

# NORTHUMBERLAND FIRE STATIONS



## PROJECT OVERVIEW

- Three fire stations owned by Northumberland County Council
- Old electric heaters removed
- Replaced with Kensa GSHPs
- Boreholes drilled in concrete forecourt
- New wet radiator system installed
- Buildings remained operational

## BREAKDOWN BY NUMBERS

- Total GSHP capacity = **74kW**
- Total borehole depth = **2,070m**
- Total heat emitters = **60**

## COST SAVINGS OVER 20 YRS

- Running cost savings = **£198,969**
- RHI income = **£247,627**
- NPV of the investment = **£90,463**

## KENSA CASE STUDY

Thanks to a pioneering programme of ground source heat pump (GSHP) installations, three Northumberland County Council (NCC) fire stations have significantly reduced their running costs and generated a 20 year income via the Renewable Heat Incentive (RHI) to invest back into core services

At each fire station a ground source heat pump system including boreholes and new wet heating system was installed. The former highly inefficient heating system was removed. In all cases the buildings remained operational during the works.

Kensa offered a complete turnkey solution, with Kensa Contracting providing full project management services overseeing the installation of the Kensa Heat Pumps manufactured ground source heat pumps. Whilst NCC is concerned about the environment and keen to reduce its carbon emissions, only projects that show clear economic benefits to the council are given the go ahead. ROI is vital for the council, as its resources are becoming ever more stretched.

### THE FIRESTATIONS HAVE REDUCED RUNNING COSTS AND GENERATED INCOME FOR RE-INVESTMENT

Due to the success of the projects, NCC have subsequently undertaken a number of additional ground source installations with Kensa in other council properties. This demonstrates how ground source can be a mainstream heating solution for public buildings.

Northumberland County Council realised a small trial would achieve little and so opted for a full scale programme from the off. This project demonstrates that GSHP is a mainstream heating solution for the thousands of public buildings that exist throughout the UK. It shows that the technology can be applied in difficult retrofit situations and to a wide range of buildings including fire stations, offices and council depots.

Councillor Nick Oliver, Cabinet Member for Corporate Services, said: "We are determined to do all we can to reduce our carbon footprint while looking at new ways of generating income. This innovative technology has already proved successful and is something we are looking to expand further."