



# Energy Sparks Case Study

## Mallaig High School Heating

Energy Sparks helps Highland school to cut their electricity consumption by 38%

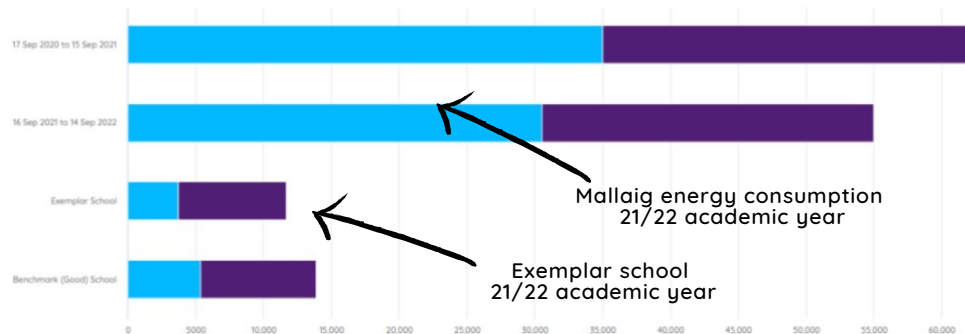
Mallaig High School is a small secondary school of 103 pupils in the north west of Scotland. They signed up to Energy Sparks in August 2021 and since then a dedicated group of pupils have been working with the school's Energy Champion, a science teacher, to take action to reduce the school's energy consumption.



Heating, as in many Highland schools, is provided by storage heaters. At Mallaig, storage heater consumption was around three times higher than that of similar schools in the region. The school spent over £60,000 on electricity in the 2020/2021 school year alone.

### Analysis

Through analysis of Energy Sparks comparison charts (comparing their school's energy consumption to that of benchmark (good) and exemplar schools), pupils and staff at Mallaig realised that their school's energy consumption was very wasteful.



Energy Sparks provided a free online audit to the school in January 2022. After discussion with the headteacher, the Energy Champion, pupils and Local Authority Climate Change Coordinator and Energy Engineer, our auditor was able to identify several priorities for action.

These included:

Switch off the storage heaters during the school holidays. It takes time and effort to turn off 100 storage heaters, so, as the Energy Sparks data shows, they tend to be left on.

Investigate replacement of the old 24hr storage heater timers for 7-day timers to allow the heaters to be switched off automatically at the weekend.

Check point-of-use electric water heaters have a 7-day timer to allow them to be only on when needed.

Check all the storage heater timer settings. (Energy Sparks data suggested that they were running from at least 7.30pm until 8am, and one was charging during the day.) Change timings so the heaters are not on for so long.

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### Actions

In response to the Energy Sparks audit, staff taught themselves about timer settings and how to set them more accurately. This enabled them to set the correct time for the storage heaters and to set them to turn off on Friday and Saturday nights.

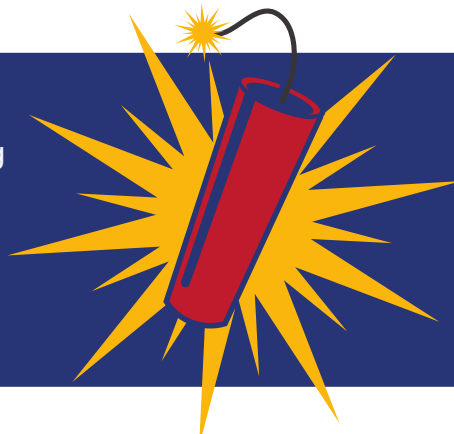
Pupils made a map of where heaters were located in the school buildings. This map is used to ensure a complete turn off of all heaters during the summer and holidays.

Throughout, the Energy Team raised the profile of limiting the amount of energy being wasted and made sure that staff and the school community were kept informed of what they were doing.



The school saw a 38% reduction in energy use, saving over 31,000 kWh and around £3400!

Comparing April to June 2022 with the same period in the previous year



This is the energy released by an explosion of 27 Tonnes of TNT or the chemical energy in 19 barrels of oil!

And by switching off the storage heaters and other electrical equipment during the summer 2022 holidays, the school saved a further 17,000kWh, around £1900 and 2.4 tonnes of CO2 across the 7 week holidays compared to summer 2021!

### Energy Sparks audits

Energy Sparks offers two types of energy audits, online virtual energy audits and on-site energy audits. Virtual energy audits take place without a physical visit to the school and are based on the energy auditor's assessment of your school's energy consumption data as presented on Energy Sparks. The audit consists of a one hour online meeting with school staff and student representatives. The main focus is on quick low-cost wins, such as looking at changing boiler timings. Virtual energy audits are available free of charge to state schools (maintained and academies).

To find out more about our online audits and the other services that we offer to schools, email [hello@energysparks.uk](mailto:hello@energysparks.uk)