



WALNUTS SCHOOL



The Walnuts School is an existing school in Milton Keynes providing 60 places for pupils with Autistic Spectrum Disorder. The existing building has developed on an adhoc basis over a period of years, and is both inadequate in size and in design. This has necessitated the design of a new building which will meet the growing demands of the school by providing places for 90 pupils and will include full time residential accommodation for 30. This facility has not been possible at the current schools location. The new building will enable the education authority to provide suitable education closer to home for pupils who would otherwise have to be sent to schools in other areas.

The design of the scheme has been influenced by specific issues relevant to the needs of the pupils. The teaching building has been shaped to create an inner courtyard, providing a protected and secure external space. The foundation teaching spaces and the residential building, form a second smaller courtyard also providing a sense of enclosure and protection.

In addition to this general aim there are a number of specific design factors that have been integrated into the scheme aimed at creating the optimum environment for the pupils. A key requirement is to avoid features that distract pupils. The main teaching spaces face north to avoid glare or shadows.



The brief asked for the teaching spaces to be simple and repetitive and to restrict views out. The low level glazing in the teaching spaces is opaque for this reason, although a proportion of the glazing remains clear, protected by blinds so staff have the option of a view and connection with the outside world as appropriate. All the teaching spaces have a small withdrawal space, designed to be calm and without windows, as a retreat



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space for pupils who are upset or excessively distracted. Pupils may have difficulty in "transition" between spaces, and this particularly applies to the youngest children. For this reason the foundation teaching space is positioned close to the main entrance where the children's minibuses can deliver and collect children under cover of the entrance canopy. The teaching building will have a purpose designed "kaleidoscope" room, which uses colour, lighting displays and sound to create a therapeutic environment.

Considerable care is being given to the selection of colours for the building in general. A colour consultant has been employed to advise on the choice of colours. A budget has been set aside for art work in order to incorporate works into

both the interior and external spaces, aimed at creating a positive and therapeutic atmosphere. The art work is being carried out in collaboration with the pupils of the existing school to allow an element of continuity from one school to the other.

Security of pupils and staff is a concern. The scheme incorporates access control of key doors and an alarm system enabling staff to call for assistance if necessary. The residential building is designed to include staff stations in the circulation spaces for night time supervision of pupils. Vision panels are included in pupils room doors to allow staff to check the welfare of pupils without waking them. This is an important consideration because children with ASD are more likely to also suffer from epilepsy. The residential building also has overnight



sleeping accommodation for staff, located so that a member of staff is close to each area of bedrooms.

The circulation in the teaching building is designed to give views out into the central courtyard and a sense of connection between the internal and external spaces. Some of the specialist teaching spaces such as for art or food technology are at ground floor level and have been designed to open out onto the courtyard. These are areas where the issue of distraction is less. The design of the external landscape has been developed with the landscape architect to produce a scheme which has visual and tactile interest, and is robust and able to withstand heavy use. There is limited planting since some pupils are likely to be very interested in eating or picking leaves or bark.

The building is designed to operate effectively in thermal terms, with precast concrete floors and roof to provide thermal mass and so manage internal temperatures. A special system of floating ceiling panels has been designed to leave the slabs exposed and so able to have thermal function. Use of a particularly dense type of precast unit has enabled the intermediate floor and roof to meet the acoustic criteria for schools without a continuous ceiling.

Monodraught ventilation chimneys have been incorporated to achieve natural ventilation in all key areas. Use of additional acoustic baffles in conjunction with the Monodraught units keeps the disruptive effect of external noise within acceptable limits.

The building has a steel frame, precast concrete floors and roof, blockwork inner skin to external walls with either cedar or brick outer skin. The single storey parts of the teaching building have a sedum roof. So that these roof areas which are overlooked from the first floor, are of attractive appearance.

The contract value is approximately £6,000,000. The scheme started on site in October 2005 and is due for completion in November 2006 in order to allow the school to equip the building for occupation in January 2007.

PROJECT TEAM

Project Architects: Jim Dorsett, Charlotte Morris, Abdi Aziz
Main Contractor: GRAHAM-England
Structural Engineer: Andrew Howard & Partners
Mechanical & Electrical Engineers: AMK
Quantity Surveyor: AMK
Acoustic Consultants: Cass Allen Associates