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Schools, Children & Families

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Structural Design:
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Services Design:
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Weatherfoil/HBS

Landscape Design:
Grants

ICT Design:
Skanska RM

Health & Safety Consultant:
Capita Symonds (CDM
coordinator)

Cost Management:
Skanska Construction

Construction:
Skanska Construction

Independent Certifier:
Capita Symonds

Canvey Island, Cornelius Vermuyden School

The Cornelius Vermuyden School site is 150,000m² and is located towards the north-eastern side of Canvey, just beyond the boundary of built-up residential area of the island. The site overlooks Green Belt to the north and west. Secondary dykes extend through the School grounds, bisecting the site along the west-east axis.

The school will be designed to accommodate 900 students aged 11 to 16 and is currently a school and art 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.

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



Vital Statistics

Floor Area in m²:
8,061m²

Construction Cost:
£21.9m

OJEU Date:
February 2008

Operational; Contract Period:
25 years

Completion Date:
May 2012

Site Health & Safety Record:
No reportable accidents



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

Cornelius Vermuyden School has a highly integrated and holistic vision for the use of ICT to facilitate adding value to learning and teaching. Classrooms are being fitted out with the latest technology to aid learning and teaching – examples include using mobile devices such as iPads, Digital visualisers and electronic slates – allowing the teacher to move around within the class and creating a much more interactive experience for learners. This 'teacher toolkit' will enhance opportunities across the curriculum and is supplemented by a phased increase in learner devices. Cutting edge technologies will be included in the form of an Immersive Room. These rooms are innovative, exciting and pivotal learning spaces for a wide range of pupils in the School, across many curriculum areas, bringing learning to life. The integrated Change Management programme is aligned to the School requirements and priorities, to embed the technology into the learning programme.

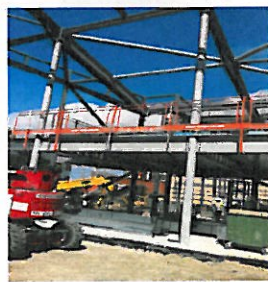
Construction Statement

The new school will be constructed on the existing school site, on the edge of town within Canvey Island. As a mixture of new build and refurbishment, the works involve a four-stage phased programme, including:

- An initial MUGA hard play surface handed over to the school in September 2010 which is a re-provision of the existing hard play area.
- A 2nd construction phase of the new Sports Hall, Music and Drama, and Teacher Training Facility, handed over in April 2011;
- The 3rd phase of new teaching clusters to be handed over in September 2011;
- The 4th and final phase of the new LRC block and the refurbished North Block and Karslake Centre will be completed in December 2011; and
- The existing school and caretaker's house will then be demolished beginning January 2012, with landscaping completed by May 2012.

As at the other project sites, the Skanska Construction team will minimise the impact of construction on the school and surrounding community by:

- Planning work and methods of working to take account of curriculum and timetabling, examination periods, quiet periods, parking, deliveries, school transport arrangements, vehicle and pedestrian points of access;
- Ensuring a safe and secure separation between construction activity and school/community activity;
- Maintaining excellent communication and close liaison with the school and all relevant stakeholders.



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.

Landscape Statement

The new school sits on a broad, largely flat site at the edge of town. The new facilities open up to the landscape, both reaching out and giving views across it and also allowing the landscape to penetrate into the heart of the school. The orientation of the retained buildings naturally sets up a more 'public' zone to the west and a more 'private' zone to the east. The site will retain its perimeter fence and gated entrance. The layout respects the boundaries of the site to the south to allow the school to function comfortably alongside the neighbouring properties.

At the arrival forecourt, bold drifts of maritime planting will extend up to the edge of the entrance drawing the eye into the arrival from the wider landscape setting.

The layout retains outlying sports pitches to the north and east. Two new MUGA's have been provided to the east of the new sports hall. Hard play will be provided in sheltered locations east of the new teaching clusters. A naturally formed elevated sports viewing area overlooking the athletics track / sports fields will facilitate community participation.

The bulk of the external teaching and social spaces will enjoy a southerly aspect and positive micro climate to the east of the 'street' surrounding the new teaching clusters.

To the west, the existing mature tree groupings will be set within a formal lawn and wildflower meadow encouraging the local coastal meadow character to extend into the school grounds, wrapping around the parkland and promoting a greater sense of place.

The planting strategy will also be important for habitat creation, the objective being to promote and a greater diversity of native species through the introduction of wildflower meadow, wetland, hedgerow and scrub, and new tree groupings including pollarded willow and black poplar all of which are recognised important habitats within the local biodiversity action plan. The existing ditches will be important sites where this will be promoted and managed and developed as ecology trails.

The school will celebrate its visual arts specialism in a variety of ways, including opportunities for temporary displays of both students' work and visiting exhibitions in the external courtyards. Wireless access to ICT will be available in all huddles, external dining and outside courtyards.

