

Quattro Seal Permanent Draught Proofing CASTLE HILL PRIMARY 2011

Awareness raising + Energy Efficiency Technology
= Behaviour Change & Financial Savings

BACKGROUND

- 412pupils
- 4,080m² School size
- £19,903 annual natural gas cost
- 796,136kWh natural gas consumption

| Technology | Estimated Annual Savings | | | Total Project Costs | |
|---|---------------------------------|------------------|-----------|---------------------|--|
| | % of school's natural gas saved | tCO ₂ | Financial | Total Project Cost | Estimated number of years until school keeps savings |
| Invest to save Quattro Seal Permanent Draught Proofing | 15.17% | 22.19 | £3,021 | £8,468 | 2.8 years |

CASE STUDIES METHOD

Castle Hill School received a SALIX funded Permanent Draught Proofing project in 2011. This project involved using Quattro Seal to Draught Proof the schools. The details of the savings that will be achieved by this installation are summarised in the table below:

Castle Hill Primary School's eco-team identified draught proofing as a priority area to become more energy efficient. A member of staff from the school attended a Croydon Sustainable Schools Network training session to find out about opportunities to draught proof the school. The sustainability and energy team organised for a survey to be conducted and a detailed quote was provided. The council's schools energy efficiency officer met with the supplier and assessed the quote. As there is only one supplier of Quattro Seal as it is a unique solution for draft proofing once the potential savings were identified and the supplier was recommended to the school.

Quattro Seal is a unique sealing system that eliminates all draughts and has been tested by the Building Research Establishment to reduce air leakage by 53%. This means typical and provable energy savings of up to 20% can be achieved with payback of around 36 months.

Quattro Seal is recognised by English Heritage for listed buildings as it is a fully reversible system and is applied internally. There have been successful installations of Quattro Seal at St Andrews and Cambridge University, Houses of Parliament, Natural History Museum, The Tate, Hampton Court Royal Palace and many schools.

Windows work in exactly the same way as before with the advantage of all the benefits of double glazing but at a fraction of the cost. This is also recognised as an ideal resource for those hard to treat buildings where you cannot change them.

SAVINGS

Windows at the school were found to be draughty meaning that the school was losing heat, the proposal was to use Quattro Seal to make them more draught proof. The total cost of the project was £8,468 which was provided using the LEAF interest free loan. This initiative will save £3,021 and 22.19 tCO₂ per annum. After 2.8 years the school will get to keep the savings.

HOW IT WORKS

The council's Sustainable Development and Energy team can help you to reduce your energy consumption and save money by providing interest-free loans for simple energy efficiency measures like lighting upgrades and insulation through the Local Authority Energy Finance

scheme or 'LAEF scheme'. LAEF operates an interest-free loan scheme for Croydon schools. Schools can apply at any time. The loans are repaid on an annual basis, up to a maximum of 5 years. The school only repays the amount of money predicted to be saved by the technology installed, once the loan has been repaid the school keeps the savings.

Total LAEF fund value is £390,000

In parallel Croydon's Schools Energy Efficiency Officer and Sustainable Schools Officer will also provide advice, information and educational resources help the school become more sustainable using the national Eco-Schools resources. The team will guide your school on:

1. Setting up an Eco-Committee
2. Conducting an Environmental Review
3. Writing an Action Plan
4. Creating an Eco-code
5. Involving the whole school
6. Linking to the curriculum
7. Checking progress

SERVICE FEATURES

- ✓ Free, no-obligation quotes for energy saving technology which you will be able to get an interest free loan for will be arranged with approved suppliers by the council
- ✓ A council officer will contact the school to discuss project compliance and assess quotes/proposal
- ✓ Projects are managed by the council; there is very little extra work for the school
- ✓ Chosen supplier arranges convenient time to install energy efficiency measure at school

BENEFITS TO YOUR SCHOOL

- ✓ Access to interest-free loan
- ✓ No up-front costs
- ✓ Reduced energy cost as a result of energy saving project
- ✓ Reduced energy consumption
- ✓ Reduced carbon emissions
- ✓ Reduced CRC (carbon reduction commitment) tax
- ✓ Improved school environment
- ✓ Enhanced educational experience for students and a change in their behaviours towards environment

Behaviour Change



Castle Hill Primary has signed up for Eco-schools and is working towards a bronze award by meeting the following criteria:

Eco-Committee

The school has an Eco-Committee consisting of pupils and adults

- ✓ The group meets at least once every term
- ✓ Records are kept of meetings

Environmental Review

- ✓ The Eco-Committee has completed an Environmental Review covering the Eco-Schools nine topics
- ✓ Results of the review have been discussed by the Eco-Committee

Action Plan

- ✓ The Eco-Committee has produced a basic Action Plan influenced by the Environmental Review and shared the plan with the rest of the school community

- ✓ The Eco-Committee can identify progress towards achieving elements of the Action Plan

Linking to the curriculum

- ✓ The school can indicate that environmental issues have been covered within curriculum work

Involving the whole school and wider community

- ✓ The school has a prominent, designated notice board, detailing Eco-Schools activities

The facts: Energy is one area where costs can be reduced, while maintaining and improving the school environment. Schools account for more than 44% of Croydon council's total carbon footprint and its important that we work together to not only reduce your energy consumption but also help you reduce your schools energy bills.

Last year Croydon council approved the Carbon Management Energy Efficiency Programme (CMEEP) to reduce its carbon footprint (including schools) by 25% over the next 5 years. Schools and other council buildings are eligible for the programme.