

Case Study

University of Adelaide - Barr Smith Library Lighting Upgrade North Terrace Campus, Adelaide, South Australia



The University of Adelaide's requirement was to deliver a lighting upgrade to identified areas of the Barr Smith Library, providing 2 key benefits:

- A reduction in energy consumption across the replaced fittings
- Increased light output from de-generated light fittings

THE PROJECT

The Library's areas have minimal natural light which was impacting on the 24/7 operational running hours of the light fittings.

The concept of a lighting control strategy was suggested, but capital cost expense removed this potential, due to the significant cost involved in cabling, programming and commissioning requirements. Therefore, an energy savings strategy needed to be adopted to support reduced OPEX costs.

Similarly, a number of the light fittings had deteriorated over time with significant environmental damage, dust and foreign objects retained in the existing light fittings. The result is inappropriate light levels as well as damaged light fittings at high energy consumption levels.

THE SOLUTION

The University decided on piloting Level 2 North of the Barr Smith Library with replacing 300 x tired and energy-demanding 2x36W fluorescent troffers with 40W NovaBlade™ LED Panels to support key energy savings and reduced maintenance requirements. The University procured the services of PSG to undertake the installation.

Lumex NovaBlade™ was selected based on a number of key factors including



high-quality LED technology, incorporating the latest LED chip sets from partners such as Samsung and Sharp, low wattage light fittings, reduced maintenance, along with a 7 year warranty against product failure. The simple capability to retrofit the Lumex NovaBlade™ panel proved time and cost savings for the electrical contractor and the University as the project was completed out of business hours and in a minimal amount of time.

Across the physical construction of the Barr Smith Library the ability to surface mount a number of the Lumex NovaBlade™ LED panels were essential as no access to ceiling spaces was available. Lumex worked closely with PSG and the University, providing a surface mount frame solution that pleasantly concealed the LED driver as well as provide an architectural point of difference in the installation.



THE COST SAVINGS

As part of the project, prior to installation, data meters were installed to measure existing energy consumption levels. The results provide the University with high-quality lighting and a genuine 50% energy savings level achieved.

This strategy supported the University's philosophy of reducing its carbon footprint and overall operational costs, whilst providing a superior working environment for students and staff.

This combination highlights the benefits of Lumex working with key clients such as the University of Adelaide in realising the commercial benefits available in lighting upgrades today.

APPLICATION



Entrance Area Service Area Library Areas Quiet Study Spaces



Use your smartphone to link to the website



Case Study

University of Adelaide - Barr Smith Library Lighting Upgrade
North Terrace Campus, Adelaide, South Australia

Assessment Date:	1/02/13
Subject Name:	Adelaide University - Barr Smith Library Upgrade

Cost per kWh (assumed)	\$0.32
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ENERGY CONSUMPTION SAVING CALCULATIONS		
Globe type	LED	Fluoro (with losses)
Wattage	40	80
Number of globes	300	300
Hours per day	12	12
Days per week	7	7
Weeks per year	52	52
kWh per year	52,416	104,832
Total Energy Costs per year	\$16,773.12	\$33,546.24

Total Savings for 12 months \$16,773.12
Total Savings based on the LED globe life \$192,000.00

MAINTENANCE SAVING CALCULATIONS		
Globe type	LED	Fluoro
Number of globes	300	300
Hours per day	12	12
Days per week	7	7
Weeks per year	52	7
Total number of Hrs per year	4368	4368
Rated globe life hrs	50,000	8,000
Labour to change globes per unit (assumed for illustration purposes)	\$80.00	\$80.00
Average globes to be changed per year	0	137.59
Average globes to be changed per year (rounded)	\$0.00	138
Labour costs to change globes per year		\$11,040.00

Total labour Average Savings for 12 months \$11,040.00
Total saving per year \$11,730.00
Total Savings based on the LED globe life \$134,271.98

NovaBlade LED Panels	LL9P## Series
 <p>300x300mm</p>  <p>600x600mm</p>  <p>600x300mm</p>  <p>1200x300mm</p>  <p>1200x600mm</p> 	<p>Even better performance and even higher output Excalibur models</p> <p>More than 50% energy saving</p> <p>Maintenance free life up to 50,000 hours</p> <p>Smooth, even dispersal of light with minimal glare</p> <p>Super thin (8.8mm) and light weight</p> <p>Robust and durable</p> <p>Fully recyclable</p> <p>Fitted with flex and plug for instant install</p> <p>Suitable for T-Bar systems</p> <p>Suitable for set plaster ceilings (with a flush kit)</p> <p>Suitable for surface mount (with a semi-flush or surface mount kit)</p> <p>Suitable for Pendant Mount (with a pendant mount kit)</p> <p>Fully Australian Approvals</p> <p>lumexlighting.com.au/novablade-led-panel/</p>