

Revisit -Efficiency Action Plan

Submitted to:

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1.0 Background: The LiteClub Story

- LiteClub is on a mission: working to transform community sports infrastructure, and the culture to match, to be electricity independent, water neutral and zero waste by 2025.
- We want to inspire New Zealanders to be environmental champions, to follow the lead our ambassadors have made in their own lives, and to reap the economic, social and environmental benefits.
- LiteClub's field team visits clubs throughout New Zealand, making immediate changes that reduce the club's running costs – improving conditions at the club, and giving them more money to spend on sport.
- Club members are engaged through the example set by LiteClub's sport ambassadors – top athletes who have made the same changes in their own lives – helping to spread the LiteClub message to the broader community.
- New Zealanders love sport and they love the environment. LiteClub helps to combine these two loves, demonstrating that they need not be exclusive. With the right attitude and education, we can use our competitive drive to achieve a sustainable future for New Zealand – to the benefit of us all.



From all our
ambassadors,
welcome aboard!

2.1 Energy Consumption

New Zealand is lucky in that most of our electricity comes from renewable sources like hydro dams, geothermal plants and wind farms. However we still burn coal and gas to generate electricity and heat as well, which isn't great news for the atmosphere. Because the consumption of energy makes up a significant proportion of our country's overall carbon footprint, it's important that we use it wisely. Besides, energy is expensive, so by using less of it we can be kinder to the environment while saving money in the process.

We've had a good look around your club and think there are some great opportunities to save money by being smarter with energy. These ideas are covered in the next few pages.

A. Lighting

B. Water heating

C. Space heating & ventilation

D. Appliances



A. Lighting

Lighting accounts for 19% of the world's electricity consumption. If we all changed to modern, energy-efficient lighting that could be reduced to just 7%. Doing so would free up literally *billions* of dollars for things like ... more sport! When we visited your club, we made the following changes:

Bulbs changed in 2011:

28

bulbs upgraded to energy efficient bulbs



Saving:

\$5610

over the lifetime of the bulbs
(15,000 hours)

Recommendations:

- ✓ Last time we visited we upgraded **28** energy intensive light bulbs for **free**.
- 1. Lighting in the function room was provided by 48 halogen down lights, which are particularly energy intensive. The entrance to the office and the bar also uses these lights. If they are used frequently, it is worth upgrading to LED replacements. Compared to a traditional halogen bulb, these use a mere tenth of the energy and last up to 15 times longer depending on the model. The initial outlay is soon recovered via reduced energy and bulb replacement costs.



B. Hot water heating

Whether you're looking at installing a new hot water system or retrofitting your existing system, there are ways to reduce your electricity consumption without compromising on convenience. Sports clubs generally burn through a lot of hot water, so there are often great gains to be made.

We noted:

- ★ The club's hot water is provided by a 300 litre electric cylinder manufactured in 2013.
- ★ There was no lagging fitted to your hot water pipes. Lagging prevents energy wastage by reducing the amount of heat that is lost through the piping. It is most effective when installed within the first 2 metres from the cylinder, where most heat loss occurs.

Recommendations:

- ✓ Consider fitting lagging to hot water pipes. This is simple to self-install, especially if you opt for the Climaflex product, which is pre-split and extremely flexible. The fact that the hot water pipe for this cylinder is flush against the wall makes it harder to install the Climaflex product – we suggest speaking to a plumber about the best lagging alternative.



C. Space heating & ventilation

Poor insulation and ventilation makes for cold and damp clubrooms that have a host of knock-on health and comfort issues. Heat loss also leads to wasted electricity and money. Healthier, dryer and warmer clubrooms make for happier members!

We noted:

- ★ The function room is heated with ceiling mounted electric radiant heaters. Fantastic. This type of heater produces heat in the form of infrared radiation, which warms people and objects directly, instead of the air. This makes them ideal for use in large uninsulated spaces that do not retain heat well. They produce heat almost instantly and can be used to heat portions of a larger area, useful if only part of a room is in use.
- ★ The clubroom has a number of large single glazed windows, which had no curtains fitted. While windows capture lots of natural light and heat while the sun is shining, they become a source of net heat loss once they are no longer receiving direct sunlight. Uninsulated windows are responsible for up to one third of a building's total heat loss, nearly the same as an uninsulated ceiling.
- ★ The exit swing door's that lead from outside to the function room corridor and from the corridor to the restaurant have gaps that could be the source of cold draughts in winter.

Recommendations:

1. Electric radiant heaters produce heat instantly, so minimise energy use by only switching the heaters on when they are needed, instead of preheating. This can be done manually, or with timer switches.
2. Since the club is mostly used during the warmest part of the day, window insulation is not a top priority. However if usage patterns change to include winter evenings, or the club is having major work done, consider installing thermal curtains or double glazing.
3. Fit draught brush or stripping to any draughty doors to make the clubroom more comfortable and easier to heat. If you can easily remove a piece of paper placed between the door or window and its frame when closed, weather stripping or draught brush should be fitted.



D. Appliances

We're relying more and more on electrical appliances to support our lifestyles. Money invested up front in energy-efficient appliances saves loads of cash in the long run. "Standby" electricity consumption is a real issue – the simple act of switching appliances off at the wall makes a real difference.

We noted:

- ★ While your fridges are currently in good condition, periodic inspections and simple maintenance is important. Lack of maintenance can reduce appliance lifetimes, and increase energy consumption.
- ★ The door seals on the fridge in the green keepers kitchen were in need of a clean. Dirt promotes the growth of mould and mildew, which degrades seals. Degraded seals allow warm, moist air to enter the appliance, increasing energy consumption and frost build-up while reducing the appliances' lifespan.

Recommendations:

- ✓ Your club has been awarded our **Efficient Appliances** medal—congratulations!
- 1. Keep the condenser coils and fan free of dust. Deice units if ice build-up exceeds 5mm. These actions will ensure your refrigerating appliances continue to run at peak efficiency and extend their lifetimes.
- 2. Periodically clean and inspect fridge and freezer door seals for gaps, tears and perishing to ensure the doors are sealing correctly.



2.2 Water consumption

Water is one of our most valuable resources and one that we often take for granted. Despite popular belief, New Zealand will experience water shortages in the future if we don't carefully manage our supply. It means all of us have to do a little – thankfully there are simple changes that can be made to help us consume water more efficiently.

We noted:

- ★ Since our last visit the club has renovated and upgraded almost all of the bathroom areas to dual flush toilets and mixer taps that have aerators fitted. Fantastic! Dual flush toilets give users the option to use only as much water as needed to flush the toilet, instead of using the whole cistern every time.
- ★ The office toilet is still an older single-flush model. A 'Gizmo' cistern weight enables a user to control how much water is used rather than emptying the whole cistern. In an average household, this can save up to 30,000 litres per year. Cistern weights are a good interim solution if upgrading to a dual flush system is not feasible.
- ★ The office toilet has also developed a leak where water is dripping continuously from the cistern into the toilet bowl.
- ★ A few of the clubroom's hand basins are fitted with mixer taps that have high flow rates. Aerator inserts can reduce water flow from 15-20 litres per minute to 6 litres per minute without compromising functionality. An aerator-equipped tap being used for 5 minutes per day could save up to 10,000 litres per year.
- ★ The men's bathroom hand basin near the function room was missing the spout nozzle where an aerator is usually installed. This tap is currently flowing at a high rate as a result.

Recommendations:

- ✓ Next time we visit Remuera Golf we will bring a gizmo to install for **free**.
- 1. Seek to repair any water leaks as soon as possible. A pipe or fixture leaking at two drips per second can waste 5,000 litres or more per year, as well as contributing to water damage, interior moisture and condensation issues.
- ✓ Next time we visit Remuera Golf we will see if we can install our water-saving aerators for **free**.
- 1. See whether you can locate the missing part so that an aerator can be installed next time LiteClub visits.



2.3 Waste to landfill

Optimizing your club's waste system is good for the environment, but it also ensures that the club's money can be used for sport, not waste disposal.

Reducing, Re-using and Recycling keeps waste out of your landfill bin and keeps waste costs down.

We noted:

- ★ A significant proportion of the club's waste consists of recyclable products: glass, cans, cardboard and plastic. This waste is recycled via Waste Management and Full circle. Well done—proper recycling is both cheaper for the club and better for the environment than sending all waste to landfill.
- ★ The club produces green waste and is currently investigating a green waste collection with Waste Management. Great ! Green waste breaks down in landfills to produce greenhouse gases, and takes up valuable space in your landfill bin. Like recyclables, it's cheaper and better for the environment to dispose of this waste in other ways.
- ★ The club has a water cooler in the restaurant that uses grade 6 plastic cups. The restaurant also uses takeaway coffee cups.
- ★ The club produces food waste due to a fully functioning kitchen/restaurant. This is currently placed in the landfill bins. Food breaks down in landfills to produce greenhouse gases, and takes up valuable space in your landfill bin. Like recyclables, it's cheaper and better for the environment to dispose of food waste in other ways.

Recommendations:

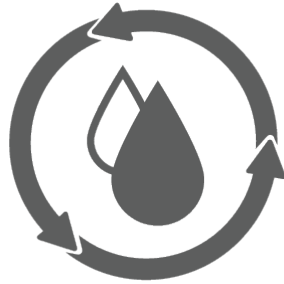
- ✓ Your club has been awarded our **Effective Recycling** medal—congratulations!
 - ✓ The LiteClub team left a total of ten sorting at source bins to help capture and sort recyclables from landfill waste. Please remember to install liners so that your bins remain clean and hygienic. Bin lids will also require a wipe down from time to time. Recycling bins operate better in stations (a recycling bin and landfill bin side by side) because “stations” make it easy for people to put things in the right place and avoid recyclables being thrown into the waste bin.
1. Keep in touch with Waste Management about getting a green collection organised. If you are having trouble doing this there are other great alternatives such as Sunshine Garden bag or Clippa bags. Let us know if you would like any help organising this.
 2. Reduce waste by using reusing crockery where ever possible. If your club tends to use a lot of disposable packaging, ensure that recyclable plastic grades 1,2 and 4 are used and that bins are in place to capture the material. As a guide – stay away from expanded Grade 6 polystyrene materials (traditionally used in meat trays and burger containers). Let us know if you would like to hear more about businesses who are able to provide recyclable or compostable takeaway products.
 3. LiteClub would love to revisit the issue of food waste with you as soon as your Waste Management contract is up for consideration. Getting a food collection in place would mean you could collect all food waste, paper towels from the bathroom and compostable packaging in the one collection. This is the path to **Zero Waste**.

5.0 Medals

We want to help clubs showcase their efficiency. Via our assistance, or the club's own initiative, LiteClub medals are awarded so clubs can clearly demonstrate to their members (and other clubs!) areas where they are winning off the field too. Being efficient with resources means more money for sport – win win.

In gold below are the medals awarded at our visit to your club. Undertaking the recommendations made in this report will help your club win more medals (displayed below in grey). Game on!

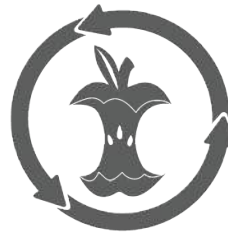
Reusing water



Community garden



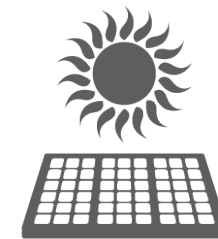
Composting



Conserving water



Creating energy



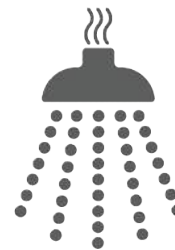
Effective insulation



Efficient appliances



Efficient heating & cooling



Efficient hot water heating



Efficient lighting



Recycling effectively

6.0 Action Plan (detach and return to LiteClub or send us an email)

Recommendation	Instruction (tick the box)	Next step
Get further information on window insulation options.	<input type="checkbox"/> Tell us more <input type="checkbox"/> No thanks	We'll be in touch
Get further information on recyclable/compostable cutlery and takeaway container options	<input type="checkbox"/> Tell us more <input type="checkbox"/> No thanks	We'll be in touch
Get further information on installing solar panels at the club from Solar City	<input type="checkbox"/> Tell us more <input type="checkbox"/> No thanks	Speak to your power supplier about obtaining your power consumption history and send this to us. We'll be in touch
Get further information on upgrading your halogen lights to LED	<input type="checkbox"/> Tell us more <input type="checkbox"/> No thanks	We'll be in touch

Club: Remuera Golf

Signature: _____

Name: _____

Date: _____