

CASE STUDY

THE CATHEDRAL CHURCH OF ST ANDREW



THE CHALLENGE

James Aiken Engineering Solutions has been involved in many heating and ventilation contracts over the past 42 years, fabricating bespoke galvanized mild and stainless-steel HVAC ductwork for commercial and industrial buildings. And when the Cathedral Church of St Andrew in Aberdeen came calling to discuss upgrading the existing heating pipework, as part of a major refurbishment of the church, it was something that our experienced fabricators had never tackled before.

The heating system dated from around 1914 with the last significant changes made in 1935. The old cast iron pipes under the floor were leaking badly and were switched off over a year ago. Several heating companies were approached but none were prepared to take on the work. David Chouman, the appointed architect, approached James Aiken Engineering Solutions and work began on bringing the heating system up to modern standards.



BEFORE



AFTER



BEFORE



AFTER



THE SOLUTION

The first stage for the team was the safe removal of 100 metres of rotten cast iron pipes. These pipes were in a serious state of disrepair, literally collapsing despite sections in recent years having been removed and renewed in mild steel with bellows connections. All joints were found to have asbestos rope while asbestos based floor tiles also presented a hazard. A specialist company was brought in to dispose of all asbestos material.

This cleared the way to install, hidden from view below the floors, 100 metres of 4-inch mild steel flanged pipes, painted with two coats of red oxide prior to being insulated. In the workshop, James Aiken's coded welders TIG welded PN16 flanges inside and out to the 4-inch pipework.

Approximately 30 metres of 2-inch black coated mild steel pipe were used for the branches. The 2-inch pipework was cut and threaded on-site. All replacement pipe brackets were stainless steel.



THE RESULTS

The contract took five weeks from initial draining of pipework to the heating going back on. The new installation has been tested and no evidence of leaks were found. Parishioners and choristers can look forward to worshipping in a warm cathedral as convective heating rises from the trenches below the floor through linear cast iron floor grills. The insulation of the heating distribution pipework will protect the system and lead to greater energy efficiency for decades to come. Call James Aiken Engineering Solutions on 01224 704842 for your next fabrication project whether commercial, industrial or ecclesiastical.

JAMES AIKEN ENGINEERING SOLUTIONS IS A LEADING SUB-CONTRACTOR OF FABRICATED METAL AND PRECISION MACHINED COMPONENTS WITH EXTENSIVE FABRICATION AND MACHINE SHOP FACILITIES UNDER ONE ROOF.



James Aiken Engineering Solutions Ltd

47 Woodside Road, Bridge of Don, Aberdeen AB23 8EF

Telephone 01224 704842 • Fax 01224 825147 • Email enquiries@jasm.com