

## Publication of Building Information Seven Hills School

<b>A basic description of the project and building</b>	<p>The new Seven Hills school is to be located on the same campus as All Saints Catholic High school.</p> <p>The two schools are to be linked physically and will share key accommodation. This will include a shared suite of post-16 facilities providing integrated sixth form learning and social space, dining areas and recreational and sports facilities. Staff will also have the opportunity to work together through shared staff facilities and a single front of house.</p> <p>The new build Seven Hills creates a new entrance for both schools seen from the site entrance and the main pedestrian access. This led to creation of a new mall which links the entrance to the dining spaces and forms the spine of All Saints linking the existing facilities. Community areas are located on the ground floor whilst the large hall, chapel, and gym are to be adapted to create dance and drama areas in a suite on the first floor. Highly serviced areas, such as DT or those requiring specific acoustic requirements, such as music, have been located in the All Saints new build whilst the remaining blocks are to be refurbished / remodelled. In most departments, a number of internal walls are to be removed creating large, flexible spaces supported by a mix of classroom, breakout areas, and tutorial spaces.</p> <p>The existing lift in Block A is to be replaced to conform to current requirements and provide access to all floors of All Saints.</p> <p>The existing Block C is remaining largely untouched due to financial constraints, but some walls are being removed to create an open plan presentation suite on the ground floor.</p> <p>The sports hall is untouched by the developments.</p> <p>Seven Hills layout is designed around a courtyard, enabling the classrooms on the West side of Block A to retain their light and aspect. The therapy block, the main community facility, is located close to the main entrance at the end of the mall. A mix of general teaching and specialist rooms are then located on both floors supported by stores, group rooms and sensory classrooms.</p> <p>Single sided corridors enable links with the courtyards and create the visual link between the site entrance and playfield.</p>
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<b>The key innovative and low-impact design features of the building</b>	<ul style="list-style-type: none"> <li>• Existing school detailed analysis to understand internal comfort levels to limit overheating and to provide ventilation advise for façade design</li> <li>• Daylight targets are at an average 2.5% daylight factor in all classrooms and a good uniformity</li> <li>• 80% natural ventilation over new build and refurbishment with high and low level opening windows to encourage good air circulation in classrooms</li> <li>• BREEAM 'Very Good' attained (As-Designed) for new building and refurbishment</li> <li>• Replacement of gas fired boilers with connection to City District Heating system (significant benefit to both new build and refurbishment)</li> <li>• U values 20% better than Part L 2006 where possible (new build and extensions)</li> <li>• Artificial lighting, Daylight dimming with 1st row on time and presence control to reduce energy consumption</li> <li>• Comprehensive metering and monitoring strategy, for lighting, power, heating and hot water with local temperature control</li> <li>• Heat Recovery air handling plant</li> <li>• - Bio-diverse roof to reduce heat loss and provide rainwater attenuation</li> </ul>
<b>Basic Building Cost - £/m2</b>	New Build - £1,450m <sup>2</sup> Refurbishment - £470m <sup>2</sup>
<b>Services Costs - £/m2</b>	New Build - £460m <sup>2</sup> Refurbishment - £450m <sup>2</sup>
<b>External Works - £/m2</b>	£340m <sup>2</sup>
<b>Gross floor area - m2</b>	13,596m <sup>2</sup>
<b>Total area of site - hectares</b>	4.24 (development) 6.499 (school site)
<b>Functional areas and their size - m2</b>	<ul style="list-style-type: none"> <li>• Teaching – 6,818m<sup>2</sup></li> <li>• Therapy – 378m<sup>2</sup></li> <li>• Central Resource – 737m<sup>2</sup></li> <li>• Staff &amp; Admin – 749m<sup>2</sup></li> <li>• Dinning – 477m<sup>2</sup></li> <li>• Kitchen – 140m<sup>2</sup></li> <li>• Sanitary / Change – 323m<sup>2</sup></li> <li>• Plant / Risers / Hub Rooms – 231m<sup>2</sup></li> </ul>
<b>Area of circulation - m2</b>	2,792m <sup>2</sup>
<b>Area of storage - m2</b>	364m <sup>2</sup>
<b>% area of school grounds to be used by community</b>	3% (development) 12.5% (school site)
<b>% area of school buildings to be used by community</b>	10%
<b>Predicted electricity consumption - kWh/m2</b>	0.047kWh/m2

<b>Predicted fossil fuel consumption - kWh/m<sup>2</sup></b>	District heating provided by Veolia, approximately 22% of their heat is provided by Gas. Annual energy consumption estimated to be 172kWh/m <sup>2</sup> therefore, energy produced by fossil fuel is approximately 38kWh/m <sup>2</sup>
<b>Predicted renewable energy generation - kWh/m<sup>2</sup></b>	0
<b>Predicted water use - m<sup>3</sup>/pupil/year</b>	3.21
<b>% predicted water use to be provided by rainwater or grey water</b>	0
<b>The steps taken during the construction process to reduce environmental impacts, i.e. innovative construction management techniques.</b>	Our Site will be responsible not only for supervising the quality of the works but also for keeping the site clear of waste. Where practicable, we will segregate waste, as set out in our Waste Plan within the Environmental Management Plan, which includes methodology on how we will manage Waste in line with VINCI Construction UK Limited's Environmental Policy and our ISO 14001 certification.
<b>A list of any social or economically sustainable measures achieved/piloted.</b>	<p>The Sustainability Design Guide (SDG) has been utilised by the design team in developing the design proposals to produce a consolidated approach to the environmental and sustainable aspects of the schools.</p> <p>Seven Hills School is the utilisation of the City district heating system, known locally as Veolia Environmental Services, district heating system.</p> <p>The schemes do not rely solely on renewables to achieve the carbon reduction requirements. Both new and refurbished part of the scheme benefit from more thermally efficient buildings by complying with Part L building regulations, responsible construction and school engagement to help the schools operate their buildings in a more sustainable way.</p> <p>Early on in the design process, the project team was advised through an initial building physics assessment of the new build Seven Hills School and how to improve the internal environment in terms of location and form, thermal comfort, ventilation and day lighting strategies.</p> <p>We have carried out the initial school workshops and found that Seven Hills is one of the leading schools in sustainability due to their pro-active and positive approach to healthy schools and schools participation philosophy. All Saints school has focused on fair-trade schools and is beginning to recognise the all round benefits that sustainability can bring to a school that is focused on achievement targets. Both schools have potential to achieve Outstanding in the DSCF</p>



	Sustainable schools toolkit and we have prepared a Draft School Sustainability Implementation plan (SSIP), which will be developed with the final workshop. The SSIP concentrates on developing a management structure for the schools to produce the sustainable eight doorways to encourage sustainable learning, auditing of their carbon consumption and developing ways in how to reduce it.
<b>BREEAM Rating and score</b>	All Saints & Seven Hills development has the likely potential to achieve a BREEAM Very Good.

\* BREEAM (Building Research Establishment's Environmental Assessment Method) used as an environmental assessment method for buildings to ensure best practice in sustainable design and used to measure a buildings environmental performance.