

Lighting Upgrade Case Study

St Mary's Cathedral Enacon Car Park



Overall Site Location Details



The table below highlights the key performance indicators of the energy efficient lighting upgrade and benefits of the capital investment. These figures are based on current operational hours.

Detail	Value
Energy Consumption Reduced	318,060 kWh p/a
CO2 Emissions Reduced	315 tonnes
Energy Costs Reduced	\$34,706 p/a
Project Delivery Cost	\$45,520
Upgrade ROI (Simple)	1.3 Years
Project Completion Date	19/02/2016
Product Warranty	3 Years
Service Warranty	3 Years
ESC Discount	\$25,449

Site Location Analysis

Upgrades commenced December 2015 replacing 503 existing twin 36W T8 Fluorescent lamps (total lamp circuit power 92W) with single 36W LED weatherproof luminaires. Lighting circuits were logged using a dedicated meter to confirm the consumption of electricity before and after upgrading, the result are shown below.

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	Existing Lighting	Upgrade Lighting
Photo		
Lamp Type	Twin T8 36W	LED Battens
Consumption	92W	36W
Quantity	503	503
Operational Hours	7000 p/a	7000 p/a
Replacement frequency	15,000 hrs (2.1 years)	50,000 hrs (7.1 years)
Energy Cost p/a	\$73,339	\$38,633

Additional Benefits - Maintenance

In addition to the costs reduced in electricity, there are savings in ongoing maintenance, service, and re-lamping from the significant increase in asset lifetime. These costs may be high as the lighting is as the works are required to be undertaken outside of normal operating hours.

Metered Results:

The energy was monitored during the installation and the 60% reduction in energy use can be seen between the start and finish of the installation.

