

AN INSPIRING SPACE FOR INDEPENDENT LEARNING



## DOWNE HOUSE LEARNING AND RESOURCE CENTRE THATCHAM, BERKSHIRE, UK

The Learning and Resource Centre at Downe House school will provide an inspiring new space for students to study independently and develop their own learning style, helping to prepare them for the future.

The new three storey building will include a library, gallery, auditorium, study and seminar spaces, and a cafe as part of the school's exciting new expansion scheme.

In order to provide an inspiring and comfortable learning environment with a transparent and open feel, the building will have a dramatic glass facade that will wrap around the front, providing transparency and maximising natural light.

Our structural engineers have proposed an integrated facade solution in which the building structure will be used as the mullion for the glazing, rather than there being a separate glazing frame. This efficient solution blends cladding with structure into one line, creating a seamless system and open facade that will create a light and airy space within.

In addition to ensuring transparency in our structure, we are also working with the contouring of the land to embed the large volume auditorium space into the hill. This design will ensure that the building retains a sleek and neat appearance from the front elevation and isn't overpowered by the auditorium.

With environmental and energy considerations also a key factor due to the planning requirement for a BREEAM 'Excellent' rating and a 20% reduction in CO<sub>2</sub> emissions, our building services engineers have proposed a passive design approach, which uses natural ventilation and high performance materials to reduce energy consumption. A biomass boiler will use fuel from woodland on the site, while photovoltaic panels will provide green energy and help meet the council's renewables requirements.

Through our innovative structural approach and energy efficient building services, we are helping to create a beautiful new space that meets the clients aspirations and will inspire students for years to come.

**CLIENT**  
Downe House School

**ARCHITECT**  
Design Engine Architects Ltd

**PROJECT VALUE**  
£5m

**DURATION**  
2015 - completion expected 2018

**SERVICES PROVIDED BY  
BUROHAPPOLD**  
Building services engineering, ground engineering, infrastructure engineering, structural engineering, acoustic consultancy