

Education – Greenvale SEN – Off-Site Low Carbon Design



**GREENVALE
SCHOOL**

PROJECT Greenvale School

CUSTOMER London Borough of Lewisham

LOCATION Mayow Road, Lewisham

CONTRACT 2 Stage Design and Build

Need

Creating 93 new secondary school places at Greenvale School for young people with profound special educational needs and disabilities (SEND) is part of the education plan for Lewisham. The proposal is to re-purpose nearby vacant land for a new 2,500m² satellite facility as a big step towards delivering their SEND programme and improving the area for the local community.

The design of the school environment must meet the specialist needs of the children, teachers and support staff while also delivering against the council's plan to be carbon neutral by 2030.

Taking the right decisions early in design is critical to meet these requirements and ensure an efficient build. Through early collaboration, the designer, principal contractor, and specialist suppliers can incorporate off-site systems and modern methods of construction (MMC) into the design for better outcomes. Recognising this the council procured the design and build at RIBA Stage 0 using a two-stage process.

Solution

Starting during the tender we engaged with our architect and specialist suppliers to develop the proposals. Maximising off-site was a priority and we progressed, with our sister company Innovare, the use of their structural insulated panel system (SIPS) for the building fabric. The solution delivered the councils requirements and future proofed the school so as new floors could be added very simply in the future. Other benefits included:

- Faster construction and less disruption to the community.
- Low embodied carbon and less waste in manufacturing.
- SIPS thermal u-value of 0.2 saving 60% operational carbon from heating.
- Windows pre-installed for programme and insulation benefits.

The early collaboration supported by regular facilitated client meetings brought additional design improvements:

- Entrance was changed to improve accessibility for people with restricted mobility which in turn enabled orientation of the buildings for greater privacy in the outdoor play spaces.
- Our performance data from 44 similar schools informed selection of facades, internal fixtures and fitting, and M&E.

Outcome

Planning was approved within 3 months helped by the relationship between designers Avanti, Osborne and our specialist supply partners. The individual and specialist needs of the council, school and students has been central to the integrated design which incorporates well considered use of MMC and off-site technology to reduce risk.

Selection of Innovare's SIPS system - which has been used to construct over 100 schools - will ensure factory-controlled quality and de-risks the programme to meet the important academic milestones. Additional carbon benefits have been gained as SIPS have lower embodied, operational, and avoidable carbon than traditional methods, supporting the councils 2030 commitment.

The design has been mindful of the school's specialist current and future needs. Innovare's system is flexible for expansion up to 5 floors. Externally the entrance has been altered for safety and increased privacy, and our experience on SEND schools has informed design detailing and product selection.

The council's procurement approach has put the scheme firmly on track to deliver the new build educational facility, better, faster and greener while future proofing the school for vertical expansion.