University Centre
Farnborough College of Technology

Nicholas Hare Architects


University Centre Farnborough

A public face for a successful College

Farnborough College of Technology is a successful Further Education College, which also offers degree courses with the University of Surrey. The College is located next to one of the main roads out of town. It is under the flight path to the local airport. Most of the buildings on the campus were designed in the 1980s by Sir Colin Stansfield-Smith and his team at Hampshire County Council. They are arranged around a central pedestrian street at right angles to the road. They formed an excellent working environment, but were hidden from public view behind a belt of trees and some low grade older buildings.

Part of the brief for the new building was therefore to announce on the street the presence of a high quality educational establishment – a striking building was required. Its main functional purposes were to create a new entrance to the College and to the library, an internet café, seminar rooms and informal study spaces.

Design concept

The design concept exploited the diagonal route from the main arrival point in the corner of the site through to the start of the existing pedestrian spine. This was dramatised using gently sloping roofs, with opposing slopes on each side of the diagonal route, so that the form of the building recalls two slices of cake arranged with the diagonal rooflight mediating between them. The projecting points at each end contain the escape stairs from the library on the first floor of the building. Externally, they help to form protected areas at either end of the building.

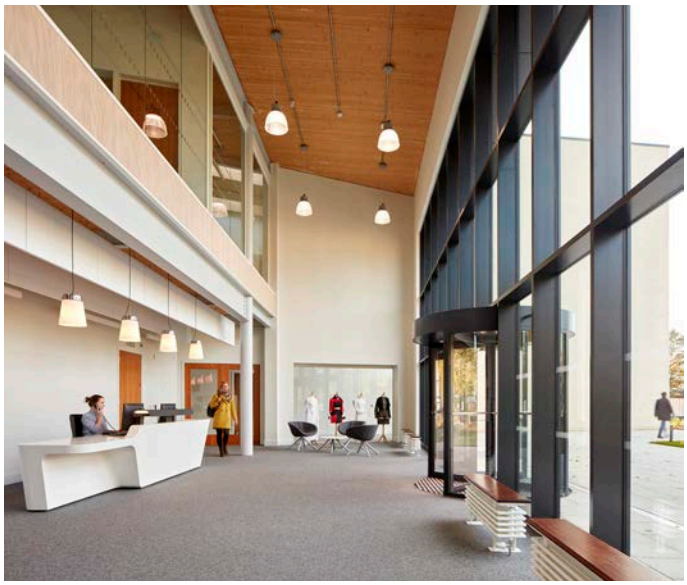
The building and its setting

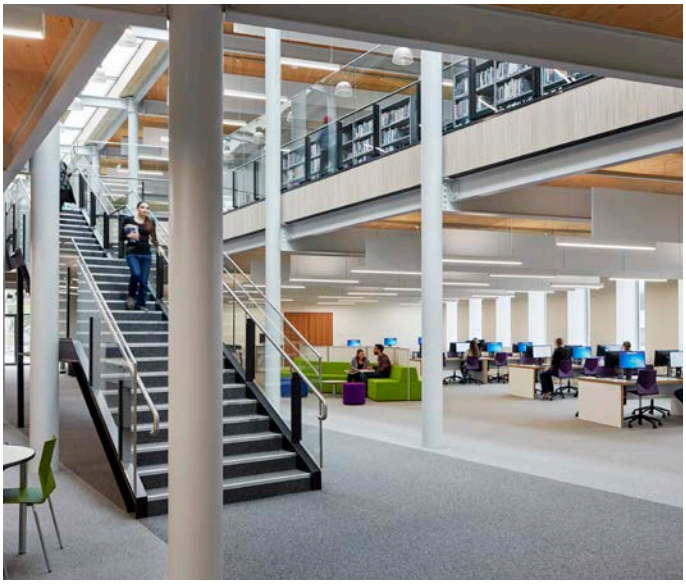
A dramatic 'prow' extends towards the approach route from the north, guiding the eye towards the main entrance and protecting a paved entrance plaza. The plaza is further defined by a light screen of birch trees, whose delicacy acts as a foil to the geometric form of the building. A similar, smaller prow on the south side protects the terrace for the café, shaded by existing trees.

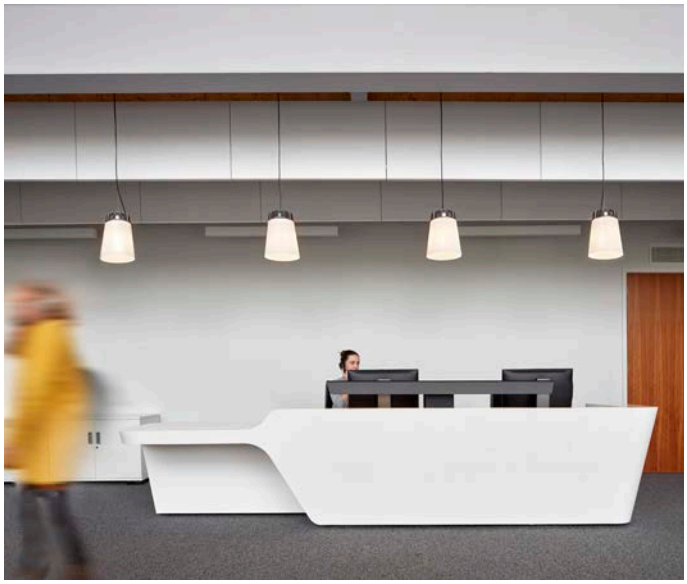
The building is clad in pale textured brickwork, with dark vertical fins establishing a rhythm along the east and west elevations. Between the building and the road some dark opaque conifers were removed to be replaced by groups of birches, to emphasise both the presence and the accessibility of the College.

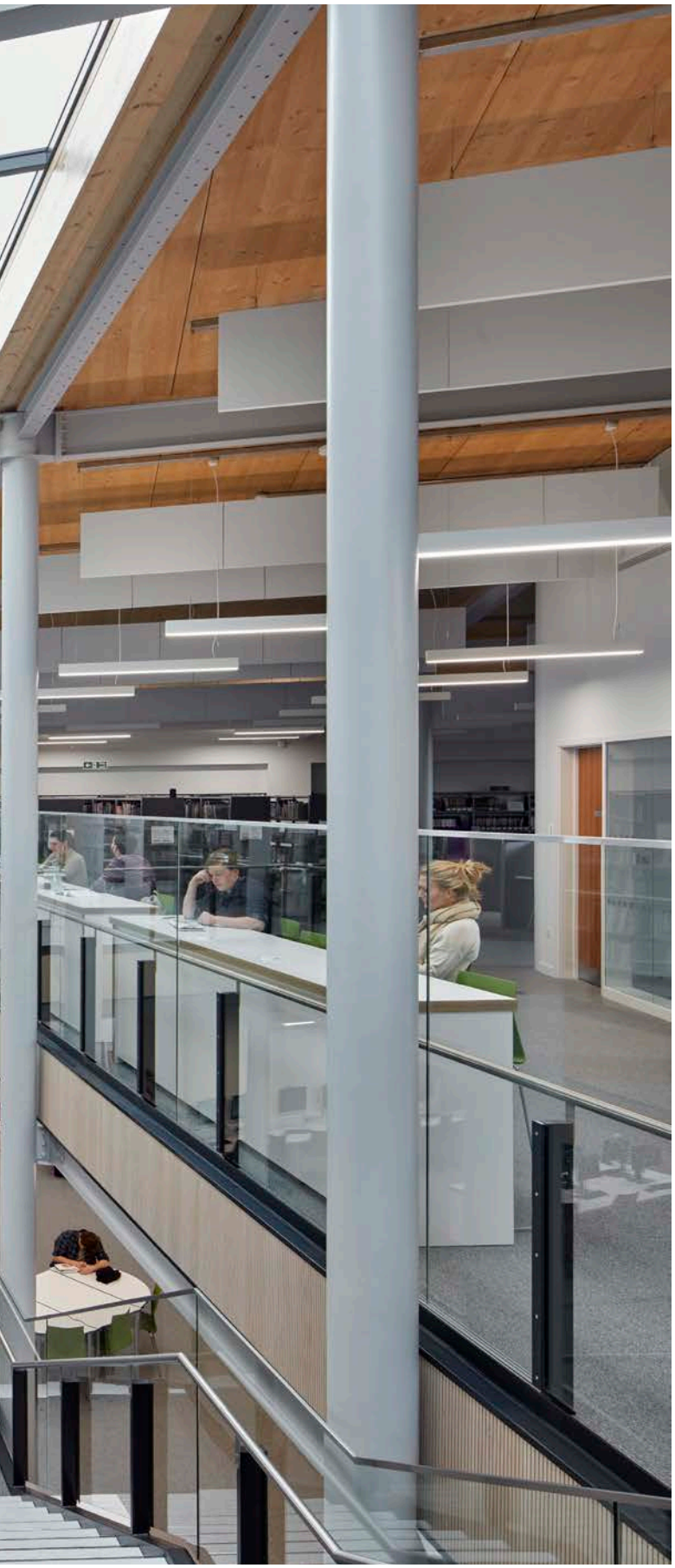
Inside the building

Internally, the diagonal route is naturally lit by sloping rooflights, and is lined on either side by circular steel columns, which echo those of the 1980s pedestrian street. The main structure is formed of steel columns and beams, with visible cross-laminated timber forming the first floor and roof. This exposure of the essential construction seems appropriate to a College with a strong reputation in engineering. In the same spirit, acoustic panels are suspended between the slender LED lights. The tall windows and the rooflights contribute to the feeling of a building flooded with daylight, although they were carefully sized to avoid excessive solar gain.









"Nicholas Hare Architects embraced our vision for the building and worked with endless enthusiasm to give us the building we had asked for."

Marion Shepherd, Director of Building Projects
Farnborough College of Technology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Sustainability

The issue of sustainability has been central in guiding decisions on all aspects of the project.

The choice of steel and CLT as the main construction materials means that the building has low embodied energy, because of the use of timber and the high efficiency of the structure, using each material for what it is structurally best at doing. Similarly with the use of brickwork with lime mortar and mineral wool insulated cassettes for the inner leaf and Fermacell internally. The building will be easy to maintain and, when the time comes, to demolish and recycle.

Energy performance

The building envelope is designed to achieve comfortable conditions through primarily passive means. It is highly insulated, and the glazing and rooflights are carefully scaled to give excellent daylight without overheating. All of the lights use LEDs with PIR controls, and the displacement mechanical ventilation system uses efficient heat recovery in winter. The building achieved an EPC 'B' rating and a 'very good' BREEAM rating, without the use of on-site generation.

Universal design

A primary purpose of the new building is to relate the College to the public realm. It is both highly visible and inviting, and designed to be accessible for everyone, whether members of the College, of the local community or visitors.

There are drop-off points for the main entrance plaza, as well as parking spaces for the disabled, close to the entrance and at the same level. There are automatic sliding doors at both ends of the central diagonal route through the building, with automatic powered doors giving access to the reception space from the diagonal route and the external plaza.

All entrances to the building are level. Both the ground and first floors are level, and they are linked by the lift beside the central diagonal route, in a position clearly related to the central access stair. There are accessible WC's on both levels, less than 40 m away from the furthest point. The ground floor one is directly accessible from the main reception area. Cubicles for the ambulant disabled are included in the generous toilet provisions on both levels.

The needs of those with impaired sight have been carefully considered, with attention to the necessary contrast levels and, for instance, a different carpet shade to help define the diagonal route through the building. Acoustics within the building have been carefully managed, with acoustic separation and absorption designed to give good levels of audibility, with an induction loop in the largest meeting space.

Client:

Farnborough College of Technology

Contractor:
Mace

Structural engineers:
Peter Brett Associates

Environmental/M&E engineers:
Full Electrical Services Ltd

Project management:
MEA Ltd

Landscape architects:
Colour Urban Design Ltd

Planning consultant:
Pegasus Group

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