystem survival. Providing water to drink, to use in agriculture and industry and for recreation is essential to our health. Waterways provide protection for a myriad of aquatic and terrestrial species and serve as important connectors in fragmented landscapes. In Australia, water is a limiting feature and needs to be properly managed to ensure there is enough to maintain ecosystem services.

What we have

The Benalla Rural City contains a number of tributaries of the Broken River and a significant portion of the Broken River itself. The Broken River is regulated by Lake Nillahcootie – that is on the southern border of the Benalla Rural City.

The Broken River is a tributary of the Goulburn River, which flows into the Murray River. The Broken Creek is also a significant system in the Benalla Rural City area that flows out of the Broken River and joins directly with the Murray upstream of the Goulburn River. The Benalla Rural City is thus a part of the Murray Basin.

Stream condition in the Benalla Rural City is mostly marginal, as shown in the map below. Sam Creek, which runs into Holland Creek, is rated as very poor and sections of the Broken itself are also in poor condition. It is worth noting that this data from the DEWLP Interactive Biodiversity Mapping system, is in conflict with the DEPI 2010 Third Index of Stream Condition Report, which identifies most Benalla Rural City river and stream reaches as being in moderate condition (69%), with some Broken River reaches in poor condition (21%) and some upper reaches in good condition (6%).

The southern highland portion of the Broken basin predominantly contains the fractured rock groundwater aquifer. The sedimentary aquifer system extends along the Broken River from just south of Benalla and spreads to cover most of the basin north of Benalla. The northern and southen parts of the Benalla Rural City local resources are more closely connected with the Broken River and Broken Creek, but the alluvial aquifer becomes generally brackish as you move further away from these surface water resources. The Broken Groundwater Management Area Local Management Plan will be implemented by Goulburn-Murray Water early in 2016/17. This plan will describe how groundwater resources are managed across the Broken River catchment.

Benalla Rural City is upstream from six RAMSAR wetlands of international importance. The Broken Creek and Lower Broken River are identified as wetlands of national importance under the EPBC Act. The Winton Wetlands are also a significant wetland asset. Wetlands and rivers in the Benalla Rural City support five species of migratory wetland birds, four frog species and three fish species listed under the EPBC Act.

Threats and water quality issues

Significant threats to Benalla Rural City waterways include:

- Storm water run-off in urban and agricultural settings carrying litter and pollution
- Potential contamination of groundwater and surface water by leaks in old or poorly managed and sited on-site waste-water treatment systems
- Point source pollution from industry or agriculture, or from waste management sites
- Increased sediment and pollution from run-off from fire-affected areas
- Climate change impacts reducing surface water levels and groundwater recharge
- The impact of water storage, particularly dams and man-made lakes, on down-stream flows
- The impact of flooding

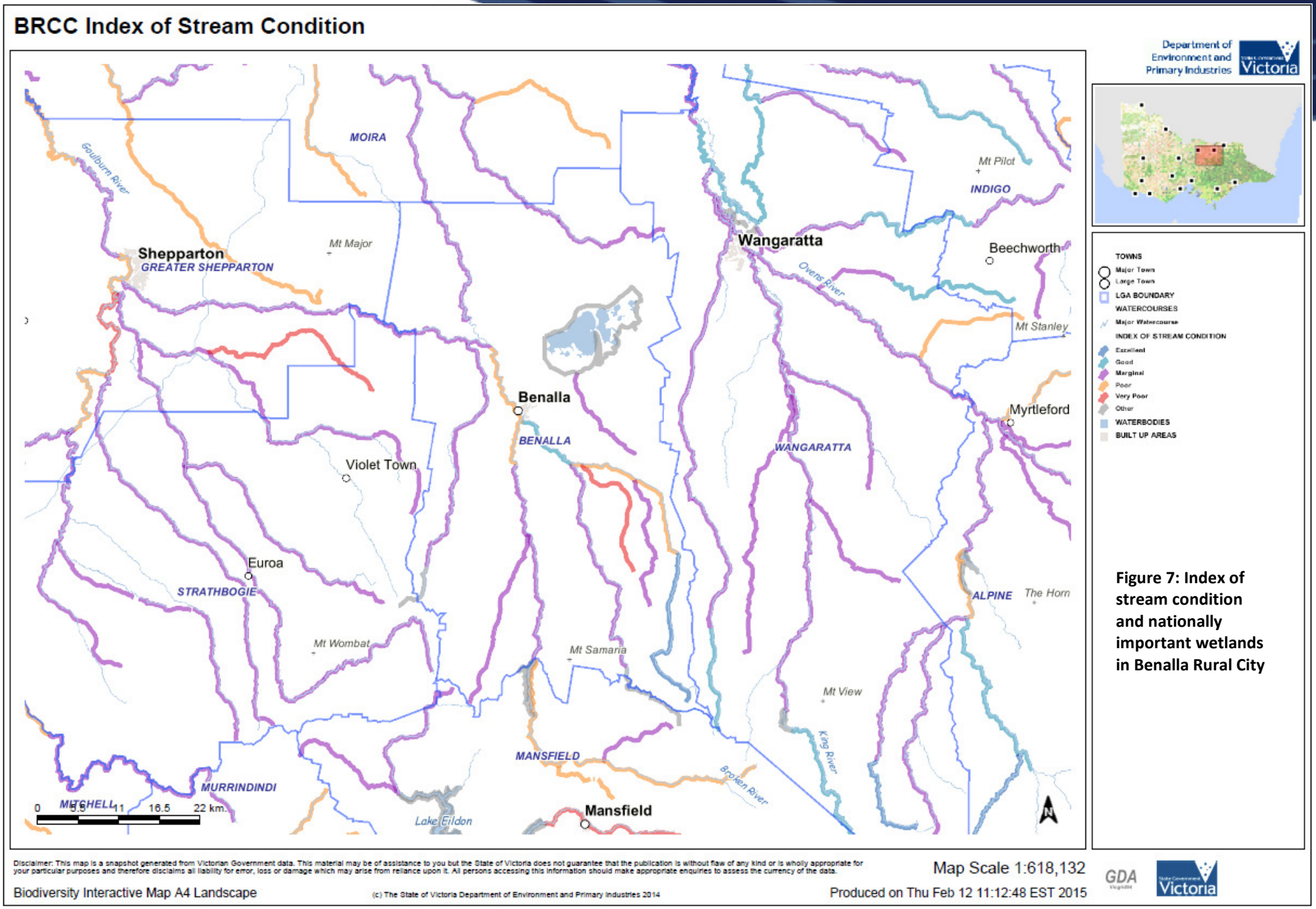


Figure 7: Index of stream condition and nationally important wetlands in Benalla Rural City

Latest government and regional water policy

The key Commonwealth water legislation is the Water Act 2007 which sets out key reforms for water management in Australia. The key features of the Act are:

- Establishement of the Murray-Darling Basin Authority which is an independent expertise-based statutory agency to oversee water resource planning in the Basin.
- Gives fuctions to the Bureau of Meteorology in relation to water information and performance reporting for urban water utilities.
- Established the Commonwealth Environmental Water Holder
- Gives fuctions in relation to water charge and water market rules to the Australian Competition and Consumer Commission.

Water-use and allocation is directed under the Victorian Water Act 1989. Long term water security is planned for within the Northern Region Sustainable Water Strategy. The Strategy identifies threats to water availability and policies and actions to help water users, water corporations and catchment management authorities manage and respond to those threats over the next 50 years. As the Benalla Rural City is located largely within the Murray Basin the Basin Plan and Murray Darling Basin Authority also impacts water allocation in their efforts to increase environmental flows and support Murray Darling Basin health.

The Victorian Waterway Management Strategy has been developed through collaboration between State and Local government agencies and research organisations to address the health of waterways across Victoria. The overall goal of the Strategy is to maintain or improve the environmental condition of waterways to support environmental, social, cultural and economic values. Under the Strategy, regional waterway strategies are a single planning document for river, estuary and wetland management in each region and drive implementation of the management approach outlined in the Victorian Waterway Management Strategy. The Goulburn Broken Regional Waterway Strategy was also released in 2013.

Domestic water supply and waste water is administered by North East Water and bulk water supply is overseen by Goulburn Murray Water. These organisations oversee water used as a resource and are addressed under the Resource Use theme.

Role and approach of Benalla Rural City Council

Benalla Rural City Council has a significant role in watershed protection through the following mechanisms:

- The management of stormwater
- The management of waste-water in septic systems through environmental health
- Use of water (see 'Sustainable Development and Resource Use' theme)
- Influence over building and subdivision design, which may or may not include an integrated or water-sensitive approach, through Council's role as an educator and through administration of the Planning Scheme.

Partnerships

The Government runs two key programs for the community in the area of waterway protection and conservation. The Goulburn Broken Catchment Management Authority administer grants to encourage landowners to protect and enhance waterways and riparian frontages within their land. Waterwatch Victoria is an education and volunteer monitoring program overseen by the Goulburn Broken Catchment Management Authority, which aims to increase community engagement and education of their local rivers and creeks. Benalla Rural City Council also participates in the Goulburn Broken Water Quality Coordination Group which iis a forum for key catchment stakeholders to coordinate water quality activities.

Climate Change

Across all contextual parameters discussed previously, climate change is the one driver of change and challenge for management that is present across all areas of community development, economic development, and environmental and natural resource health. Climate change also poses complex risks for all areas of Council business and, as such, is presented here in a separate, stand-alone section that influences all themes of the current Environment Strategy.

Climate change – What is happening

Climate change refers to long-term changes in global climate that have come about from human-induced greenhouse gas emitted into the atmosphere. While there is considerable debate in the media about the validity of climate change, in the scientific community there is little doubt, with over 95% agreement that climate change is real and is occurring mostly as a result of human greenhouse gas emissions, which have a warming effect on the Earth's surface. There are thousands of scientific documents investigating various features of climate change, its causes and its impacts.

The Intergovernmental Panel on Climate Change (IPCC) periodically releases a compilation of scientific understanding of the issue, its impacts, and activity to mitigate its happening and to adapt to its impact. The Fifth Assessment Report includes a chapter on impacts of climate change for the Australian and New Zealand regions. Traditionally the IPCC Assessment Reports have dealt with uncertainty around levels of future emissions by analysing potential impacts under different 'emissions scenarios', where different levels of emissions of carbon dioxide, or carbon dioxide equivalents, are assumed in the medium and long term. Planning to adapt to climate change impacts (also called adaptation planning or adaptation action planning) first makes assumptions about the emissions scenario before assessing likely impacts and subsequent risks.

The latest reports by the IPCC and CSIRO now use Representative Concentration Pathways (RCPs). These are slightly different in that the focus is on the consequence of greenhouse gas emissions – the resultant concentration of carbon dioxide and equivalents in the atmosphere. The CSIRO projections cover two time periods, the near future 2020–2039 (herein referred to as 2030) and late in the century 2080–2099 (herein referred to as 2090), and use four RCPs:

- RCP8.5 - high radiative forcing (high emissions with carbon reaching 940ppm by 2100) with business as usual carbon emissions. Henceforth referred to as 'high emissions'.
- RCP4.5 and 6.0 - intermediate radiative forcing (intermediate emissions with carbon dioxide reaching 540-670ppm by 2100) assuming some mitigation of carbon emissions. Henceforth referred to as 'medium emissions'.
- RCP2.6 - low radiative forcing (low emissions with carbon dioxide reaching 420ppm by 2100) assuming a peak of carbon emissions around 2020 and subsequent rapid decline. Henceforth referred to as 'low emissions'.

Of great importance for Australia in terms of understanding the science and likely impact, is that the CSIRO has recently released a wealth of information, based on the IPCC fifth assessment report, specifically to give Australians assistance in understanding how climate change will impact their local area and in conducting risk assessments for climate change impacts. The work by CSIRO (Murray Basin Cluster Report 2014, p4) "provides the most up to date, comprehensive and robust information available for this part of Australia, and draws on both international and national data resources and published peer-reviewed literature."

The CSIRO has separated Australia into climate change impact regions based on natural resource management boundaries. Benalla Rural City falls into the Murray Basin region. All future Council climate change mitigation and adaptation planning should refer to the Murray Basin Cluster Report and supporting information on risk assessment (also found in the CSIRO 2014 Technical Report) found at www.climatechangeinaustralia.gov.au.

Climate change is likely to have a number of impacts on the Benalla Rural City. The following table describes the current trend, the 2030 projection and the 2090 projection presented by the CSIRO.

Table 6: Murray Basin Cluster Report CSIRO climate projections

Trend	2030 Projection	2090 Projection
Over 1910–2013, mean surface air temperature has increased by 0.8 °C using a linear trend.	• Very high confidence mean warming is projected to be around 0.6 to 1.3 °C above the climate of 1986–2005 with only minor difference between RCPs • A substantial increase in the temperature reached on the hottest days, the frequency of hot days and the duration of warm spells are projected with very high confidence • Decrease in the frequency of frost days is projected with high confidence	• Very high confidence 1.3 to 2.4 °C increase for medium emissions and 2.7 to 4.5 °C for high emissions. • April to October daily maximum could warm up to 1 °C more than daily minimum by 2090 following the high emissions scenario.
Overall, there is no long term trend in annual rainfall throughout the 20th century. **Snowfall and maximum snow depth have declined significantly since 1960**	• High confidence that natural climate variability will remain the major driver of rainfall differences from the climate of 1986–2005 (annual-mean changes of -10 to +5 %, winter-mean changes of -15 to +10 %, and summer-mean changes of -15 to +15 %). • Snowfall is projected to continue to decline for all RCPs with high confidence, particularly under high emissions. • There is medium confidence that the time spent in meteorological drought, and the frequency of extreme drought, will increase over the course of century under high emissions.	• Under both medium emissions and high emissions there is high confidence that cool season rainfall will continue to decline and there is medium confidence that rainfall will remain unchanged in the warm season (Nov- Mar). • High confidence that the intensity of heavy rainfall events will increase. There is low confidence in the magnitude of change, and therefore the time when any change may be evident against natural variability, cannot be reliably projected
	Small changes are projected for mean surface wind speeds with high confidence under all RCPs	Decreases in winter wind speeds are projected for 2090 with medium confidence
	• Small changes are projected for solar radiation and relative humidity • Increases in potential evapotranspiration in all seasons.	• High confidence in increased winter and spring radiation (related to decreases in cloudiness associated with reduced rainfall), medium confidence in decreases in relative humidity in summer and autumn, and high confidence in decreases in winter and spring. • Medium confidence soil moisture projections suggest overall seasonal decreases. • Runoff is projected to decrease, but only with low confidence.
	High confidence that climate change will result in a harsher fire-weather climate in the future. However, there is only low confidence in the magnitude of the projected change to fire weather, as this depends on the rainfall projection and its seasonal variation.	

These projections can be used in adaptation planning. The Climate Change in Australia website contains a climate futures web tool that facilitates the visualisation and categorisation of climate model results. The tool selects data sets that are representative of futures that are of interest to the user. In this way the tool helps create climate scenarios for local areas. The user can then use the results to think through risk to areas of interest.

Government response

How to respond to climate change is a contentious topic for governments. A change in government at the Federal or State level typically results in a marked difference in policy approaches to how climate change is addressed.

There are two approaches to addressing climate change: action to reduce or mitigate carbon dioxide emissions to slow down the rate of climate change; and action to identify, prepare for and adapt to impacts of climate change. Agency responses to climate change usually address both mitigation (reduction of agency emissions) and adaptation (actions to help reduce or respond to identified risks).

Federal Government

While the current Liberal Government in Australia addresses renewable energy and greenhouse gas reporting, their policy focuses more on adaptation rather than mitigation of emissions. Federal policy is overseen by the Department of the Environment and many climate-focussed initiatives of the previous Labour Government have been wound back, including the contentious Carbon Tax and the Climate Change Authority. Australia still has an emission reduction target of 5% below 2000 levels by 2020 and the Government has set up the Emissions Reduction Fund to buy the lowest-cost carbon abatement schemes to reduce emissions, which effectively replaces the Carbon Tax. However the policy focus is on adaptation rather than mitigation despite the independent Garnaut Report update (2011), which advises that action on climate change, both mitigation and adaptation, and a price on carbon is absolutely necessary to address risks from climate change.

The Liberal Government has retained the previous Government's position paper on adapting to climate change in Australia. The paper sets out the Australian Government's vision for adapting to the impacts of climate change and proposes practical steps to realise this vision. It focusses on six national priority areas for action: water, coasts, infrastructure, natural ecosystems, natural disaster management, and agriculture.

Victorian Government

The previous Liberal Government in Victoria also focussed primarily on supporting adaptation actions. The Labour Government of the late 2000s embarked on a significant climate change program, establishing the *Climate Change Act 2010* and a Climate Change White Paper. The Act (DEPI 2014) contains measures that support the management of and adaptation to climate risks and increase the ability of individuals, businesses and communities to capitalise on opportunities and includes:

- Requiring the Victorian Government to develop a Climate Change Adaptation Plan every four years.
- Requiring decision makers to take climate change into account for decisions under the Catchment and Land Protection Act 1994, Coastal Management Act 1995, Environment Protection Act 1970, Flora and Fauna Guarantee Act 1988, Public Health and Wellbeing Act 2008 and Water Act 1989.
- Creating new arrangements for the ownership, registration and transfer of forestry and carbon sequestration rights.

The White Paper outlines a number of positions that were taken up by the Victorian Liberal Government in 2011 and are likely to be continued by the newly elected Labour Government in Victoria. The White Paper states that the priority actions will result in:

- Significant reductions in Victoria's carbon emissions
- A more diverse energy mix with a greater proportion of renewables
- New opportunities, new jobs and new technologies

- More energy and water efficient Victorian homes and businesses
- Resilient communities able to adapt to a changing climate
- Victorians empowered to take action on climate change

In 2013 the Liberal Government of Victoria released the first *Victorian Climate Change Adaptation Plan.* The Plan aims to strengthen the management of climate risks to assets and services and fulfilled a requirement of the White Paper, while affirming the Government's focus on adaptation. The Victorian Adaptation and Sustainability Partnership was also established in 2013 (superseding the Local Sustainability Accord) to support local governments to work in partnership on projects that adapt to climate change impacts. The new Labour Government is likely to continue supporting adaptation action while increasing commitment to mitigation of carbon dioxide emissions.

Regional Planning

Regionally, climate change has significantly influenced strategy and policy. The Goulburn Broken Greenhouse Alliance was established in 2007 to support regional climate action. Their current Strategic Plan outlines how this will be achieved, focussing on training, partnerships, and information provision. Benalla Rural City Council is a member of the Alliance along with a number of other Councils in the Goulburn Broken catchment, and has been involved in the projects undertaken as part of the Alliance. Projects include:

- Development of a regional Climate Change Adaptation Plan, which included involving member Councils in a climate impact risk assessment exercise, identification of risks and actions local governments can take to respond to risks.
- Replacement of public street-lights with energy efficient lighting.
- Training for staff on climate change impacts and responding to challenges of climate change.
- Climate Smart Agriculture – a project that focusses on supporting agricultural enterprises to adapt to climate change through industry transformation.

While the Greenhouse Alliance focusses specifically on climate change response through supporting local governments to take action, other agencies engage specifically with how climate change impacts the environment. CSIRO supports regional natural resource management adaptation to climate change through a dedicated website called AdaptNRM funded through the Australian Government Natural Resource Management Planning for Climate Change Fund – a mechanism for the Australian Government to further support adaptation planning.

AdaptNRM provides information to natural resource managers on how climate change will impact challenges such as weed management and protection of biodiversity. The site also provides access to a guides on the implication of climate change for biodiversity and for weed management. This information could be very useful for local governments planning a strategic approach to weed management and revegetation.

The Goulburn Broken Catchment Management Authority are developing the Goulburn Broken Climate Change Planning Strategy in 2015. This will be a sub-strategy underneath the Goulburn Broken Regional Catchment Strategy and is a part of a larger project also funded by the Australian Government Natural Resource Management Planning for Climate Change Fund. Thus far a series of kitchen table discussions on climate change have been held across the catchment with well-informed community members. The report presents information on attitudes towards climate change that is very useful for local governments to understand when engaging with their communities on climate change.

The report included statistics from a 2013 Regional Wellbeing Survey, which contained questions on people's opinion on climate change. The report (Feehan 2014, p7) concluded that in summary, in the Goulburn Broken catchment, there is:

- Very strong belief that human use of fossil fuels is changing the climate

- Strong disbelief that the science behind global warming is doubtful
- Very strong belief that global warming will make it more difficult to farm in this region in the future
- Very strong agreement that individuals are worried about global warming
- Planting trees on agricultural land to sequester carbon would be a very acceptable practice.

The final conclusions of the report imply that people and communities are now looking to agencies to take defined and meaningful action on climate change and look for ways to deal with climate change impacts. These findings will be used by the Goulburn Broken Catchment Management Authority to help develop the Climate Change Planning Strategy.

The Goulburn Broken Catchment Management Authority (RMCG 2014) have also investigated the policy implications of carbon farming within their Climate Change Planning project. Carbon farming has been identified as having significant potential as a mitigation mechanism, although it is unclear, as yet, how compatible this approach will be under the Liberal Government's 'Direct Action' policy. Should the political landscape change or when the policy details become clearer, local governments, as administrators of planning schemes, may need to consider the implications of carbon farming mechanisms on their shire areas.

The third significant product that will inform the Goulburn Broken Climate Change Planning Strategy is the recently developed Spatial Assessment Tool. The Goulburn Broken and North East Catchment Management Authorities received funding under Stream 1 of the Regional NRM Planning for Climate Change Fund to identify priority landscapes for climate change adaptation and mitigation, and for management actions to increase landscape resilience to climatic and other change drivers. The Spatial Assessment Tool will also help local governments to assess how climate change will impact significant landscapes.

Local Government and climate change

Climate change will impact most areas of Council business. The Australian Local Government Association notes the impacts of climate change on local government (Gero et. al. 2012, p3) are wide and varied and include:

- Planning policy and development assessment
- Litigation
- Coastal infrastructure
- Economic Development and Tourism
- Social and community planning
- Provision and use of recreational facilities
- Maintenance of recreational facilities
- Health services; Community/workplace health
- Emergency/bushfire management
- Agriculture/biosecurity
- Natural resource management/coastal management
- Weed/pest management
- Biodiversity Protection
- Water and sewerage services
- Stormwater and drainage
- Wastewater
- Water supply

Benalla Rural City Council is one of a number of Councils across Victoria that have climate change planning in place. In 2012 the Council adopted a Climate Change Adaptation Action Plan. Helpful guides for how the Benalla Rural City Council can update climate change adaptation planning include:

- The Goulburn Broken Greenhouse Alliance Regional Climate Change Adaptation Plan

- A report by Stefanie Pillora (2011) from the University of Technology Sydney Centre for Local Government titled “Australian Local Government and Climate Change”
- A background report prepared for the National Climate Change Adaptation Research Facility by the University of Technology Sydney Institute for Sustainable Futures (2012) titled “Cross-Scale Barriers to Climate Change Adaptation in Local Government, Australia”
- Victorian Centre for Climate Change Adaptation Research http://www.vcccar.org.au/publications
- The Australian Centre of Excellence for Local Government (2014) Climate Adaptation Manual for Local Government – Embedding resilience to climate change.

Waste management

Benalla Rural City Council run one landfill near Benalla. They also run a fortnightly garbage and fortnightly recycling collection in urban areas, and a new weekly organics collection. Rural areas have a weekly garbage collection and fortnightly recycling collection. Households are able to choose their bin size – from 80 litre, 140 Litre and 240 litre options. They also have the choice of a 360 litre bin for recyclables as of 2015. Benalla Rural City Council developed a Waste Management and Minimisation Strategy in 2014.

A 2011 Sustainability Victoria survey ranked the Benalla Rural City Council as 60th of the 79 Victorian local governments in percentage of recyclables diverted from landfill. The survey claimed a diversion rate of 31% for the Benalla Rural City, as compared to the State average of 45%. Two hundred and seventy one kilograms of recyclable material was collected per household over the year in the Benalla Rural City (State average 279kg/yr) as compared to 515kg of rubbish (State average 488kg/yr). Sustainability Victoria Waste Audits in 2013 show a large amount of avoidable food waste (2.2kg per household per week across Victoria).

Barriers to improved waste management services

Waste management is a costly exercise and most of the costs are borne by rate payers in local government areas. The rate base of rural councils is much lower than urban councils but the distances involved for waste management vehicles and per-resident costs of landfills are significantly higher. As such, barriers to improved waste management in rural areas usually relate to costs involved with improved services. Councils may also battle with communities that are slow to demand improved services.

State and Federal Government positions on best practice waste management

Current State Government policy on waste management is articulated in *Getting Full Value: The Victorian Waste and Resource Recovery* Policy. Getting Full Value aims to:

- Have a more integrated state-wide approach to waste management
- Strengthen and support markets for recovered resources
- Make sure waste is managed in a way where resource recovery is supported and facilitated
- Reduce environmental health risks from waste
- Reduce illegal dumping
- Reform institutions around waste management.

State Government waste policy is implemented through Sustainability Victoria. Sustainability Victoria have recently looked at potential markets for a number of waste streams and have commenced a Rural and Regional Landfill Support Program to supply funding to local governments opting to close landfills in favour of larger regional landfill sites.

The North East Waste and Resource Recovery Group is one of several new regional waste and resource recovery groups charged with implementing Getting Full Value in the regions. One significant change is that e-waste will be banned from landfills and will need to have specific disposal arrangements that facilitate resource recovery. The implementation planning of this policy is still in development.

Benalla Rural City Council Waste Management and Minimisation Strategy

The Benalla Rural City Council Waste Management and Minimisation Strategy 2014-2019 outlines a strategic approach to waste management and resource recovery. The Strategy contains three priority areas: Organics diversion; resource recovery; and community education and engagement. The Benalla Rural City Council has recently commenced an organics collection in the Benalla urban area to reduce food and green waste in landfill.

The Policy Context

Aside from the State and Federal policies outlined in the previous summaries, there are two significant regional policies that influence environmental management in the Benalla Rural City.

Hume Strategy for Sustainable Communities and the Hume Regional Growth Plan

The Hume Strategy for Sustainable Communities 2010-2020 (Hume Strategy) articulates a framework to capitalise on strengths and competitive advantages to harness growth for the benefit of the region and to develop liveable and sustainable communities. It is separated into four sub-regional areas. The Benalla Rural City falls into the Central-Hume sub-region.

Benalla's location on the Hume freeway means that the town can and does play a role in the greater national economy and could be a hub for specific regional services. The Hume Strategy recognises Benalla as an area of disadvantage, and sees the economy in the central-Hume region as being driven by agriculture, retail and manufacturing. Tourism plays as a major role in the Alpine valley areas and it is possible Benalla can capitalise on through-tourist-traffic with marketing of local day-trip opportunities – particularly with rail trail connections through to Wangaratta via Winton Wetlands.

Error! Reference source not found. below outlines the framework for action in the Hume Strategy and the regional environmental priorities that are relevant for the Benalla Rural City.

Table 7 Key Priorities of the Hume Strategy

Hume Strategy framework for action	Sub-regional environmental priorities specific to the Benalla Rural City area
• **Environment: Natural resources protected and enhanced for current and future generations.** • **Communities: Healthy, vibrant and resilient communities.** • **Economic: A thriving and dynamic economy.** • **Transport: An integrated network of efficient and high functioning transportation systems.** • **Land Use: An efficient and sustainable pattern of urban and rural land use and development.**	• Ensure planning and development in the Upper Broken River catchment is consistent with Goulburn Broken regional river health objectives to substantially improve overall stream condition • Maximise potential of Winton Wetlands • Solutions for *Cabomba caroliniana* and other aquatic weeds • Potential for solar and waste-energy electricity • Investigate need for rail freight infrastructure in Benalla • Improved public transport along the Melbourne-Sydney corridor and also to other regional centres of Wangaratta, Shepparton, and Bendigo

The Hume Regional Growth Plan provides long-term strategic direction for land-use planning in the Hume Region. The Plan identifies some of the key drivers of land-use change in the Hume Region and some of the most significant challenges for growth. These are outlined in Table 8 below. Given the drivers of change and challenges identified, the overall approach of the Regional Growth Plan is

> "To support the development of a more diverse regional economy while managing and enhancing key regional economic assets. An expanded, diverse regional economic base will provide greater resilience to global changes." (RDV 2013 p18)

Table 8 Hume Regional Growth Plan drivers of change and challenges for growth

Hume Regional Growth Plan key drivers of land-use change	Hume Regional Growth Plan significant challenges for growth
• **Preparing for the potential impacts and opportunities arising from climate change** • **Impacts of climatic conditions such as long-term droughts, widespread flood and an increase in the number of days of extreme heat and fire danger** • **Environmental and heritage assets and liveability attracting visitors and new residents to the region** • **Changes in economic sectors, particularly agriculture and manufacturing** • **Economic adjustments to initiatives that support national and global action to reduce greenhouse gas emissions, such as a price on carbon**	• How to best support communities and their changing needs. • How to support the sustainability of small and rural communities. • How to assist agricultural industries to remain competitive in the face of climate change, industry restructuring, government policy, irrigation modernisation, economic conditions and pressure from non-agricultural uses. • How to meet community and business needs for transport and infrastructure, including public transport, roads, water, energy, information and communications technology, and waste management. • How to protect and enhance biodiversity, reduce the potential impacts of climate change on the natural environment and manage exposure to natural hazards, especially bushfire and flood. • How to support economic diversification.

Goulburn Broken Regional Catchment Strategy 2013-2019 (RCS)

The RCS describes the importance of the Goulburn Broken catchment in terms of its key biodiversity, land, water and social assets. It sets the priorities and targets for integrated management of land, water and biodiversity and is supported by a range of sub-strategies, such as the Goulburn Broken Biodiversity Strategy. Individual socio-ecological system plans are in the process of being developed.

Socio-ecological systems are systems of consistent social and ecological characteristics and are consistent with a systems-based or landscape-level approach. Six socio-ecological systems have been identified for the Goulburn Broken. Benalla Rural City falls within two systems – the Productive Plains and the Upland Slopes systems. Table 9 below outlines the characteristics, condition and threats for each socio-ecological system in the Benalla Rural City. For each socio-ecological system, the RCS establishes strategic priorities for addressing the risks and drivers of change in order to maximise system resilience.

The RCS takes a resilience approach, recognising that the catchment has been significantly affected by climatic events and natural disasters over the last fifteen years.

> *"Resilience is the ability of the Catchment's people and environment to absorb stress while continuing to function in a desired way… The resilience approach to catchment management focuses on the connections between people and nature, how these connections change, and what can be done to achieve desired, balanced goals for resilience." (GBCMA 2013, p13)*

The resilience approach recognises the need to adapt to drivers of change by countering risks and capitalising on opportunities. Four main drivers of change are identified, each of which has different impacts on the different socio-ecological systems. The four key drivers of change identified in the RCS include:

- Water policy reform
- Land-use change
- Climate variability
- Increased farm production

Strategic objectives are identified in the RCS for each of these drivers of change within each system.

Table 9: Characteristics of Benally Rural City socio-ecological systems identified in the RCS

Upland Slopes	Productive Plains
The slopes and valleys towards the south of the Catchment	Foothills and floodplains towards the north of the Catchment
Description • **Grazing and other agricultural enterprises in cleared valleys surrounded by partially forested hills and vegetation along waterways** • **Lake Eildon provides water for agricultural production, recreation, tourism, and river health all the way down the Catchment and beyond the boundary** • **Generational farmers live alongside increasing numbers of lifestyle properties and absentee landholders** • **Erosion, weeds and fires are among the threats to the amount and quality of highly valued water, used for many purposes**	Description • Habitat provided by vegetation along waterways, roadsides, ranges and spring soak wetlands • Dryland farming includes cattle, sheep, cropping and viticulture and many farms remain in same families for generations with average farming populations ageing • Rivers and creeks in moderate condition and wetlands in moderate to good condition • Landcare and conservation management networks establish sustainable farming practices and protect threatened species • More habitat loss, ageing farming populations and declining social connection are threats to biodiversity and farming futures
Condition • **Biodiversity good in terms of extent, although fragmented and disconnected.** • **Many large, old trees and native pastures on private land. Public land supports large forest blocks.** • **Threats to biodiversity include fragmentation and land-use change.** • **Bushfires in 2006 and 2009 have affected soil health and erosion.** • **Significant invasive species' threats include rabbits and blackberries.** • **Goulburn River in a poor state, largely due to water regulation.** • **Waterway threats include erosion run-off, point-source pollution, and flow regime change.**	Condition • Strong social networks • Biodiversity highly fragmented • Major threats include erosion, dryland salinity, continued fragmentation and loss of diversity, and pest plants and animals. • Soil condition sustains a range of land-uses but needs to be managed • Waterways and wetlands in moderate condition • Aquatic pests are a significant threat

Local Benalla Rural City Council legislation and policy

Overarching Council policy is presented in the Council Plan, the Council Planning Scheme (including the Municipal Strategic Statement) and Local Laws. The Council Plan contains five strategic objectives. One of these specifically aims to achieve appropriate land use and environmental sustainability. Development of this Environment Strategy is an action under this strategic objective.

The Planning Scheme sets out policies and requirements for the use, development and protection of land. It defines the objectives of planning, the State Planning Policy Framework, the Local Planning Policy Framework, zones and overlays, and other provisions. The Local Planning Policy Framework contains local planning policies and a Municipal Strategic Statement, which identifies long term directions about land use and development in the municipality and presents a vision for its community and other stakeholders. This is followed by maps of land use zones and overlays that define the types of development allowed in a given area and any restrictions that may apply.

The Local Planning Policy Framework for Benalla identifies the following as key environmental issues:

- Protection of remaining native vegetation.
- Removal of native vegetation and its effect on salinity and ground water.
- Recognition of the detrimental and beneficial effects of flooding.
- Protection of landscape character.
- Control of pest plants and animals.
- Enhance biodiversity conservation and sustainability.
- Water quality protection.

Local laws can be found on the Council website www.benalla.vic.gov.au. Local laws are legislation specific to the Benalla Rural City area. The Community Local Law includes a section on the environment. This is limited to the following:

- Amenity of land and property.
- Waste management on building sites.
- General waste and landfill management.
- Trees and plants on roadsides.
- Fires.
- Stormwater.
- Animal keeping.

Section Three – Action to support a healthy environment

Roles and responsibilities

Table 10 below identifies the roles and responsibilities of different agencies and groups for this Environment Strategy. While the Benalla Rural City Council is the only accountable agency for the actions contained in the Environment Strategy, achieving the overarching vision and aims of this Strategy is dependent on the mutual commitment of other agencies and groups. Table 10 identifies how different agencies and groups can help to make this Strategy a success.

Table 10: Roles and responsibilities

Agency or group	Roles and responsibilities
Benalla Rural City Council	▪ Maintaining and enforcing the Planning Scheme, including zones, and community laws. ▪ Providing incentives to encourage environmentally sensitive behaviour. ▪ Being a leader to the community by applying best environmental practice to Council business and service delivery (including management of Council land). ▪ Advocating a position on issues on behalf of the community. ▪ Distributing information and education material. ▪ Encouraging and supporting partnerships. ▪ Monitoring and improving environmental performance. ▪ Monitoring and enforcement of onsite wastewater and stormwater management
Benalla residents	▪ Be environmentally responsible citizens and actively seek to minimise environmental impacts where possible. ▪ Inform Council of environmental problems identified with Council assets.
Private land managers	▪ Manage land such that its condition is maintained or enhanced.
Business and industry	▪ Take steps to minimise their environmental impacts.
Community environment groups, and Winton Wetlands Committee of Management	▪ Inform Council of their activities so that Council is able to support them where possible. ▪ Work with the community to conserve environmental assets and help the community minimise their environmental impacts. ▪ Work with the Council to encourage complementary and collaborative strategic directions and activities of various groups.
Goulburn-Broken Catchment Management Authority	▪ Develop and implement a Regional Catchment Strategy to set out a framework for coordinating land, water and biodiversity management in the catchment ▪ Implement waterway and floodplain management ▪ Statutory referral authority under local planning provisions for development in identified floodplain areas ▪ Regulate works within bed and banks of designated waterways
North East Water	▪ Manage the infrastructure for the supply of domestic water and the management of waste water.
Goulburn-Murray Water	▪ Manage water related services in G-MW region including the supply of raw water for irrigation, domestic and stock, urban and environment.

North East Waste and Resource Recovery Group	▪ Provide cohesive and strategic direction for waste management throughout the region.
Department of Environment, Land, Water and Planning	▪ Provide policy frameworks that assist in managing natural and productive landscapes. ▪ Work in partnership with Council to support the implementation of this Environment Strategy.
Environment Protection Authority	▪ Regulate pollution and activities that have the potential to cause water or air pollution.
Sustainability Victoria	▪ Provide opportunities and programs to help Victorians use resources more efficiently and reduce environmental impacts
Victorian Local Governance Association and the Municipal Association of Victoria	▪ Support local governments by being a representative voice for multiple local governments. ▪ Support local governments by providing programs that enable action. ▪ Support local governments by brokering partnerships that allow two or more local governments to work together to achieve a common goal.

Stakeholder priorities

In July 2015 a workshop was conducted with key stakeholders to update the priorities for the Environment Strategy. The workshop was attended by representatives from the Department of Environment, Land, Water and Planning, GeckoCLan Landcare Network, Victorian Farmers Federation, Benalla Rural City Council staff, Benalla Sustainable Futures Group, Goulburn Broken Greenhouse Alliance, Country Fire Authority, and the Goulburn Broken Catchment Management Authority.

Workshop participants were informed of the community poster campaign and its findings (see Section Two: Community Aspirations and Concerns p15 above) and were asked to discuss Council's role in environmental management, environmental issues that are critical for councils, and changes that were needed in the current suite of strategic directions presented in the first Environment Strategy.

The group felt that Council's key roles in environmental management are:

- As a provider of information and to relay information
- As a model and role-model for good practice and good projects.
- To report to the community on the environment
- As a facilitator of action.
- To set and enforce local laws.
- To protect the environment through the Planning Scheme.

These roles in managing the environment spanned a number of environmental issues that the group thought were faced by Council's particularly. Pertinent environmental issues identified during the workshop were:

- Emergency management, and specifically how emergencies impact on the environment.
- Dealing with extreme heat and variability and rain events that are more spaced apart.
- Weed issues and pest animals, including where they relate to "Good neighbour" practices.
- Managing and responding to community opinions on the environment and on appropriate environmental management, which are polarised on a number of issues.
- Grappling with limitations handed down by the State Government. For example, the 40 Ha rule for rural subdivision.
- High energy use in housing and sustainability across the community.
- Demographic and economic challenges putting pressure on the environment.

- Poor subdivision design leading to increased energy use. Integrating sustainability into planning is a Council issue.
- Resource recovery and re-use.
- Energy and looking at renewable energy.
- Environmental messages
- Consumption, both community consumption and Council consumption.
- Managing energy through transport. Promotion of alternative transport means and provision of cycling routes.
- Street tree and high-value tree management.
- Remnant vegetation on subdivisions.
- Roadside vegetation management.
- Offset plantings.
- Support for community action.
- Community perceptions on fire as a management tool.

Overall, the group felt that the Strategic Directions and high level outcomes presented in the first Environment Strategy were still relevant for Council. These have been retained in this revised Environment Strategy. Some changes were recommended for the Action Plan. The Action Plan below reflects the recommendations of those in the stakeholder workshop.

Outcomes we are aiming for

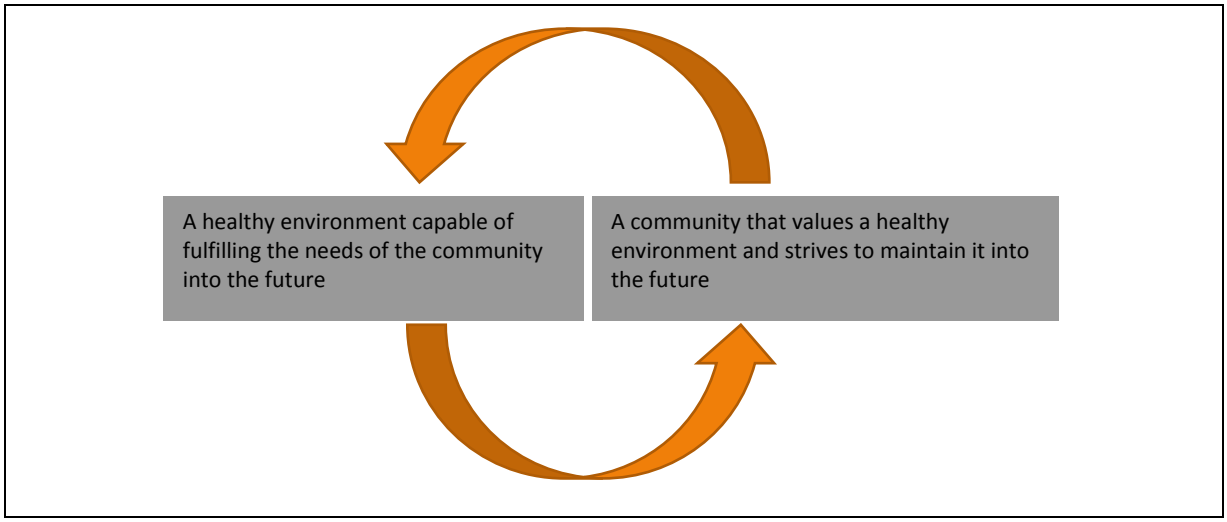
Vision

The overarching strategic document that directs Council activities is the Council Plan. The *Council Plan 2013-2017* has as its vision, **a sustainable, thriving and cohesive community where lifestyle, culture and safety are important**. The Environment Strategy is one of the ways Council will work towards achieving this vision.

Aim of the Environment Strategy

The relationship between the community and the environment is very much inter-related. Our community cannot exist without a healthy environment, and a healthy environment can only be achieved through efforts by and on behalf of the community. Putting in place an Environment Strategy recognises the importance of a healthy environment for our lifestyle and culture, and for the ability of our community to thrive.

The overarching aim of the Environment Strategy is represented by the following diagram.



Strategic directions and outcomes of the Environment Strategy

To help achieve this aim, the Environment Strategy identifies five strategic directions. Each strategic direction contains a high level outcomes to work towards. It is important to understand that these strategic directions and outcomes represent broad, high-level directions Council has identified (through discussions with the community) as being important to pursue. While Council will work towards achieving these outcomes, success does depend on the input of many others operating in the Benalla Rural City including other agencies, businesses, community groups and residents.

Table 11: Strategic Directions and High-level Outcomes

Strategic directions	High-level outcomes
1. Appropriate land-use, development and biodiversity management	1.1 Biodiversity assets in the Benalla Rural City are identified, appreciated and nurtured
	1.2 Management of threats to biodiversity has strong direction and advocacy from Council.
	1.3. Development is managed to meet community needs while avoiding and minimising environmental impacts.
	1.4 Benalla Rural City has sustainable and diverse farming systems where environmental concerns such as biodiversity, salinity, erosion and riparian areas are well managed.
2. Acting to mitigate climate emissions and adapt to climate change impacts	2.1 Future changes in our climate are anticipated and planned for.
	2.2 Council and community are reducing their greenhouse gas emissions and resource use.
3. Efficient waste management and resource recovery	3.1 There is increased recovery of resources and minimal waste to landfill through regular and diverse waste collections and support for market development in line with regional and State targets.
	3.2 Council supports and enables the community to act responsibly around waste management and resource use.
4. Strategic and collaborative water management	4.1 Council is working towards integration of water management.
	4.2 The community understands how they can be responsible water users
	4.3 Natural and man-made aquatic environments are healthy and productive.
5. Supporting and building community resilience and capacity	5.1 Community feels informed, involved and valued in environmental matters.
	5.2 Community is resilient and equipped to respond positively to stress induced by changes in the environment
	5.3 Community are informed and supported during emergency events

Accountable Outcomes and Action Plan

Each high-level outcome identified above has one or more outcomes and actions for Council. Council is accountable for achieving these outcomes through implementing the associated actions. The tables below identify the outcomes and actions for Council that will help to achieve each high-level outcome. Shaded purple are items that are new to this revised Environment Strategy. Shaded green are items that are carried over from the first Environment Strategy.

Strategic Direction 1 - Appropriate land-use, development and biodiversity management

Outcome for Council	Action	Responsibility	Timeline for implementation (financial year)	Resource Implications	Recommended method of implementation	Partner organisations or groups	Key Performance Indicators
1.1 Biodiversity assets and native vegetation in the Benalla Rural City are identified, appreciated and nurtured.							
1.1.1 Council has a better understanding of biodiversity assets on Council managed land in the Benalla Rural City and how best to manage them according to best practice.	1.1.1.1 Work with the Goulburn Broken Catchment Management Authority to understand Biodiversity Action Planning and Biodiversity Management Planning for key biodiversity sites in the Benalla Rural City and communicate key messages to the community via Council's website.	Development and Environment		Existing budget	Discussions with GBCMA	DELWP, GBCMA, Regent Honeyeater Group, Winton Wetlands, landholders	Record of discussions
1.1.2 Manage roadsides in accordance with the Roadside Vegetation Management Plan.	1.1.2.1 Implement Roadside Vegetation Management Plan	Development and Environment	Ongoing	Existing budget	As outlined in the Roadside Vegetation Management Plan	Rural residents, CFA, Community environment groups, Landcare, GBCMA, GBLGBRG	Roadside Vegetation Management Plan recommendations are implemented
	1.1.2.2 All relevant staff receive further training in the management of vegetation in accordance with the Roadside Vegetation Management Plan and the Roadside Environmental Code of Work Practice Handbook.	Development and Environment Infrastructure	Ongoing	Existing budget	Review work plan annually and training needs for individual staff	Infrastructure Team, GBLGBRG, Landcare	Compulsory training identified for Infrastructure Team and included in performance planning.
	1.1.2.3 Make the permit process for roadside pest plant and animal control easy to follow and implement	Development and Environment	2016/2017	Existing budget	Review and streamlining of the permit process	Landholders, GeckoCLan, Regent Honeyeater Group, DELWP, GBCMA	Changes made to the permit process
1.1.3 Council supports landholders to improve management of remnant vegetation on private land.	1.1.3.1 Research and implement the feasibility of an appropriate incentive program to support landholders who manage land for conservation purposes and promote other available incentives.	Development and Environment	2016/2017	Existing budget	Report to Council. Information on incentives available on website.	GBCMA , Trust for Nature, Regent Honeyeaters Group, DELWP, VFF, GeckoCLan	Landholders managing land for conservation are receiving benefits or incentives.
1.1.4 Community appreciates and respects remnant vegetation on private and public land and roadsides.	1.1.4.1 Support the Regentl Honeyeater Group to continue working with the community to enhance remnant vegetation	Development and Environment	Ongoing	Existing budget		Regent Honeyeater Group	
	1.1.4.2 Investigate the financial and operational feasibility of an annual voluntary revegetation program.	Environmental Sustainability	2017/2018	Existing budget	Report to Council.	Regent Honeyeater Group, GBCMA, DELWP, GBLGBRG	Report to Council, evidence of decision making process.
1.1.5 Develop strong relationships between Council and agencies and community groups managing	1.1.5.1 Council continues to actively participate in regional network groups to promote best practice in environmental management. Eg. Goulburn Broken	Development and Environment	Ongoing	Existing budget	Ensure consistent participation and communication to Council and community. Work to match projects	GBCMA , GBGA, GBLGBRG, NELGEN, Land and	Current membership with all relevant groups

Outcome for Council	Action	Responsibility	Timeline for implementation (financial year)	Resource Implications	Recommended method of implementation	Partner organisations or groups	Key Performance Indicators
other environmental projects so mutual benefits can be achieved.	Local Government Biodiversity Reference Group, North East Local Government Environment Network, Land and Biodiversity Implementation Forum, NEWRRG, GBGA, Landcare				to grant options. Work into staff work plans. Active participation in the 'Backbones to Biolinks' project of the GBLG Biodiversity Reference Group.	Biodiversity Implementation Forum, NEWRRG, Landcare	is maintained. Council participates in at least 70% of meetings annually.
	1.1.5.2 Council publicly supports local environment initiatives through the media and uses information	Environment al Sustainability, Communications	Ongoing	Existing budget	Council Column in the Ensign to include a 'Green Corner' to advertise Council and community environment activities and initiatives	GBCMA , Community Groups, DELWP	Community groups surveyed mid-ES implementation (2018). They are aware of the opportunity to contribute to the Green Corner.
1.2 Management of threats to biodiversity has strong direction and advocacy from Council.							
1.2.1 Council is managing pest plants and animals within a framework that gives clear direction for management priorities.	1.2.1.1 Review DEDJTR approved Pest Plant and Animal Action Plan.	Development and Environment	2017/2018	Plan for in existing budget	Identify priorities for pest management throughout the community ▪ Research best practice examples for local government ▪ Include review of weed classifications ▪ Ensure that information provided is the most up-to-date research at time of publication with ongoing review of control methods and eradication techniques	DEDJTR, DELWP, GBCMA, Winton Wetlands, Regent Honeyeater Group, Landcare, VFF, Rural residents	Pest Plant and Animal Plan is adopted by Council and is being implemented. Mid ES survey of residents receives positive feedback.
1.2.2 Council responds when informed of breaches in the Community Local Laws.	1.2.2.1 Enforcement is undertaken in cases of breaches in Local Laws	Compliance	Ongoing	Existing budget			Record of breaches and actions taken.
1.2.3 Develop programs to encourage the community to act responsibly around natural resource use.	1.2.3.1 Continue to implement the Community Firewood Policy developed in 2012. Review and update the policy in 2017/2018	Environmental Sustainability, Compliance, Infrastructure	Ongoing	Existing budget		DELWP, Local contractors.	Supply and distribution of firewood is being actively managed. Mid ES survey receives positive feedback.
1.3 Development is managed to meet community needs while avoiding and minimising environmental impacts.							
1.3.1 Planning and development of all development proposals includes environmental assessment that addresses collective resource use, drainage, public and open space and walking and public transport options.	1.3.1.1 Advocate for the Infrastructure Design Manual to be updated to include best practice standards for water management in the design phase and during construction and occupation.	Development and Environment	Immediate and ongoing	Existing budget	Ongoing enhancements to Infrastructure Design Manual (IDM) and procedural improvements for monitoring. Integrate the recommendation s of 'Adapting to a low water future' in relation to changes to local planning schemes and sustainable water	Regional IDM group. Local contractors.	

Outcome for Council	Action	Responsibility	Timeline for implementation (financial year)	Resource Implications	Recommended method of implementation	Partner organisations or groups	Key Performance Indicators
					management		
	1.3.1.2 Council uses online sustainable design tool (eg BESS) as part of planning approvals process, identifies appropriate environmentally sustainable design features for the built environment for the Benalla area, and informs and supports developers to encourage incorporating them into new developments. Examples include energy efficient building design and innovative water treatment design.	Development Department, Communications	2016/2017	Existing budget	Referral to BESS or like tool to assess design status. Promote technologies used. Facilitate open days for high profile sites.	Draft-persons and architects, Private Certifiers, BSFG	
	1.3.1.3. Ensure Overlay data is current, land is zoned appropriately, and information channels within Council and with other agencies are open so that environmental impacts are avoided	Planning	Ongoing	Existing budget	Part of performance reviews for planners		Performance reviews
1.4 Benalla Rural City has sustainable and diverse farming systems where environmental concerns such as biodiversity, salinity, erosion and riparian areas are well managed.							
1.4.1 Council supports sustainable farming practices in the community.	1.4.1.1 Council refers individual landholders to the relevant Authority when seeking to develop whole farm plans.	Planning	Ongoing	Existing budget	Encourage landholders to approach Council early when initiating whole of farm planning processes.	GBCMA and Landholders. VFF and GeckoCLan	Positive feedback from landholders developing whole farm plans
	1.4.1.2 Investigate how to support more produce gardening in Benalla to support future food security. Implement best options.	Development and Environment	2016/2017	Existing budget	Work with community groups to enable community gardens and food production on designated sites.	DHHS, DELWP, Foodshare, Retailers and Producers, Benalla West Community Garden, Community farm.	Community gardens established
1.4.2. Council supports innovative waste water management systems on rural properties	1.4.2.1. Investigate alternative Onsite Waste Water Management where appropriate, implement the best options through implementation of the Domestic Waste Water Management Plan	Development Department	Ongoing	Unknown	Implement Domestic Waste Water Management Plan	GMW, North East Water, DHHS, DELWP, EPA	Domestic Waste Management Plan being implemented.
1.4.3. Ensure landholders have access to the best information on environmental management and management of environmental threats.	1.4.3.1. Update information in new resident kit and website with direction on best environmental practice and sites to visit for more detailed information on environmentally appropriate land management	Development and Environment	2017/2018	Low	Environment Sustainability to maintain a list of web links for assistance and a small brief on easy steps to manage environmental impacts		Written information is available
	1.4.3.2 Work with GeckoCLan to investigate the feasibility of holding new landholder information sessions	Environment al Sustainability	2016/2017	Low	Communicate with GeckoCLan and organise an annual information evening	GeckoCLan	Information sessions conducted if feasible

Strategic Direction 2 - Acting to mitigate climate emissions and adapt to climate change impacts

Outcome for Council	Action	Responsibility	Timeline for implementation (financial year)	Resource Implications	Recommended method of implementation	Partner organisations or groups	Key Performance Indicators
2.1 Future changes in our climate are anticipated and planned for.							
2.1.1 Impacts of climate change are identified and adaptive strategies are implemented to ensure Council programs are able to deal with changes in climate.	2.3.1.1 Implement Climate Change Adaptation Action Plan and ensure it is updated every five years. Integrate with relevant actions recommended by the Goulburn Broken Greenhouse Alliance.	Development and Environment , all staff	Ongoing	May require additional funds for some actions	Ensure actions from Climate Change Adaptation Action Plan are entered into performance planning software. Review Action Plan every five years.	GBGA	Implementation of Climate Change Action Plan as evidenced through performance planning software and performance reviews. Report to Council on review of Action Plan
2.2 Council and community are reducing their greenhouse gas emissions and resource use.							
2.2.1 Council is a leader to the community in ways to reduce greenhouse gas emissions and resource consumption.	2.2.1.1 Use the tool developed in the Resilient Community Facilities project to identify retrofits that will result in a more sustainable building for buildings that are scheduled for maintenance or upgrade.	Facilities, Asset	Ongoing	Part of building assessments that inform maintenance schedules	Facilities manager and asset manager use tool to identify best value retrofits	Other NE Councils involved in the Resilient Community Facilities project	Assets and Facilities staff are trained in use of the tool and sustainability features are a component of building maintenance needs
	2.2.1.2 Offer the community the opportunity to receive Council notices via email.	All Council sections	Ongoing	Existing budget	Communications Team have already started compiling a database of email addresses. Expand to include Rates Section if possible under legislation.	All staff	Database is accessible by all staff. Number of residents receiving notices by email has increased.
	2.2.1.3 Incorporate a sustainability objective into Council performance planning to support staff to undertake projects and activities with positive environmental outcomes	Human Resources, LeadershipTeam	2017/2018	Existing budget	Performance plan review and incorporate achievements into Council formal reporting.	All staff	Implemented by 2017/18
	2.2.1.4 Continue to undertake ongoing environmental training with staff and Councillors.	Human Resources, Environment al Sustainability	Ongoing	Existing budget	Identify environmentally focussed staff training and offer to staff for PD	All staff,	Environmentally focussed training identified
	2.2.1.5 Strengthen the process for environmental performance to factor into decision making when Council builds new, or renews assets and upgrades infrastructure, include the feasibility of renewable energy options.	Development and Environment	2016/17	Existing budget	Capital Works Reference Group to develop an Assessment Tool for Capital Works Projects	Sustainability Victoria and other Council sections	Report design features, in project work; estimated and actual benefits reported annually

Outcome for Council	Action	Responsibility	Timeline for implementation (financial year)	Resource Implications	Recommended method of implementation	Partner organisations or groups	Key Performance Indicators
	2.2.1.6 Evaluate benefits and costs for Council policy to make any new Council buildings be seven-star energy rated.	Development and Environment	2017/2018	Existing budget	Leadership Team to assess and determine a policy statement to this effect.		Evidence of decision making process.
	2.2.1.7 Continue support and work of the Council 'Green Team' to drive sustainability initiatives across Council Teams and operations.	Development and Environment, all of Council	Ongoing	Existing budget		All staff	Documented improvements from 'Green Team' actions.
	2.2.1.8 Council informs, supports and advocates innovative sustainability programs to the community	Development and Environment, Communication, Economic Development	Ongoing	Existing budget or grants where applicable	Keep informed of grant opportunities and opportunities to collaborate with other local governments to implement sustainability projects in the community	GBGA, NELGEN, Sustainability Victorian, Hume Business Champions, Benalla Business Network	
2.2.2 Council understands sources and quantities of energy and water use and is working towards identified improvement targets.	2.2.2.1 Put in place a mechanism for measuring resources use within Council to be able to implement strategies for reducing consumption.	Council Green Team (Strategies for reducing consumption) Finance (Monitoring resource use)	2017/2018	Medium	See ▪ Sustainability Victoria Utility Tracker for Local Governments ▪ The Sustainability Victoria 5Star Sustainability Assessment for Local Governments. ▪ Planet Footprint environmental scorekeeping.	All staff. Potentially GBGA	Report annually on outcome.
2.2.3 Businesses are supported by Council to reduce resource use and transition to a green economy.	2.2.3.1 Where practical, Council to implement or support initiatives for businesses such as 'Grow me the Money'.	Economic Development	Ongoing	Existing budget	Continue to look into State, Federal and NGO opportunities that encourage businesses to reduce environmental impacts. Implement those that are feasible in the Benalla community.	GBGA, Sustainability Victoria, Hume Business Champions, Benalla Business Network, State and Federal Government Departments and NGOs implementing sustainability initiatives for business.	Report to EDAC of activities.

Outcome for Council	Action	Responsibility	Timeline for implementation (financial year)	Resource Implications	Recommended method of implementation	Partner organisations or groups	Key Performance Indicators
3.1 There is increased recovery of resources and minimal waste to landfill through regular and diverse waste collections and support for market development in line with regional and State targets.							
3.1.1 Council is working collaboratively with other Councils and government agencies to implement new waste solutions in line with the Statewide and Regional Waste and Resource Recovery Infrastructure Plans.	3.1.1.1. Be an active participant in, and supportive of, the NERWRRG	Waste Management	Ongoing	Existing budget	Participate actively in NERWRRG activities	NERWRRG and other NE local governments	Meetings attended.
	3.1.1.2 Work with government agencies implementing community waste management initiatives and advocate for convenient access to national and Statewide high-impact waste programs. For example:: ▪ Clean up Australia Day ▪ ChemCollect ▪ Drum Muster ▪ PlasBack silage wrap ▪ Detox your Home ▪ Keep Victoria Beautiful, Adopt a Road Program	Waste Management	Ongoing	Existing resources	Aim for an annual opportunity for each program. Evaluate options to increase participation by residents and businesses.	Sustainability Victoria, EPA, Litter Prevention Group, Community.	Monitor participation rates.
	3.1.1.3 Work collaboratively on regional projects that seek to increase resource recovery, build markets for post-use resource streams, and improve economies of scale for waste-based industries.	Waste Management, Development and Environment	Ongoing	Existing resources and special grants where appropriate	Use and participate in regional forums to ensure engagement in regional projects and regional funding applications as they arise	NERWRRG, GBGA, NELGEN	Monitor participation rates
3.1.2 Waste management services are strategic, designed to meet the needs of urban and rural residents, business and industry, and addresses public spaces as well as residential and commercial areas. (includes e-waste, hard waste, recycling, organics, hazardous waste and waste to landfill)	3.1.2.1 Continue to implement the Waste Management and Mitigation Strategy	Waste Management	Ongoing	Existing resources		NERWRRG	Reporting of achievements annually.
3.2 Council supports and enables the community to act responsibly around waste management and resource use.							
3.2.1 Council has in place infrastructure and programs in the community to enable more effective treatment of public place waste.	3.2.1.1 Incorporate education on waste minimisation and management in the Waste Management and Mitigation Strategy. Seek out opportunities for the Waste Management Team and the Environmental Sustainability Team to work together to achieve multiple goals.	Waste Management , Environmental Sustainability	Ongoing	Existing budget and seek additional funding	Liaise with State and Federal Governments and NGOs to implement initiatives	Sustainability Victoria, EPA, Litter Prevention Group, DSEWPC	Council achieves at least five waste education activities. Include in quarterly reporting.
	3.2.1.2. Develop a long-term strategic approach to public place recycling litter prevention and organics	Waste Management	2017/2018	Low	Liaise with NERWRRG and GBGA	NERWRRG, GBGA, Sustainability	Strategy written and being implemented

Outcome for Council	Action	Responsibility	Timeline for implementation (financial year)	Resource Implications	Recommended method of implementation	Partner organisations or groups	Key Performance Indicators
	separation.					Victoria, Litter Prevention Group	
	3.2.1.3 Council to improve visibility and performance of event trailer.	Event Management	Ongoing	Existing budget		Event organisers.	Event organisers monitor waste amounts. Encourage organisers to aim for recycling to compose 50% of event waste.
3.2.2 Council has formed partnerships with businesses and community groups to reduce resource consumption and waste in the community	3.2.2.1 Explore the further potential for a ban on plastic bags and/or bottled water in Benalla. Implement a feasible program.	Environmental Sustainability	2016/2017	Existing budget	Work with community groups, residents and businesses to understand support for such a program. Develop an options paper. Implement program that is cost-effective and likely to have the support of the community. Consider trials of different options during key times (eg. National Environment Week).	Sustainability Victoria, BSFG, NE Water.	Community support is surveyed. Options paper created. Feasible program implemented.

Strategic Direction 4 - Strategic and collaborative water management

Outcome for Council	Action	Responsibility	Timeline for implementation (financial year)	Resource Implications	Recommended method of implementation	Partner organisations or groups	Key Performance Indicators
4.1 Council is working towards integration of water management.							
4.1.1 Understand what integrated water management would look like in Benalla Rural City.	4.1.1.1 Map the various components of water management that fit within the role of Council.	Executive Management	2016/2017	Existing budget	Model the different components of water management within the Benalla Rural City Council role and the relationships between each of them.	Winton Wetlands, NEW, GMW, GBCMA	Model established
	4.1.1.2 Council continues to participate in regional working groups, including the Goulburn Broken Water Quality Coordination Group, to collaborate on water quality issues throughout the municipality	Development and Environment	Ongoing	Existing budget	Participate in regional forums to share information and identify issues to collaborate on.	Goulburn Broken Water Quality Coordination Group, GBCMA, NEW, GMW, DELWP, neighbouring councils	Meeting attendance.
4.1.2 Develop the institutional structure necessary to achieve a greater level of integration in water management within Council.	4.1.2.1. Establish an Integrated Water Management team within Council made up of people from each department that has a role in management of water in the Benalla Rural City Council.	Executive Management	2016/2017	Existing budget	Team meets regularly to strategize ways to better integrate water management in new infrastructure and upgrades to infrastructure		Team established
4.2 The community understands how they can be responsible water users.							
4.2.1 Council provides information on integrated water management	4.2.1.1. Put up a page on the website to inform people around options available for components of water systems so residents can make better choices. .	Environmental Health	2016/2017	Low	Gather information and work with IT	DELWP	Web page established
4.3 Natural and man-made aquatic environments are healthy and productive.							
4.3.1 Council advocates for community concerns and improved management.	4.3.1.1 Review the 2007 Lake Benalla Environs Study to evaluate the success of implementation measures.	Planning		Additional resources required	Review to occur as part of the Planning Scheme review conducted after 3 years of implementation	Community, Landholders, State Agencies, Traditional Owners	Report plan achievements and shortcomings.
	4.3.1.2 Continue to work to control and eradicate Cabomba in Lake Benalla.	Development and Environment	Ongoing	Existing budget	Consider a range of control methods such as revegetating native aquatic plants to remove nutrients from the water.	DELWP, GBCMA, GMW	Cabomba levels are reduced.
4.3.2 Sources of pollution into waterways are reduced.	4.3.2.1 Septic tank and leachate management is improved through working with residents and/or providing incentives to identify and retrofit old and inefficient systems.	Environmental Health	Ongoing current program	Existing budget	Staged implementation of Domestic Waste Water Management Plan	NEW, Plumbing industry, EPA, DELWP.	Annual report of achievements.
	4.3.2.2. Ensure compliance around run-off from building sites	Compliance, Building	Ongoing	Existing budget	Checks are adequate		No complaints from the public around pollution from building sites.
	4.3.2.3 Council works with relevant agencies during	Development and	Ongoing	Existing budget	Continue to participate in Goulburn	Goulburn Broken	

Outcome for Council	Action	Responsibility	Timeline for implementation (financial year)	Resource Implications	Recommended method of implementation	Partner organisations or groups	Key Performance Indicators
	emergency and recovery events to ensure potential impacts to water quality are addressed.	Environment			Broken Water Quality Coordination Group and Contingency Working Group	Water Quality Coordination Group – Contingency Working Group, State Agencies	
	4.3.2.4. See public place litter prevention 3.2 above						

Strategic Direction 5 - Supporting and building community resilience and capacity

Outcome for Council	Action	Responsibility	Timeline for implementation (financial year)	Resource Implications	Recommended method of implementation	Partner organisations or groups	Key Performance Indicators
5.1 Community feels informed, involved and valued in environmental matters.							
5.1.1 Community are informed about the Environment Strategy	5.1.1.1 Consultation and Community Plan includes specific action around informing the community on Environment Strategy content and priorities. Communications mechanisms include social media platforms as well as traditional avenues.	Environmental Sustainability, Communications	Ongoing	Existing budget	▪ Identify communication and information needs. ▪ Organise information content. ▪ Work with Public Relations to present and disseminate information. ▪ The use of any relevant recommendations from existing studies.	All staff, all stakeholders	Community feedback gathered during regular surveys indicates an awareness of environmental messages.
	5.1.1.2 Effective engagement with the community around the Environment Strategy.	Development and Environment	Ongoing	Existing budget	Engage with schools and community or environment groups around appropriate environmental improvement works. Eg: offset tree planting.	All staff, all stakeholders	Where appropriate, environmental improvement works have a component of community involvement.
5.1.2 Community are informed about how they can influence sustainability through design and building practices for residences.	5.1.2.1. Planners advertise for developers to contact them early in the planning process, and direct customers to information on more sustainable building and design.	Development	Ongoing	Existing budget	Identify great places for the pubic to get good information on sustainable building and design	BSFG, GBGA	Planners and building inspectors to report on number of more sustainable builds (greater than 7 star energy efficiency and/or WSD features). Information available on website.
5.1.2 Community groups and projects are recognised and supported by Council where practical.	5.1.2.1 Community groups running environmental activities are able to put event information in the Ensign Council column.	Environmental Sustainability , Communications	Ongoing	Existing budget	Council Column in the Ensign to include a 'Green Corner' to advertise Council and community environment activities and initiatives	Community Groups	Monitor numbers of community environmental events and opportunities advertised in this way.
	5.1.2.2 Council sponsors an annual 'Environmental Management and Sustainability' award as part of the annual Benalla Business Awards.	Environmental Sustainability, Economic Development	Annually	Existing budget	Work with the Benalla Business Network to sponsor an Environmental Award with Council naming rights.	Benalla Business Network.	Award sponsorship is implemented. Report achievement.
	5.1.2.3 Continue to offer a Council scholarship to reward local students undertaking sustainability initiatives.	Development and Environment, Community Development	Annually	Existing budget		Communicatoins, Secondary Schools, Training institutions.	Scholarship awarded. Report achievement.
5.1.3 Community has a stated common vision for development.	5.1.3.1 Council to work with community to develop a community development charter that includes environmental awareness and capacity building.	Community Development, Development and Environment	2017/2018	May require additional funds	Review other local government community development charters. Engage the community using a range of different mechanisms to	Residents, business and industry, agriculture, all staff.	Report investigations and outcomes. Feedback shows ownership by the community.

Outcome for Council	Action	Responsibility	Timeline for implementation (financial year)	Resource Implications	Recommended method of implementation	Partner organisations or groups	Key Performance Indicators
					target different sectors of the community		

5.2 Community is resilient and equipped to respond positively to stress induced by changes in the environment							
5.2.1 Council understands how the community is vulnerable to predicted changes in climate and acts to reduce vulnerabilities and build community resilience.	5.2.1.1 Municipal Health and Wellbeing Plan adequately captures how climate change influences vulnerability and takes steps to build resilience to climate change impacts where they impact on community vulnerability.	Community Services and Development and Environment	2017/2018	May require additional funds	Employ a consultant to ensure climate response is included with the next update of the Municipal Health and Wellbeing Plan	Community health groups.	Updated MHWP that addresses vulnerability exacerbated by climate change
	5.3.1.2 Investigate how best to support community in transitioning away from peak oil and towards a Carbon Pollution Reduction Scheme, including options in sustainable energy.	Development and Environment and SMT	2018/2019	Low-medium funding required	Investigate impacts on different sectors of the community. Identify actions that will support an easier transition for the community.	Residents, businesses, industry, agriculture, RDV	Report findings. Create Action Plan for implementation in next Environment Strategy round.
5.3 Community are informed and supported during emergency events.							
5.3.1 Council has effective partnerships with key agencies	5.3.1.1 Work with agencies to update MEMP	All council	Annually	Existing budget		SES, CFA, VicPol, DELWP, Parks Vic, DHS	
5.3.2 Ensure communication networks with agencies and with the community are open and effective so that communication in an emergency is effective and recovery is supported	5.3.2.1 Continue to engage with agencies and community around planning for emergencies, including maintenance of important contact lists.	Development and Environment	Ongoing	Existing budget	.	SES, CFA, VicPol, DELWP, Parks Vic, DHS, Community	

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