

## Houlton School, Rugby

### PROJECT TEAM

Architect: **Van Heyningen and Haward Architects**

Structural engineer: **Price & Myers**

Steelwork contractor (New blocks):

**Mifflin Construction Ltd**

Main contractor: **Morgan Sindall Construction**

Client: **Urban&Civic plc**



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The desire to retain structure on a new project is satisfying for any designer. There are not only environmental benefits, but also the ability to retain memory within a community – to preserve identity for future generations. And so it was with Houlton School.

The project involved the refurbishment and alteration of the former Rugby Radio Station (C-Station), to be transformed into a large secondary and sixth form school. The Grade II listed building was built in 1926, hosted the first transatlantic telephone call to New York, transmitted telegraph messages to the Commonwealth, and communicated with nuclear submarines during the cold war.

The design of the new school involves the adaptation of the historically fascinating buildings into new school facilities including two new teaching blocks, a new sports hall, drained external sports pitches, car parking, access roads and sustainable drainage systems (SuDS).

Listed building consent was required to undertake careful investigations into the fabric and condition of the existing buildings. A new steelwork frame was

threaded through the first floor of the existing Transmission Block to provide an additional four floors of accommodation, while leaving the existing first floor steel beams exposed and intact. The new steel frame sits on piled foundations, constructed so as not to undermine the existing foundations.

To improve circulation throughout the buildings, two steelwork scissor stairs have been constructed at each end of the Transmission Block, and ring beams added to restrain the existing walls around the new stair voids. Two further steel staircases are inserted into the Accommodation Block.

External openings have been adjusted in the Power Hall to suit its new use as a dining and main hall. New steel frames were inserted, on local spread foundations cut through the existing slab, to support a sixth form dining area over the new kitchen and control room space to serve the main hall.

The upgraded and repurposed historic buildings use significantly less energy than a standard refurbishment through careful insulation, high performance windows, ventilation including heat recovery, and painstaking design to upgrade airtightness.

The school opened in September 2021 and forms the heart of the surrounding Houlton development. The project successfully restores and repurposes the historic buildings as an integral part of a highly sustainable, purposeful and distinctive secondary school that is a key attraction for those considering living at Houlton. It could not have been achieved without the strength, versatility and beauty of structural steel.

### Judges' comment

This project has transformed the former listed radio station, built in 1926, into a large secondary school. After cleaning and repainting, the original steelwork was fully expressed and new steelwork carefully integrated, creating an excellent internal environment. A very high-quality heritage project of which all users are justly proud.