

# Strata Sustainability Retrofits

## CASE STUDY: Botany Cope, Waterloo

Never Stand Still

Built Environment

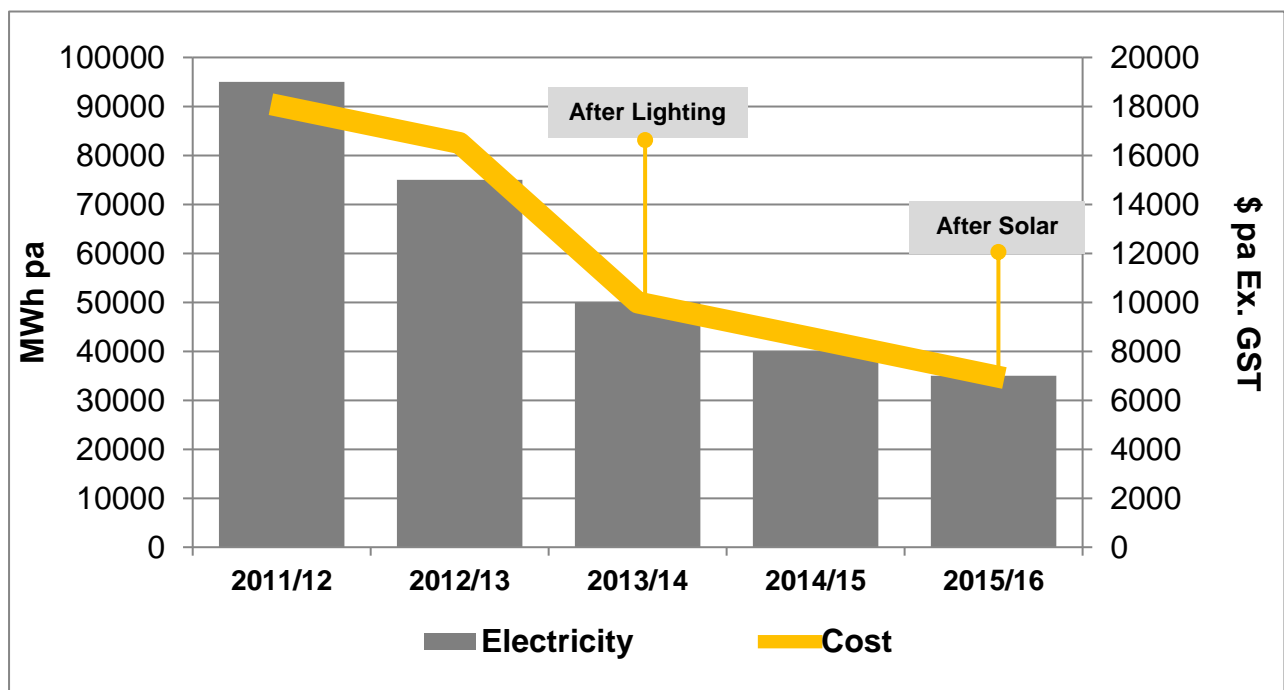


Solar Panels on top of the Botany Cope Building

### The Case:

Built in 2002 the Botany Cope building is a mixed use building with 34 lots including 4 small shops. Dealing with a defects claim led to the development of social connections in the building and a strong team of owners working on different projects for the common good. In 2012 the building was consuming around 205kWh per day at a cost of \$4,700 per quarter. After receiving a flyer for an energy audit, the strata committee initiated and implemented a series of sustainable retrofits.

**Innovation:** Successfully implemented energy-saving lighting and solar power.



Energy consumption and costs before and after retrofits

### Challenges

### Overcoming these challenges

### Support

The EC were able to thoroughly audit the scheme's insurances and maintenance schedules to demonstrate the feasibility of the project as well as model the potential cost-savings. Being transparent with owners about costs, timeframes and inconveniences and organising for owners to see and touch samples of the fittings maintained support for the lighting project. EC members stressed the importance of ongoing communication about the retrofits, and emailed energy audits to owners and distributed collated summaries of these in the Annual General Meeting (AGM) notice. As a result of these efforts, the easiest step in the retrofits project was getting approval at the AGM, however the retrofits proved challenging to implement.

Challenges	Overcoming these challenges
Time	<p>The initial energy audit was conducted and then followed up on a six-monthly basis as the retrofits occurred. The works were staged over several years for budget reasons and each year at the AGM the owners were asked to approve the next stage of the works. In the first year, the garage and fire stair lighting was replaced, followed by the hallway, then lobby areas and finally the solar panels were installed. Eight quotes were obtained for the lighting works, and nine quotes for the solar project before the committee found the right solution.</p> <p>There were also issues with the solar panel installation which delayed works, as the building has a small, shaded roof that is not ideal for solar power collection. The EC paid two deposits to solar suppliers which were later refunded as the project was cancelled by both suppliers. Eventually they found a supplier that was able to install the panels.</p> <p>Retrofits also take time to 'pay for themselves' after the significant upfront costs. EC members were aware that the cost saving from the solar panels would not be seen for years and communicated this to the owners.</p>
Access	<p>Access to get the solar panels to the roof was a challenge. The panels didn't fit through the manhole, which was the only internal access to the roof and the OC was trying to avoid the expense of scaffolding to get access.</p> <p>Penthouse owners were asked to give access to the roof through their units to allow for installation of the solar panels. Some owners were hesitant to give access. The strata manager investigated people's concerns, and found most were concerned with their belongings being damaged by the contractors. To address this, the EC committed to rectify any damage caused, and also undertook a pre-inspection with the contractor about where they needed access and space for materials so that residents could adequately prepare.</p>
Costs	<p>The energy audits cost around \$350 every six months, but proved important to create a case for the feasibility and benefit of any future retrofits and to track progress of the installed retrofits. The costs of implementing the new lighting and solar panels were high, but reports showed large cost savings over time. The costs of the lighting upgrade were incorporated into the budget, and the installation of the solar panels was paid for from the sinking fund. This avoided the need to raise a special levy. The costs of the project were affected by changes in the solar rebates and tax ruling on solar credit during the life of the project, reducing the rebates available and therefore increasing the predicted costs. Even with these changes, the project continued as the two hydraulic lifts, roller door and constant common property lighting made the implementation of solar and energy-saving lighting worthwhile. The solar panel installation cost \$14,000 but the EC applied for and received a grant of \$7,000 from the City of Sydney Council to offset some of these costs. The resulting payback period for the solar panels was 4 years. The lighting retrofits cost \$25,000 but had a rapid 2.5 year pay back period.</p>

## Outcomes:

- Total energy usage reduced by 61%
- Solar panels successfully installed and reduced energy usage by 23.5%
- Energy costs dropped 44% and energy usage dropped 49% after the lighting retrofits
- Jamesons Strata Management now incorporate sustainable retrofits on EC meeting agendas of other strata schemes as a means to open up an obligation free discussion.



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