

Case Study

Installing LED lights at Redlands School

Redlands is a private Preschool to Year 12 coeducational school, located in Cremorne. The school has approximately 1,600 students across three campuses.

Project summary

In 2020 Redlands completed a lighting upgrade on all three school campuses which resulted in the installation of LED lights throughout the school. Solar panels were also added to the Junior Campus at this time.

What inspired the school to upgrade to LED lights?

- Reducing carbon emissions
- Cost savings

What was involved in setting up the project?

Project Coordination - There was a lot of planning involved to find a contractor to oversee the project, alongside implementing the works around school terms.

Developing a Business Case - The initial payback period for the project was estimated at 44 months on one campus and 52 months on another.

On top of this, according to the initial proposal, the school would reduce lighting energy consumption by 67-69% over both campuses and annually would prevent 233 tonnes of CO₂ from entering the atmosphere.

See the estimated savings in the tables below.

Site 1

Environmental savings

Current annual lighting energy consumption	159,246 kWh
Annual lighting energy consumption after upgrade	51,801 kWh
Energy reduction	67%
Annual CO ₂ reduction	102.07 tonnes

Site 2

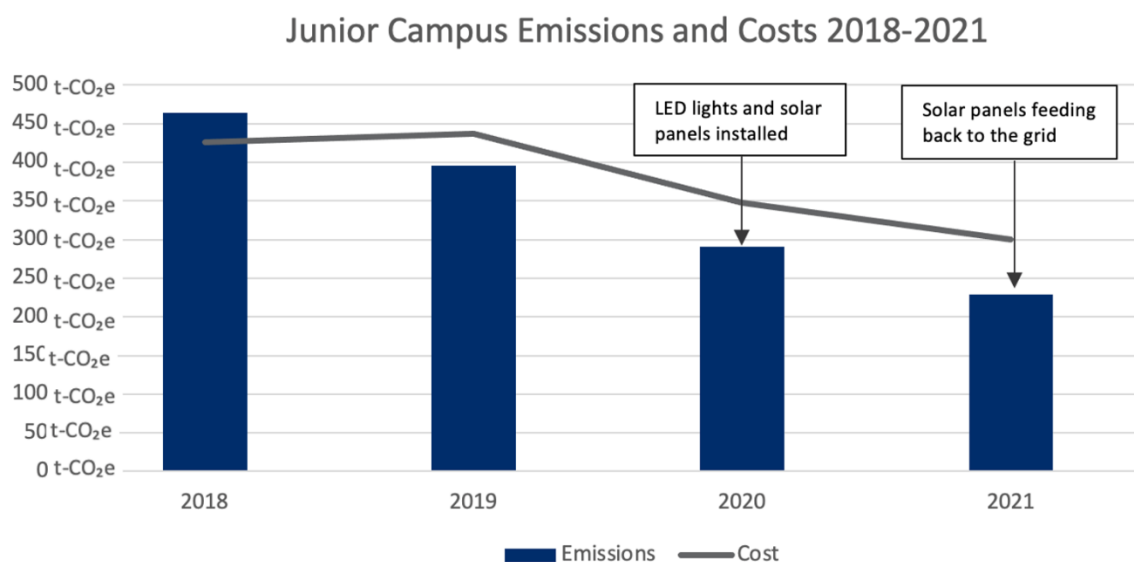
Environmental savings

Current annual lighting energy consumption	202,235 kWh
Annual lighting energy consumption after upgrade	63,692 kWh
Energy reduction	69%
Annual CO ₂ reduction	131.62 tonnes

Are you using any tools to help measure the impact of your project?

We're also a member of ClimateClever Schools and are using this platform to help document the changes in our emissions over time.

We also have an energy monitoring system that monitors the lighting in various buildings. The kWh used from lights are now very low. The graph below shows the reduction in energy use from our Junior Campus achieved with the installation of LED lights and solar.



Note it has been difficult to isolate the data on the bills for each project as the new lights were installed at the same time a new building was opened and solar panels were added to our Junior Campus.

What is the greatest success of the project?

The reduction of energy usage from LED lights combined with the energy savings on electricity bills. Another success is the overall safety of staff members as the prolonged life of LED lights mean the lights don't need to be changed often, so facilities staff are not on ladders as often as they once were.

How did you overcome any challenges or obstacles?

One of the biggest challenges was the timing for the installation. As all lights throughout the school were replaced, the project had to be completed on weekends, after school hours or in school holidays. This meant that the project occurred over a longer period of time in different stages.

How did you share the project with your school community?

The changes were communicated with staff through meetings and updates, and communicated to families through our weekly newsletter.

More Information

- Read more about [Redlands Sustainability initiatives on their website.](#)
- Find NSW Energy Saver [rebates for LED lighting upgrades here.](#)
- Learn about NSW Department of Education Infrastructure Program [installing LEDs lights in some public schools here.](#)

Thanks to Kimberlee Chipper (Chair of Redlands Sustainability Community Advisory Group) for providing this inspiring overview of the school's LED lighting project.