

FLINDERS MEDICAL CENTRE

LIGHTING UPGRADE



Sustainable Focus has been working with Flinders Medical Centre to design and implement a comprehensive lighting upgrade. The first two stages were completed in June 2011.

OUR PEOPLE

Rob Smith,
Technical Director & Project Manager

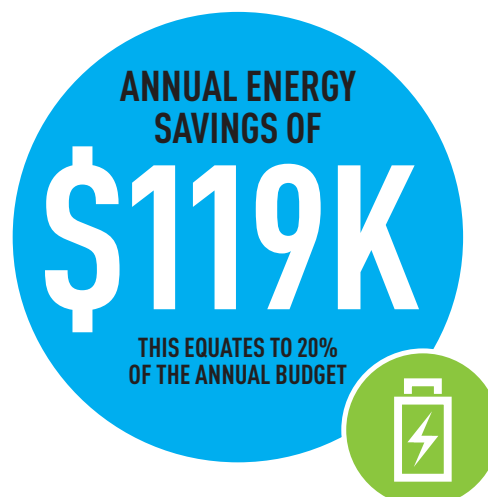
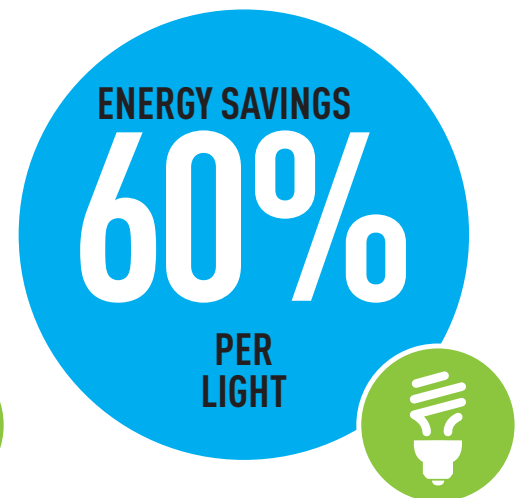
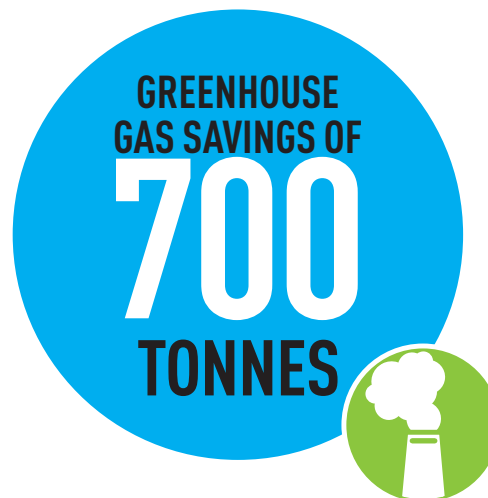
Rob has extensive experience in the Heating, Ventilation and Air Conditioning (HVAC) industry with expertise in energy efficiency, control system strategy, passive building design and solar heating systems. His comprehensive knowledge of these fields enables him to effectively evaluate the functionality of active and passive systems and implement site specific strategies to improve overall efficiency. Rob has many years' experience with governments and industry both within Australia and overseas and is a Certified Energy Manager with the Association of Energy Engineers.

CLIENT FEEDBACK

"Sustainable Focus has highly committed and capable staff who operate with integrity and attention to detail. I have been very satisfied with their work. No 'greenwash'!"

Rob Bunting
Senior Environmental Officer
Infrastructure
SA Health, Government of South Australia

KEY OUTCOMES



'SUSTAINABLE FOCUS WAS ENGAGED TO DESIGN AND IMPLEMENT A COMPREHENSIVE LIGHTING UPGRADE'



THE SOLUTION

The project was implemented through the Sustainable Focus 4 Step Green Building Program.

STAGE 1: REVIEW

Undertake a lighting technology review to determine the most suitable equipment, including an on-site testing of proposed equipment.

STAGE 2: DESIGN

Design an appropriate and cost effective upgrade solution as well as prepare a project plan for implementation. The design and testing stage included:

- A room by room review to specify the lighting upgrade requirements
- Data logging of occupancy and lighting run hours in areas suited to occupancy control
- Measurement of lighting levels in representative spaces in the early phases of implementation to ensure lighting requirements achieved

STAGE 3: IMPLEMENTATION

Sustainable Focus managed all aspects of the project implementation, including:

- Managing the procurement process including the preparation of tender documentation and assessing and recommending preferred suppliers and installers

- Placing orders for lighting equipment supply and installation
- Co-ordinating installation and inspection of all work
- Assisting with communication to staff about the upgrade
- Managing the project budget

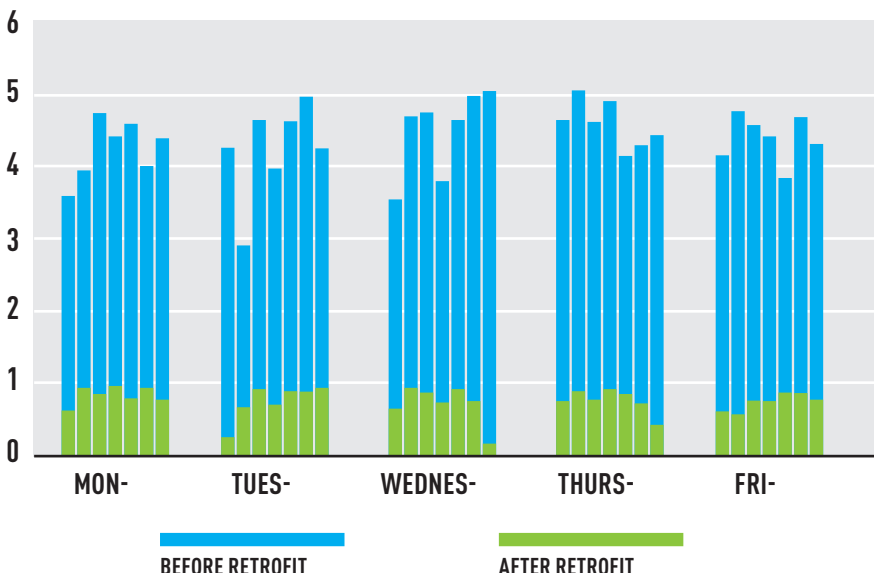
STAGE 4: VERIFICATION

Data logging of electricity consumption before and after the upgrade in representative areas to provide performance data. Reporting on project outcomes.

LIGHTING UPGRADE DETAILS

The upgrade has included retrofitting high quality fluorescent troffers lights by removing existing lamps and installing a new high efficiency ballast, triphosphor lamp and reflector to reduce the energy consumption of each light by almost 60 percent. By reusing existing light fittings, the project is saving resources and avoiding waste generation. Other elements of the project include fitting occupancy sensors in shared spaces and replacing old fittings.

ELECTRICITY DRAW (AMPS) OF TYPICAL LABORATORY AND OFFICE – BEFORE AND AFTER RETROFIT



THE RESULTS

ENERGY SAVINGS

- On completion, the lighting upgrade will save an estimated 1,700 megawatt hours per annum of electricity
- This will reduce greenhouse gas emissions by 1,665 tonnes each year, which is the equivalent of taking 550 cars off the road
- On target to achieve a payback of less than five years

The majority of lighting measures implemented reduce energy use during peak periods. This will reduce maximum demand at the hospital and therefore reduce maximum demand charges. The move to electronic ballasts in new and retrofitted fittings will improve power factor which provides additional maximum demand benefits.

OTHER BENEFITS

Other benefits of the project include:

- Uniform lighting levels in accordance with Australian Standards
- Uniform lighting appearance across all wards and departments
- Reduced maintenance requirements by halving the number of lamps per fitting and removing the need to replace starters by installing high quality electronic ballasts
- Reduced heat load on the air-conditioning system
- Fewer flickering lamps

Similar lighting upgrades have been undertaken or are in progress by Sustainable Focus at the Women's and Children's Hospital, Hampstead Rehabilitation Centre, SA Pathology, Ambulance SA, Repatriation General Hospital and Coober Pedy Hospital.

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