

Maxwells Drycleaning

Target Sustainability Programme

About the Company

Maxwells Drycleaning provides drycleaning services to both the residential and commercial market and is located in Middleton, Christchurch.

Introduction to the Project

Maxwells Drycleaning joined the Christchurch City Council Target Sustainability Programme in 2013. The Target Sustainability Programme supports businesses to reduce waste and to be energy and water efficient.

Maxwells Drycleaning's objective at the time of joining the programme was to become more energy efficient.

Maxwells Drycleaning implemented a range of projects to improve energy efficiency.

Key Achievements

- **Reduced diesel use by an estimated 19% (8,360 litres) per year, saving an estimated \$10,460 per year.**
- **Reduced electricity use by an estimated 7% (6,750 kWh) per year, saving an estimated \$1,147 per year.**



Maxwells Drycleaning © Copyright

Energy Efficiency Initiatives

Maxwells Drycleaning reduced its diesel use by an estimated 19% (8,360 litres)¹ per year, saving an estimated \$10,460 per year and reduced its electricity use by an estimated 7% (6,750 kWh) per year, saving an estimated \$1,147 per year.

Maxwells Drycleaning implemented the following initiatives to increase energy efficiency:

- Installed a new diesel burner on the steam boiler to improve combustion. During a regular combustion inspection it was noted that the burner was not combusting cleanly, and ash quickly built up on the testing probe. The level of carbon monoxide in the exhaust stack was also high, indicating that poor combustion was occurring. A new burner was installed that burnt diesel more cleanly.
- Repaired all the identified steam leaks around the site.
- Lagged all of the steam pipes in the facility.
- Cleaned all of the existing clear roofing to allow more daylight into the premises, and implemented a manual system to turn off factory lights when not required. This initiative saved an estimated 3,600 kWh (\$612) per year based on the twelve 400W lights being turned off for an average of three hours per day.

- Installed new 250W sodium bulbs to replace existing 400W bulbs. This initiative saved an estimated 3,150 kWh (\$535) per year, with a minimum effect on lighting level throughout the factory. The electricity saving was determined by comparing lighting configuration before and after the lighting refurbishment and calculating the difference in installed lighting capacity.
- Reduced the compressor pressure output from 9 bar to 7.5 bar, reducing electricity use by the compressor and reducing the rate of air leakage from the compressed air system.
- Purchased a new shirt press machine that uses a small amount of compressed air and steam for the process rather than a significant amount of steam.

¹ The calculations are based on invoices and compare the period for 6 months from October 2012 to March 2013, which is the period when the organisation joined the programme, and the October 2013 to March 2014 period, which is the period when the majority of the initiatives were implemented.



Diesel boiler with a new diesel burner installed © Copyright



High level lights turned off in the factory due to high daylight levels © Copyright



New shirt press machine © Copyright

Summary

Since joining the Target Sustainability Programme, Maxwells Drycleaning has implemented a range of projects that have resulted in a significant improvement in energy efficiency.

“The Target Sustainability programme made us aware of where we could make easy energy savings, and we are pleased to see that our actions have been rewarded financially.” Greg Irvine, Managing Director Maxwells Drycleaning.

Maxwells Drycleaning plans to continue to look for ways to implement further energy efficiency projects.

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