

## The Wilderness Shop Eco Lighting Case Study

### Above and Beyond Expectations!

#### Case Study Key Findings

- A **60.7%** reduction in electricity for lighting.
- A saving of over **\$4,240** each year on electricity.
- A reduction of **34 tonnes** of CO<sup>2</sup> emissions per year.
- On top of that, there are savings of **\$1,499** each year in maintenance costs.
- A return on investment in two years and one month.
- Total cost of retrofit: **\$12,030**.

#### About The Wilderness Shop

For over 25 years, the Wilderness Shop has long been meeting the needs of Victorian bushwalkers, cross country skiers and rock climbers.

The Wilderness Shop, located at 969 Whitehorse Road, Box Hill, offers specialised service from experienced staff and quality equipment at competitive prices.



#### Before the Eco Lighting Retrofit

Prior to the eco lighting retrofit, the Wilderness Shop's annual electricity bill for lighting was **\$6,985**. The light globes were so inefficient that the staff at the Wilderness Shop were often reticent to fully utilise the lights because of the high electricity cost.



## After the Eco Lighting Retrofit

After conducting a systematic lighting audit, the energy consumption for lighting at the Wilderness Shop was reduced by **60.7%**. Table One below shows the lights that were replaced during the retrofit, including the details about the globes replaced and the wattage per globe.

Location	Original Item	No.	Consumption		Efficient Lighting Replacement Item	No.	Consumption	
			Power (W)	Total			Power (W)	Total
Front Window	36w T8 Fluoro	11	40	440	28w T5 Fluoro	8	30	240
	50w MR 16	13	55	715	6w MR LED	13	6	78
Shop Higher Black Ceiling	36w T8 Fluoro	41	40	1640	28w T5 Fluoro	30	30	900
Shop Lower Ceiling	36w T8 Fluoro	100	40	4000	28w T5 Fluoro	80	30	2400
	50w MR 16	60	55	3300	6w MR LED	60	6	360
Counter Area	36w T8 Fluoro	5	40	200	28w T5 Fluoro	5	30	150
	50w MR 16	17	55	935	6w MR LED	17	6	102
Upstairs	100w GLS B22	1	100	100	18w CLACFL	1	18	18
Safe Storeroom	36w T8 Fluoro	4	40	160	28w T5 Fluoro	4	30	120
	15w CFL	2	15	30	15w CFL	2	15	30
Ski Workshop	36w T8 Fluoro	5	40	200	28w T5 Fluoro	5	30	150
Rear Storeroom	36w T8 Fluoro	5	40	200	28w T5 Fluoro	5	30	150
Office	36w T8 Fluoro	4	40	160	28w T5 Fluoro	4	30	120
Rear Entry	100w GLS B22	1	100	100	18w CLACFL	1	18	18
	36w T8 Fluoro	1	40	40	28w T5 Fluoro	1	30	30
Rear Carpark	100w GLS B22	4	100	400	18w CLACFL	4	18	72
	36w T8 Fluoro	6	40	240	28w T5 Fluoro	6	30	180
		280		12860		246		5118

Table One: Original and efficient lighting replacements during the retrofit

“Our first thoughts regarding the new lighting, said Glenn Robbins, Manager, The Wilderness Shop, were that the overall brightness seemed to be quite dull and perhaps cold for the first two days...until the staff began to grow accustomed to the change”. Glenn Robbins added “We have all grown up with the thought that light should have tones of warming yellow or orange - suggesting warmth (as in a fire). These are no doubt primal notions”.

“After a number of days, however, we noticed that the light appeared to be more even and less stark, leaving us a little less drained at the end of very long days”.

The Wilderness Shop has reduced its lighting costs by **\$5,740** a year, with substantially less impact on the environment with a saving of **34 tonnes** of CO<sup>2</sup> emissions per annum.

“My ultimate appreciation for all your efforts in establishing a lighting system that, without a doubt, meets our needs as a retail establishment, at a fraction of the energy costs” said Glenn Robbins.

## About the Eco Lighting for Victorian Business Project

The Eco Lighting for Victorian Business Project aims to demonstrate the latest energy saving lighting technologies to business and organisations. The Project is supported by the Victorian Government Sustainability Fund, managed by Sustainability Victoria.

The Project is funded by the Sustainability Fund with the management being conducted from the Environment Shop. Other partners include the Alternative Technology Association, the Cities of Darebin, Banyule and Hume, the Moreland Energy Foundation (MEFL), the Northern Area Greenhouse Alliance (NAGA), VECCI Grow Me the Money, Megaman Australia, CLA and Low Energy Developments.

