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## EXECUTIVE SUMMARY

The Shared Leadership Program provides an opportunity for future leaders to further develop skills in leadership and teamwork to help lead Victorian public libraries. The Shared Leadership Program recognises that leadership is found within all levels of an organization and seeks to foster and develop leadership potential. It is anticipated that the leadership skills that are being developed can then be applied in the future to benefit the public library sector and the community it serves.

As part of the program, participants formed several groups to complete an action learning project that can then be utilized across Victorian public libraries. Janet Salvatore, Coordinator - Library Operations at Monash Public Library Service, submitted a project idea which involved developing a Victorian Public Library Green Framework for new and refurbished library buildings.

Janet's idea was inspired by the ministerial advisory committee's "Tomorrows Library" report, which documented that the majority of Victorian library building stock is old and one third of Victorian library branches have not been refurbished. The purpose of the project is to create some guidelines for Victorian public libraries to use when planning new or refurbished library buildings and services.

Tomorrow's Green Library team consists of:

- Andrew Logan, Brimbank Libraries
- Emily Braithwaite, Wyndham City Libraries
- Lisa Binks, Monash Public Library Service
- Lisa Hogarth, Hobsons Bay Libraries
- Stephanie Wilson, Mornington Peninsula Library Service

This project is sponsored by Anne-Maree Pfabe, Manager – Community Information & Arts, City of Monash.

Tomorrow's Green Library aims to provide recommendations that can be used by Victorian public library services and associated organisations when considering building or refurbishing library buildings. It is hoped these recommendations may inspire current and future library management to incorporate sustainable initiatives into their library services.

This report also aims to provide a framework for libraries to follow when designing a new building, refurbishing existing buildings and raising community awareness of the benefits of designing and running sustainable libraries.

Three key areas of sustainability are highlighted - Building/Refurbishing, Operations and Education. Recommendations will provide solutions from simple and easy to implement practices and procedures, to large scale building development. This report looks at what is sustainability and its importance within a library, refurbishment of library buildings, greener work practices, and public education initiatives.

These recommendations and concepts are demonstrated through three case studies of forward thinking Victorian public libraries.

In the absence of relevant Victorian publications, Tomorrow's Green Library also serves as a resource guide to direct public libraries to further information and publications available.

# 1 INTENDED PURPOSE

The Tomorrow's Green Library report will provide a valuable information guide on sustainable practices and principles for Victorian public library services considering planning to build new or refurbishing existing library buildings. It can be used in conjunction with the publication *People Places : a guide for public library buildings in New South Wales, 3<sup>rd</sup> ed. (2012)*. This revised edition has some relevant environmentally sustainable design information, which is covered in this report.

The framework demonstrated in Tomorrow's Green Library can be used as a practical starting point for library staff when planning sustainable library design and initiatives.

## 1.1 *What is a sustainable library?*

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Sustainability has many meanings, including preserving natural resources for the future, living in a carbon-neutral way, and meeting the needs of the community now whilst ensuring the needs of future generations are met.

For the purpose of this report, sustainability is defined as living and working in a practical and environmentally responsible manner, to ensure the protection of the world's resources for future generations.

The term sustainability is often used interchangeably with the word 'green'.

A sustainable library encompasses not only design and refurbishment of library buildings, but also improved day to day operations and procedures of the library, as well as educating the community about responsible environmental practices.

## 1.2 *Why run a sustainable library?*

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Libraries are in a unique high profile position which enables them to be community role models by implementing sustainable strategies.

Public libraries have the opportunity to become environmental leaders in our communities. They are committed to the community and to the future by creating welcoming and long lasting buildings. When creating green buildings libraries make good use of public funding and lead the way in the community by implementing sustainable design and operations.

In most cases, sustainable buildings cost less to operate and maintain than non-sustainable buildings. They create less strain on natural resources and are more attractive and comfortable than older buildings.

Although the initial financial outlay for the building or redevelopment of a green library is more expensive than a traditional build, the decreased running costs and added benefits to the community and environment make the overall investment a more cost-effective long term proposal.

## 2 NEW and REFURBISHED BUILDINGS

According to the Green Building Council of Australia, the building sector contributes 23% of all greenhouse gas emissions in Australia each year. The building sector has the potential to make a huge impact on lowering greenhouse gas and energy emissions. Typically green buildings use around 26% less energy, and emit 33% less greenhouse gases than traditional buildings.

The Local Government Planning for Sustainable Building Guide produced by the Victorian Government and the Municipal Association of Victoria (MAV) provides information for Local Councils to improve sustainability of buildings built in their municipalities. There are many tools for measuring and assessing the sustainability of buildings in Victoria such as Green Star, STEPS (Sustainable Tools for Environmental Performance Strategy) and SDS (Sustainable Design Scorecard).

This guide also states “The ultimate environmental design aim for the built environment should be to create buildings and neighbourhoods that benefit the community, use no energy, no water, produce no waste in operation or construction, and are made of materials that are derived from sustainable sources. Whilst this may be difficult to achieve in practice, this aim should be the theoretical goal for sustainability opportunities that are considered in any project.”

Buildings should include aspects of Environmentally Sustainable Design (ESD) principles, which are:

- Reducing energy consumption and cost
- Providing a natural environment for people
- Passive and active ventilation, heating and cooling
- Natural lighting
- Reducing heat in summer
- Reduction in water usage

## 2.1 Green Star System

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Currently the Green Star system is the most commonly used certification system in Australia which is administered by Green Buildings Council of Australia (GBCA). This system is holistic, national and voluntary.

This system rates buildings on:

- Management (of the design and construction)
- Indoor environmental quality
- Energy
- Transport
- Water
- Materials
- Land use and ecology
- Emissions
- Innovation

Buildings can achieve a maximum of 6 stars. The star system indicates:

|        |   |
|--------|---|
| 4 Star | <i>Best practice</i> in environmentally sustainable design and/or construction.         |
| 5 Star | <i>Australian excellence</i> in environmentally sustainable design and/or construction. |
| 6 Star | <i>World leadership</i> in environmentally sustainable design and/or construction.      |

## 2.2 Reducing Energy Consumption

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Buildings can achieve a reduction in energy consumption and costs by implementing a number of different strategies ranging from renewable energy sources to energy efficient lighting and climate control systems.

### Renewable Energy

These are smarter and cleaner ways of meeting the energy needs of a building, as opposed to using non-renewable resources such as coal and gas.

Power is generated by sources such as solar, wind and hydro (water). Renewable energy systems reduce greenhouse emissions, decrease demand on conventional energy resources and are becoming more cost effective in the long term. The most common renewable energy systems used in Australia are solar power systems and wind turbines.



## **Solar Energy (Photovoltaic or Solar Panels)**

Solar power generates power by converting sunlight into electricity. Energy produced can power fixtures and appliances in a building. Solar panels require a significant upfront cost, but once installed they need little maintenance and can last for up to twenty years. Excess energy can be fed into the main electricity grid or into a storage system.

## **Wind Turbine Systems**

Wind turbines or generators use the wind to turn a propeller which drives a generator and produces electricity to power a building onsite. Wind turbines are usually installed on a tower and would be better suited to rural or non-urban areas.

### **2.3 Building Orientation and Mass**

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Reductions in building energy use through lighting systems and climate control systems can be gained through strategic building orientation and massing.

Building massing can reduce reliance on artificial lighting by making the most of natural lighting. Buildings can be oriented in a way that utilises the sun's path at the building site.

Building massing can also be used to influence elements such as rainwater harvesting, and acoustics.

### **2.4 Indoor Environment Quality**

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Following ESD principles and careful building design, library buildings can achieve efficient and sustainable indoor air, thermal and lighting quality.

A sustainable design should incorporate:

- Properly designed ventilation systems (passive and mechanically powered).
- Climate controlled systems to monitor.
- Temperature, humidity and air circulation.
- Integration of daylight and energy efficient light fittings.
- Windows and shades: unprotected glass is the greatest source of heat gain.
- Passive solar heating: keeping summer sun out and letting the winter sun in.
- Passive cooling: achieving natural cooling during summer and minimising energy use for cooling.
- High quality insulation throughout the building: minimises heat loss and heat gain through walls, roofs and floors.
- Airtight enveloped building design.
- Energy efficient cooling and heating systems, such as in-floor systems which don't require air to be cooled as much and therefore reduce energy consumption.

- Night purge systems to effectively cool buildings overnight during the warmer months to reduce the reliance on air conditioning systems.
- The use of rooftop gardens, which will absorb heat from direct sunlight on the roof, and reduce reliance on mechanical air conditioning, whilst also removing CO<sup>2</sup> from the air.

## **2.5 Materials**

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The materials used in the construction of a building can improve the sustainability of the library by reducing the need for mechanical systems to improve the indoor environment quality, and by also reducing the impact of construction and destruction of the building on the environment with materials coming from sustainable sources.

Ideally materials used in a building should also create minimal waste at the end of the building's life, preferably being easily re-used in other natural or industrial processes.

Some points that should be considered when designing a sustainable library are outlined below:

### **Carpet Tiles and Sustainable Carpets**

Carpet tiles, which can be produced from recycled materials, help reduce waste caused by replacing large areas of carpet within a building. When high traffic paths are worn or small areas damaged, carpet tiles in the affected areas can be easily replaced.

### **Low embodied energy materials**

The use of low energy embodied materials will help minimise the impact the building has on the environment from the start, reducing CO<sup>2</sup> and waste emissions from the manufacturing of the building materials. Embodied energy can also be interpreted to include the energy used to transport the material and construction workers to the site.

### **E-Crete**

E-Crete is a geopolymer concrete alterindigenous made up of fly ash and slag - both by-products of other manufacturing. The use of E-Crete reduces the embodied CO<sup>2</sup> of traditional concrete by at least 60% and reduces the impact on the environment from quarrying for the products.

### **Solar hot water systems**

There are two types of heaters, either active systems which use an electric pump to circulate the fluid or a passive system which has no pump. Heat pump or solar water systems are beneficial to the environment and will reduce energy cost, over the years paying for themselves.

## 2.6 Water

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Water shortages have been common in Victoria for a number of years, resulting in the need to enforce water restrictions that vary in stages across the state. Due to the rising cost of infrastructure and the shortage of water in Victoria costs have risen dramatically, reinforcing the need to think sustainably about water usage.

The following ideas can be implemented to reduce water consumption:

- Aim to harvest enough rain water to meet 100% of the buildings water demand.
- Once a building has been constructed on a site, water runoff increases – this runoff can be stored in water tanks, which can be used for landscaping or toilets.
- Waste water or storm water can be treated and reused for irrigation purposes.
- Black water (from kitchen and toilets) can potentially be used, however it needs to be treated either biologically or mechanically before it can be utilised.
- Tanks that are underground or in-ground are preferred for water storage.
- Landscaping and garden designs can use large amounts of water. The use of drought resistant plants and indigenous shrubs or trees and grasses can reduce the need for watering as indigenous and indigenous plants require less water.
- The use of mulch on garden beds keeps the soil moist and minimises water loss from the soil and reduces the need for watering.
- Electronic watering systems should be used at night to decrease water evaporation. Drip watering systems are preferred over sprinkler systems that can waste large amounts of water.
- Careful landscaping can assist in thermal control, additionally the plants will absorb carbon dioxide from the atmosphere.
- Where possible minimise lawn areas or consider using grass alterindigenouss such as synthetics, crushed rock or gravel.
- The use of automatic or sensor taps and dual flush toilets will dramatically reduce water consumption in buildings.
- Waterless urinals can dramatically decrease water usage in bathrooms.
- Efficient fixtures and fittings such as flow regulators or aerators on taps.
- Avoid leaks wherever possible and aim to have them fixed as soon as they are noticed.

## 3 OPERATIONS

Reduce, reuse, recycle – These are terms synonymous with sustainable living and, from an operational point of view, all very valid ideas when it comes to reducing a business' impact on the environment. But there is far more to sustainable practices than just these three concepts. It's important for libraries to start "thinking outside the box" in terms of truly sustainable practices. Ensuring initiatives are embraced and changing the mindset of customers and staff alike are essential steps in the process of moving to a sustainable industry.

Below is a list of initiatives that libraries can incorporate to ensure they operate more sustainably. Some libraries will be able to adopt all, or most, of these ideas, however some will be able to adopt a only a limited number of them, dependent upon budgetary constraints. It is important to recognise that some of these initiatives will, in fact, reduce a library's operating costs such as a reduction in the use of energy and water.

### 3.1 *Energy*

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- Signage in staffing areas ie "Please turn off when leaving room"
- Maximum use of natural lighting
- Light-sensitive lighting
- Movement-sensitive lighting
- Energy-efficient lighting
- Heating/cooling to be run only on extreme temperature days Re-use of warm air produced from computer/server rooms into areas in need of heat
- Invest in green IT solutions – eg energy efficient servers, printers, photocopiers, computers, screens, programs

### 3.2 *Water*

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- Half-flush toilets
- Water saving taps
- Water re-use cisterns/sinks
- Harvesting of rainwater
- On-site processing for re-use of waste water

### **3.3 Waste**

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- Recycle e-waste – can it be used by someone else or does it need to be recycled efficiently?
- Recycle everything! Toners, paper, cardboard, flyers, books, cd/dvd cases, etc
- Waste bins in every area of the library – rubbish, paper products, recyclables (different colour for different functions) – will require cleaners to be “on-board” with the library’s needs
- Implement a waste audit to be used as a starting point for measuring the library’s waste and any possible reductions (an organisation such as Green Makeover can deliver this)
- Greater reliance on eResources to reduce paper production and waste in monograph production
- Resource sharing to reduce the number of items required

### **3.4 Transport**

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- Hybrid or electric van for branch run
- Hybrid or electric car for staff use
- Electric vehicle charging stations
- Multi-purpose external visits
- Car-pooling initiatives for staff
- Incentives for public transport users, cyclists and walkers such as bike shelters, bike racks and close proximity to public transport (i.e. bus stops)
- Staff to work at branch closest to home
- Flexible working hours to avoid road congestion
- Video meetings
- Allow remote access to system for staff to work from home

### **3.5 Green Team**

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- Create a “green team” to investigate, implement & monitor sustainability measures
- Create incentives for staff – ie monthly “green” staff member wins a “green” prize
- Review suppliers and ensure they practice sustainable practices (use a company such as Ecobuy to create sustainable procurement procedures) and give sustainable practices a higher rating when comparing quotes, not just price based
- Set up car-pooling roster and maintain

### **3.6 *Management and Support***

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Many operational procedures and practices are “entrenched” in the library industry. It’s imperative that library management ensure all staff are included in the planning, implementation and management of the new policies. This will ensure staff feel they are included and have some ownership of the changes involved in moving towards a more sustainable way of operating.

## 4 EDUCATION

Aside from being intrinsically valuable, green public building projects can be excellent vehicles for initiating broader community conversations about sustainability.

Libraries are traditionally places associated with learning and discovery so it is fitting that “green” libraries use their buildings to demonstrate green technologies and practices. Libraries can show their patrons how these practices can be applied at home, work and in the community.

Public libraries are well positioned in their communities to deliver education programs about environmental sustainability. In Appendix One we highlight the Melton Library project. One of Melton Library’s key targets is to educate people and lead by example. They understand the importance of “walking the talk” - not just designing and building a sustainable library, but building it, living it and sharing it with the community.

Libraries can use a variety of methods to educate the community about responsible environmental practices. Some of these methods can include:

### **4.1 Library Programming**

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In order to help educate the community about sustainability, libraries can plan and execute programs featuring guest speakers on topics such as:

- water-wise gardening practices
- composting and worm farming
- recycling in the home
- energy efficiency
- “green cleaning” - using non-toxic, non-hazardous chemicals

Other events could include film nights, fruit and vegetable co-operatives and author talks. Immediately following the opening of a new “green library”, it would be beneficial to invite the architect and builders to present the key ESD features to the community.

### **4.2 Resources**

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Libraries can provide access to a range of resources including books, magazines, DVD’s and energy kits.

In Appendix Three we highlight Altona Library’s “EnviroCentre” - a resource centre featuring a broad range of material on sustainability. The Envirocentre is specifically designed to

inform and educate the community and create awareness of environmental issues. It also aims to encourage participation in preserving the local environment.

### **4.3 *In-Library Displays***

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A library that has successfully implemented green practices and/or sustainable building design can create displays within the library that help to educate the public about the sustainable strategies employed and their positive impact on the environment.

Melton Library has plans to include “green trails” which involve a process of self-discovery where patrons follow a trail through the library stopping at points along the way which highlight the key ESD features via signage. Other initiatives include web based interactive programs accessible both remotely and from within the library.

The use of monitors to display slideshows featuring the building project from start to finish, including commentary on ESD features can help to create interest and give a good background on the project and its key goals and objectives. Communication and transparency is an essential element of community education.

By highlighting the key ESD features of the building, including recycling and re-use of materials from a demolished site, libraries are demonstrating sound sustainability practices and encouraging the community to think about ways that they can do the same. It also fosters a sense of community satisfaction: patrons like to know that their rates are being put to good use.

Book displays are also an excellent way of educating the community on sustainability. Creative, attractive displays featuring items from the collection such as building green homes, water and energy saving, and recycling create interest and awareness about environmental issues.

### **4.4 *Energy Dashboards***

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Other initiatives include monitors within the building displaying the performance of the building using programs such as eGauge MySmartCTI software. This technology can be used within the library and on the library’s website.

This software is a visual, practical way of educating the community on energy efficiency, and demonstrates the effects that the ESD features are having on the actual energy consumption of the building.

This software has the capacity to include sustainability tips as well as detailed information about the library’s green features.



## 5 RECOMMENDATIONS

As a result of the research conducted in developing this framework, the following recommendations are made:

- This report could be used as a starting point for libraries considering or planning the building or refurbishment of a sustainable public library.
- Public Libraries Victoria Network (PLVN) to produce a detailed report or standards for library management considering building new Victorian public buildings, to incorporate detailed ESD specifications.
- Incorporate sustainable library buildings/operations as a key result area of the Being The Best We Can self-evaluation framework.
- Create sustainability awards and/or grants as an incentive to encourage public library services to consider sustainability as a high priority when building or refurbishing library buildings.
- PLVN seminar (including library tours) on ways libraries can be more sustainable, by showcasing the various case studies included in this report.

## 6 APPENDICES

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## 6.1 APPENDIX ONE – CASE STUDY – Melton Library

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Melton Library and Learning Hub, 31 McKenzie Street, Melton, Victoria  
Municipality: City of Melton  
Project cost: \$21 Million  
Expected completion date: May 2013  
Site Area: 3500 m<sup>2</sup>  
Architect: FJMT  
Builder: ADCO Constructions

Currently under construction, the Melton Library and Learning Hub is being built at the site of the old Melton Library. The building will consist of 3500 square metres over two levels and is four times larger than the previous 30 year old building. It will service a population of approximately 50,000 people and contain around 70,000 items. In demolishing the old building the City of Melton ensured that they were as sustainable as possible recycling 92% of the old building materials.

This innovative building has a strong focus on sustainability and has a proposed 5 Star Green Star rating from the Green Building Council of Australia and will be the first public building in the Western Metropolitan area that achieves this rating. As part of this building project Melton City aim to set a benchmark for sustainable buildings and show leadership in the area of green and sustainable buildings. It is hoped that this will inspire builders to achieve new levels of environmental sustainability within the City Council.

Aiming to achieve a 5 Star Green Star rating can increase the costs of building by 5%. These costs can be slowly recouped over the years in costs saved on amenities usage.

The Melton Library will feature the following green and sustainable design features:

- Efficient design to minimise heating, cooling and lighting costs
- Underfloor air distribution system (UFAD)
- Mixed mode ventilation (mechanical and natural)
- Night purging of hot air
- Solar hot water
- Solar thermal collectors
- Real time display of building energy usage
- Carbon dioxide sensors to monitor acceptable levels
- Daylight optimisation and daylight glare control
- Highly efficient air systems - 50% of heating will come from solar thermal collectors
- 48,000 litres of water tanks with 2600m<sup>2</sup> dedicated to rainwater collection
- 50 m<sup>2</sup> of PV panels
- Digital automatic lighting
- Solar energy E-Crete (replaces concrete)
- Sustainably sourced timber – 95% forest certified
- Use of responsible steel
- Environmentally certified materials
- New materials used have a high recycled content
- Transport management, including onsite car and bicycle parking and close proximity to bus stop (500 metres to major bus stop with a small bus stop at the front door)
- Rainwater harvesting and reuse
- Indigenous drought tolerant plant species used in landscaping
- Operational waste management plan
- As often as possible building components were designed to be disassembled, moved and reused
- Durable and maintainable material was selected and used to minimise the need to replace or redo sections of the building in the near future

Not only will the sustainable design of the Melton Library result in a decreased environmental impact and set a benchmark for sustainable public libraries, it will also save the municipality a large amount of money in its day to day running. It is estimated that the annual utility cost savings will average \$30,000 a year. Melton Library will have a 52% decrease when compared to standard in total energy use with a 60% reduction in gas usage. Thermal collector heaters will save \$23,000 a year in gas costs with electricity savings of \$6,000 annually. The building will have a decreased water consumption of 82% when compared to standard resulting in \$5,000 savings on water per year.

## 6.2 APPENDIX TWO – CASE STUDY – East Melbourne Library

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The East Melbourne Library & Community Centre opened in August 2006 as an initiative of the City of Melbourne, following extensive consultation with the local community. It was vitally important to both groups that the final design was not only environmentally responsible, but comfortable and attractive as well.

From the very beginning of the project all possible steps were taken to reduce the impact on the environment. Whilst construction of the new building was taking place, the library operated out of a temporary facility nearby. This temporary facility was constructed using reclaimed materials from the old building, and once this facility was no longer required the majority of materials were claimed by a charitable organisation, resulting in only one trailer load of waste going to landfill.

The new building incorporates a number of ESD (Environmentally Sustainable Development) elements into both the construction of the building and the ongoing operations. Some of the more innovative elements are:

### **Climate control**

The climate within the building is controlled through a specially designed system that uses natural ventilation, underground geothermal loops and heat pumps.

Fresh air is drawn into the building via a sub-floor. Once within the building the air warms and rises. As the temperature within the building reaches the optimum level, vents in the roof are opened to allow hot air to escape and the internal temperature to remain constant.

If the internal temperature is not within acceptable levels, the geothermal system is activated. This entails water running through pipes 50 metres underground and absorbing the temperature of the surrounding earth. Heat pumps then utilise this water to either heat or cool water flowing through pipes within the concrete library floor.

### **Water**

Two 7,500 litre tanks collect rainwater runoff, and this water is then utilised in the garden and toilets.

## **Garden**

All garden beds have been densely planted, including the use of bamboo in the north and south-east garden beds. This is particularly important on the north side as the building's main air intake is located close to the garden bed, and the bamboo helps improve the building's air quality.

The East Melbourne Library & Community Centre has become an exciting and well-utilised component of the neighbourhood, receiving an excellent response from the community. However, it has not been without its difficulties and a number of issues have needed addressing since the opening.

## **Communication**

As with any local government project there were a large number of parties that needed to be consulted regarding issues arising. This resulted in some frustration for library staff when trying to resolve problems, particularly with the heating and cooling system.

## **Heating & Cooling**

When the system was installed, only the heating & cooling company could over-ride the system if needed, for example on extremely hot days when added air flow was required. Consultation between the parties has resulted in a contingency procedure being put in place.

## **Lighting**

The automated sensor lighting system does not always work as efficiently as envisaged when installed, and some of the large ceiling lights emit too much heat.

There are a number of recommendations that would assist any library service considering taking on a similar project. These recommendations are not technology centred, but process centred.

In particular, it is recommended that parties remain flexible as each project is different and what worked for one building might not work at another. Communication channels should be as open as possible, allowing all parties involved to have an opportunity to contribute ideas and questions. And, most importantly, allow for adjustments and changes that will need to be made as the "final" product will inevitably require some ongoing improvements.



## 6.3 APPENDIX THREE – CASE STUDY – Altona Library



Located at the Altona Library, the EnviroCentre brings together and showcases all of the City's environmental initiatives and maximises community awareness.

The EnviroCentre contains a range of resources for loan, including local field guides and conservation manuals. It also has environmental reference material, including items currently held in the Local History collections of Hobsons Bay Libraries and in library archives; council publications; Industry Environment Improvement Plans, and information about local Friends Groups.

The EnviroCentre is the 'Central Hub' for students, residents and community groups who wish to explore a broad range of environmental information relating to Hobsons Bay and the current environmental trends and issues in our world.



### Resources

A range of field guides, conservation manuals, books about local recreational activities (e.g. bike and walking trails) and books relating to local environment issues and groups are available for loan.

There is also a Reference collection of annual reports of industries and organisations that have an impact on the environment in Hobsons Bay.

Items such as the Living Water Literacy Kit are available for loan to local schools.

### Magazines

Titles available in the EnviroCentre are:

- Earth Garden
- Ethical Investor
- G Magazine
- Grass Roots
- Habitat
- ReNew
- Ride On
- Source
- Water
- Wildlife Australia



## Brochures

A range of information brochures are available including:

- Council environment publications (including the Living Green in Hobsons Bay brochure)
- EPA brochures
- Water Saving Tips
- Information about local environment groups
- Information about sustainable transport options

## Websites

The EnviroCentre has curated a list of useful environment websites that offer patrons access to a broad range of resources. Links are available to these websites from the Hobsons Bay Libraries website.

Patrons can also search the “Environment Complete” database for free using their library membership card number. It contains more than 1,957,000 records from more than 1,700 domestic and international titles going back to the 1940s, as well as more than 120 monographs. It offers deep coverage in applicable areas of agriculture, energy, geography, renewable energy sources, pollution and waste management, environmental law, social impacts and much more.

## Displays and workshops

The library has monthly displays on show at the Altona Library promoting significant environmental events and campaigns throughout the year. Community members and groups are encouraged to display any environmental initiatives or interests in one of the Enviro Centre’s display cases. The centre also has a wide variety of Taxidermied fauna on display.

Guest speakers present a range of topics throughout the year. Together with the Parks and Wildlife Department of the Council, tours of the local wetlands area are available free to the public.

## Environmental/Recycling programs

Hobsons Bay City Council has a commitment to supporting environmental groups within the city. Some of the projects conducted by or receiving support from the council include:

- Friends Groups  
These groups help establish or maintain significant environmental areas and raise profiles of local environmental areas to the wider community.
- Community Liaison Committees  
These committees work together with local industries to assist in the improvement of the local community.





The EnviroCentre has many recycling initiatives. These initiatives aim to promote environmental awareness throughout the Hobsons Bay community. Some of the recycling programs that are currently being implemented include:

- Shower Head exchange program
- Cork recycling program
- Mobile phone recycling program
- Printer cartridge recycling
- Paper recycling program

## 6.4 APPENDIX FOUR – RECOMMENDED RESOURCE LIST

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Water Saving in the workplace- These websites contain further information on saving water in the workplace, including tools to help non-residential water customers to assess their water usages and find ways to save and conserve water.

[www.savewater.com.au](http://www.savewater.com.au)

[www.water.vic.gov.au/saving/](http://www.water.vic.gov.au/saving/)

Water Sensitive Urban Design - For more information on water management in urban development and design to work towards creating a sustainable city. This website covers water cycle management which includes drinking water, storm water, water recycling and sewage treatment.

[wsud.melbournewater.com.au/](http://wsud.melbournewater.com.au/)

Water Efficiency Guide: Office and Public Buildings is an introduction to the water saving in office and public buildings.

<http://www.environment.gov.au/sustainability/government/publications/pubs/water-efficiency-guide.pdf>

Key environmentally sustainable design (ESD) features in a public library - The Grove Precinct website give further information and examples of ESD in libraries, it includes diagrams and fact sheets

[thegroveprecinct.com/the-building/](http://thegroveprecinct.com/the-building/)

The Local Government Planning for Sustainable Building Guide produced by the Victorian Government and the MAV provide information for Local Councils to improve sustainability of buildings built in their municipalities.

[www.sustainability.mav.asn.au/sustainability-accord/mav-planning-for-sustainable-buildings-guide-2774](http://www.sustainability.mav.asn.au/sustainability-accord/mav-planning-for-sustainable-buildings-guide-2774)

Sustainability Victoria has identified specific tools to help organisations and government to assess and incorporate sustainable practices.

[www.resourcesmart.vic.gov.au/for\\_government/sustainability\\_in\\_government\\_5053.html](http://www.resourcesmart.vic.gov.au/for_government/sustainability_in_government_5053.html)

Information on living sustainably.

[www.livinggreener.gov.au/energy](http://www.livinggreener.gov.au/energy)

Green Building Council of Australia, promotes the development of a sustainable property industry in Australia. It provides information on sustainability by promoting green building programs, technologies, design practices, operations and the intergration of green building initiatives in designing and construction of buildings.

[www.gbca.org.au](http://www.gbca.org.au)

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[www.egauge.net/devices](http://www.egauge.net/devices)

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