

Cheam Fields Primary Academy

Enhancing energy efficiency and ensuring compliance with TM44 Air Conditioning Inspections.



Cheam Fields Primary Academy in Sutton, part of the LEO Academy Trust, has 11 air conditioning units that serve the first-floor kitchen/ staff room; three classrooms; a cloakroom; ground floor office; additional office adjacent to reception; reception and lobby; server room; and staff room.

The school engaged Zenergi's technical division to evaluate whether its systems were working efficiently and to ensure that the school was compliant with TM44 Air Conditioning Inspections.

TM44 compliance

Schools with air conditioning systems with an effective rated output of more than 12kW are legally required to ensure compliance with TM44 Air Conditioning Inspections. This includes systems consisting of individual units which are less than 12kW but whose combined effective rated output is more than 12kW.

A TM44 regulation inspection is where an accredited assessor is appointed to carry out an inspection of the air conditioning system.

The assessment will review the efficiency of the system, check for faults, and provide advice on how to make it more efficient to reduce the costs involved in running it. Following the inspection, a full report will be provided detailing findings, faults, and recommendations. Inspections are required every five years to remain compliant.

Did you know?

The refrigerant used in air conditioning systems is thousands of times more damaging than carbon dioxide.

Chemicals called Hydrofluocarbons (HFCs) are used in air conditioning for cooling but have a Global Warming Potential (GWP) thousands of times greater than CO₂, should they leak.

Some HFCs are more than 13,000 times more harmful to the ozone layer, with the most commonly used typically 3,500 times more damaging.

This should be the most important consideration for schools evaluating the need to commission a TM44 inspection.

TM44 compliance at Cheam Fields Primary

The combined cooling capacity of the air conditioning system at Cheam Fields Primary Academy is 60.4kW which is over the 12kW qualification threshold required for legal compliance

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with TM44 regulations, so the school engaged Zenergi to carry out its inspection.

Following a comprehensive site survey, the compliance certificate and report were produced and lodged onto the central register. The survey assessed key questions set when inspecting the cooling plants, terminal points, system controls and maintenance.



This is excellent, I was really blown away by the detail and scope of the report. We are pleased to know that, not only are we compliant with the regulation, but that we can reduce our impact on the planet and make some significant annual cost savings too – many of which can be achieved at no cost to ourselves.

John Llewellyn
Trust Premises Manager
LEO Academy Trust



Added value: Identifying energy efficiency opportunities

The format and the method of presentation of the report is standard and set by the government. However, we believe that the output from the compliance report should go a lot further by providing customers with more valuable data. This is why our TM44 inspection service provides a supplementary energy report to provide the savings available for each of the recommendations identified in the report. The information is provided in a much more reader-friendly way so that it is easy to understand how much money each recommendation could save.

The assessment at Cheam Fields Primary Academy identified several practical no-cost recommendations for improving efficiency of the air conditioning systems. Recommendations included ensuring that all clocks on controllers are checked to ensure they display the correct time and date and they are seasonally adjusted. The report identified that by implementing correct

time schedules Cheam Fields Primary Academy could potentially save 84.8 kWh per week which equates to £779.08 per annum. A further saving of £1,223.43 per annum could be achieved by adjusting the temperature set points by 2°C.

The inspection concluded that of the 11 air conditioning units, 10 were oversized and only one was correctly sized. One of the units offered cooling capacity of as much as 112% more than was required, with another at 97% and a third at 75%.

Evaluating opportunities

We can help schools with tendering for an air conditioning upgrade to benefit from the energy efficiency and cost savings of a more modern system. We can provide a complimentary TM44 air conditioning inspection upon upgrade, allowing the benefit of no upfront TM44 fee; and annual savings on electricity, while achieving compliance with the legislation.

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Key data

Annual operational cost of the air conditioning systems:

£15,292

Total system global warming potential equivalent:

31 tCO₂e

Average Energy Efficiency Ratio of the air conditioning systems:

3.3 (A)

Annual saving of the largest opportunity:

£4,003