

Westminster Academy

at the Naim Dangoor Centre

A city academy for 1175 students and 128 staff members planned around a linear atrium on a challenging site adjacent to an elevated motorway. Colour has been used extensively on the elevations, a reaction to the gritty quality of the area. The local community, which was fully involved in the project, has extensive access to both the school and its sports facilities.

The building is a creative, engaging environment that uses connectivity and flexibility to provide pupils with a place where they can take individual responsibility for their education. The internal configuration encourages team working by both staff and pupils and provides facilities for the pupils' families as well as local residents.

Sector : Education
Location : London, UK
Address : 255 Harrow Road
London W2 5EZ
Client : Westminster Acade

Westminster Academy, Westminster City Council, DCSF and Exilarch

Foundation

Value: £25m
Start: August 2003
Completion: September 2007
Contract Type: Contract Type

Quantities

Key Dates

August 2003: Allford Hall Monaghan Morris appointed as design architect for

Westminster Academy (Chelsfield plc original sponsors)

January 2004 : Stage C Report issued
June 2004 : Stage D Report issued

June 2004 : Detailed Planning Application submitted

October 2004 : Planning approval for scheme received

December 2004 : Stage E Report issued **June 2005 :** Scheme tendered

October 2005 : Galliford Try appointed as main contractor

December 2005 : Commencement of works on site by Galliford Try

September 2006 : Westminster Academy opens in Penfold Street premises

January 2007: New sponsor: Exilarch Foundation (David Dangoor)

September 2007: Completion of main building

October 2007: Completion of sports building and landscape
September 2007: Westminster Academy opens for pupils

Areas

Brief Planning History

The planning application was submitted to the Westminster City Council on the 24th June 2004. The application was made for full planning permission for the:

- > Erection of 4 to 5 storey city academy building fronting Harrow Road with associated external grounds;
- > Erection of 2 storey sports hall (shared academy and community facility) with associated external grounds in Torquay Street; and
- > Upgrade of existing pedestrian right of way and new landscaping.

Planning approval for the scheme was received in October 2004.

Project Team

Client: Westminster Academy, Westminster

City Council, DCSF and Exilarch

Foundation

Sponsor:Exilarch Foundation, David DangoorArchitect:Allford Hall Monaghan MorrisLead Consultant:Building Design Partnership

Project Manager :Capita SymondsCost Consultant :Davis LangdonMain Contractor :Galliford Try

FF&E Consultant: Building Design Partnership

Environmental Designer : Morag Myerscough/Studio Myerscough

ICT Consultant : Hornagold & Hills
Security Consultant : Buro Happold

Structural Engineer: Building Design Partnership

Catering Consultant : Winton Nightingale

Services Engineer :Building Design PartnershipAcoustic Consultant :Sandy Brown AssociatesLandscape Architect :Building Design Partnership

Fire Consultant: Warrington Fire

Lighting Engineer: Building Design Partnership

Building Control: MLM

Planning Supervisor: PCM Safety

Allford Hall Monaghan Morris Team Members

Simon Allford, Sarah Baccin, Sonia Browse, Robert Burton, Ming Chung, Julie Franklin, Mark Foster, Alexis Germanos, Ben Gibson, Susan Le Good, Jonathan Hall, Lee Higson, Stuart Hill, Gareth Jones, Victor Kite, Demetra Lindsay, Paul Monaghan, Peter Morris, Steve Morton, Gabriel Musat, Mira Porstmann, Goh Ong, Anna Radcliffe, Alexa Ratcliffe, Debby Ray, Heidrun Schuhmann, Laura Stephenson, Matt Thornley & James White.

For further information and images please contact

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A Vision for Learning

The Westminster Academy is a new secondary school in West London, housing 1175 pupils and 128 staff members. The sponsor, Exilarch Foundation and the head, Alison Banks, had a powerful vision of learning for the school that embraces the latest thinking in education and the ideals of the RSA Curriculum of the 21st century. The driving idea was to create a sustainable learning environment that inspired creativity and enabled connectivity and flexibility. This approach seeks to create a completely different learning environment – one that raises expectations in terms of what this might mean in the 21st century.

In response to a clear and progressive brief, the architect created a building that draws upon the extensive and varied experience of their practice in a range of sectors. The new school creates an environment where the core values of enterprise, global citizenship and communication can be delivered through a flexible and responsive learning framework that gives pupils individual responsibility for their education and encourages team working by both staff and pupils.

Civic Pride

The Academy is located in a gritty urban context, dominated by the Westway, I 960s tower blocks and the Harrow Road. The site is also crossed by a public right of way and houses several public sports pitches. The physical complexities of the site are matched by the cultural and social challenges of working in one of the poorest areas in London where 95% of students are bilingual. The aspiration was to create a new civic landmark in which the pupils, staff and wider community felt a sense of pride. The school is a 5-storey building located along one edge of the site lining the Harrow Road housing all facilities except the sports hall separated to allow for year round community use.

The simple form of the school, responding to the need for a fully sealed building, has a bold, expressive façade stratified into large panels of glazing, vibrantly coloured terracotta tiles in green and yellow and a series of illuminated screens. These layers, relating to the functions inside, create a dramatic building by day that transforms into a glowing beacon at night. The rear elevation facing the Westway continues this stratification with deep, cantilevered balconies overlooking the terraced landscape. As well as providing sheltered outdoor spaces on all levels, these balconies act as the primary means of escape for the classrooms and therefore allow the central atrium to be totally open.

Green Environment

Sustainability was a core theme of the project approached through the design of all elements and the selection of materials and services. Within the glazed atrium, which provides significant amounts of natural light within the building, the system for shading has been designed as a sculptural feature running north/south. The system of baffles, coloured green and yellow in one direction and painted white on the reverse to maximise reflected light provide effective shading but are made from simple door blanks.

Due to the requirement to keep out noise from the Westway and Harrow Road the building is sealed and so mechanically ventilated, which provides greater flexibility in use to spaces internally.

The in-situ, exposed concrete frame, projecting balconies on the rear elevation and the sedum roof are all sustainable features that have been designed to add drama to the school whilst delivering a range of environmental advantages – now and during the life of the building.

Security & Stimulation

For the staff, the recipe for effective learning is 'security + stimulation' and so the plan was driven by ideas of flexibility and connectivity. A 'market place' on the ground floor physically connects to all the key communal spaces at this level and visually connects to the whole school via the full height atrium with a highly-coloured sculptural roof. This dramatic central space embodies the needs of the new learning framework by operating as the hub of the school. Pupils are encouraged to plan their own working schedule and are free to move between the café and informal working spaces, a multi-functional "Long Room", the library and the Green Room (lecture theatre) that can hold an entire year group.

Using Space Syntax to predict people flow around the school, AHMM designed a large central staircase as the main circulation for the school. Scissor Stairs, inspired by Escher, at each end of the building act as fire escapes only. On each floor, wide corridors allow ease of flow and are terminated by floor-to-ceiling glazing with views to the mature trees around the site. These long views and internally glazed teaching and break-out spaces create an open feel whilst providing acoustically insulated spaces and a highly efficient and clearly understood plan.

The ideas of passive surveillance and connectivity also dictated the central location of the toilets that also have two entrances to reduce the risk of bullying. These areas are designed to a high specification with individual cubicles complete with basin, dryers and full height walls for privacy and communal areas dominated by long mirrors. Another unusual feature is the location of the dining room, 'Sky Dining', found at the top of the building, providing diners with views south across the Westway. Both the dining room and social spaces on this floor have access to large terraces front and back.

Landscape

The landscape around the two main buildings is one large terraced space leading to seven sport pitches located under the Westway for weather protection. The concrete terraces provide robust in-situ steps and benches within an orchard of new trees with different surfaces marking areas that can be used for a variety of uses. A long strata of timber clad wall at ground level ties the main building, the landscape and the Academy Sport together. The ground floor consists of a bank of locker rooms, with the dance studio and sports hall on the first floor. Diffused light will enter one end of the sports hall through Reglit glass, with the rest of the building clad in an untreated larch rainscreen. Slicing through the site is a raised bridge that maintains the public right of way.

Academy Sport

The Academy Sport building is constructed from concrete to ground floor and steel frame above. The ground floor consists of a bank of seven pairs of locker rooms, one for each sports pitch. The dance studio and sports hall are on the first floor with sprung rubber and timber floors respectively. Diffused light will enter the end of the sports hall through 'Reglit' glass, with the remainder of the building clad entirely in an untreated larch rainscreen. The building and sports pitches will be shared by community and students with managed access throughout the day.

Materials & Graphics

In contrast to the bold colourful exterior, a more austere approach to materials has been employed internally where raw concrete, painted blockwork, timber and acoustic baffles intentionally foreground the teaching environment. The building in this case is seen as a backdrop to learning and aims to encourage exhibition and display. The extensive use of graphics by Studio Myerscough also draws on commercial and civic environments. Bold branding for the school and the spaces within, a rich colour palette and large graphic elements relate to the vibrant reality of urban life beyond the school walls and to an international community – both on the doorstep and beyond.

Conclusion

Westminster Academy is a school that sets new standards for educational buildings, meeting the demands of a highly innovative and radical educational agenda and creating a place where pupils, staff and the community as a whole can come to learn, interact and aspire.



Site Analysis

KEY

- I Vehicular access

- Venicular access
 Main North facing street frontage
 Noise pollution from Harrow Road
 Noise pollution form Westway
 Notting Hill Area
 Public right of way
 Main entrances for main building & sports hall

Existing Site Photos



Existing site photos





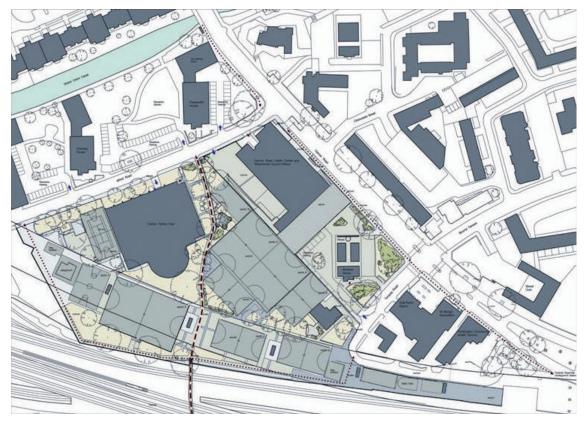




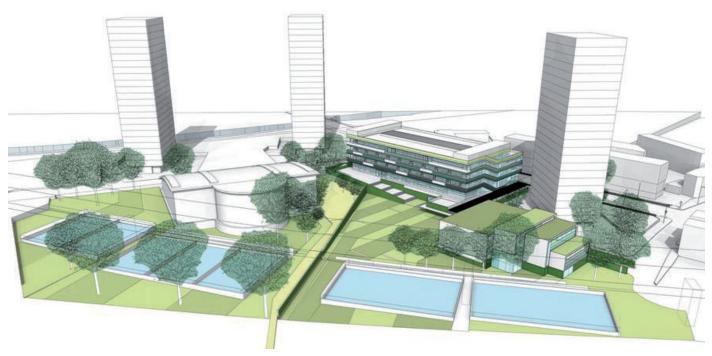




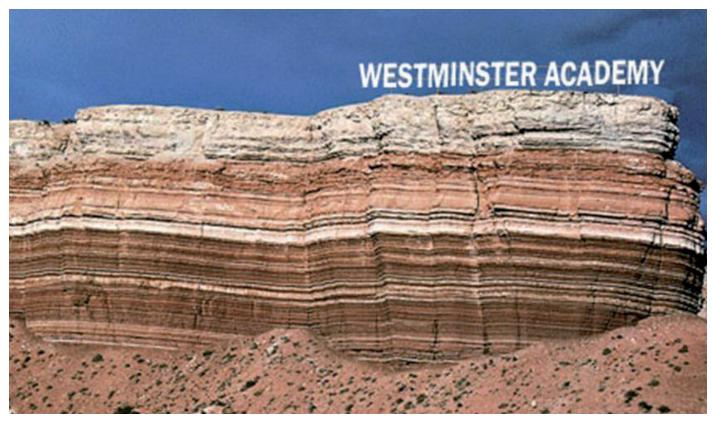




Existing site plan



Proposed scheme aerial view



Inspiration: geological stratification



Concept sketch



Façade & massing view



Bridget Riley 'Nataraja' 1993 influence on façade lavering

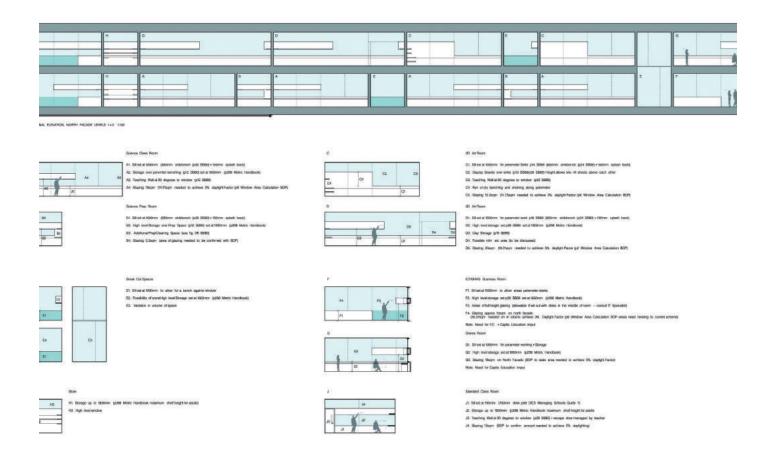


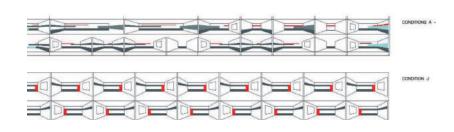
Bauhaus textile - influence on façade layering



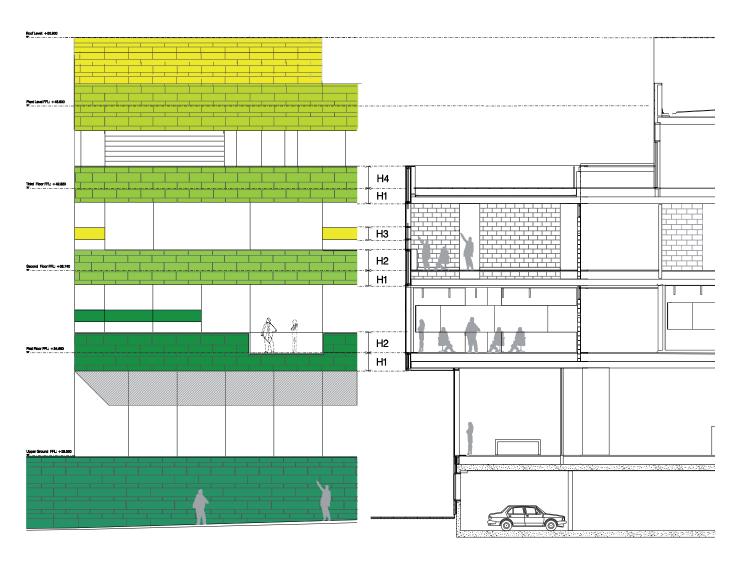
Bauhaus textile - influence on façade layering

Design Development Images: Outside



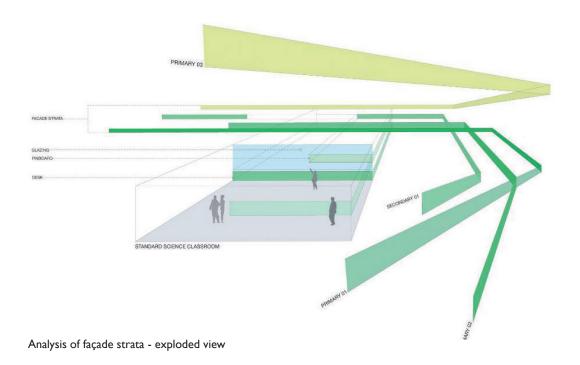






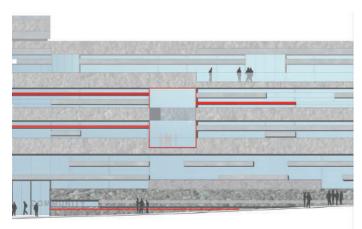
PRIMARY STRATA TYPE 03; Cladding Zone between H4 FFL and Parapet height PRIMARY STRATA TYPE 01; Cladding zone to slab edge ΗΙ and floor void SECONDARY STRATA; pin board/light box height Н3 based on ergonomic average of building user. Secondary positioning determined by total coordination of building components and materials PRIMARY STRATA TYPE 01; cladding zone to slab edge ΗІ and floor void PRIMARY STRATA TYPE 02; cladding zone between H2 FFL and work surface height НΙ PRIMARY STRATA TYPE 01; cladding zone to slab edge and floor void

Design Development Images: Outside

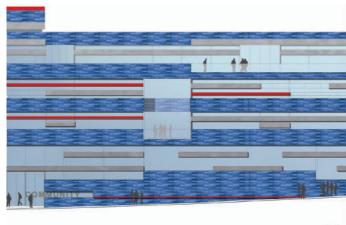




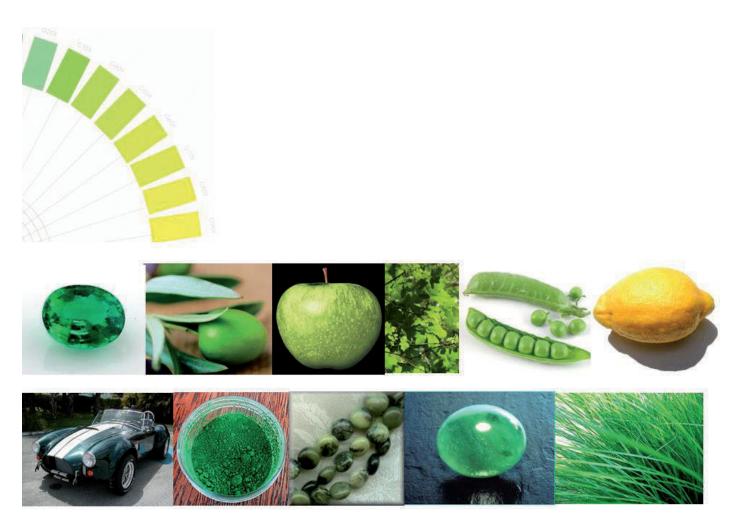
Façade material & colour study



Façade material & colour study



Façade material & colour study



Study of greens for façade cladding



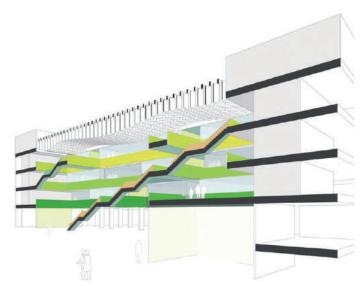
Terracotta sample tiles for cladding



Planning view North East corner







Study of atrium section & roof



Study of atrium colours & graphics



Study of corridor baffles



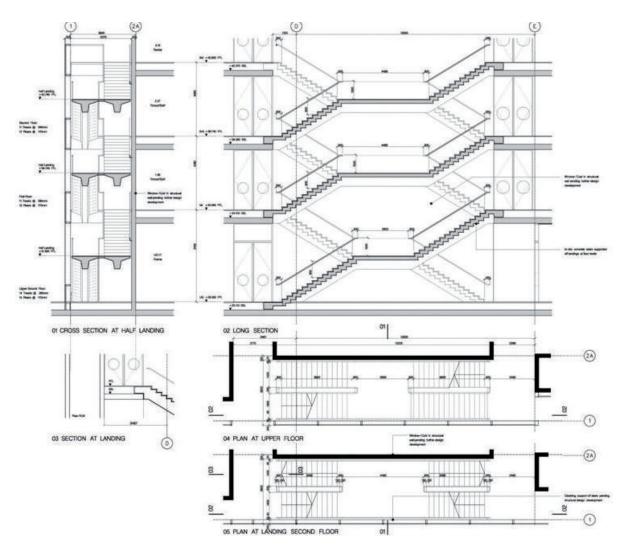
Aerial view of ground floor and whole site



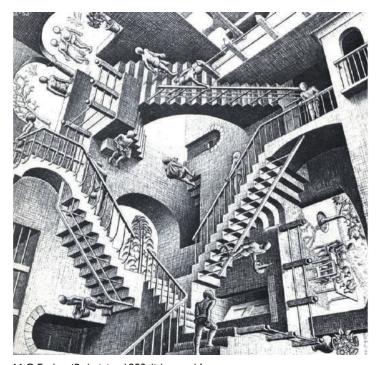
Early study of atrium interior



Early study of atrium interior



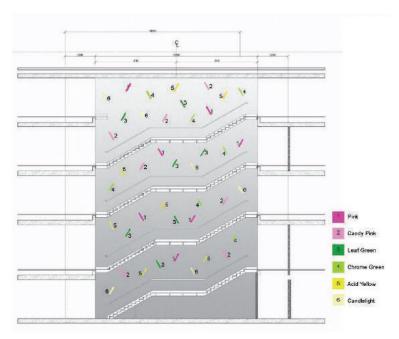
Study of scissor stair structure



M.C Escher 'Relativity, 1953, lithograph'

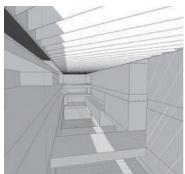


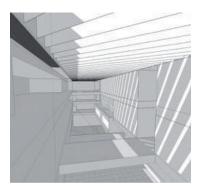
Study of scissor stair balustrade and lighting



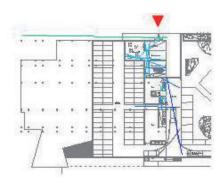
Study of scissor stair lighting

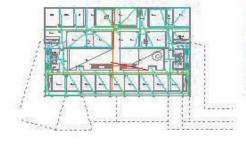


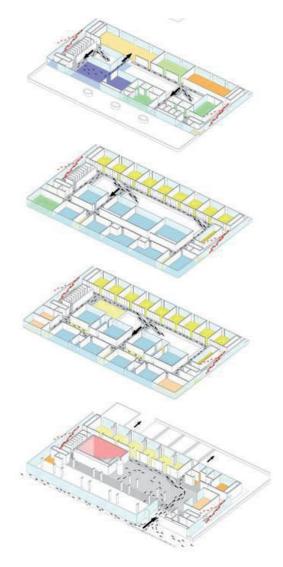




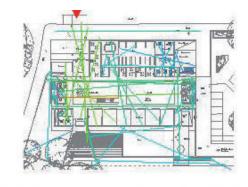
Spatial accessibility by Space Syntax







Movement analysis by Space Syntax



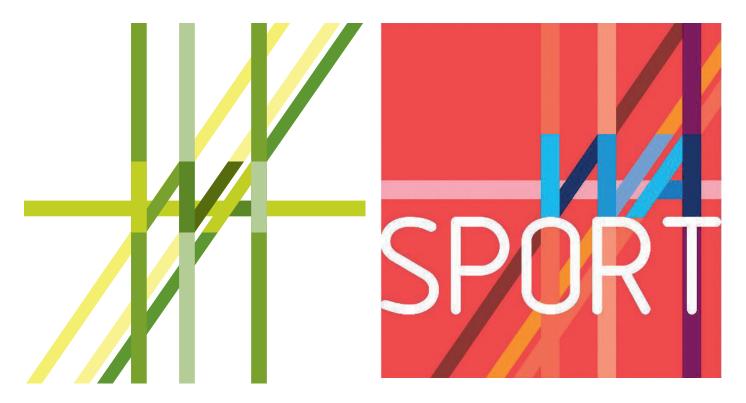




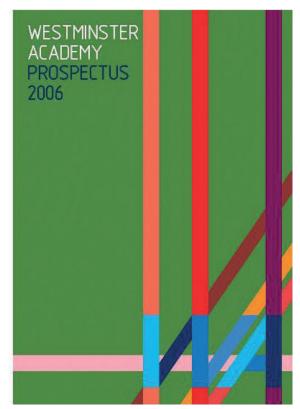
Movement analysis by Space Syntax



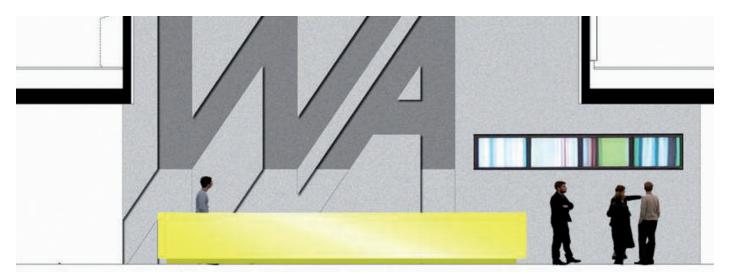
2.01 Westminster Academy logo







2.04 Academy prospectus ideas showing use of logo



2.05 Visualisation of main Academy reception



2.06 Main Academy reception

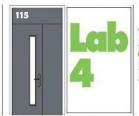
Graphics - Studio Myerscough - Westminster Academy



2.07a Visualisation of supergraphics for main entrance



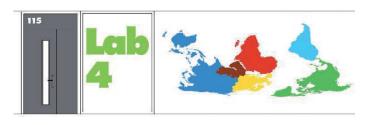
2.07 Visualisation of supergraphics for green room



THE PURPOSE OF LEARNING IS GROWTH, AND OUR MINDS, UNLIKE OUR BODIES, CAN CONTINUE GROWING AS LONG AS WE LIVE. MORTIMER ADLER/AMERICAN PHILOSOPHER AND EDUCATOR, 1902 — 2001



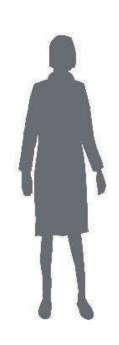
2.08 Visualisation of classroom naming

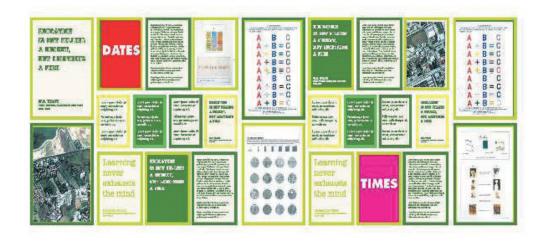


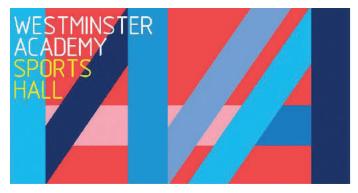




2.08a Visualisation of classroom naming









 $2.10\,V is ualisation \ of \ external \ entrance \ graphics$

 $2.10 a\, Visualisation\,\, of\, external\,\, entrance\,\, graphics$









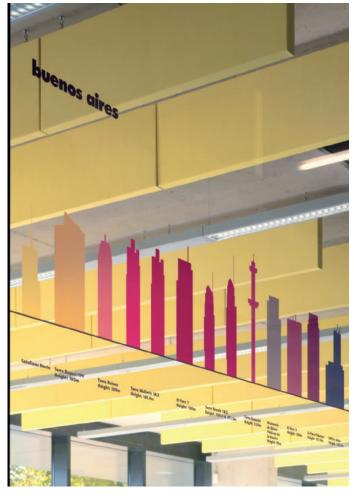












Final signage and wayfinding graphics in Westminster Academy

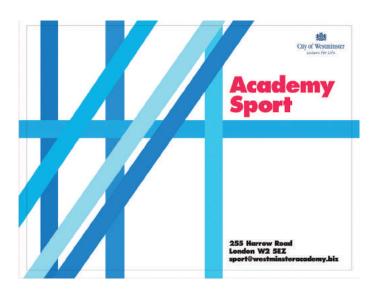


2.12a Final signage for Locker Rooms in the Academy Sport

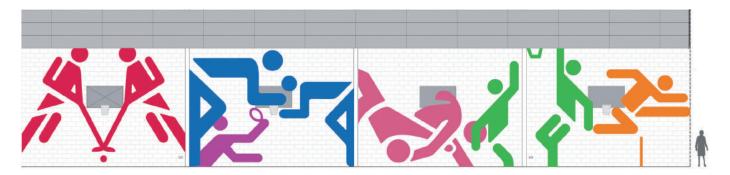




 $2.12a\;$ Final signage for Locker Rooms in the Academy Sport







 $2.15\ \text{Pictograms}$ on the walls of the Sports Hall



2.16 Academy Sport Hall with Myerscough LOGO

Events and Exhibitions































Woman in Construction - Royal Visit **Westminster Academy** 13th January 2009 © Amanda Duncan









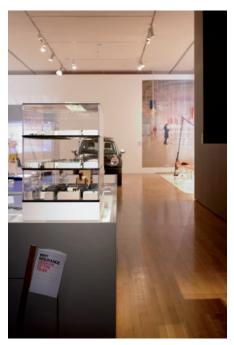












Related Press

Building Design 'Dream Academy' 29th November 2007



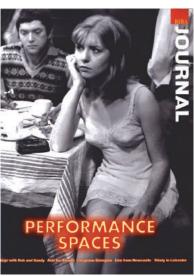


The Guardian 'Big Green Teaching Machine' 7th january 2008





RIBA Journal 'Making an Entrance' 1st February 2008



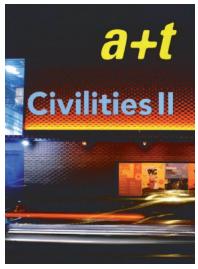




School Building 01/02/2008











A+T (Spain) 01/02/2008

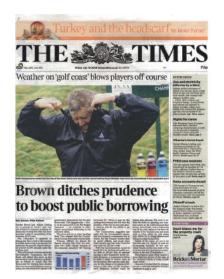








The Observer 13/07/2008



The Times 17/07/2008





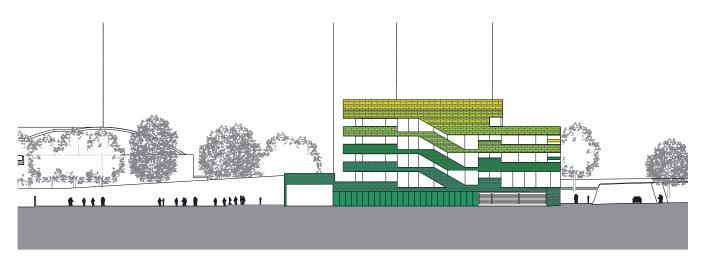


KEY

- Main Buidling
 Academy Sport
 External Sports Pitch
 Terraces
- 5 MUGA
- 6 External classroom

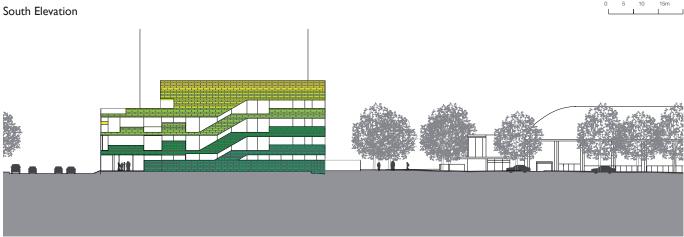


North Elevation

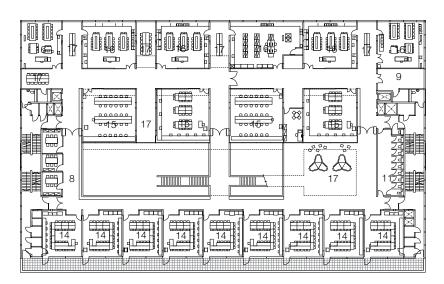


West Elevation 0 5 10 15n

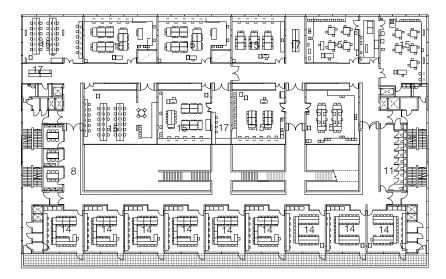




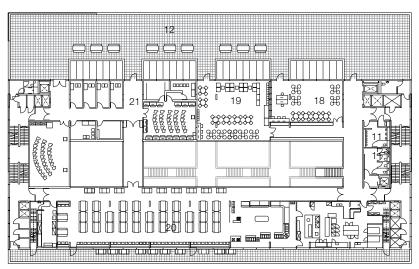
East Elevation 0 5 10 15m



Ist Floor



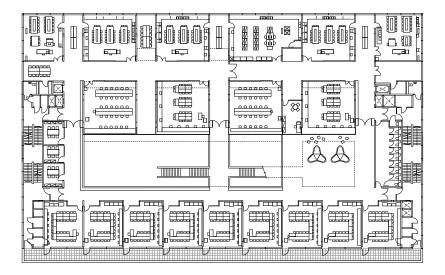
2nd Floor



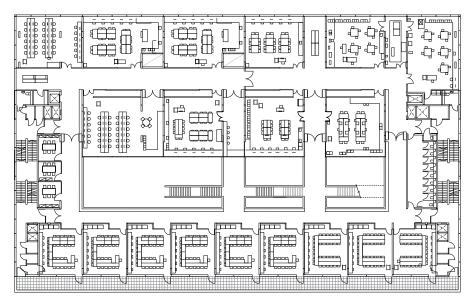
3rd Floor

KEY

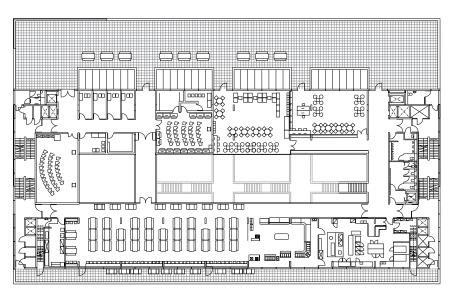
- 8 Group Rooms
- 9 Resources
- 10 Drama Room
- II Toilets
- 12 Terrace
- 13 Outdoor Classroom
- 14 Homeroom
- 15 Studio
- 16 Lab
- 17 Breakout
- 18 The Social
- 19 Staff Room
- 20 Sky Dinning
- 21 Music Suite



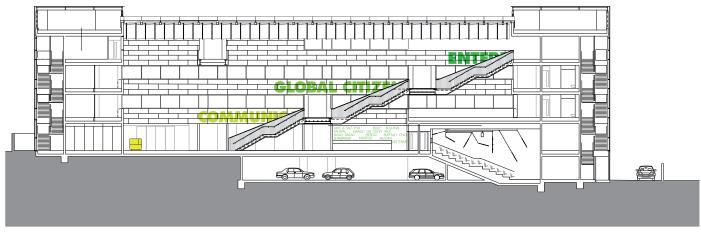
1st Floor



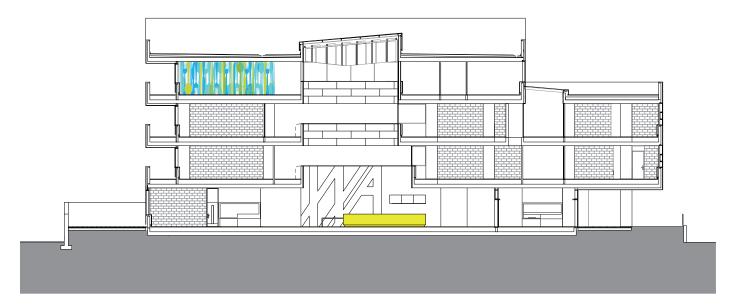
2nd Floor



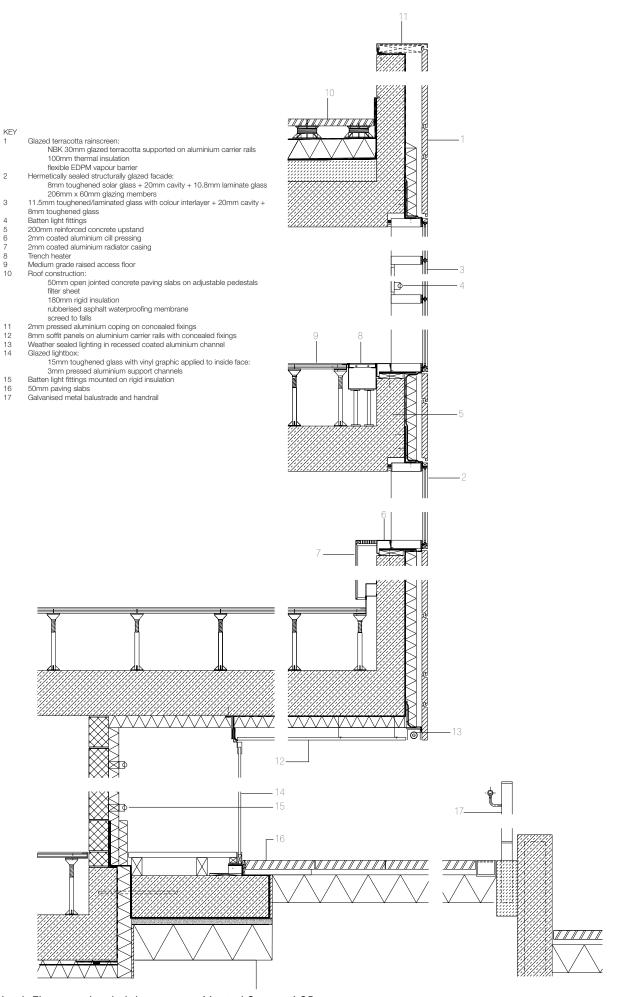
3rd Floor





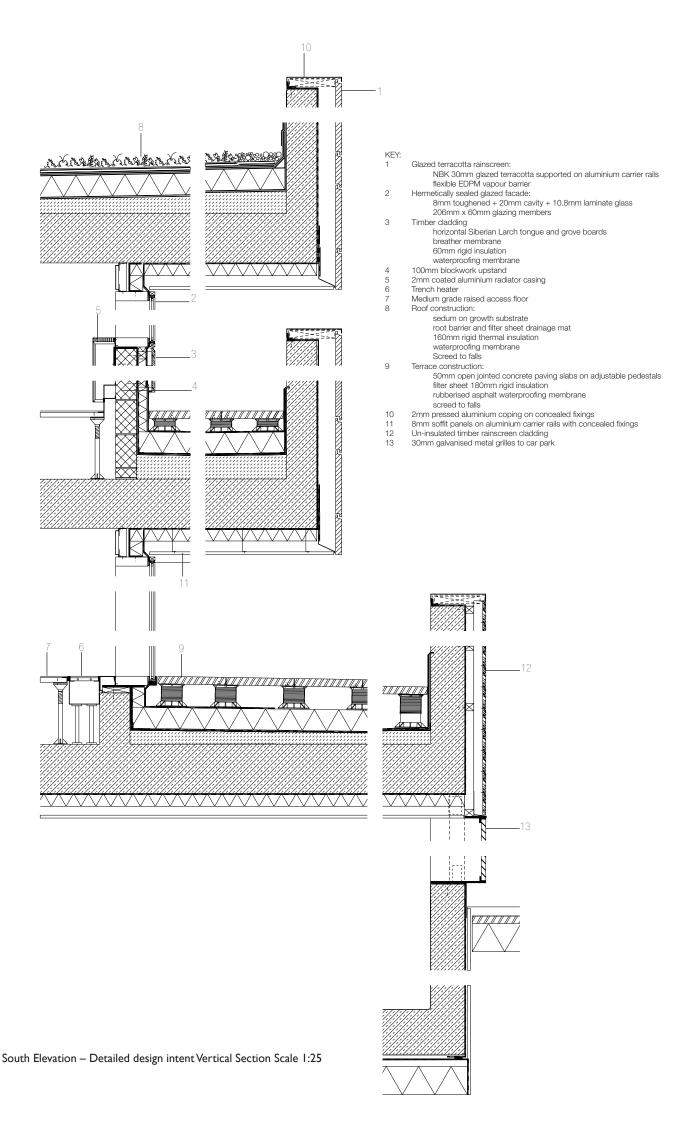


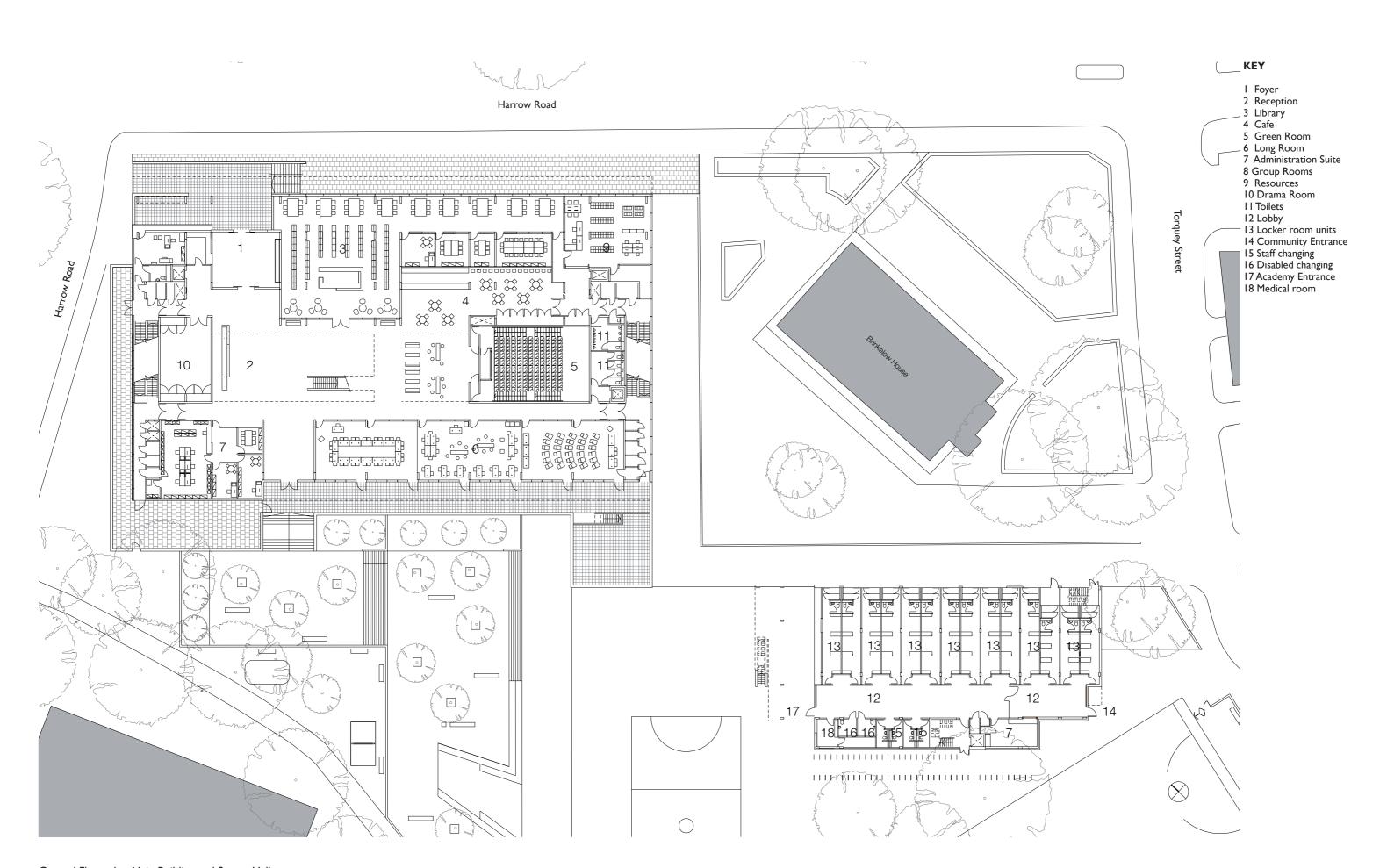
Section CC

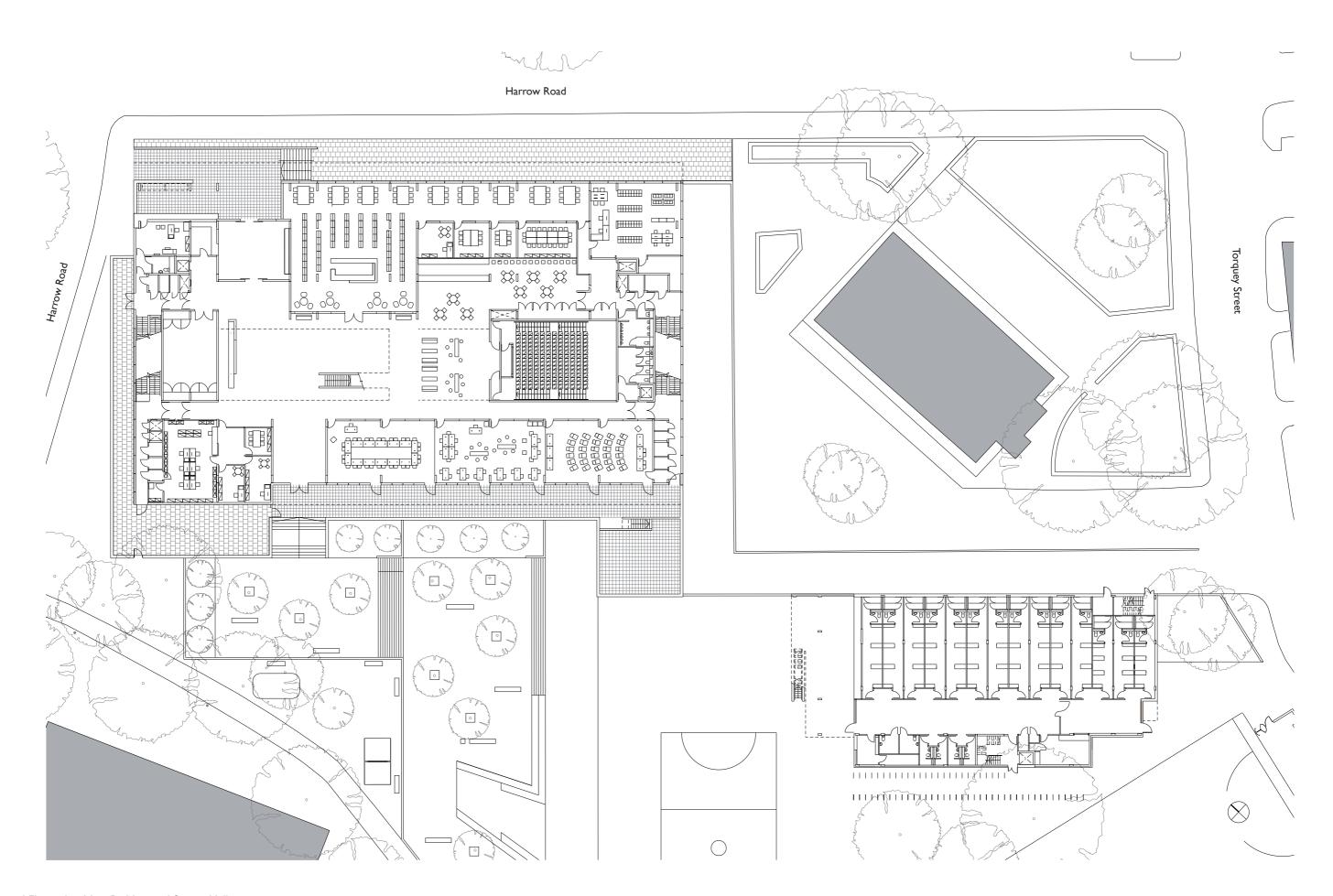


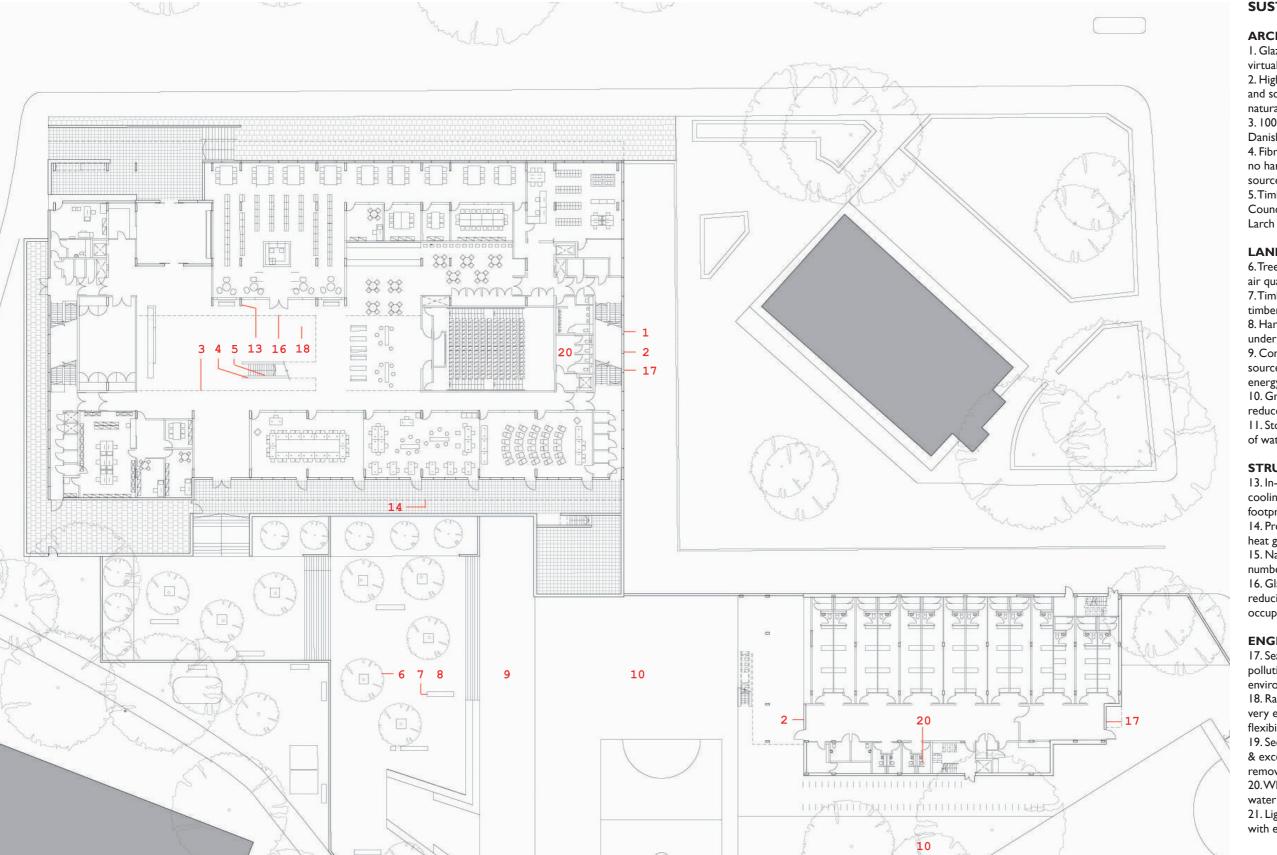
North Elevation-detailed design intent. Vertical Section 1:25

2









SUSTAINABLE FEATURES

ARCHITECTURE

- I. Glazed Terracotta Cladding: Fully recyclable, virtually no wastage
- 2. High performance glazing: Low-E, double glazed, and solar coated, X-large panes for natural light
- 3. 100% Polyamide Carpet: ISO 9001, 14001, Danish Climate Certificate, minimizing VOC's
- Fibrous acoustic panels: 100% organic,
 no harmful toxins, fully recyclable, replenishable
- source
 5. Timber linings: FSC (Forest Stewardship
 Council) certified, European Oak & Siberian

LANDSCAPE

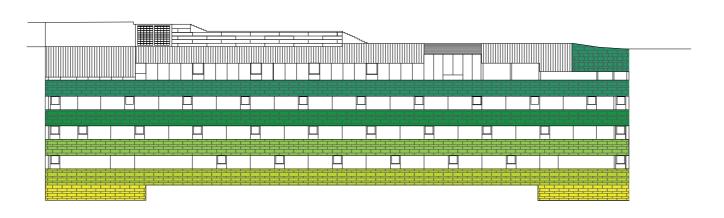
- 6. Trees: acoustic and visual buffer from the poor air quality experienced via the Westway flyover.
 7. Timber Benches: FSC certified sustainable
- 8. Hardcore: recycled rubble layer acts as base under hard landscape
- 9. Concrete paviours : large areas of paving sourced within the UK minimize embodied energy.
- 10. Grass & bound gravel: free draining, i.e. reduces the need to store storm water
- 11. Storm water attenuation: controls discharge of water, preventing flooding downstream.

STRUCTURE & FORM

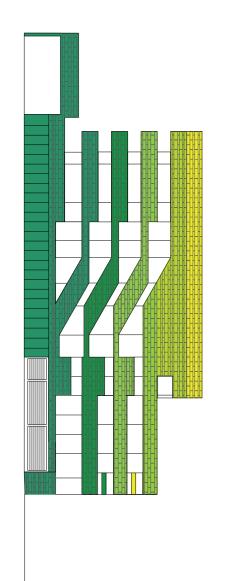
- 13. In-situ exposed concrete frame: passive cooling, reduces energy demands & carbon footprint
- 14. Projecting balconies to the south: reduces heat gain to the classrooms & cooling load. 15. Naturally ventilated car park: only small number of assisting fans, greatly reduces plant 16. Glazed atrium: significant natural light, reducing need or artificial lighting, better for occupants

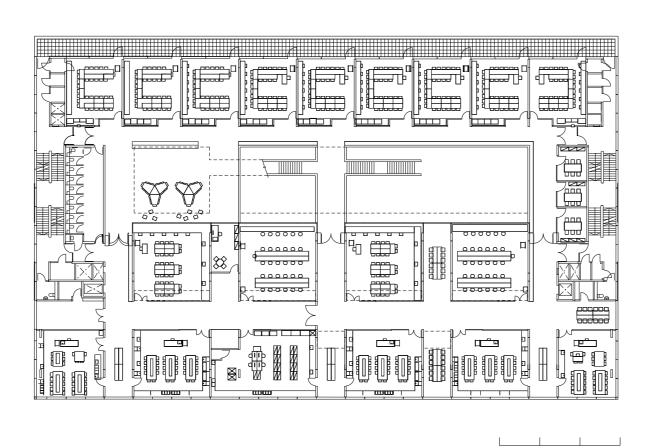
ENGINEERING SERVICES

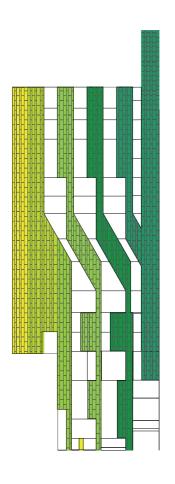
- 17. Sealed Envelope: eliminates air & noise pollution from Westway, high quality acoustic environment
- 18. Raised Access Floor: low VAV & plenum very energy efficient, minimising plant, total ICT flexibilty
- 19. Sedum Roof: reduces storm water runoff & excess heat loss/gain, increases biodiversity, removes
- 20. White goods: throughout, greatly reduced water consumption
- 21. Lighting: energy efficient fluorescent bulbs with electronic ballasts throughout, daylight linked





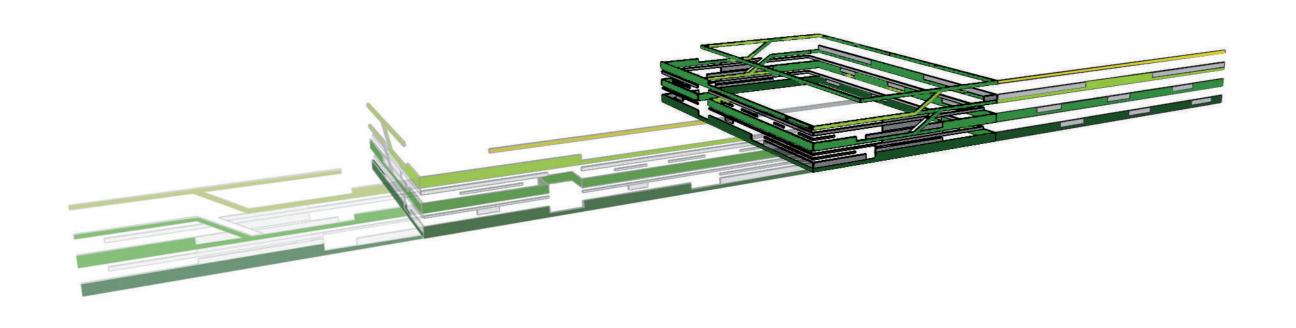




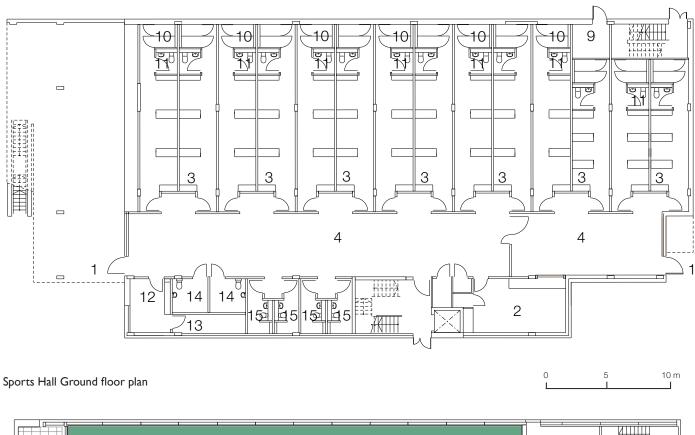


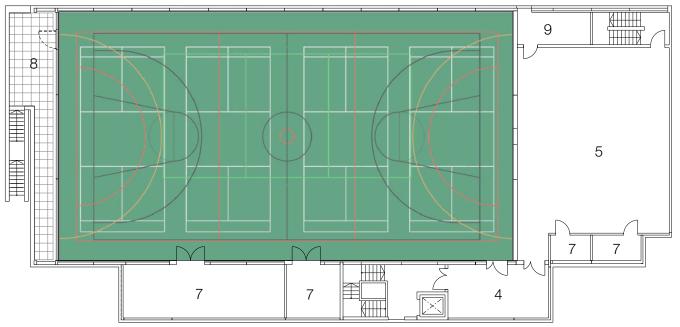


Unfolded Elevation



Academy Sport Drawings





10 m

KEY 8 Balcony I Entrance 2 Administration

9 Plant room

3 Locker room 4 Lobby

10 Showers I I Toilets

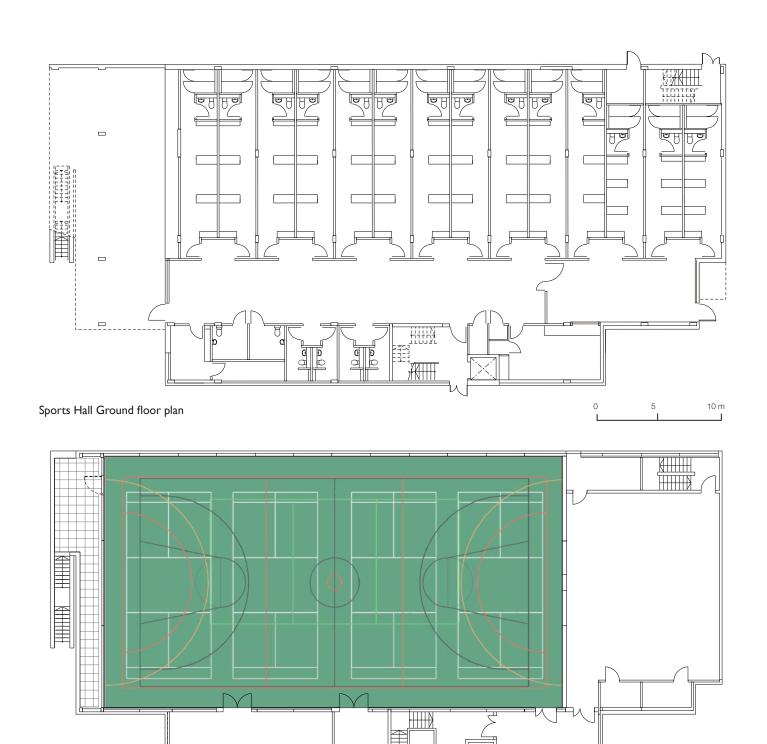
5 Dance studio

12 Medical room

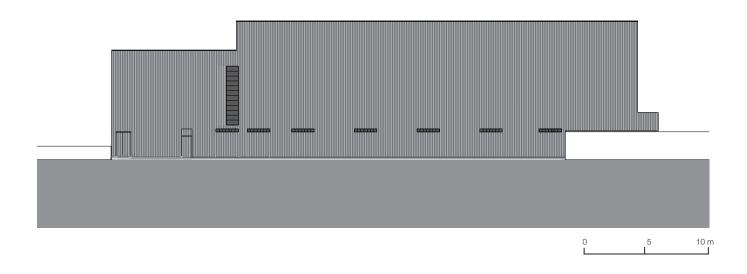
6 Sports Hall 7 Store

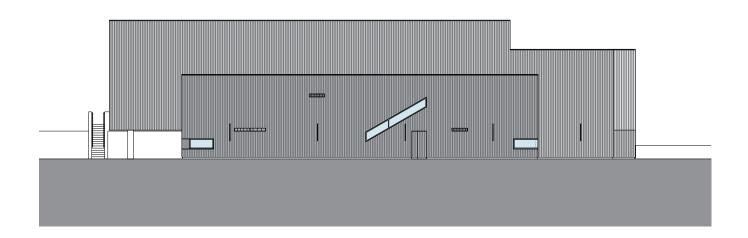
13 Laundry 14 Disabled changing

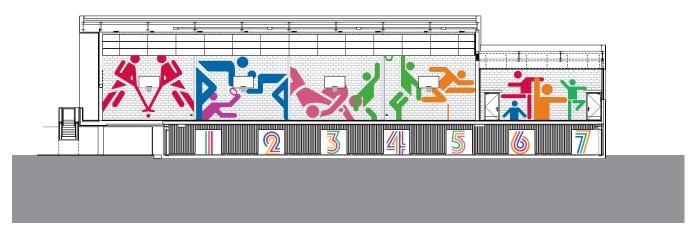
15 Staff changing

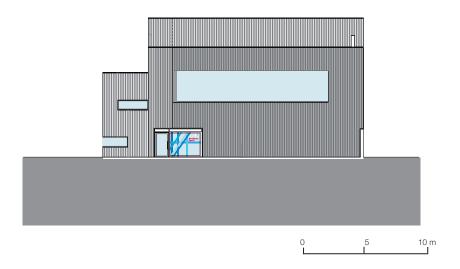


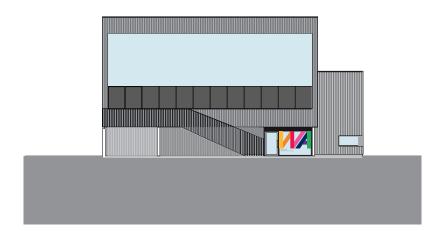
Sports Hall First floor plan

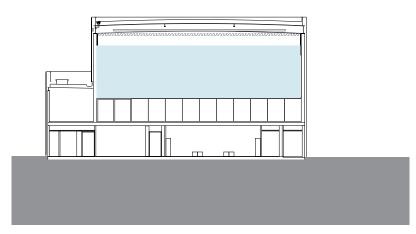












Academy Sports Section

Site Progress Photos













In construction- exteriors











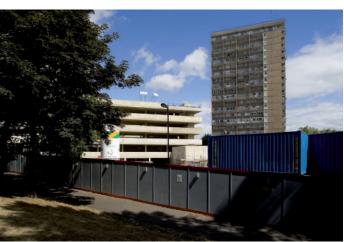


In construction- interiors

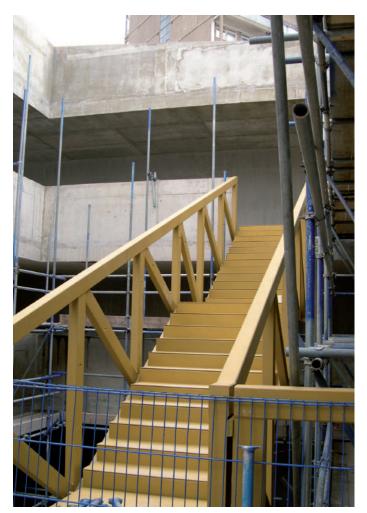








Construction-cladding







Construction- central stair



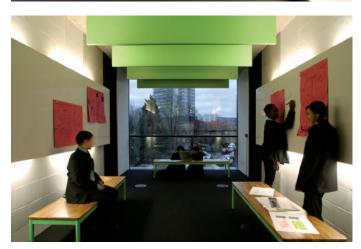
Construction- internal cladding and supergraphic installation











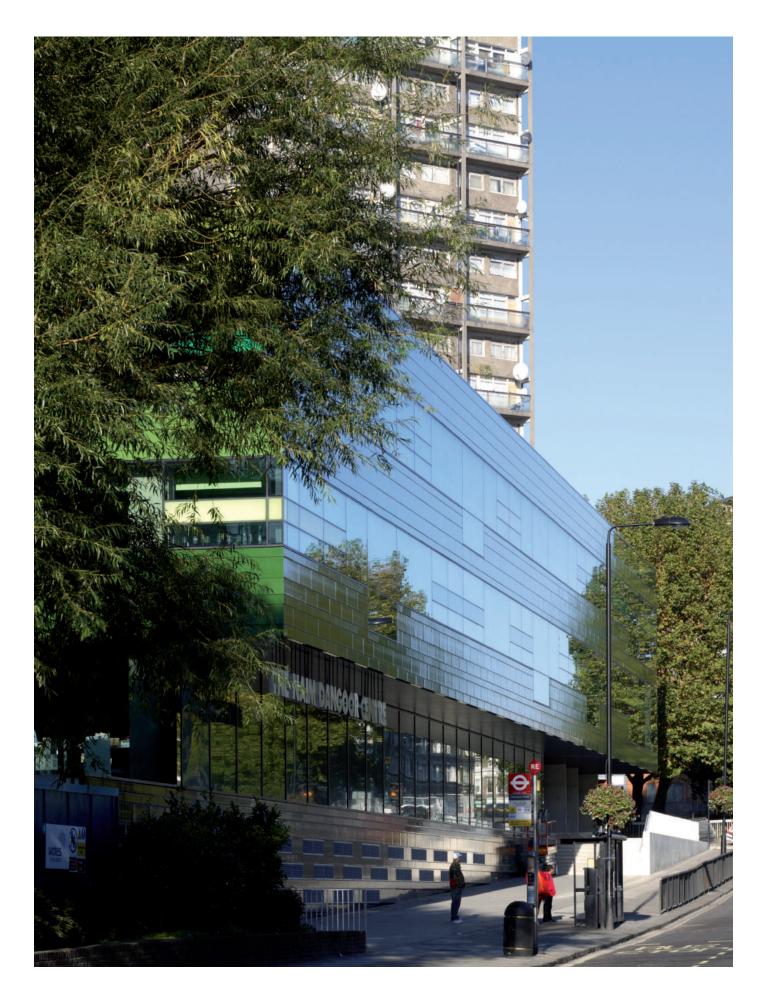




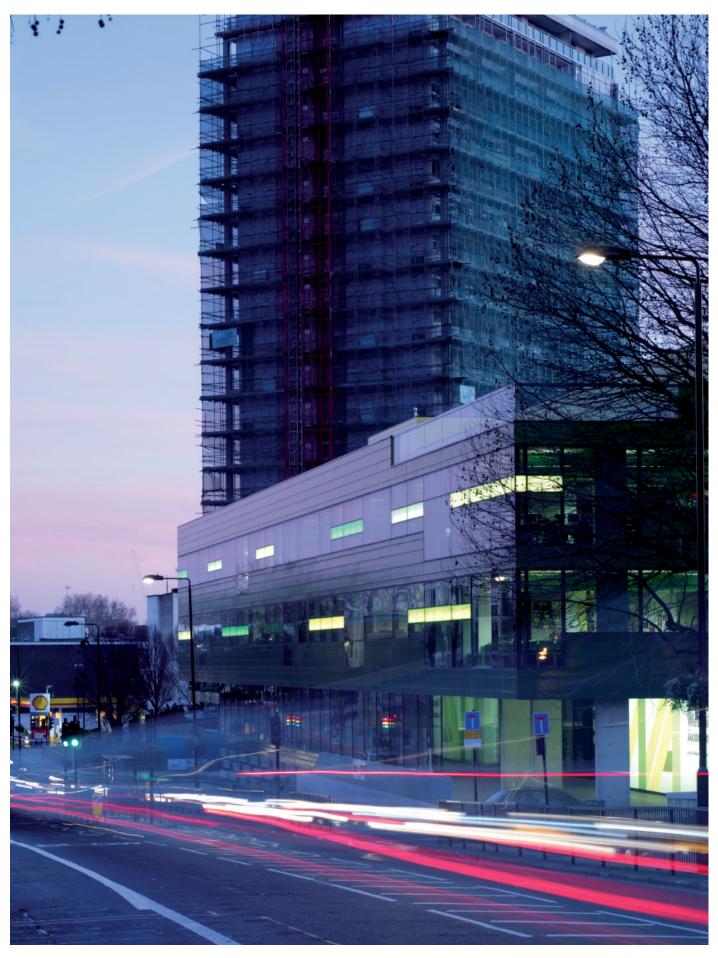
Building in Use by students

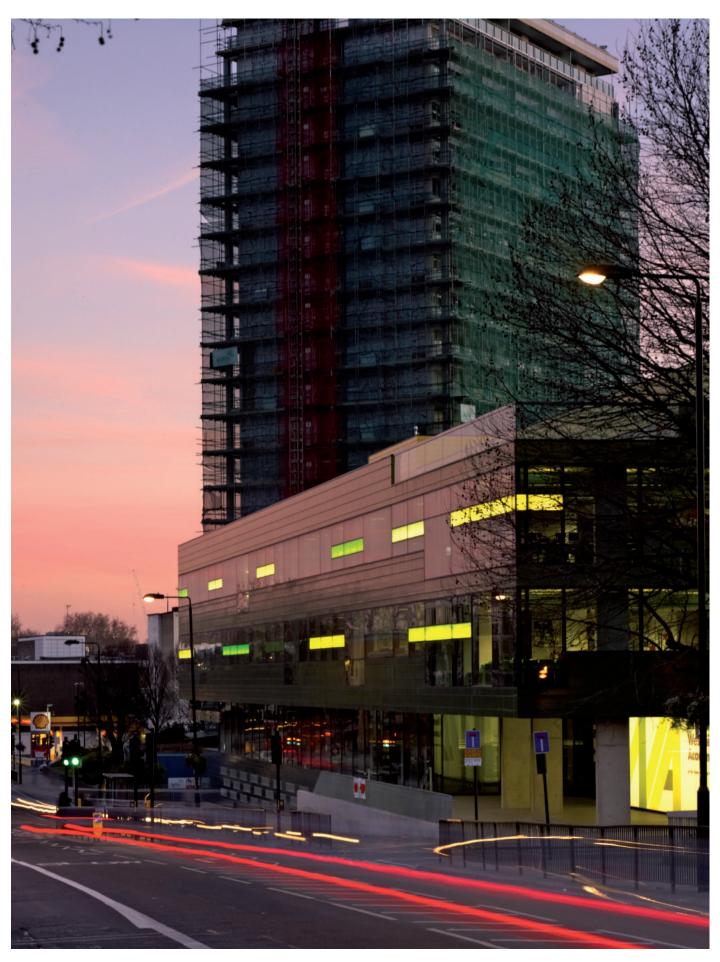


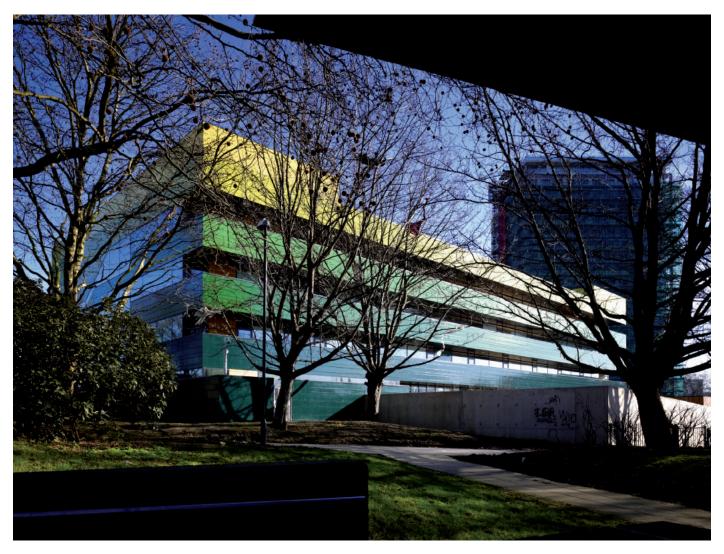
North façade detail A471_395 © Timothy Soar



North façade Harrow Road A471_368 © Timothy Soar







South façade from afar A471_464 © Timothy Soar

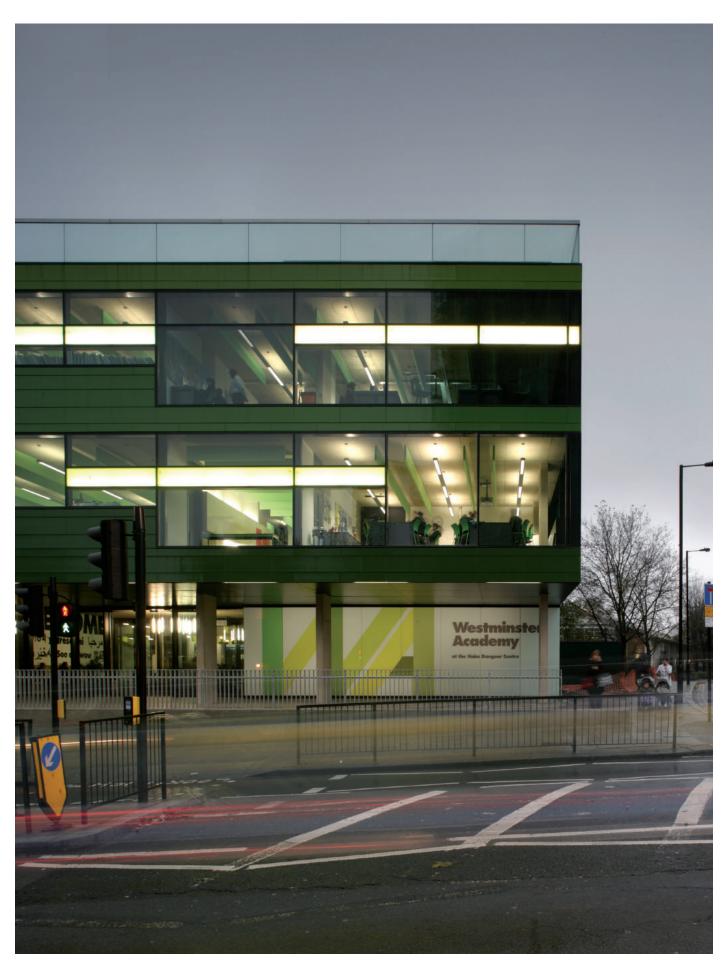


West façade A471_481 © Tim Soar



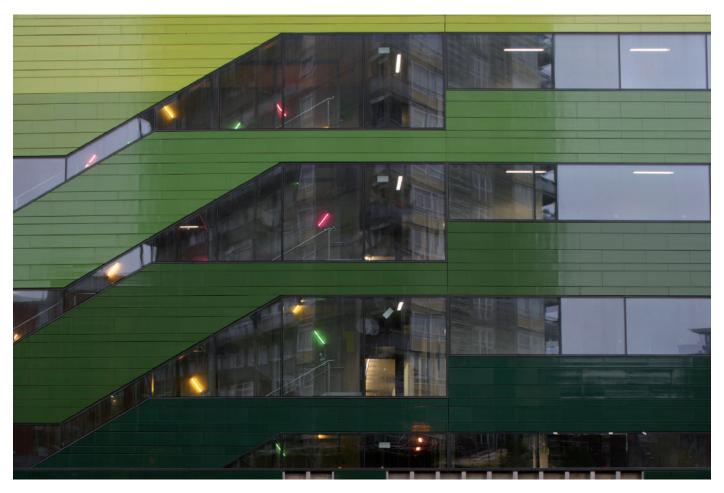
North façade in context

A471_134 © Kilian O'Sullivan





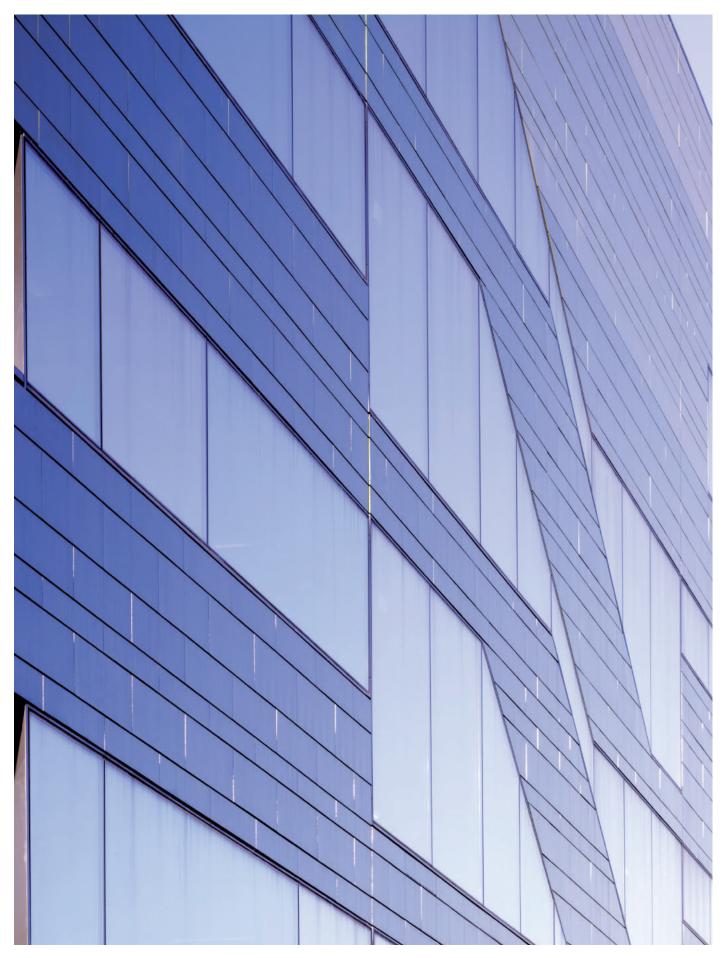
North façade at dusk A471_417 © Robert Parrish



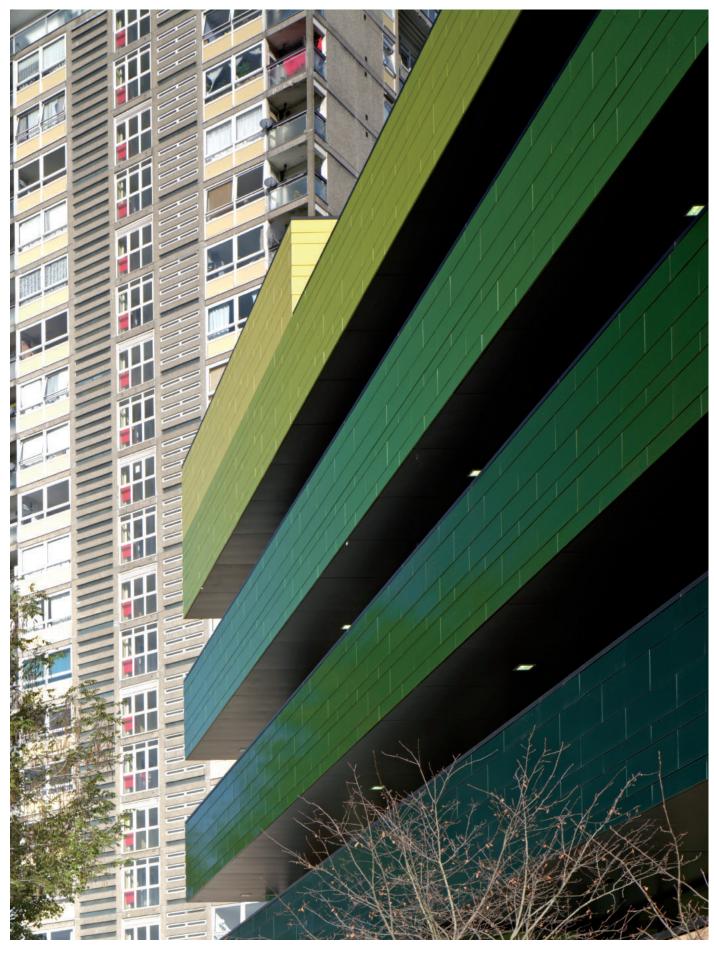
West elevation detail A471_419 © Robert Parrish



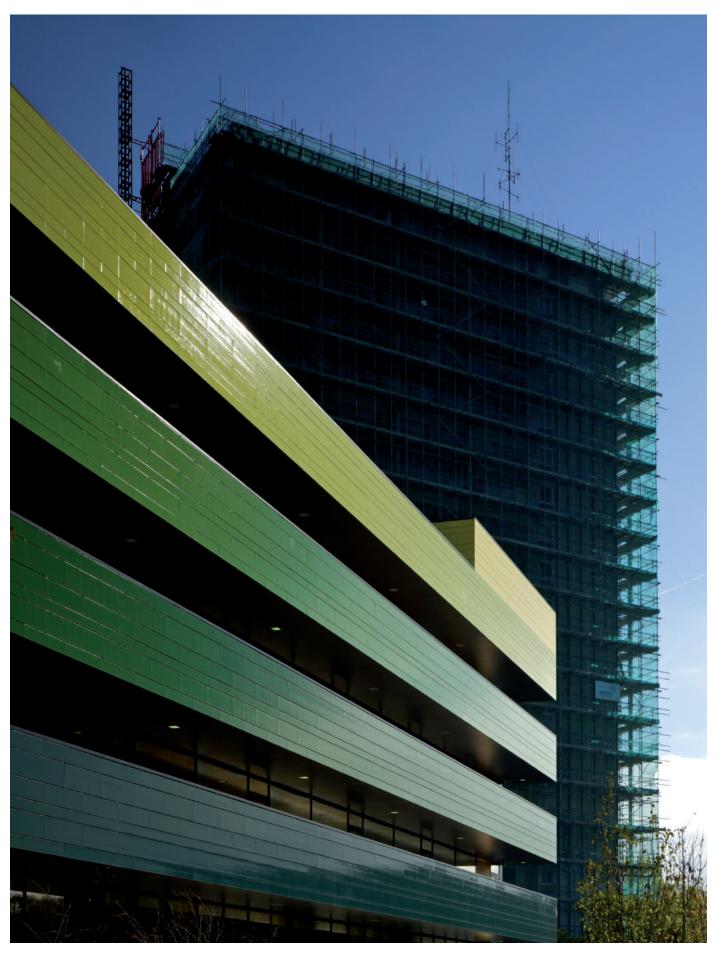
South façade detail A471_474 © Timothy Soar



West elevation detail A471_475 © Timothy Soar



South façade detail view A471_374 © Timothy Soar



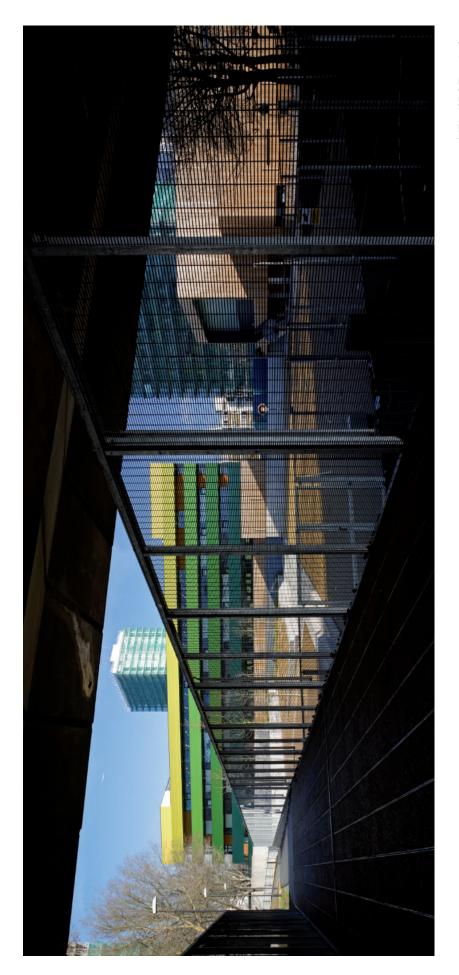
South façade detail view A471_378 © Timothy Soar



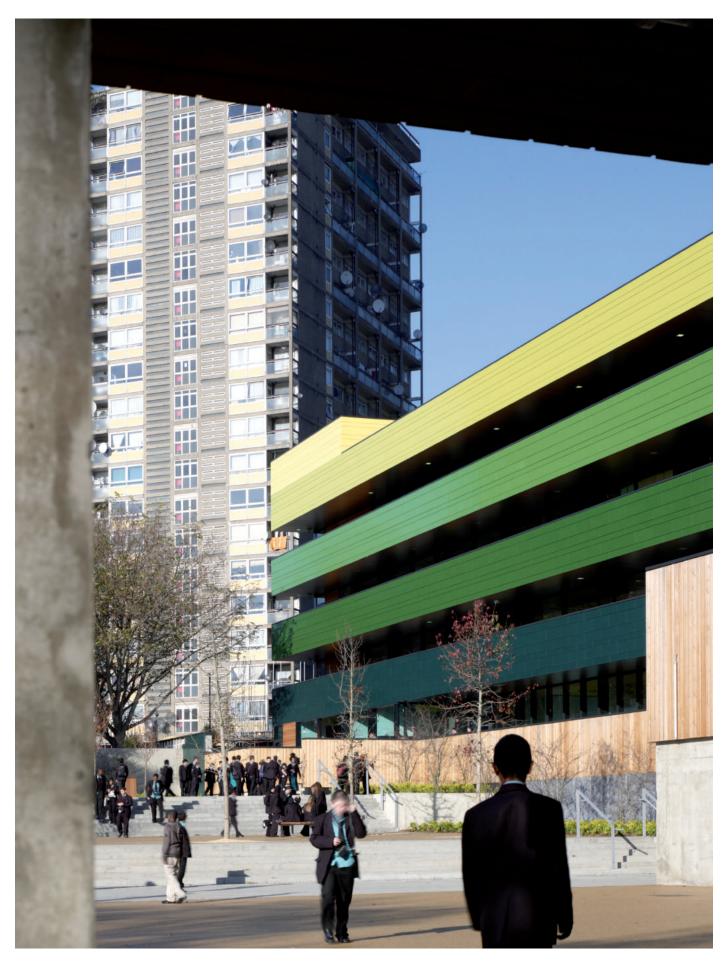
North façade corner detail A471_471 © Timothy Soar

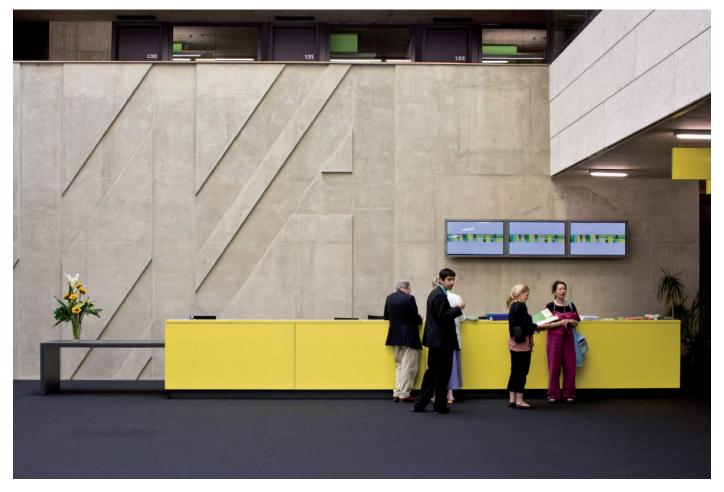


South façade and games area A471_390 © Timothy Soar



South façade showing Academy Sports and pitches





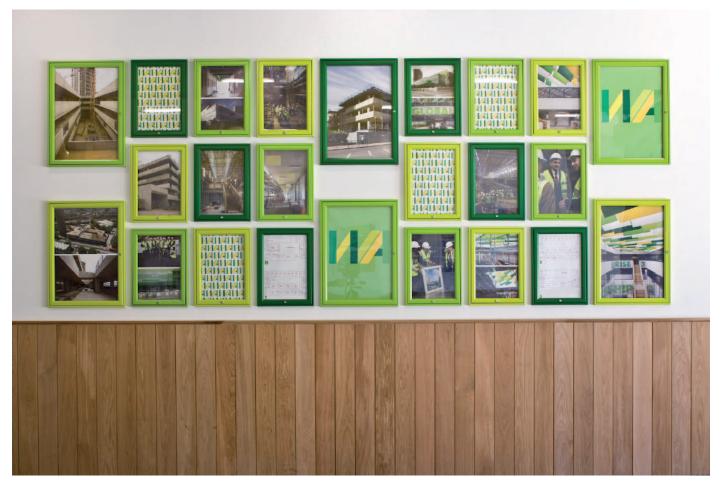
Entrance Reception Desk with large Westminster Academy logo set into concrete

A471_250 © Matt Chisnall



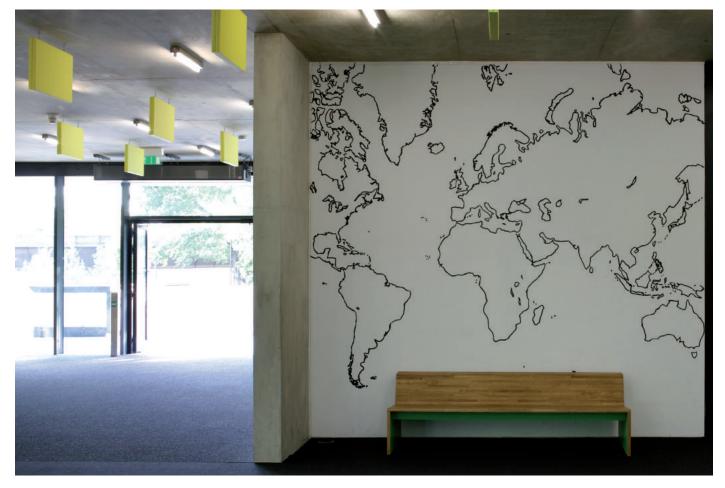
Entrance foyer with Welcome Sign in various languages

A471_334 © Matt Chisnall



 ${\sf Display} \,\, {\sf collage} \,\, {\sf depicting} \, {\sf Westminster} \,\, {\sf Academy} \,\, {\sf History}$

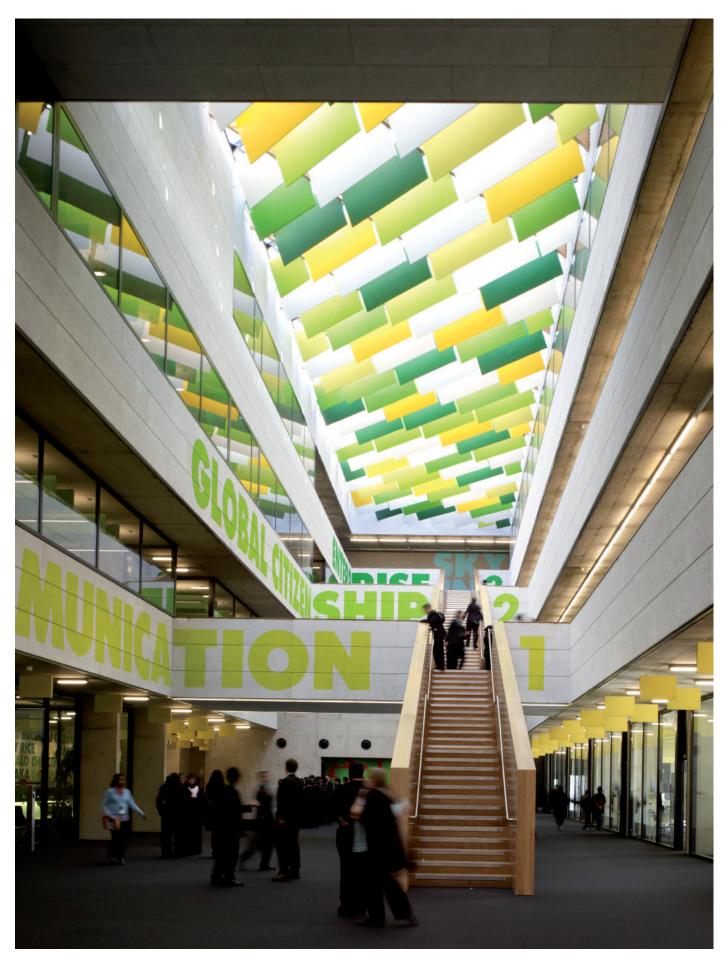
A471_331 © Matt Chisnall



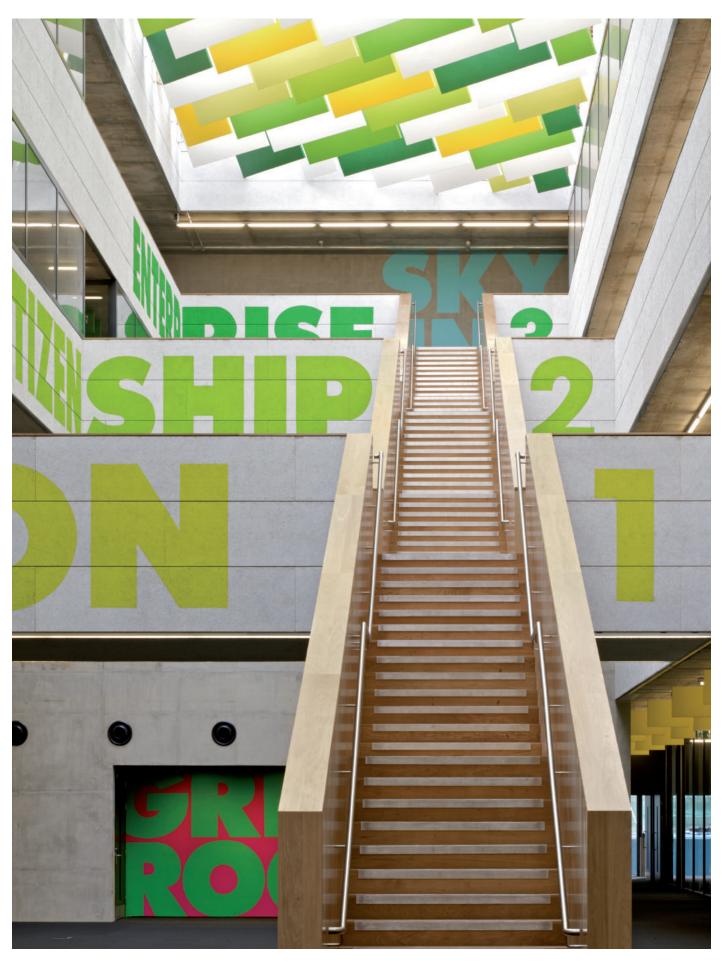
Entrance and supergraphics detail A471_547 © Robert Parrish



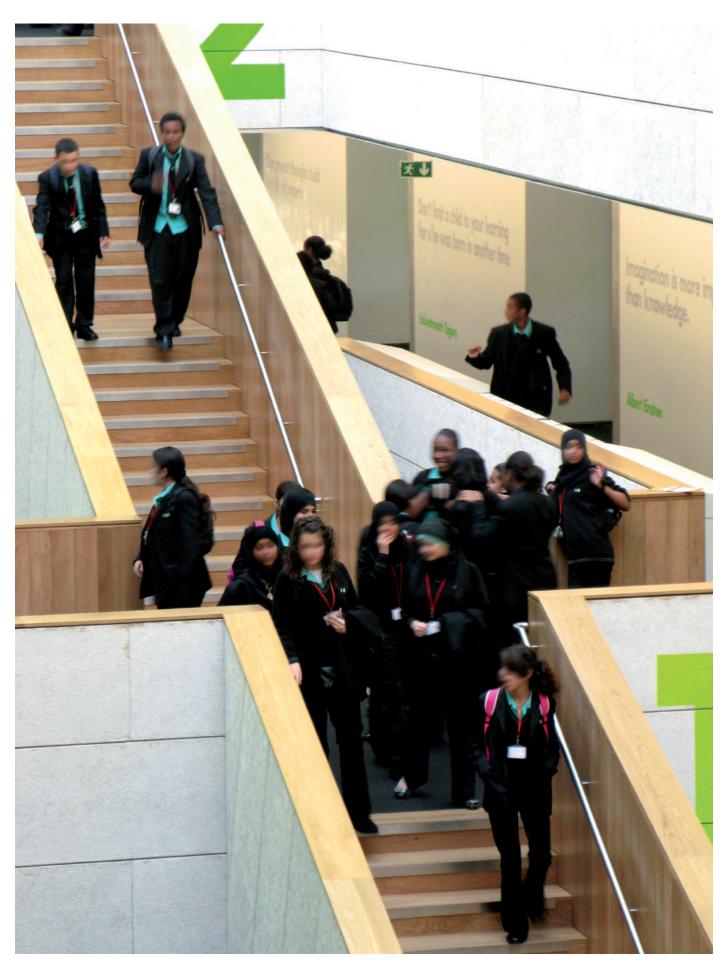
Atrium with school branding A471_349 © Timothy Soar



Atrium area being used by Pupils at the Academy



Atrium central staircase and School Branding on all levels



Main staircase in atrium with pupils of the Academy

A471_405 © Timothy Soar

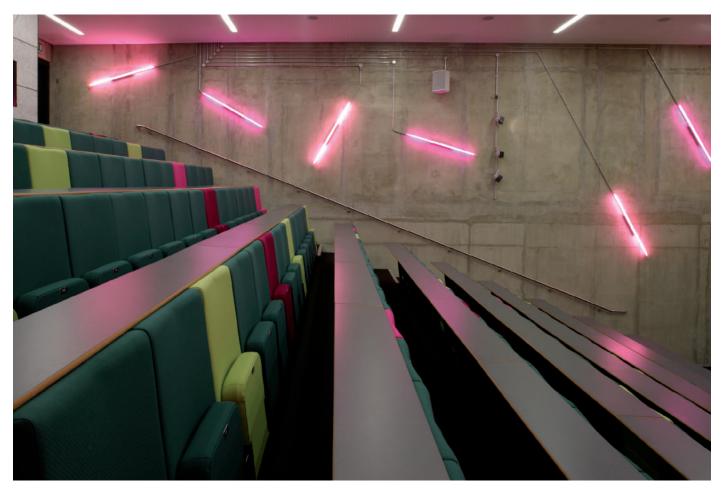


Ground Floor Cafe A471_385 © Timothy Soar

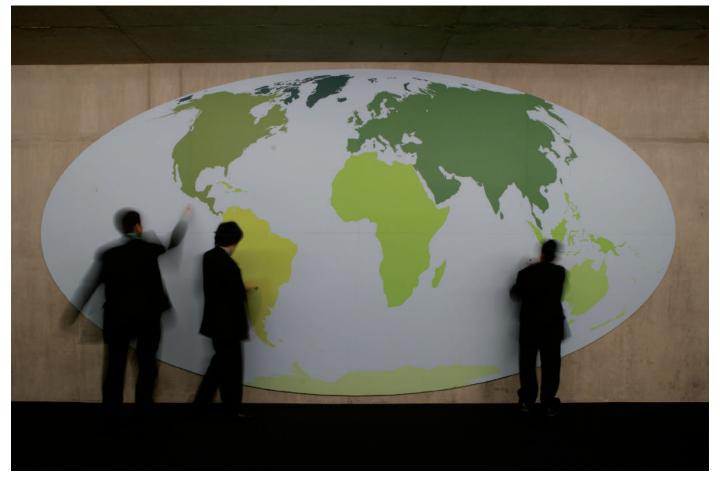


Supergraphics by Studio Myerscough and furniture by Andrew Statford in the Atrium

A471_556 © Robert Parrish



Green Room A471_431 © Robert Parrish



Supergraphics by Studio Myerscough on the Upper level

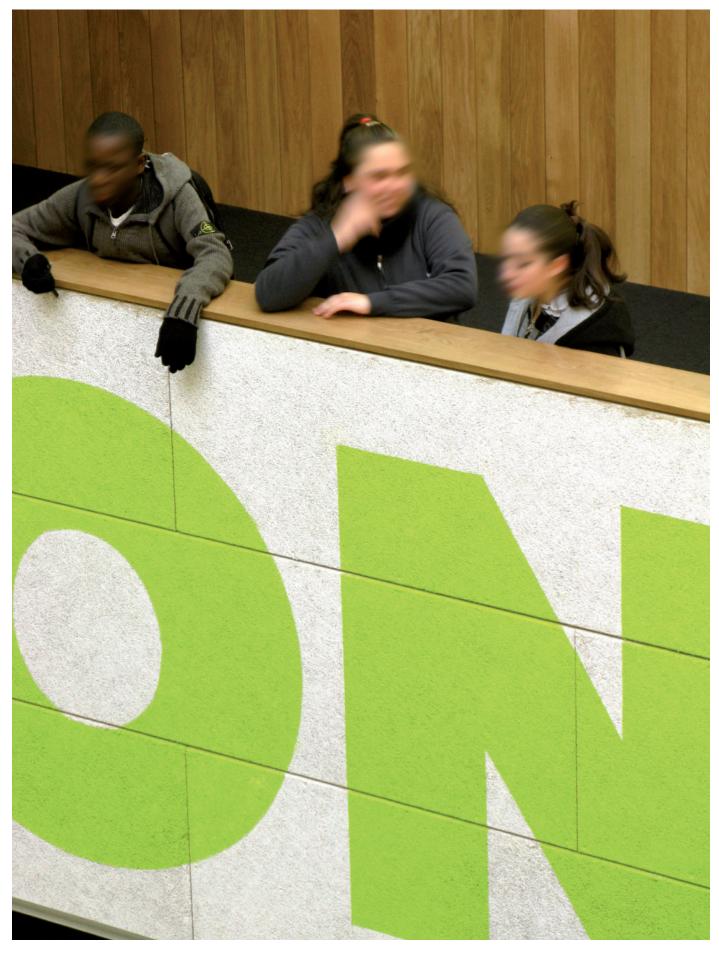
A471_458 © Robert Parrish



Atrium roof detail with baffles A471_359 © Timothy Soar



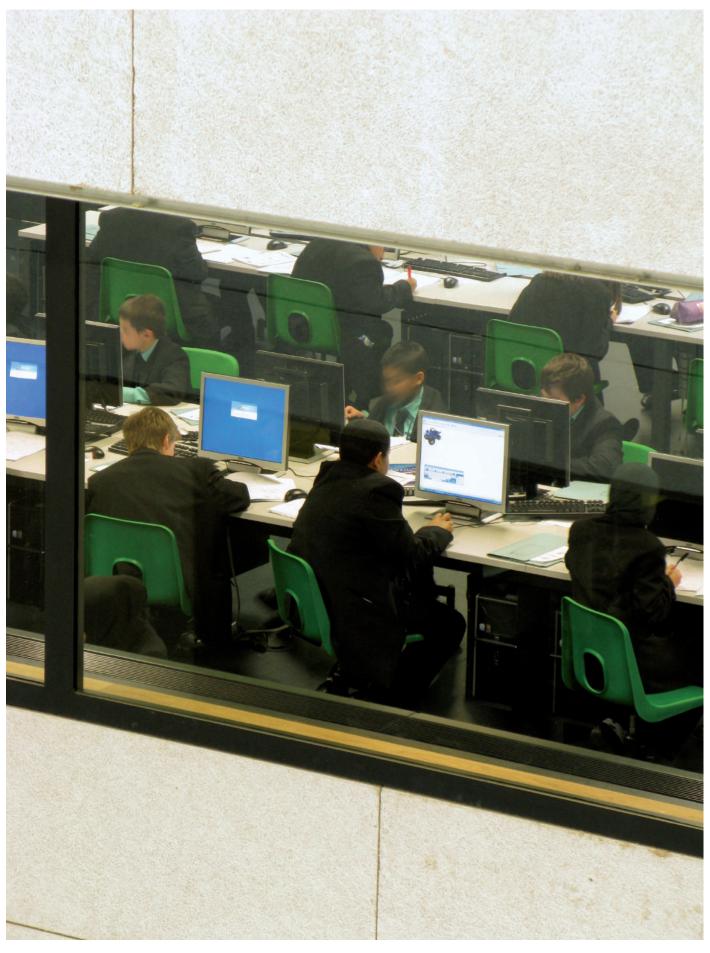
Detail of atrium roof baffles A471_358 © Timothy Soar



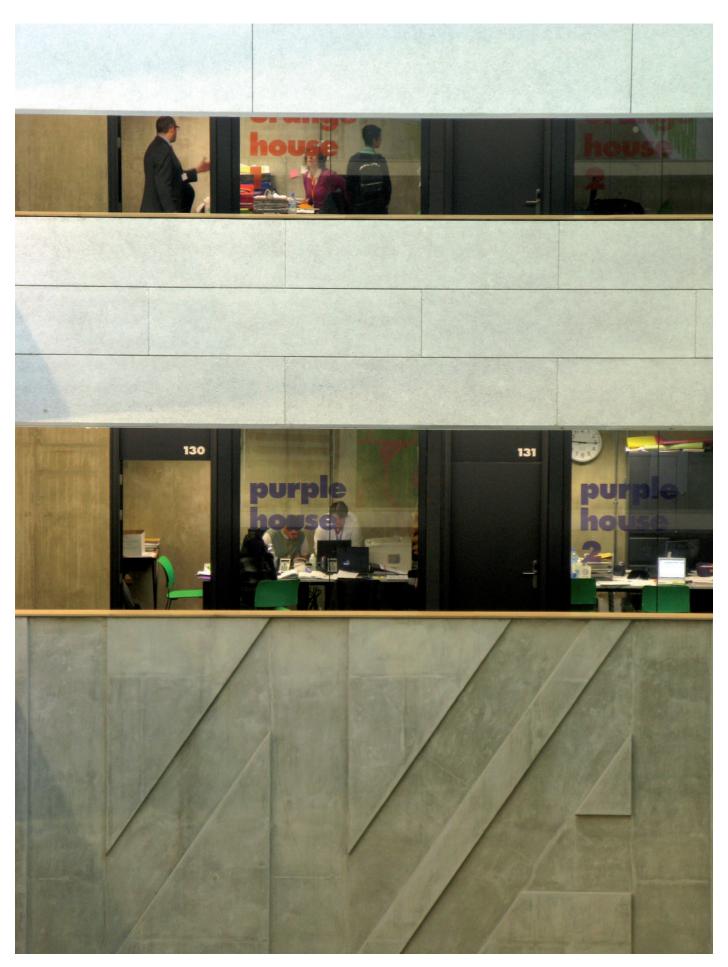
Atrium detail A471_403 © Timothy Soar



Atrium detail A471_407 © Timothy Soar



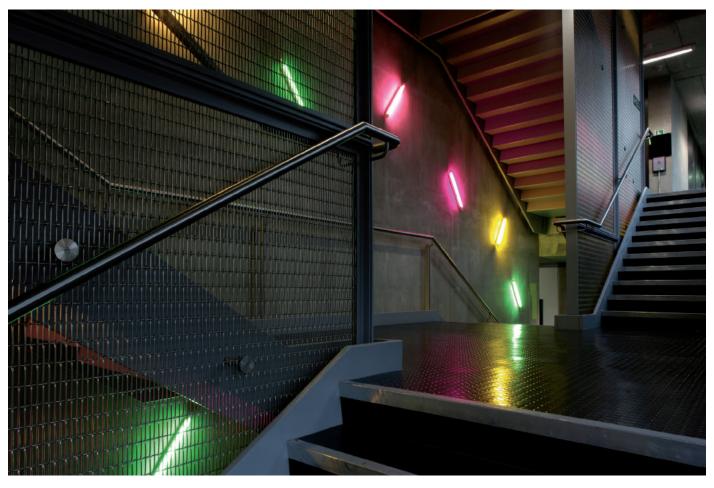
Learners in business studio A471_402 © Timothy Soar



Main reception graphics and House rooms



Row of House rooms A471_360 © Timothy Soar



Scissor stair lighting A471_422 © Robert Parrish

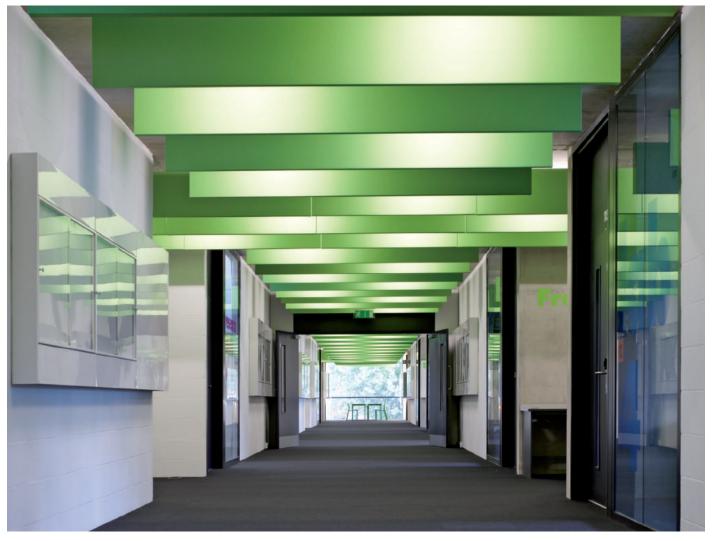


Students relaxing in breakout space

A471_409 © Timothy Soar

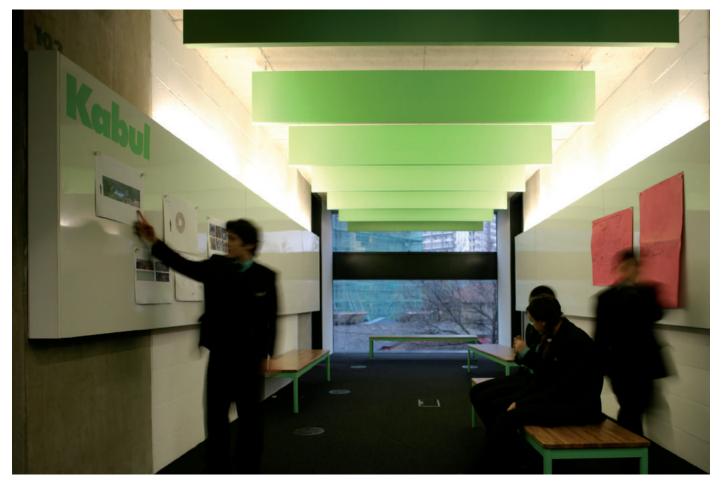


Breakout space A471_364 © Timothy Soar



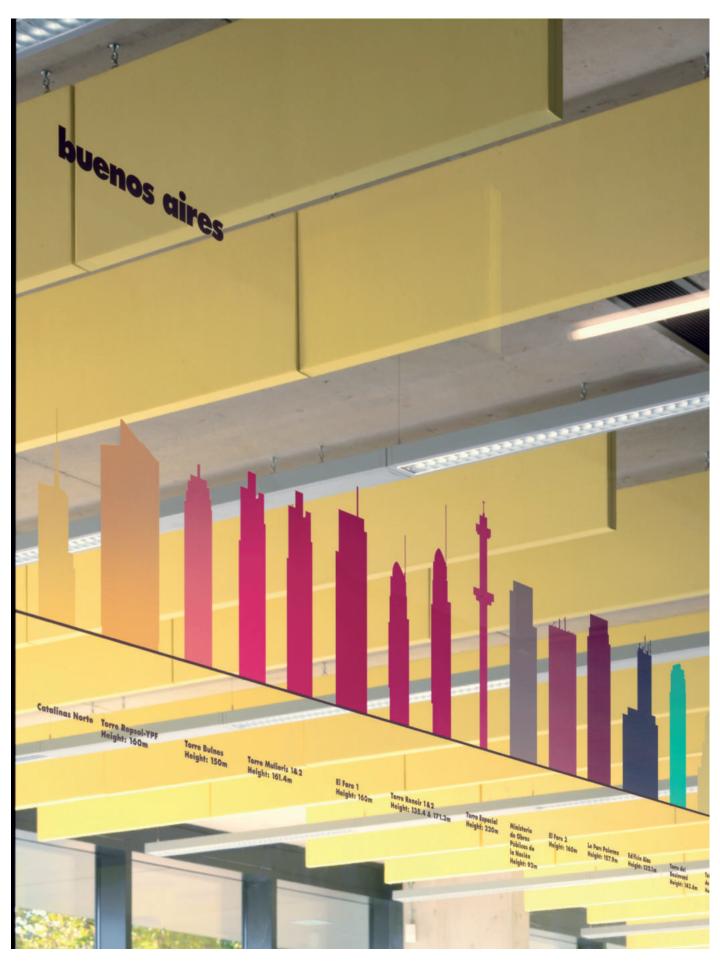
Main school corridor with baffles and break out spaces on either side

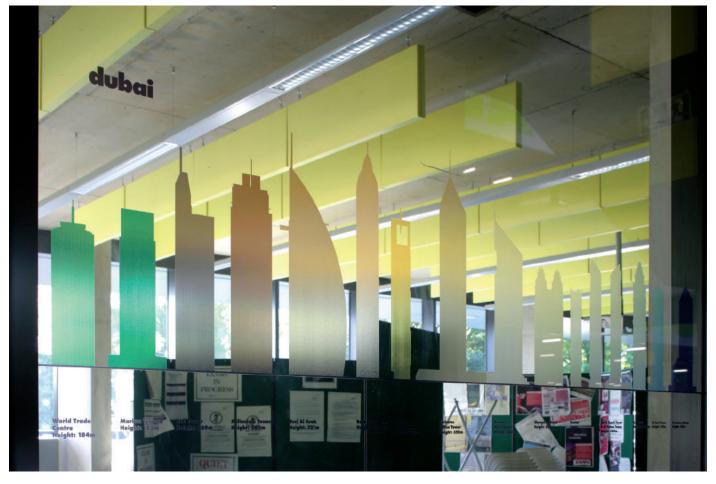
A471_356 © Timothy Soar



Break out spaces being used and enjoyed by Pupils

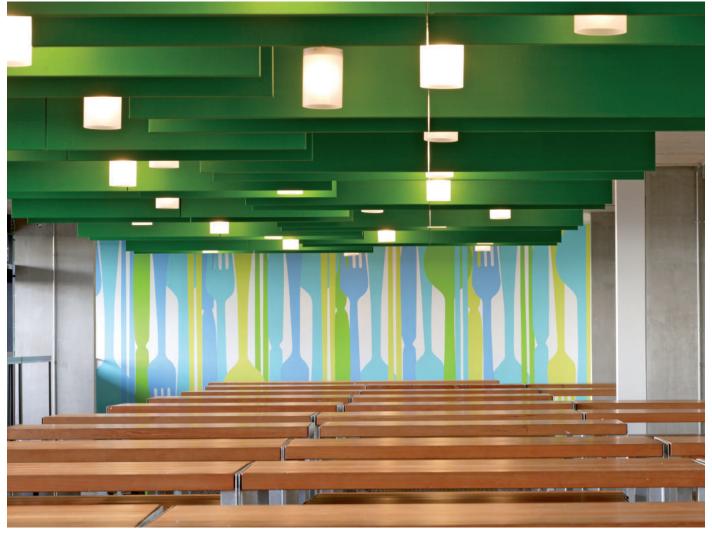
A471_450 © Robert Parrish





Detail of manifestations on teh Long Room window

A471_553 © Robert Parrish



Sky Dining-student canteen facilites

A471_386 © Timothy Soar

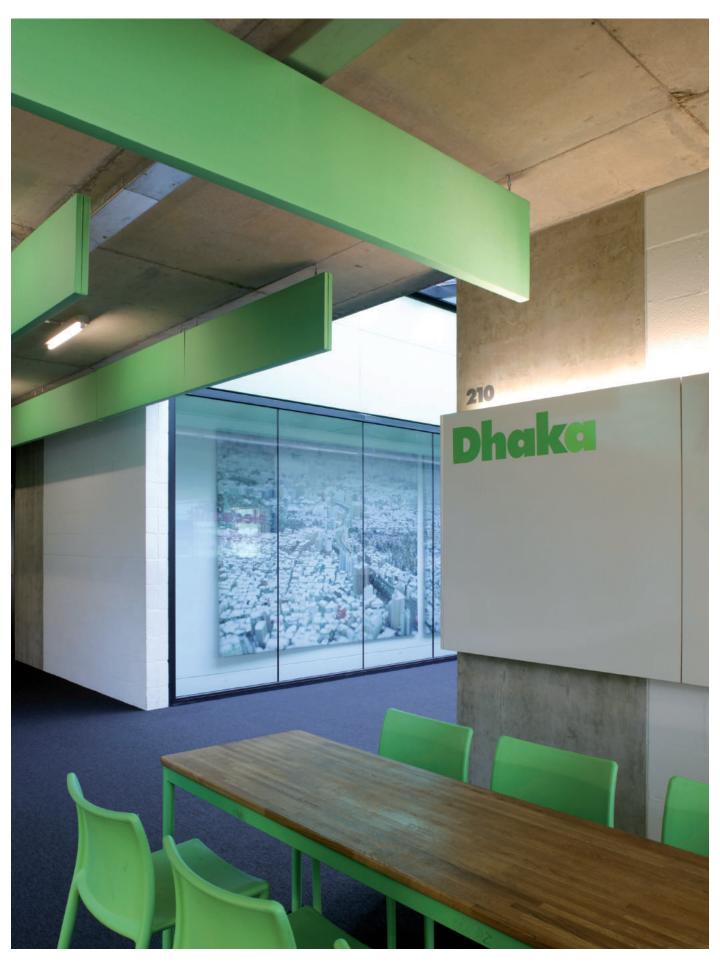


South terrace saeting area with view of the Sports Academy

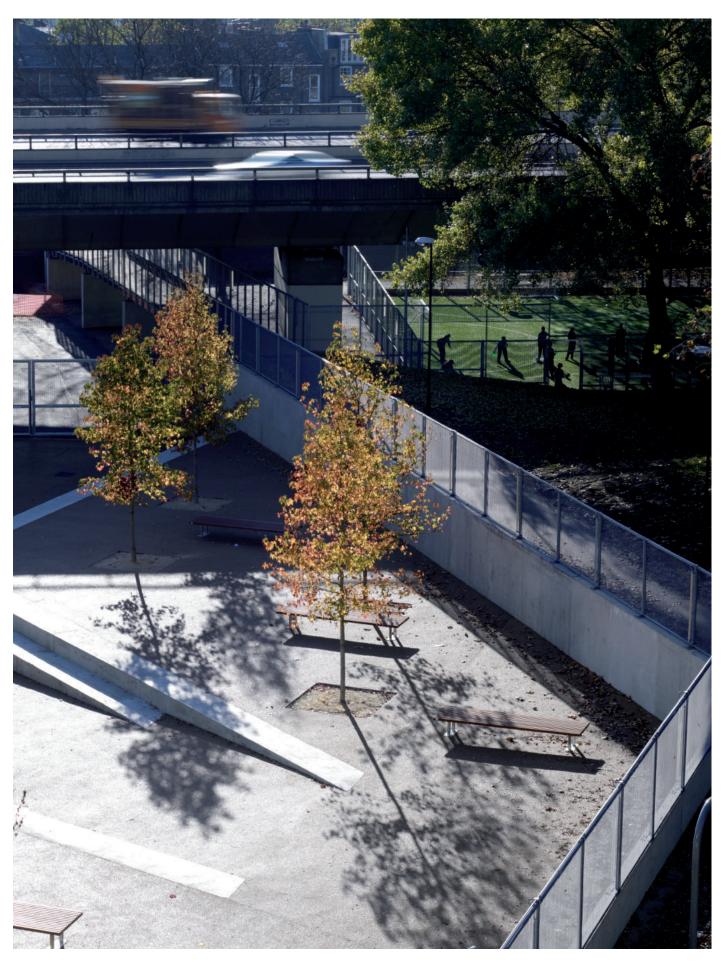
A471_527 © Robert Parrish



Typical Science lab classroom A471_306 © Matt Chisnall



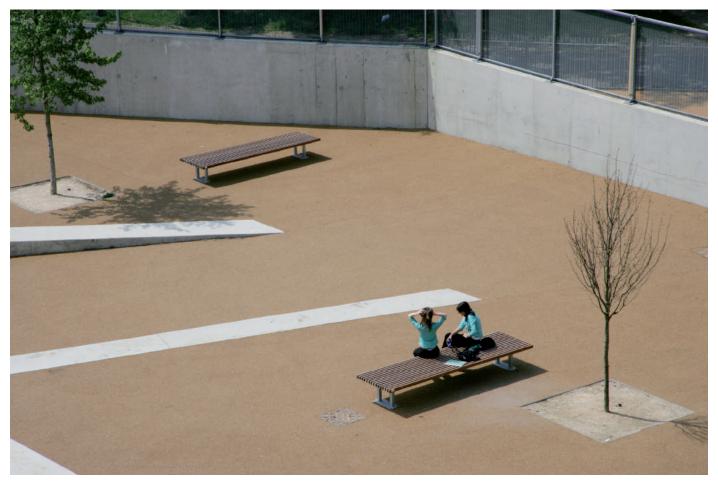
Breakout space with photography by Naoki Honjo



External Terrace spaces and Sports Pitches int eh background



Terraces in the games area A471_525 © Robert Parrish



Terraces in the games area A471_506 © Robert Parrish



Sports pitches, attached to Academy Sport in use

A471_519 © Robert Parrish



Academy Sport façade A471_478 © Robert Parrish



Academy Sport Building A471_412 © Timothy Soar

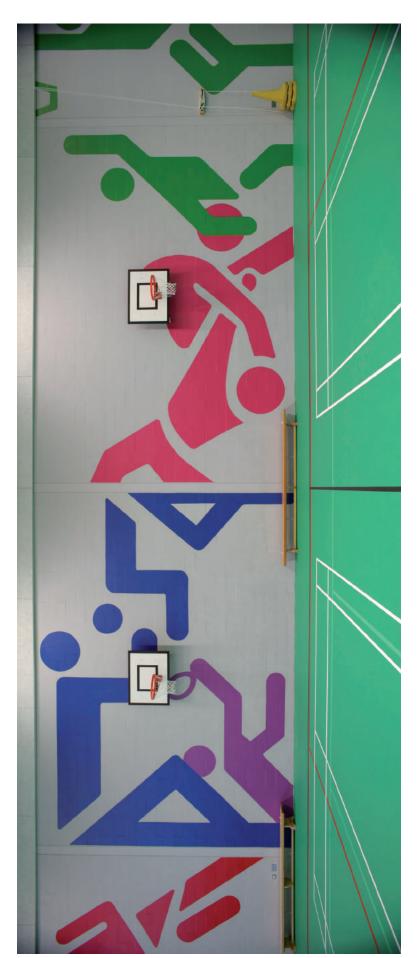
Academy Sport main corridor and locker room graphics

A471_438 © Robert Parrish



Academy Sport main corridor and locker room graphics

A471_414 © Robert Parrish



Academy Sport supergraphics in Sports Hall

A471_432 © Robert Parrish

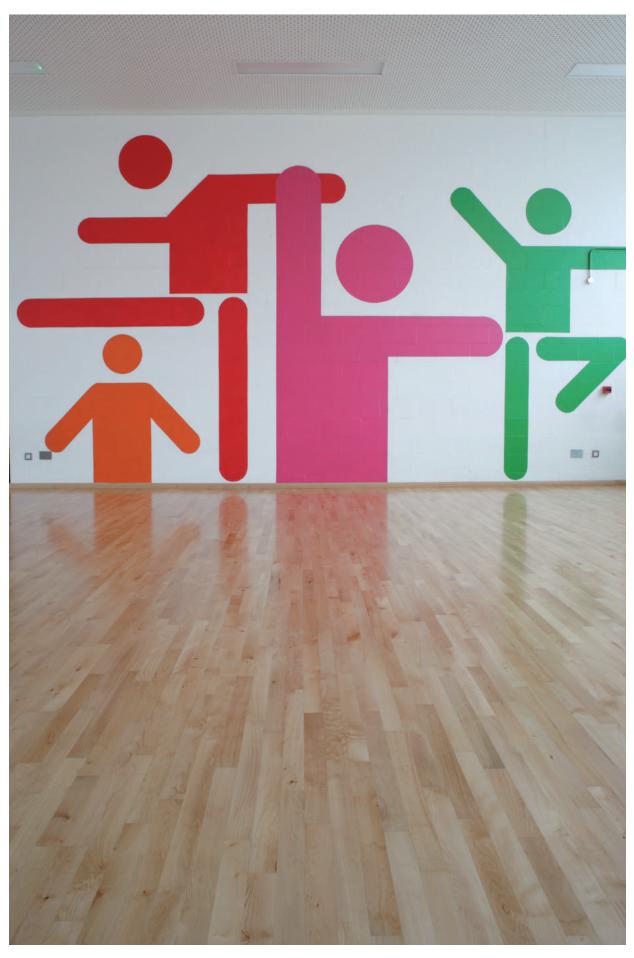


Sports hall facilities in use A471_521 © Robert Parrish



Academy Sport supergraphics in dance studio

A471_437 © Robert Parrish



Academy Sport supergraphics in dance studio