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Schools, Children & Families

**Project Sponsor:**  
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**Building Design:**  
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**Structural Design:**  
Arup

**Services Design:**  
Skanska Rashleigh  
Weatherfoil/HBS

**Landscape Design:**  
Macgregor Smith

**ICT Design:**  
Skanska RM

**Health & Safety Consultant:**  
Capita Symonds (CDM  
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**Cost Management:**  
Skanska Construction

**Construction:**  
Skanska Construction

**Independent Certifier:**  
Capita Symonds

# Canvey Island, Castle View School

The Castle View School site is 72,000m<sup>2</sup> and is on the site of the previous Furtherwick Park School. The site is located in the town centre and will be part of the town's regeneration project. The site itself is identified as being in a flood zone 3a, being protected by Thames Tidal Defences.

The school will be designed to accommodate 1200 students aged 11 to 16 and is currently designated as a Specialist Science College.

The new school is to be built in order to be seen as a 'beacon for education'. It will offer state of the art technology and resources and will also offer community resources such as a community science lab and family area.

The central atrium offers opportunities for the building structure to be used by teachers and students to investigate aspects of the curriculum, for example:

- Using structural members to illustrate principles of Physics.
- Investigating hydraulics using the site surface water drainage system.

By providing a structure that allows subjects to be taught in different ways and at different scales like this, the design can help engage students.

ICT is a strong feature within the school. Skanska RM have provided an innovative Lego Education Centre in the Community Science Hub. This supports the specialism and offers strong links with the community.

Externally the school will have a wildlife garden, pond area and organic growing area. There will also be external classrooms for example for brickwork and mechanics.

The public square formed by the wings acts as a forum for the community to populate and for the School to spill out onto and celebrate events. The community spaces are located directly off the square and the internal arrangement allows both the School and the community to make good use of the services. For example, The Confucius Room can be used by local businesses for conference meetings where they can make full use of the IT facilities.

Secured, covered, cycle storage is provided in two places, one adjacent to the public square and a second located near the main car park. Both facilities are in well-supervised areas and are CCTV monitored.



## Vital Statistics

**Floor Area in m<sup>2</sup>:**  
17,000m<sup>2</sup>

**Construction Cost:**  
£27.6m

**OJEU Date:**  
November 2008

**Operational Contract Period:**  
25 years

**Completion Date:**  
May 2012

**Site Health & Safety Record:**  
No reportable accidents



**Building Design & Sustainability Statement**

The designs for the school were developed in response to the authority's Output Specification and through the extensive engagement process. The building provides a learning environment that first welcomes, and then inspires those who use it, be they students, staff or visitors. The material palette of brick, zinc, glass and timber combines robustness with beauty to ensure that the building is low maintenance yet striking. Grey water recycling is used in the toilet cores for flushing. A visual display of grey water storage will demonstrate its use and the savings made. A brown roof over the hall, which is visible from the art clusters, allows students to study and record the habitat evolving and the wildlife that populates it.

**Structural Design Statement**

The building comprises driven precast concrete piles & pile caps, suspended flat slab flooring, a mix of RC flat slabs with precast columns for the teaching cluster and steel frames with composite concrete slabs for the remainder, this supports the three types of roofing – RC flat slab, steel beams with structural metal deck (brown roof to main hall) and steel beams with structural metal deck and lightweight roof finishes.



**Environmental and Services Design Statement**

A combination of low Nox natural gas boilers and a low carbon biomass boiler heat the school. Teaching spaces will be ventilated naturally with mechanical assistance during warm summer months to increase fresh air rates. The building utilises an exposed concrete structure which, when combined with night purge ventilation, provides a passive cooling effect to help minimise summer daytime temperatures. Lighting systems to classrooms are low energy and are controlled to ensure that they are only switched on when necessary. The lights automatically switch off when classrooms are vacated for a certain period of time.

**ICT Statement**

Castle View School's ICT vision is focussed upon the interactive facilitation of learning. New and emerging technologies are provided to supplement the focus on good practice in the learning environment. There is a clear focus on the provision of more personalised and flexible technology opportunities aligned to the curriculum development, in order to maximise the support for the learning taking place. Learning spaces will be fitted with a common technological platform to ensure equality of provision. The School sees technology as a tool for supporting learning, and not as an end in itself, and the range of technologies available to the School community will make learning more accessible. The integrated Change Management programme is aligned to the School requirements and priorities, to embed the technology into the learning programme.

**Construction Statement**

The building is located within the grounds of the existing Furtherwick Park School.

The construction of the new school is taking place while parts of the old school are being used by Yr 7 and 11 students. This means that construction is taking place in four phases over a period of two years. Construction and deliveries to site require careful management in order that construction work can occur with minimal disruption to the day to day running of the school and to ensure public safety at all times

**Landscape Statement**

The landscape concept was to create learning spaces around the building that respond to the external micro climate and context and to the internal function of the adjacent sections of the building. The bulk of external teaching and social spaces enjoy a southerly aspect and positive micro climate.

The main building sits on a raised section of the site as a response to the flood risk mitigation requirements. The building formation and external site layout takes advantage of the level changes to divide spaces and add interest to the scheme. The design of the external level arrangements allow for convenient circulation.

The layout retains the position of the playing field as an undisturbed 'green field' area. The sports hall, MUGA and playing fields are also tightly clustered to allow for efficient and convenient use for both the School and community users.

