

### Man 9. Publication of Building Information City School

<b>A basic description of the project and building</b>	<p>The redevelopment of the City School as part of the Building Schools for the Future programme. The scheme comprises the construction of a large new-build block, the refurbishment of a number of existing buildings and the demolition of the remainder with remodelling of associated external areas.</p>
<b>The key innovative and low-impact design features of the building</b>	<ul style="list-style-type: none"> <li>• 80% Natural Ventilation over new build and refurbishment.</li> <li>• High performance glazing on all south and west facades to limit solar gain.</li> <li>• Brise Soleil to classrooms on south elevation to reduce heat gain and solar glare</li> <li>• Thermal mass exposed in lower ground and ground floor classrooms to aid in cooling</li> <li>• Integrated outdoor learning areas including horticultural / science garden</li> <li>• Daylight dimming with first row of artificial lights to provide energy savings</li> <li>• Reconfiguration of the existing biomass boiler to provide baseload heat across entire site</li> <li>• U values for new build and extensions to be 20% better than Part L 2006</li> <li>• Artificial lighting – time and presence control to reduce energy consumption.</li> <li>• Comprehensive metering and monitoring strategy for lighting, power, heating and hot water</li> <li>• Heat recovery air handling plant</li> <li>• Local temperature control</li> <li>• Plant controllability through Building Management System</li> <li>• Wind turbine and biomass boiler connected to IT system for student monitoring and teaching opportunities throughout the school.</li> <li>• Use of sustainable building materials wherever possible.</li> </ul>
<b>Basic Building Cost - £/m2</b>	<p>£618m2</p>
<b>Services Costs - £/m2</b>	<p>£439m2</p>
<b>External Works - £/m2</b>	<p>£35m2</p>
<b>Gross floor area - m2</b>	<p>10,478 m2</p>
<b>Total area of site - hectares</b>	<p>12.4 hectares</p>

<b>Functional areas and their size - m2</b>	<ul style="list-style-type: none"> <li>• Teaching Areas – 5055m2</li> <li>• LRC – 153m2</li> <li>• Main Hall – 345m2</li> <li>• Sports Hall – 664m2</li> <li>• Dining – 295m2</li> </ul>
<b>Area of circulation - m2</b>	2281m2
<b>Area of storage - m2</b>	193m2
<b>% area of school grounds to be used by community</b>	Approximately 57%
<b>% area of school buildings to be used by community</b>	Approximately 30%
<b>Predicted electricity consumption - kWh/m2</b>	667,181 kWh/Year ~ 63.67kWh/m <sup>2</sup>
<b>Predicted fossil fuel consumption - kWh/m2</b>	103 kWh/m <sup>2</sup>
<b>Predicted renewable energy generation - kWh/m2</b>	4886 kWh/Year ~ 25.4 kWh/m <sup>2</sup>
<b>Predicted water use - m3/pupil/year</b>	3.8 m3/pupil/year
<b>% predicted water use to be provided by rainwater or grey water</b>	No rainwater or grey water utilised
<b>The steps taken during the construction process to reduce environmental impacts, i.e. innovative construction management techniques.</b>	Constant monitoring of; <ul style="list-style-type: none"> <li>• CO2 emissions from site plant, site deliveries.</li> <li>• Site noise</li> <li>• Site materials i.e. sustainable timber and recycled materials / aggregates</li> <li>• Waste handling</li> </ul>
<b>A list of any social or economically sustainable measures achieved/piloted.</b>	<ul style="list-style-type: none"> <li>• Bio-mass Boiler</li> <li>• Wind Turbine</li> <li>• Petrol / Oil Interceptors</li> <li>• Attenuation Water Tank</li> </ul>
<b>BREEAM Rating and score</b>	Very Good 55+

\* 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.