

Wentworth Castle

Northern College, Stainborough

Barnsley, South Yorkshire

SERVICES: MEP & INFRASTRUCTURE ENGINEERING DESIGN

CLIENT: NORTHERN COLLEGE & WENTWORTH CASTLE TRUST

PROJECT DESCRIPTION:

PrestonBARBER have been working with Northern College since 2004. The college is located within the grounds of the former stately home of the Earls of Strafford just outside of Barnsley, South Yorkshire. The campus consists of a number of former estate buildings of various ages and conditions including the main house, Wentworth Castle.



Picture 1 — South Façade

The main house, built by Thomas Wentworth commencing in 1711, is Grade I Listed although the majority of the interiors were destroyed by Barnsley Corporation during 'remodelling' works undertaken by these new owners during the 1950s.

Over the course of our engagement with the college we have undertaken numerous electrical projects ranging for electrical distribution upgrades, lighting replacement / enhancements, energy assessments and schemes to reduce running costs.

Mechanically we have been involved with individual building energy reduction schemes, heating system replacements and feasibility studies into the de-centralisation of the main campus boiler plant.

Currently we are undertaking a site wide feasibility study into the utilisation of renewable technologies and overall energy and carbon reduction focusing on photovoltaic arrays, bio-mass, ground source heating pumps.



Picture 2 — Former Long Gallery

SERVICES PROVIDED:

Mechanical

- Heating system replacements
- Energy performance analysis and insulation upgrades

Electrical

- General & Decorative Lighting
- Small Power Installation
- Site wide Fire Alarms

Infrastructure

- Site wide energy analysis
- Feasibility study into de-centralisation of boiler plant
- Renewable technology study

EDUCATION SECTOR CONSERVATION

TYPE: REFURBISHMENT

VALUE: VARIOUS

DESIGN TEAM:

Client -

Director of Estates,
Northern College



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Consultants

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LOW CARBONCONSULTANTS



Competent Person Scheme
Building CO2 emissions rate calculation - Hevacomp
Certificate Number ERC3057

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As with many buildings of a similar age and nature, refurbishment is a slow process, and as the campus is live, can only be undertaken in a piecemeal fashion. A large part of the works have had to be designed and installed in a sympathetic manner, in keeping with existing, and hopefully undoing the damage caused during the 1950s.

In addition to the college we have also undertake works for Wentworth Castle Trust, the body that runs the Grade I Listed gardens. Working with leading Conservation Architects, Purcell Miller Tritton, on the internal refurbishment of 'The Gun Room' in the Castle Grounds.



Picture 2 — The Gun Room

The Gun Room dates from the 1720s, being part of the Palladian construction phase, and forms the focal point at the bottom of the Pleasure Grounds Avenue. Probably built as a banqueting or bath house the building was used as a gun store in the 19th century, hence the name.

The proposed scheme includes underfloor heating to provide 'an invisible' source of heat and LED cove mounted lighting to provide a low energy lighting scheme that is infinitely dimmable; the use of LEDs will enable suitable variations in lighting for the anticipated space use (meeting / conference room, exhibition space, private fine dining and small wedding venue).

The building has recently been re-roofed and the very badly eroded sandstone façade repaired, however, sufficient monies for the internal refurbishment of this building have yet to be raised by the Trust.

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