PLACE MAKING ADVISORY COMMITTEE

WEDNESDAY 15 FEBRUARY 2017
Council Chambers, Ballan
3.00pm – 4.00pm

Attendees	
Cr. John Keogh, Chair	Councillor, East Moorabool Ward
Cr. Tom Sullivan	Councillor, West Moorabool Ward
Cr. Paul Tatchell	Councillor, Central Moorabool Ward
Mr Phil Jeffrey	General Manager Infrastructure
Mr Satwinder Sandhu	General Manager Growth & Development

AGENDA

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1. MEETING OPENING

1.1 Present & Apologies

2. DECLARATION OF CONFLICTS OF INTEREST

2.1 Conflicts of Interest

3. CONFIRMATION OF MINUTES

3.1 Confirmation of Minutes

Recommendation:

That the Place Making Advisory Committee confirm the minutes of the meeting held on Wednesday 14 December 2016.

4. INFRASTRUCTURE REPORTS

4.1 Request for Maintenance; Cathcart Street, Clarendon

Introduction

Author: John Miller
General Manager: Phil Jeffrey

Council has received several requests from residents of Clarendon requesting maintenance be undertaken on Cathcart Street. The residents have raised concerns about the current condition of the road surface, safety issues particularly in wet weather, the ability for emergency services to find and access their properties in an emergency, and increased risk during fires and ability for them to be able to safely evacuate.

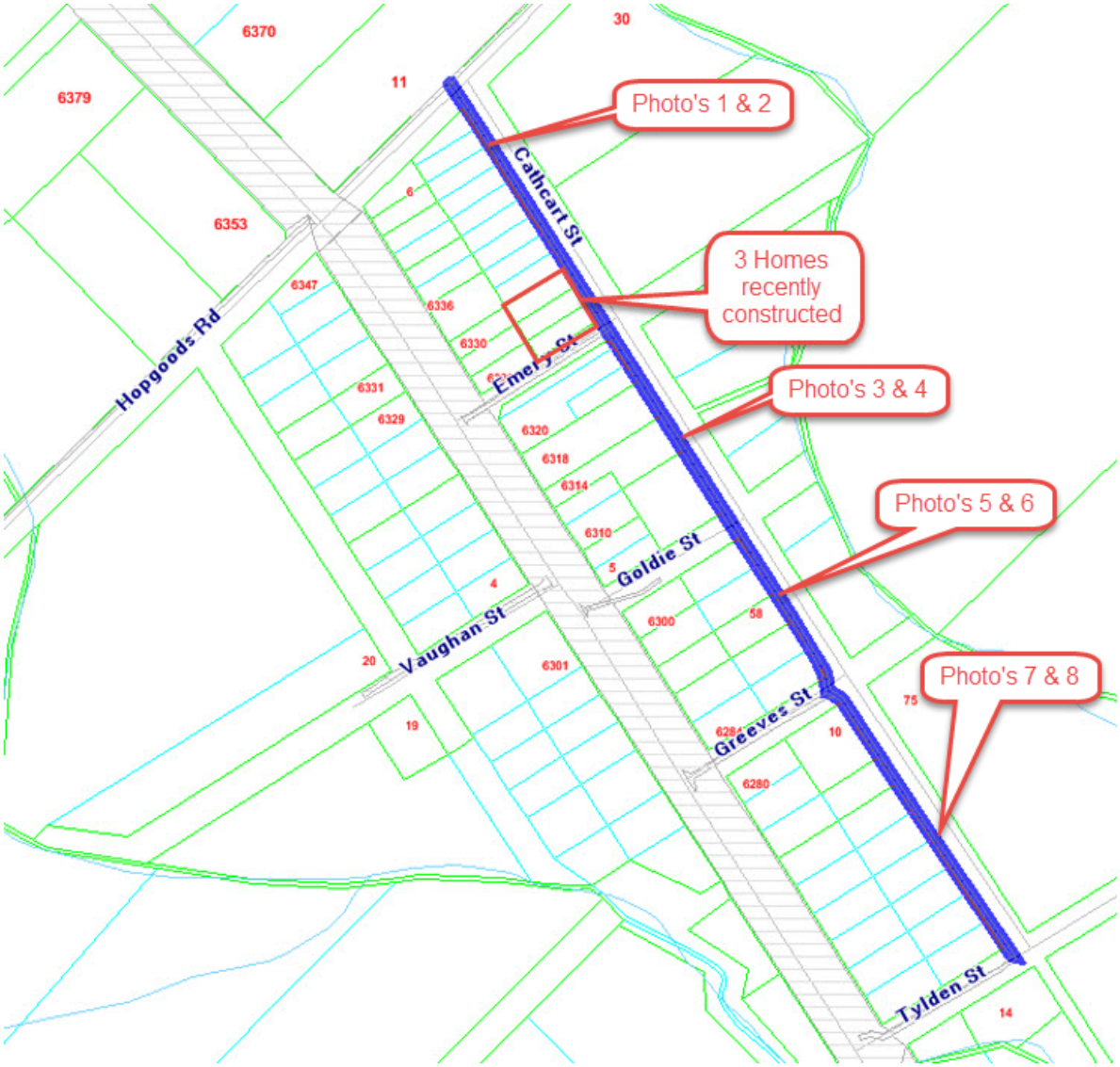
Background

The various roads in Clarendon were created prior to its official proclamation as a 'town' in 1861, whilst still known as the 'Parish of Clarendon'. All roads were created as 'government roads' and therefore 'public highways' unless otherwise licensed as an 'unused road'. Based on the current information available, Cathcart Street has not been licensed and continues to be a government road and public highway.

Many government roads within the Shire are undeveloped. Any person is legally permitted to access such roads, which are often referred to as 'paper roads'. Council is not responsible for the management and maintenance of 'paper roads' and as such, those roads are not included on Council's Register of Public Roads.

This section of road is approximately 1,000m in length and runs between Clarendon-Lal Lal Road and Tylden Street.

The request for maintenance of this 'paper road' has recently become topical as the original land owner is selling separate allotments. This does not require a Planning Permit as the lots have individual titles, however as a result, houses are being constructed without access to a formal road. Three homes have been recently constructed, however there is potential for another 30 homes to be constructed in the future. See the map and image below.



Cathcart Street (paper road) is a 1,000m long natural surface currently fenced for 205m from the intersection of Clarendon-Lal Lal Road by the owner of 30 Clarendon-Lal Lal Road, Clarendon. A notice has been sent to the property owner to remove the existing fence from the road reserve.

The remaining part of road is mostly unformed with a natural surface and is accessible by vehicles. However, the section between Emery Street and Golden Street, and Greevers Street to another 108m towards Tylden Street has been surfaced with gravel by neighbouring property owners. These sections are not properly constructed as an 'unsealed road' in accordance with Council or Australian Standards for road construction.

The images below show the current condition of Cathcart Street (Paper Road).

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

Photo 7

Photo 8

Proposal

Notwithstanding the above, Council is not obliged to assume responsibility for any ‘paper road’ until it has made a decision under the Road Management Act 2004, that the road is reasonably required for general public use. Council's RMP sets the criteria for when a road will be deemed required for general public use and subsequently added to its register of public roads and managed accordingly.

In this case, even with the construction of dwellings, the criteria under the RMP is not met and typically would not be considered for addition to the Road Register.

There are 2 options available for Council to consider:

1. **Maintain the Status Quo**

   Do nothing, leaving access to properties as the responsibility of the property owners and continue to receive complaints.

2. **Initiate a Special Charge Scheme**

   The Local Government Act 1989 provides Council with the ability to introduce a Special Rate or Charge Scheme seeking property owner contributions toward infrastructure projects such as roads.

   Council formally adopted a Special Rates and Charges Policy on 5 February 2014. The policy acknowledges that Council does not necessarily have the financial resources or receive enough external grants funding to meet all of the infrastructure demands in the municipality and that where it can be demonstrated that properties will receive a special benefit from implementing necessary infrastructure work, Council may implement a Special Rate or Charge process to provide some or all the necessary funds.

   This also provides an avenue for projects that may be a low priority in Council's Long Term Capital Improvement Program to be fast tracked.

   A special charge scheme could be implemented to construct the road with contributions from adjoining land owners. This would provide a further two options for Council to consider.

   1. Construct a 100m section of Cathcart Street to service the 3 recently constructed residences and wait for further development to take place and construct the sections as demand requires which could be up to 37 residences.
   2. Construct 1,000m of Cathcart Street to service all of the properties fronting the Road.

Policy Implications

The 2013 - 2017 Council Plan provides as follows:

Key Result Area	Enhanced Infrastructure and natural and built environment
Objective	Management of assets and infrastructure
Strategy	Proactive maintenance of roads, bridges and footpaths at documented standards in the Road Management Plan

The proposal is consistent with the 2013-2017 Council Plan.

Financial Implications

There are no financial implications associated with the recommendation within this report.

However, if Council resolved to construct the road, the upgrade would cost approximately $80,000 depending on the extent of drainage works.

Risk & Occupational Health & Safety Issues

There are no Occupational Health & Safety issues associated with the recommendation within this report.

Communications and Consultation Strategy

The property owners will be notified of the outcome following a formal resolution of Council.

Victorian Charter of Human Rights and Responsibilities Act 2006

In developing this report to Council, the officer considered whether the subject matter raised any human rights issues. In particular, whether the scope of any human right established by the Victorian Charter of Human Rights and Responsibilities is in any way limited, restricted or interfered with by the recommendations contained in the report. It is considered that the subject matter does not raise any human rights issues.

Officer's Declaration of Conflict of Interests

Under section 80C of the Local Government Act 1989 (as amended), officers providing advice to Council must disclose any interests, including the type of interest.

General Manager – Phil Jeffrey
In providing this advice to Council as the General Manager, I have no interests to disclose in this report.

Author – John Miller
In providing this advice to Council as the Author, I have no interests to disclose in this report.

Conclusion

Correspondence has been received requesting that Council construct and maintain the 'paper road' known as Cathcart Street (approximately 1000m). This request has been assessed against the criteria contained within Council's RMP and does not meet the minimum requirement for Council to consider adding this section of Road to its Road Register. There is little option but to propose a Special Charge Scheme.

Recommendation:

That the Place Making Advisory Committee:

1. **Receives the report in relation to Cathcart Street 'paper road'.**
2. **Requests that the report be presented to Council endorsing the following recommendation:**
    a) **That Cathcart Street not be added to the Register for Public Roads until upgrades are undertaken in accordance with Council standards.**
    b) **Requests officers to write to property owners along Cathcart Street 'paper road' proposing the implementation of a Special Charge Scheme.**
    c) **Acknowledge that the public and property owners are legally permitted to use this road reserve (ie. Cathcart Street 'paper road') to access property.**

5. GROWTH & DEVELOPMENT REPORTS

5.1 Sustainable Environment Strategy

Introduction

Author: Justin Horne
General Manager: Satwinder Sandhu

Background

At the November 2016 Ordinary Meeting of Council, in principle support was given and it was resolved to place the strategy on public exhibition for a period of four weeks. Due to the Christmas period the consultation period was extended to eight weeks. The consultation period closed on Friday 13 January, 2017.

Community Consultation

The community and agencies were notified of the consultation period via:

- Have your say Moorabool website;
- Facebook;
- Moorabool News; and
- Letter.

The following organisations were directly notified via letter:

- Central Highlands Water;
- Melbourne Water;
- Western Water;
- Southern Rural Water;
- Corangamite Catchment Management Authority (CCMA);
- Port Phillip and Westernport Catchment Management Authority (PPWCMA);
- Parks Victoria;
- Department of Environment, Land, Water and Planning (DELWP);
- Department of Economic Development, Jobs, Transport and Resources (DEDJTR);
- Environmental Protection Agency;
- Wathaurung Aboriginal Corporation;
- Wurundjeri Tribe; and
- Sustainability Victoria.

In total three submissions were received from:

- Moorabool Environment Group (MEG);
- Sustainability Victoria; and
- Melbourne Water.

This is in addition to the previous feedback provided by the Corangamite Catchment Management Authority and Central Highlands Water.

A summary of the submissions is provided in table 1. Full submissions are attached in appendix 1.

Table 1: Comments and Actions resulting from Submissions Received

SUBMISSION	SUMMARY OF SUBMISSION	COMMENTS	ACTIONS
Moorabool Environment Group (MEG)	• Improved protection of waterways via use of buffers • Increased use of stormwater retention ponds • Recommend development of Council policy regarding illegal dumping and littering • Recommend implementing the 'Detox Your Home' initiative to be set up within Moorabool Shire. • Increased protection of production agricultural land • Support street lighting upgrade initiative • Encourage Council to set a timeline for the implementation of solar upgrades on Council buildings • Support increased street tree plantings • Improved cycle and pedestrian connections in existing and future developments • Provide information to households about the possibility of waterless, composting toilets instead of septic or sewer connected toilets. Ensure the options are supported in shire planning law	• In partnership with water authorities, DELWP and VPA utilisation of buffers to protect and promote waterways via buffers and open space in new developments will be encouraged via existing planning controls, such as open space provisions. • In current and future greenfield developments such as Stonehill and Underbank, stormwater retention ponds have been developed and locations identified for construction. Council, in partnership with Melbourne Water, has previously investigated potential sites for construction of stormwater retention ponds in existing developments such as Darley and Ballan. • Section 4.9.1 of the Moorabool Waste Management and Resource Recovery Strategy recommends development of a Litter and Dumping Strategy. Action area 8 of the Moorabool Waste Management and Resource Recovery Strategy also outlined actions to be implemented between 2014/15 and 2025. • Detox Your Home initiative was identified for future investigation in	• Insert reference to Moorabool Waste Management and Resource Recovery Strategy

SUBMISSION	SUMMARY OF SUBMISSION	COMMENTS	ACTIONS
	• Recommend Council investigates implementing a bulk buy program for community for technology such as solar heat pump hot water systems, battery storage for solar PV households, water tanks and double glazing • Ongoing council support for community gardens is acknowledged and supported, further opportunities should be encouraged eg allowing council land to be used	the Moorabool Waste Management and Resource Recovery Strategy • Development of the Bacchus Marsh Urban Growth Strategy and Rural Growth Strategy aim to identify suitable actions to protect areas of agricultural land within Moorabool Shire. • Council have received funding to undertake energy audits of three facilities (Darley, Ballan and Lerderderg Library) with the aim to develop costings, timelines, indicative savings and energy reductions.	
Sustainability Victoria	• Highlighted the potential for increased recovery of waste in the region • Potential for significant reduction in Greenhouse Gas Emissions through reduction in methane emissions from the waste sector	• Section 4.8 of the Moorabool Waste Management and Resource Recovery Strategy recommends community consultation and review of the potential for hard waste collection in Moorabool Shire • Council has commenced a greenwaste collection service in Bacchus Marsh and Ballan	• Update strategy to include reference to the recent commencement of the greenwaste collection service in Bacchus Marsh and Ballan • Insert reference to draft Grampians Central West Waste and Resource Recovery Group Implementation Plan
Melbourne Water	• Generally supportive of the Strategy and Implementation Plan • Some minor formatting and referencing issues identified • Recommended consider including VICSES and Resilient Melbourne Office as stakeholders for section 8.3 (community climate change risk	• Noted	• VICSES and Resilient Melbourne Officer included as stakeholders • Formatting and referencing issues corrected.

SUBMISSION	SUMMARY OF SUBMISSION	COMMENTS	ACTIONS
	education and engagement) of the Implementation Plan		

Proposed Strategy Vision, Strategy Directions and Priority Areas:

During the consultation process, a Strategy Vision, four Strategy Directions and twelve Priority Areas (figure 2) were developed.

The proposed vision for the Strategy is:

> *Moorabool Shire will work to ensure the Shire has healthy ecosystems, productive landscapes, sustainable communities and the capacity to adapt to future environmental challenges.*

This vision forms the direction of the strategic directions, priority areas and the actions listed in the implementation plan.

Figure 2: Proposed strategic directions and priority areas for the Moorabool Sustainability and Environment Strategy.

Implementation Plan 2016 - 2021:

As stated previously, the intention of the Strategy is to also provide an implementation plan to assist Council departments with the delivery of programs to ensure that the vision is achieved.

The implementation plan will have a five year lifespan, and aims to assist Council with operational actions to be delivered by 2021. These will be reviewed against the objectives of the Strategy and a new implementation plan will be developed for the period 2022-2026.

During the consultation phase, the need to ensure that the implementation actions were specific, measureable and achievable. The intent is that the implementation plan is feasible to accomplish.

Proposal

Council to review the submissions and adopt the strategy subject to the changes accordingly. A copy of the draft Strategy is attached to this report for information.

Policy Implications

The 2013 - 2017 Council Plan provides as follows:

Key Result Area	Enhanced infrastructure and natural and built environment
Objective	Enhance and protect the long term integrity and biodiversity of the natural environment
Strategy	Pursue initiatives to reduce greenhouse gases, energy and water consumption. Work with Landcare networks, government and community to implement and support environmental and sustainability initiatives.

The proposal is consistent with the 2013-2017 Council Plan.

Financial Implications

There are no immediate financial implications associated with the consideration of this report. It is expected that some actions will be delivered through changes in operational and purchasing procedures. However, some larger initiatives have not been costed and would require consideration from Council as part of future capital improvement programs or through external funding (e.g. state or federal government grants).

The Strategy will guide decision making in relation to environment and sustainability over the long term (25 plus years), consequently it will require an ongoing staffing commitment across the organisation.

Where implementation of specific recommendations requires a new capital allocation from Council, these will be presented and considered as part of the overall annual budget process.

The inclusion of these projects within the Strategy is likely to improve the opportunities for gaining co-contributions from external funding sources.

Actions identified in the Strategy fall into three broad categories:

1. Policy and procedural consideration for energy and water efficient products and design at the point of purchase or construction for all new buildings and assets.
2. Upgrades to existing assets. For example, changeover of street lights to LED.
3. Behavioral change initiatives such as reducing paper consumption, teleconferencing and turning off lights.

These actions all have the potential to provide long-term cost savings to Council, as well as improved environmental outcomes.

Risk & Occupational Health & Safety Issues

There are no direct Risk or Occupational Health and Safety issues associated with the recommendation within this report.

Communications and Consultation Strategy

The following methods were utilised to achieve an effective community consultation:

- Newspaper advertising;

- Social Media Links (Facebook and Twitter);
- Council website;
- Have Your Say website; and
- Media release.

Victorian Charter of Human Rights and Responsibilities Act 2006

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Officer's Declaration of Conflict of Interests

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In providing this advice to Council as the General Manager, I have no interests to disclose in this report.

Author – Justin Horne
In providing this advice to Council as the Author, I have no interests to disclose in this report.

Conclusion

The draft Moorabool Sustainable Environment Strategy provides Council with policy direction and an implementation plan relating to its role in managing the local environmental assets and promoting sustainability through a variety of actions.

The actions identified in the Strategy, have been developed and reviewed internally by operational departments to ensure that they are achievable and provide a direct financial benefit to Council and ratepayers.

At the November 2016 Ordinary Meeting of Council, Council was provided in principle support prior to the completion of community consultation.

Stakeholder and community feedback to the strategy and implementation plan has been completed with changes to the document included as discussed in Table 1 of this report.

Recommendation

That the Place Making Advisory Committee:

1. **Note the submissions and amendments as proposed in the draft Moorabool Sustainable Environment Strategy; and**

2. **Support a report being presented to the April Ordinary Meeting of Council for adoption of the subject strategy.**

5.2 Flood Modelling Peer Review

Introduction

Author: Rod Davison/Andrew Goodsell
General Manager: Satwinder Sandhu

Summary

The purpose of this report is to inform Councillors about a proposed peer review of the flood modelling that was undertaken by Melbourne Water on behalf of Moorabool Shire Council and was used as the basis for Moorabool Planning Scheme Amendment C73 (flood controls). Amendment C73 applied to the catchments of the Werribee River, Lerderderg River and Little River, including rural areas and the major population centres of Bacchus Marsh and Ballan.

The peer review could be undertaken in either of the following ways, with the preference being for option 2 for reasons outlined in this report:

1. Melbourne Water commissions peer review, selects consultants and pays for all assessments.
2. Council commissions peer review, independent of Melbourne Water, but funded by Melbourne Water. In this case Council would select consultants.

In either case, the peer review report would be tabled with Place Making Committee and ultimately at an Ordinary Meeting of Council. Once that work is tabled, Council will be better placed to determine whether the data and processes used to derive the proposed LSIO and SBO in Amendment C73 are fit for the purpose of informing planning decisions relating to the development of land.

Background

On 1 November 2013, Melbourne Water requested an amendment (Amendment C73) to the Moorabool Planning Scheme to introduce flood controls. The proposed controls included the Land Subject to Inundation Overlay (LSIO), the Special Building Overlay (SBO), updates to the Municipal Strategic Statement, a new local planning policy relating to floodplain management, and the addition of three new reference documents (i.e. three flood mapping reports that provide the basis for the LSIO and SBO). Attachment A outlines the responsibilities of Melbourne Water and Council in respect to Amendment C73.

At its ordinary meeting on 3 June 2015, Council resolved to seek authorisation from the Minister for Planning to prepare and exhibit Amendment C73. On 21 August 2015, Council was granted authorisation by the Minister to prepare and exhibit Amendment C73.

Amendment C73 was subsequently exhibited and Council received 44 submissions, including 36 submissions which either objected or sought changes to the Amendment. At a Special Meeting of Council on 22 June 2016, Council considered the submissions received together with the officer recommendation that Council resolve to:

1) Request the Minister for Planning to appoint a Planning Panel under Part 8 of the *Planning and Environment Act 1987* for Amendment C73.
2) Refer Amendment C73 (including submissions) to the Planning Panel for consideration.
3) Adopt a position on submissions to Panel as outlined in the Table to Attachment 3 (i.e. Attachment 3 to the Council agenda of 22 June 2016).

A number of submitters spoke at the Council meeting, some of whom raised concern about potential for inaccuracies in the flood modelling and mapping. Council consequently resolved to abandon the Amendment.

As far as can be determined, no other Victorian Council has ever abandoned a flood mapping amendment to its planning scheme based on Melbourne Water modelling, with all amendments being referred to a Planning Panel and ultimately being gazetted. Moorabool Shire's decision to abandon Amendment C73 is therefore somewhat unusual.

The need for a peer review of Melbourne Water's flood modelling was discussed at the Council meeting on 22 June 2016. The opportunity to test the different opinions evident within the Council meeting via a Planning Panel was not taken.

A Planning Panel would provide an opportunity for Melbourne Water, Council and submitters (including any experts) to present their respective cases in a fair and equitable forum. The following is a pertinent extract from the Panel report relating to Bass Coast Amendment C82:

> *"The Panel acknowledges the inherent inaccuracies in some of the methodologies adopted by the Proponents in obtaining topographic data (generally using LiDAR mapping) and modelling predicted flood levels, specifically using the 'bathtub model' for predicted coastal inundation. The Panel is nevertheless satisfied that the type of information and level of accuracy is satisfactory and appropriate for the strategic purpose of creating a trigger for planning permits as is proposed by this Amendment.*
>
> *The Panel believes that the Proponents have applied the best available data to mapping the boundaries of the LSIO, including applying ground truthing, use of photographic evidence and applying local knowledge to refine boundaries and correct errors. The Panel applauds the Proponents for the lengths that they have gone to in order to address site specific issues raised by submitters in order to achieve the most accurate mapping possible.*
>
> *The Panel notes that, over time, further, more accurate data will likely become available. Further information such as: the Western Port Local Coastal Hazard Assessment; the impacts of any dredging of Western Port Bay; and more detailed modelling of coastal inundation and riverine flooding, may all become available over the coming years. If and when it does, the Proponents should revisit the planning controls accordingly."*

Notwithstanding that Council abandoned C73, it is an adopted Council local policy via clause 21.02 of the Planning Scheme to apply effective planning controls to address flood risk across the Shire (Attachment B). Currently those controls do not exist and the risk exposure to Council is high, especially with all building applications being processed having regard to flood risk and mapping prepared by Melbourne Water.

An effective and long term solution to flood risk management via appropriate planning controls is now urgent (refer to Attachment C). A peer review of the flood modelling and mapping is considered the best option for progressing this important issue, as it would inform Council as to whether the data and processes used to derive the proposed LSIO and SBO are fit for purpose. This would enable a new planning scheme amendment to be prepared and exhibited with a greater level of confidence.

Peer Review of Flood Modelling

The issue does not appear to be whether flood extent mapping is required in the Moorabool Planning Scheme. Rather, it appears to be about providing Council with a greater degree of confidence regarding the accuracy of the flood modelling. Since the Council meeting on 3

June 2015, Council officers have subsequently been involved in discussions with Melbourne Water, with a view to undertaking a peer review of the flood modelling work.

In an effort to ensure that the peer review is transparent, Melbourne Water has recommended that Council engage an independent consultant to undertake the review. Melbourne Water would reimburse Council for the full cost of the peer review.

Scope of Peer Review:

Fit for purpose:

The overall aim of the work would be for the independent consultant to determine whether or not the data and processes used to derive the proposed LSIO and SBO in Amendment C73 are fit for purpose. The overlays will be used as a high level planning control to identify areas where 1% flooding might be expected to occur, so that appropriate development occurs in areas where 1% flooding effects might impact the development and surrounding areas.

Data used:

Was the data sufficient in quantity and quality to achieve fit for purpose modelling and mapping?

Modelling:

- Were the models that were used appropriate to achieve the aim stated above?
- Were the models set up with parameters that are within the normal range?
- Have the hydrology results been incorporated correctly into the hydraulic model?
- Are the model runs / results appropriate to produce fit for purpose mapping?

Mapping:

- Have appropriate measures been used to produce the final mapping from the model results?

Timing of Peer Review:

Council officers will seek quotations from suitably qualified and experienced consultants early in 2017, with a view to having the peer review completed within the current financial year.

Victorian Charter of Human Rights and Responsibilities Act 2006

In developing this report to Council, the officers considered whether the subject matter raised any human rights issues. In particular, whether the scope of any human right established by the Victorian Charter of Human Rights and Responsibilities is in any way limited, restricted or interfered with by the recommendations contained in the report. It is considered that the subject matter does not raise any human rights issues.

Officer's Declaration of Conflict of Interests

Under section 80C of the *Local Government Act 1989* (as amended), officers providing advice to Council must disclose any interests, including the type of interest.

General Manager – Satwinder Sandhu
In providing this advice to Council as the General Manager, I have no interests to disclose in this report.

Authors – Rod Davison/Andrew Goodsell
In providing this advice to Council as the Authors, we have no interests to disclose in this report.

Summary

Flood extent mapping is an integral aspect of risk management for Council, State agencies and the community as a whole.

The priority is to complete the peer review, independent of Melbourne Water, to determine whether or not the data and processes used to derive the proposed LSIO and SBO are fit for the purpose of informing planning decisions relating to the development of land. Once this matter is resolved, Melbourne Water will apply for a new planning scheme amendment to introduce the flood controls.

Recommendation:

That the Place Making Advisory Committee:

1. **Receives this report.**

2. **Advise Melbourne Water that, for a rigorous and independent peer review of existing flood modelling undertaken by Melbourne Water, it would be optimal for Council to choose the preferred consultant with funding via Melbourne Water.**

3. **Resolve that the findings of the peer review process be tabled at the Place Making Committee, once completed, and thence tabled at an Ordinary Meeting of Council.**

4. **Resolve that, upon tabling the peer review and upon addressing any identified concerns with the modelling data and processes in accordance with an agreed methodology, Council should proceed with seeking authorisation to prepare and exhibit an appropriate new planning scheme amendment to map and address flood risk within the eastern half of the Shire.**

5.3 Parking of Heavy and Long Vehicles

Introduction

Author: Andy Gaze
General Manager: Satwinder Sandhu

Background

This report has been completed in response to a concern which was raised by Cr Keogh at the Place Making Committee Meeting held on 14 December, 2016 regarding B-Double parking on the road reserve along Cemetery Road, Maddingley.

Cr Keogh requested a report in relation to Council's policy regarding B Double parking within the municipality and for it be presented to a future Place Making meeting for consideration specifically around the compliance aspects. This report outlines the legislative position and the current practice adopted by the Community Safety Team.

Legislation

Under the Road Safety Road Rules 2009 (see Appendix 1) a heavy or long vehicle (a B-double would come under this definition) cannot stop on a road in a built up area (Cemetery Road would be classified as a built up area) for longer than 1 hour unless permitted to do so.

Current Council Practice.

Under the legislation, Council have the ability to allow heavy and long vehicle parking above the 1 hour limit within a built up area. To-date Council has not allocated any area where heavy or long vehicles can park.

In response to complaints regarding heavy or long vehicle parking (these complaints generally refer to overnight or late parking), Council staff compile a list of all complaints and will on approximately a bi-monthly or quarterly basis undertake evening inspections to ascertain if parking is occurring and take appropriate action. In the second half of 2016, 3 patrols occurred resulting in 10 fines being issued. The fine amount is $93. We currently have 8 potential issues identified (new and ongoing) and will be looking to undertake another evening patrol in the coming month.

Complaints are made for a variety of reasons but generally they are due to amenity issues around noise and unsightliness as well as potential road safety issues.

Issues for Consideration

Owners and drivers of heavy vehicles will often want and need to park overnight or for extended periods for a plethora of reasons. Owner drivers often want to park their vehicles in a safe location where they have easy access (often outside their home) or when they arrive early to a site may need to park up for a period of time prior to dropping off their load. Providing areas for heavy and long vehicles to park could potentially alleviate the issue of where heavy and long vehicles can park and thus reduce the amenity issues they can cause.

Proposal

That the report be received and noted.

Policy Implications

The 2013 – 2017 Council Plan provides as follows:

Key Result Area	Community Wellbeing.
Objective	A safer community.
Strategy	Promote and administer Council's Local Laws and other relevant legislation.

This report is consistent with the 2013 – 2017 Council Plan.

Financial Implications

The current program of complaint investigation and enforcement is fully budgeted. If additional enforcement activities were to be considered any additional resource allocation would need to be looked at and either additional budget sought or look for a reduction in service in another community service area.

Risk & Occupational Health & Safety Issues

N/A

Communications and Consultation Strategy

N/A

Victorian Charter of Human Rights and Responsibilities Act 2006

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Officer's Declaration of Conflict of Interests

Under section 80C of the Local Government Act 1989 (as amended), officers providing advice to Council must disclose any interests, including the type of interest.

General Manager – Satwinder Sandhu
In providing this advice to Council as the General Manager, I have no interests to disclose in this report.

Author – Andy Gaze
In providing this advice to Council as the Author, I have no interests to disclose in this report.

Conclusion

The Road Safety Road Rules 2009 provide for controls over where heavy and long vehicles can park. These requirements are enforced by the Community Safety on a programmed basis.

Recommendation:

That the Place Making Advisory Committee receives the Parking of Heavy and Long Vehicles report.

6. CLOSED SESSION OF ADVISORY COMMITTEE

Nil

7. NEXT SCHEDULED MEETING

Special Meeting (Wednesday 15 March 2017)

8. MEETING CLOSURE

ATTACHMENT 3.1; PMAC Minutes - Wednesday 14 December 2016

MINUTES
PLACE MAKING ADVISORY COMMITTEE

WEDNESDAY 14 DECEMBER 2016
Council Chambers, Ballan
3.00pm – 4.00pm

MEETING OPENING

Phil Jeffrey, General Manager Infrastructure, welcomed all and opened the meeting at 3.05pm.

ATTENDANCE

Cr John Keogh	Councillor – East Moorabool Ward
Cr Paul Tatchell	Councillor – Central Ward
Cr Tom Sullivan	Councillor – West Moorabool Ward
Mr Phil Jeffrey	General Manager Infrastructure
Mr John Miller	Manager Asset Management
Ms Sam Romaszko	Manager Engineering Services
Ms Lace Daniel	Minute Taker

APOLOGIES

Mr Satwinder Sandhu	General Manager Growth & Development

APPOINTMENT OF MEETING CHAIR

Cr. Paul Tatchell nominated Cr. Keogh be appointed Chair of the Place Making Advisory Committee. Cr. Keogh accepted that nomination.

CONFLICTS OF INTEREST

No conflicts of interest were declared at the meeting.

CONFIRMATION OF MINUTES

Resolution:

That the Place Making Advisory Committee confirm the minutes of the meeting held on Wednesday 17 August 2016.

Moved: **Cr Sullivan**
Seconded: **Cr Tatchell**

CARRIED

INFRASTRUCTURE REPORTS

5.1 Inglis Street, Ballan Streetscape Masterplan

Recommendation:

That the Place Making Advisory Committee:

1. **Receives the draft Ballan Streetscape Master Plan.**
2. **Requests that the draft Ballan Streetscape Master Plan (with any amendments identified) be presented to the next Meeting of Council for endorsement for the purpose of a four week public exhibition period.**
3. **Requests that Council receive a further report at the conclusion of the exhibition period, seeking adoption of the Ballan Streetscape Master Plan.**
4. **Recommends to Council that officers pursue external funding opportunities for the overall project.**

Resolution:

That the Place Making Advisory Committee:

1. **Receives the draft Ballan Streetscape Master Plan.**
2. **Requests that the draft Ballan Streetscape Master Plan (with any amendments identified) be presented to the next Meeting of Council for endorsement for the purpose of a four week public exhibition period.**
3. **Requests that Council receive a further report at the conclusion of the exhibition period, seeking adoption of the Ballan Streetscape Master Plan.**
4. **Recommends to Council that officers pursue external funding opportunities for the overall project.**
5. **Recommends that a Terms of Reference for the Community Reference Group is developed to define its purpose, scope and duration.**

Moved: **Cr Sullivan**
Seconded: **Cr Tatchell**

CARRIED

5.2 Request for Maintenance; O'Loughlin Road Reserve, Grenville

Recommendation:

That the Place Making Advisory Committee:

1. **Receives the report in relation to O'Loughlin Road, Grenville.**
2. **Requests that the report be presented to Council endorsing the following recommendation:**
   a) **That O'Loughlin Road, beyond the 310 metres currently included in the Road Management Plan, not be added to the Register to Public Roads until upgrades are undertaken in accordance with Council standards.**
   b) **If property owner(s) in O'Loughlin 'paper road' wish to pursue the construction of the road to a standard acceptable to Council, at the cost of the benefitting property owners, Council would subsequently assume ownership and maintenance responsibility for that additional section of road.**
   c) **Requests officers to write to property owners along O'Loughlin Road, gauging support or otherwise for a Special Charge Scheme.**

d) **Acknowledge that the public and property owners are legally permitted to use this road reserve (ie. O'Loughlin 'Paper Road') to access property.**

Resolution:

That the Place Making Advisory Committee:

1. **Receives the report in relation to O'Loughlin Road, Grenville.**
2. **Requests that the report be presented to Council endorsing the following recommendation:**
   a) **That O'Loughlin Road, beyond the 310 metres currently included in the Road Management Plan, not be added to the Register to Public Roads until upgrades are undertaken in accordance with Council standards.**
   b) **If property owner(s) in O'Loughlin 'paper road' wish to pursue the construction of the road to a standard acceptable to Council, at the cost of the benefitting property owners, Council would subsequently assume ownership and maintenance responsibility for that additional section of road.**
   c) **Requests officers to write to property owners along O'Loughlin Road, gauging support or otherwise for a Special Charge Scheme.**
   d) **Acknowledge that the public and property owners are legally permitted to use this road reserve (ie. O'Loughlin 'Paper Road') to access property.**
3. **Request officers prepare a policy on the development or maintenance of unused government ('paper') roads.**

Moved: **Cr Sullivan**
Seconded: **Cr Tatchell**

CARRIED

GROWTH & DEVELOPMENT REPORTS

Nil

CLOSED SESSION OF THE MEETING

Nil

OTHER ITEMS OF BUSINESS

Cr. Keogh requested a report be presented to a future committee meeting in relation to the provision of standpipes across the municipality.

Cr. Keogh requested a report be presented to a future committee meeting in relation to Council's policy regarding B Double parking within the municipality.

DATE OF THE NEXT MEETING

Wednesday 15 February 2017

MEETING CLOSURE

The Chair thanked all and closed the meeting at 4.05pm.

ATTACHMENT 5.1; Moorabool Environment Strategy

Moorabool Shire Sustainable Environment Strategy 2016 – 26

Submission in response to draft strategy released November 2016 by Moorabool Environment Group Inc.

11/01/2017
Correspondence: Ben Courtice (President), bencourtice.bze@gmail.com or ph 0413 580 706

1. General considerations for a strategy
MEG welcomes that this strategy takes climate change seriously as a looming threat to the community. We welcome the value the strategy accords to preserving the balance of agricultural and conservation land uses in the face of urban growth. We recognise that the Shire's resources to implement ambitious strategic planning are limited, and we welcome the opportunity to engage with and support key aspects of the shire's plan.

MEG were consulted in January 2015 in relation to this draft by Rusty Brown consultants. We received a brief questionnaire which we discussed at a meeting and sent back some responses. We are happy that some of them have been incorporated in the current draft document. We raise some other points again, and make a number of new points as well in the following submission.

We believe that 2 years from consultation to draft document is much too long! No doubt you do too. To make consultation more real, it needs to be timely and allow for more back-and-forth discussion between parties, which this drawn out process has not facilitated very well.

On the substantive points in the draft, we first have some general points we would like to make:

- If climate change is taken as seriously as it ought to be, peak oil is less of a problem (if any) since we will move right off fossil fuels
- existing and potential new mining in the shire may pose serious environmental threats (eg proposed gold mining in Wombat State Forest), but this is not mentioned in the document (should be in waterways, biodiversity).
- Council has limited statutory powers over many matters but can set important directions through urban planning including zoning which may be a powerful tool against inappropriate developments. This is inadequately recognised in the document and, combined with erratic past practice, this calls into question the seriousness of some of the proposed directions in the document.
- General plans to do something regarding fossil fuel use are not congruent with the actual urgency of global warming, which demands drastic cuts in emissions immediately; we address this in points below with suggestions for clear targets and deadlines to be set for various actions.
- The strategy needs to set less actions that only commit to developing a plan, a report etc and more actions that result in changes on the ground not on paper! But we also note that on some aspects the council is already doing good work considering the limited staff resources that are available.
- Would it be appropriate to suggest annual professional development/workshops for staff and councillors on environmental issues, considering just about every aspect of the running of council and decisions made by council can have environmental impacts that may not be immediately evident?
- Having the implementation plan separate from the main strategy document is potentially confusing, and makes a more difficult task in writing a response such as this, and maybe in implementing the plan as well!

Following are detailed responses to the plan's points.

4.1.1 Protect Biodiversity
Seems to be an area council is working on already fairly effectively with the resources available.

4.1.2 Healthy Waterways

- Development next to rivers in towns – larger buffer zones are needed to protect vegetation & threatened species mentioned on p22. Consider minimum width (for each bank) given in the summary at

http://www.ccmaknowledgebase.vic.gov.au/kb_resource_details.php?resource_id=3010 which starts at 60m for high intensity land use.

- Appropriate development along rivers to be low impact, lower density.
- Ecolinc stormwater system implemented (?) years ago should be a model for new developments.
- Promote rainwater gardens with water utilities (community education) to reduce stormwater flows, implement rainwater gardens on nature strips where feasible (especially new developments) – should be high priority not low as per point 2.5 in implementation plan, at least for new developments where appropriate infrastructure can be included from the start.
- Household chemical collection & promotion/community education – transfer station collection of oil etc should be promoted to discourage dumping down drains & should be free to remove temptation to dump! Consider the "detox your home" initiative to be set up in the shire: http://www.sustainability.vic.gov.au/services-and-advice/households/waste-and-recycling/detox-your-home/detox-your-home-mobile-service
- Litter & rubbish dumping – a lot of it goes into rivers/riversides – currently appears to be no policy to deal with dumping? (unless under council waste policy). Suggest barriers constructed to prevent access to dumping areas? Increased policing such as CCTV to catch offenders? Change to tip fee system? Melton seems to be making some progress (we think) with their problem.
- Consider council & household use of pesticides (over-the-counter simazine used on driveway weeds, kerbside spraying etc) and whether any changes or community education are needed to protect waterways from endocrine disruptors (like Simazine) and other problem chemicals.

4.1.3 Sustainable Rural Land Management

- Council has great power in their zoning role and this is not mentioned clearly. Transparent, publicly visible policy to leave high-value farming zones as agricultural needs to be announced and followed by council. (more mention in notes 3.1 and following in implementation plan, should be included in strategy document).
- Policy identifies "loss and fragmentation of land for primary production and an increase in land prices for primary production, driven by urban growth and the demand for residential development" as a threat but this is no threat if council follows appropriate zoning decisions.
- Zoning policy must have priority and be adhered to, not current ad hoc/"as the developer wishes" zoning decisions, eg Parwan rural industry zone.
- Zoning policy must be consistent with protecting productive agricultural land, especially horticulture (Bacchus Marsh irrigation zone) but also broadacre farming. This includes land which would be productive if appropriately managed (so no loopholes to rezone if a farmer sells their water rights and claims the land is no longer being farmed, etc)
- Link to local food policy (4.4.2): agriculture is an important part of local food system, supplying the community and further afield, ie Melbourne, not just backyard/community gardens.

4.1.4 Community as Land Stewards

All good directions, no comment here.

4.2.1 Energy Efficient & Clean Energy Council

- Street lighting upgrade is good and should be pursued. Can we include measures to reduce light pollution of sky & of nature reserves, river corridors etc, if lighting is being upgraded anyway? (see implementation plan 5.6)
- Signing power purchase agreements with wind farms is important to provide clean energy & give developers security to go ahead with building wind farms. Council should pursue this option with other councils (WAGA councils or others) as per implementation plan 5.8
- Question re landfill emissions: these are not energy (unless captured as methane) but are a potentially significant source of emissions. Have they been quantified, or addressed in another report?
- Report needs to note & act on the fact that gas is more polluting & expensive to use than the equivalent electric services in buildings, and therefore all services should be upgraded to electric: council should set an example to community by "going gas free" and publicise this, in conjunction with supporting the vic govt ban on onshore/unconventional gas. We suggest the council should aim to replace all gas appliances in council buildings by 2020.
- Lead by example & make community aware of actions in all these.
- MEG supports aims for solar on council buildings. – need to set a target: we suggest all council buildings to have solar by 2020, aim for 100% renewable energy (by solar, direct purchase from windfarms, or greenpower

purchase) by 2025 or earlier, as other communities are implementing (there are more ambitious targets than this in some areas)

4.2.2 Water Efficient Council

There is so much literature and examples available on saving water we don't think it should be an issue to improve on this!

4.2.3 Sustainable Transport in Council

- Amend implementation plan 7.1 - all future fleet replacements of council cars to be small efficient EVs, no further purchase of fuel vehicles except if range limitations etc are an overriding consideration (consider hybrids in that case). This will save money (on fuel) and emissions at little or no risk as the international EV market is expanding rapidly and the technology is well established.
- Videoconferencing instead of travel to meetings supported (implementaion plan 7.1). Possibly also less meetings in far flung corners of the shire unless good reason shown by records that locals there want it
- Implement car pooling for council events (as well as for staff travel to work as in 7.2), use of public transport (train) for travel to Melbourne etc by council staff.
- Lead by example & publicise actions to community!

4.3.1 Climate Adaptation

- No mention of heatwave refuges for residents, although they have been implemented. Are they open all hours? Night time heat can be worse than daytime heat.
- Increased flood zone risk assessment & planning including zoning overlays in at-risk areas, flood/runoff planning and modelling for new urban developments, as well as educate residents about the risks (implementation plan 8.3).
- More street trees for shade is supported (implementation plan 8.4) but needs to also prioritise retaining existing mature trees, which are cut down too casually by council at present. Mature trees are more effective than young trees in absorbing carbon dioxide, as well as in providing cooling and shade.
- Power lines in new developments underground, to allow shade trees to grow uninterrupted & reduce fire risk

4.3.2 Sustainable Community Transport

- Council must ensure new urban developments and roads are not approved unless all streets built with best practice cycling & walking facilities (not token), as appropriate to the road level; also no new suburban developments approved without bus routes incorporated (in consultation with PTV etc).
- All significant local destinations (shopping centres, schools, station etc) in Ballan & Bacchus should have safe cycling routes to them identified & implemented, not just bike lockups (implementation plan 9.2) – investment in new infrastructure needed here; Hike & Bike Strategy is currently deficient in this regard.
- Implement Bacchus Marsh Avenue bike lanes/bike paths as mentioned in Hike & Bike Strategy
- Council advocate to PTV for bus services to meet every train, or within ten minutes of trains during peak hour to make bus service reliable & reduce car trips in town (strengthen implementation plan point 9.4)
- Council to support the community campaign asking state government to reopen passenger services on Geelong-Ballarat train line, with stations potentially in Moorabool shire at some or all of Elaine, Lal Lal, Yendon and Warrenheip; also continue to advocate for the re-opening of the Gordon station.
- Advocate for better regional bus services, coordinating with train services and/or Ballarat, eg Gordon and Mt Egerton, Blackwood, etc
- School buses increase – work with schools to get kids on buses instead of parental taxi services
- We support more bus shelters
- Implementation plan 9.5 mentions MEG to be on a working group on issues relating to buses; we would be willing to participate with the above points on our agenda

4.3.3 Urban development and planning

- We have already noted council's ability in zoning, overlays etc to exercise significant influence over development under 4.1.3 above
- Council should encourage a diversity of housing including medium density in appropriate urban locations eg central Bacchus Marsh, south side of railway in Ballan.

- Medium density need not mean 8 storey towers but could be terrace houses, low apartments etc with a range of residence sizes (1 to 4 bedroom) not just shoebox apartments; council can set height restrictions in overlays etc if it is considered necessary
- As noted above in 4.1.2, developments need to be approved that respect/protect natural values (eg buffer zones or only low density/no new development near remnant vegetation, national & state parks etc) – as per implementation plan 10.1
- Shared park, community garden, outdoor recreation, kindergarten/primary schools etc needs to be integrated into new developments, within walking distance of residents (including advocacy mentioned in implementation plan 10.4, also utilising any other avenues to influence/restrict developers in these matters)
- Encourage infill of existing areas before large expansions of urban area; but sensitively, bearing in mind that backyards may constitute valuable green space, tree cover etc and be better not filled with concrete & tile surfaces; that other aims (local food for eg) are served by lower density (backyards etc) in some instances

4.4.1 Clean Energy and Energy & Water Efficient Community

- Set targets or it's meaningless! Aim to have shire averages for household & travel emissions below WAGA averages by 2020
- Can council promote measures like Renewable Newstead, Totally Renewable Yackandandah etc as ways to engage communities in the shire?
- Promote solar, water tanks. Council previously partnered in a solar PV bulk buy scheme that was very successful. Solar PV may or may not need this level of support now (price has dropped drastically in the intervening years) but other sustainable bulk buy options should be investigated. eg solar heat pump hot water systems, battery storage for solar PV households, water tanks, double glazing, etc.
- Council website prominent link to reservoir levels to educate community about water saving
- Provide information to households about the possibility of waterless, composting toilets instead of septic or sewer connected toilets & ensure the options are supported in shire planning law
- Other initiatives suggested in earlier points eg rainwater gardens, gas-free buildings, etc for many of which council can lead by example
- We would like to see council embrace and promote the imminent wind farm projects which are going ahead in the shire (which are helping to reach State and Federal government targets on clean renewable energy). A positive attitude and policy from council would then be consistent with the vision statements throughout the document. Recently council policy seems inconsistent and unclear on wind farms and the future of this industry in our shire.

4.4.2 Local Food

- Allow residents to use nature strips to plant fruit trees, vegetable garden plots etc as already permitted in other municipalities
- We support the way the plan considers local food holistically including larger scale agriculture/horticulture, local food/farmers markets, vege swaps, community gardens ie the whole spectrum
- Ongoing council support for community gardens is acknowledged and supported, further opportunities should be encouraged eg allowing council land to be used, etc

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6 January 2017

Satwinder Sandhu
General Manager Growth & Development
Moorabool Shire Council
PO Box 18
BALLAN VIC 3342

Dear Satwinder

SUBJECT: Draft Moorabool Sustainable Environment Strategy
SITE: Council Wide
COUNCIL: Moorabool Shire Council

Thank you for referring the Draft Environment Strategy to Sustainability Victoria (SV), we received this on 28 November 2016. SV has reviewed the document and Implementation Plan and provides the following comments:

SV's priorities are balanced between climate change, energy, waste and resource recovery. SV focuses on helping the Victorian community respond to climate change and deliver programs to improve the sustainability and efficient use of resources, specifically energy, materials and waste, and we therefore consider that the sustainable environmental strategy holds relevance to our work.

SV is one of the Victorian Government's agencies delivering waste management and resource efficiency programs, with a key role in long-term statewide planning for waste and resource recovery infrastructure.

We acknowledge that Council has a *Management and Waste Recovery Policy* 2007, and the *Moorabool Industrial Areas Strategy* 2015. However, SV considers that there could be a more distinct link with these documents, and greater consideration towards being more sustainable with waste management in the strategy.

It is noted that one of the main focus areas of the strategy is residential development and population growth. Section 4.3.3 of the draft document *urban development and planning* states that:

> *'Due to the continued growth of western Melbourne, it is expected that Bacchus Marsh will accommodate an additional population in the order of 37,000 by 2041.'*

VICTORIA State Government

The strategy goes on further to indicate that during the residential growth, consideration should be given to protect natural landscape areas, and agricultural areas; however, greater consideration could be given to ensure this growth will not impact on established industries. Allowing adequate buffers from existing established industry is an important component of sustainability, and SV considers that this concept should be indicated in the strategy. In particular, Maddingley Brown Coal landfill and composting site at Bacchus Marsh, is listed as a hub of state significance within *Statewide Waste and Resource Recovery Infrastructure Plan* 2015 (SWRRIP). [p40]

One of the SWRRIP Strategic Directions states that,

> ***2.1.4 Providing suitable land for waste and resource recovery activities***
> *Managing waste and material streams is essential to support viable communities. If not done strategically, perverse outcomes will occur. Land use planning plays a fundamental role in this through:*
> - *ensuring there are appropriate buffers around facilities to protect communities and the environment from potential adverse impacts such as dust, noise and odours*

In line with the above strategic direction, SV considers that importance should be placed on ensuring population growth in suitable areas, and that there are appropriate buffers from waste and resource recovery facilities.

The Grampians Central West Waste and Recourse Recovery Group Implementation Plan 2016, is currently pending approval by the Minister. This document reinforces the site as a hub of state significance, and includes priority actions to increase resource recovery in the region. Section 2.1.1 of the Implementation Plan, '*Priority Actions for Grampians Central West'* indicates priority action number 1 - to increase the recovery of priority materials: -

> *Recovery of the majority of resource materials is lower in the region compared to the state trends. This is evident in areas such as organics, timber, tyres, aggregates, plastics and E-waste, which could be significantly improved..*

The Implementation Plan goes further to indicate that areas such as Ballarat and Moorabool have the highest potential to increase resource recovery; hence greater importance should be placed on resource recovery facilities and land uses in those areas.

Sustainability and Climate Change
Section 3.2 of the strategy, describes *Challenges and Drivers of Change - Climate Change.*

One of the biggest challenges to Victoria over the next 30 years will be mitigating and adapting to the impact of climate change. If waste and material streams are not managed properly then it could add further pressure on the sustainability and resilience of communities.

The major cause of greenhouse gas emissions from the waste and resource recovery sector arise from the breakdown of putrescible waste in landfills. When these materials break down they generate by-products, one of which is methane gas. Methane gas is at least 21 times more potent than carbon dioxide and is estimated to account for around 86% of the total greenhouse gases from the waste sector.

In addition, the resource recovery industry contributes to the generation of greenhouse gas emissions through the use of energy in the collection, sorting, transporting, processing and remanufacturing of recovered materials. (SWRRIP, 2015). SV therefore considers that there is an opportunity for this strategy to put more emphasis on being sustainable with regard to waste management.

Clean Energy and Energy & Water Efficient Community
Section 4.4.1 of the strategy indicates that, *currently there are very few Victorian Government programs for the community on energy efficiency or renewable energy as a result of the recent change of government. Previous government programs have mostly ceased and were very few anyway. The new government has stated that climate action is a priority therefore it is likely that funding and programs for councils and communities will arise in the 2015-19 period. Council needs to maintain close communications with Sustainability Victoria and the Department of Environment, Land, Water and Planning (DELWP) to seek out opportunities to offer its community [p51].*

SV currently manages some grants and funding projects that might be worth considering, which contribute to reaching sustainability goals, these include:

- Resource Recovery Infrastructure Fund - Infrastructure Grants to support delivery of the regional waste and resource recovery implementation plans
- Social Impact Investment for Sustainability
- SV Business – Boosting Productivity: Energy Efficiency Capability Grants
- SV Business – Boosting Productivity: Energy Assessment Grants

The $7 million Resource Recovery Infrastructure Fund aims to support the development of infrastructure which improves the collection and processing of recycled materials. The program seeks innovative projects that will increase jobs in the resource recovery industry while also increasing the recovery of priority materials. Further information regarding available grants and funding can be found here: http://www.sustainability.vic.gov.au/services-and-advice/funding

Council may also want to make reference to the relevant Council waste management, and industrial areas documents in this strategy. The above comments should also be considered when finalising the Implementation Plan 2016-2021.

Council may also want to subscribe to Sustainability Victoria News and Events Newsletter to be informed about projects and other funding available:
http://www.sustainability.vic.gov.au/news-and-events/newsletters/subscribe

I hope that you find this submission useful and we would be happy to work with you to resolve any queries you may have. Please do not hesitate to contact me on 03 8626 8853, or sam.trowse@sustainability.vic.gov.au should you have any further queries with regard to the above.

Yours sincerely

Sam Trowse
Project Lead | Land Use Planning

20 January 2017

Justin Horne
Environmental Planning Coordinator
Care of/
Satwinder Sandhu
General Manager - Growth & Development
Moorabool Shire Council
PO Box 18
BALLAN, VIC 3342

Dear Justin,

Draft Moorabool Sustainable Environment Strategy 2016-26

Thank you for the opportunity to provide comment on the Council's Sustainable Environment Strategy and Implementation Plan. Our general feedback is that Melbourne Water supports the finalisation of these documents.

Overall the Strategy and Implementation Plan thoroughly reflects the environmental assets and values within the Moorabool Shire Council area. The Strategy and Implementation Plan recognises the need for partnerships within the community in order to deliver the Strategy Vision and Implementation Plan actions.

Thanks again for the opportunity to review these documents. We look forward to working with Council in delivering future sustainable environmental outcomes and initiatives within the Shire.

Yours sincerely,

SHERRY BABCOCK
CUSTOMER & PLANNING SERVICES
Care of/
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Reviewer Name	Document (Strategy or Implementation Plan)	Page	Comments
Will Steele, Biodiversity - Integrated Planning	Draft Environment Strategy	20	Reads like Golden Sun Moth described as Critically Endangered species of FLORA.
	Draft Environment Strategy	20	EVCs (a Victorian concept) are confused with broad vegetation communities listed under Commonwealth legislation, e.g. Seasonal Herbaceous Wetlands (Freshwater) is a Commonwealth listing, not a Victorian EVC.
	Draft Environment Strategy	20	Seems little point in having a nice photograph of Grey Box woodland that is completely covered by a text box.
	Draft Environment Strategy	21	"Council roadsides support excellent stands of Victorian Volcanic Plains vegetation (Moorabool Shire Council 2004)". This reference seems very dated, from nearly 13 years ago. Are the roadsides still supporting 'excellent' vegetation... or has serrated tussock and Chilean Needle-grass affected areas?
Erin Millard, Waterways & Land	General comment	n/a	Overall the Strategy and Implementation Plan thoroughly reflects the environmental assets and values within the Moorabool Shire Council area. The Strategy and Implementation Plan recognises the need for partnerships within the community in order to deliver the Strategy Vision and Implementation Plan actions. A number of Melbourne Water staff members reviewed this draft Strategy, and Melbourne Water supports the finalisation of Moorabool's Sustainable Environment Strategy.
Deborah Riley Resilience – Integrated Planning	Implementation Plan 8.3	18	Regarding implementation action 8.3, covering on educating/improving awareness of climate change impacts, you could also consider working with VICSES to understand opportunities for flood education

			in areas currently at high risk of flooding.
	Implementation Plan 8.3	18	Regarding action 8.3, you could consider liaising or partnering with the Resilient Melbourne Office and considering the forthcoming Metropolitan Urban Forest Strategy as strategic partners for planning.
Digby Richardson, Waterways & Land	Draft Environment Strategy	6	*Melbourne Water's Healthy Waterways Strategy. This Strategy outlines the role Melbourne Water will play in managing these waterways to improve waterway health over the next five years.* Just to note that Melbourne Water will soon have a new relevant strategy known as the Healthy Waterways 2018. This will be a 20 year strategy. The current HWS exists from 2013/14 to 2017/18. We look forward to working with Council's internal teams to manage new development occurring in the Shire to achieve good environmental outcomes and to support Council's vision for their waterways of improving conditions over the next decade.
Sherry Babcock, Waterways & Land	General comment	-	Just a note in support of future sustainable environmental planning: Melbourne Water's latest guidelines are available on our website and we can provide ongoing interpretation on request.

Comments table for Draft Moorabool Sustainable Environment Strategy and Implementation Plan:

MOORABOOL
SHIRE COUNCIL

Moorabool Shire Sustainable Environment Strategy 2016 - 26

Draft Strategy

Moorabool Shire Council

rustybrown

RMCG
Environment | Water | Agriculture
Policy | Economics | Communities

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DRAFT

Executive Summary

Moorabool Shire contains some of Victoria's best environmental assets including the Long Forest Nature Conservation Reserve, Brisbane Ranges National Park and the Lerderderg State Park. In addition to these large reserves, within the municipality there are smaller areas of significant remnant vegetation and species, streetscapes and roadsides, forested mountains, rural valleys and waterways.

Council has a role in maintaining these significant and valued areas for the community and encouraging the community to experience these places. This occurs through Council directly managing its own land, influencing private land management through its planning responsibilities and partnering with other public land managers.

Much of the work undertaken by Council, Landcare and other land owners focuses on the threats to our local environmental and agricultural assets. These include: weed invasion; declining water quality; urban development; urban stormwater; climate change; and bushfire.

By understanding what the threats are and what the community values, Council is able to make better decisions that strengthen our environment. A healthy environment provides an enormous range of benefits to the community. Some of these benefits are economic and are linked to our productive agricultural sector. There are also social and cultural benefits that encourage physical activity; allow for social interaction; and create a stronger community identity.

The Moorabool Sustainable Environment Strategy (MSES) aims to provide a framework for environmental program planning and decision making for the next ten years. To achieve this the MSES is organised into the following four strategic directions, which arose through the Strategy consultation process:

1. ENVIRONMENTAL STEWARDSHIP
2. SUSTAINABLE COUNCIL
3. SUSTAINABLE BUILT ENVIRONMENT
4. LIVE AND WORK SUSTAINABLY

This draft Environment Strategy aligns with Council's other high level strategies and sets the direction for Council's diverse range of activities and services.

DRAFT

1 INTRODUCTION

Protecting the natural environment and reducing our environmental impacts can only be achieved through partnership. The Strategy's success depends on the combined efforts of the region's many local conservation and sustainability groups, households, businesses, industry and other government and non-government organisations. The intent of the Strategy is to support, complement and promote these efforts.

The Moorabool Shire Sustainable Environment Strategy sets the framework for Council to work towards improving the natural environment and community resilience through to 2041. It is the guiding document for Council planning, decision-making and activities that impact on the Moorabool Shire environment.

The natural environment in Moorabool Shire provides the foundation for diverse social, cultural and economic values. Council recognises the intrinsic value of the natural environment in Moorabool Shire and thus the importance of taking a considered management approach. This is particularly important in the context of climate change, population growth and land use changes.

Moorabool Shire Council has a history of environmental planning and management, developing its first Environment Policy in 2004. This Strategy is the next iteration and builds on existing work by Council, State Government agencies and the community. It is the result of an extensive process of research and consultation to develop a shared vision that will guide Council's work. Research included an examination of Council's previous efforts and a review of the trends and issues influencing Moorabool Shire's future.

This Strategy sets directions to work with other agencies and stakeholders to ensure the protection and enhancement of the natural environment. Council recognises that protecting the natural environment and making the built environment more liveable is important to enhancing community wellbeing and resilience.

The Strategy has been developed in consideration of the Council Plan 2013 - 17, states and will assist to achieve the overall vision of "vibrant and resilient communities". The Strategy is also supported by other Council documents such as the Integrated Planning Framework, Urban Growth Strategy, Rural Growth Strategy and Waste Strategy.

The Strategy is organised into the following four strategic directions, which arose through the Strategy consultation process:

5. ENVIRONMENTAL STEWARDSHIP
6. SUSTAINABLE COUNCIL
7. SUSTAINABLE BUILT ENVIRONMENT
8. LIVE AND WORK SUSTAINABLY

Within each of these themes a number of priority areas are identified for Council action. The activities that Council will undertake within each of the priority areas are identified in the Implementation Plan. The Implementation Plan should therefore be read in conjunction with this Strategy. The Implementation Plan will be reviewed after five years, and a new Implementation Plan developed for the period.

The Strategy acknowledges that Council can only have direct control over some issues, for example its own resource efficiency. It can indirectly influence other issues where its partners share or have greater responsibility and there are some issues it cannot influence and so can only take an advocacy role. As such, the actions in the Implementation Plan are identified as Control, Influence, or Advocacy actions.

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Mt Egerton Photo: Allen Moore

1.1 Strategy Vision

Moorabool Shire Council will work in partnership to ensure healthy ecosystems, productive landscapes, sustainable communities and the capacity to adapt to future environmental challenges.

The Strategy assists in delivering a number of the strategic objectives identified within the Moorabool Shire Council Plan 2013-17 (Table 1).

Table 1. Strategic objectives identified for key result areas in the Moorabool Shire Council Plan 2013-17 that are relevant to the Sustainable Environment Strategy

Key Results Areas	Strategic objectives
Community Wellbeing	Community self-reliance and resilience.
Enhanced Infrastructure and Natural and Built Environment	Effective and integrated strategic planning in place to create sustainable communities. Ensure current and future infrastructure meets the needs of the community. Enhance and protect the long-term integrity and biodiversity of the natural environment. Promote and enhance places of heritage, landscape and environmental significance. Effective and efficient land use planning and building controls.

1.2 Purpose of the Strategy

The purpose of this Strategy is to demonstrate how Council will work over the next ten years to protect and enhance the environment for 2041. It also considers the interaction between community well-being and the natural environment, with a focus on the sustainability of the built environment and community resilience.

The Strategy is the key document for guiding Council planning, decision-making and activities that impact on the natural environment and sustainability in the Moorabool Shire.

1.3 Strategy development

1.3.1 Scope & implementation

The Strategy considers the natural values and assets of the Shire, the threats to these values and the actions Council can take to protect and enhance the natural environment (both directly and by working with others). The Strategy also sets directions and priorities to ensure community wellbeing and resilience through making the built environment more liveable and protecting the natural environment.

The Strategy will be one of the main guiding documents for other Council plans and strategies. Figure 1 shows where the Strategy fits with other council policies, plans and strategies. Waste is a key issue that Council manages for its community. Waste issues are not covered in this document as they have been recently addressed through the Moorabool Shire Waste Strategy.

The Environment Unit at Moorabool Shire will drive implementation of this Strategy as outlined in the Implementation Plan, however many of the actions will be the responsibility of other areas of Council. Indeed, the success of the Strategy will depend on the contribution of all areas of Council as part of a whole-of-Council approach to sustainability.

There will be a mid-term review of the Strategy after five years (2021) to determine progress against measurable targets and desired outcomes and to identify areas for improvement and adaptation. This review will coincide with a review of the first Implementation Plan 2016 - 21 and the development of a new Implementation Plan for the period 2021 - 26.

Review of the Strategy will be completed in 2021 and 2031 to ensure that it is still in alignment with Council and community expectations and State and Federal legislation.

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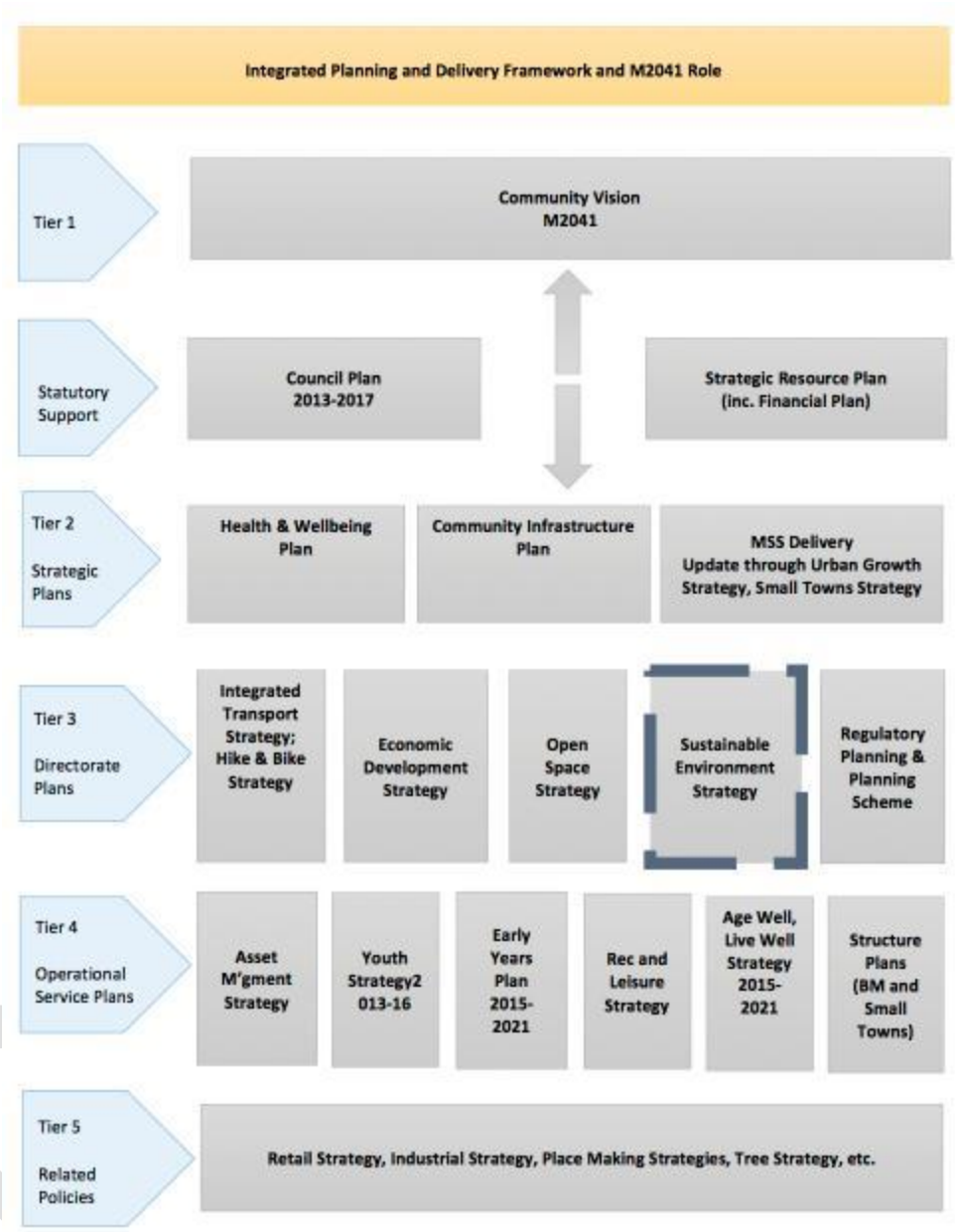
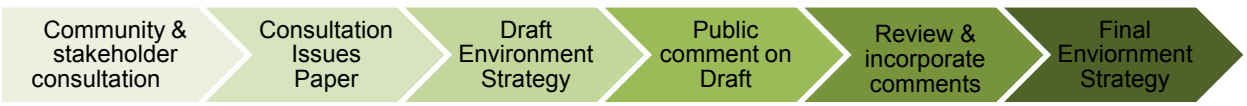
Figure 1. The Sustainable Environment Strategy in the context of other Council plans and strategies



1.3.2 Methodology

The Strategy was developed over a series of steps, as described in Figure 2.

Figure 2. Stages of Strategy development



Consultation was undertaken with the community, agency stakeholders, and Council staff. This ensured that the strategy has been developed within a local context, and is relevant and practical.

Consultation activities included a stakeholder and Council staff workshop, stakeholder and staff interviews, a community workshop at Gordon, a *Moorabool 2041* listening post in Bacchus Marsh, two workshops with the Moorabool Landcare Advisory Committee at Ballan and a meeting of the Moorabool Environment Group committee.

The strategy does not address issues relating to waste and waste recovery. For more information please refer to:

- Moorabool Waste Management and Resource Recovery Strategy
- Grampians Central West Waste and Resource Recovery Group Implementation Plan

1.3.3 Policy and legislative context

State and Federal government policies related to the natural environment, agriculture, economy, urban growth, transport and tourism are likely to have the most impact on the future of the local environment.

Victoria has more than 25 pieces of legislation and over 30 strategies that relate to environmental management. In addition, there are a large number of applicable federal laws (in particular the *Environment Protection and Biodiversity Conservation Act 1999*) and programs as well as international frameworks and conventions to consider. The main Victorian environmental legislative and planning instruments include:

- *Environment Protection Act 1970 and subordinate (State Environment Protection Policies)*
- *Environmental Protection and Biodiversity Conservation (EPBC) Act 1999*
- *Victorian Local Government Act 1989*
- *Victorian Flora and Fauna Guarantee Act 1988*
- *Victorian Catchment and Land Protection Act 1994*
- *Climate Change and Environment Protection Amendment Act 2012 and Victorian Climate Change Adaptation Plan 2013*
- *Pollution of Waters by Oils and Noxious Substances Act 1986*
- *Planning and Environment Act 1987 and Planning and Environment Amendment (General) Act 2013*
- *Victorian Waste and Resource Recovery Policy 2014*
- *Invasive Plants and Animals Policy Framework*
- *Victorian Waterway Management Strategy 2013.*

A more detailed overview of relevant policy and legislation is provided in Appendix 1.

There are also local plans and strategies that have relevance to this Strategy and include:

- Regional Catchment Strategies (RCS) for the Corangamite and Port Phillip and Westernport CMA regions. These RCS were released in early 2013 and identify each region's key assets and threats and set priorities for environmental investment.
- Melbourne Water's Healthy Waterways Strategy. This Strategy outlines the role Melbourne Water will play in managing these waterways to improve waterway health over the next five years.
- Corangamite Waterway Strategy 2014-2022, which provides a new plan for managing the region's waterways for the next eight years.

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- Grow West Implementation Plan 2013, which outlines the process of revegetating land in the Bacchus Marsh to Ballan area to create biolinks between the Brisbane Ranges National Park, Lerderderg State Park and Werribee Gorge State Park.
- Western Alliance for Greenhouse Action (WAGA) (2012), *Climate Change Adaptation Strategy 2013-2020*, which assesses the risks to the region west of Melbourne (including Mooorabool) of climate change impacts and proposes strategies to prepare for and adapt to them.
- Western Alliance for Greenhouse Action (WAGA) (2014), *Low Carbon West: A Strategy for a Transition to a Low Carbon Economy in the WAGA Region,* which assesses the greenhouse emissions of the region west of Melbourne (including Mooorabool) and provides a strategy to reduce emissions by 2020.

Environmental policy and associated funding opportunities are impacted by changes occurring at all levels of government. This Strategy will be flexible in responding and accommodating these changes.

1.3.4 Significant stakeholders

Effective implementation of the Strategy will require a partnership between Council and other natural resource management organisations and groups, as well as the broader community. Table 2 identifies the main stakeholders that Council will work with in delivering this Strategy.

Table 2. Main stakeholders Council will work with in delivering the Sustainable Environment Strategy

Stakeholder group	Stakeholder name
1 Catchment Management Authorities	Corangamite Catchment Management Authority (CCMA) Port Phillip and Westernport Catchment Management Authority (PPWCMA) North Central Catchment Management Authority (NCCMA)
2 Government departments and agencies	Department of Environment, Land, Water and Planning (DELWP)[1] Parks Victoria Environment Protection Agency VicRoads VicRail VicTrack Sustainability Victoria
3 Water authorities	Melbourne Water Central Highlands Water Barwon Water Goulburn Murray Water Southern Rural Water Western Water
4 Indigenous community	Dja Dja Wurrung Clans Aboriginal Corporation Wathaurung Aboriginal Corporation Wurundjeri Tribe Land and Compensation Cultural Heritage Council

[1] Formerly the Department of Environment and Primary Industries (DEPI)

Stakeholder group	Stakeholder name
5 Community-based groups and organisations	Moorabool Landcare Advisory Committee Moorabool Environment Group Moorabool Landcare Catchment Network Landcare Groups Community and Friends Of Groups Victorian Farmers Federation Country Fire Authority Community Garden Groups
6 Community & Business	Residents Small to large businesses

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2 COUNCIL'S ROLES AND RESPONSIBILITIES

Mt Egerton, Photo: Allen Moore

2.1 Sphere of influence

Council's ability to directly control or influence environmental and sustainability outcomes varies. In some cases Council has direct accountability, or control over an issue. In other cases Council may have limited ability to directly control or positively change a situation. This varying ability to control, influence or advocate for a situation or issue is referred to as Council's "sphere of influence" and is demonstrated in Figure 3.

Figure 3: Council's sphere of influence

In developing the Environment Strategy, actions have been identified that reflect where Council can control, influence or advocate for positive action for the natural environment within the Shire.

Control

Council has direct responsibility for (or control over) a range of activities relating to the management of the natural environment. Activities within Council's sphere of control include developing and implementing planning policy (in alignment with State Planning Policy) ensuring sustainable development in the Shire, managing Council reserves in a way that protects and enhances biodiversity values, undertaking community education and delivering support to specific environmental programs that will protect and enhance environmental assets.

Influence

In many cases, direct responsibility for the use and management of the natural environment sits with State and Federal agencies and organisations. Organisations such as the Department of Environment, Land, Water and Planning (DELWP), the Catchment Management Authorities (CMAs), Melbourne Water, Parks Victoria and VicRoads have primary responsibility for administering environmental legislation, developing strategies and plans and managing large areas of land with high environmental significance within the Shire. In these cases, Council has an important role in influencing all relevant national, state, regional, local and non-government agencies to achieve the best environmental outcomes for Moorabool Shire.

Council can influence sustainable land management through developing and administering planning policy that seeks to protect the Shire's natural environment, such as managing development near waterways and vegetation management controls. Council can also influence land management practices of private land managers such as assisting landowners to develop and implement land and farm management plans.

Advocate

Council can also play the role of advocate. This includes sharing information about and promoting the programs of other government organisations and community groups, for example CMAs, Melbourne Water and Landcare to the general community. Collaboration and coordination with other stakeholders can increase the reach of these programs. Council can offer resource efficiencies and through combined effort can result in outcomes that contribute to the vision of this Strategy, and those of other organisations and groups and the needs of the community. Council can also advocate to State Government agencies for increased funding and on ground action that lead to improved outcomes for the local community.

2.1.1 Tools and resources available to achieve desired outcomes

Council has a range of tools and resources to achieve its desired outcomes in environmental management. These include:

- Moorabool Shire Council Plan 2013 – 2017 (Revised 2014)
- Various State, Regional and Council strategic plans, management plans and policies
- Planning and Environment Act 1987
- The Moorabool Planning Scheme
- The ability to source and provide resources and funds
- Skilled staff to prepare and implement suitable projects and programs
- Leading by example in its own management of the natural environment
- Support of local community and volunteer groups including Landcare, 'Friends Of' groups and other local community groups.

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3 SETTING THE SCENE

Looking South over Bacchus Marsh towards the You Yangs, Photo: Allen Moore

3.1 Moorabool Shire

Moorabool Shire is a fast-growing, peri-urban municipality covering a geographical area of 2,112 sq. km. The Shire is centrally located with easy access to Melbourne, Ballarat and Geelong. There are 64 localities, hamlets and towns across the municipality, including the townships of Bacchus Marsh, Ballan, Gordon and Blackwood (Figure 4).

More than 74% of the Shire is protected within national and state parks and water supply catchments. Some of the major national and state parks in the Shire include:

- Brisbane Ranges National Park
- Lerderderg State Park
- Wombat State Forest
- Werribee Gorge State Park
- Long Forest Nature Conservation Reserve
- Lal Lal State Forest.

Three major rivers traverse the Shire: the Lerderderg River, Moorabool River (East and West Branches) and Werribee River. Providing tributaries such as Parwan Creek, Korkuperrimul Creek, Granite Creek, Tea Tree Creek, Lal Lal Creek and Williamsons Creek provide social, ecological and agricultural benefits.

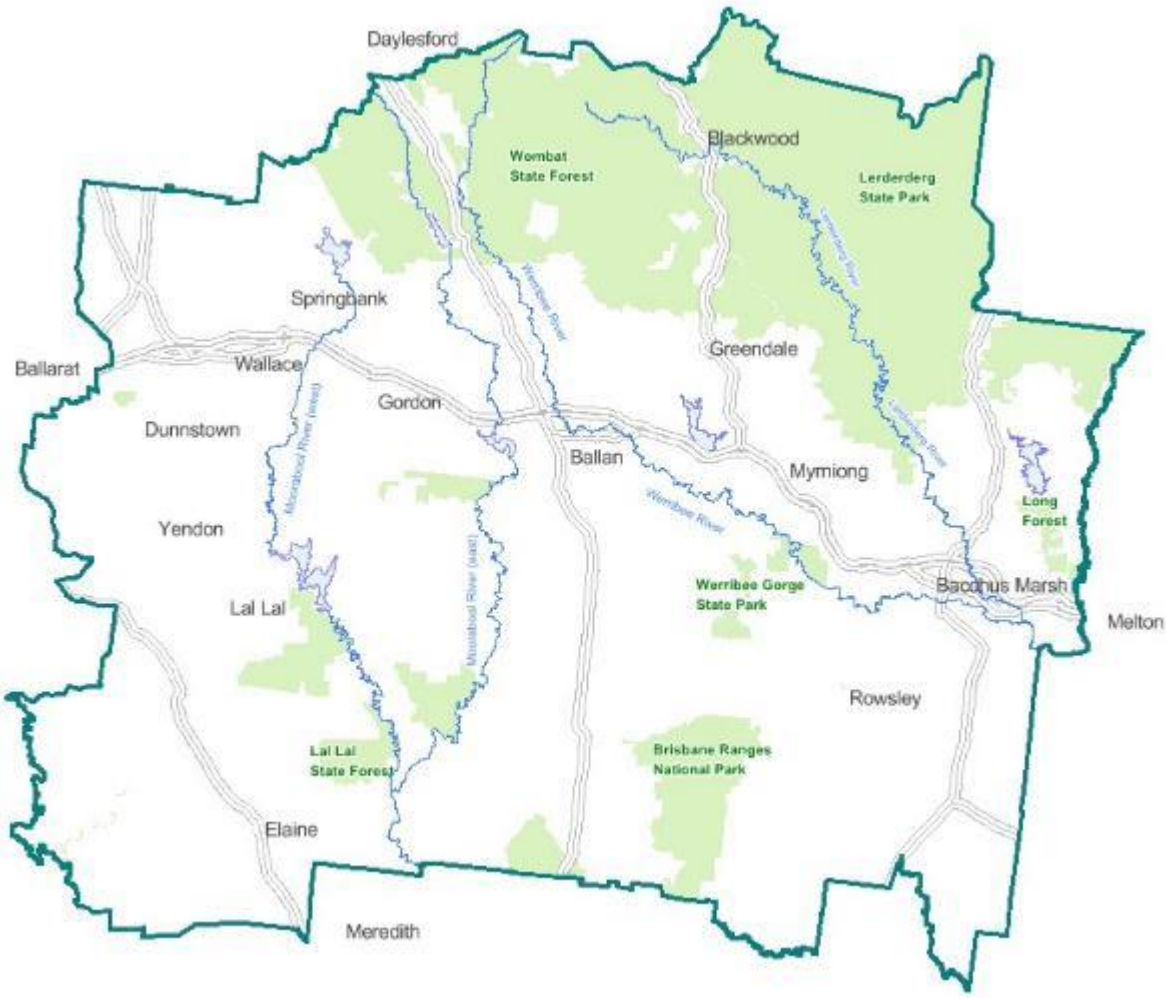

Figure 4: Moorabool Shire

Outside the main townships and the protected natural areas, much of the rural area is used for agriculture, including horticulture, sheep and beef farming, cropping, timber production, and more recently, viticulture (ABS 2011). There is also some clay, mineral and coal mining undertaken in the Shire. Grazing and cropping dominate large areas and intensive horticulture occurs where there is access to irrigation water and fertile soils, such as the alluvial soils on the floodplain of the Lerderderg and Werribee Rivers at Bacchus Marsh. There are also potato growing areas in the western region of the Shire.

The rivers are also an important source of potable water. Subsequently significant areas of the shire are in Special Water Supply Catchments that supply water for the residents of Moorabool Shire as well as surrounding areas. Large reservoirs in the Shire include Lal Lal, Pykes, Moorabool, Bolwarrah and Merrimu.

Moorabool Shire is predominately located within two catchment management areas. The Port Phillip and Westernport catchment extends across the eastern half of the municipality, and the Corangamite catchment occupies the western half. A small area in the northeast of the shire is within the North Central catchment.

3.2 Challenges and drivers of change

Several 'drivers of change' will influence the natural environment in Moorabool Shire. A fast growing urban and semi-rural population, a changing demographic, rural land uses and an increasing demand for natural resources will all shape the natural environment, creating challenges, as well as opportunities.

There are also other drivers that have the potential to influence change to the natural environment in Moorabool. Some of these drivers are outside Council's direct control, such as changes in government priorities and legislation and larger influences like climate change.

The major drivers of change and the macro-context for Council's response include:

Climate Change

Climate impacts such as extreme heat waves, bushfires and drought are becoming more frequent and dangerous. Council needs to plan for this in the following ways:

- Understand the climate risks to council and its community and plan and mitigate for these
- Reduce Council's corporate greenhouse emissions to reduce its own climate impacts (and costs) and utilise renewable energy production at Council owned facilities to reduce emissions and ongoing costs
- Assist the community and business to cut their emissions and energy costs and access renewable energy
- Reduce its water consumption and improve efficiency and alternative sources of water to mitigate for future drought and low water supplies
- Ensure a more localised food supply including households growing some of their own food.

Peak Oil

Peak oil is where the cost of oil becomes more expensive as oil reserves diminish, resulting in the cost of oil-based fuels and products rising sharply. This has major implications for the cost of transport, which will drive change for people and businesses to shift to less fuel-intensive transport (such as public transport, walking, cycling) or to find more efficient ways to transport goods and people. For example, when petrol prices spiked above $1.80 per litre in the mid 2000s, public transport patronage rapidly increased, leaving transport services struggling to respond[2]. Inevitable fuel price rises need to be planned for. Currently for Moorabool residents, 90% of the daily work commute is by car either as a driver or passenger[3].

Food costs and supplies would also be impacted, as the cost of fertilisers, which are derived from oil, would increase. Fuel costs for machinery and freight would also increase, which may then be passed on to consumers.

Population

Population is a major driver of environmental impacts, both positive and negative. At the local level this is mainly due to increased urban development for housing, services, recreation, transport and employment. Moorabool Shire's population has grown from 25,197 in 2003 to 30,926 in 2014[4] and in 2041 it is estimated

[2] http://economicdevelopment.vic.gov.au/__data/assets/word_doc/0017/1094120/Changes-in-travel-demand-in-Melbourne-Is-it-time-for-a-new-paradigm.doc
[3] 2011 Census of Population and Housing, Basic Community Profile - Moorabool
[4] http://profile.id.com.au/moorabool/population-estimate

that the total population of the Shire will grow to 54,418[5] with Bacchus Marsh alone predicted to have a population of over 37,000.

To accommodate this population growth, development is likely to impact upon significant agricultural and environmental assets.

Lifestyles

Another main driver related to population growth is consumption of resources through the way we live. This is both a local and global issue. The impacts of resource extraction, production and trade in goods and services are the result of a complex array of local and global inputs (such as water, energy, minerals, land etc.). Our material consumption results in waste; a local issue managed by Counci,l who must supply landfill and recycling facilities. Waste generation can be seen as a proxy for how much we are consuming: over the past decade waste generation has increased more rapidly than population growth across Victoria[6].

The standard measure of the impact of our lifestyles is the ecological footprint, that is, the measure of the amount of land required to provide for all the needs of a human life. The amount of land required by the average Victorian equates to one and a half times the land area available in Victoria. It is also four times more than that which would enable all humans to live sustainably on the planet.

Our energy consumption patterns are the biggest contributor to this footprint, largely due to our reliance on fossil fuel-intensive electricity generation.

Economic Model

The way we currently live and run our economy is turning natural resources into waste at a faster rate than nature can turn waste back into natural resources. This basic equation threatens the viability of our environment, and in turn undermines the sustainability of the economy and human well-being.

Our challenge is to better understand and value nature's services, consume in less impactful ways, and to 'de-couple' economic activity from environmental degradation. Business and jobs growth needs to be achieved while reducing our per capita fossil fuel and material consumption and waste.

Combined, these macro influences create a number of challenges, as well as some opportunities, for the natural environment.

3.3 Achievements to date

Moorabool Shire has achieved much over the past decade in the area of environment and sustainability. This includes working with the community and other stakeholders to achieve positive environmental management outcomes such as the Grow West and Moorabool River Recovery projects. Achievements have also been made in reducing Council's resource use in the areas of energy, water and transport. Table 3 includes some of the achievements made by Moorabool Shire over the past decade.

[5] http://forecast.id.com.au/moorabool

[6] http://www.sustainability.vic.gov.au/~/media/resources/documents/publications%20and%20research/publications/a%20-%20b/publications%20annual%20survey%202010-11%20report%20victorian%20local%20government.pdf

Table 3: Achievements by Moorabool Shire in the area of environment and sustainability

Area	Achievements
Environmental Management	▪ Grow West. Now in its eleventh year, Grow West is a multi-partner collaboration that aims to protect and enhance indigenous vegetation, control pest plants and animals and create biolinks. Moorabool Shire Council was a founding member and continues to have an active role in Grow West. ▪ The Moorabool River Recovery Project. This is a joint project between Moorabool Shire Council, Barwon Water and the Moorabool Catchment Landcare Group that is improving the health of the Moorabool River through on-ground action to reduce weed cover, rabbit populations and increase native vegetation cover. ▪ The ongoing contribution made by Landcare and environment groups to promote improved land management practices, protect key environmental assets on public and private land and provide opportunities for local communities to meet and work together. Currently there are 12 Landcare and 6 'Friends of' groups operating within the Shire, with total membership exceeding 300 members. ▪ An updated Environment Page on the Council website highlights local biodiversity, including what can be found in residential backyards, and encouraging residents and visitors to explore the Shire's natural environment.
Energy Saving & Renewable Energy	▪ CBUS sensor lighting, delamping (e.g. removing lights) and use of energy efficient lights (e.g. T5 fluro lights) at Darley and Lerderderg Library has reduced energy use and costs. ▪ Ballan Council office 'informal' green team has encouraged energy saving through behavioural 'green' actions (e.g. turning computers off). ▪ Blackout blinds on west facing windows in the Darley Council office to reduce energy consumption. ▪ Bulk purchase of solar panels for the community in 2009 with good uptake. ▪ Cost benefit analysis undertaken on upgrading streetlights from Mercury vapour to more energy efficient options (T5, T8, LED) – installation still required. ▪ Major sporting clubs are now paying their power bills (previously paid by Council), encouraging energy and water saving measures. One football club saved over $4000 in the first year. ▪ Council involvement in Victorian Government Ecolinc Building – green demonstration and education centre.
Reducing Council Potable Water	▪ 75% reduction in open space water consumption by using drought tolerant turf species, water tanks, automated irrigation and other efficiencies in open space areas. The use of ground water via bores has been reduced as a result and there are energy savings from the reduced pumping. ▪ Water and energy savings through efficient showerheads installed at recreation reserves. ▪ The current planning system includes water sensitive urban design (WSUD) and water reuse and harvesting; and there are controls to ensure efficiencies in new urban developments e.g. Darley stormwater retarding basin. ▪ Currently working with Melbourne Water to investigate WSUD options in existing urban areas of Ballan and Bacchus Marsh.
Sustainable Transport	▪ Reuse of road materials for maintenance works has reduced vehicle movements, fuel and operational costs. ▪ Council fleet policy encourages more efficient vehicles. ▪ Trial purchase of an electric car. ▪ Video conferencing between Darley & Ballan Council offices has reduced staff vehicle travel. ▪ The Hike & Bike Strategy was developed in 2014 to increase cycling and walking in the Shire through better infrastructure and education.

Food & Community Engagement	▪ Development of community gardens has worked well to this point with Council supporting positive community action – three community gardens are in operation. ▪ Moorabool Matters Mag has spread information about Council actions. ▪ Community grants program has provided many grants for positive community action including some environment-related projects. ▪ Commencement of a greenwaste collection service at Bacchus Marsh and Ballan.

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4 STRATEGIC DIRECTIONS

Greendale, Photo: Allen Moore

Four main strategic directions have been identified through the consultation process to guide Moorabool Shire's work in delivering a more sustainable environment over the next ten years. The four strategic directions are:

- ENVIRONMENTAL STEWARDSHIP
- SUSTAINABLE COUNCIL
- SUSTAINABLE PLACES
- LIVE AND WORK SUSTAINABLY.

A number of priority areas have been identified within each strategic direction. There are twelve priority areas in total (Figure 5).

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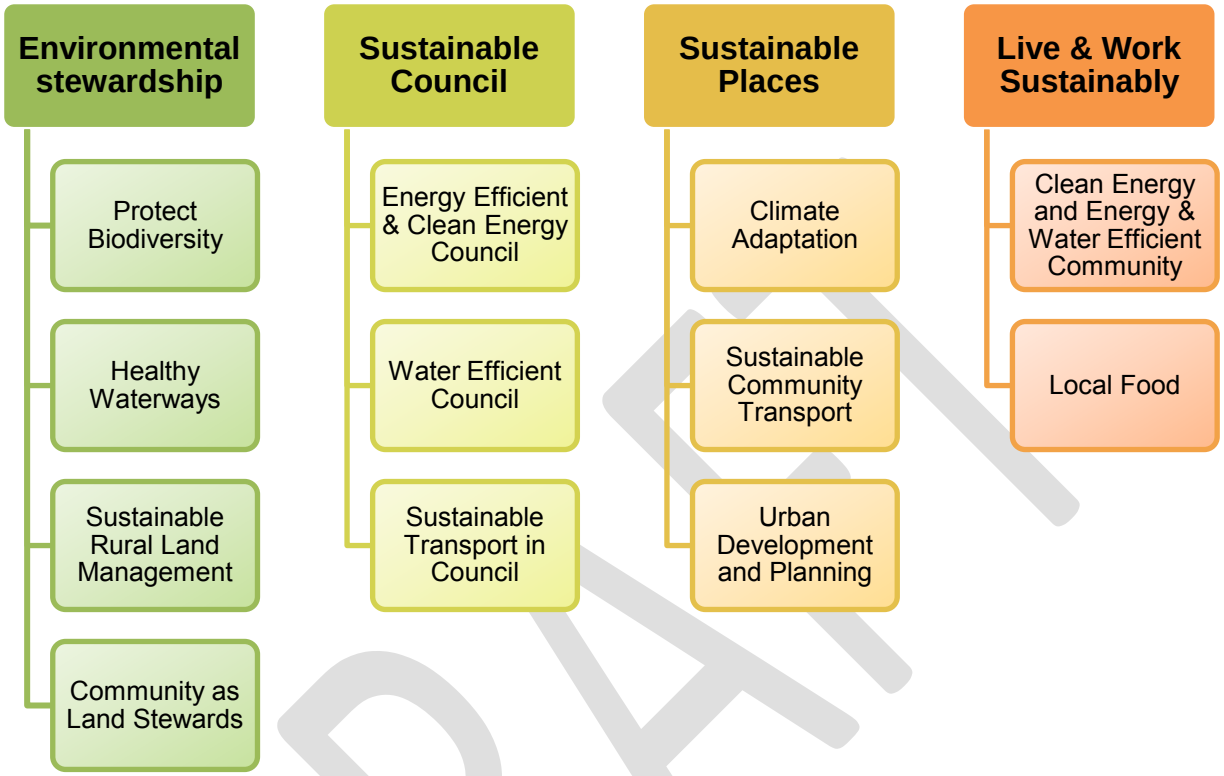
Figure 5. Strategic directions and priority areas for the Moorabool Shire Sustainable Environment Strategy



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The following sections present the priority areas in detail within each strategic direction.

4.1 ENVIRONMENTAL STEWARDSHIP

Lerderderg State Park, Photo: Allen Moore

Common Rice Flower (Pimelea humilis), Photo: Moorabool Shire

4.1.1 Protect Biodiversity

At a glance

- More than 74% of the Moorabool Shire comprises national parks, state forests, reserves and protected water catchment areas. Some of the important protected areas include the Long Forest Nature Conservation Reserve, Brisbane Ranges National Park, Lerderderg State Park, Werribee Gorge State Park and the Wombat State Forest.
- The Shire spans two bioregions: the Victorian Plains and the Central Victorian Uplands.
- There are 17 threatened fauna species, such as the Golden Sun Moth (*Synemon plana*), listed under the Australia *Environment Protection and Biodiversity Conservation (EPBC) Act 1999.*
- There are 15 threatened flora species including the Plains Rice-flower (*Pimelea spinescens subsp. spinescens*).
- Five Ecological Vegetation Communities (EVCs) are listed as either critically endangered or endangered under the *EPBC Act 1999.* These are Grassy Eucalyptus Woodland of the Victorian Volcanic Plain, Natural Temperate Grassland of the Victorian Volcanic Plain, Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains, White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland and the Grey Box Grassy Woodlands and Derived Native Grasslands of South-eastern Australia.
- There are 25 Council managed environmental and bushland reserves, including Lal Lal Falls, Bald Hill, Hopetoun Park Conservation Reserves, Ballan Mineral Reserve, Spargo Creek Mineral Reserve and Werribee River at Bacchus Marsh and Ballan.

Source: DoE 2014, Moorabool Shire Council 2004

Grey Box (Eucalyptus macrocarpa) Woodland Photo, Moorabool Shire

Protect Biodiversity vision

There is a measurable improvement in the condition of the natural environment in Moorabool Shire over the next ten years

Context

Moorabool Shire is characterised by ranges, plains and rugged river gorges providing a diverse and spectacular landscape. The municipality spans two bioregions: the Victorian Plains Bioregion occurs predominately in the south where there is highly productive agricultural land, which also contains highly valuable grasslands and grassy woodlands. The Central Victorian Uplands Bioregion extends across the north of the Shire and includes grassy woodlands and forests. Appendix 2 provides more detail on the bioregions and ecological communities found in Moorabool Shire.

The large areas of protected native vegetation provide highly significant natural resources and nationally important flora and fauna habitat values. They are also important assets for tourism and recreation. Roadside vegetation also comprises high biodiversity values, providing flora and fauna movement corridors between State and National Parks or Forests (DTPLI 2011). In particular, Council roadsides support excellent stands of Victorian Volcanic Plains vegetation (Moorabool Shire Council 2004).

Outside the protected areas and roadsides, much of the remnant vegetation occurs on private land. Much of this has been greatly modified from their pre-European condition through agricultural and urban development and expansion. This is particularly true for grassland communities, the majority of which occur on private agricultural land and in areas of urban development. Council has an important role to play in ensuring that land use planning decisions protect natural resources and areas of high conservation significance.

There are a number of factors which continue to threaten biodiversity values in the Shire, including:

- Pest plants and animals
- Climate change
- Bushfire
- Urban growth
- Other development pressure
- Inappropriate land use and/or land management practices
- Modification and fragmentation of habitat
- Vegetation clearing
- Unsustainable resource use e.g. timber, quarrying, water
- Edge effects around the perimeter of protected areas.

A considerable challenge exists for Council to manage land and biodiversity values and the associated threats in order to sustain healthy, connected ecosystems.

Strategic objectives for protecting biodiversity

1. Increased landscape scale connectivity of remnant and other native vegetation.
2. An increased knowledge of natural assets including understanding and monitoring changes in condition on Council managed reserves and roadsides.
3. Strengthened local planning policy that recognises and protects existing natural values.
4. Increased monitoring and control of the impacts of pest plants and animals on native vegetation.

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4.1.2 Healthy Waterways

At a glance

- The Shire is located within two main Catchment Management Authority (CMA) jurisdictions: the Corangamite CMA in the west and the Port Phillip and Westernport CMA in the east. A small area within the north east of the Shire is within the North Central CMA.
- Large areas of the Shire are in Special Water Supply Catchments providing potable water for local and regional communities.
- Three major rivers flow through the Shire: the Lerderderg, Moorabool and Werribee Rivers.
- The headwaters of the Lerderderg and Werribee rivers, and their associated gorges, are recognised as sites of international and state geomorphological significance.
- There are a number of threatened species listed under the *EPBC Act 1999* that are associated with waterways in the Shire. These include:
  - Macquarie Perch (*Macquaria australiasica*)
  - Eastern Dwarf Galaxias (*Galaxiella pusilla*)
  - Australian Greyling (*Prototroctes maraena*)
  - Growling Grass Frog (*Litoria raniformis*).
- Waterways in the Shire provide important ecosystem services including potable water for local and regional communities, water for agriculture and recreation.

Source: DoE (2014)

Lerderderg River Photo, Allen Moore

Healthy Waterways vision

There is a measurable improvement in the condition of waterways and the quality of water across Moorabool Shire over the next ten years.

Context

The three major rivers, Moorabool, Lerderderg and Werribee, which intersect the Shire and their tributaries are recognised for their important ecological values, supporting an array of aquatic flora and fauna, many of which are endangered.

The rugged and steep landscapes around the headwaters of the Lerderderg and Werribee Rivers provide breeding habitat for Peregrine Falcons and Wedge-tailed Eagles and house significant species like the Powerful Owl, Common Bentwing Bat and Brush-tailed Phascogale (Melbourne Water 2015). The Moorabool River is recognised for its important habitat values for native fish including river blackfish, Australian smelt, common galaxias and southern pigmy perch (CCMA 2015), as well as other aquatic flora and fauna.

The waterways also provide important cultural Indigenous heritage sites, recreational opportunities, amenity value and economic values for the local community. Agriculture across the Shire is underpinned by access to freshwater and the fertile floodplains at the confluence of the Lerderderg and Werribee Rivers at Bacchus Marsh support productive horticultural enterprises. Large areas of the Shire are in Special Water Supply Catchments providing potable water for local and regional populations. Much of the Special Water Supply Catchment areas contain towns, communities and productive farms (DTPLI 2011). Large reservoirs in the shire include the Lal Lal, Pykes Creek and Merrimu Reservoirs.

The condition of the rivers varies across the Shire. The general trend is that the upper reaches of the river basins are in good condition due to their occurrence in relatively undisturbed environments such as protected water catchments and forested parks and reserves. However the lower reaches show deterioration as they are exposed to more intensive land uses such as agriculture, horticulture and urban development (Moorabool Shire 2004). According to the Corangamite CMA (2009) the Moorabool River is one of the most flow stressed rivers in the State and the lower Moorabool River is in very poor ecological health. Waterways, especially those in the lower reaches, are subject to a number of threats including, but not limited to:

- Altered natural flow regimes
- Barriers to fish migration
- Poor quality streamside vegetation
- Weeds and pest animals
- Litter and rubbish dumping
- Stream bank erosion.
- Soil and nutrient runoff
- Salinity
- Increased stormwater inflows from urban development
- Stock access
- Altered flood and flow paths

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Steps are being taken to improve the condition of waterways in the lower reaches. Council has played a supporting role to organisations such as CMAs and Landcare who work with private landholders on riparian protection and rehabilitation works. The Corangamite CMA is also delivering an environmental watering plan on the Moorabool River to restore some of the river's original ecological function (CCMA 2015). Even though Council has limited ability to take direct action on water related issues, it does have an important function in:

- Stormwater and wastewater management within townships,
- Managing Council reserves with waterways,
- Demonstrating leadership and action on conserving water use in all areas of Council operations,
- Advocating to State Government and local water authorities on behalf of the community on water related issues,
- Partnering with relevant organisations, such as water authorities and CMAs to promote best practice in Council and the community.

Strategic objectives for healthy waterways

1. Better protected and healthier riparian vegetation within the shire.
2. Increased connectivity of riparian vegetation across the shire.
3. Improved quality of stormwater runoff.

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4.1.3 Sustainable Rural Land Management

At a glance

- The natural resources and rural areas of Moorabool Shire support approximately $80 million worth of agricultural production annually.
- The highest quality agricultural land is associated with the floodplain areas at the confluence of the Werribee and Lerderderg Rivers. There are also rich soils in the west of the Shire used for potato production.
- The main primary production enterprises are horticulture, sheep and beef, cropping and timber production.

Orchard in Bacchus Marsh, Photo: Allen Moore

Sustainable Rural Land Management vision

We will develop agricultural land for agricultural production and preserve rural landscape values and amenity.

Context

Even though there has been a 65% decline in the total workforce employed in agriculture from 2006 to 2011, agriculture remains one of the Shire's biggest industries, employing approximately 10% of the total working population (ABS 2011). In 2011, agriculture in Moorabool was valued at an estimated $80.4 million (Phillips Agribusiness 2014) and the value of production per hectare is around $760 (Neil Clark & Associates 2010). The rural base of the Shire is also central to attracting people to live and work in the municipality, supporting tourism and maintaining the lifestyle appeal of the area (DTPLI 2009).

Urban and rural lifestyle development poses a number of threats to agriculture and horticulture in the Shire. This includes the loss and fragmentation of land for primary production and an increase in land prices for primary production, driven by urban growth and the demand for residential development.

Residential development within proximity to rural zones can create conflict at the urban / rural interface raising issues such as odour and noise associated with agricultural and horticultural activities. The increase in 'rural lifestylers' and hobby farmers occupying small rural blocks also has the potential to create tensions at the interface with primary production land. This occurs where new residents have limited rural experience.

Over time, the intensification of agriculture and horticulture has contributed to the decline in the quality and quantity of native vegetation, land and waterway conditions across the Shire (Moorabool Shire 2004). Specific issues include the loss and fragmentation of native vegetation habitat, species loss, decreasing water quantity and quality, soil erosion, salinity and pest plants and animals. There are projects such as Grow West and various river health and biodiversity programs administered by CMAs and Melbourne Water that aim to improve land management and protect high value natural assets on private property in the Shire. There is also an active and engaged Landcare community that is working on improving land management on private land across the Shire.

Council has an important role to play in ensuring planning solutions are implemented that effectively integrate rural living and farming activities, enabling farm businesses to operate as agricultural enterprises. It is also important that Council supports urban and rural development where it does not compromise the long-term productive use of rural land for agriculture and horticulture, or the Shire's natural resources (DTPLI 2009).

Strategic objectives for sustainable rural land management

1. Adopt planning policies that support increased agricultural development of productive farmland.
2. Plan for land use that is respectful of rural landscape values and amenity.

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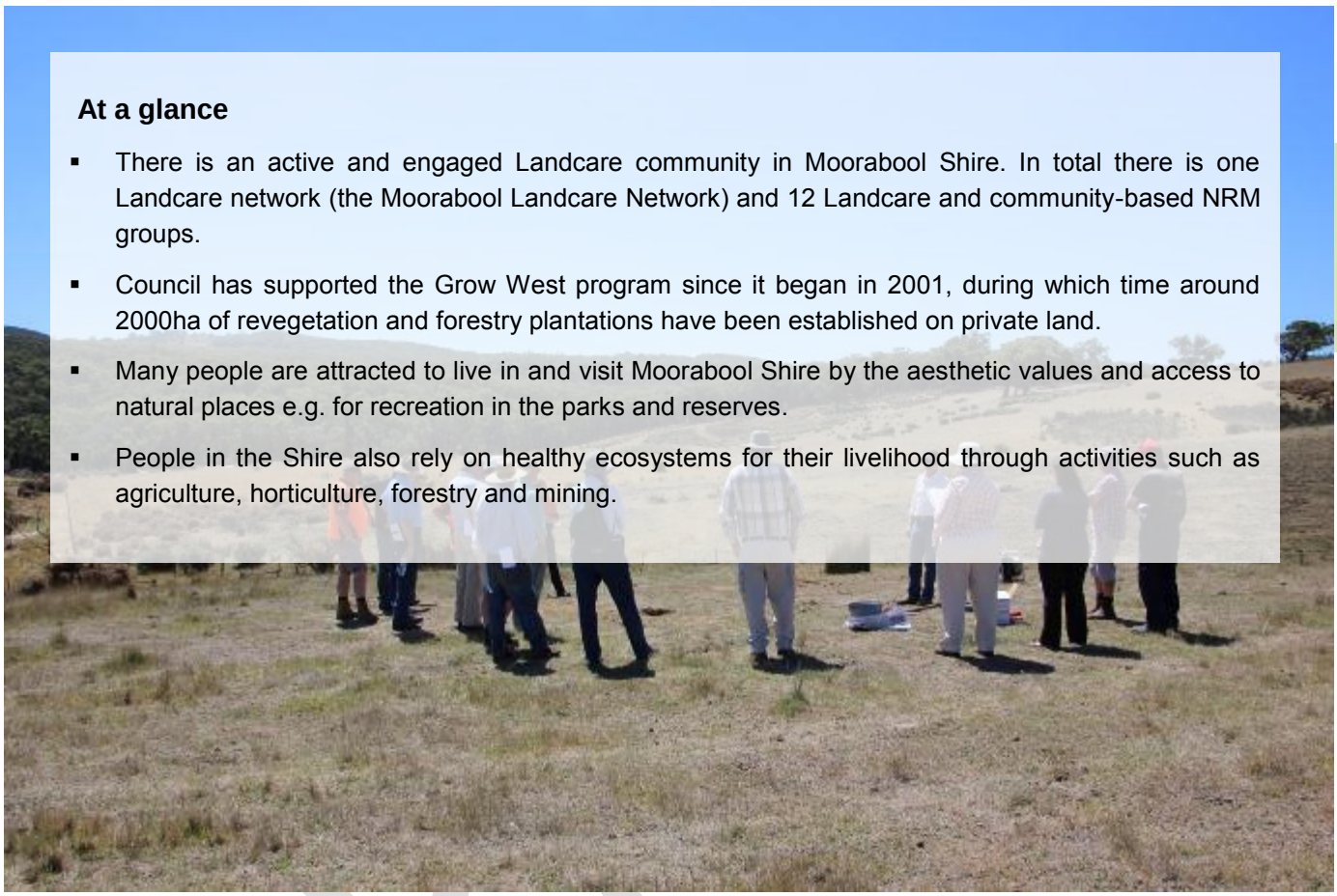
4.1.4 Community as Land Stewards



At a glance

- There is an active and engaged Landcare community in Moorabool Shire. In total there is one Landcare network (the Moorabool Landcare Network) and 12 Landcare and community-based NRM groups.
- Council has supported the Grow West program since it began in 2001, during which time around 2000ha of revegetation and forestry plantations have been established on private land.
- Many people are attracted to live in and visit Moorabool Shire by the aesthetic values and access to natural places e.g. for recreation in the parks and reserves.
- People in the Shire also rely on healthy ecosystems for their livelihood through activities such as agriculture, horticulture, forestry and mining.

Moorabool Catchment Landcare Group Rabbit Fumigation Day, Photo: Moorabool Shire

Community as Land Stewards vision

There is a measurable increase in community awareness of the natural environment and participation in NRM based activities in the Shire.

Context

The Shire has an active and engaged Landcare community, demonstrated through the recent and continued growth of the Moorabool Landcare Network. Even though there is a robust network of community based NRM groups. The increase in urban growth has seen a rise in young families who are likely to be 'time poor' and have priorities other than connecting with nature. Nearly 19% of the working population commute more than two hours per day (Department of Health 2013) and therefore are unlikely to have time to engage with the environment in which they live.

Local councils are the layer of government that are most closely connected to local communities. Moorabool Shire Council is well positioned to broaden and strengthen community connection to the local natural environment through building on the existing network of community-based NRM groups and other community organisations. There is also an opportunity for Council to increase partnerships with other agencies such as the CMAs and water authorities that deliver community education programs and incentives for land management.

Council can also promote incentives, such as Landcare grant programs, for the implementation of best practice land management activities. According to a recent study by the Corangamite (CMA 2013b), Moorabool Shire has the highest proportion of rural landholders who cite cost as the main barrier to doing more to protect and enhance the natural environment. The implementation of financial incentives may increase the uptake of private land conservation activities.

The study also found that pest plants and animals is the environmental issues of most concern for rural landholders in Moorabool (CCMA 2013b).

Strengthening community connection to the natural environment is also important in developing resilient communities that are prepared for adaptable to climate related impacts. Climate change presents complex challenges for communities. With the potential to generate impacts to livelihoods that are dependent on natural resources such as agriculture, horticulture, forestry and tourism, as well as impacts to health and well-being.

Strategic objectives for community as land stewards

1. Increased community awareness of the local natural values in Moorabool Shire.
2. Participation in community based NRM groups and activities is encouraged and supported by Council.
3. Increased engagement with new rural and semi-rural landholders on best practice NRM activities.

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4.2 SUSTAINABLE COUNCIL

Lerderderg Library, Photo: Moorabool Shire Council

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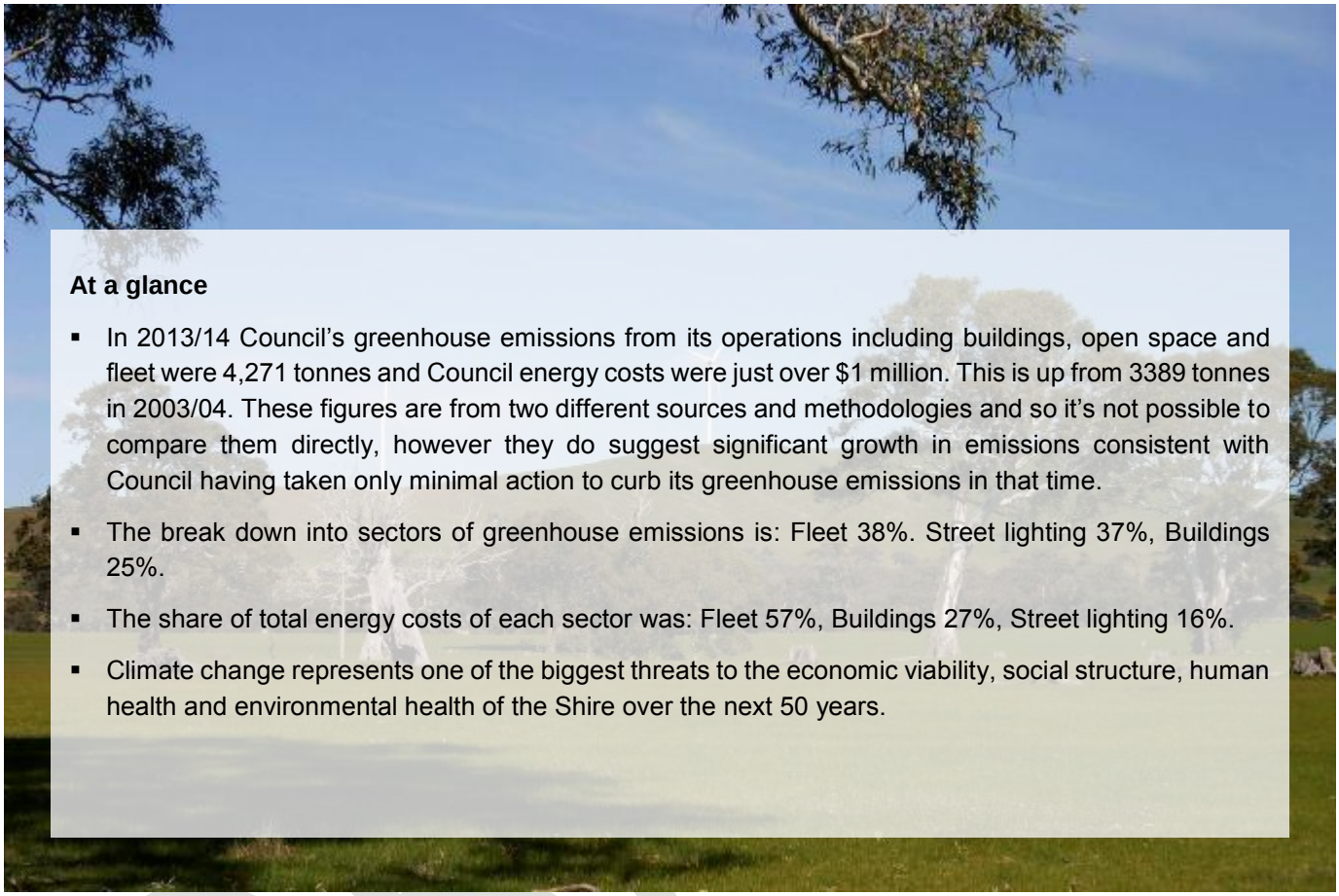
4.2.1 Energy Efficient & Clean Energy Council



At a glance

- In 2013/14 Council's greenhouse emissions from its operations including buildings, open space and fleet were 4,271 tonnes and Council energy costs were just over $1 million. This is up from 3389 tonnes in 2003/04. These figures are from two different sources and methodologies and so it's not possible to compare them directly, however they do suggest significant growth in emissions consistent with Council having taken only minimal action to curb its greenhouse emissions in that time.
- The break down into sectors of greenhouse emissions is: Fleet 38%. Street lighting 37%, Buildings 25%.
- The share of total energy costs of each sector was: Fleet 57%, Buildings 27%, Street lighting 16%.
- Climate change represents one of the biggest threats to the economic viability, social structure, human health and environmental health of the Shire over the next 50 years.

River Red Gums (Eucalyptus camaldelensis), Photo: RMCG

Energy Efficient and Clean Energy Council vision

There is a measureable improvement in energy efficiency of Council operations and an increase in clean energy use in order to achieve a carbon neutral council by 2031.

Context

In 2012, the Victorian Government published its first biennial report on climate change and greenhouses gases, *Report on Climate Change and Greenhouse Gas Emissions in Victoria*. The report noted that "the overall warming of the climate in Victoria over the past century has been linked to GHG-related climate change. The recent decline in autumn rainfall and the southward shift in some rain-bearing weather systems may also be partially caused by greenhouse-gas related climate change. Continued global GHG emissions, depending on their level, are likely to lead to warmer conditions in Victoria, reduced rainfall in some seasons, and sea level rise."

The relationship between GHG emissions and climate change was further reinforced in 2013 when the Intergovernmental Panel on Climate Change (IPCC) released its latest global assessment of climate change science, *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change* (Climate Change 2013: The Physical Science Basis). AR5 stated that warming of the climate system is unequivocal, and many of the changes observed since the 1950s are unprecedented over decades to millennia.

Source: Western Alliance for Greenhouse Action *Low Carbon West, A Strategy for a Transition to a Low Carbon Economy in the WAGA Region,* p.3.

There is clearly a need for action to reduce greenhouse emissions at all levels of government. Moorabool Shire has the opportunity to contribute to reducing Victoria's and global greenhouse emissions whilst reducing its cost overheads from the carbon-intensive aspects of council operations including buildings, open space, street lighting, fleet and waste. It can also support local businesses and the community to reduce their greenhouse emissions.

The Shire has previously done some work to reduce its and the community's greenhouse emissions through its *Greenhouse Local Action Plan 2007* which aims to reduce the Shire's emissions by 20% and the community's emissions by 10% on 2003/04 levels. A clear assessment of that program has not yet been undertaken.

As part of the Sustainable Environment Strategy project, Ironbark Sustainability has undertaken an Energy and Water assessment of Council's operations (Ironbark Sustainability 2015). The inventory enables Council to benchmark its current use and expenditure of electricity, gas, transport fuel and water. It also shows the greenhouse emissions associated with Council energy use.

The inventory shows that in 2013/14 Council's greenhouse emissions from its operations including buildings, open space and fleet were 4,271 tonnes and council energy costs were just over $1 million. This is up from 3,389 tonnes in 2003/04, as calculated for the *Greenhouse Local Action Plan 2007* (part of the ICLEI Cities for Climate Protection Program). As these figures are derived from two different sources and methodologies it's not possible to compare them directly, however they do suggest significant growth in emissions consistent with Council having taken only minimal action to curb its greenhouse emissions in that time.

In addition, in 2014 Council engaged Ironbark Sustainability to undertake an assessment of costs and greenhouse emissions of street lighting in the Shire, including a business case for switching to low emission globes (Ironbark Sustainability 2014a). This report presents a compelling case for the financial and environmental savings that can be achieved by investing to low energy street lighting. In total, the projects considered in the analysis are expected to cost between $0.66 million and $1.13 million. Net lifetime cost savings (after project costs are removed) are projected to be between $3.86 million and $5.05 million, depending on technology type and increase in electricity and maintenance costs. Project costs include materials (eg. globes) labour (installation) project management, potential expertise and/or consultants, Written Down Value (WDV) and net Avoided Cost (AC) and does not include community education or

Council staffing costs. The project becomes cash flow positive in 5 to 7 years depending on which technology and implementation timeframe is adopted.

The Energy & Water inventory includes a street lighting summary (figure 6) as well as the energy and water used in Council buildings, open space and Council fleet for the financial year 2013/14. (Please note that not all utility bills were available and some smaller facilities were not included, therefore these figures are likely to be under-estimated.)

For the 2013/14 financial year, the inventory showed the breakdown of the Shire's greenhouse emissions by sector in 2013/14 was: Fleet 38%, Street lighting 37%, Buildings 25%. The share of total energy costs of each sector was: Fleet 57%, Buildings 27%, Street lighting 16% (

Figure 7). This shows that Fleet was the largest proportion of Shire energy costs and reductions in fleet energy use will bring substantial cost savings.

Figure 6. Energy consumption costs (2013/14)

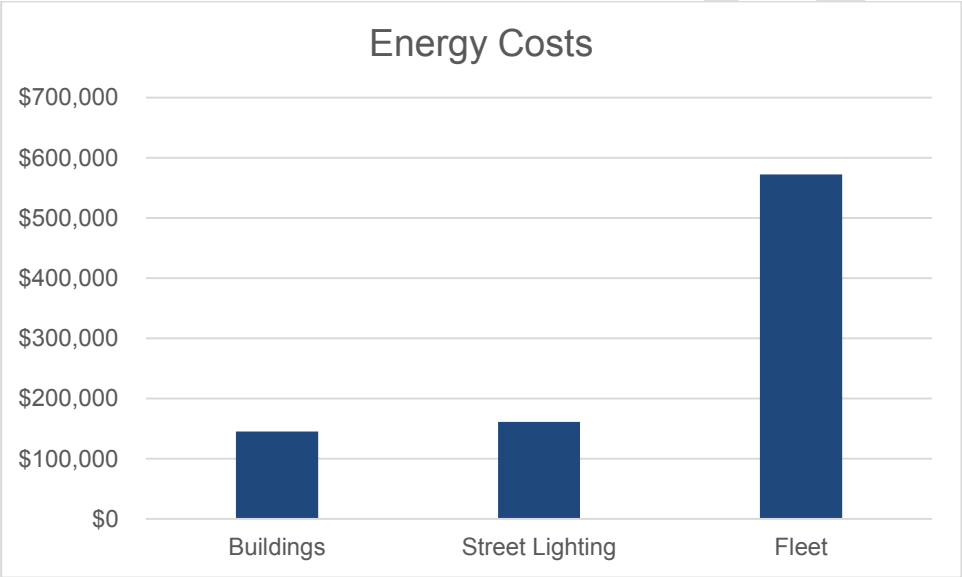
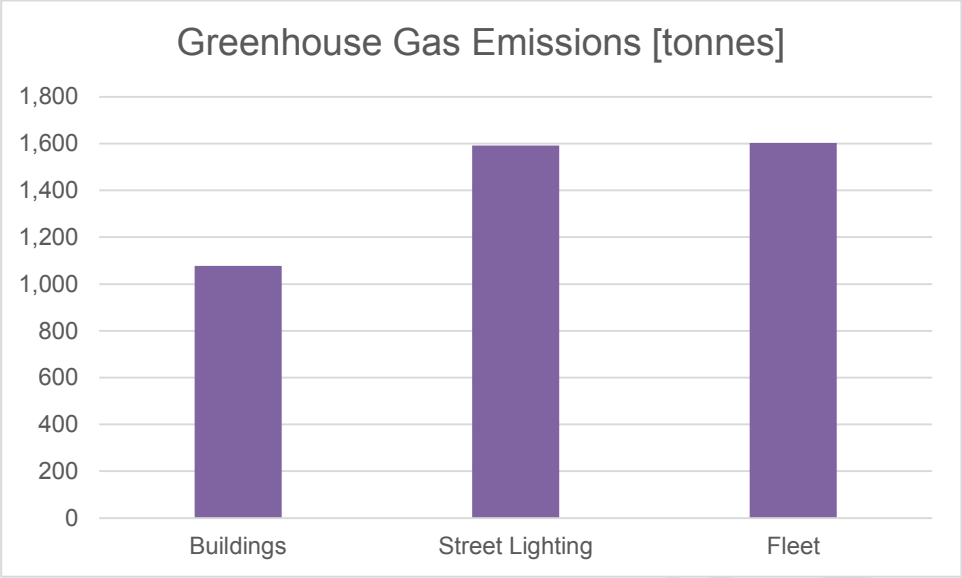
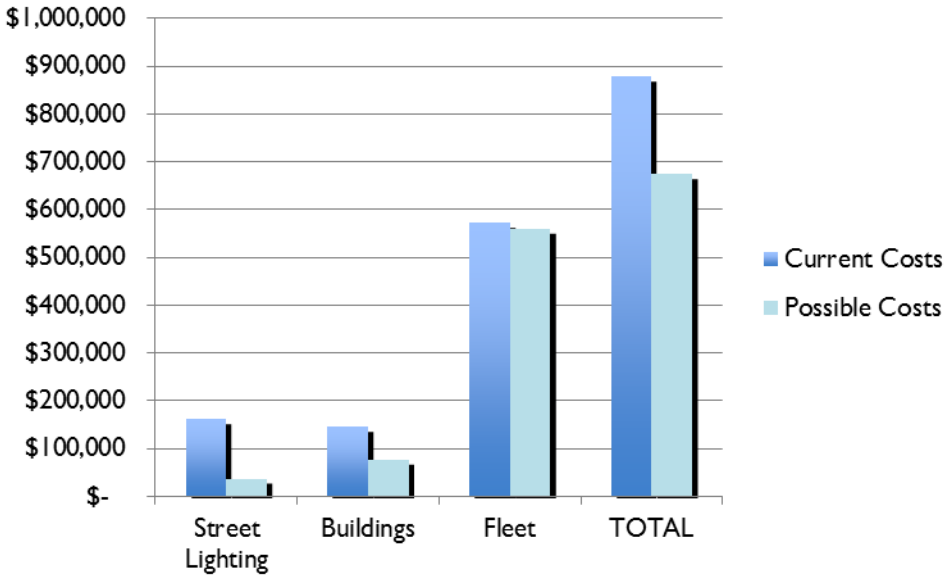


Figure 7. Greenhouse gas emissions (2013/14)



The inventory shows that significant financial and greenhouse savings could be achieved if Council were to undertake a range of retrofit actions to buildings and open space and made changes to the Council fleet. If the Shire were to undertake all actions listed to bring its standard to that of a "best practice" Council, the financial savings would be around **$204,098 per annum** in combined energy and water savings after costs (most of this relates to energy saving rather than water). The majority of cost savings would be from building improvements, followed by energy efficient street lighting and fleet adjustments (Figure 8).

Figure 8. Current vs. Possible Costs if Moorabool Shire achieved Best Practice in Energy & Water



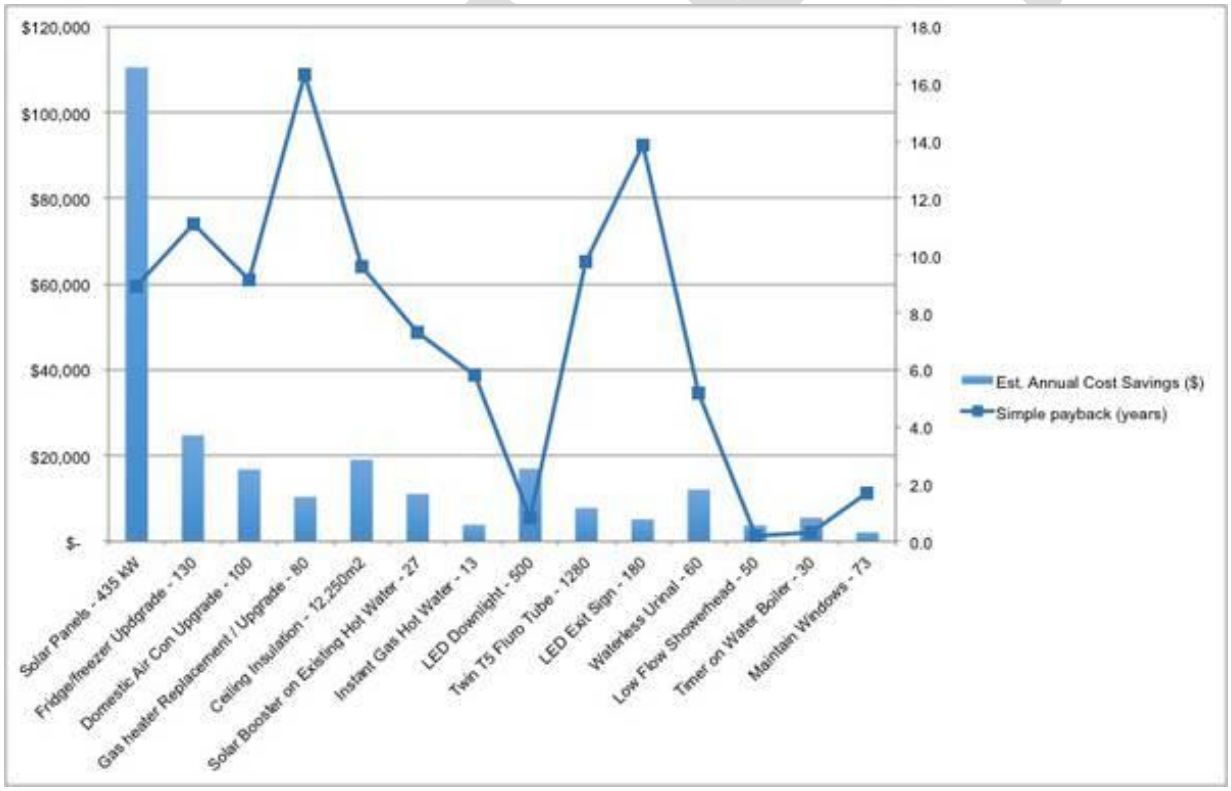
If the Shire were to implement all of the identified actions to bring it to current "best practice", the greenhouse savings would be significant – a total reduction of approximately 1,800 tonnes of greenhouse emissions per year, which is a 42% reduction on 2013-14 emissions. If existing streetlight globes were replaced with energy efficient LEDs it is projected that the greenhouse emissions from street lighting could be cut by up to 77%. If efficiency measures for buildings were introduced, the greenhouse emissions savings for building

energy use could be up to 47%. For fleet changes, the greenhouse emissions savings for running Council's fleet could be up to 2%.

When comparing Moorabool Shire to current best practice, the majority of energy saving actions are yet to be implemented at Moorabool. This presents an enormous opportunity to the Shire to upgrade its building stock, open space, street lighting and fleet to achieve both major cost savings as well as benefiting the environment by cutting its greenhouse emissions.

In terms of prioritising which actions to take in retrofitting buildings and open space, Ironbark has calculated the greatest cost savings and payback periods – see Figure 9 below. It shows that solar photovoltaic panels would provide the largest annual savings with the investment being returned within 9 years. Smaller, lower cost actions such as LED light globes and low flow showerheads have shorter payback periods but over the long term would not achieve as large total savings. There are clearly numerous building efficiency upgrades to save energy and/or water that would save the Shire significant costs with a payback period of less than 15 years.

Figure 9. Average annual per site cost savings compared to simple payback for a selection of actions (Ironbark Sustainability 2014b)



The Western Alliance for Greenhouse Action (WAGA), of which Moorabool Shire is a member council, launched its strategy Low Carbon West: A Strategy for a Transition to a Low Carbon Economy in the WAGA Region in 2014. This strategy provides a range of pathways and actions for member councils to deliver in partnership with all sectors including residential and non-residential buildings, freight, residential transport, waste, and agriculture to improve energy efficiency and cut greenhouse emissions. The actions identified

would reduce greenhouse emissions from the region by 14% compared to business as usual. It presents numerous opportunities for Moorabool to partner with larger councils to benefit from initiatives to reduce Moorabool greenhouse emissions, for example bulk purchasing of solar photovoltaic panels to offer to its community.

Strategic objectives for Energy Efficiency & Clean Energy

1. To reduce the amount of electricity and gas used, and the associated greenhouse emissions, for Council operations per dollar spent by Council.
2. To increase the proportion of renewable energy used in Council's operations.
3. To shift Council's procurement towards low emissions products and services.

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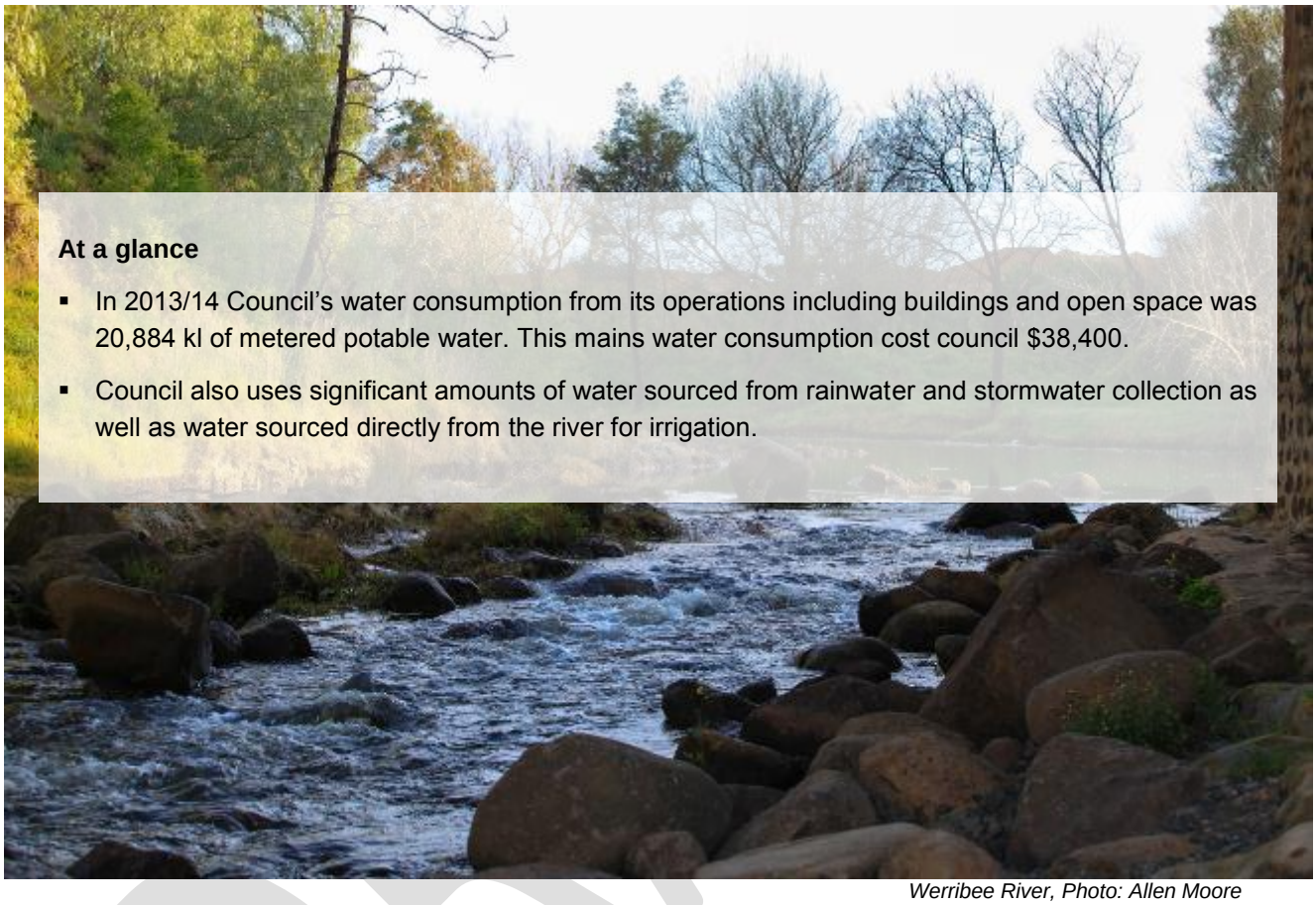
4.2.2 Water Efficient Council



At a glance

- In 2013/14 Council's water consumption from its operations including buildings and open space was 20,884 kl of metered potable water. This mains water consumption cost council $38,400.
- Council also uses significant amounts of water sourced from rainwater and stormwater collection as well as water sourced directly from the river for irrigation.

Werribee River, Photo: Allen Moore

Water Efficient Council vision

There is less water used in the operations of Council with a transition away from potable mains water use to rainwater, stormwater and recycled water.

Context

Mains water supply in Moorabool can be quite variable due to regular droughts experienced in the region – the most intense recent drought being the Millennium drought from 1995 to 2009 which was associated with a hot and dry El Nino weather pattern. The impacts of that drought were felt for many years, with government drought assistance continuing until 2012.

During drought periods water supply reservoirs dip to extremely low levels and all sections of the community are placed on water restrictions to ration consumption in order to maintain supply. Ground water is also depleted due to increased usage of bore water in the face of water restrictions.

However future projections for rainfall for the region are that temperature rises associated with human-induced climate change are almost certain to result in decreased rainfall in Victoria and so future droughts and water shortages are very likely. Therefore Council needs to prepare for the inevitable future droughts by delivering its operations much more efficiently in terms of water use.

Council has already taken steps over the years to reduce its water consumption and to find more sustainable sources. Open space irrigation has been reduced by using more drought tolerant (low-water) turf and landscaping. Alternative sources such as storm water retention and rainwater tanks have also been used, with many buildings in the Shire now having rainwater tanks.

As part of the Sustainable Environment Strategy project, Ironbark Sustainability has undertaken an Energy and Water assessment of Council's operations (Ironbark Sustainability 2015). The inventory enables Council to benchmark its current use of mains potable water as captured by water bills for Council buildings and open space.

The Water inventory for financial year 2013/14 shows that Council used 20,884 kl of mains water for buildings and open space from available water bills (some small facilities did not have bills available). This represented a total water bill cost of $38,400. This does not include any water sourced from rainwater tanks or stormwater retention or pumped from the river for irrigation, of which an unknown but sizeable proportion is sourced for open space irrigation and facilities.

Significant water savings could be achieved if Council were to undertake a range of retrofit actions to buildings and open space to reduce water consumption and use of mains potable water. However exact cost and water saving estimates through such actions are difficult to provide until a detailed building and open space water assessment and plan is developed.

Strategic objectives for a Water Efficient Council

1. Improve water efficiency of Council buildings and operations.
2. Transition from using potable water to using recycled water or stormwater for Council operations and facilities.

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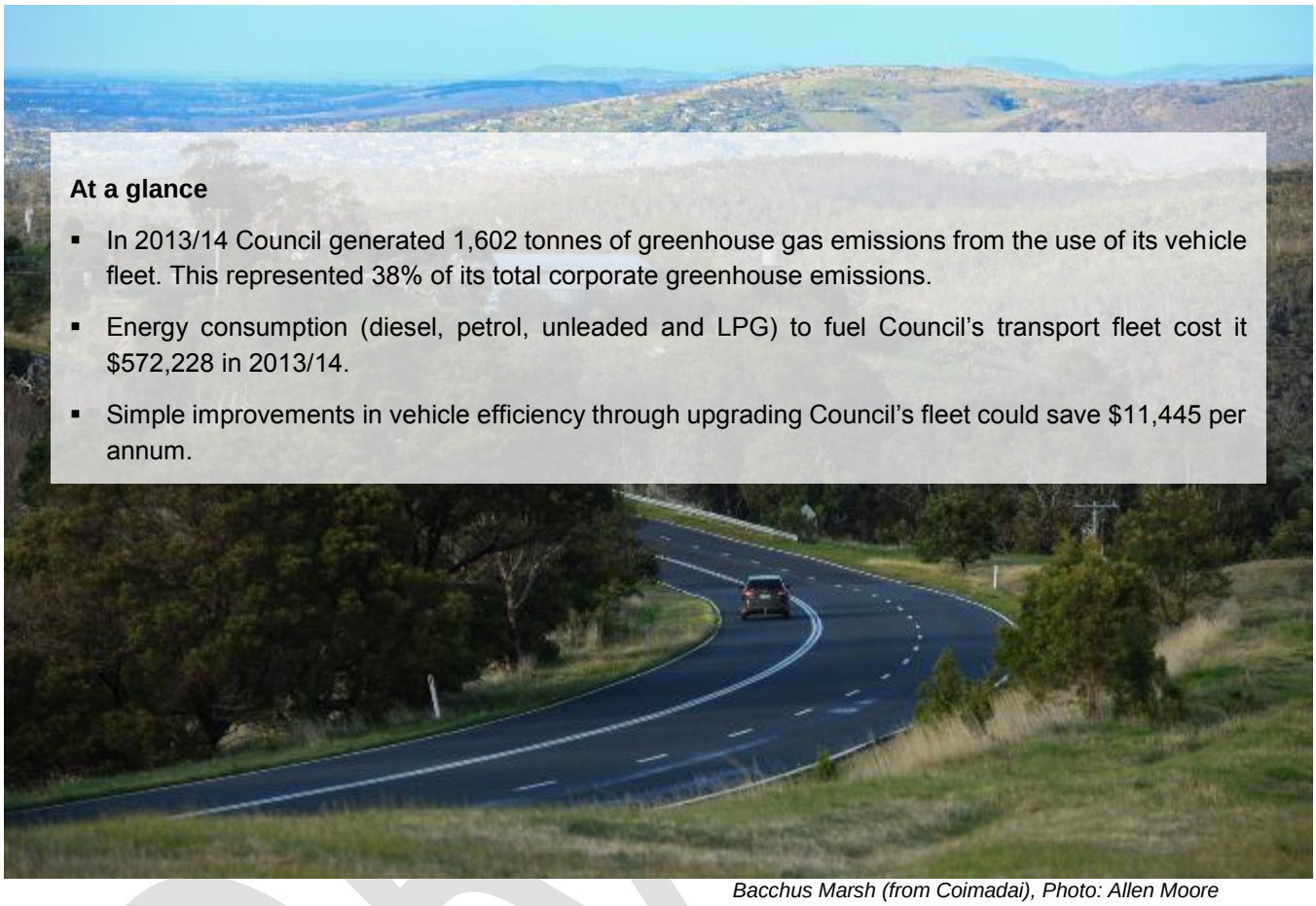
4.2.3 Sustainable Transport in Council



At a glance

- In 2013/14 Council generated 1,602 tonnes of greenhouse gas emissions from the use of its vehicle fleet. This represented 38% of its total corporate greenhouse emissions.
- Energy consumption (diesel, petrol, unleaded and LPG) to fuel Council's transport fleet cost it $572,228 in 2013/14.
- Simple improvements in vehicle efficiency through upgrading Council's fleet could save $11,445 per annum.

Bacchus Marsh (from Coimadai), Photo: Allen Moore

Sustainable Transport Council vision

We will reduce the greenhouse emissions from the transport used for Council operations.

Context

The direct greenhouse emissions and fuel costs associated with Councils transport are predominantly from:

- Heavy equipment for Council works, particularly the backhoe, large trucks and tippers.
- Staff use of fleet passenger cars to travel to work meetings.

Greenhouse emissions from fleet is the largest sector of Council's emissions profile, according to Ironbark's inventory, being 38% of emissions from energy in 2013/14 – greater than buildings, open space or street lighting (see Figure 7 and 8 in Energy Efficient Council). Fleet is also a larger total cost than these other energy use sectors, representing 57% of Council's energy costs. Therefore any action that Council can take to reduce its fuel consumption for fleet will save it significant operating costs and greenhouse emissions.

Ironbark has estimated that actions to improve the efficiency of vehicles, largely by using more fuel-efficient vehicles, could save 2% of these costs and emissions (based on best practice comparisons). However if more behaviour change was achieved to reduce and avoid staff usage of fleet vehicles or to drive more efficiently, greater gains could be achieved.

Council's Fleet Policy was updated in 2015 with the aim of progress towards a more fuel efficient fleet by 2021. In addition, options to improve the existing fleet booking system are being considered.

Another related transport impact is staff travel to work. Although the greenhouse emissions associated with this are not considered the direct ownership of Council, this is an area that Council can have an influence. As an employer, it is also the responsibility of Council to assist its staff to travel in the most cost effective, healthy and sustainable method possible.

Strategic objectives for sustainable transport in Council

1. Reduce greenhouse emissions from vehicle usage for Council operations.
2. Reduce greenhouse emissions from staff travel to and from work through supporting a reduction in car trips.

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4.3 SUSTAINABLE PLACES

Residential development, Photo: Suzie Brown

4.3.1 Climate Adaptation

At a glance

- Climate change projections show the most serious impacts in Moorabool Shire are very likely to occur from as early as 2030 including: extreme bushfire and extreme heat, with associated drying of the land, and reduction in rainfall and increased risk of drought.
- The risks of climatic change on the operations of Council and the community are very serious and include numerous issues such as: financial costs of replacing damaged assets and maintaining stressed assets, inadequate building standards to cope with extreme weather, poor planning for the impacts of climate change and the slowing of the regional economy.

Photo: Sustainability.com

Climate Adaptation vision

We will support and deliver activities to reduce the impact of and vulnerability to future climate change on the Moorabool Shire community.

Context

As part of current operations, significant work has been undertaken to ensure that Council is ready to respond to natural events, such as flood and fire, through the Community Emergency Risk Assessment (CERA) process.

With the forecast increase in average temperatures and fire and flood events resulting from climate change over the next 40 years, it is important that Council considers actions to manage for this eventuality.

The Western Alliance for Greenhouse Action (WAGA) developed the *Climate Change Adaptation Strategy 2013-2020* and *Action Plan 2013-30* which set out the key risks and a plan of action for its member councils to respond to the priority climate change risks for the region (as described in the *WAGA Climate Change Risk Assessment 2011)..*

These documents show that the greatest risks to Moorabool Shire from climate change are extreme bushfire and extreme heat risks, with associated drying of the land and reduction in rainfall and increased risk of drought.

A summary of the climate impacts and risks for Melbourne's west as outlined in the WAGA reports is as follows:

1. **Higher average temperatures and solar radiation**
   - Increasing average temperatures over time with a high degree of certainty.
   - By 2030, average daily maximum temperatures are likely to rise by 0.5 to 1.5°C over most of Victoria; by 2070, they are likely to rise by 0.7 to 5.0°C compared to 1990. There will be more hot days and fewer cold days. Widespread decreases in atmospheric moisture are likely.
2. **Reduced rainfall, but heavier rainfall during rain events**
   - Although average annual and seasonal total rainfall is expected to decline, the intensity of heavy daily rainfall is likely to rise in most seasons. However, fewer rain days are anticipated, along with more droughts. These heavy rains could contribute to soil erosion and movement.
   - Reductions in the total average annual rainfall of around four per cent are expected, with the greatest percentage reductions occurring in spring (7%) compared with 1990 figures. In Melbourne, the average long-term stream flow into water supply catchments could be reduced by up to 11 per cent by 2020, and as much as 35 per cent by 2050. Projections suggest that annual runoff to the Maribyrnong and Werribee Rivers could reduce by five to 30 per cent by 2030.
3. **Increasing intensity and frequency of extreme weather events**
   - Without global action to reduce emissions, by 2070 Melbourne's average number of days above 35°C are likely to increase from 9 to 26. An increase in the frequency, intensity and duration of heat waves may also amplify the risk of heat-related health problems, particularly in urban areas. Higher temperatures may also shift energy use from winter heating to summer cooling.
   - "Extreme" fire danger days are expected to increase by 12 to 38 per cent by 2020, and by 20 to 135 per cent by 2050. Between 2000 and 2007, Victoria experienced a 62 per cent increase in fire weather warnings. By 2020, they may occur twice as often, and by 2050 four to five times as often. This means the Melbourne region would experience catastrophic fire days once every 2.4 years on average, instead of the current average of once every 33 years.

The WAGA climate adaptation work also involved identifying major risks or threats to the region that each council needs to plan for and mitigate the impact of. It is important to note that WAGA only included risks that were applicable to entire WAGA region or multiple councils. There are likely to be other risks unique to

Moorabool and not shared by other councils in the WAGA region. Therefore Council needs to consider additional possible risks when doing its climate adaptation planning.

Strategic objectives for climate adaptation

1. To ensure that Moorabool Shire has understood the risks of climate change on Council operations and takes actions to prepare for and mitigate these risks.
2. To ensure that Council has understood the risks of climate change to the community and is working with the community to help prepare for and mitigate the risks.

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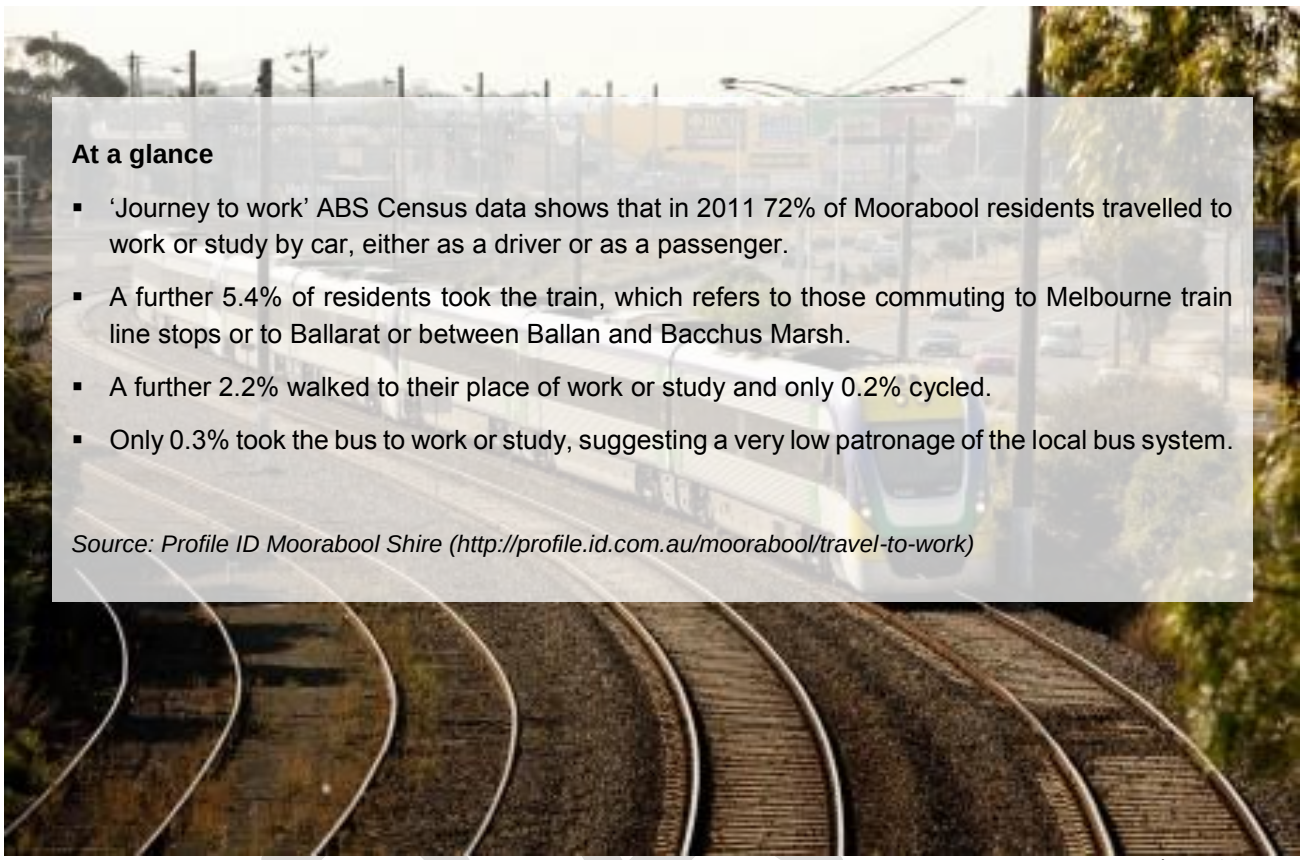
4.3.2 Sustainable Community Transport



At a glance

- 'Journey to work' ABS Census data shows that in 2011 72% of Moorabool residents travelled to work or study by car, either as a driver or as a passenger.
- A further 5.4% of residents took the train, which refers to those commuting to Melbourne train line stops or to Ballarat or between Ballan and Bacchus Marsh.
- A further 2.2% walked to their place of work or study and only 0.2% cycled.
- Only 0.3% took the bus to work or study, suggesting a very low patronage of the local bus system.

Source: Profile ID Moorabool Shire (http://profile.id.com.au/moorabool/travel-to-work)

Photo: G21

Sustainable Transport Infrastructure & Engagement vision

There is a reduction in vehicle trips in the Shire as a result of Council's provision, promotion and advocacy for community transport infrastructure and programs to support cycling, walking and public transport.

Context

Transport behaviour in Moorabool Shire is heavily car dependent, which is not unusual for a peri-urban shire. ABS Census data on residents' mode of traveling to work (Journey to Work data) shows that in 2011 72% of Moorabool residents travelled to work or study by car, either as a driver or a passenger. A further 5.4% took the train, which refers to those commuting to Melbourne train line stops or to Ballarat or between Ballan and Bacchus Marsh. A further 2.2% walked to their place of work or study and only 0.2% cycled. Only 0.3% took the bus to work or study, suggesting a very low patronage of the local bus system[7].

In Moorabool Shire there are affordable and direct connections by train from Ballan and Bacchus Marsh to Melbourne and Ballarat, however community feedback suggests more frequent services would be desired. The bus network is quite limited with services mainly in Bacchus Marsh. Community feedback also suggests better coordination between bus and train services would assist increased uptake of public transport use.

Cycling and walking are well-utilised within townships and Council continues to work to improve cycling and walking access particularly in Bacchus Marsh.

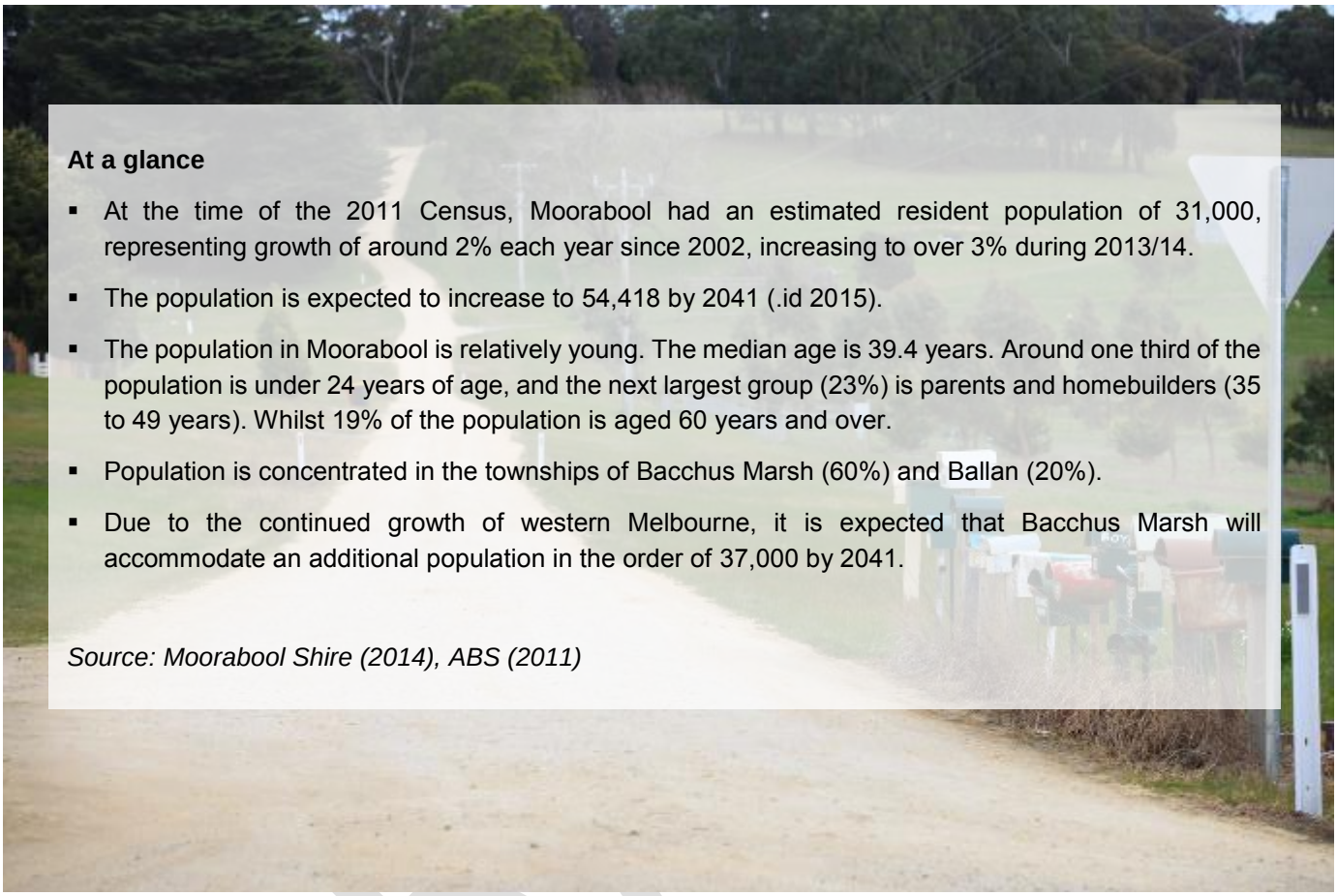
In 2014 and 2015 Council completed the Moorabool Hike & Bike Strategy and Bacchus Marsh Integrated Transport Strategies which aim to improve the connectivity of existing road networks and promote greater cycling and walking, by constructing interconnected cycling and walking paths to link key destinations.

Strategic objectives for Sustainable Transport infrastructure and engagement

1. Ensure transport infrastructure in Bacchus Marsh and Ballan is integrated to support greater linked use between modes and better planning for active transport modes.
2. Provide cycling and walking infrastructure to support increased use of these modes instead of driving.
3. Support the increased use of public transport in the Shire in place of car travel.

[7] Source: Profile ID Moorabool Shire http://profile.id.com.au/moorabool/travel-to-work

4.3.3 Urban development and planning



At a glance

- At the time of the 2011 Census, Moorabool had an estimated resident population of 31,000, representing growth of around 2% each year since 2002, increasing to over 3% during 2013/14.
- The population is expected to increase to 54,418 by 2041 (.id 2015).
- The population in Moorabool is relatively young. The median age is 39.4 years. Around one third of the population is under 24 years of age, and the next largest group (23%) is parents and homebuilders (35 to 49 years). Whilst 19% of the population is aged 60 years and over.
- Population is concentrated in the townships of Bacchus Marsh (60%) and Ballan (20%).
- Due to the continued growth of western Melbourne, it is expected that Bacchus Marsh will accommodate an additional population in the order of 37,000 by 2041.

Source: Moorabool Shire (2014), ABS (2011)

Mt Egerton, Photo: Allen Moore

Urban development and planning vision

We will support development that respects and conserves Moorabool Shire's natural environment and reduces future environmental impacts from increased population growth and new development.

Context

Moorabool Shire is centrally located between Melbourne and Ballarat with easy access to Geelong and Bendigo via highways and transport, making it an attractive destination for those seeking affordable housing, a rural lifestyle and access to employment and services in major cities.

Population growth since 2002 has been at about the state average and is projected to be considerably higher than average to 2022 (Department of Health 2013). This is reflected in the most recent population data, showing that during the 2013/14 year the growth rate was 3.3% (a 36% increase on the average annual growth rate of 2.1%). The population is expected to grow from the current population of 31,000 to approximately 49,000 by 2036 however given the recent increased rate of growth this projected figure may be reached sooner (Moorabool Shire 2014).

Moorabool is a young community with approximately one third of the population aged 24 years or younger. The next highest group are those in the 'parent and homebuilder' demographic', aged 35 – 49 years (accounting for approximately 23% of the total population). Approximately 19% of the population is aged 60 years and over (ABS 2011).

Most of the growth in the Shire is concentrated in the east, around Bacchus Marsh. Currently, more than half the Shire's population lives in Bacchus Marsh and surrounds (approximately 19,032), followed by Ballan (6,534). The remaining population is distributed across a number of small towns, hamlets and farming areas within the Shire. Council has identified Bacchus Marsh and Ballan as the main locations for future growth, as they already have established infrastructure to accommodate new growth (Moorabool Shire 2014).

Moorabool Shire is currently developing an Urban Growth Strategy and a Rural Growth Strategy in response to population growth pressures and other land use issues such as the preservation of significant natural environments and agricultural land. Central to these strategies is the *Moorabool 2041 Strategy,* which will guide planning and future decision making in the Shire over the coming decades to 2041. Moorabool Shire is also a member of the Peri-Urban Group of Rural Councils, which aims to promote a comprehensive vision for the peri-urban region of the Melbourne metropolitan fringe.

The increasing population means that now more than ever, it is imperative that a balance is struck between accommodating this present growth and protecting the natural environmental values and the needs of future generations. Council is well placed to demonstrate leadership in environmentally sensitive and sustainable development. This can be achieved through land use planning decisions that protect natural resources, productive agricultural land and landscape aesthetics. Council can also influence new residential and commercial development to ensure higher environmental standards for new buildings as well as water, renewable energy and biodiversity-sensitive urban streetscapes.

There will be challenges for Council in achieving sustainable development. These include, but are not limited to:

- Managing and restricting development pressure in areas of high biodiversity and landscape values (particularly in areas that have high conservation significance, but are not well understood by the community such as grasslands).
- Early identification of biolink and connectivity opportunities and protecting these areas from development.
- Protecting productive agricultural land from development.
- Advocating for and engaging the community in more sustainable, environmentally sensitive urban developments and settlements.

Strategic objectives for urban development and planning

1. To ensure that attention to natural values are embedded within structure planning processes to allow for protection of natural assets.
2. Access and collate the most up-to-date data sets to support strengthened environmental policies within Moorabool's planning scheme aimed at protecting natural assets.
3. Improve access to and connectivity between residents and open space and natural reserve areas.
4. Use the planning process to improve the standard of new residential or commercial buildings or renovations in the Shire.
5. New residential or mixed use precincts are designed with sustainability at the core of their structure plan including support for cycling/walking/public transport, abundant recreation space, greenspaces and biodiversity, shops or services within walking distance, water sensitive urban design, stormwater reuse and design for passive solar or solar panels.

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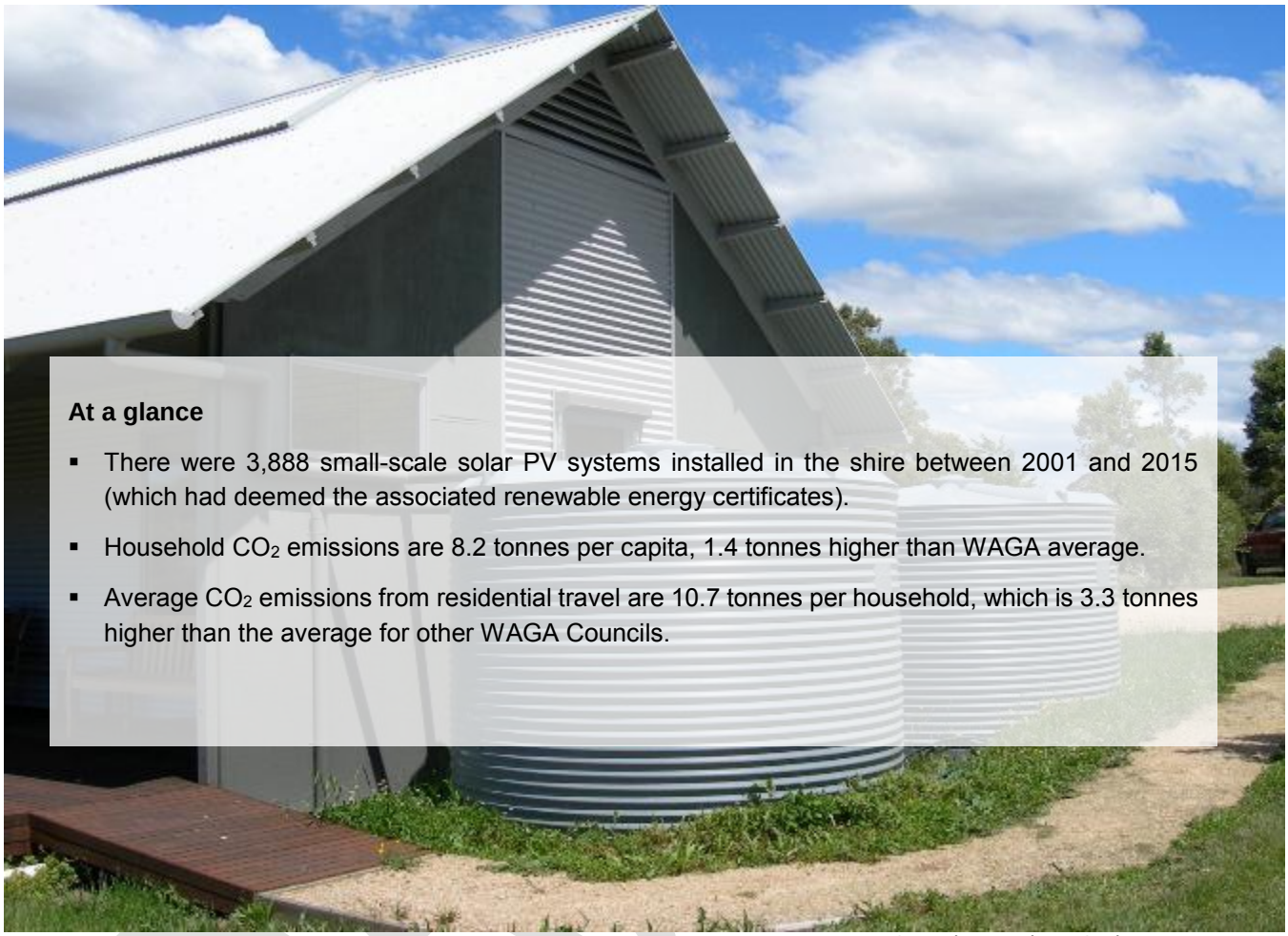
4.4 LIVE & WORK SUSTAINABLY

Blackwood, Photo: Allen Moore

Bacchus Marsh, Photo: Moorabool Visitor Information

4.4.1 Clean Energy and Energy & Water Efficient Community



At a glance

- There were 3,888 small-scale solar PV systems installed in the shire between 2001 and 2015 (which had deemed the associated renewable energy certificates).
- Household CO_2 emissions are 8.2 tonnes per capita, 1.4 tonnes higher than WAGA average.
- Average CO_2 emissions from residential travel are 10.7 tonnes per household, which is 3.3 tonnes higher than the average for other WAGA Councils.

Green home, Photo: Suzie Brown

Clean Energy & Energy & Water Efficient Community vision

There is a measurable decrease in greenhouse emissions and potable water use in the Moorabool business and residential community.

Context

As outlined in the Climate Adaptation section, the impacts of climate change are likely to be severe, and have already been felt in the last two decades in the form of heatwaves, drought and extreme bushfire. It is crucial that the whole community be informed about climate change and be engaged to play their role in reducing its impacts. One of the main actions households and businesses can take is to reduce their greenhouse emissions from their home energy, transport or business energy needs.

In 2006 a SGS Economic and Planning report found that, when compared to the 7 Councils in the Western Alliance for Greenhouse Action (WAGA) CO_2 emissions per capita from Moorabool residents were 1.4 tonnes above the average for all WAGA Councils. The report found that this was largely as a result of higher than average emissions resulting from residential travel.[8]

In addition, to handle the increased incidence of heatwaves it benefits residents' health and safety if their homes are retrofitted to keep them cooler in summer (and warmer in winter) – vulnerable groups such as the elderly and families with infants need priority for this assistance.

These actions often also cut household energy bills, and many energy efficiency actions have a very short payback period (see Figure 1 in the Energy Efficient Council section). In addition solar PV has become a very good investment as panel prices have come down whilst energy bills have risen. Therefore the payback period is now quite short for installing panels.

Due to limited resources, Council currently does very little work in the energy efficiency and clean energy engagement area, other than provide information on its website. In 2009 Council ran a well-received bulk buy program of solar photovoltaic (PV) systems, which allowed residents to buy a discounted rooftop solar system which was pre-arranged with a reputable supplier.

Between 2001 and May 2015 there were 3,888 small-scale solar systems installed in the Shire[9] – these were the systems for which the renewable energy certificates were deemed via the Federal Clean Energy Regulator, so it is possible there were more systems than this, as well as the systems that were installed prior to 2001.

Currently there are very few Victorian Government programs for the community on energy efficiency or renewable energy as a result of the recent change of government. Previous government programs have mostly ceased and were very few anyway. The new government has stated that climate action is a priority therefore it is likely that funding and programs for councils and communities will arise in the 2015-19 period. Council needs to maintain close communications with Sustainability Victoria and the Department of Environment, Land, Water and Planning (DELWP) to seek out opportunities to offer its community.

As outlined in the sections on Water Efficient Council and Climate Adaptation, Victoria experienced regular droughts and these are becoming more severe as a result of climate change. The 1995-2009 drought was probably Australia's worst ever drought and resulted in water supply reservoirs reaching dangerously low levels and some drying up completely. The community were put on high-level water restrictions to reduce consumption, whilst water saving measures such as rainwater tanks and efficient showerheads and toilets were well implemented.

[8] Source: https://www.acfonline.org.au/sites/default/files/resources/Werribee-Plains-ACF-WAGA-Energy-Research-Study.pdf
[9] Source: http://ret.cleanenergyregulator.gov.au/REC-Registry/Data-reports#Latest-data

As the likelihood of future drought is high, continued action to increase household water efficiency and increase the use of rainwater collection is needed to 'future-proof' our water supplies. This is more difficult during the current period of higher water levels and few water restrictions, but Council and water authorities can continue to play a key role in supporting action.

Strategic objectives for Clean Energy and Water & Energy Efficient Community

1. Council to advocate to other levels of government to reduce the cost burden on residents of energy through funded energy and water efficiency and renewable energy programs.
2. Council to work with water authorities and energy retailers to gather data about community water and energy usage and opportunities for greater efficiency.
3. Council to develop a Water & Energy Efficient Communities engagement strategy to promote existing State Government programs that assist the community to:
   a) Reduce greenhouse emissions from electricity and gas use.
   b) Increase the proportion of energy coming from renewable energy sources for community power needs.
   c) Improve water efficiency of businesses and residences in Moorabool.
   d) Increase the use of greywater, rainwater tanks and stormwater harvesting methods to replace the use of potable mains water in businesses and residences.

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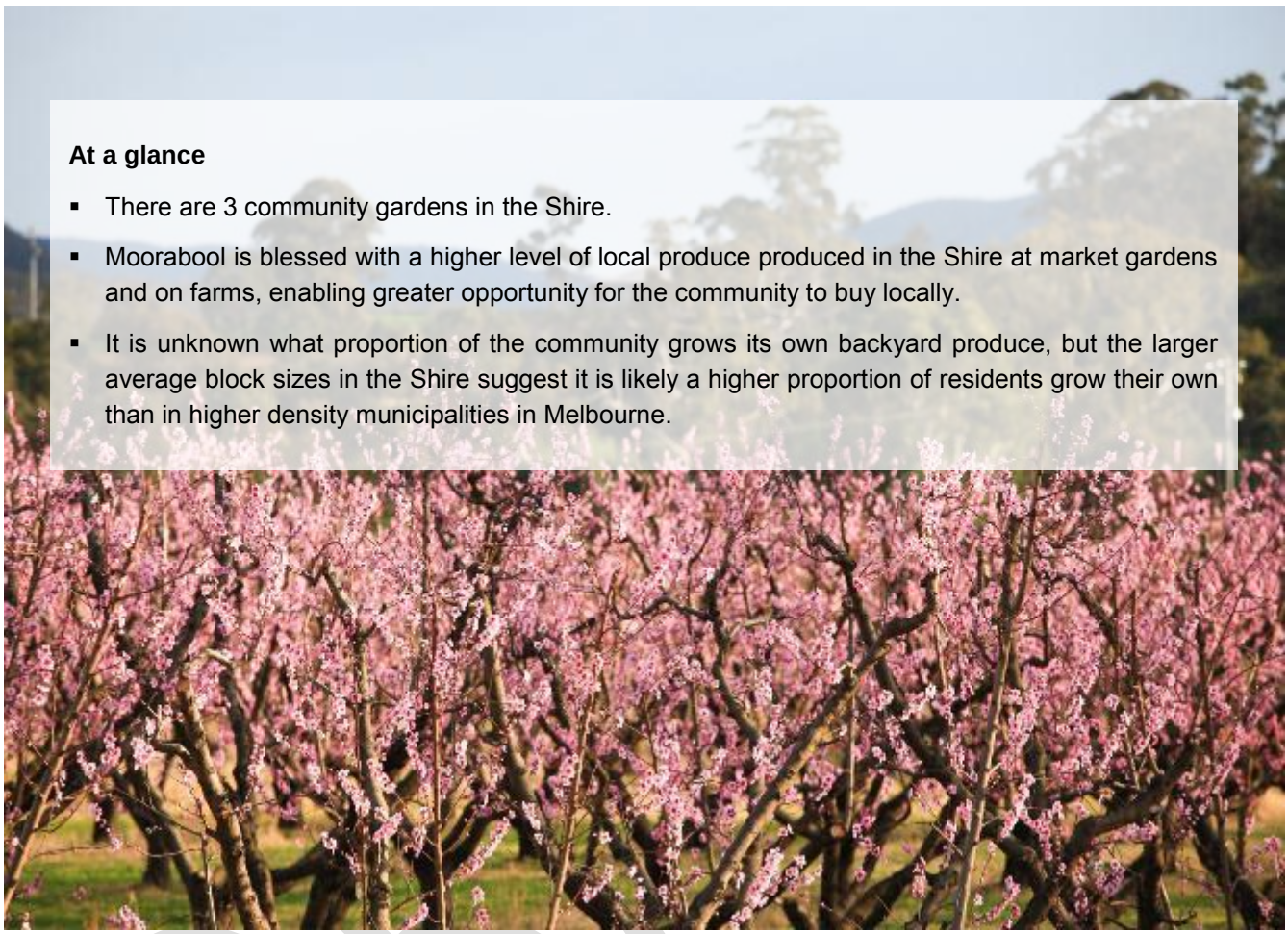
4.4.2 Local Food



At a glance

- There are 3 community gardens in the Shire.
- Moorabool is blessed with a higher level of local produce produced in the Shire at market gardens and on farms, enabling greater opportunity for the community to buy locally.
- It is unknown what proportion of the community grows its own backyard produce, but the larger average block sizes in the Shire suggest it is likely a higher proportion of residents grow their own than in higher density municipalities in Melbourne.

Orchard in blossom Photo: Allen Moore

Local Food vision

There is a measurable increase in the community growing their own food and buying more of their food from local food producers.

Context

As the impacts of climate change are felt, there are a number of climate impacts which threaten our food supply including:

- Water shortages due to drought reducing rainfall and water storages
- Heatwaves causing the loss or drop in quality of produce
- Bushfire causing the loss of crops, livestock and grazing land
- Unpredictable impacts of pests such as insects damaging food production.

Peak oil (where the cost of oil becomes more and more expensive as extraction becomes more difficult) could result in the cost of food increasing dramatically since many inputs to large-scale food production rely on oil (transport, fertilizer, machinery etc.).

Moorabool Shire has a large supply of local food, with the presence of market gardens as well as small to large-scale agricultural production on farms. Supporting this local food production, connecting it to local residents, and also supporting local residents to grow some of their own food are all important actions.

Council has put some energy into supporting the development of community gardens in the Shire in recent times and there are now at least three community gardens: Darley Community Art Garden, Hospital Garden Ballan, Friendship Garden at Ballan.

Moorabool Environment Group does a range of activities to support people growing their own food, buying locally and growing in the community gardens. The Bacchus Marsh Produce Swap is one example, where residents are invited once a month to meet to exchange or offer excess produce.

Strategic objectives for Local Food

Moorabool Shire to promote activities that:

1. Increase local production of food by residents and businesses in Moorabool Shire.
2. Increase local sales and consumption of locally produced food in Moorabool Shire.
3. Increase participation in community food production activities including community gardens, food swaps and local farmers markets.

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Appendix 1: Strategic and legislative framework

National

Legislation	Policy Strategy and Agreements
▪ Aboriginal and Torres Strait Islander Heritage Act 1984 ▪ Australian Heritage Commission Act 1975 (Register of the National Estate) ▪ Environment Protection and Biodiversity Conservation Act 1999 ▪ Native Title Act 1993 ▪ Water Act 2007	▪ A Directory of Important Wetlands in Australia (EA 2001) ▪ Australia's Biodiversity Conservation Strategy 2010–2030 ▪ Australian Pest Animal Strategy 2007 ▪ National Framework for the Management and Monitoring of Australia's Native Vegetation (2001) ▪ National Indigenous Reform Agreement (Closing the Gap) ▪ National Water Quality Management Strategy (1992) ▪ Strategy for Australia's National Reserve System 2009–2030 ▪ The Australian Weeds Strategy (revised 2007) ▪ Wetlands Policy of the Commonwealth Government of Australia 1997

State

Legislation	Policy Strategy and Agreements
▪ Aboriginal Heritage Act 2006 ▪ Catchment and Land Protection Act 1994 ▪ Climate Change Act 2010 ▪ Conservation, Forests and Lands Act 1987 ▪ Cooperative Management Agreement 2004 ▪ Crown Land (Reserves) Act 1978 ▪ Environment Protection Act 1970 ▪ Fisheries Act 1995 ▪ Flora and Fauna Guarantee Act 1988 ▪ Forests Act 1958 ▪ Heritage Rivers Act 1992 ▪ Land Act 1958 ▪ National Parks Act 1975 ▪ Parks Victoria Act 1998 ▪ Planning and Environment Act ▪ Reference Areas Act 1978 ▪ State Environment Protection Policy (Waters of Victoria) 2003 ▪ Sustainable Forests (Timber) Act 2004 ▪ Traditional Owner Settlement Act 2010 ▪ Assessment Council Act 2001 ▪ Victorian Conservation Trust Act 1972 ▪ Water Act 1989 ▪ Wildlife Act 1975	▪ Biosecurity Strategy for Victoria 2009 ▪ Indigenous Partnership Framework 2007-10 (reviewed 2010) ▪ Invasive Plants and Animal Policy Framework 2010 ▪ Our Water Our Future (DSE 2004) ▪ Native Vegetation Management – A Framework for Action (Revised 2005) ▪ Policy for Sustainable Recreation and Tourism on Victoria's Public Land 2002 ▪ State Environment Protection Policy (Waters of Victoria 1988) ▪ State Environment Protection Policy (Groundwaters of Victoria) 1997 ▪ Sustainability Charter for Victoria's State Forests 2006 ▪ 2009 Victorian Bushfires Royal Commission ▪ Victorian Bushfire Strategy 2008 ▪ Victorian Landcare Program Strategic Plan 2012 ▪ Victorian Flood Management Strategy 1998 ▪ Victorian Planning Provisions 1998-1999 ▪ Victorian Waterway Management Strategy 2013 ▪ Victorian Floodplain Management Strategy 2016 ▪ Victoria's Nature based Tourism Strategy 2008–2012 ▪ Victoria's Salinity Management Framework 2000 ▪ Water for Victoria (discussion paper) 2016

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Regional

Legislation	Policy Strategy and Agreements
▪ N/A	▪ Central Highlands Regional Growth Plan 2014 ▪ South West Landscape Assessment Study 2012 ▪ Grow West Implementation Plan 2013 ▪ Corangamite Regional Catchment Strategy 2013 ▪ Corangamite Waterway Strategy 2014 – 2022 ▪ Corangamite Landcare Support Plan 2013 ▪ Corangamite Invasive Plant and Animal Management Strategy ▪ Corangamite Soil Health Strategy 2006 – 2012 ▪ Corangamite Native Vegetation Plan 2003 – 2008 ▪ Corangamite Salinity Action Plan 2005 – 2008 ▪ Corangamite Wetland Strategy 2006 - 2011 ▪ Port Phillip and Westernport Regional Catchment Strategy ▪ Port Phillip and Westernport Healthy Waterways Strategy 2013 ▪ Port Phillip and Westernport Native Vegetation Plan 2006 ▪ Port Phillip and Westernport Rabbit Action Plan 2003 ▪ Port Phillip and Westernport Weed Action Plan 2003 ▪ Melbourne Water Port Phillip and Westernport Region Flood Management and Drainage Strategy 2007 ▪ Western Alliance for Greenhouse Action (WAGA) (2012), *Climate Change Adaptation Strategy 2013-2020 Full Report* ▪ Western Alliance for Greenhouse Action (WAGA) (2012) *Climate Change Adaptation Action Plan 2013-30* ▪ Western Alliance for Greenhouse Action (WAGA) (2011) *Climate Change Risk Assessment* ▪ Western Alliance for Greenhouse Action (WAGA) (2014) *Low Carbon West: A Strategy for a Transition to a Low Carbon Economy in the WAGA Region*

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Appendix 2: Bioregions and ecological communities of Moorabool Shire

Bioregions of the Moorabool Shire

Bioregions are a landscape-scale approach to classifying the environment using a range of attributes such as climate, geomorphology, geology, soils and vegetation. Bioregions capture the patterns and ecological characteristics in the landscape. There are 28 bioregions identified across Victoria (DEPI 2014).

Within Moorabool Shire there are two bioregions that characterise the landscape. An overview of these bioregions is provided in Table 4.

Table 4. Bioregions of Moorabool Shire

Bioregion	Characteristic
Central Victorian Uplands	Dominated by Lower Palaeozoic deposits giving rise to dissected uplands at higher elevations, amongst granite and sedimentary terrain metamorphic and old volcanic rocks, which have formed steeply sloped peaks and ridges. Supports grassy woodlands and forests (DEPI 2014). Extends across the north of the Shire.
Victorian Volcanic Plains	Vast open areas of grasslands and small patches of open woodland. Dominated by Cainozoic volcanic deposits that formed extensive flat to undulating basaltic plain with stony rises, old lava flows, numerous volcanic cones and old eruptions points and is dotted with shallow lakes both salt and freshwater. Numerous volcanic cones (scoria and basalt) dot the landscape (DEPI 2014). South of the Shire. Supports productive agricultural land.

Ecological communities

The large areas of protected reserves within Moorabool Shire provide good examples of intact remnants of original ecosystems. These areas are important habitat and refuge for threatened flora and fauna that are known to occur in the Shire. Council reserves and many of the roadsides across the Shire also provide important habitat values for threatened flora and fauna.

The natural environment of Moorabool Shire also provides important ecosystem services for humanity like clean water, fresh air, food, fuel and energy. Subsequently, the use of natural resources to provide these services has resulted in significant change to the natural, or ecological, function of the landscape in Moorabool Shire.

Steps are being taken to restore the ecological function of the landscape, with landholders, Landcare, programs such as Grow West and Council undertaking activities to rehabilitate the natural environment and restore some of its former ecological function. These activities and proposed actions such as increasing the connectivity between reserves and patches of remnant habitat, will contribute to the protection and restoration of ecological communities within the Shire.

There are five ecological communities in the Shire that are listed under the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*. These are identified in Table 5.

Table 5. Endangered ecological communities in Moorabool Shire (DoE 2014)

Ecological community	Status
Grassy Eucalypt Woodland of the Victorian Volcanic Plain	Critically endangered
Natural Temperate Grassland of the Victorian Volcanic Plain	Critically endangered
Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains	Critically endangered
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically endangered
Grey Box *(Eucalyptus microcarpa)* Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Endangered

In addition, there are 32 threatened species (17 fauna species and 15 flora species) that are listed under the *EPBC Act,* as well as 11 migratory species. Two of these species are critically endangered:

- Golden Sun Moth *(Synemon plana)*
- Plains Rice-flower *(Pimelea spinescens subsp. spinescens)* (DoE 2014).

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MOORABOOL
SHIRE COUNCIL

Moorabool Shire Sustainable Environment Strategy

Implementation Plan 2016 - 2021

DRAFT FOR CONSULTATION

Moorabool Shire Council

rustybrown

RMCG
Environment | Water | Agriculture
Policy | Economics | Communities

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1 About the Implementation Plan

This Implementation Plan outlines the activities over the next 5 years that Moorabool Shire Council will undertake to help achieve the objectives and visions, identified in the Moorabool Shire Sustainable Environment Strategy, that aim to see improvements to the natural environment by 2041.

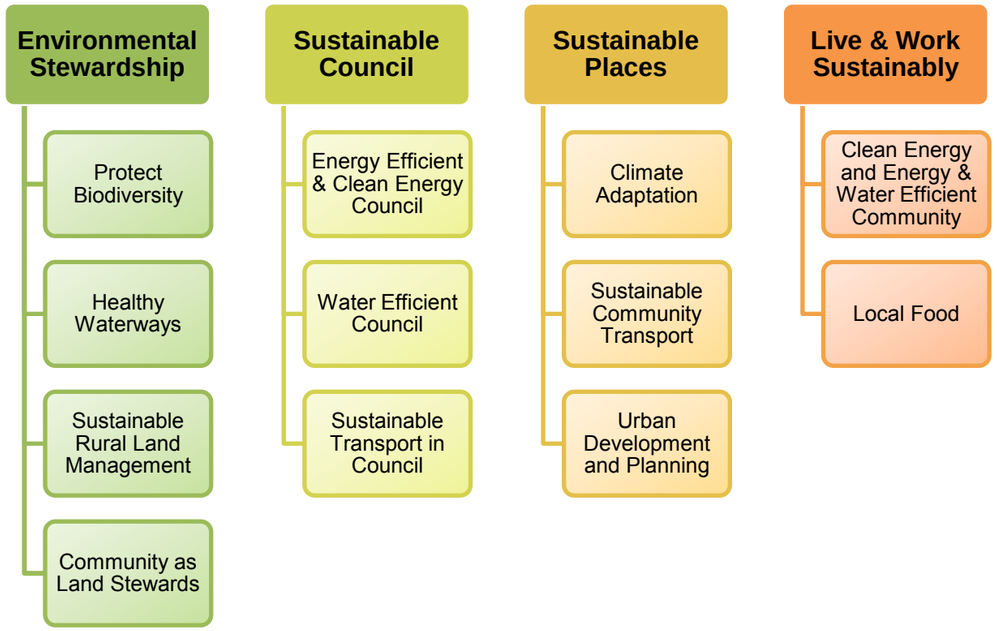
The Implementation Plan should be read in conjunction with the Sustainable Environment Strategy.

Four strategic directions are identified in the Sustainable Environment Strategy. These include:

- ENVIRONMENTAL STEWARDSHIP
- SUSTAINABLE COUNCIL
- SUSTAINABLE PLACES
- LIVE AND WORK SUSTAINABLY

A number of priority areas have been identified within each strategic direction. There are twelve priority areas in total.

Figure 1. Strategic directions and priority areas for the Moorabool Shire Sustainable Environment Strategy



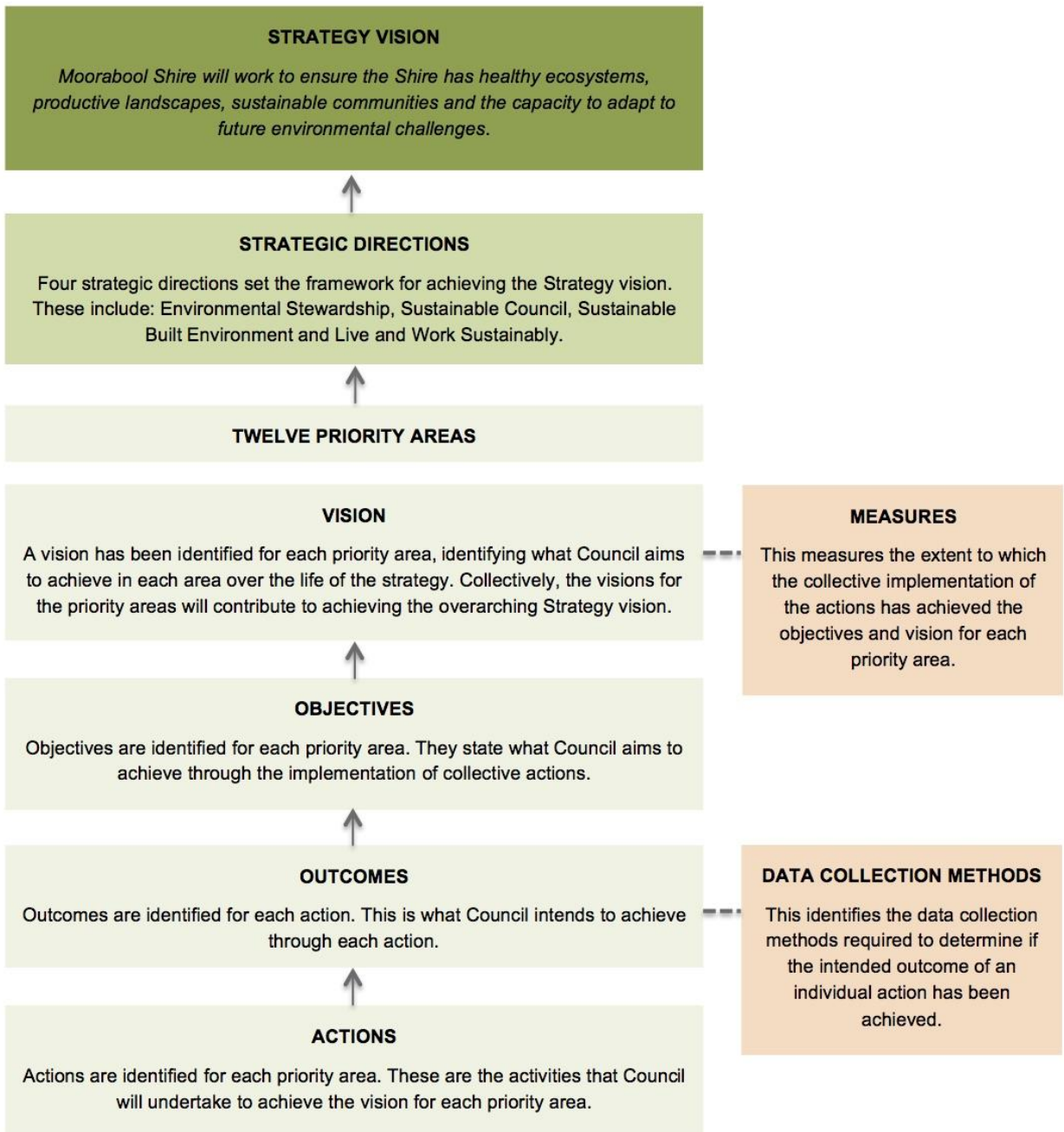
Within this Implementation Plan, actions have been assigned to each priority area.

The Sustainable Environment Strategy is a ten-year document. The actions identified in this Implementation Plan are for the next five years to 2021. A mid-term review of the Strategy and the actions that have been implemented will be conducted after five years, after which a revised Implementation Plan will be developed for the period 2021-26. The Implementation Plan will guide the development of annual action plans that will outline designated tasks, responsibilities, timeframes, resources and budgets. Action plans will be prepared, reported on and reviewed each financial year.

The Strategy acknowledges that Council can only have direct control over some issues, for example its own resource efficiency. It can indirectly influence other issues where its partners share or have greater responsibility and there are some issues it cannot influence and so can only take an advocacy role. As such, the actions in this document are identified as Control, Influence, or Advocacy actions. The Environment Unit at Moorabool Shire will oversee implementation of this Strategy (refer to the Implementation Plan 2016-26) but many of the actions will be the responsibility of other areas of Council. This includes responsibility for the delivery of the actions identified within this Strategy, as well as monitoring and evaluating the implementation of the Strategy over its lifespan. Indeed, the success of the Strategy will depend on the contribution of all areas of Council as part of a whole-Council approach to sustainability.

2 Reading the Implementation Plan

Figure 2. Outline to interpreting the Implementation Plan



3 Implementation Plan 2016 - 2021

STRATEGIC DIRECTION 1: Environmental Stewardship

Priority Area: PROTECT BIODIVERSITY

There is a measurable improvement in the condition of the natural environment in the Shire over the next ten years

MEASURES

- There is an increase in the connectivity of remnant vegetation across the Shire by 2021.
- There is an increase in the condition of native vegetation on Council managed reserves and roadsides by 2021.
- There is a decrease in priority weed species on Council managed reserves and roadsides by 2021 (measured by decrease in density).

There is a decrease in rabbit activity on Council managed reserves and roadsides by 2021 (measured by number of mapped warren entrances).

ACTIONS		OUTCOMES	DATA COLLECTION METHODS	RESPONSIBILITY	SPHERE of INFLUENCE	TIMING	PRIORITY	RESOURCING	ADDITIONAL FUNDING	CONTRIBUTION
OBJECTIVE 1: To increase landscape scale connectivity of remnant and other native vegetation.										
1.1	Review and consolidate existing Biolinks and Open Space Plans for Moorabool Shire, to help guide future land use planning.	Existing Biolinks Plans are reviewed and consolidated and are referred to for future land use planning.	Review Biolinks Plans. Update native vegetation and corridors mapping	LEAD: Environment PARTNER: Parks and Gardens, Strategic Planning, DELWP, CMAs, Grow West, Moorabool Landcare Network, Melbourne Water, MLAC, community	Control & Influence	2016/17	Medium	Existing departmental budget	Not required	Moorabool - 100%
1.2	Implement the Biolinks Plan for Moorabool Shire.	At least one landscape scale biolink project is implemented with stakeholders and the community.	Review Council environmental works projects.	LEAD: Environment PARTNER: Strategic Planning, Parks and Gardens, DELWP, CMAs, Melbourne Water, Moorabool Landcare Network community	Control & Influence	2017–2021	Medium	• Existing departmental budget • External Grants	State/Federal Government Grants	TBD
OBJECTIVE 2: Increased knowledge of natural assets including understanding and monitoring of changes in condition on Council managed reserves and roadsides.										
1.3	Work in partnership with the relevant stakeholders to collate existing biodiversity records and expand databases with new data, utilising citizen science	All significant biodiversity assets are identified and mapped.	Review native vegetation mapping, and existing databases including non-government (e.g. Nature Share, Eremaea Birdlines)	LEAD: Environment PARTNER: DELWP, CMAs, Melbourne Water, Grow West, Community Groups	Control & Influence	2016-2021	Low	Existing departmental budget	Not required	Moorabool – 75% Community – 25%
1.4	Undertake ecological assessments of the condition and extent of remnant native vegetation on Council managed reserves and roadsides.	Ecological condition assessments completed on 20 Council managed reserves and 70 roadsides. Baseline data collected and annual monitoring undertaken against baseline data.	Ecological condition assessment of Council reserves and roadsides.	LEAD: Environment PARTNER: Community groups	Control	2016/18: collect baseline data 2019–2021: Annual monitoring	High	Existing departmental budget	Not required	Moorabool – 100%

OBJECTIVE 3: Strengthen local planning policy to recognise and protect existing natural values.										
1.5	Review and update appropriate mechanisms to protect high value biodiversity areas.	Appropriate mechanisms protect all identified high value biodiversity areas within the Shire.	Spatial review of planning zones, overlays and conservation covenants.	LEAD: Strategic Planning, Environment PARTNER: DELWP	Control	Ongoing	Medium	Existing departmental budget	Not required	Moorabool – 100%
OBJECTIVE 4: Increased monitoring and control of the impacts of pest plants and animals on native vegetation										
1.6	Undertake ecological assessments on Council managed reserves and roadsides to determine current extent of weed and pest infestation, and monitor change over time.	Ecological assessments are complete. A monitoring framework is developed and implemented annually.	Ecological condition assessment of Council reserves and roadsides.	LEAD: Environment PARTNER: Melbourne Water, CMAs, DELWP and DEDJTR	Control	2016/18: collect baseline data 2018–2021: Annual monitoring	High	Existing departmental budget	Not required	Moorabool – 100%
1.7	Develop a Pest Plant and Animal Strategy for the Shire.	A Pest Plant and Animal Strategy is developed in conjunction with stakeholders and the community.	Review of Council environmental plans.	LEAD: Environment, Landcare PARTNER: DELWP, CMAs, Melbourne Water, community, DEDJTR	Control & Influence	2017/18	Low	Existing departmental budget	Not required	Moorabool – 100%
1.8	Complete the draft Operational Plan for Council conservation reserves and roadsides and implement pest plant and animal control works as identified in the Plan.	Operational Plan is completed. Weed and pest control works are implemented on Council managed reserves and roadsides, as identified in the Plan.	Review of Council Operational Plan for conservation reserves and roadsides.	LEAD: Environment	Control	Ongoing	Low	Existing departmental budget	Not required	Moorabool – 100%
1.9	Prepare 'Landscape Guidelines' that include consideration of: - Waterways - Open space - Streetscapes	Landscape Guidelines are developed.	Review of local planning provisions.	LEAD: Strategic Planning, Environment PARTNER: CMAs & Melbourne Water	Control	2016/17	Medium	Existing departmental budget	Not required	Moorabool – 100%

Priority Area: HEALTHY WATERWAYS

There is a measurable improvement in the condition of waterways and the quality of water across Moorabool Shire over the next ten years.

MEASURES

- There is an increase in the connectivity of riparian vegetation across the Shire by 2021.
- There is an increase in the condition of remnant and native riparian vegetation on Council managed reserves by 2021.

The quality of urban stormwater is maintained (or improved) by 2021.

	ACTIONS	OUTCOMES	DATA COLLECTION METHODS	RESPONSIBILITY	SPHERE of INFLUENCE	TIMING	PRIORITY	RESOURCING	FUNDING	CONTRIBUTION
OBJECTIVE 1: Better protected and healthier riparian vegetation within the Shire.										
2.1	Review and update appropriate mechanisms to protect high value riparian vegetation	All identified high value riparian vegetation is protected by appropriate mechanisms.	Review of planning zones, overlays and conservation covenants.	LEAD: Environment, Strategic Planning PARTNER: Statutory Planning, DELWP, CMAs. Melbourne Water	Control & Influence	Ongoing	Medium	Existing departmental budget	Not required	Moorabool – 100%
2.2	Undertake ecological assessments of the condition and extent of remnant and native riparian vegetation on Council managed land.	Ecological condition assessments completed on 20 Council managed riparian reserves. Baseline data collected and annual monitoring undertaken against baseline data.	Ecological condition assessment of riparian vegetation on Council managed reserves.	LEAD: Environment PARTNER: Community Groups	Control	2016/18: collect baseline data 2018–2021: Annual monitoring	High	Existing departmental budget	Not required	Moorabool – 100%
OBJECTIVE 2: Increased connectivity of riparian vegetation across the shire.										
2.3	Identify and map remnant riparian vegetation across the Shire.	Remnant riparian vegetation is identified and mapped.	Review riparian vegetation mapping.	LEAD: Environment PARTNER: DELWP, CMAs & Melbourne Water	Control	2016-2019	Low	• Existing departmental budget • External Grants	State/Federal Government Grants	Moorabool - 25% CMAs/MW – 50% Community – 25%
2.4	Identify opportunities for the connectivity of riparian vegetation within the Biolinks Plan for Moorabool Shire (refer to Action 1.1).	At least one riparian biolink project is implemented with stakeholders and the community by 2021.	Review Council environmental works projects.	LEAD: Environment PARTNER: DELWP, CMAs, Melbourne Water, community	Control & Influence	2017–2021	Medium	• Existing departmental budget • External Grants	State/Federal Government Grants	TBD
OBJECTIVE 3: Improved quality of stormwater runoff.										
2.5	Explore opportunities for small scale, localised Water Sensitive Urban Design projects.	Small scale Water Sensitive Urban Design projects are identified and implemented.	Review infrastructure projects.	LEAD: Planning, Environment, Infrastructure PARTNER: Melbourne Water, Parks & Gardens, Corangamite CMA	Control	Ongoing	Low	• Existing departmental budget • External Grants	State/Federal Government Grants	TBD
OBJECTIVE 4: Potable water supply catchments are protected.										
2.7	Support the delivery of actions by the relevant water authorities to improve waterway health.	Actions by the water authorities to improve waterway health are supported by Council.	Review waterway activities.	LEAD: Environment PARTNER: Melbourne Water, CMAs, Community	Advocate	2016-2021	Low	Existing departmental budget	Not required	Moorabool – 10% CMAs – 90%

Priority Area: SUSTAINABLE RURAL LAND MANAGEMENT

We will develop agricultural land for agricultural production and preserve rural landscape values and amenity.

MEASURES

- Development of a Small Town Strategy by 2017.
- There is an increase in the gross value of agricultural production within the shire by 2018.

All areas of landscape significance and high amenity are identified and recognised in the planning scheme by 2018.

ACTIONS		OUTCOMES	DATA COLLECTION METHODS	RESPONSIBILITY	SPHERE of INFLUENCE	TIMING	PRIORITY	RESOURCING	FUNDING	CONTRIBUTION
OBJECTIVE 1: Adopt planning policies that support increased agricultural development of productive farmland										
3.1	Review of existing productive agricultural land and agricultural uses.	Most important agricultural areas are mapped and integrated into the planning scheme.	Review of land capability, planning zones and overlays.	LEAD: Strategic Planning, Environment PARTNER: DELWP, CMAs, Melbourne Water	Control	Ongoing	Medium	Existing departmental budget	Not required	Moorabool – 100%
3.2	Develop land use polices that support agriculture and integrate these into planning scheme.	Agricultural output is maximised in areas of highest land quality and protected from residential encroachment.	Interpretation of land capability assessments and revise planning zones and overlays.	LEAD: Strategic Planning, Environment	Control & Influence	2018/19	Medium	Existing departmental budget	Not required	Moorabool – 100%
3.3	Promote the region as a "food bowl" for Melbourne and encourage residents to source local produce.	Increased agricultural development and local food production and consumption (especially in urban/rural interface areas).	ABS Agricultural Census & community survey data.	LEAD: Strategic Planning, Economic Development PARTNER: DELWP, RDV, DEDJTR	Influence and Advocate	2017 - 2021	Medium	• Existing departmental budget • External Grants	State/Federal Government Grants	Moorabool – 75% DELWP/RDV/ DEDJTR – 25%
OBJECTIVE 2: Plan for land use that is respectful of rural landscape values and amenity										
3.4	Develop policies that preserve landscape significance and integrate these into planning scheme, that align with the South West Landscape Assessment Study.	Areas of landscape significance and high amenity are identified and recognised in planning scheme.	Review of local planning provisions.	LEAD: Planning, Environment PARTNER: DELWP	Control & Influence	2017/18	Medium	Existing departmental budget	Not required	Moorabool – 100%

Priority Area: COMMUNITY AS LAND STEWARDS

There is a measurable increase in community awareness of the natural environment and participation in Natural Resource Management based activities in the Shire.

MEASURES

- There is an increase in the level of community awareness of local natural values by 2021.
- Participation in community based NRM activities has increased by 2021.

There is an increase in engagement activities with new rural and semi-rural landholders on best practice Natural Resource Management (NRM) activities by 2021.

	ACTIONS	OUTCOMES	DATA COLLECTION METHODS	RESPONSIBILITY	SPHERE of INFLUENCE	TIMING	PRIORITY	RESOURCING	FUNDING	CONTRIBUTION
OBJECTIVE 1: Increased community awareness of the local natural values in Moorabool Shire										
4.1	Update the Council website to provide current information on the local environment e.g. access to bushwalks, existing community groups, private land management practices and ecological information.	The Council website is maintained with up-to-date information.	Review of the Council website.	LEAD: Environment, PARTNER: Marketing and Communications	Influence & Advocate	Ongoing	Medium	Existing departmental budget	Not required	Moorabool – 100%
4.2	Provide new residents with information packs about the natural local environment and how to access to NRM groups and organisations.	Information packs are developed and distributed to all new residents in the Shire.	Audit of the number of information packs distributed.	LEAD: Environment,	Influence & Advocate	2016/17 - 2021	Low	Existing departmental budget	Not required	Moorabool – 100%
4.3	Conduct a community survey to identify and monitor community awareness of the local natural environment and involvement with on ground activities.	Initial resident survey completed and baseline data collected. Second survey completed by 2020 to monitor change in awareness. Three surveys to be completed between 2016 and 2025.	Community survey.	LEAD: Environment PARTNER: Customer Service, Marketing and Communications	Influence & Advocate	2018/2019: collect baseline data 2020/21: monitor against baseline data	Low	Existing departmental budget	Not required	Moorabool – 100%

OBJECTIVE 2: Participation in community-based NRM groups and activities is encouraged and supported by Council										
4.4	Support existing Landcare and other community-based environment groups e.g. through the provision of resources, information and funding.	Council provides more equitable support (in the form of resources, information and/or funding) to at least 5 Landcare and or community-based NRM groups by 2021.	Review of the number of community groups Council has supported and the scale of support provided (resource, information, funding).	LEAD: Environment PARTNER: Landcare and other community based groups	Advocate	Ongoing	High	Existing departmental budget	Not required	Moorabool – 100%
4.5	Promote, support and encourage existing NRM activities and programs delivered by other agencies e.g. CMAs & Melbourne Water.	Council has promoted and supported 10 programs delivered by other agencies.	Review of the number of programs that Council has supported.	LEAD: Environment PARTNER: CMAs, Melbourne Water, DELWP	Advocate	Ongoing	Medium	Existing departmental budget	Not required	Moorabool – 100%
OBJECTIVE 3: Increased engagement with new rural and semi-rural landholders on best practice NRM activities										
4.6	Provide and / or support activities for rural and semi-rural landholders e.g. walking tours & workshops.	Council has delivered and / or supported at least 40 community environment activities or events for rural and semi-rural landholders by 2021.	Review of the number of activities Council has conducted.	LEAD: Environment PARTNER: Landcare, DELWP, CMAs, Melbourne Water	Influence & Advocate	2016-2021	Medium	• Existing departmental budget • External Grants	State/Federal Government Grants	TBD (dependant on who is delivering)
4.7	Work with Landcare to deliver incentives and training to rural and semi-rural landholders to undertake best practice NRM activities.	Council has supported the application of 10 grant programs for residents. Council has partnered with Landcare to deliver 20 training programs.	Review of the incentives delivered by Council and Landcare and the rate of uptake from landholders.	LEAD: Environment PARTNER: Landcare	Influence & Advocate	2016-2021	Medium	• Existing departmental budget • External Grants	State/Federal Government Grants	Landcare – 75% Moorabool – 25%

STRATEGIC DIRECTION 2: Sustainable Council

Priority area: ENERGY EFFICIENT & CLEAN ENERGY COUNCIL

There is a measureable improvement in energy efficiency of Council operations and an increase in clean energy use in order to achieve a carbon neutral council by 2025.

MEASURES

- There is a 15% decrease in the amount of energy (electricity and gas) used for Council operations per dollar spent by 2021.
- There is an 10% increase in the total renewable energy used for Council operations by 2021.

There is a 30% decrease in the greenhouse emissions generated by Council operations by 2021.

ACTIONS		OUTCOMES	DATA COLLECTION METHODS	RESPONSIBILITY	SPHERE of INFLUENCE	TIMING	PRIORITY	RESOURCING	FUNDING	CONTRIBUTION
OVERARCHING ENERGY ACTIONS										
5.1	Re-instigate the Shire staff Green Team consisting of staff from across Council who are engaged and empowered to run behaviour change and educational initiatives for staff in order to reduce the environmental impacts of Council operations. NB: the Green Team would look at reducing council energy, water and resource consumption and reducing waste.	Moorabool Shire staff are engaged by the Green Team and are actively reducing their impacts at work including reducing energy, water & resource consumption (e.g. paper), transport emissions, and waste.	Green Team to track each of their initiatives and report back to Council Executive about project outcomes quarterly.	LEAD: Environment PARTNER: Corporate Services	Control	Ongoing	Medium	Existing departmental budget	Not required	Moorabool – 100%
5.2	Endorse the Western Alliance for Greenhouse Action (WAGA) *Low Carbon Strategy 2014*.	Public support for this united approach to reducing greenhouse emissions in the region. Support for Council greenhouse action through partnering with the WAGA alliance.	Endorsement by Council.	LEAD: Environment PARTNER: Executive	Control	2016/17	Medium	Existing departmental budget	Not required	Moorabool – 100%

OBJECTIVE 1: To reduce the amount of electricity and gas used, and the associated greenhouse emissions, for Council operations per dollar spent by Council.										
5.3	Review and evaluate *Greenhouse Local Action Plan 2007* actions and targets. Determine whether a new Greenhouse Action Plan is the next step or whether an alternative plan would be the most suitable e.g. a Buildings and Open Space Energy & Water Action Plan.	Clarity is achieved on Council's best internal process or mechanism for acting on the recommended actions to cut greenhouse emissions.	Review of Greenhouse Local Action Plan 2007 complete. Decision on forward pathway for greenhouse action.	LEAD: Environment PARTNER: Executive	Control	2016/17	Medium	Existing departmental budget	Not required	Moorabool – 100%
5.4	Energy use of Council managed buildings • Audit Shire's owned and managed, facilities[1] in terms of energy use (e.g. Darley Civic Hub & Bacchus Marsh Library) in order to prioritise energy saving actions. • Consider combining this with water audits and creating a Building Energy & Water Plan. • Implement the actions prioritised by energy and cost savings and payback periods. • Investigate most cost effective way to fund the retrofits – e.g. investigate leasing of installed equipment. NB: see Ironbark Sustainability report for list of actions[2]	Major Council buildings are retrofitted to reduce energy consumption. Policy developed requiring that new Council buildings meet Environmental Sustainable Design (ESD) principles.	Electricity and gas bills of the major facilities are tracked for savings (compared to 2014 benchmark in Ironbark report).	LEAD: Assets, Environment PARTNER: Finance, Recreation and Community Development	Control	2016-2021	High	• Existing departmental budget • External Grants	State/Federal Government Grants	Moorabool – 100%

[1] Going Solar audited Bachhus Marsh and Ballan service centres in 2011.
[2] Ironbark Sustainability Energy & Water Inventory of Moorabool Shire Environment Strategy, January 2015.

5.5	Open Space Energy Retrofits • Audit the Shire's major open space areas for energy use in order to prioritise energy saving actions. • Implement the actions prioritised by energy and cost savings and payback periods. • Investigate most cost effective way to fund the retrofits – e.g. investigate leasing of installed equipment. NB see Ironbark Sustainability report for list of actions[3]	Major open space areas are retrofitted to reduce energy consumption.	Electricity and gas bills of the open space areas are tracked for savings (compared to 2014 benchmark in Ironbark report).	LEAD: Assets PARTNER: Finance, Parks & Gardens, Recreation and Community Development	Control	2016-2021	High	• Existing departmental budget • External Grants	State/Federal Government Grants	Moorabool – 100%
5.6	Implement the recommendations of the Street lighting business case[4] to switch over streetlights to low energy LED globes.	Streetlights in the Shire are progressively all switched to low energy globes saving an estimated $124,000[5] off Council energy bills (after changeover costs).	Street lighting managers to keep data on globe switching and report to Council. Electricity bills for street lighting to be tracked by Finance over time (against 2014 benchmark in Ironbark Business case).	LEAD: Assets PARTNER: Finance	Control	2017-2019	High	• Council Capital Improvement Program • External Grants	State/Federal Government Grants	Moorabool – 100%

[3] Ironbark Sustainability *Energy & Water Inventory of Moorabool Shire Environment Strategy*, January 2015.
[4] Ironbark Sustainability *Streetlighting Business Case for Moorabool Shire,* 2014.
[5] Ironbark Sustainability *Streetlighting Business Case for Moorabool Shire,* 2014.

OBJECTIVE 2: To increase the proportion of renewable energy used in Council's operations.										
5.7	Solar Photo Voltaic (PV) on Council buildings • Secure a business case from a reputable solar retailer for installing solar PV panels on a number of Council facilities. • Identify the best locations and installations in terms of payback period. • Identify the best financial model, secure funding and install.	Solar PV panels are installed on a number of Council buildings to reduce long term energy costs and reduce greenhouse emissions from Shire operations.	Electricity bills of the facilities with solar panels installed are tracked for energy & cost savings (compared to 2014 benchmark in Ironbark report).	LEAD: Assets PARTNER: Finance, Recreation and Community Development	Control	2018-2021	High	• Council Capital Improvement Program • External Grants	State/Federal Government Grants	Moorabool – 100%
5.8	Support for renewable energy in the Shire • Identify opportunities for alternative energy production projects in the Shire • Investigate the Shire partnering with other WAGA Councils to purchase a long term (e.g. 20 years) supply of renewable energy from local renewable energy projects to provide some investment security. • Look to purchase 10-20 years of Council's electricity supply from the alternative energy sources to enable Council operations to be carbon neutral.	Potential alternative energy production opportunities are identified and promoted for economic development and job creation. Council's energy is provided by clean energy, enabling the Shire to be carbon neutral. Rates income is brought to the Shire from alternative energy production projects.	Report on investment options for the wind projects.	LEAD: Environment, Finance and Economic Development PARTNER: WAGA and DEDJTR	Control & Influence	2017-18	High	• Existing departmental budget • External Grants	State/Federal Government Grants	DEDJTR – 50% Moorabool -25% WAGA – 25%

5.9	Investigate and purchase Greenpower or carbon offsets in the form of renewable energy to offset Council's remaining carbon emissions after energy efficiency projects have been delivered and local solar and wind has been sourced, as above. Partner with WAGA Councils to seek bulk purchase of Greenpower to reduce cost. Create a plan and work towards Council being certified as a carbon neutral council under the National Carbon Offset Standard by 2026.	Council's total carbon emissions have been offset to make Moorabool a carbon neutral council.	Council's carbon emissions, renewable energy generation and carbon offsets tracked.	LEAD: Finance PARTNER: Environment, Assets, Recreation and Community Development	Control	2021	Low	Existing departmental budget	Not required	Moorabool -100%
OBJECTIVE 3: To shift Council's procurement towards low emissions products and services.										
5.10	Revise Council's Procurement Policy to embed sustainability requirements into all purchasing decisions. Investigate re-joining ECOBuy program to support implementation. Specify action areas where low embodied energy, energy efficient, water efficient, recycled and low waste products and services are sought including: • Roads and maintenance (e.g. low emissions concrete, recycled fill, low energy globes or fittings etc.) • Council buildings (e.g. energy and water efficient fittings and products as standard) • Stationery and supplies (e.g. recycled, recyclable, non-toxic products) • Food and catering (e.g. local, organic, fair trade food) • Fleet and machinery (i.e. most fuel efficient available) Green Team to support education of staff to ensure the policy is enacted.	Council's environmental impacts (greenhouse emissions, water use, and waste generation) will be reduced by sustainable procurement. Energy, fuel and water bills will be reduced through use of more efficient equipment.	Participation in ECOBuy program provides a tracking system for procurement.	LEAD: Finance, Environment PARTNER:, Infrastructure, Recreation and Community Services Green Team	Control	2018 - ongoing	Low	Existing departmental budget	Not required	Moorabool -100%

Priority area: WATER EFFICIENT COUNCIL

There is less water used in the operations of Council with a transition away from potable mains water use to rainwater, stormwater and recycled water.

MEASURES

- There is a 10% decrease in the amount of water (potable and non-potable) used for Council operations and facilities by 2021.
- There is a 20% increase in the amount of recycled water used in Council operations and facilities by 2021.
- There is a10% increase in the proportion of water coming from non-potable sources used for Council operations and facilities by 2021.

ACTIONS		OUTCOMES	DATA COLLECTION METHODS	RESPONSIBILITY	SPHERE of INFLUENCE	TIMING	PRIORITY	RESOURCING	FUNDING	CONTRIBUTION
OBJECTIVE 1: Improve water efficiency of Council buildings and operations.										
6.1	Audit all Council facilities for opportunities to improve water efficiency and install water efficient fittings (tap aerators, toilet regulators, and efficient showerheads). • Install simple fittings during the audit • Fix leaks during the audits • Audit to identify larger retrofit actions for later installation (including rainwater tanks – see Action 6.3 below) • Identify any important education or behavioural changes that could save water in high use facilities (e.g. signage, staff policies etc.). • Develop Water Asset Strategy.	Council buildings and facilities are retrofitted for greater water efficiency into the long term. Leaks are repaired. Water consumption in these buildings is reduced. Council water bills are reduced.	Auditors to provide data on retrofitted items, leaks repaired etc. Water bills tracked by finance to show changes in consumption and costs (against 2014 benchmark in Ironbark report).	LEAD: Assets PARTNER: Finance, Private auditor such as Green Plumber	Control	2017-2018	High	• Existing departmental budget • External Grants	State/Federal Government Grants	Moorabool -100%
6.2	Investigate other uses of water in the Shire, such as irrigation, road maintenance etc., for opportunities to reduce water consumption and switch to non-potable water. • Identify main users of water in Council and set up a working group of these users to develop and implement opportunities.	Water use (potable & non potable) by the Shire is reduced thereby reducing pressure on local water supplies and reducing Shire water bills.	Working group to report on actions. Water bills tracked by finance to show changes in consumption and costs (against 2014 benchmark in Ironbark report).	LEAD: Infrastructure, Recreation and Community Development PARTNER: Environment, Finance	Control	2018–2021	Medium	• Existing departmental budget • External Grants	State/Federal Government Grants	Moorabool -100%

OBJECTIVE 2: Transition from using potable water to using recycled water or stormwater for Council operations and facilities.										
6.3	Install rainwater tanks in all small and large Council facilities. • Audit all Council managed facilities for rainwater tank opportunities (as part of water efficiency audit above). • Investigate funding opportunities to implement a program of installing rainwater tanks in any facilities that do not have them, for connection to toilets, laundries, garden taps etc.	Rainwater tanks are installed in all Council facilities that have the capacity to replace potable mains water with rainwater for some or all usage.	Facilities management to report on the audit of facilities and the numbers of rainwater tanks installed.	LEAD: Assets PARTNER: Recreation and Community Development, Environment, Water Authorities, Finance	Control	2017-2021	Medium	• Council Capital Improvement Program • External Grants	State/Federal Government Grants	Moorabool - 100%
6.4	Work with water authorities to investigate opportunities for recycled water provision from sewage treatment or other sources that could provide fit-for-use water to Council, businesses and industry in Moorabool.	Recycled water opportunities have been investigated and plans developed to provide available recycled water for fit-for-use industrial or Council activities.	Water authorities to report on opportunities and amounts of recycled water provided.	LEAD: Infrastructure, Strategic Planning, Economic Development PARTNER: Water Authorities, MPA	Influence & Advocate	2016-2021	Medium	Existing departmental budget	State/Federal Government Grants	Water Authorities – 75% Moorabool – 25%

Priority area: SUSTAINABLE TRANSPORT IN COUNCIL

We will reduce the greenhouse emissions from the transport used for Council operations.

PROGRESS INDICATORS & TARGETS

- There is a 15% decrease in the greenhouse emissions from transport used in Council operations by 2021.

There is a reduction in car usage for staff travelling to and from work.

ACTIONS		OUTCOMES	DATA COLLECTION METHODS	RESPONSIBILITY	SPHERE of INFLUENCE	TIMING	PRIORITY	RESOURCING	FUNDING	CONTRIBUTION
OBJECTIVE 1: Reduce greenhouse emissions from vehicle usage for Council operations.										
7.1	Green Team or working group to identify and promote current opportunities, and set a clear pathway to reduce fleet usage and emissions, and improve sustainable transport options to work, including: ▪ Vehicle fleet to continue shift to more greenhouse efficient vehicles using the Australian Government's Green Vehicle Guide. ▪ Promote alternative transport support for staff including staff bike facilities and public transport options, and use of electronic meeting technology such as video conferencing and Skype. Implement agreed actions.	Council fleet reduced in number and improved in efficiency. Greenhouse emissions from staff travel to/from and for work are reduced.	Fleet managers to track fleet numbers, fuel efficiency and total usage in greenhouse emissions.	LEAD: Fleet management PARTNER: Green Team/Staff working group	Control	2017-2021 - Implementation	Medium	Existing departmental budget	Not required	Moorabool – 100%

OBJECTIVE 2: Reduce greenhouse emissions from staff travel to and from work through supporting a reduction in car trips.										
7.2	Work with Staff Green Team and/or other staff committee to identify actions that will support Council staff to reduce car trips involved in travel to and from work. Actions would include: • Ensuring cycling is supported by workplace showers, bike and gear storage space. • Facilitating carpooling between staff. • Provide incentives for public transport, cycling or walking use instead of car use to travel to/from work.	There are fewer car trips for staff to travel to and from work. Staff have gained health benefits from switching to active transport modes.	Survey of staff about travel modes to/from work.	LEAD:, Environment, Green Team	Control & Influence	2017-2021	Medium	Existing departmental budget	Not required	Moorabool – 100%

STRATEGIC DIRECTION 3: Sustainable Places

Priority area: CLIMATE ADAPTATION

We will support and deliver activities to reduce the impact of and vulnerability to future climate change on the Moorabool Shire community.

MEASURES

- Climate change Adaptation Action Plan for Moorabool is developed by 2017 and actions are implemented fully by 2026.

Number of trees planted in urban areas in the Shire is increased year on year to 2021.

ACTIONS		OUTCOMES	DATA COLLECTION METHODS	RESPONSIBILITY	SPHERE of INFLUENCE	TIMING	PRIORITY	RESOURCING	FUNDING	CONTRIBUTION
OBJECTIVE 1: To ensure that Moorabool Shire has understood the risks of climate change on Council operations and taken actions to prepare for and mitigate these risks.										
8.1	Formally endorse the Western Greenhouse Alliance (WAGA) Climate Adaptation Strategy and Action Plan.	WAGA Climate Adaptation Strategy and Action plan is endorsed and helps to create opportunities for climate resilience activities in the Shire.	Endorsement of WAGA Climate Adaptation Strategy passed at a Council meeting.	LEAD: Strategic Planning, Environment	Control	2016/17	Medium	Existing departmental budget	Not required	Moorabool – 100%
8.2	Understand the climate change risks to Moorabool Shire and develop an Action Plan to mitigate these risks (informed by the WAGA Climate Adaptation Strategy and Action plan). • Seek funding through government programs to fund the implementation. • Implement the Shire Action Plan.	A climate adaptation action plan is developed specific to Moorabool and the actions are implemented.	Development of Action Plan. Delivery of the actions is monitored and reviewed.	LEAD: Infrastructure, Strategic Planning, Risk PARTNER: Environment, Assets	Control & Influence	2016/17 Develop Action Plan 2017-2021 Implement actions	Medium	Existing departmental budget	Not required	Moorabool – 100%

OBJECTIVE 2: To ensure that council has understood the risks of climate change to the community and is working with the community to help them prepare for and mitigate the risks.										
8.3	Educate the community about the risks of climate change related extreme weather and other climate impacts to assist people to prepare and manage future impacts, including: • Heatwave response education • Helping vulnerable groups improve their homes to deal with extreme heat • Drought preparation • Bushfire management and emergency response • Rainfall intensity and storm water	Information and engagement is delivered to the community including: • Information on Council web site • Public meetings and workshops • Specific outreach on key issues to vulnerable groups • Emergency Management Plans are prepared by council for extreme events including bushfires or storms.	Assessment of information and engagement needs as outlined in Climate Change Adaptation Action Plan.	LEAD: Emergency Management PARTNER: CFA, Communications, Dept. of Health & Human Services, Community Services, DELWP, VICSES, Resilient Melbourne Office	Control & influence	2016/17 Ongoing	Medium	• Existing departmental budget • External Grants	State/Federal Government Grants	DELWP– 50% DHHS – 25% Moorabool – 25%
8.4	Develop a Tree Strategy that identifies actions to increase tree canopy coverage in urban areas, with a focus on new urban areas that are lacking in tree coverage.	An increase in tree planting in urban areas is achieved year on year.	Tree planting program is tracked by Council to report on numbers of trees planted.	LEAD: Strategic and Statutory Planning, Infrastructure PARTNER: Developers (for new developments)	Control	2016-2021	Low	Existing departmental budget	Not required	Moorabool – 100%

Priority area: SUSTAINABLE COMMUNITY TRANSPORT

There is a reduction in vehicle trips in the Shire as a result of Council's provision of community transport infrastructure and programs to support cycling, walking and public transport.

MEASURES

- There is a 5% increase in the number of residents travelling to work by non-car-based modes by 2021 (as measured by the ABS Census).
- Public transport patronage has increased to 7.5% of total trips within and connecting to the Shire by 2021 (reported by public transport operators).

A 5% increase in cycle trips in the Shire by 2021 (as measured by Bicycle Victoria Super Tuesday)

ACTIONS		OUTCOMES	DATA COLLECTION METHODS	RESPONSIBILITY	SPHERE of INFLUENCE	TIMING	PRIORITY	RESOURCING	FUNDING	CONTRIBUTION
OBJECTIVE 1: Ensure transport infrastructure in Bacchus Marsh and Ballan is integrated to support greater linked use between modes and better planning for active transport modes.										
9.1	Support actions that assist in the delivery of the Bacchus Marsh Integrated Transport Study for Bacchus March that provide improvements in walking and cycling paths, public transport routes and connections and the supporting facilities alongside planned road improvements.	Integrated Transport Study has identified best ways to improve transport infrastructure and services in Bacchus Marsh.	Delivery of Integrated Transport Study.	LEAD: Recreation Services, Engineering Services PARTNER: VicRoads, PTV, Strategic Planning	Control, Influence & Advocate	ongoing	High	• Existing departmental budget • Council Capital Improvement Program • External Grants	State/Federal Grants	Moorabool – 60% VicRoads- 30% PTV – 10%
OBJECTIVE 2: Provide cycling and walking infrastructure to support increased use of these modes instead of driving.										
9.2	Continue to deliver the Moorabool Hike & Bike Strategy (2014) to construct interconnected cycling and walking paths to link key destinations. In addition: • Provide secure bike parking at train stations, shops, services areas. • Ensure safe lighting and security around train stations and on walking paths at night. • Sheltered rest stops.	Safe, accessible and enjoyable cycling and walking routes are provided for more residents to cycle or walk.	Pre and post-construction counts of walkers and cyclists along key routes. Bicycle Victoria Super Tuesday bike count.	LEAD: Infrastructure PARTNER: Strategic Planning, Recreation Services, V/Line/ Vic Track, Moorabool Environment Group, Schools, Traders etc.	Control & Influence	2016/17 - 2021	Medium	• Existing departmental budget • Council Capital Improvement Program • External Grants	State/Federal Grants	Moorabool – 80% VicRoads- 20%
9.3	Deliver a behaviour change and community awareness campaign to promote cycling and walking in the Shire as part of promoting the new cycle/walk paths as part of Hike & Bike Strategy.	More residents are aware of the new safe and accessible cycling and walking paths and the connection to train stations and shops etc. Residents are incentivised to switch from driving to walking or cycling to these destinations.	Mode of travel to work survey (ABS Census). Cycle and walk counts along key routes (pre and post construction).	LEAD: Strategic Planning, Environment PARTNER: GIS, Bicycle Victoria, Communications, Infrastructure, Recreation and Community Development, Public Transport Victoria, Moorabool Environment Group, Schools, Traders etc.	Influence & Advocate	2016/17: collect baseline travel data 2020/21: monitor against baseline data after paths have been constructed	Low	• Existing departmental budget • External Grants	State/Federal Grants	Moorabool – 100%

OBJECTIVE 3: Support the increased use of public transport in the Shire in place of car travel.										
9.4	Work with bus companies and V/Line to ensure bus and train timetables are optimally connecting to allow more residents to take the bus to/from the station for onward travel. Advocate to V/Line and state government to increase train services on the Ballarat line stopping at Bacchus March and Ballan. Promote existing public transport options	More residents are taking the bus to the stations and fewer cars are being parked at the stations.	Bus company patronage data. Parking counts at stations.	LEAD: Infrastructure PARTNER: Strategic Development, Marketing & Communications, Bus companies, V/Line, PTV, Allied Health Professional, MPA	Influence & Advocate	2017/18	Low	Existing departmental budget	Not required	Moorabool – 100%
9.5	Work with PTV and bus companies to better understand the community's travel needs in order to provide more useful bus services bringing people to destinations at the times they need to travel. • Support community travel surveys to be undertaken • A working group of bus companies, State government Transport department, Moorabool Environment Group and Council to devise a more extensive and effective bus routes and timetables. • A joint promotions campaign to be delivered to promote the use of buses (and trains) in the Shire.	Bus services are better meeting the travel needs of residents and patronage of buses has increased with a corresponding decrease in car trips.	Bus patronage data.	LEAD: Infrastructure PARTNER: Recreation and Community Development, Bus companies, Public Transport Victoria, Allied Health, Merrimu Services,	Advocate	2017/18	Medium	Existing departmental budget	Not required	Moorabool – 100%

Priority Area: URBAN DEVELOPMENT & PLANNING

We will support development that respects and conserves Moorabool Shire's natural environment and reduces potential adverse impacts from increased population growth.

MEASURES

- Council's environmental data sets are up-to-date by 2018.
- There is a 15% increase in the average star rating of new buildings in the Shire by 2021.

All new residential or mixed use developments are designed and built with sustainable design including support for cycling/walking/public transport, abundant recreation space, greenspaces and biodiversity, shops or services within walking distance, water sensitive urban design, stormwater reuse and design for passive solar or solar panels.

ACTIONS		OUTCOMES	DATA COLLECTION METHODS	RESPONSIBILITY	SPHERE of INFLUENCE	TIMING	PRIORITY	RESOURCING	FUNDING	CONTRIBUTION
OBJECTIVE 1: Continue to ensure attention to natural values are embedded within planning decision making processes to allow for protection of natural assets.										
10.1	• Ensure Local Planning Policy Framework (LPPF) amplifies State Planning Policy Framework (SPPF) and apply appropriate tools. • Ensure decision makers are aware of State Planning Policy Framework and Local Planning Policy Framework environmental information and tools	Natural environmental assets are considered where appropriate in planning decisions	Planning Scheme review table Planning permit report audit	LEAD: Strategic Planning, Environment PARTNER: Statutory Planning, DELWP, MPA	Control	2017/18	Medium	Existing departmental budget	Not required	Moorabool – 100%
OBJECTIVE 2: Access and collate the most up-to-date data sets to support strengthened environmental issues within Council decision making processes.										
10.2	Partner with agencies with data on natural assets to integrate information into Council data sets	User-friendly Council environmental data sets are up-to-date and are reflected in planning scheme (as appropriate) to assist planning decision making process and Council operations (e.g. best practice)	Review of data sources within partner agencies Ecological assessments	LEAD: Environment, Assets PARTNER: DELWP, CMAs, Melbourne Water, Strategic Planning	Control and Influence	2019/20	Medium	Existing departmental budget	Not required	DELWP – 50% CMAs/MW – 25% Moorabool – 25%
OBJECTIVE 3: Improve access to and connectivity between residents and open space and natural reserve areas.										
10.3	Investigate opportunities to expand the Ballan Nectar Project and other similar projects e.g. Knox Garden for Wildlife program	The Ballan Nectar Project, or other similar projects, are implemented	Review environmental activities	LEAD: Environment, Landcare PARTNER: Grow West	Control and Influence	Ongoing	Low	• Existing departmental budget • External Grants	State/Federal Grants	Moorabool – 50% Landcare – 50%

OBJECTIVE 4: New residential or mixed use precincts are designed with sustainability at the core of their structure plan including support for cycling/walking/public transport, abundant recreation space, greenspaces and biodiversity, shops or services within walking distance, water sensitive urban design, stormwater reuse and design for passive solar or solar panels.										
10.4	Work with MAV to advocate for improved Ecological Sustainable Design principles in the Victorian Planning Provisions	Strengthen environmental controls in clauses 54 and 56 of the Victorian Planning Provisions to improve: • Connectivity to public transport, walking and cycling (active transport) infrastructure • Walking/cycling distance to services and recreation space • Abundant green spaces and protected biodiversity • Water sensitive urban design • Water efficiency including use of recycled water, rainwater and stormwater where possible Solar access to all buildings for passive solar and solar PV	Gazetted change to Victorian Planning Provisions as a result of advocacy	LEAD: Strategic planning PARTNER: Statutory planning, Environment, Infrastructure, MAV	Advocate	Ongoing	Low	Existing departmental budget	Not required	Moorabool – 100%

STRATEGIC DIRECTION 4: Live and Work Sustainably

Priority area: ENERGY EFFICIENT & CLEAN ENERGY COMMUNITY

There is a measurable decrease in greenhouse emissions and potable water use in the Moorabool business and residential community.

MEASURES

1. Council to advocate to other levels of government to improve energy and water efficiency and renewable energy programs while reducing the cost burden of residents.
2. Council to work with water authorities and energy retailers to gather data about community water and energy usage and opportunities for greater efficiency.
3. Council to develop a Water & Energy Efficient Communities Engagement Strategy to assist the community to:
    a. Reduce greenhouse emissions from electricity and gas use.
    b. Increase the proportion of energy coming from renewable energy sources for community power needs.
    c. Improve water efficiency of businesses and residences in Moorabool.

Increase the use of greywater, rainwater tanks and stormwater harvesting methods to replace the use of potable mains water in businesses and residences.

ACTIONS		OUTCOMES	DATA COLLECTION METHODS	RESPONSIBILITY	SPHERE of INFLUENCE	TIMING	PRIORITY	RESOURCING	FUNDING	CONTRIBUTION
OBJECTIVE 1: Council to advocate to other levels of government to reduce the cost burden on residents of energy through funded energy and water efficiency and renewable energy programs.										
11.1	Council to work with the Western Alliance for Greenhouse Action (WAGA) to advocate to state and federal governments to: • Expand roll out of energy and water efficiency programs to houses and small businesses • Improve policy to support households and businesses to take up renewable energy, for example a stronger feed-in tariff • Provide small grants to support water and energy efficiency, especially for low income households Work with Sustainability Victoria to roll out community resource efficiency programs to the Moorabool Shire.	State and Federal Government add influences and support to expand energy and water efficiency programs.	Council and WAGA to monitor progress of government programs.	LEAD: Environment, WAGA PARTNER: Sustainability Victoria, DHHS	Advocate	2017-19	Low	Existing departmental budgets	Not required	WAGA – 80% Moorabool – 20%
11.2	Improve the content and functionality of Council's web site to promote greater community uptake of sustainable living, including energy efficiency, renewable energy, water saving, local food growing and waste reduction. • Include links and programs for taking action. • Include case studies of council achievements to reduce energy, water & waste to show leadership.	The community is provided with better information to take action to reduce their environmental impacts.	Web site manager to track and report on traffic to the environment pages of the web site. Environment unit to monitor web site to ensure most up to date information is there.	LEAD: Environment, PARTNER: Marketing and Communications	Control	Ongoing	Low	Existing departmental budgets	Not required	Moorabool – 100%

OBJECTIVE 2: Council to work with water authorities and energy retailers to gather data about community water and energy usage and opportunities for greater efficiency.										
11.3	WAGA and Council staff to work with water and energy retailers to collate data on Shire residential and business water and energy consumption and renewable energy take up, with a view to developing an efficiency program in partnership.	WAGA and Council and retailers have gathered data on water and energy consumption in the Shire to guide outreach activities.	Water & energy retailers to use bill information to collate data.	LEAD: WAGA, Environment PARTNER: Energy and water retailers	Influence	2019-20	Low	• Existing departmental budgets • External Grants	Not required	WAGA – 75% Moorabool – 25% Energy and water retailers – 25%
OBJECTIVE 3: Council to develop a Water & Energy Efficient Communities Engagement Strategy to assist the community to: ▪ Reduce greenhouse emissions from electricity and gas use. ▪ Increase the proportion of energy coming from renewable energy sources for community power needs. ▪ Improve water efficiency of businesses and residences in Moorabool. Increase the use of greywater, rainwater tanks and stormwater harvesting methods to replace the use of potable mains water in businesses and residences.										
11.4	Council to develop and implement a strategy to assist and engage residents and businesses to improve their water and energy efficiency. • Use data gathered in 11.3 to guide plans. • Work with water and energy retailers.	A strategy has been developed.	Data collected with retailers above to guide the strategy.	LEAD: Environment SUPPORT: Community development, Moorabool Environment Group, WAGA	Influence	2020-2021	Low	• Existing departmental budgets • External Grants	State/Federal Grants	Moorabool –100%

Priority area: LOCAL FOOD

There is a measurable increase in the community growing their own food and buying more of their food from local food producers.

MEASURES

- There is a 10% increase in the number of residents or businesses producing some of their own food by 2021.
- Increase in participation in community food production activities including community gardens, food swaps and local farmers markets.

	ACTIONS	OUTCOMES	DATA COLLECTION METHODS	RESPONSIBILITY	SPHERE of INFLUENCE	TIMING	PRIORITY	RESOURCING	FUNDING	CONTRIBUTION
OBJECTIVE 1: Increased local production of food by residents and businesses in Moorabool Shire										
12.1	Support residents and businesses to commence producing their own food in their gardens. Run food gardening workshops	More residents are producing and consuming more food in their own gardens.	Community survey	LEAD: Community Services PARTNERS: Environment, Moorabool Environment Group, Landcare	Influence	2018-2020	Low	• Existing departmental budgets • External Grants	• Existing departmental budget • State/Federal Grants	Moorabool –75% Community groups – 25%
OBJECTIVE 2: Increased local sales and consumption of locally produced food in Moorabool Shire										
12.2	Support increased market opportunities for local food producers to sell to local buyers • Bring local food producers and local retailers or food buyers (eg cafes, caterers, fruit shops) • Support increased use of local farmers markets • Promote Cultivate local food producers website to connect producers to suppliers/caterers etc.	More of the food produced in Moorabool is being consumed in the Shire.	Survey of local food producers and retailers	LEAD: Economic Development, Cultivate PARTNERS: Environment, Moorabool Environment Group, Farmers markets, Moorabool Landcare Network	Influence	2017-2020	Low	• Existing departmental budgets • External Grants	• Existing departmental budget • State/Federal Grants	Moorabool –75% Community– 25%
12.3	Council to review its catering and food purchasing and seek to increase the use of local suppliers or use of caterers sourcing local food.	Council is sourcing a greater proportion of its food from local producers.	Assessment of Council food purchasing.	LEAD: Finance PARTNERS: Environment unit, Economic Development	Control	2017-2018	Low	Existing departmental budgets	Not required	Moorabool –100%
OBJECTIVE 3: Participation in community food production activities including community gardens, food swaps and local farmers markets.										
12.4	Support the development of community gardens or other local food growing projects in the Shire • Provide community grants • Provide land	2 community gardens or food growing projects have been set up and are used by local residents to grow their own food.	Number of community gardens. Number of residents using these gardens (committees to report).	LEAD: Community Development, Environment PARTNER: Community groups, Moorabool Environment Group	Control/Influence	2017-2020	Low	• Existing departmental budgets • External Grants	• Existing departmental budget • State/Federal Grants	Moorabool –50% Community – 50%
12.5	Promote community food activities and local food businesses to residents and businesses through Moorabool Shire newsletters, web site, events, noticeboards etc.	Local food activities and businesses are well promoted and supported by the Moorabool community.	Number of food-related initiatives promoted by Council.	LEAD: Marketing & communications and Tourism PARTNER: Community food projects and groups	Advocate	Ongoing	Low	Existing departmental budgets	Not required	Moorabool –100%