

Project cost

£13,585.97

Estimated Savings

7.2 tonnes of CO₂e per year

Equipment / Installer

139 LEDs (Yess Electrical), Insulation (Warmer Group), Improved secondary window glazing (Newglaze)

Grant
awarded:
£8,151.58

Estimated
Annual Savings:
7.2 tonnes of
CO₂e*

The Project

Springhead Trust is a small Dorset based charity. In 2020, with the help of a Low Carbon Dorset grant the charity improved the energy efficiency of their site in Fontmell Magna. The trust's holistic whole-building approach saw the insulation of roof, ceiling and floor insulation, LEDs and improved window glazing. Combined these measures will reduce their emissions by 7 tonnes of CO₂e a year and significantly lower their heating demand. This project is an excellent demonstration of how the energy efficiency of old buildings can be significantly improved without threatening their historic integrity.

Getting started

From their site in Fontmell Magna, Springhead Trust run a rural centre for creative and sustainable living. The charity's mission is to encourage people of all ages and backgrounds to experience and value the rural environment and to learn about the sustainable use of natural resources.

A key objective at Springhead is to practice and demonstrate techniques and principles associated with a more sustainable way of life. Prior to seeking support from Low Carbon Dorset the trust had already invested in a number of renewable energy measures. These included a hydro turbine which takes advantage of the



*CO₂e, or carbon dioxide equivalent, is a term used to describe different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO₂e signifies the amount of CO₂ which would have the equivalent global warming impact. And allows us to express a carbon footprint consisting of lots of different greenhouse gases as a single number.

year-round flow of water from the lake at Springhead and a ground mounted solar PV array.

However, their inefficient and draughty buildings were proving to be a big challenge on their road to becoming net-zero and this is where Low Carbon Dorset was able to help. We were able to recommend and support several bespoke measures that would help improve the energy efficiency of their buildings and reduce their emissions.

Insulation

Part of Springhead Trust's holistic approach to energy efficiency involved installing a range of roof, ceiling and floor insulation to improve the thermal efficiency of their buildings. This new insulation will help retain warmth in the winter, and keep the buildings cool in the summer. Due to the historic nature of some of the buildings, access to certain floor areas to insulate proved difficult. However, installers were able to work around this and instead insulate from below and by doing so demonstrated that even old historic buildings can benefit from simple energy efficiency measures – and in an environmentally friendly way too. Springhead were keen for their insulation to be as eco-friendly as possible, so, where feasible they used a Knauff earth wool which is manufactured from recycled glass.

LEDs

To reduce their energy demand Springhead replaced old inefficient lighting with 139 highly efficient LEDs. This measure alone will save the trust just over £1,000 a year in reduced electricity bills.

Improved Window Glazing

The Springhead site dates back to the 1600s and the buildings have significant historic importance. This rules out replacing existing single glazed windows with newer units. However, the Trust were able to find a more bespoke solution to prevent heat loss through their old windows by simply installing lightweight aluminium secondary glazing. This additional glazing is installed inside the existing windows, posing very little aesthetic impact whilst dramatically improving the windows' thermal efficiency.

Next Steps

The Trust is not stopping here, they have future plans to further reduce their site's carbon footprint by installing a water-source heat pump and storage batteries to optimise output from their solar panels.



'Climate change is a threat to everyone, and the project has enabled us...to take action.'

Edward Parker,
Director of
Springhead



European Union
European Regional
Development Fund