



National Records of Scotland

Case Study



About

The General Register Office for Scotland (GROS) has combined with the National Archives of Scotland, both departments have been renamed the National Records of Scotland (NRS) and is part of the devolved Scottish Administration. Its principle ethos is, "Preserving the Past, Recording the Present. Informing the Future." The NRS performs a number of key functions including; preserving the National Register of Archives for Scotland, keeping a central register of Births, Deaths and Marriages and the administration of Scotland's Census.

The Brief

The server room is located at New Register House within Central Edinburgh; an area designated as a World Heritage Site. The building is a Grade A listed structure which was designed by Robert Matheson, the Clerk of Works at the Office of Her Majesty's Works in Scotland and was built in 1861.

Sudlows won the contract to supply and install high sensible cooling to the server room within this impressive building. The project was challenging due to the limited space availability, the obvious operational restrictions of working in a listed building, the physical constraints of the server room itself and the energy efficiency requirements of the Scottish Administration.

Location:
Edinburgh

Value:
£70,000

Duration:
1 month

To meet these energy efficiency criteria, Sudlows selected:

4x Liebert Emerson HPM D2AD displacement type air-cooled dx air conditioning systems. Each capable of delivering up to 22Kw sensible cooling to give a critical N+1 redundancy.

Considering the impressive cooling capacity that can be achieved, the units deployed are amongst the most compact designed systems currently available.

These technically advanced units also contain the latest Copeland Digital Scroll technology operating on R410a refrigerant and EC evaporator fans for maximum energy efficiency.

Conclusion

The key to the success of this project was to bring modern and efficient cooling into a building that was designed over 150 years ago. Regardless of the Grade A listed status, it has always been a working building, dedicated to the important running of the Scottish Administration. The building has over 6.5km (4 miles) of shelving containing half a million volumes which are still being added to every year and it requires the latest in cooling to keep this important service operational in the 21st Century.



Testimonials

Robert Phillips, Accommodation Property Consultant at NRS said;

“Sudlows brought a real insight into this project. So often contractors see the words ‘Grade Listed’ and start to have concerns. However, Sudlows displayed an assured and caring approach on working with buildings such as ours. This gave us the confidence that they could deliver a much needed mechanical upgrade to this beautiful building, without affecting any of its important daily operational functions we provide as part of the Scottish Administration.”

Gary Frith, Mechanical Services Divisional Director at Sudlows commented;

“The opportunity to work on this prestigious Grade A listed building provided a number of key engineering challenges. Fortunately having worked on a number of Grade Listed projects in the past meant that our experience of working with the eccentricity of old buildings allows for some exciting innovation and use of modern technology combined with the very latest in cooling technology.

“By utilising the measurements and loading from both the 3D models and combining them with advanced Computational Fluid Dynamics (CFD) software, we were able to design and install a cooling system that was both energy efficient and reliable, yet had a low aesthetic impact to the surrounding architecture”



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