

The logo for McAvoy, featuring the company name in a white, lowercase, sans-serif font on a dark blue rectangular background.

Think Smart. Build Smart.



education

Grindon Hall Christian School

Sunderland, Tyne & Wear

The school site sits within a plot bounded by Pennywell Road to the West and Nookside to the South, and is bordered by residential dwellings to the South and North boundary. To the East is a vacant plot, formerly a sports field, as well as The Nook Aged People's Hostel.

Grindon Hall School was formerly Grindon Hall Hospital, but became the current school in 2000. The main house is a two storey light brick faced building with stone detailing to the windows dating from mid 19th century. Internally it possesses a mezzanine level, and steps down to a lower level at the back of the site.

The original building was extended over the years to include a T-shaped extension currently used for classrooms and changing. The school recently adapted a stable block to the Northern boundary to provide further classroom spaces at two levels. Additionally the school has a number of outbuildings to the rear which have a variety of functions including storage, and a popular Nursery provision.

The site has a good mixture of mature trees and hedgerow within its boundary and a sports pitch to the West used primarily for rugby. A new accommodation block was part of the expansion to existing facilities at Grindon Hall.

The school made a successful bid to the Department of Education to achieve Free School status from September 2012. The school's current capacity is now 560 pupils, having started the September 2012 school year with some 540 pupils catering for the high demand from the local community. Growing pupil numbers and the need for additional teaching meant the school premises had to expand. The teaching model at the school is to teach in year groups of up to 40 pupils split into two classes of 20. The school is a through school taking children from the age of 5 through to 18.

The new accommodation was planned so that, together with some reorganisation of the existing buildings, a coherent layout could be achieved that supports the smooth operation of the school. The 'stable block' is a standalone 6th form centre; the main building houses the secondary age pupils and the 14 new classrooms within the new build element accommodates the primary cohort of pupils.

In addition to the classrooms, the new building provides a multi-purpose hall, a kitchen, music classroom and changing facilities. Reorganisation of the existing campus included removal of temporary accommodation and some non-original modifications and extensions to the existing historic building. The stable block is retained and redefined within the new hub configuration. The new building nestles in among the existing school facilities to define a series of external walk ways and play areas corresponding to the different teaching zones.



Landscaping is key in defining the spaces between the new and existing buildings to encourage outside learning and interaction while providing a clear organisational structure to the campus-style hub.

The new building is a part single storey, part two storey L-shaped block that is carefully inserted among the existing buildings to not only provide a coherent layout for the school, but also to ensure that the existing main building remains the principal focus of the school campus.

The new building sits lower than the existing historic building and gently wraps around the rear and side elevations revealing the more significant historic frontages, and forming a series of interconnected external courtyards between the old and new.



PROJECT OVERVIEW

BUILDING TYPE

Primary School, with both modular and rapid build elements.

PROJECT BUDGET

£3,422,000.00. Includes all fees.

TARGET CO₂ EMISSION RATE (TER), Kg CO₂/m² PER ANNUM

15.5

BUILDING CO₂ EMISSION RATE (BER), Kg CO₂/m² PER ANNUM

15.1

DURATION

24 weeks

SPACE HEATING DEMAND

75.39Mj/m²

HEAT LOAD

8.28 kWh/m²

PRIMARY ENERGY DEMAND

74.7kWh/m²

GROUND FLOOR CONSTRUCTION

Classrooms are McAvoy standard modular classroom construction with a 3kN/m² floor loading. Sports hall is a ground bearing concrete slab.

EXTERNAL WALL CONSTRUCTION

Internal leaf is standard timber frame 140 stud with frametherm 32 between studs. Cladding is combination of coloured render, brick slips and Western red cedar.

ROOF CONSTRUCTION

Flat roof throughout, single ply membrane min pitch, 1:80.

WINDOWS

PPC aluminium

DOORS

Pre finished hardwood veneered with vision panels.

CURTAIN WALLS/ROOF LIGHTS

PPC aluminium

AIR PERMEABILITY

7m³/(h.m²) at 50 Pa

HEATING SYSTEM

Air source heat pumps, ventilation and heat recovery, gas fired boiler providing hot water for kitchen and underfloor heating for sports hall.

VENTILATION

Mechanical ventilation (combined heating, cooling and heat recovery unit). Controlled by BMS with inbuilt CO₂ monitors activating fresh air when needed. Natural ventilation in sports hall with high level vents.

The new buildings are clad externally in a combination of natural cedar cladding and through coloured render. The design philosophy is to evoke the spirit of a tree house sitting comfortably, as it does, within a mature wooded setting. The first floor overhangs the ground floor and is clad in timber, the tree house, with the ground floor largely rendered to be more neutral. The render is interspersed with a random pattern of timber panelling representing the trunks supporting the tree house above.



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