

# Education



**Role:** M&E Contractor (Designed to Stage 5)

**Client:** Essex County Council

**Main Contractor:** Morgan Sindall

**M & E Consultant:** Ingleton Wood

**Architect:** Stanley Bragg

**M & E Value:** £360,000

## Ormiston Rivers Academy

We provided the complete mechanical and electrical services for the new build Ormiston Rivers Academy. The layout incorporates five classroom bases, meeting facilities, a toilet block, plant room, entrance lobby and circulation areas.

The mechanical installations involved connecting the external cold water main to the existing school science building and running a new protectaline main to the new block. The heating is served via an air source heat pump, located externally to the new plant room and circulating to the natural ventilation units within the classrooms and group room. Sanitaryware has been provided to the WC's and cleaner's store. The systems are controlled via a PRIVA BMS system, complete with Priva Edge Gateway add-on for energy monitoring and input to an external iSERV system.

The electrical package consisted of sub mains cabling fed from an existing switch panel. This was routed over a length of 200m and spanned over the existing blocks before passing through cable ducts into the new plantroom. Lightning protection has been installed with termination points on the roof to protect all plant as well as the structure. The fire alarm, security, class change, fibre and data packages are all integrated back to the existing school to provide fully synchronised systems.

The solar PV arrangement on the roof has been designed to achieve an annual yield of 34.58kW per annum. The 76 no module design contributes to the development's energy end use and targets for Essex County Council's net zero aspirations.

Internally, there is a bespoke Bluetooth lighting arrangement. The technology avoids cabling of the power requirements as the wall switches are wireless and battery free. Kinetic energy pushing in the light sends a signal to the sensor within the luminaires. The solution enables a diverse and flexible system that can be readily tailored to suit the changing needs of the end user.

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