

## Case Study Jacaranda Community Centre

### Organisation Profile

Jacaranda Community Centre Inc. was set up because of the support within the Belmont and surrounding areas for an agency that offered more than financial counselling. Aboriginal people wanted an organisation where they felt they could belong but did not want a solely Aboriginal organisation.

The service as reflected by the Constitution's aims, is designed to meet the needs of people on low incomes, regardless of family composition, gender or race. Aboriginal people are encouraged to attend (approx. 80%) and preference is currently given to people in Belmont and surrounding areas. However, if it is extended family from out of this region they will also be included. Some programs may also have a wider area as part of the funding agreement.

The principles used by Jacaranda underlie the Metropolitan Model of Aboriginal Family Support and Development Service, thus acknowledging issues resulting from history, past policies, racism and the current level of social disadvantage, while using the Community Development Model of Empowerment.

### Energy and Greenhouse Audit Summary

The Energy and Greenhouse Audit was conducted on the 3<sup>rd</sup> March 2010. The auditors analysed the electricity, gas and water consumption of the site, determined key behaviours regarding energy and water usage through interviews with staff and critically assessed the property's energy and water efficiency.

There are a number of key energy and water structural issues with Jacaranda Community Centre:

- The lack of insulation in one part of the building and quality of insulation in another;
- The inefficient lighting;
- The age, efficiency and effectiveness of the air-conditioning system;
- Lack of natural lighting in some parts of the building.

The behavioural issues at Jacaranda Community Centre included:

- Leaving lighting on;
- Leaving the air-conditioning on and setting at an appropriate temperature;

### Recommendations

The following recommendations were provided to the management at the Jacaranda Community Centre. They include both behavioural recommendations and potential retrofitting.

1	Develop and Implement a Resource Management Strategy, appointing one or more staff to this 'portfolio' who can read electricity and water meters, and understand standby energy use and strategies to reduce use
2	Include average daily energy (units per day), water use (litres used) and transport (car travel in litres used) in summary financial reports and organisational reports.
3	Install insulation of at least R3.5 in the ceiling 144 and consider upgrading the insulation of 146 to at least R3.5.
4	As the opportunity arises, and if this wall remains unshaded, consider painting the North Western wall (city side of 144) of the building with an insulating paint.
5	Consider painting the metal roofs that are not insulated directly underneath with an insulating paint.
7	Replace the current air conditioning setup with either a single unit or two units that are both either evaporative or refrigerative
8	Turn off air-conditioners when an area is empty.
9	Where possible, shade the refrigerative unit of reverse cycle air-conditioners as this helps with efficiency.
10	Replace vertical blinds with block out curtains and install pelmets over the blinds to trap rising air and add an additional layer of insulation. The current pelmets in the reception have no top, so do not function to trap heat.
11	Install weather stripping around doors.
12	Install high quality skylights in each room of the building to provide natural lighting and couple to light sensors that automatically adjust lighting levels to maintain constant illumination levels
13	Install solar tubular skylights into each room/office as they are a free source of natural lighting.
14	Replace the current magnetic ballasts with electronic ballast.
15	De-lamping where applicable in consultation with affected staff.
16	Replace incandescent light bulbs with CFL (Compact Fluorescent Light) bulbs.
17	Look into installing light sensors with auto dimming features into all rooms/offices fitted with skylights and occupancy sensors in the less used areas.
18	Replace old computers and CRT(Cathode Ray Tube) monitors.
19	Install a wired network throughout the building with outlets in each room to

	minimise the number of printers which are each using (different) consumables.
20	Setup a recycle bin for paper only with a paper shredder nearby for disposal of sensitive information.
21	Install weather stripping around doors.

## Retrofits

### Timber Blinds

Jacaranda has a west facing window that receives significant summer sun in the afternoons. This heats the reception area and provides discomfort to reception staff and clients waiting for appointments. Timber blinds were installed to prevent afternoon summer sun from entering the room but they also provide flexibility for natural light enter at other times. It was also important that the blinds chosen we child safe.

### Photovoltaic System

A 5.29kW photovoltaic system has been installed at Jacaranda Community Centre. This will provide them with approximately 7300kWh of self-generated electricity per year. This will dramatically reduce their electricity expenditure, up to 75%, whilst saving approximately 7300 kg's of GHG per year.

### Lighting

Energy use from lighting contributes to 12% of Jacaranda Community Centre's energy use. To help address this, 40 high efficiency fluorescent tubes have been installed in replacement of older fittings. In addition to using less electricity, they have a longer life expectancy and produce a better quality light.

### Other Work

Jacaranda Community Centre was successful in applying for a Lottery West grant to retrofit the building according to recommendations in the Energy and Greenhouse Report provided by WACOSS auditors. The other work undertaken was the removal of old and installation of new insulation, replacement of inefficient refrigerator, a new efficient heating and cooling system and the replacement of old CRT monitors.

## Summary

Jacaranda Community Centre provides an important service to the Belmont community, especially its Aboriginal members. The energy audit and subsequent retrofit will significantly reduce the financial burden of energy bills on the organisation. In addition, being involved with the Climate Change Readiness for Community Services project allowed them to submit and to be successful in a Lottery West application. The funding from Lottery West allowed them to implement additional recommendations above what was funded through the Climate Change Readiness project.