

## Rosslyn Chapel Trust Project

### Introduction

Formed in 1995, the Rosslyn Chapel Trust aims to "preserve and promote for the benefit of the nation and the local community and for use as a place of worship the 15th Century listed building known as Rosslyn Chapel". In addition to serving the local community, the Chapel - a stunning 4 star visitor attraction - also attracts a high number of visitors (around 130,000 each year). It recently featured in the blockbuster movie and Novel: "The Da Vinci Code".



As part of an extensive refurbishment including extending the existing Visitor Centre, the installation of a controllable heating system was seen as crucial to the long term conservation requirement of the Chapel. Humidity control and heat are significant considerations for preserving the fabric of the Chapel. The previous heating system in the Chapel was not suited to either purpose. A system needed to be designed which would protect the fabric of the building but crucially also fit in with the Chapel's historic nature. The refurbishment plans identified the need to provide heating to the chapel; the current system was inadequate and the proposed system is helping to reduce the degradation of the building fabric. A biomass system was deemed as the best and most appropriate solution and the system proposed was designed to fit in with the historical nature of the building.

### Equipment: **Froeling Turbomatic 85kW biomass boiler**



The Trust approached their local Community Energy Scotland Development Officer and, after researching other community energy heat projects, the group were able to make use of information, guidance and advice about a variety of system options. The following selection process for the installation was carried out:

- Following an energy appraisal, the Rosslyn Chapel Trust decided that a Froeling Turbomatic 85 kW woodchip biomass boiler would be the best system to meet the heating and hot water requirements for both the Chapel and the extended visitor centre;
  - The Trust selected three specialist installers to tender for the biomass installation;
  - Two of these were already known to the project's quantity surveyors and were listed on the Carbon Trust approved list;
- The third had carried out installations using a very reliable boiler manufacturer with whom the Trust had already met;
- The winning contract was chosen due to the installers' consistent delivery of high quality installations, as well as their commitment to ensuring systems are installed and commissioned correctly.

### Cost and Grant Funding

Total Project cost	£343,648	The remaining funding was obtained through: Rosslyn's Own Funds £193,648
CARES grant	£150,000	
CARES grant %	44%	

## Fuel Bill Savings

In 2008, the total electricity bill was around £6900, rising to over £8000 in 2009. The Trust therefore, were only using the heating in the Chapel for very limited occasions and were struggling to afford even minimum heat provision on a regular basis. This was contributing to the degradation to the fabric of the building and was the main reason that the Trust were looking for a sustainable, cost effective solution to provide more stable temperature and humidity in the Chapel.

## Emission Savings

Estimated kWh savings p.a.	170,000
Annual Co2 savings (tonnes)	15.9
Lifetime Co2 savings (tonnes) @ 25yrs	397

## Project Monitoring

A meter was also installed in the new visitor centre showing how much CO<sub>2</sub> the system is saving.

## Local Impact

The new system keeps the building at a constant temperature of around 12-14 degrees and the Chapel guide makes reference to the sustainable heating as part of their guided tour.

The lowered heating costs for the Trust have enabled current wider community benefits to continue into the future, including the continued offer of free entrance to the Chapel for locals as well as providing the local Sunday School with a weekly venue for free.

## Lessons Learned **Colin Glynn-Percy, Director of the Rosslyn Chapel Trust, said:**

**“An economical and sustainable heating system is central to the long term conservation strategy for the Chapel, eliminating the current temperature fluctuations and the damaging effects of condensation on the stonework. We are very grateful to Community Energy Scotland for the support which will helped us achieve this”.**

For further information, contact:

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