

University of Aberdeen CHP facility

Complete	Area	Client	Architect
2007	UK Scotland	University of Aberdeen	Gauldie Wright & Partners

The £10m combined heat and power (CHP) plant at the University of Aberdeen provides both heating and electricity for the Old Aberdeen campus. The main CHP engine is fired on natural gas and is capable of producing 1,630 kW of electricity and 1,700 kW of heat and replaced the old central heating station at the site.

The facility is in close proximity to residential areas and it was important that noise from the facility was adequately controlled.



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Services provided

Sandy Brown provided a full acoustic design for the development. Services provided included:

- carrying out a pre development environmental noise survey
- preparing a noise impact assessment
- providing support through the planning process
- detailed acoustic design of the facility
- Commissioning testing on completion to verify that specified performance requirements were achieved.

Special acoustic features

The building incorporates bespoke high performance attenuation measures to control noise. It is a conventional steel portal frame building with lightweight metal cladding. The main CHP engine is 'cocooned' within the building in an engine bay formed using dense blockwork walls and a concrete lid.

Fans draw fresh air into the engine bay via large high performance sound attenuators which are blanked off to prevent engine noise from flanking to outside via the ductwork.

The engine bay is accessed via a lobbied door arrangement to prevent engine noise transferring out into the boiler hall and to outside via ventilation openings in the boiler hall facade.

The lightweight metal roof in the boiler hall is upgraded with a plasterboard ceiling installed below the roof purlins. Ventilation louvres in the facade of the boiler hall which face the nearby housing are backed by low pressure drop attenuators.