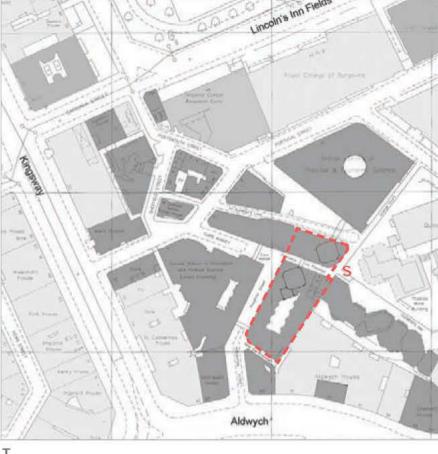
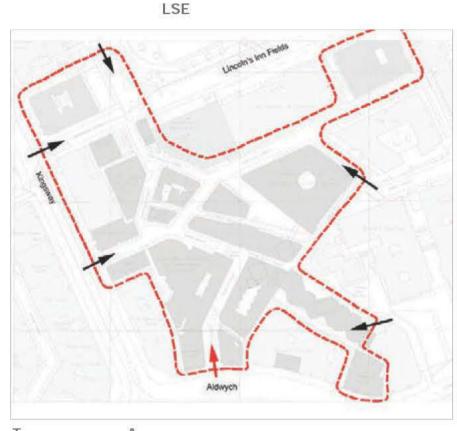
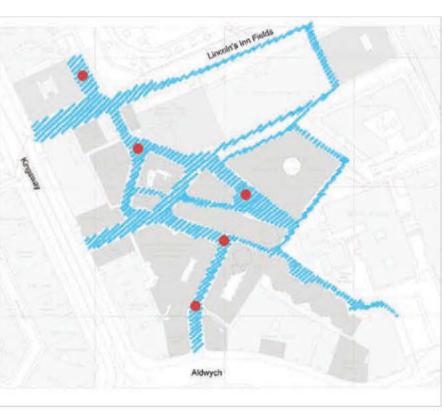
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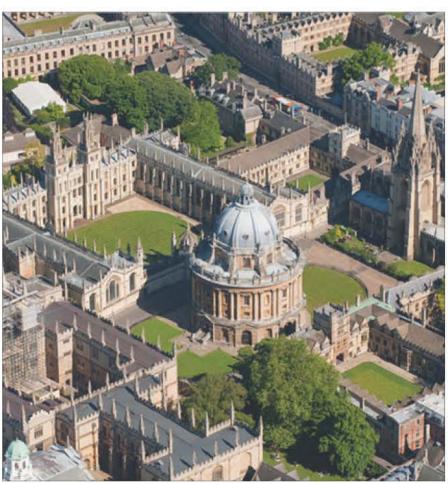


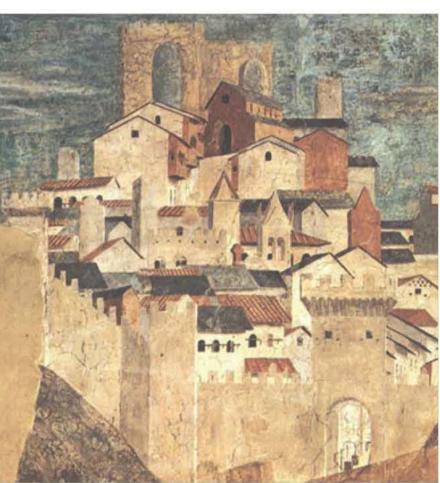




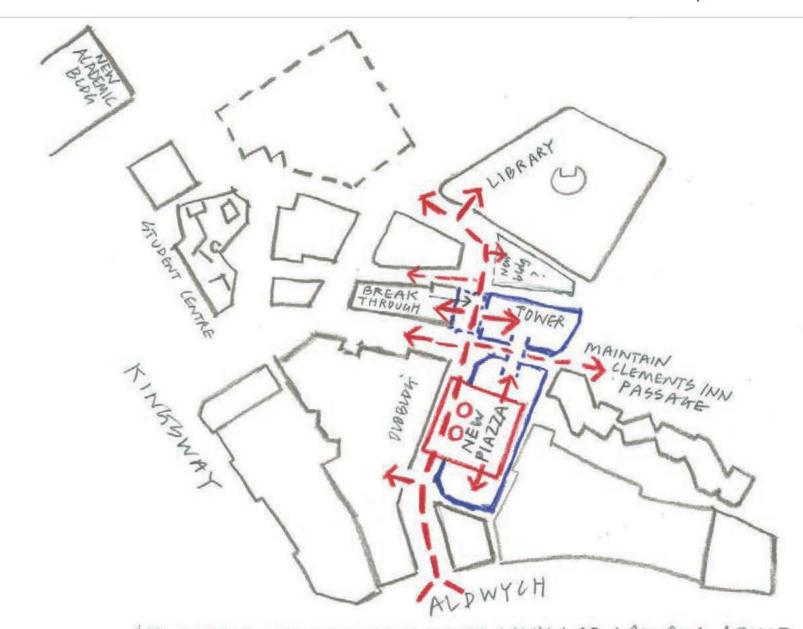


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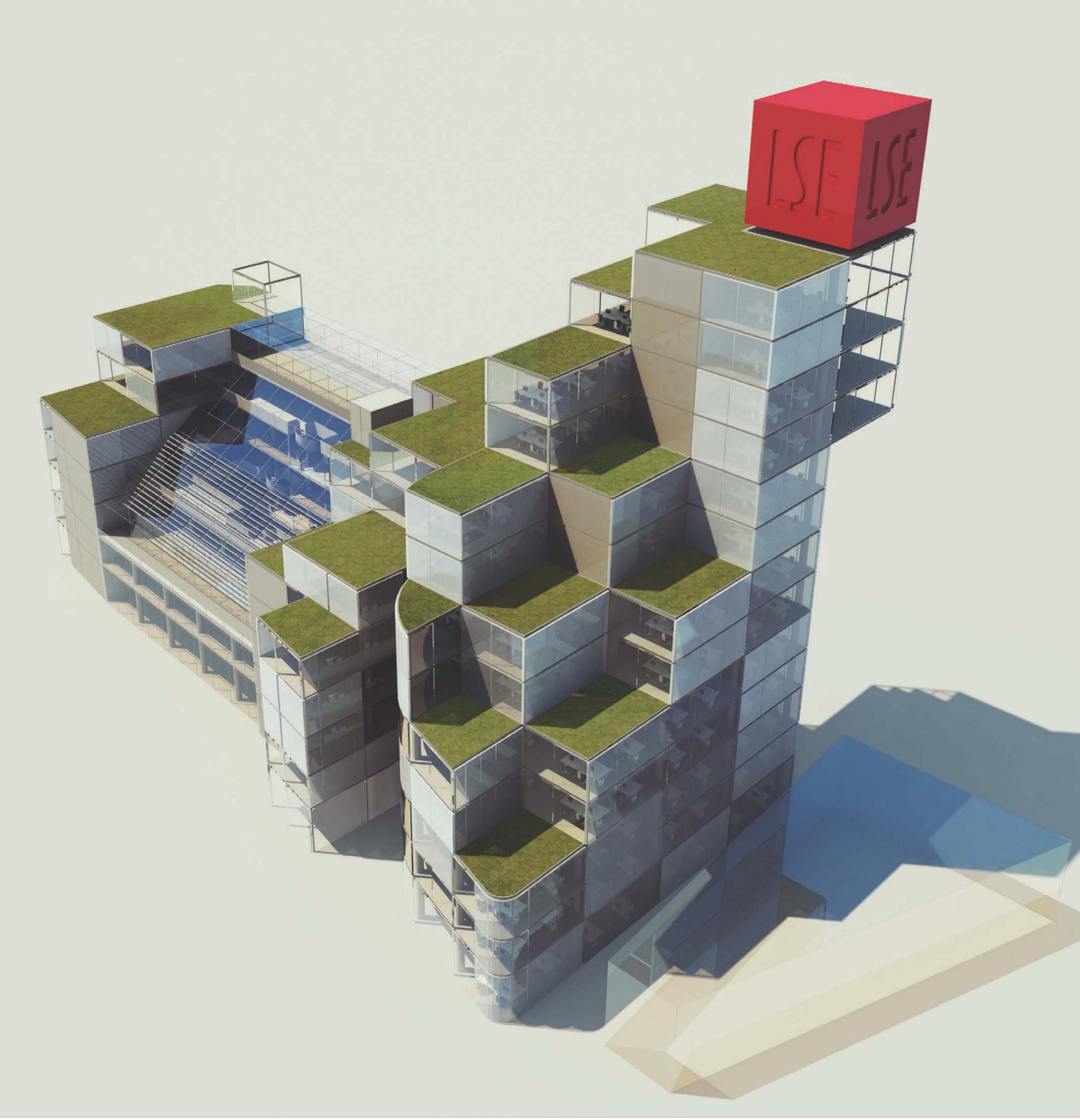
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NEW THROUGH CONNECTION TO LINK LSE CAMPUS SPINE

Т

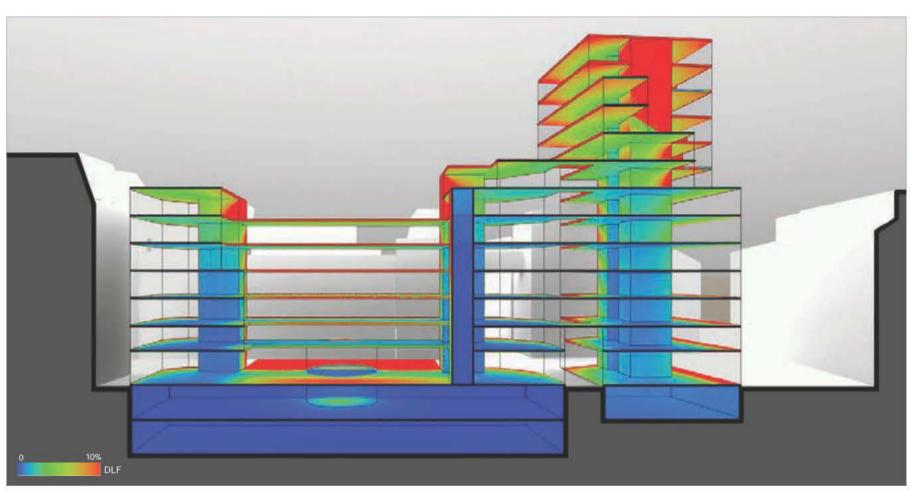






Passive Cooling Strategies Assessment Solar Irradiation Mapping

In order to meet the high standards of GCSS buildings, we have first focused on maximising the potential of effective passive strategies associated with the optimised building form and materiality. Initial thermal studies have demonstrated the potential for 50% reduction in cooling loads from the application of shading, exposed thermal mass and night ventilation; maximising façade as well as potential for PVs, making the most of this natural resource even in such a dense urban site.



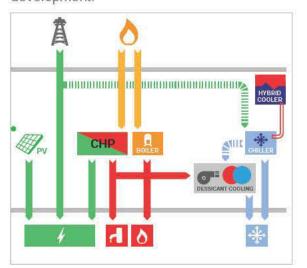
Daylight Section

The building servicing strategy for the GCSS building focuses on delivering high levels of user comfort and control with minimal energy consumption and carbon emissions. A floor supply system ensures cooling can be delivered efficiently to the spaces and works in tandem with natural ventilation, thermal mass and night ventilation strategies (mixedmode approach).

A gas fired CHP is delivers low carbon heat and generates electricity to reduce the building carbon emissions. It provides a significant portion of the heating requirements (winter) as well as the domestic hot water and the dessicant cooling systems (summer).

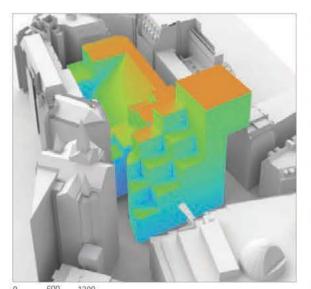
Cooling is first provided by 'Dessicant Cooling System' using waste heat from CHP plant and adiabatic cooling. This system does not rely on conventional refrigeration plant i.e. Chillers for most of the year. Thus heat rejection is minimised and dealt with via hybrid coolers on the roof. To provide high heat rejection output with no risk of legionnaires disease contamination. This system provides the best combination of low carbon performance and low water usage.

PVs are provided to unshaded parts of the roof to provide some of the electricity used on site from a zero-carbon source and hence further reduce the carbon footprint of the development.



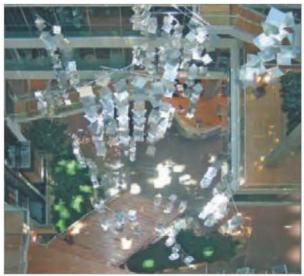
Energy Strategy Flow Chart





800 1200 kWhr/m2

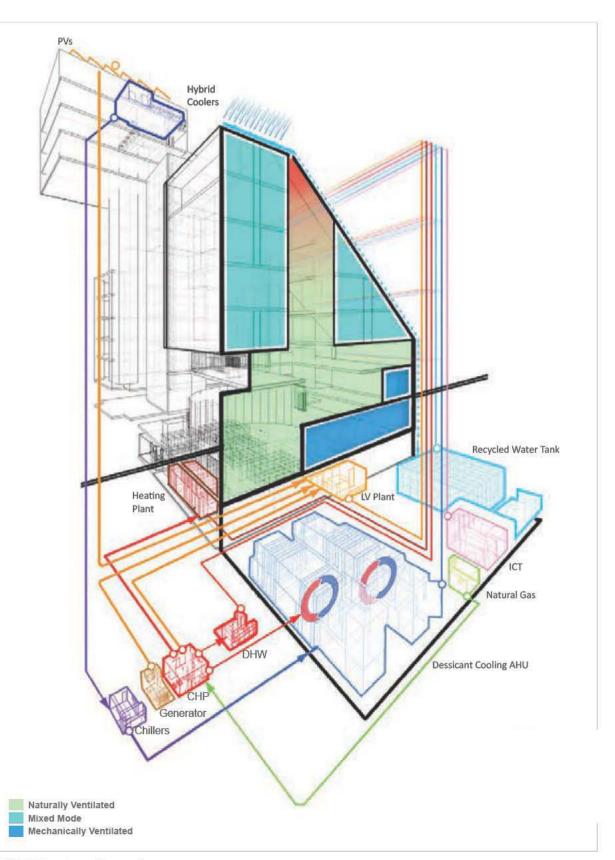
We understand the environment provided environmental sustainability expected for the in the campus influences the capacity of the LSE attracting world leading academics and the best students. A dynamic luminous environment with changing patterns of daylight through the day and seasons is critical to the quality of the spaces. We have used climate-based daylight analysis looking at numbers of hours throughout the year when the spaces receive adequate daylight periods of natural ventilation. Solar irradiation mapping was used to help shape the building along Houghton Street as well as the varying and identify areas for solar treatment of the floor plates and terraces help bring daylight deeper into the building.



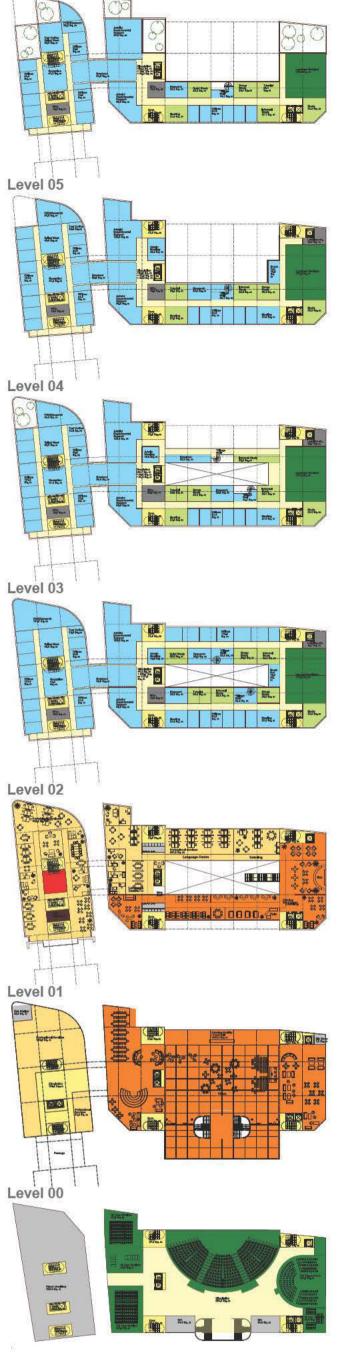
An example of heliostats (sun reflectors) and custom designed hanging sculptures which will bring sunlight deep into the heart of the building.



The roof terraces offer the opportunity for a variety of landscape treatments according to orientation, use and height.







Teaching Academic Depts. (faculty) Academic Depts. (study) Catering Professional Services Special Ancillary & Cores Circulation

Floor plans with designated activities. (Option 1)

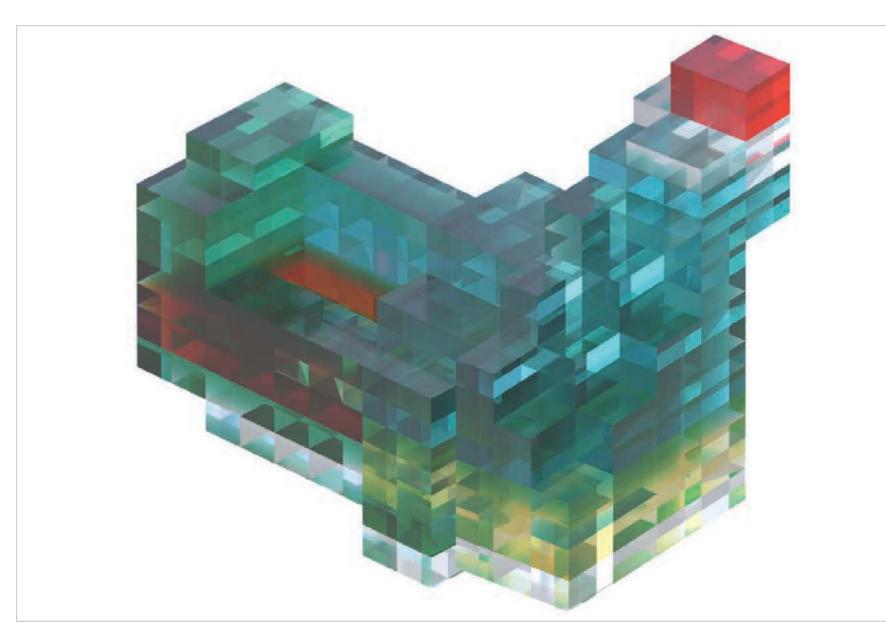


Diagram of internal occupancy.



Α

The form of building is designed to the high density urban context of the LSE Campus.

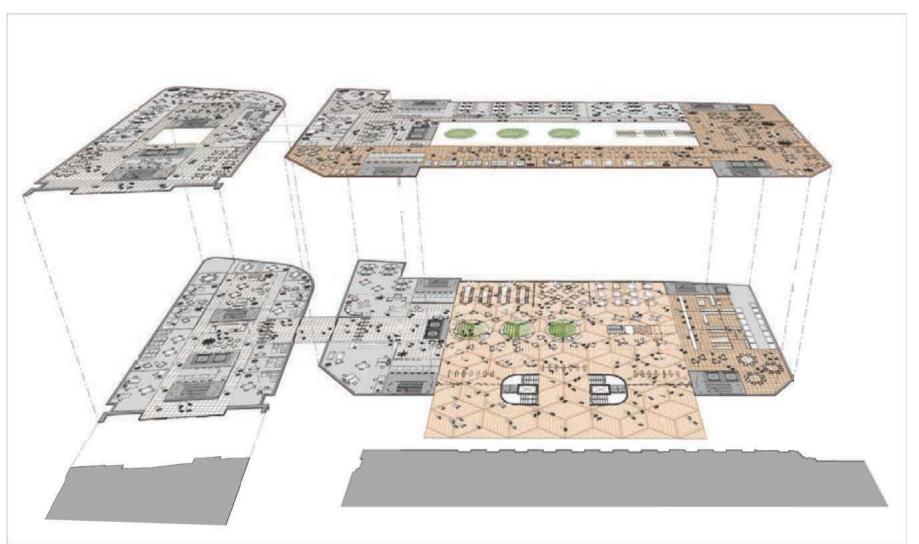


A new London landmark: view from the South Bank with the proposed Garden Bridge.



The project establishes a coherent and generous public realm for the campus.





The new 30x30m 'inside / outside' public piazza and connecting mezzanine.



375 seat amphitheatre with subdivisions of 125 and 250 seats.

View towards Llbrary and the new GCSS along Houghton Street.