



Carbon Management Response Plan 2011 - 2013



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1. Introduction

Regardless of the debate whether Climate Change is a fact or not, the Intergovernmental Panel on Climate Change (IPCC) concluded in its recent assessment that “warming of the climate system is unequivocal”. This, along with evidence of increased global temperatures and more frequent intense storm events, has raised the general awareness and understanding of climate change and increased the emphasis on reducing carbon emissions.

Although Victorian councils are actively responding to the emissions reduction challenge (mitigation) and the present and future climate change impacts on both operations and communities (adaptation), this Shire’s Carbon Management Response Plan (CMRP) is focused on mitigating greenhouse gases and the reduction of corporate emissions, rather than those of the community.

Measuring carbon emissions will be a required service indicator under the Essential Services Commission’s Victorian Local Government Services Report and will assist councils to identify opportunities to save energy and money. Over the last decade Victorian local government has made significant efforts to reduce corporate carbon emissions, particularly under the International Council for Local Environmental Initiatives (ICLEI) Cities for Climate Protection (CCP) Program. Today, councils are increasingly collaborating with residents, business and industry to pursue opportunities associated with the emerging low carbon economy. In this way they are able to both engage with local industry and reduce emissions across council operations and community. This approach is supported by state government initiatives such as the Victorian Climate Change White Paper (July 2010) which stresses the ability of local councils to make a meaningful climate change response through strategies to reduce carbon emissions.

For close to ten years ICLEI - Local Governments for Sustainability has been working with councils to support and guide them toward their carbon goals through CCP Program. Approximately 70 Victorian councils have been active participants in the Program; collecting data, establishing policies and strategies, and taking steps towards reaching their emission reduction targets. ICLEI continues to provide councils with emissions reduction and climate adaptation support.

Strathbogie Shire’s commitment to reducing its Carbon Footprint is not only about good environmental management it’s also about doing business more effectively and efficiently.



2. Terms to Know – Used in this Plan.

Global warming

Greenhouse Gas (GHG's) are naturally occurring and have historically been an important part in the maintenance of the earth's stable atmosphere. Experts believe that human activity has significantly increased this concentration of GHG's in the atmosphere, causing a warming of the earth's temperature.

Carbon and Greenhouse Gas emissions

The term 'carbon' is often used interchangeably with the phrase greenhouse gas emissions.

For example carbon is used within the phrases carbon neutrality and carbon management although these include all six key greenhouse gases, not just carbon dioxide. Similarly quantities of greenhouse gases are often expressed as carbon dioxide equivalent or CO₂e.

Scope 1, 2 and 3 Emissions

The protocols governing GHG calculations categorise emissions from an organisation's operations into the following scopes, also refer to the diagram on the following page for council-specific examples of Scope 1, 2 and 3.

- Scope 1 - The release of GHG's into the atmosphere as a direct result of the activities of a 'facility' which is under the direct control of the organisation e.g. council owned or managed landfill.
- Scope 2 - The release of GHG's into the atmosphere through off-site activities which are under the direct control of the organisation e.g. purchase of electricity.
- Scope 3 - The release of GHG's into the atmosphere through off-site activities which are not under the direct control of the organisation e.g. airline flights by staff for work purposes.

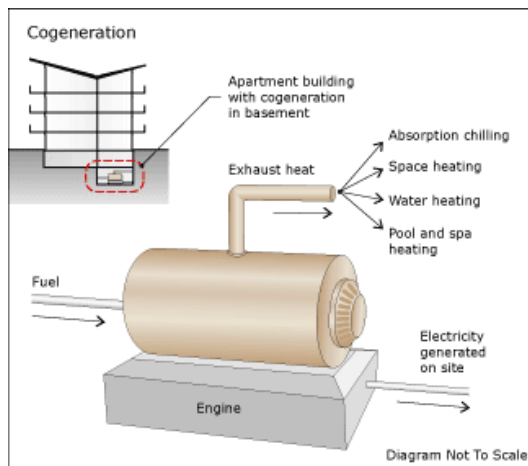


Figure 1: Example of Cogeneration System in an apartment block

SCOPE 1



Waste water treatment
(council owned or managed)



Council owned and/
or managed landfill

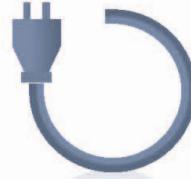


Council fleet



Gas for heating and energy

SCOPE 2



Purchased electricity for heating and energy



Metered lighting such as security lighting on the civic centre



Council pumps and irrigation

SCOPE 3



Council waste



Waste water treatment (non council)



Unmetered lighting



Taxis used by council staff for work purposes



Public transport and flights by staff for work purposes



Leased buildings such as leisure centres

Carbon Neutral

An activity or product is commonly considered carbon neutral when the net emissions arising from the specified product or activity are zero through a combination of emission reductions, energy switching and the offsetting of residual emissions.

The Australian Competition and Consumer Commission (ACCC) warns that to ensure credibility, carbon neutrality claims should be supported by evidence of the nature and method of offset, or potentially independently verified by a credible standard or certification scheme.

Certification scheme

As an example, in becoming carbon neutral EPA Victoria took the following steps:

- Measurement of carbon footprint
- Development of draft Carbon Management Principles
- Analysis of carbon offset options through a financial and environmental perspective, and
- Independent verification of emissions inventory and plan.

Emission Factor

A factor which identifies the per kilogram carbon dioxide equivalent (CO₂e) arising from a particular activity.

Greenhouse Gases 101

There are six GHG's which are considered to be key contributors to global warming.

These are:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Hydro fluorocarbons (HFCs)
- Per fluorocarbons (PFCs), and
- Sulphur hexafluoride (SF₆).

Carbon dioxide is considered the most significant GHG due to its increasing prevalence within the atmosphere. As an example, global annual emissions of CO₂ grew by around 80 per cent between 1970 and 2004.

3. Why we need a Carbon Management Response Plan

For more than a decade, Victorian local government has been working to reduce its greenhouse gas emissions, largely through the development and implementation of mitigation strategies. With the introduction of a price on carbon expected, councils seeking to reduce their exposure will look for further opportunities to improve the efficiency of their activities. In collaboration with the other levels of government, they will provide strong community leadership and education on the implications of a carbon price. Collaborative action will assist communities to make a smoother transition to a low-carbon economy.

Victorian Councils have been working closely with their local communities to progress household and business emission reductions; often through partnerships and incentive programs for improved practices.

Strathbogie Shire Council is serious about its commitment to reduce emissions from day-to-day operations. By addressing these areas through strategic planning, policy making and partnerships, we can build a more effective and efficient organisation. This Plan is another step towards assisting the Strathbogie Shire Council to better understand its greenhouse gas emissions footprint and introduce further measures to manage and reduce emissions.

As a Shire we want to provide a consistent and recognised carbon management and reporting approach. This will be based on a (3) three step program which in summary provides:

1. Step One – Identify your Carbon Footprint

Identifying carbon emissions is the first step towards improving a council's emissions profile. This process involves the following broad steps:

- a) Assign resources – Completed as part of CMRP Course
- b) Set objectives – This is developed in this Plan
- c) Establish a methodology – This is developed in this Plan
- d) Commit to carbon accounting and reporting principles
- e) Define organisational and operational control
- f) Establish a baseline, and then collect data
- g) Develop a data collection and management system
- h) Measure emissions, and
- i) Seek third party verification.

2. Step Two – Reducing Emissions Strategies

A series of Key Result Areas (KRA's) are included in this plan which will assist in reducing emissions in the following areas:

- Electrical
- Heating, Ventilation and Air Conditioning (HVAC)
- Building Fabric
- Fit-out
- Indoor Environmental Quality (IEQ) Management, and
- Transport.

3. Step Three – Purchasing Offsets

A carbon offset is any project that indirectly “reduces” carbon at one source by investing in emission reductions elsewhere. Council may elect to offset the emissions of all operations or specific activities or events. Carbon offsets may be derived from activities which sequester carbon such as forestry plantation, energy efficiency projects or renewable energy developments.

We recognise that carbon offsets should be the last resort in a carbon management strategy, therefore council should always consider opportunities to avoid, reduce, and switch before pursuing offset options.

Drawing on the increasing prevalence of carbon offsets, a range of national and international standards have been developed to ensure the integrity of the offsetting process. Each of these standards recognises certain types of offsetting projects.

This Carbon Management Response Plan 2011-2013 highlights the national approach taken by the Commonwealth Government which in December 2007 ratified the Kyoto Protocol, signalling a new era of climate change strategy and policy in Australia. The Kyoto Protocol commits nation states to reducing carbon emissions and intensities.

Through the 2009 Copenhagen Accord, Australia is committed to an unconditional emissions reduction target of 5 per cent on 2000 levels by 2020. In addition, the Commonwealth will further reduce carbon emissions by 2020, contingent on the extent of action from other countries. The Government has also committed to a long term emissions reduction target of at least 60 per cent below 2000 levels by 2050.

The following issues continue to influence the Commonwealth Government climate change policy approach:

- The nature and extent of global action
- The domestic carbon reduction approaches of major emitters such as the USA, India and China, and
- Specifications surrounding international emissions accounting and access to carbon markets.

The aim of this plan is to take into account the above Protocols when reviewing and implementing any actions to reduce GHG's. The plan also recognises that not all actions can be implemented at once as they are dependent on resources and funding. Therefore a planned approach where easy, achievable actions can be addressed first with quick results, the "low hanging fruit", can be implemented.

In addition to developing the program based on reducing GHG's it must be recognised that apart from being a good corporate citizen by protecting the environment the Council also shows Civic Leadership by ensuring it is providing efficient and cost effective services. These factors are always considered when reviewing, updating or implementing new actions.

This plan will be used when considering new design plans, review council operations etc through strategic planning, policy making and partnerships.



Figure 2: Example of Mitsubishi Innovative Electric Vehicle

4. What our community looks like

Strathbogie Shire at a glance

- **Our people** - The estimated population of the Strathbogie Shire for 2010 is 9,974. Our residents choose to live predominantly around the four small towns of Euroa, Nagambie, Violet Town and Avenel. Population projections show that the Shire's total population will continue to grow to 10,136 people by 2014.
- **Getting older** - Our population, like most parts of Australia, is ageing. This ageing trend is projected to continue, but at a higher rate as the baby boomers enter old age. Forecasts show that the Strathbogie Shire will have the second highest population of people over 60 years of age in Victoria by 2021. The incidence of disability increases with age from 4.4% of children to 95.9% of people aged over 90. The chance of becoming the primary carer of someone with a disability, usually a partner or other family member, also increases with age, peaking in the 55 to 74 years age group.
- **Our services** - Home and Community Care; Youth Programs; Maternal and Child Health; Community Development; Health; Planning; Building; Waste Management; Asset Management; Risk Management; Parks And Reserves; Financial Services.
- **Growing tourism** - Tourism is a growing industry with around 369,000 visitors coming into the Shire each year. Our central location and proximity to Melbourne, good freeway access, water, mountains, events, wine and gourmet foods provide a year-round experience for tourists.
- **Work opportunities** - Strathbogie's unemployment rate, as of December 2008, sat on 3.5% compared to the state average of 4.4%. Agriculture accounts for nearly a quarter of the labour force in the Shire, followed by manufacturing and construction. Australian Bureau of Statistics (ABS) research tells us that only a third of people who do work are employed on a full time basis.
- **Disadvantage** - Overall, the Strathbogie Shire is more disadvantaged in terms of socio-economic wellbeing than many other local government areas in Victoria, ranking 20 on a scale of 1 to 80 where 1 is most disadvantaged. In 2010, the Victorian Local Governance Association (VLGA) estimates that 9.3% of the
- **Disability** - Strathbogie Shire population will experience profound or severe disabilities placing limitations upon their employment and/or educational opportunities. This figure is predicted to rise to 9.9% by 2014, significantly higher than the 7.2% total for Victoria.

5. We partner with others

Strathbogie Shire Council believes that government, the community and stakeholders should work together to develop programs / actions that aim at reducing GHG's. By partnering with others, we are able to better understand what needs to be done over the next three years. Our key partners in this process include:

- The Municipal Association of Victoria
- Sustainability Victoria
- Department of Sustainability & Environment
- Department of Regional Development Victoria
- Department of Planning & Community Development
- Neighbouring councils
- Other relevant Federal and State Departments
- Goulburn Broken Greenhouse Alliance
- Resource GV (Regional Waste Management Group)
- Community Action Groups
- Carbon Training International

It is planned to have an ongoing Carbon Management Response Working Group which will provide valuable advice and guidance to Council on a strategic level by helping to integrate everyday issues and objectives into core business such as service planning and policy development. The committee acts as a forum for development of these plans and also acts a resource.

We have also worked with neighbouring shires, to develop the Sustainable Communities Program. Our approach towards planning and service delivery allows Council to work in a leadership role and/or a delivery role.

This plan has clear links with other plans including Hume Sustainable Communities Strategy which was developed by the 12 Councils in the North East of Victoria in conjunction with Regional Development Victoria, Department of Planning and Community Development, other State Government Agencies and Community Representatives. This means that we all speak the same language and share the same vision so that initiatives can be rolled out across the Shire and the region in a coordinated and meaningful way.

6. We identify key issues and priorities

This *Carbon Management Response Plan 2011-2013* influences, and is influenced by, a series of other Council plans and strategies. Together, they identify what is going on in our community and set the key priorities for the future of the Strathbogie Shire.

In addition, this Council's Business Planning process allows its Business Units to prioritise actions required to deliver the objectives of the Council Plan thus allowing another avenue for input.

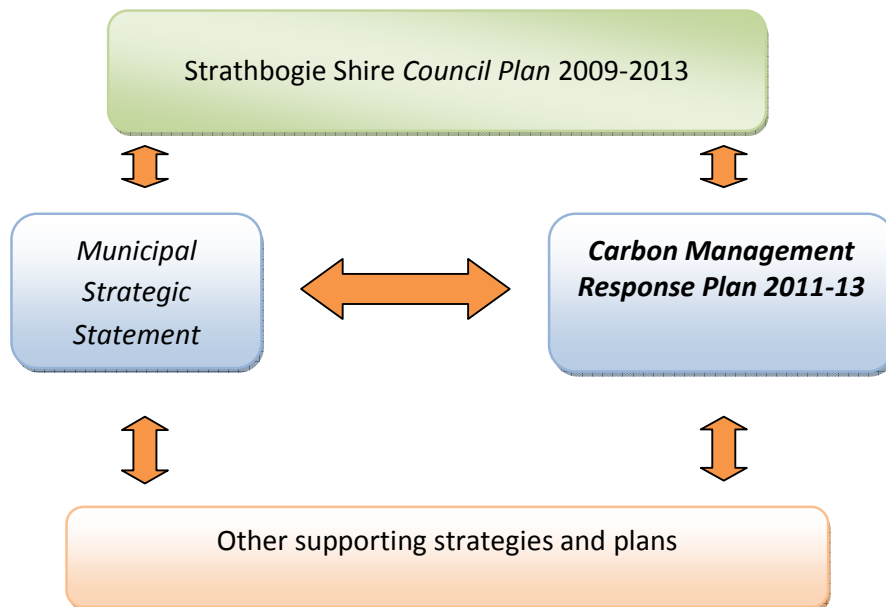


Figure 3: Strategic planning documents in local government

7. What we are going to do

To promote the management of carbon emissions across the Strathbogie Shire requires planning for action. This action plan is framed by four key result areas, (KRAs). Together, these KRA's factors combine to uphold our vision of effectively managing Council's carbon emissions for a sustainable future.

Each KRA addresses different aspects that influence and align the organisation across its different business functions. The KRAs can be defined as 1) organisational learning which addresses Council capacity and skills, 2) internal processes considers legislative requirements, policy and processes, 3) our community deals with customers' needs and requirements and 4) financial focuses on internal and external funding sources and monitoring of financial performance.

By addressing each KRA, considering the issues and priorities of council, actions are planned to improve the management of our carbon emissions over the next four years.

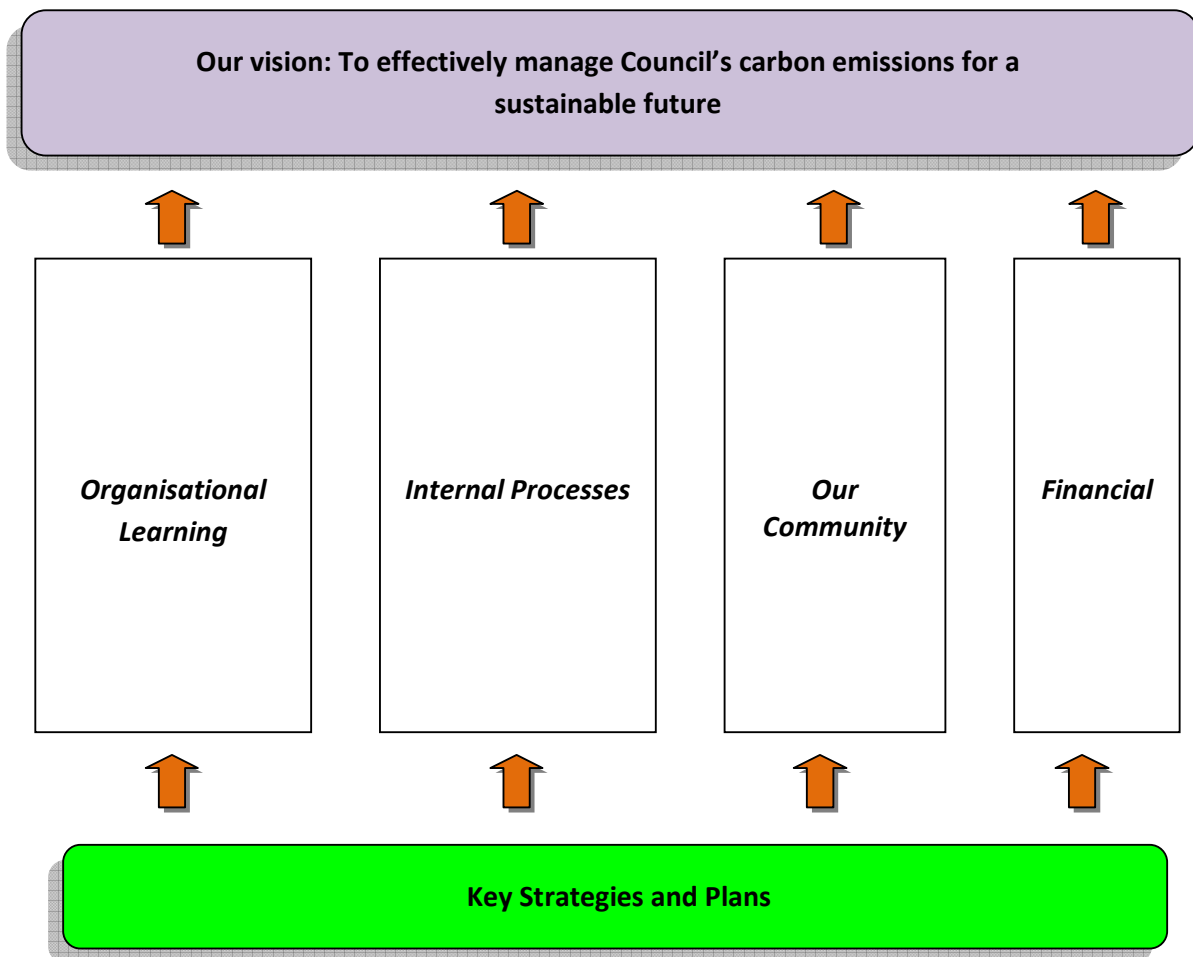


Figure 4: Strathbogie Shire Council planning framework

8. Key Result Areas

The following section deals with the (4) four Key Result Areas (KRA's) that will deliver outcomes for the Shire. These areas are:

- Organisational Learning
- Internal Processes
- Our Community, and
- Financial.

KRA 1: Organisational Learning

a) Why we need to develop a corporate knowledge base:

- Less reliance on consultants
- Development, retention and ownership of corporate knowledge
- Creating a self-sustaining organisational culture
- Respond to the challenges of climate change

b) What we have done recently:

- Nominated staff have completed Certificate 4 in Carbon Management as detailed in the Council Plan 2009 – 2013 Section 1.1.4.2
- Raised staff awareness

c) What this plan will deliver:

- The following objectives, strategies and targets

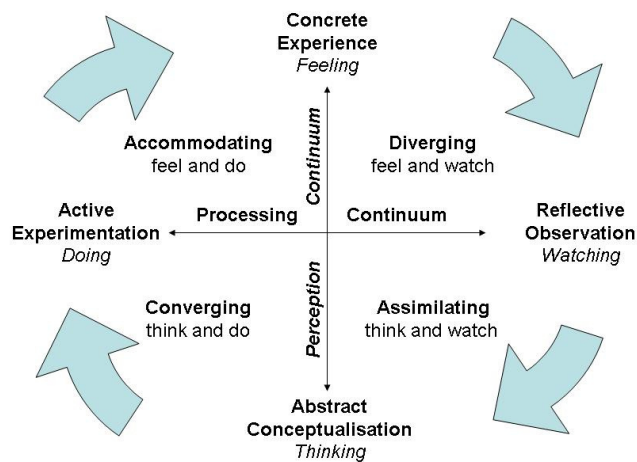
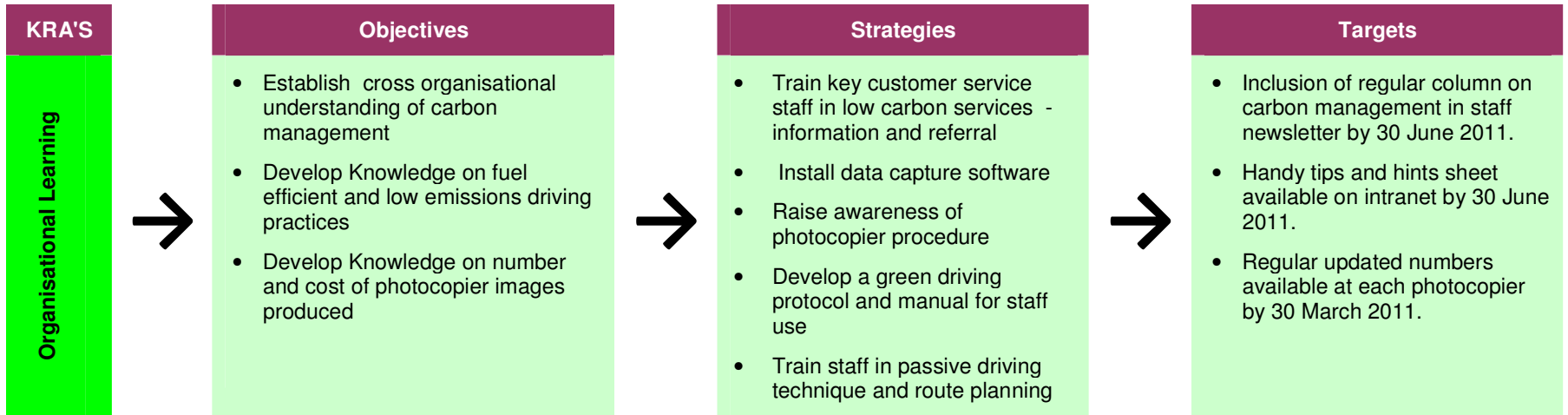


Figure 5: Continuous Improvement Cycle



KRA 2: Internal Processes

a) Why we need to develop our internal processes:

- Establish consistency
- To ensure compliance
- Informed decision making and reporting

b) What we have done recently:

- Developed a draft CMRP
- Provided a briefing to Councillors and CEO
- Formed an internal Carbon Management Response Working Group
- Initiated a cultural change process

c) What this plan will deliver:

- The following objectives, strategies and targets

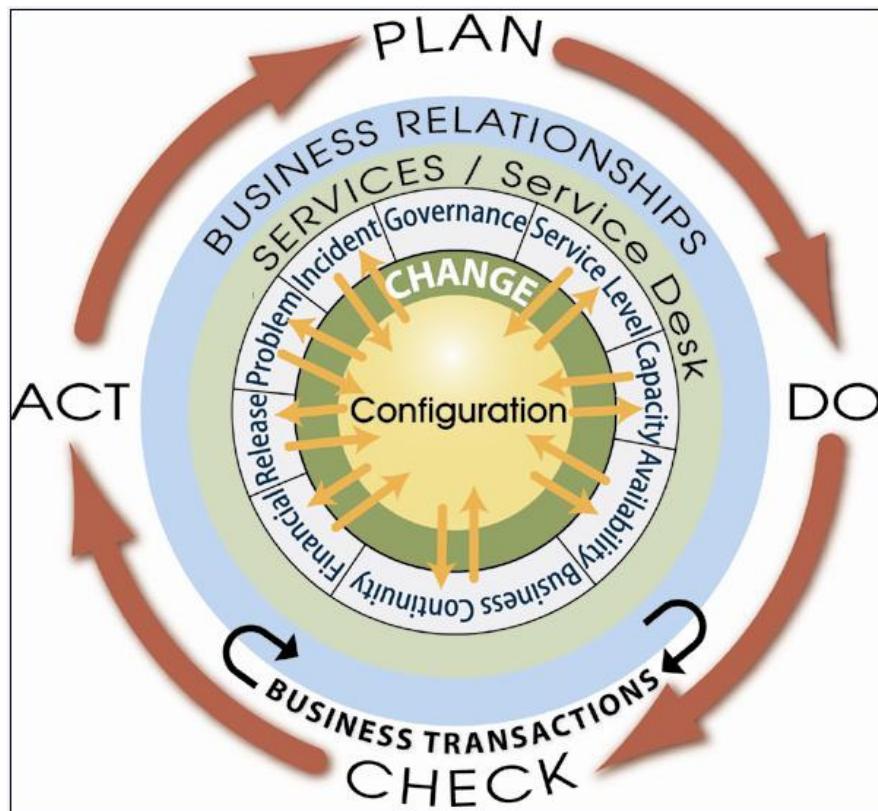
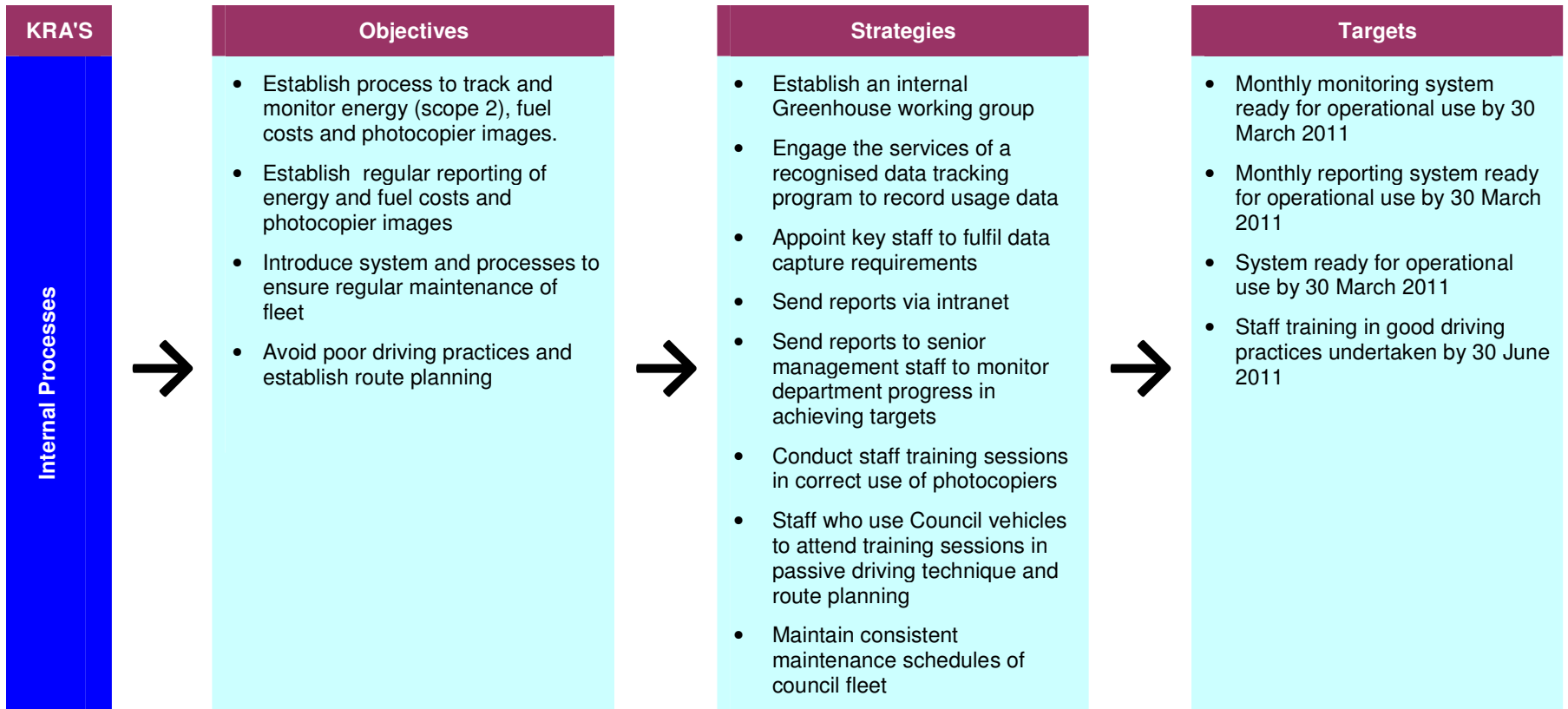


Figure 6: Business Planning Cycle which includes all stakeholders



KRA 3: Our Community

a) Why we need to support our community:

- Establish a common goal
- To provide civic leadership
- Support the community adapting to a changing climate

b) What we have done recently:

- Implemented a “Heatwave Plan”
- Conducted public information workshops focusing on sustainable living
- Developed town protection plans and neighbourhood safer places
- Reviewed and updated the Municipal Emergency Management Plan

c) What this plan will deliver:

- The following objectives, strategies and targets:

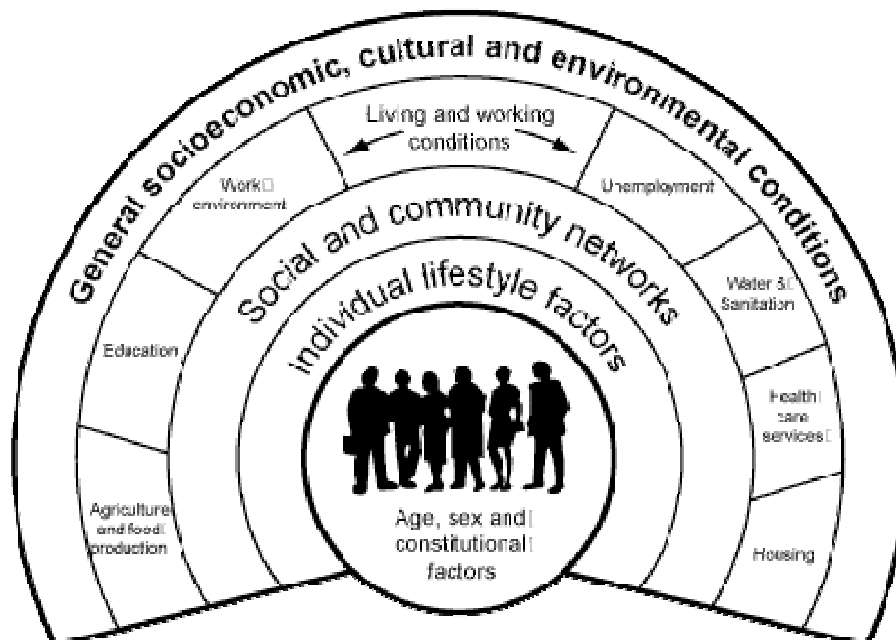
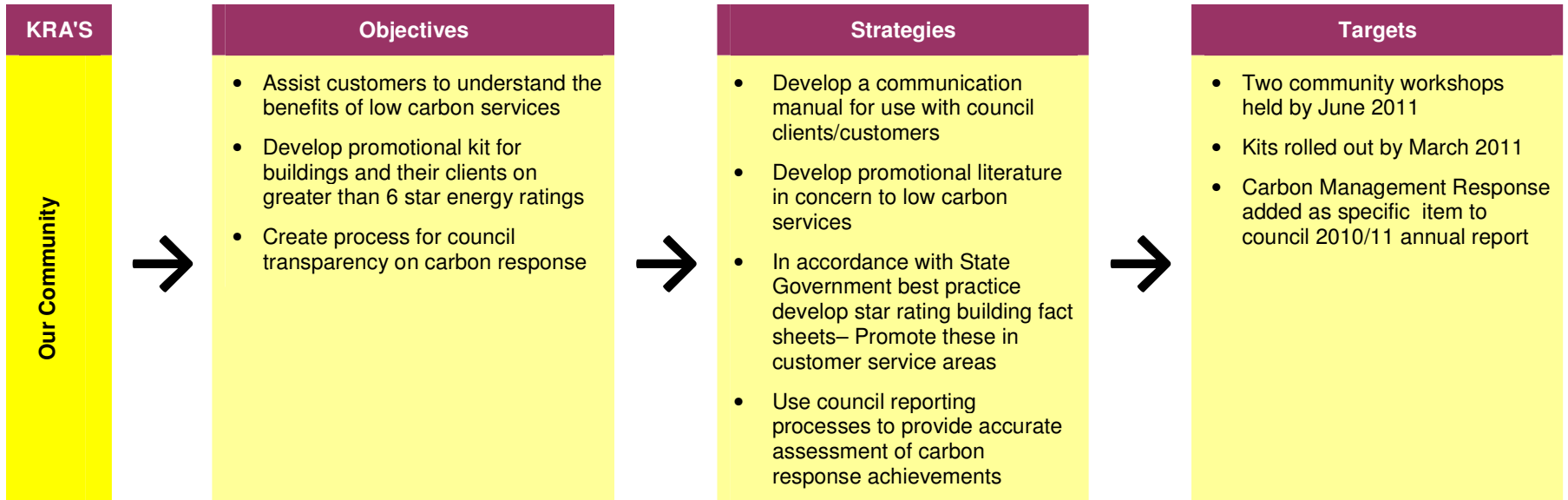


Figure 7: Inclusive Community inputs / outputs



KRA 4: Financial

a) Why we need a financial plan:

- To provide input into the Council budget process
- To develop long term financial goals and budgets
- To capture savings and reinvest in carbon reduction measures
- To provide transparency in business planning process
- To attract external funding

b) What we have done recently:

- Provided funding for Carbon Management Course
- Internal assessment of energy usage and identified areas for savings
- Climate change actions are budgeted for in the 2010-11 budget

c) What this plan will deliver:

- The following objectives, strategies and targets:

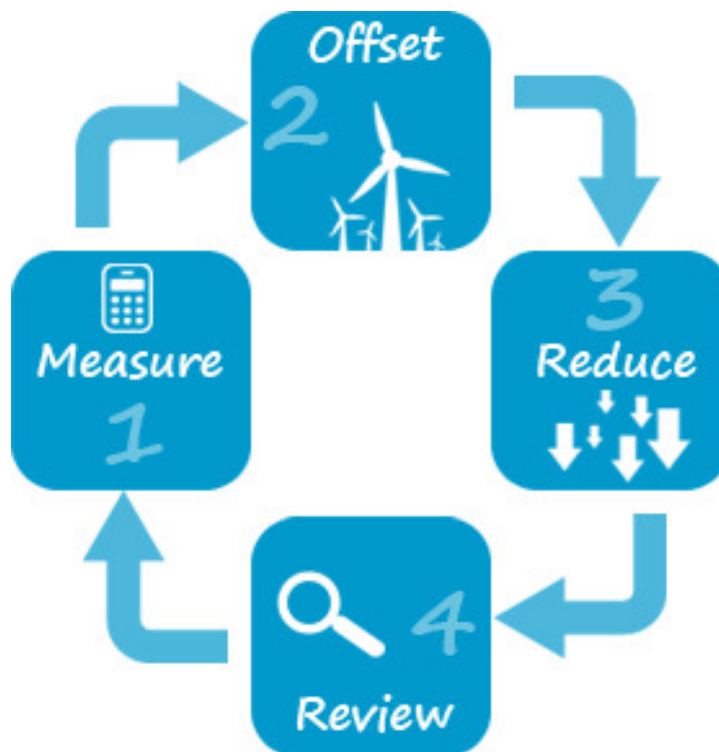
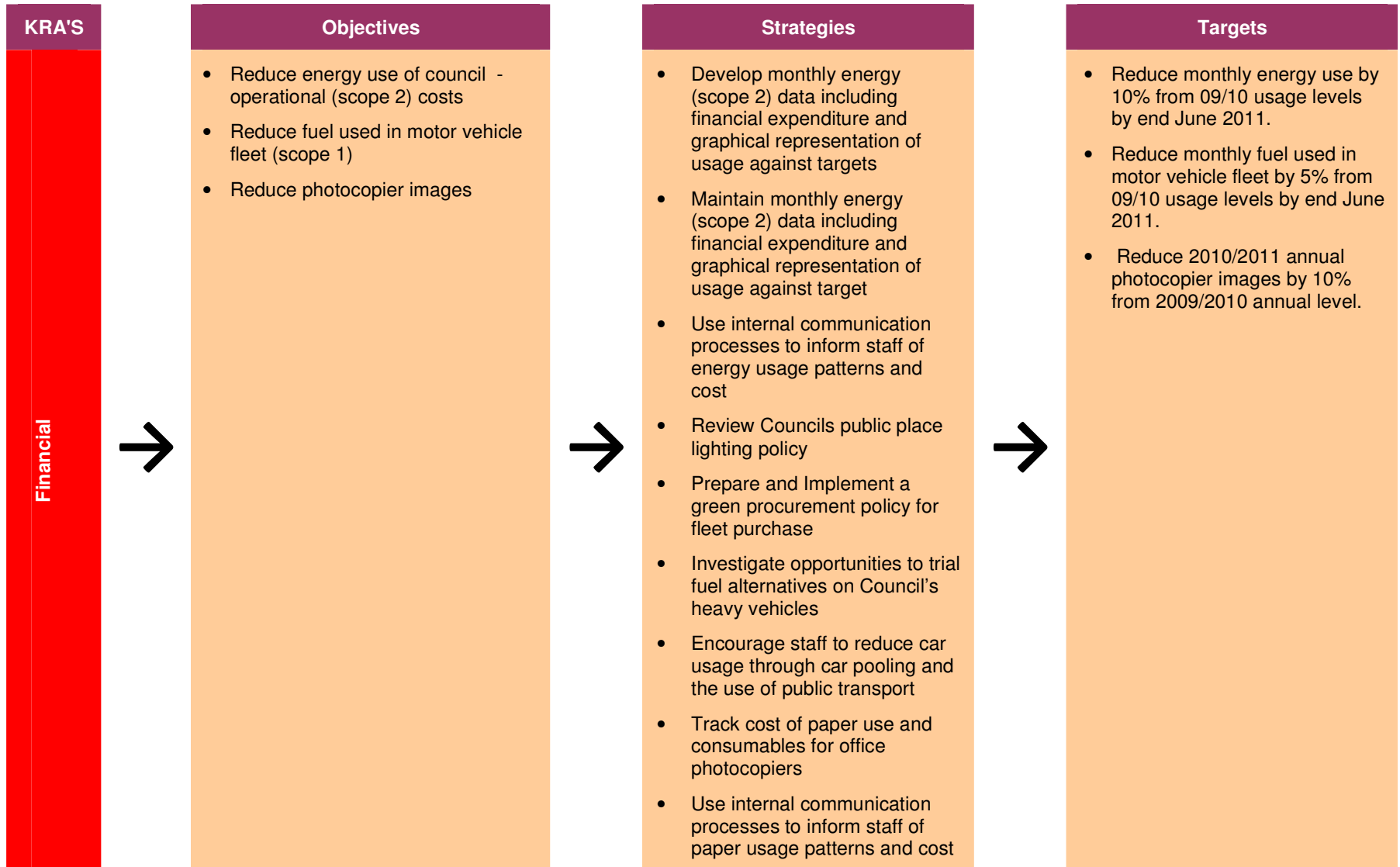


Figure 8: The Carbon Reduction Cycle = more efficient and effective businesses



9. How we plan to keep on track

To ensure Strathbogie Shire Council's Carbon Management Response Plan 2011-2013 remains relevant, it will be reviewed in line with 2009-2013 Council Plan or sooner due to legislative requirements.

The KRA's in the plan will be incorporated as required into the Council Plan and in line with its reporting requirements an update will be presented to Council on a quarterly basis. As items are completed and new ones included these will also be reported to Council.

It is also proposed that the Carbon Management Response Working Group will continue on an ongoing basis to review, monitor and recommend to the Environment Committee Actions and / or Strategies that should be investigated / undertaken.

As part of the Essential Services Commission Review into Local Government reporting all Council's will be required by February 2013 to start reporting on progress made in relation to reducing GHG's. These results of the report will also be included in Council's Annual Report.



Figure 9: New fuel efficient / faster sprinter V/Line country commuter trains

10. Communication Plan

A Communication Plan has been developed for the CMRP to ensure that all audiences such as staff, councillors and the community are kept informed and more importantly factual messages are delivered.

Details:	Response:
Who are the audience?	Councillors, staff and community
Why have plan?	To ensure all stakeholders are aware of Council's response to strategically managing its carbon footprint
What are we doing	<ul style="list-style-type: none"> ▪ Change – reduction in electricity and paper usage ▪ Objective – reduce carbon emissions and save money ▪ Reason – carbon emissions contribute to climate change ▪ Effect – increased comfort for all stakeholders
How will this be communicated?	<ul style="list-style-type: none"> ▪ Internally – email, CEO emails, and staff meetings ▪ Externally – media releases and pamphlets
When will this occur?	Once the CMRP is adopted by Council the actions will commence
Responsibility for delivery of the Communication Plan	<ul style="list-style-type: none"> ▪ The Communication Plan is developed and delivered by the Carbon Management Response Working Group ▪ The CEO will approve any outgoing messages
Tracking and measurement of the Communication Plan	The Carbon Management Response Working Group will meet on a bi monthly basis to update the team members on the status of the actions within the plan, raise and discuss any issues encountered whilst delivering the plan and checking for understanding of what is being discussed and agreed using feedback tools

11. Glossary

Name:	Explanation:
Carbon neutral	An activity, product or organisation is commonly considered carbon neutral when the net emissions arising from the specified product or activity are zero.
Emission factor	A factor which identifies the per kilogram carbon dioxide equivalent arising from a particular activity.
Facility	An activity or series of activities can be referred to as a facility if it: produces energy or carbon emissions or consumes energy; is part of a production process; occurs at the one site, and is attributable to a single industry sector.
Global warming	The rise in average temperature which experts believe is caused by GHG's derived from human activity
Greenhouse Gases (GHG)	Which collect in the atmosphere, preventing the escape of heat into space causing an increase in the earth's atmospheric temperature.
Offset	The reduction of carbon emissions through an activity or project, to compensate for the emissions of another activity or project.
Operational control	The authority with control to introduce and implement any or all of the following for the facility: operating policies, health and safety policies, and environmental policies. Only one corporation can have operational control over a facility at any time.
Organisational boundaries	Defines the units and operations which make up a corporation and which will be included within the carbon accounting assessment.
Scope 1 emissions	These are Operational emissions which arise through everyday activities
Scope 2 emissions	These are Indirect emissions arising from purchased electricity, gas, heat, and steam or cooling.
Scope 3 emissions	These are Carbon emissions which occur outside operational boundaries and do not include those emissions covered by scope 2.
Sequester	Carbon sequestration is the capture and storage of carbon emissions which would otherwise be released into the atmosphere.

12. References

- The Victorian Local Government Guide to Reducing Carbon Emissions
- Strathbogie Shire Council Healthy Communities' Plan
- Strathbogie Shire Council - Council Plan 2009 – 2013
- Certificate 4 in Carbon Management Resource Manual – Carbon Training International