

Service Group:
Schools, Children & Families

Project Sponsor:
Terry Reynolds

Project Manager:
Paul Critchley

Procurement Management:
MPI

Building Design:
Haverstocks

Structural Design:
Skanska Technology

Services Design:
Skanska Rashleigh
Weatherfoil/HBS

Landscape Design:
Wynne-Williams

Health & Safety Consultant:
Capita Symonds (CDM
coordinator)

Cost Management:
Skanska Construction

Construction:
Skanska Construction

Independent Certifier:
Capita Symonds

Chelmsford, Columbus College

Columbus College site gross internal area is 4,376m² which was constructed on land that was previously part of the existing St John Payne School.

The site is located in the Patching Hall Ward, within the northern periphery of urban Chelmsford. The area is surrounded by farmland and housing.

The co-location of the College with St John Payne School enables joint use of the new facilities by students from both schools.

The building is open to the community through different facilities. The 'Columbus Square' offers an open frontage with bold signage and integrated artwork that welcomes the community in. The café is open to the community and has secure management, easy public access and enticing views into the College. It also links into the 'Columbus Square' for events. The café allows for vocational and enterprising opportunities.

The two-storey College has a much bolder presence than the School through the 'Columbus Square' and the atrium form. This along with the other zones and community presence expresses the maturity of the students and their passage into adulthood.

The design set out to achieve 'green' buildings and the 'Very Good' score for BREEAM reflects this.

Externally, the design exudes a simplistic feel with formal soft landscaping including a row of large trees directing pupils to the entrance. Seats are provided along central green, and low walls allow seating around the square.

The Eco-courtyard directly links the internal specialist spaces while providing a sustainable learning environment for students and staff. The courtyard has targeted plant species areas for specific eco-learning experiences which provide a chance to stimulate the senses.

Food growing has been incorporated into the food technology garden.

Between the College and the sports hall and the MUGA (Multi Use Games Area) there is an avenue of green spaces for the College and St John Payne School including a social zone, therapy spaces and an external gym. A new, large car park for both the College and School with some spaces for St John Payne will be constructed with access off Partridge Avenue.

The internal teaching spaces have been incorporated with external garden zones. The discovery zone and creative zone can be combined to provide a larger teaching space for outdoor experiments etc.



Vital Statistics

Floor Area in m²:
1500m²

Construction Cost:
£20.3m (incl College)

OJEU Date:
November 2008

Operational Contract Period:
25 years

Completion Date:
January 2012

Site Health & Safety Record:
No reportable accidents



Building Design & Sustainability Statement

The College has a strong form and is a significant building in the local context. It has two-storey 'arms' enclosing 'Columbus Square', the central atrium and the eco-courtyard. The northern arm is geometric in plan and constructed predominantly from brick to align with and reflect the St John Payne School. In contrast the southern arm is much softer and has a sweeping curve announcing itself to those arriving from the south. This will be constructed from timber with a green planted screen. The two arms are brought together by the central atrium and the eco-courtyard at it's heart. Externally there is a low maintenance water feature which uses rain harvested from the college roof.

Structural Design Statement

The new building will be an in-situ reinforced two storey concrete frame building. It comprises of two main blocks each two-storey height, separated by two atria; one covered forming the central hall and the other open to form the eco courtyard. Three bridges link the main blocks at first floor level. The ground floor slab is designed to be ground bearing. The ground floor slab has an integral underfloor heating system. The reinforced concrete column and shear wall foundations are shallow pad foundations, typically 550mm thick which bear on the underlying stiff clay sub-soil. The concrete structure will comprise of 300mm thick flat slabs generally supported on 300mm square columns internally and 250x300mm columns at the perimeter. Overall stability of the concrete frame will be achieved by the provision of shear walls in both orthogonal directions.



ICT Statement

The ICT provision at Columbus School and College is designed to be highly personalised and progressive. The addition of new technologies will build upon current practice and is focussed on the varied needs of all learners. The key cornerstone is the 'Rights of Passage' ethos that enables all learners to journey towards independence and equal accessibility of opportunity. The new and emerging technologies provided will prioritise the specific needs of individuals, as well as supplementing opportunities for group interaction. Cutting edge technologies will be included in the form of an Immersive Room for both the School and the College. These rooms are innovative, exciting and pivotal learning spaces for a wide range of pupils in the School. The integrated Change Management programme is aligned to the School requirements and priorities, to embed the technology into the learning programme.



Construction Statement

A temporary car park and access routes were constructed at the beginning of the works and included the provision of wheel washing units to ensure that no dirt or debris was deposited on public roads. The works comprise of the construction of a two storey brick clad, concrete frame building on pad foundations. Site perimeter hoardings were erected to provide physical separation between the public / students and construction. The hoardings were approximately 2.4m high and included viewing windows.

Environmental and Services Design Statement

A biomass boiler, in combination with back-up condensing gas fired boilers and CHP, will be used to heat the college and to generate domestic hot water. A natural ventilation strategy was followed in the college with teaching spaces using 'mixed mode' method provided by windows at high and low level working with local transfer fans when required. Mechanical ventilation is provided in rooms such as the LRC, Internet Café, Kitchen and Hydrotherapy amongst others. High efficiency fluorescent light fittings with energy-saving controls have been used in all areas.

Landscape Statement

The landscape design for the college was based around the shared use environment which needed to incorporate the necessary learning experiences and social integration for campus' pupils, staff and the outside community. The location of the college on the St John Payne School playing fields offered the opportunity for a new landscape setting to be created for the buildings with an enhanced street frontage on Partridge Avenue. A strong planting strategy has been implemented which provided a framework for the variety of spaces that surround the buildings. The design provides an 'Olympic Avenue' which links all the sports facilities into one collective activity zone to allow for easy access while providing additional opportunities for social interaction between students, staff and the wider community. This connection presents a strong sports identity enhancing Columbus' role in providing a local centre for disabled sports.

