

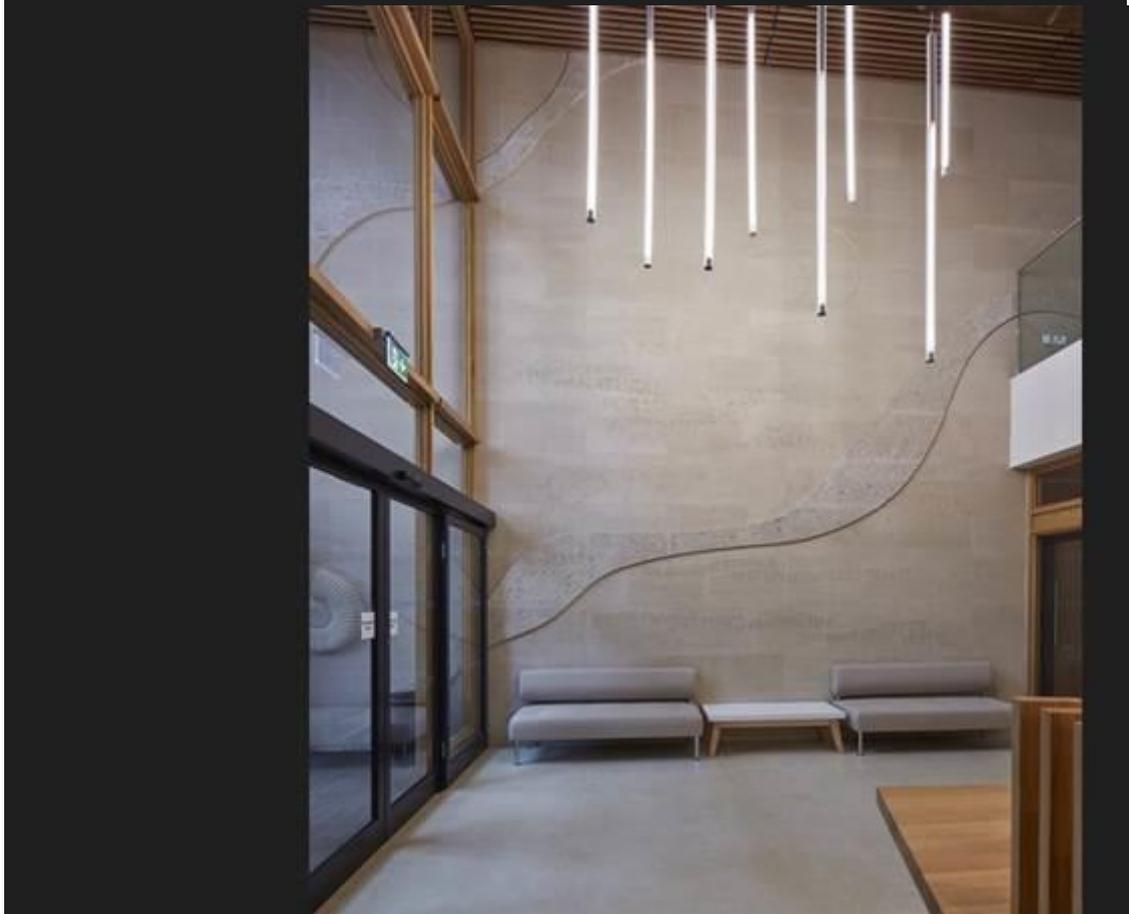
Architype deploys a rich palette at Highgate Junior School

26 JANUARY, 2017 BY [HATTIE HARTMAN](#) AJ

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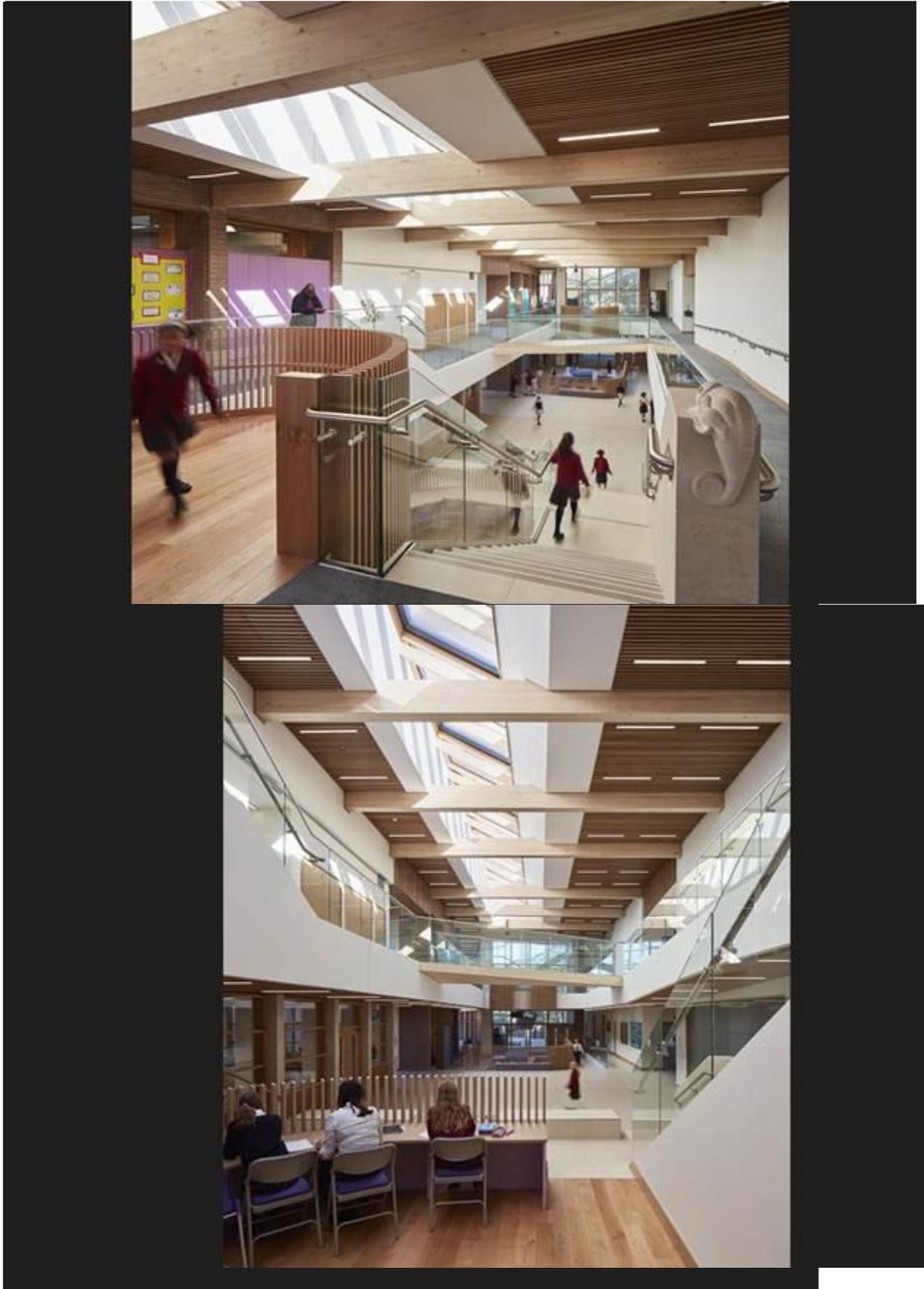
















COMMENT

Hattie Hartman takes a look around Architype's first private school

If you search for 'Architype' on Google, the practice pops up as 'the UK's leading Passivhaus, sustainable architect'. The description is not unwarranted; the firm has won the AJ100's Sustainable Practice of the Year Award for the past two years.

Most clients who commission Architype want first and foremost a green building. This was not the case at Highgate Junior School, the practice's first commission for a private school. Although the school's capital projects manager Simon Martini (himself an Italian architect, hailing from Rome) initially met an Architype director at a Passivhaus conference, sustainability was not the determining factor in the practice winning the job. The project's initial brief aimed for BREEAM Very Good status and the school had specifically ruled out Passivhaus certification, although Architype founding director Bob Hayes notes that the building is nevertheless designed 'according to Passivhaus principles'.

After using the RIBA's client advisory service to create a longlist of some 50 practices, Martini trawled through websites and visited offices before six practices, including van Heyningen & Haward and Curl la Tourelle Architects, were invited to submit concept schemes.

Hayes believes Architype won the commission because it presented a very clear diagram of how the building would relate to the site. It was all about the context: the street frontage on Bishopswood Road, which is in the Highgate conservation area, and 'bringing the landscape in'. Architype opted to orient

the classrooms towards the school's playing fields, located at the heart of the site, even though this implied a west-facing building, rather than south-facing, which would have been more in keeping with the Passivhaus approach.

Many of Architype's trademark touches are apparent at Highgate Junior School

Founded in 1984, Architype has designed or refurbished more than 50 primary schools across the UK. Many of its trademark touches are apparent at Highgate Junior School: a double-height atrium with clerestory windows, lots of timber joinery and stair balustrades, a memorable assembly hall (here most often dubbed a multipurpose room), and keen attention to daylight.

Hayes notes that it was 'lovely to work with the more generous budget' enabled by the resources of a private school, and that the building was designed for a 100 year-plus life. Materials were selected both for their durability and thermal mass. The cost per square metre is approximately double that of a typical state-sector Architype school – even those certified Passivhaus – and it shows.

The palette of materials includes Portland stone (personally selected by client and architect at a quarry in Dorset), oak joinery and ceilings, and more than 55,000 oversized hand-made bricks from the same York supplier used for Herzog & de Meuron's Tate Modern Switch House and O'Donnell + Tuomey's Saw Swee Hock Student Centre at the London School of Economics.

The site, which falls by approximately 3m from south to north, was not without its challenges. Ingleholme, a Victorian villa belonging to the school, occupies a prominent corner of Hampstead Lane, midway between Highgate Village and Kenwood House at the south end of the site. Although the school's brief stated that Ingleholme could either be retained or demolished, all six teams at competition stage opted to keep the building.

With the existing villa retained at the corner, the junior school reads deliberately and unashamedly as three buildings in one. Transformed into a semi-independent teaching block for music and drama, Ingleholme is linked to the main building with a glazed slot, behind which sits a new stair leading to upper-floor music rooms. This connecting space is one of the most inviting in the building, and one can imagine generations of children welcoming the trek to their music and drama lessons in cozy Ingleholme.

The main block of the new school houses an assembly hall with retractable seating for all 320 students, a light-filled central atrium and the visitors' entrance. It is easily identifiable because 'Highgate Junior School' is hand-carved into the handsome Portland stone façade by Witney-based sculptors

Fiona and Alec Peever, also responsible for more than a dozen stone animal sculptures, such as ammonites and platypuses, which make surprise appearances throughout the building. This epitomises what Hayes describes as the school's desire for a 'contemporary heritage' feel.

Beyond the main block, one reaches a brick-clad art, science and design technology building with brick jali screens in front of openable windows. While this tripartite massing works well as a contextual nod to the syncopated massing of the stocky Victorian villas nearby, one wonders if it might have been achieved less literally. 'The client fell in love with the competition scheme and didn't want to change anything, so we had to deliver it,' notes Hayes.

The plan also reads as a concept diagram in built form

This comment is revealing, because the plan also reads as a concept diagram in built form – the letter 'H' turned sideways to bring light into the central atrium, with speciality teaching and the assembly hall along the street and the classrooms fronting the playing fields to the west. Deep vertical fins and balcony and roof overhangs are used to control daylight glare in the classrooms.

The outdoor courtyards embraced by the arms of the H are the school's least successful spaces, reading as leftover places. This is not so critical for the south courtyard because it serves only as spillover space for drama teaching, but it is of greater concern in the north-facing court, which serves as the main entrance and exit for students, the place where parents and carers gather after school to collect the children.

This sunless area is the equivalent of the 'school steps', yet it is not a particularly inviting place to wait on a wet winter afternoon.

'We wanted the building to be fun,' observes Hayes as we enter the atrium and discover a stone frog permanently peeping over a step. The atrium is an airy, welcoming place, with both the school's assembly hall and library opening on to it and enlivening it. Fixed cluster-pod seating areas for small group study, adapted from Danish schools, lack intimacy in this double-height circulation space and seem a bit wrong. Spanning the atrium at the second floor level, a diagonal bridge leads awkwardly to the IT server cupboard.

Despite these misgivings, Architype has added a well-considered quality building to Highgate School's estate. The countless meetings and workshops with the client during the design phase are evident, as is the presence of an informed client with an architect in the estate office and a building surveyor as

chair of the board of governors. One senses quality throughout. This is a thoughtful building which should stand the test of time.

Detail

The primary structure is a reinforced concrete frame on piled foundations, with floor slabs and walls. Concrete was chosen for its longevity, thermal mass and airtightness.

The external brickwork rainscreen is predominantly built with 440 x 103 x 38mm York hand-made bricks, and is supported on Ancon stainless-steel support brackets fixed at ground level and at window heads to the concrete structure, tied back to the structure with low-thermal-conductivity basalt wall ties to minimise cold bridging. Lime mortar is used throughout to eliminate the requirement of movement joints in the external brickwork. The 250mm-wide cavity is filled with blown mineral-fibre insulation.

For the jalis in front of the openable windows and screening the staff balcony, the brick is 140mm wide to provide additional depth for drilling the vertical stainless-steel tie rods. The jali provides additional security, allows the inward-opening windows to be fully opened without compromising pupil safety, and allows secure night-time cooling.

The cavity insulation continues to the top of the roof parapet, where it links with the roof insulation to form a continuous insulated blanket around the superstructure.

Triple-glazed, inward-opening windows are set within the insulation layer and tied back to the concrete walls with airtightness tape between them concealed behind the oak faced plywood linings.

Bob Hayes, project director, Architype

Client's view

Architype really understood the essential ingredients to create an inspirational learning environment: the use of light and space; the incorporation of intriguingly chosen natural elements; a room configuration that flows; and an effective visual and actual connection with the outside spaces dedicated to learning and play.

Architype's experience in the design of educational buildings was evident from the outset of the competition phase. It grasped the intricate design requirements of the building's young users.

The incorporation of an artist into the project team was also highly successful, bringing with it a common natural-world theme that provides an enduring and universal appeal. The ability for pupils to 'discover' this artwork as they make their way around the building adds further interest and excitement.

The retention of Ingleholme, a 19th-century villa, and its incorporation in the new building design was thoughtfully executed, providing both a visual reference to the school's past and a link to the new building's progressive style.

Architype maximised the logic and the aesthetic potential of the building's positioning. Ground and first-floor classrooms offer views across the splendours of our hallmark playing fields while offices and laboratories enjoy the street elevation.

Architype's vision extended beyond the aesthetic; it has delivered a building with longevity and manageability at the heart of its design. Built with high-grade materials along Passivhaus principles, the new junior school will be economical to operate and easily maintained, given the convenient access to the building's services that has been created throughout.

Simon Martini, capital projects manager, Highgate Junior School



SOURCE: DENNIS GILBERT

Project data

Start on site March 2014

Completion August 2016

Gross internal floor area 4,288m²

Form of contract Traditional JCT Standard Building Contract with Quantities

Procurement route Competitive tender

Construction cost £20 million

Architect Architype

Client Highgate School (The Wardens and Governors of the Possessions, Revenues and Goods of the Free Grammar School of Sir Roger Cholmeley)

Structural engineer Built Engineers

M&E consultant Skelly & Couch

Landscape architect Katy Staton Landscape Architecture

Planning consultant Turley Associates

Acoustic engineer Applied Acoustic Design

Artists Alec and Fiona Peever

CDM coordinator TGA Building Consultancy

Approved building inspector London Borough of Haringey

Main contractor Wates Construction

Annual CO₂ emissions 8.8kg/m²

Percentage of floor area with daylight factor >2% 86 per cent

Percentage of floor area with daylight factor >5% 38 per cent

On-site energy generation 20 per cent

Annual mains water consumption 1.87m³ per occupant (estimated term-time consumption)

Airtightness at 50Pa 2.59m³/h.m² (new build), 4.82m³/h.m² (Ingleholme refurbishment)

Heating load 1.04 kWh/m²/year

Hot water load 15 kWh/m²/year

Overall area-weighted U-value 0.23 W/m²k (new build), 0.47 W/m²k (Ingleholme refurbishment)

Link to full AJ article: <https://www.architectsjournal.co.uk/buildings/architype-deploys-a-rich-palette-at-highgate-junior-school/10016701.article?blocktitle=Big-picture-story&contentID=13625>