

# DESIGN

from IBSTOCK BRICK

## Autumn 2016

In this issue: Cottrell Vermeulen at Brentwood School, Evans Vettori at Nottingham Trent, PRP, Studio Verve, Adrian James Architects, plus creating curved brickwork and Ibstock's Birtley brickworks





Domino housing, London, by Verve Architects (ph: Luke White)

# DESIGN

from IBSTOCK BRICK

## IBSTOCK

Ibstock Brick Ltd  
Leicester Road, Ibstock,  
Leicestershire, LE67 6HS  
t: 01530 261999  
f: 01530 257457  
e: enquiries@ibstock.co.uk  
www.ibstock.com

Ibstock Sales Office:  
0844 800 4575  
Design & Technical Helpline:  
0844 800 4576  
Sample & Literature Hotline:  
0844 800 4578  
Special Shapes and Brickwork  
Components Sales Office:  
0844 736 0350

©Ibstock Brick 2016  
Published by Ibstock Brick Ltd



- 4 Autumn 2016 – Ibstock Update
- 6 The Pavilion and Teaching Building by Evans Vettori add a heart to Nottingham Trent University's campus
- 12 Brickwork enhances the fluid, dynamic curves of Incurvo, a private house in Oxfordshire by Adrian James Architects
- 18 Black bricks lend distinction to the Domino houses on a neglected backland site in north London by Studio Verve
- 24 Cottrell Vermeulen's Bean Learning Resource Centre at Brentwood School is a showcase of inventive brickwork
- 32 PRP's regeneration of London's Myatts Field North estate exploits the potential of steel framing and brick facades
- 38 Creating curved brickwork
- 42 High environmental standards in both production and in its products are a hallmark of Ibstock's Birtley factory
- 46 Brick Response: Simon Gould of Mitchell Eley Gould

Ibstock  
Building  
Products

Building a family of exceptional brands



# Ibstock Update

## NEW BRICK BLENDS IN THE SPOTLIGHT

Ibstock has launched a range of new Leicester Blends, alongside its Birtley and bespoke blends, all of which feature in a new brochure, available online.

Factories specialising in blends include Swanage, Birtley, Leicester, Chailey and West Hoathly. Where Swanage produces stock bricks in unique colours, textures and sizes, plus handmade specials, Birtley builds on a century-old tradition of manufacturing authentic waterstruck bricks. Leicester makes

the most extensive range of standard and crease-textured stock bricks in the UK, while West Hoathly is among the country's last remaining clamp-fired stock brick factories. Chailey also builds on its history, using clamp firing to set its products aside from modern clay bricks in both colour and texture.

However, with Ibstock's total of 15 manufacturing sites together producing more than 300 brick types, the range of bespoke blends is almost unlimited. This offers

specifiers huge freedom in creating blends to harmonise with adjacent buildings, to match existing brickwork or to imbue a new project with a unique identity.

Bespoke brick blends can be created with the blending tool at [www.ibstock.com/brick-blender](http://www.ibstock.com/brick-blender). In addition, Ibstock can supply Blend-Builder boxes, featuring 30 brick slips of a chosen blend with which to create a bespoke mix. For samples or bespoke blend panels, please call 0844 800 4578.

## BIM OBJECTS READILY AVAILABLE

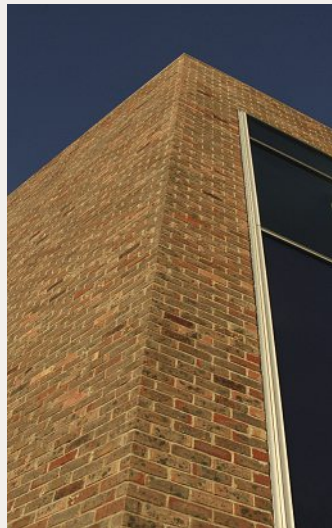
Ibstock is delighted to announce that all its principal UK brands have fully embraced BIM, making many key products available through the RIBA-supported National BIM Library. Ibstock Brick, Supreme Concrete, Anderton and Forticrete recognise the benefits that BIM can bring to specifiers in efficient building design. The widest range of clay bricks and concrete products, including lintels, walling stone and masonry blocks, floor beams and troughing products are available in all common formats at [www.nationalbimlibrary.com](http://www.nationalbimlibrary.com)

## BRICK-EFFECT CHIMNEYS

The Faststack range of brick-effect chimneys from Ibstock Kevington offers a time-saving solution to forming lightweight imitation chimneys. They are delivered to site ready to point, crane, fix and dress. See [www.ibstock.com/chimneys](http://www.ibstock.com/chimneys)

## AGES OF BRICK WINNER

Answers to Ibstock Design's Spring quiz, won by Rex Lambert, are: 1 Amsterdam, 2 The Pantheon, 3 Alvar Aalto, 4 Fritz Höger, 5 Antoni Gaudi, 6 Louis Kahn, 7 Edwin Lutyens, 8 Copenhagen, 9 Albi, 10 Rome.



**Above**  
Rex Lambert, an architect at Anne Machin Architects, wins the £250 prize in the Ages of Brick competition.

**Left**  
Bespoke blends at the Oval and Wakehurst Civic Offices.



## IBSTOCK'S STRENGTH IN NUMBERS AT THE BRICK AWARDS

Bricks from Istock feature in many of the shortlisted entries for this year's Brick Awards. The winners will be announced at the 2016 awards presentation, held by the Brick Development Association in London on 10th November.



### Commercial Building

- Foundry Digital Village, Salford, SixTwo Architects
- Smithfield, Stoke Civic Centre, Aedas Architects (above)



### Craftsmanship

- Erdington Skills Centre, Birmingham, Bryant Priest Newman
- Brick Relief Panels, Brick Kiln, Telford, Galliford Try (above)
- Peel Campus accommodation, Salford University, Sheppard Robson Architects
- Smithfield, Stoke Civic Centre, Aedas Architects



### Education Building

- Pavilion & Teaching Building, Nottingham Trent University, Evans Vettori (above)
- Brentwood School Learning Resource Centre, Cottrell & Vermeulen
- Merchant Taylors' School Design Centre, Architecture PLB
- Crausaz Wordsworth Building, Robinson College Cambridge, RH Partnership



### Refurbishment

- Student Services Building, Arts University Bournemouth, Design Engine Architects (above)
- Brentwood School Learning Resource Centre, Cottrell & Vermeulen



### Large Housebuilder

- Catalyst Housing Group, Mill Farm Estate, Higgins Construction
- Catalyst Housing Group, Myatt's Field Phase 1, PRP Architects
- Bovis Homes, Sirius Way, Cambridge
- Bovis Homes, Addenbrookes Road, Cambridge
- Linden Homes, Greyfriars Quarter Wilshere Park, Gloucester, Stride Treglown (above)
- Barratt Homes, City Wharf
- Barratt Homes, Hastings Park, Ashby
- Taylor Wimpey, Churchill Place, Mill Hill, London, CMYK Architects
- Taylor Wimpey, The Arboretum, Haverhill
- Bellway, Marconi Evolution, Chelmsford
- Bellway, Maple Court, Birmingham
- Redrow, Coppice Green Adobe, Telford
- Redrow, The Orchards, Leicester



### Large Housing Development

- Sighthill Regeneration, Glasgow, Collective Architecture
- Abbey Road Barking, Cartwright Pickard (above)
- 113 Upper Richmond Road, AHMM Architects
- Cobalt Place, Battersea, London, AHMM Architects

### Small Housing Development

- Elmwood Court, Battersea, London, CF Moller Architects
- Domino Houses, Bounds Green, London, Studio Verve



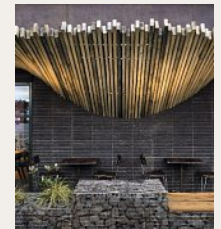
### Urban Regeneration

- Blocks A & C Wapping Wharf, Alec French
- Pavilion & Teaching Building, Nottingham Trent University, Evans Vettori
- Sighthill Regeneration, Collective Architecture (above)



### Individual Housing Development

- The Ashes Folly, Kent, Richard Hopkinson Architects
- Courtyard House, London, Dallas Pierce Quintero
- Incurvo, Oxon, Adrian James Architects (above)



### Innovative use of Brick and Clay Products

- Nando's Hove, STAC Architecture (above)

### Specialist Brickwork Contractor

- Phoenix Brickwork, Pavilion & Teaching Suite, Nottingham Trent University, Evans Vettori Architects
- Lee Marley, Woolwich Blocks C & D, Berkeley Homes





# Focal Point: Nottingham Trent University

Brickwork lends scale and coherence to the new Pavilion and Teaching Building, designed by Evans Vettori to form the focus of Nottingham Trent University's campus.



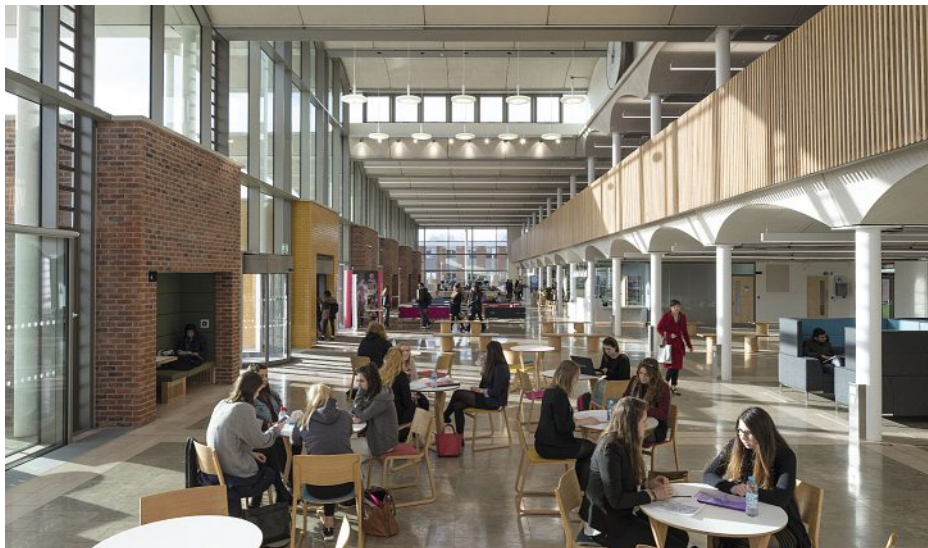
Nottingham Trent University's brief to architect Evans Vettori was to replace or modernise a number of worn-out 1960s teaching buildings on an unpromising site to provide state-of-the-art spaces. A 'front door' and student 'heart' to the campus were requested, and the buildings were to be highly sustainable and low-energy.

The new social centre – the Pavilion – is augmented by a new teaching building, set at right angles. By relating these to an existing lecture theatre building, on the hypotenuse, a triangular Plaza is created, forming a focal point to the campus and providing coherence to the site.

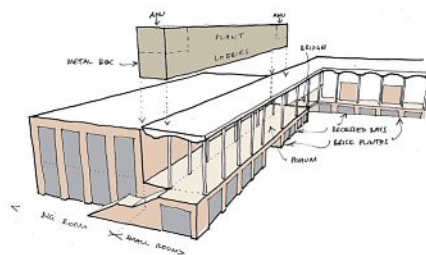
The Pavilion is raised on a sheltered, south-facing plinth with views across the plaza. Precast concrete roof vaults provide thermal mass and a sense of permanence, while the walls comprise red and grey brick, reflecting the local context. The main north-south and east-west pedestrian routes are defined by colonnades.

The 2,000-square-metre Pavilion forms a new front door to the campus, providing a central building for students with large and small spaces for collaborative learning and social interaction. The colonnade concept was generated by the primary east-west pedestrian route, and it shades the south-facing facade. The structure turns at the west end, forming a covered bridge which accesses the three new lecture theatres and defines the 'quad', with a new entrance to the library.

The ground floor is mainly given over to the Forum – a flexible, high-quality, IT-rich space for meeting and working in a relaxing, social



PAVILION CONCEPT



#### Above

The Forum occupies the main double-height space within the Pavilion. Brick study niches punctuate the main facade.

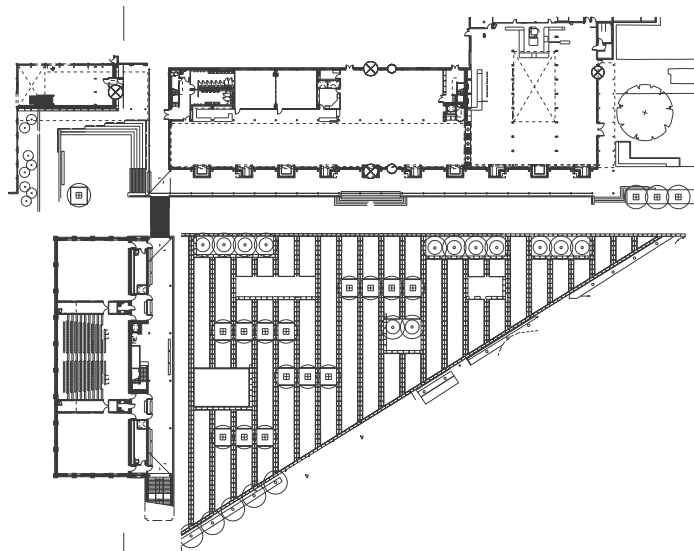
#### Left

Preliminary sketches showing the Pavilion section concept and the Teaching Building fronted by the extended loggia.

#### Right

The Pavilion addresses the new central, triangular Plaza. Location plan and ground-floor plan showing the two new buildings aligning the Plaza.





---

environment. The Forum is augmented by more enclosed learning spaces to the rear, while cosier alcove spaces are provided in the 'pods' along the front elevation. The mezzanine floor offers quieter, more intimate areas for study and social interaction, including flexible teaching rooms.

The 2,100-square-metre Teaching Building, which has replaced several demolished buildings, contains large, state-of-the-art classrooms and lecture spaces. A clear external route is provided through the building to link the Plaza with outlying areas. The building plays a supporting role in the ensemble of new buildings around the Plaza, and its architectural language complements that of the Pavilion.

The large lecture spaces are accessed externally from the raised colonnade. The elevations express the steel-framed structural grid and make use of multi-coloured brickwork to define openings. Texture and grain are provided by varying the brick coursing.

The upper floor contains three large lecture spaces. The central space has tiered seating, while the two on either side are flat-floor, allowing flexible furniture arrangements for different teaching modes. The lower floor has 10 classroom spaces of varying sizes. It is possible to join three of these to form a large flat-floor space for 'scale-up' teaching and other large-format configurations. The high-performance acoustic partitions are motorised and open up at the touch of a button.



**Left**

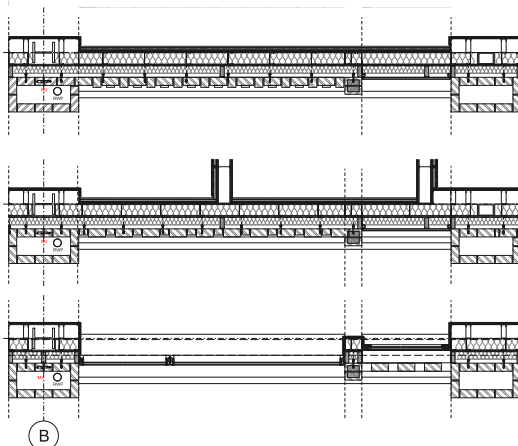
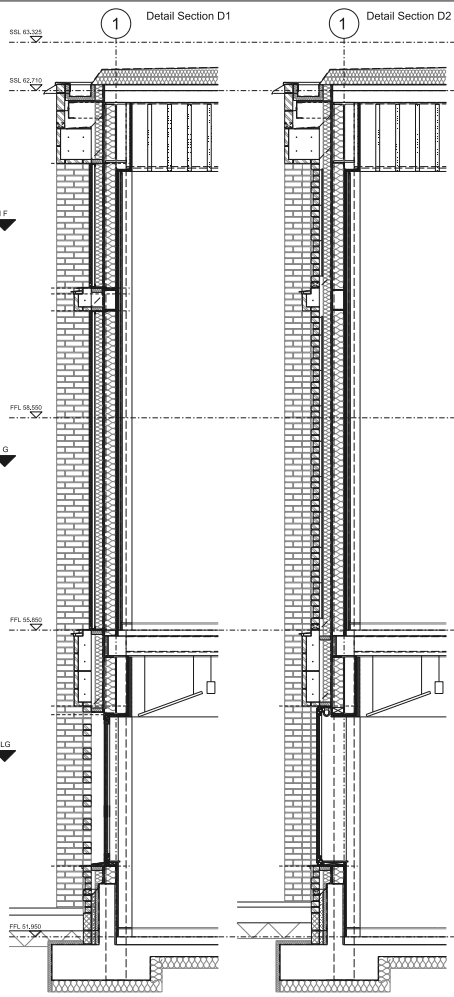
Staircase to podium level of the Teaching Building; night view. The use of generous double-height brick columns allowed the architects to suggest a grand scale to address the Plaza. Brickwork also enabled articulation of the surfaces to add texture and relief to what would otherwise have been relatively blank elevations. Hit-and-miss honeycomb bond brickwork allows secure night-time ventilation while giving a dappled diffused light during the day. Brick also offered a degree of robustness externally and internally in this demanding environment, while also helping to bring urban consistency to the variety of different buildings. Glazed bricks were used to add a colour contrast to the elevation of the Pavilion. Facing bricks were also used internally in the lecture theatres to incorporate optimal thermal mass and provide a focal wall.



**Right**

Brickwork panel details on the Teaching Building elevation.





Plan Detail First Floor

Plan Detail Ground Floor

Plan Detail Lower Ground Floor

**BUILDING**  
 Pavilion and Teaching Building,  
 Nottingham Trent University

**BRICKS**  
 Ibstock Nevado Geel, Rood Gesinteld,  
 Alu Special Yellow, Dark Grey, Light Grey,  
 Sky Blue, Green Glazed

**ARCHITECT**  
 Evan Vettori Architects

**MAIN CONTRACTOR**  
 CF Tomlinson

**BRICK CONTRACTOR**  
 Phoenix Brick

**PHOTOGRAPHY**  
 Martine Hamilton Knight

# Sweeping Impressions

Stylish curved walls of brick envelop the free-flowing and flexible interior spaces in Adrian James Architects' re-invention of the archetype 'villa in the landscape'.









‘Incurvo is a meta-villa’, says architect Adrian James. ‘Like a classical villa it sits at the centre of a beautiful sculpted landscape. But unlike a classical villa it does not sit four-square on axis, gazing haughtily down on a formal landscape in stasis.’

‘Incurvo is all about movement. It is fluid; a dynamic sensuous form which beckons the visitor around its sweeping curves. This is a building that grows out of the organic curves and folds of its setting. The house is a viscous form petrified; it is an English butte. The strong sense of movement embodied in the shape is frozen in time within its brick carapace. The local brick has a luminous earthy orange hue, seemingly still bright from the heat of the kiln; this house exploits both the extraordinary plasticity of the humble brick, and its rough, tough sense of rootedness.’

‘Inside, too, is all about curves and movement; a lofty entrance hall draws visitor inwards and then left, right and up as the space opens and diverges in all directions. The destinations, the places to pause and rest, are the foci of the majestic curved windows which offer breathtaking panoramic views of the garden, water, trees and rolling Chilterns landscape beyond.’

‘Incurvo is not just a pretty face, however. It is as close to being a Passivhaus as a curvy house can be. The radial windows preclude full compliance, but the house meets the most stringent benchmarks for insulation, thermal bridging, airtightness and thermal comfort. Passivhaus principles have been adhered to throughout, with a Certified Passivhaus tradesperson overseeing the entire construction. The end result is a dwelling that will have



#### Left

Ground and upper floor plan; site plan.

#### Right

Entrance elevation; living area; master bedroom suite.

#### Adrian James writes:

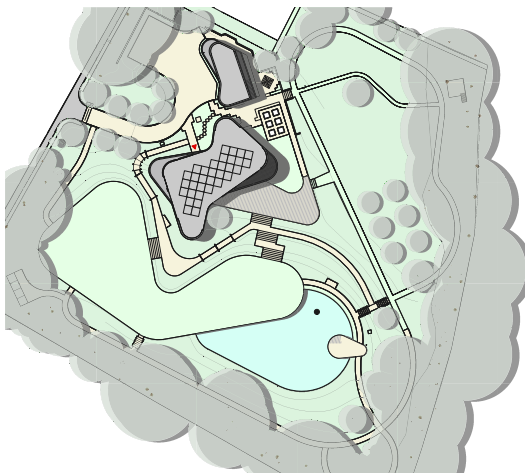
In 1973, the celebrated architect Louis Kahn wrote: ‘You say to brick, “What do you want, brick?” And brick says to you, “I like an arch.”’

A present-day conversation might go: You say to brick, “What do you want now, brick?” And brick says: “Look, I still love an arch, of course! But I appreciate that technology has moved on. Nowadays the loadbearing job is necessarily within an insulating envelope; whatever bears the weight has to be separated from the external finish to prevent cold bridging. There was a time – a few millennia in fact – when I could be structure and finish simultaneously. But those days are over. Now there are other materials that can do the loadbearing and I am more likely to do the external cladding alone.”

“That is not a problem though! And certainly not a demotion. I have qualities beyond compressive strength, and, if I’m not carrying all that internal load, that frees me up to exploit them. For a start, I have extraordinary plasticity. My small handy shape means that angles, cranks, curves are a doddle – no special fabrication, just me doing what I do best.”

“Being the face of the building, freed from structural duties, gives me scope to be supple and sinuous. I can be like the skin of an athlete, a taut layer hugging and expressing the musculature beneath.”

“What do I want now? I want to wrap myself smooth and taut around dynamic curvaceous forms. I want to be the cheetah’s fur, the sculpture’s carapace.”





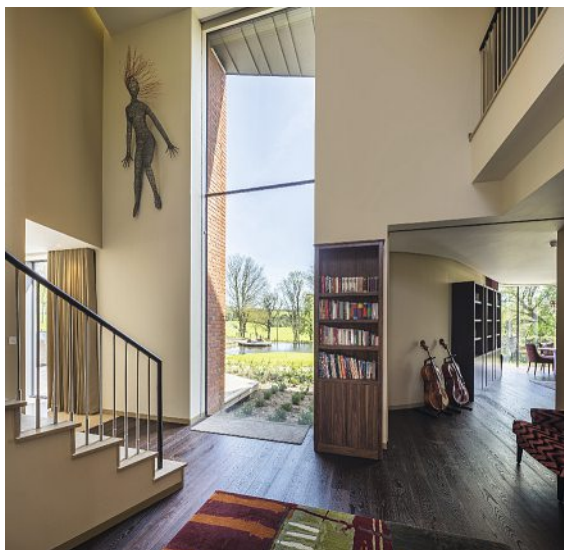


exceptionally low running costs and carbon dioxide emissions for its lifetime. The house has three energy generation systems: a large array of photovoltaic panels on the roof, an array of solar thermal panels to heat domestic water, and a full mechanical ventilation system with heat recovery.'

'Incurvo will be extremely comfortable to occupy. It has been designed as a Lifetime Home, with space for a lift, generous dimensions and internal flexibility. And it has been built using extremely durable materials requiring minimal maintenance. This house is designed to last for many lifetimes with the lightest of touches on the planet.'

'The structure is an enhanced ICF (Insulated Concrete Formwork) system, with a U-value of 0.14. This construction method combines continuous insulation with structural flexibility and airtightness in one robust element. In-situ concrete floors and roof (with even better U-values of 0.1) create a contiguous thermal and airtight envelope and cope with the non-orthogonal form and large cantilevers over the wide curved openings. This is a house which stretches the capabilities of the building systems to the limit. The long stretches of curved walls required a whole new approach and real craftsmanship from the ICF supplier to make the tied radial insulating formwork.'

'There has been unstinting attention to detail throughout the design and construction of Incurvo', says Adrian James. 'But at no time has the pursuit of excellence in sustainability or construction been allowed to compromise the poetic idea of the house. Everything, everyone has worked together to make it real.'



#### Left

The architect selected a Swanage Handmade Light Red Multi brick – a rich orange colour brick with some variety. 'It's a favourite brick of ours and one we have specified before – and we used it here to suit the locality', says Adrian James.

'We used a Flemish bond because it makes a complex and lovely rhythm and also because it goes round the tight curves without the need for specials: we tested this first with a sample panel, and the bond combined with the rough lines of the handmade bricks worked well even down to a two-metre radius. The natural mortar was recessed to create shadows and leave the brick arrises clear.'

'The deep reveals were critical to the look of the building; the walls are very thick because of the exceptional levels of insulation and this means the brick carapace from which the body of the house emerges has the necessary solidity to read as a structure of its own, a vessel rather than just a skin.'

#### Right

Construction section through door head and floorslab.



**BUILDING**  
Incurvo, Oxfordshire

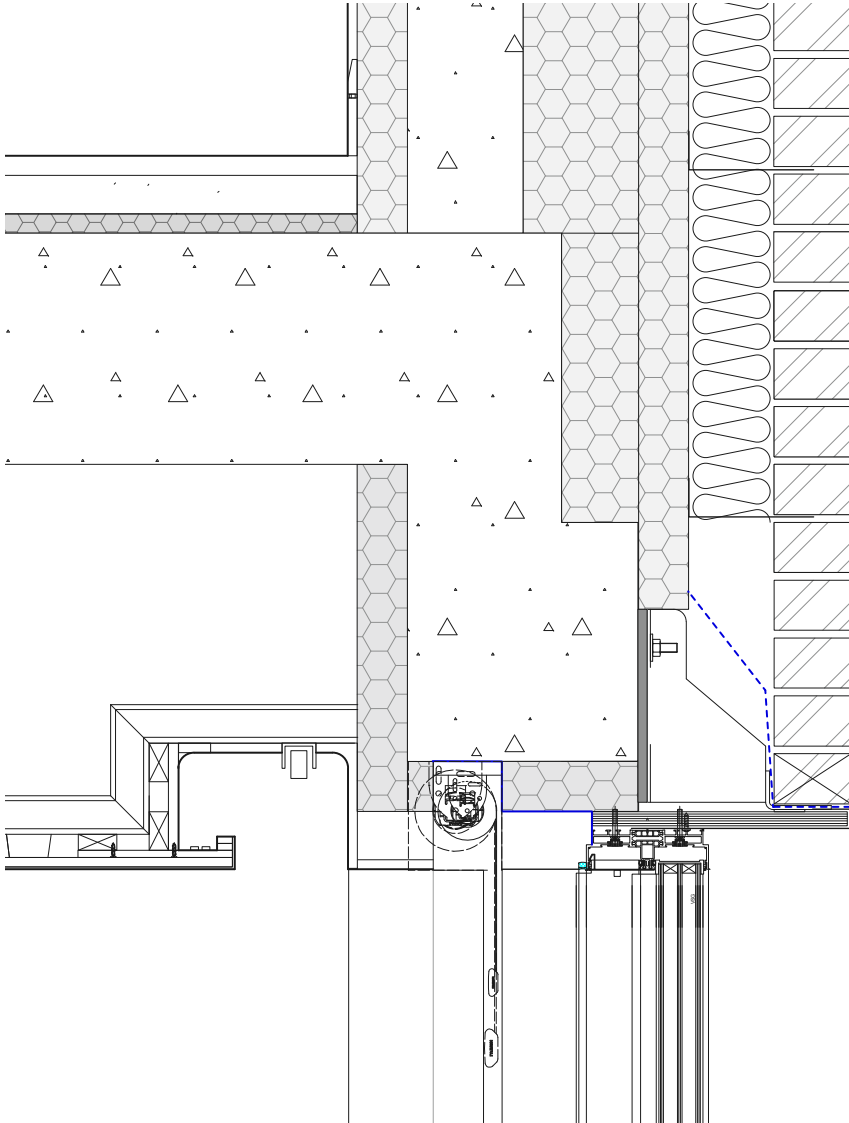
**BRICKS**  
Ibstock Swanage Handmade Red Multi

**MORTAR**  
CPI Mortars M4 Natural

**ARCHITECT**  
Adrian James Architects

**CONTRACTOR**  
DLP Associates

**PHOTOGRAPHER**  
Fisher Studios



# Domino Dances

Sombre dark brickwork is tempered by the playful curved rooflines and informal planning of the Domino housing development on a constrained railway-side site in north London by Studio Verve.



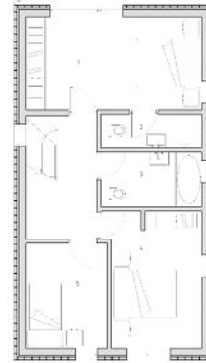






Located on a neglected backland site in Bounds Green, north London, Domino is a development of eight houses planned around a central area of woodland. The plot runs north to south along the curve of the adjacent railway line, tucked behind a council estate on Corbett Grove, and accessed from Imperial Avenue to the south. The house types are a mix of linked, terraced and standalone dwellings, all set within sensitively landscaped surroundings.

On entry from the south, bright yellow gates open onto a sloping cobbled road which is marked by a mature tree – successfully retained throughout the construction process – and providing an appropriate welcome. Car parking and vehicular roads are finished with the same uneven stone, lending an informal character to the development and encouraging communal use of the spaces. The houses are conceived as monolithic blocks of black brick with curved green roofs and ‘domino’ porthole windows dotting the facades. The dominant black brick and undulating facades lend a sculptural quality to the development, suggesting a Nordic quality to the looming forms, says architect Verve Studio.

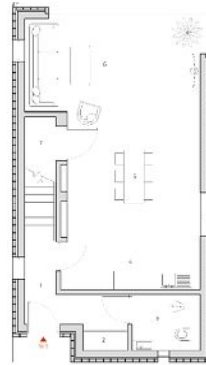


**Left**

Site plan; typical dwelling plans (a third-level attic space extends across the whole footprint).

**Right**

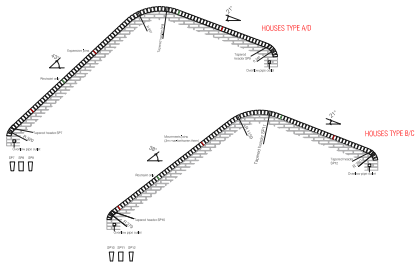
Staggered terrace of three houses. The dwellings were built using a combination of steel and timber frames with traditional cavity brick and block wall construction. The rapid completion of the structural steel frames on site provided the backbone on which the rest of the envelope followed on.





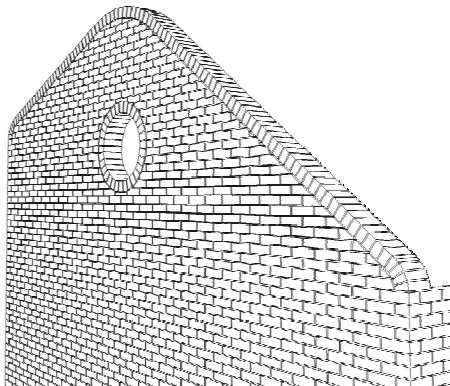






Glazed patio doors open onto private gardens with views onto the woodlands or green buffers of the railway tracks. The north and south sites are separated by a retained area of woodland, into which new shared facilities have been introduced, including park benches and tables and a Petanque bowling pitch which is proving popular with the residents.

The houses were designed to level four of the Code for Sustainable Homes. Each has photovoltaic panels at an optimum pitch of 30 degrees, together with a sedum roof. A large part of the mature woodland was retained, helping to shade the houses in summer months. Bounds Green underground station is a five-minute walk away, helping reduce potential car use, while the expansive loft spaces beneath the curved roofs can provide home-offices. The development is designed to promote neighbourliness, security and sharing of resources. Fruit trees have been planted in the private garden of each dwelling.

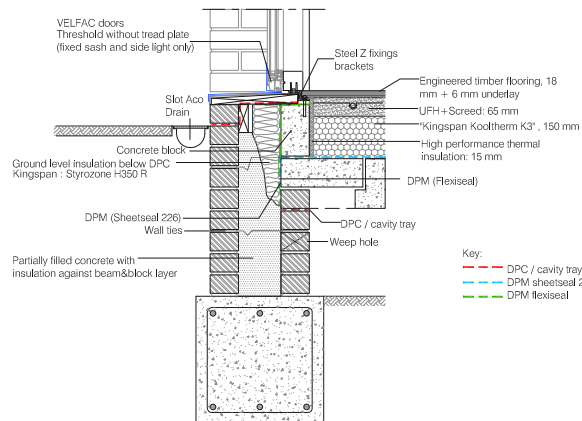
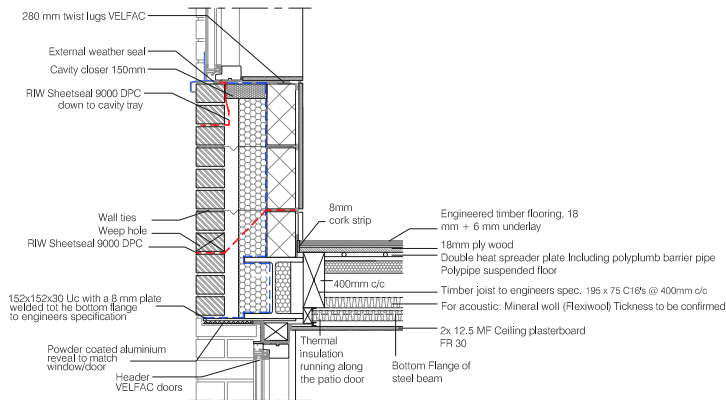
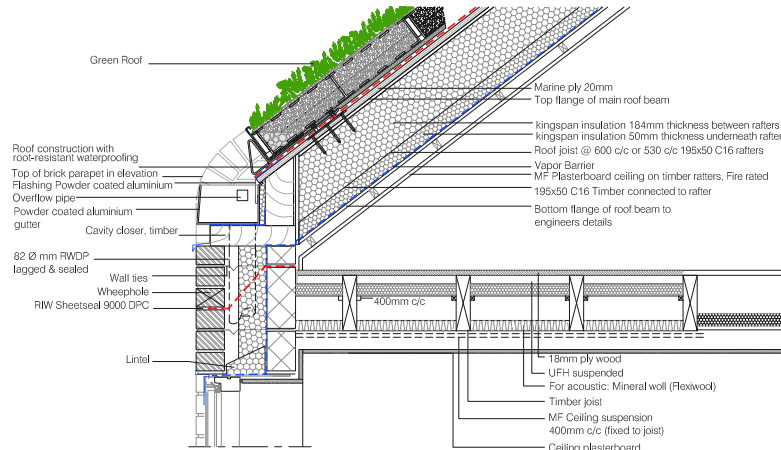




### Left/right

The choice of brick cavity-wall construction arose from the wish of the contractor-developer to utilise its team of traditional bricklayers. The team had to learn new skills, however, as the brick construction was made to work harder, with an increased cavity to achieve the required U-value, and also to negotiate the curved roof parapets, special corner details and hidden downpipes. Extensive meetings were held with Ibstock's technical representatives and the builders, and three-dimensional modelling was employed to resolve the detailing of special corners.

Standard-sized bricks were used as far as possible, with the rare exceptions of the curved corners. The construction timetable was tight as the developer wanted to complete on site within 12 months, so many details were resolved with the developer and builder on site. Full-size mock-ups of feature bricks and special corners were also made on site.



**BUILDING**  
Domino Housing

**BRICKS**  
Ibstock Himley Ebony Black

**ARCHITECT**  
Studio Verve

**MAIN CONTRACTOR**  
Stephen Alexander Morris

**BRICK SUBCONTRACTOR**  
Joseph Pickering

**PHOTOGRAPHER**  
Luke White

# Speaking Volumes

Cottrell & Vermeulen's latest project at Brentwood School – the Bean Learning Resource Centre and Cunliffe Building – employs brick facades to harmonise with the existing buildings while establishing a distinctive new identity.









**Left**

The new development is clad entirely in Ibstock Heritage Red blend, the same brick used in Cottrell & Vermeulen's previous projects at Brentwood School. The large brick arches create a distinctive character and reference those elsewhere on the school campus, notably at the chapel gate.

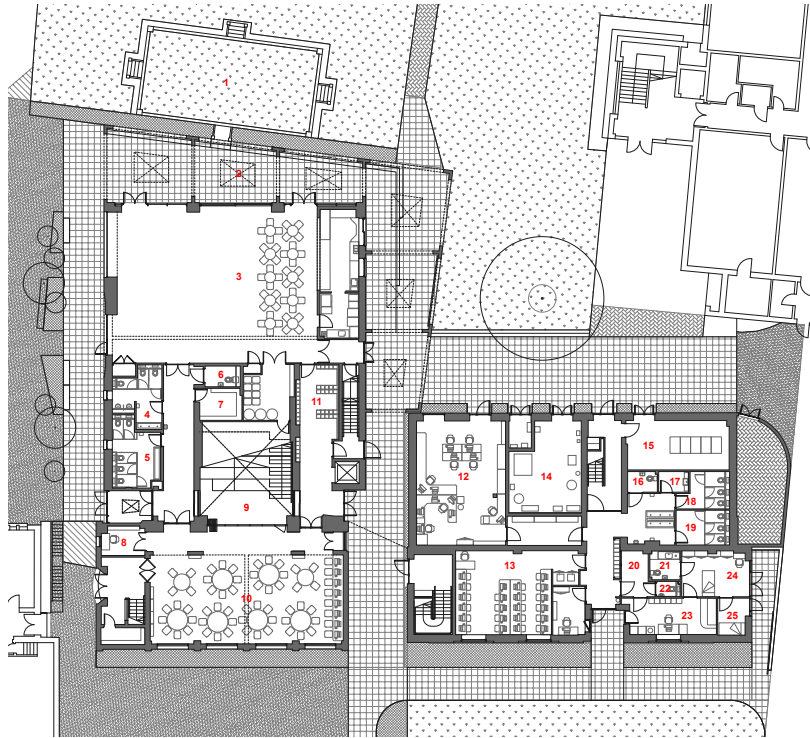
**Right**

Ground floor plan: 1 Stage Lawn, 2 arcade, 3 hall, 4/5/6/16/18/19/21/22 toilets, 7 archive, 8 office, 9 seminar stair, 10 LRC lobby, 11 cloakroom, 12 ICT office, 13 ICT classroom, 14 plant, 15 servers, 17 cleaner, 20 waiting, 23 exam room, 24 ward, 25 isolation ward.

**Right bottom**

Cottrell & Vermeulen's earlier Sixth Form Centre and 420-seat assembly hall at Brentwood School (2011). The design of the building represented a reinterpretation of the nineteenth-century buildings on the site, and explored the potential of brick to create a forward-looking statement for the school.





The Bean Learning Resource Centre at the independent Brentwood School, Essex, provides the a new two-storey extension to the existing library, transforming how the building is used and in tune with the demands of the twenty-first century technological landscape. The project also incorporates the redevelopment of an adjoining 1960s teaching block – the Cunliffe Building – increasing learning space and creating a sense of coherence between the buildings.

The design responds to the existing grain of the school site, which is characterised by a series of courtyards and quadrangles. The two new interventions – the Bean LRC and the Cunliffe Building – emphasise this approach, physically connecting the school’s central gardens through a new arcade. This arcade takes its cue from a nearby cloister and informs the rest of the elevation, creating an array of arches that form a picturesque backdrop to the much-used ‘stage lawn’.

In seeking to respond to the existing built context, both buildings are clad in red brick and composed in similar proportions to the neighbours. A subtle brick patterning (English Bond) used on the Cunliffe Building adds visual interest to the facade.



The existing two-storey Bean Library, completed in 1929 and named after Edwin Bean (headmaster from 1891-1913), encompassed two floors at the centre of the campus, but it was unable to accommodate the present-day needs of the school’s 1,200 pupils. The old library has been retained on the first floor, preserving the character and integrity of the building and contrasting with the contemporary spaces.

---

As well as creating a new education hub, the ground floor of the library incorporates a dedicated social area. An entrance portico links the study and social areas with a transition space that can be used for talks and lectures. With large classroom spaces, a lecture theatre, cafe and places for individual and collaborative study, it provides a state-of-the-art, resource-rich environment intended to help students develop independent learning skills. The library features improved access to books and electronic resources and includes a digital learning hub where student 'digital leaders' are on hand to help other students and staff develop their digital literacy.

The new assembly space and lecture theatre evoke a university-style learning environment with seminar and workshop areas. It is flanked by a new

arcade that provides external social space and acts as a veranda to the Shakespeare Garden.

The adjacent Cunliffe Building, previously containing classrooms for classics, learning support and first-form tutor groups, now contains eight classrooms equipped with cutting edge technology, including computer suites, interactive whiteboards, giant projector screens, and Apple TV systems which can connect multiple iPads to a large screen. In addition, the building includes the relocated sanatorium, now better positioned at the centre of the campus.

The new buildings incorporate highly-insulated envelopes, heat-recovery units, an air-source heat pump and photovoltaic panels.

#### **Below**

With its pitched roof and gabled windows, the Cunliffe Building presents a interpretation of the neighbouring Bean Library. The red brick anchors the building to its context, while a relief pattern and glazed brick infill panels add visual interest.

#### **Right**

A gabled wing to the existing Cunliffe Building was replaced by a new full-length brick extension. The retained shell was overlaid with matching insulated brick slips, using Ibstock's BrickShield, increasing thermal efficiency while blending it with the new extension. Together the two buildings define an edge to the library square. 1 Terracotta capping, 2 clay tile, 3/4 Heritage Red blend brick, 5 glazed brick, 6 grey ppc windows, 7 awning, 8 grey ppc cill.

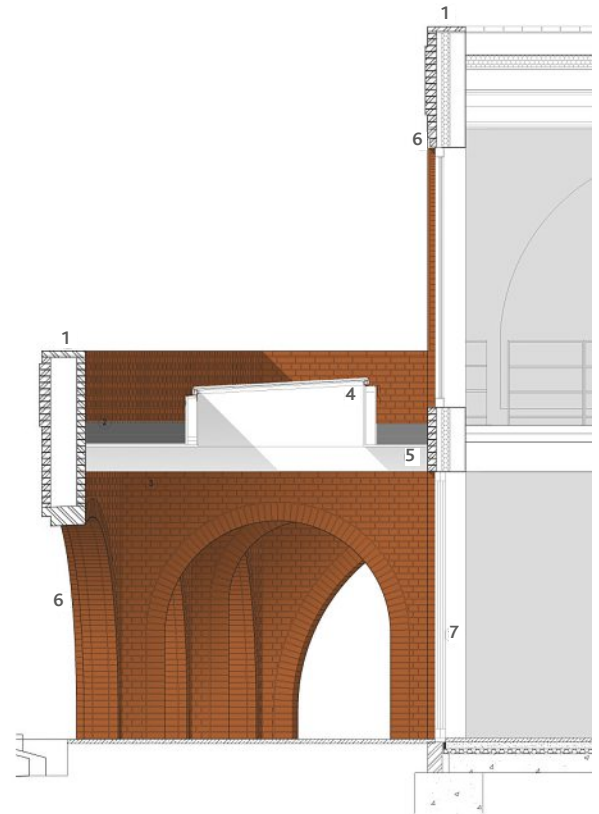
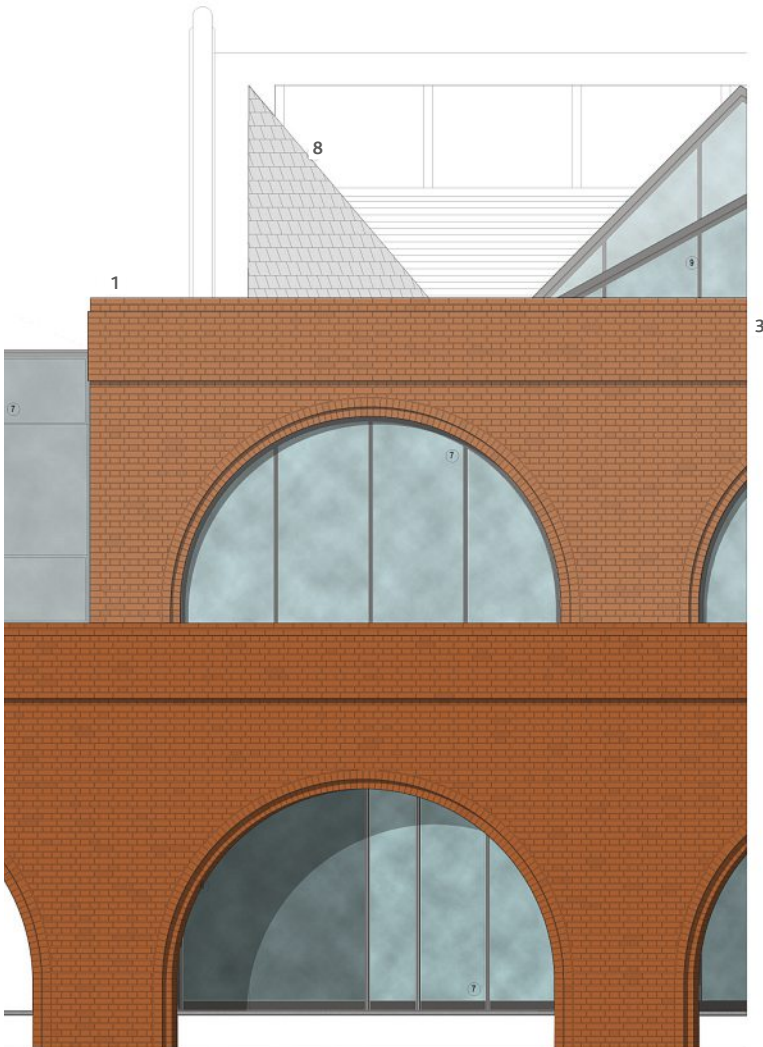






**Below**

North elevation and section through colonnade: 1 terracotta capping, 2 sedum roof, 3 lbstock Heritage Red blend brick, 4 steel-framed rooflight, 5 larch softwood frames, 6 lbstock Heritage Red blend brick arch, 7 grey ppc windows and doors, 8 slate roof, 9 grey ppc aluminium mullions.





**BUILDING**

Bean Learning Resource Centre and  
Cunliffe Building, Brentwood School,  
Essex

**BRICKS**

Ibstock Heritage Red Blend  
Ibstock Bevern Dark Multi  
Ibstock Brown Glazed Bricks

**ARCHITECT**

Cottrell & Vermeulen

**CONTRACTOR**

Hutton Construction

**PHOTOGRAPHY**  
Anthony Coleman



# Fields of Dreams

A variety of brick types and tones contributes to a sense of urbanity and continuity in PRP's regeneration of the Myatts Field North estate in south London, now reborn as part of the Oval Quarter 'urban village'.





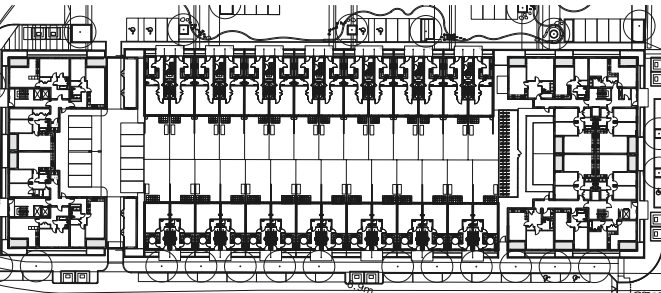
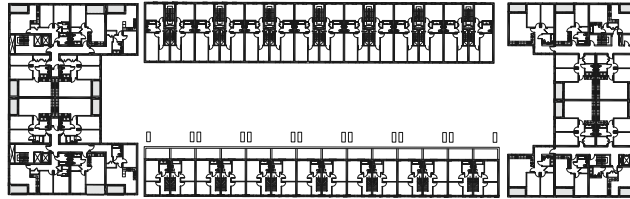




PRP's masterplan for Oval Quarter, south of the celebrated cricket ground in the London Borough of Lambeth, envisages an 'urban village' with 800 new homes, 170 refurbished properties, a community centre providing a hall, cafe and crèche, as well as a new park.

As part of the consortium for one of the last housing-led PFI projects in the UK, PRP's approach to the regeneration of the former Myatts Field North estate was to create a neighbourhood-focused, street-based masterplan, intended to transform the formerly isolated, inward looking estate into a well-connected, sustainable neighbourhood with a distinctive sense of place and identity. The masterplan incorporates a series of 'character areas' which not only provide a sense of variety and distinction to each street and public space, but also connect them with their immediate context, as well as the conservation areas that surround the estate.

A range of accommodation and dwelling types have been provided across the masterplan, from single-storey wheelchair bungalows to two-storey wheelchair houses; three-storey three-, four- and five-bedroom family houses; three-bedroom stacked maisonettes with either a private garden at ground level, or a private roof terrace; and up to four-, five- and six-storey apartment buildings, many of which feature direct views onto the public park or the new residential squares. The perimeter blocks that form the majority of the phase-one accommodation, provide many of these typologies within a single building. Undercroft parking is accessed from each building end, with four-storey stacked

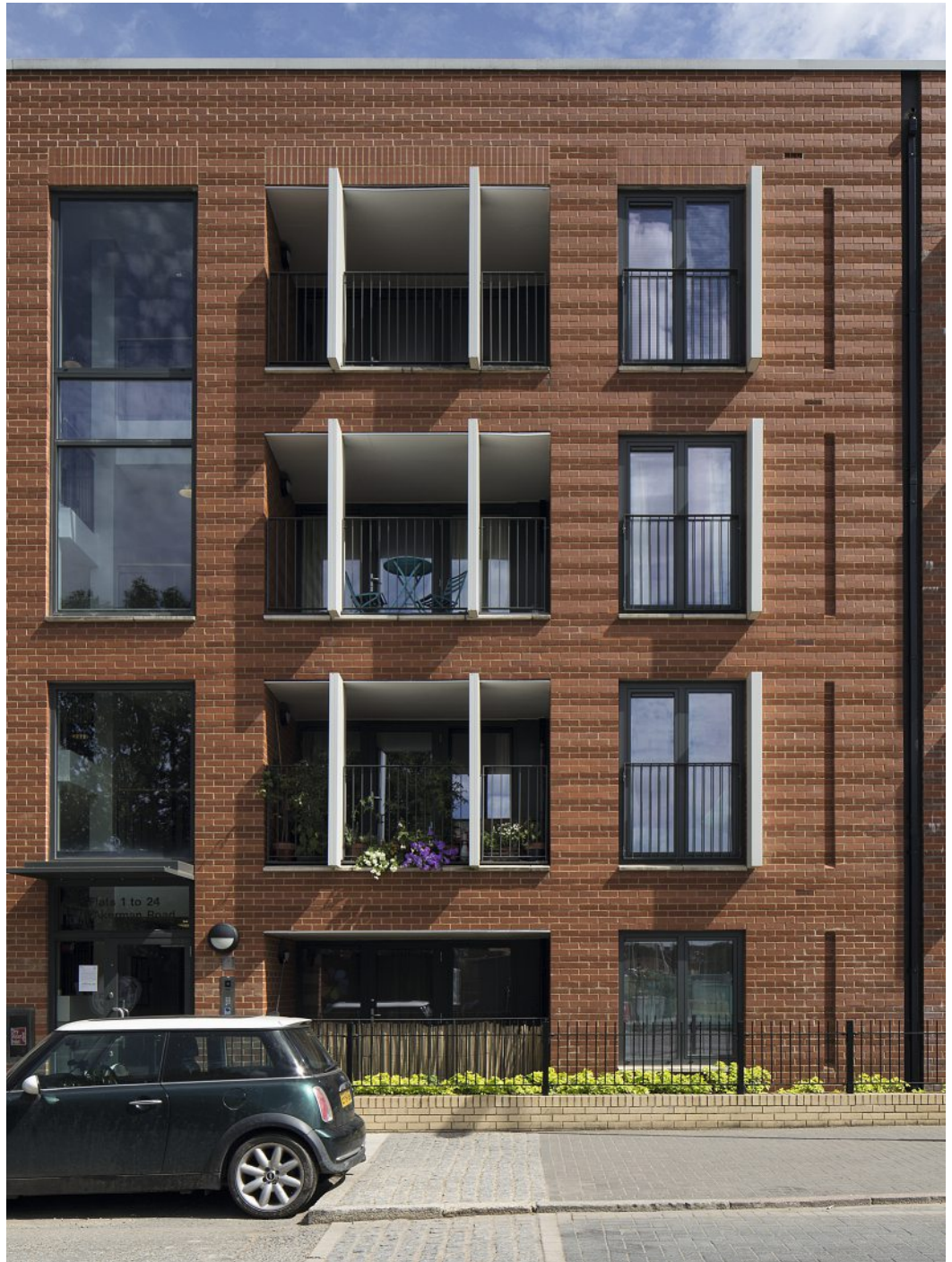




**Left**

Site plan and Block G ground- and first-floor plans. The Oval Quarter consists of a mix of two- and three-storey houses, four- to six-storey apartments, and four-storey maisonettes. It will include 820 housing units, of which 491 units are in phase one, where 27 per cent are privately sold, 23 per cent part-buy part-rent, 36 per cent social rented and the rest in other rented tenures. Most apartments are two bedroom and 80 square metres, with some three- and four-bedroom units. All have some private space, either as balconies, roof or ground-floor gardens.

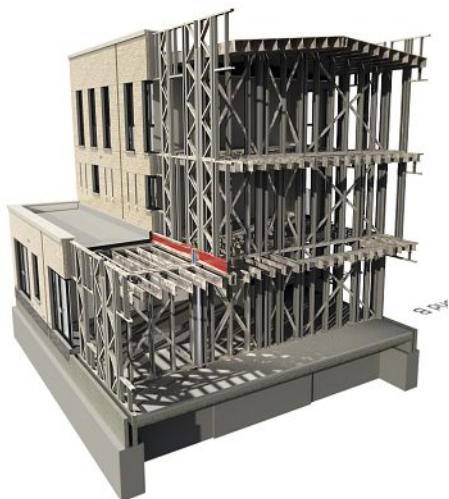
The target U-value was 0.19 for external walls and 0.15 for the roof, with an air permeability target of  $4\text{m}^3/\text{m}^2/\text{hr}$  at 50 pa. Acoustic insulation requirements were 3dB better than Building Regulations (2010) for both airborne and impact sound. The project satisfied the Code for Sustainable Homes Level 3 at the time of the design and later phases will satisfy level 4.



---

maisonettes to the north side of the block stepping down in scale to the three-storey houses on the south side, allowing additional daylight to reach into the private gardens. A new combined heat and power plant and neighbourhood district heating system will significantly reduce carbon emissions across the estate. All new homes have been designed to achieve level three under the Code for Sustainable Homes.

Constructed using Metek's light-gauge steel frame system and a variety of brick types and tones, all provided by Ibstock, the Oval Quarter development creates an exemplary new neighbourhood with interlinked streets and open spaces fronted by buildings that provide a modern interpretation of the traditional brick and stone detailing found throughout London.



#### **Left/right**

The brick facades are supported on a light-steel framing system by Metek with loadbearing walls and 250mm C-sections that span up to 6.5m. Acoustic insulation is provided by a 21mm screed board above the joists and two layers of 15mm fire-resistant plasterboard, a service zone, and a further layer of plasterboard ceiling below the joists.

Generally, the brickwork is ground supported up to 14m high and laterally supported by the light-steel structure. Brick slips were used for the upper levels and fixed via the insulation to the structure. On some blocks, however, where weight restrictions inhibited the use of traditional construction, Ibstock's Kevington Fastwall was used to clad the top storey.





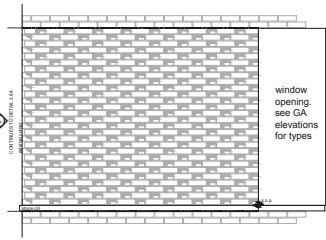
**BUILDING**  
Oval Quarter, London

**BRICKS**  
Ibstock Alpine White, Bradgate Medium Grey, Bradgate Multi Cream, Brunswick Tryfan Grey, Capital Brown Multi, Holbrook Smooth Red, Leicester Multi Cream, Staffordshire Slate Blue Smooth and Blue Brindle Smooth, Throckley Smooth Buff

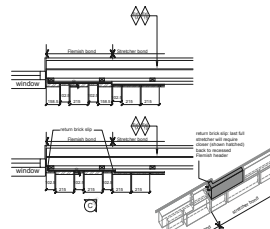
**ARCHITECT**  
PRP

**CONTRACTOR**  
Higgins Construction

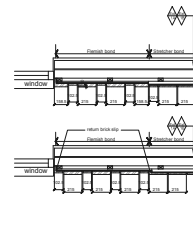
**PHOTOGRAPHER**  
Richard Chivers



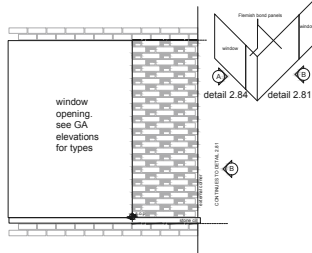
2.81 FLEMISH BOND DETAIL - BLOCK 21C ELEVATION B



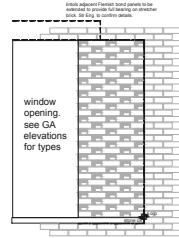
2.82 FLEMISH BOND DETAIL - 3 HEADER BRICK SLIP PANEL



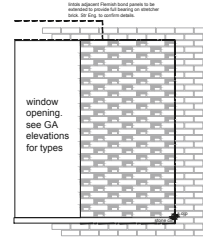
2.83 FLEMISH BOND DETAIL - 4 HEADER BRICK SLIP PANEL



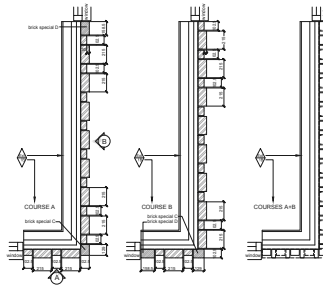
2.84 FLEMISH BOND DETAIL - BLOCK 21C ELEVATION A



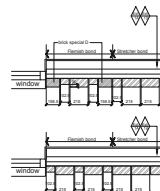
2.85 FLEMISH BOND DETAIL - TYPICAL 3 HEADER PANEL



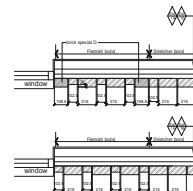
2.86 FLEMISH BOND DETAIL - TYPICAL 4 HEADER PANEL



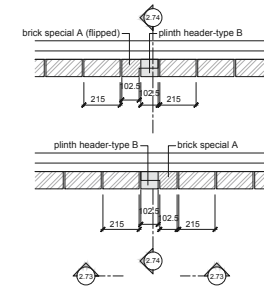
2.87 FLEMISH BOND DETAIL - BLOCK 21C EXT CORNER



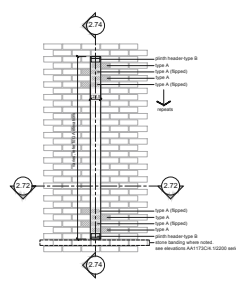
2.88 FLEMISH BOND DETAIL - TYPICAL 3 HEADER PANEL



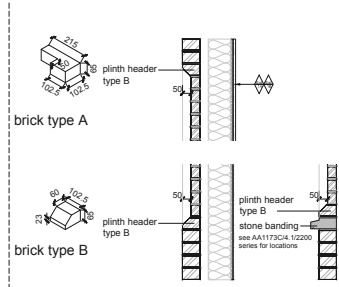
2.89 FLEMISH BOND DETAIL - TYPICAL 4 HEADER PANEL



2.73 FEATURE BRICK SLOT DETAIL



2.74 FEATURE BRICK SLOT DETAIL



2.75 FEATURE BRICK SLOT DETAIL - HEAD AND BASE

# Technical: Radial Brickwork

Radial brickwork can significantly enhance the appearance of a building, by adding a design feature that can engage with the context, express the internal activities, or suggest streamlined glamour. We tend to think that radial brickwork means using more expensive special bricks. This may be true for the glazed radials such as those, for example, on the feature stair towers at Killorglin Area Centre in County Kerry, Ireland (Murray O'Laoire Architects), where the radius of 1650mm justifies their use, but it's not always the case.

At the Sixth Form College building in Worcester, by Quattro Design Architects, it was possible to use standard bricks in a curved feature that was just within the minimum radius of the four metres Istock would normally recommend. With their highly reflective surfaces, glazed bricks

can be the least forgiving when set out on a radius, but even with the sun shining on them the cylindrical tower at Worcester looks very effective. The architect's careful consideration of the brick modular sizing for the window openings and piers between them has done much to enhance the appearance.

It is possible to achieve even tighter radii with standard bricks and avoid an overly faceted appearance. This does however require the use of a Header Bond to exploit the narrower 102mm face. Here the consideration concerns not so much the faceting of the bricks but rather getting sufficient mortar between them on the inner intrados of the radius whilst not having the joints too wide on the extrados.

The drawings for the curved brickwork of PagePark's Bluebell



## Left

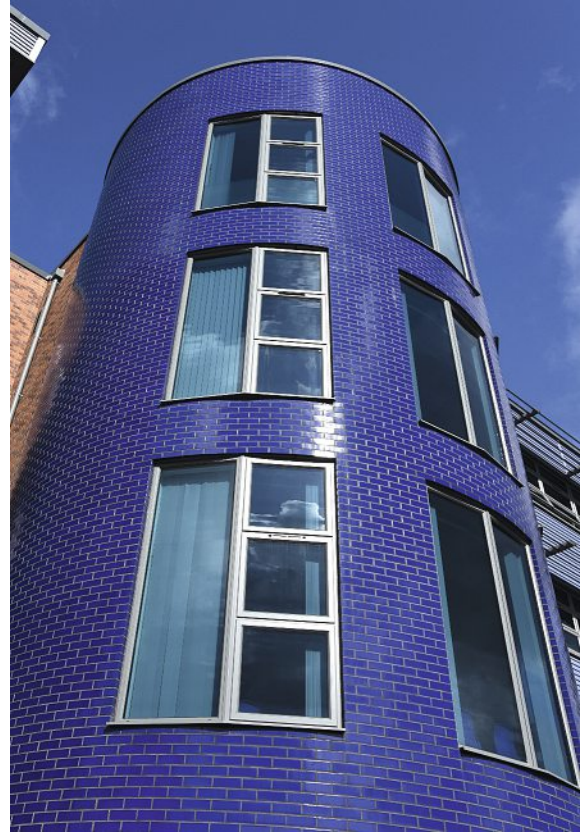
The Local Area Centre at Killorglin, County Kerry, was designed as a landmark building that forms a focal point on a new civic square when viewed from the town's main road. The different functions within the building are expressed externally. The public areas, library and primary circulation are made permeable with large areas of glazing. Vertical circulation routes are pulled out of the body of the building and highlighted in an electric blue glazed brick which was specifically made to pre-determined radii in order to achieve a monolithic finish. The Council Chamber or public meeting room is a wedge shaped volume clad in blue glazed brick which projects above the roof line of the adjacent offices.

The use of Istock's glazed brick on the curved stair tower and recessed Council Chamber is an important design element, lending both colour and animation to the facade addressing the square. The effect of wrapping the irregular forms in the blue glazed brick expresses them as a seemingly separate element flows through the building. The sheen of the glazed brick emphasises the sculptural irregularity of the forms.



**Right**

Worcester Sixth Form College's £2.6m science centre, by Quattro Design, provides four state-of-the-art science laboratories as well as study and IT spaces. The building, which opened last year, helps the college cope with the increased demand for students wishing to study STEM subjects. The scheme was supported by a £1.5m grant from the Government's Building Condition Improvement Fund. The curved bay has a radius of less than four metres, which allowed the use of standard blue-glazed bricks rather than curved specials.



View student residences at Warwick University show two setting-out alternatives. Option A shows the external perpendicular joints at 11mm and the inner at 3mm, which would have been more difficult to build due to the mortar not compressing easily down to 3mm, leaving the possibility of only part of the joint being filled with mortar. Option B has 6mm internal joints, which can be more readily built, and 15mm joints on the outside, a 4mm increase that generally goes unnoticed.

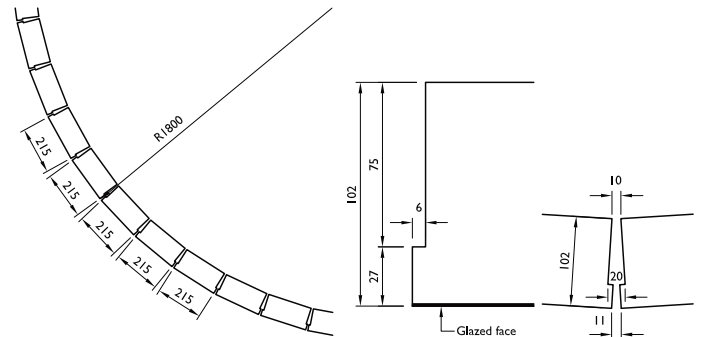
Glasgow City Council Architects' Castlemilk Pool gives evidence that there is at least one other way of building 215mm stretcher face bricks around a tight radius. For this building the edges of the bricks were rebated to allow them to nest into each other around the 1.8-metre external radius. As with all stack-bonded brickwork, this required stainless steel bed joint reinforcement, manufactured to suit the radius, in every course.

Adrian James Architects' Incurvo house (p12-16), shows that Flemish Bond can be used to achieve a 2m

radius using standard bricks. The combination of headers and stretchers, together with a stack brick with its rounded arrises and a recessed mortar jointing, will gently facet the bricks around a fairly tight radius. Extruded bricks built with a flush or bucket handle joint may not be quite as forgiving at this radius. Like Adrian James Architects at Incurvo, therefore, we would advise specifiers to consider having a small sample panel built to provide reassurance that the radiused brickwork meets with the aesthetic expectations.

#### Below

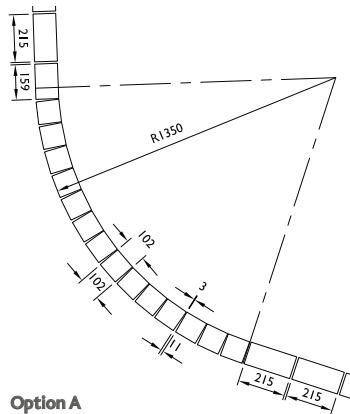
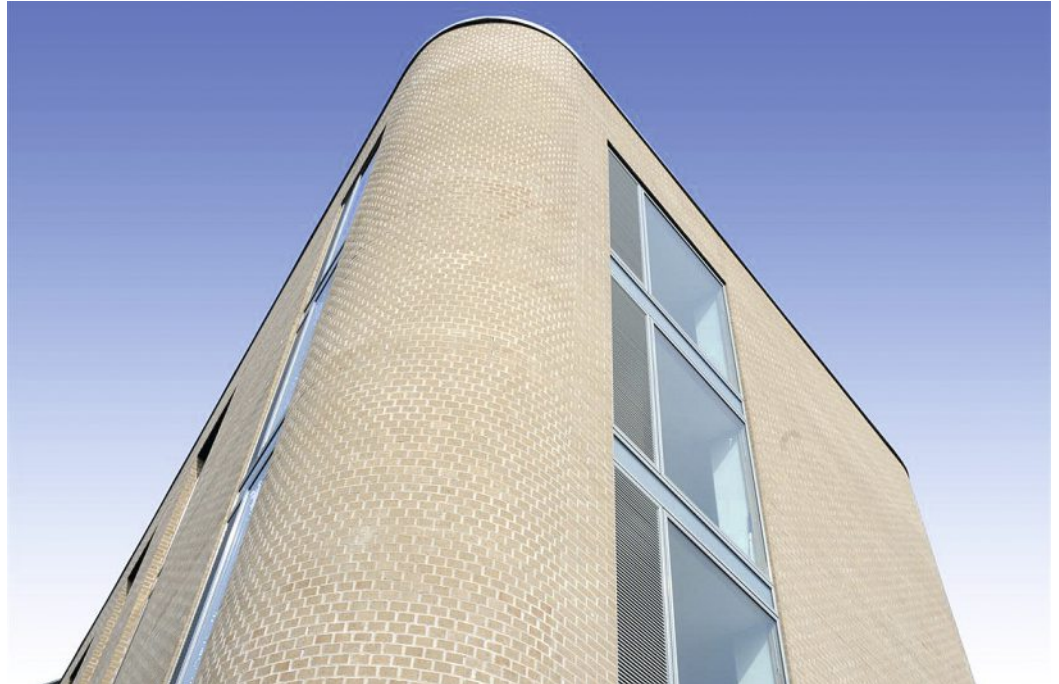
The £4.5m remodelling and refurbishment of the 1960s' Castlemilk Pool, Glasgow, by Glasgow City Council, included the addition of a new stair tower clad in blue glazed bricks. The existing facades of the pool building were removed, and the concrete structural frame retained. New glazed and brick elevations were added, with new office areas, auditoriums and a fitness studio incorporated.



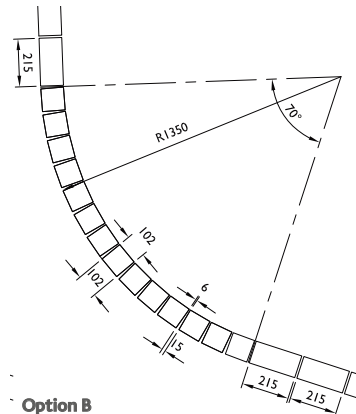


**Right**

Page\Park's Bluebell View residences are located on a sensitive site at the edge of the University of Warwick campus. They provide 500 bedrooms in four blocks, built to BREEAM excellent standard. Each block has four flats per level, split into two wings, and linked by a glazed bridge. Shared living spaces at the ends of the wings enjoy fine views. The design is characterised by gently curving facades which help the project harmonise with the landscaped setting. The external wall finish is Ibstock Himley Ash Grey bricks, produced using local clay.



**Option A**



**Option B**

# Profile: Ibstock's Birtley Brickworks

Ibstock's Birtley factory – home to three brickworks over a period of more than 100 years – today employs 45 people at its County Durham site.

Until 1972, Birtley produced handmade and extruded type bricks but with the installation of its first Petersen machine, and two years later a second, the Birtley factory began instead to produce authentic waterstruck bricks. Today it is thought to be one of only two factories countrywide to do so. Rather than using sand or oils to release the pressed clay from the moulds, water is used, helping to create the highly prized and uniquely textured appearance of the bricks.

The use of the high quality Petersen machines means that the bricks are truly sustainable, and as they are kept operating seven days a week, Birtley is well equipped to meet the demand for its products. This factory alone achieves an output of around 25 million bricks per year, with a mixture of both 65mm and 73mm bricks.

Even though Birtley's main focus is the waterstruck brick, it also specialises in rumbled bricks and non-standard linear bricks up to



440mm in length. Additionally, Birtley produces unique blends and colour combinations to meet individual requirements. These are made using a full palette – from reds through to greys – which means truly unique colour combinations can be produced for use where a traditional brick is not appropriate for a particular project or where the client wants to create a distinctive façade.

Significantly, Birtley has worked with the celebrated designer Stella McCartney to produce special bricks and the factory is currently working on a project with sculptor Sir Antony Gormley on an innovative artwork that seeks to explore the special characteristics of the Birtley clay. Gormley's 'Angel of the North' (1998) is located to the north of Birtley, and its profile features in the brickmaker's logo.

The factory's products have come to be used in many major projects, and this has been recognised through its success in the BDA's Brick Awards over a number of years. It has also been commended for sourcing responsibly to BES 6001, for being environmentally accredited to ISO 14001 and being the first brick factory to achieve ISO 50001 for energy management.



**Left**  
Foundry Lane Apartments, Ouseburn, Newcastle, are the first new-build homes completed in area for more than 50 years. Designed by Anthony Keith Architects, the development straddles part of Hadrian's Wall.



**Below**  
Petersen machine at the Birtley factory; 1935 commemorative brick.

**Right**  
Faulkner Browns' Freeman's Reach Phase 1, Durham, features Birtley's Bespoke Hawkey Blend bricks.



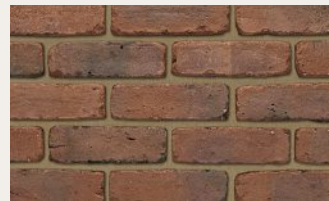


**Left**

Gottstein Architects' Haven Hostel, Killarney, employs Birtley Olde English and Birtley Olde Linear bricks; the house at Mount Anville, Dublin, by Aughey O'Flaherty Architects, uses Birtley Olde English Buff (ph: Marie-Louise Halpenny); the Michael Baker Boathouse at The King's School, Worcester, by Associated Architects, employs a Birtley Olde English linear blend.

**Right**

The Foundry, Salford, by Sixtwo Architects, features Birtley Northern Buff bricks.



**Left top**

Beamish Blend, Birtley Brown waterstruck, Birtley Olde English Buff.

**Right top**

Birtley Olde English, Borrowdale Blend, Commercial Red, Cumberland Blend.

**Left bottom**

Millhouse Blend, Northern Buff, Northumbrian Cottage.

**Right bottom**

Birtley Olde English Grey, Otterburn Antique, Townhouse Blend, Warwickshire Olde English.





# Brick Response: Simon Gould



## What factors tend to lead you to use bricks in a project?

The quality and richness of the finished product that we and the client aspire too; the project location and built context; and the budget. I personally love using bricks to make places because they bring so much playful opportunity to a project. It is quite extraordinary that a product with a standard module of 215x65 x102.5mm can be used to give form to such a variety of buildings and places.

## What can bricks offer in terms of creativity?

My early memories of massive industrial structures and civic buildings in the West Midlands have informed my view that brick has limitless opportunities. From heavy, moody volumes to delicate, refined structures, one can use brick to create all manner of different surfaces, walls, floors and roofs. Bricks are not just red – from their raw clay state through the firing process to the finished article there are many opportunities for them to be made into a totally different type of product. Also, bricks can be stacked and bonded in a

multitude of ways, and one mustn't forget the all-important mortar that completes the palette.

## Which brick projects by Mitchell Eley Gould have pleased you most?

King's College library – we were asked by the Taunton school to build a library as an extension to a grade-two listed building of locally quarried stone. We were faced with the challenge of complementing and enhancing the built setting, but the quarry had long since closed. We therefore decided to use a mix of five different bricks, one of which was a klinker brick that had been stamped on and distorted before being fired. A fat, flush mortar joint made the individual elements read as a cohesive whole. Initially there was some doubt as to whether the proposed blend of materials would work, but five years on the building is full of character and charms its users.

Kingswood Classroom Building is located in Bath conservation area, and the planning officer requested that Bath stone be used. We argued that another prominent material in the city was slate, and that long slate-coloured blocks would be appropriate for the walls. They agreed, and we identified black

Fireborn bricks for the purpose, with a narrow 5mm mortar joint to create a more refined surface. The end product is a dark, engineered facade that plays in a compelling manner off the neighbouring soft Bath stone.

## Which projects by other architects have impressed or influenced?

Sigurd Lewerentz and Alvar Aalto created very different buildings but both made brick structures of character and charm, along with raw spatial qualities that inspire.

## Is brick a material of the future?

Of course. Bricks have been used for hundreds of years to create the places that we inhabit and I believe we will continue to use bricks for many more years to come



### Simon Gould

Director at architect Mitchell Eley Gould, which he joined in 2007 after studying at the universities of Bath and Cambridge, and working with MJP and FCB Studios. Much of Gould's work is in education, placemaking and housing, and current projects include an animal welfare centre in Gloucester. He is a tutor and teaching fellow at Bath and an external examiner at the University of the West of England.

### Above

Mitchell Eley Gould's library at King's College, Taunton (2011); Sigurd Lewerentz's St Peter's Church, Klippan (1966).









The Pavilion, Nottingham Trent University, by Evans Vettori (photo: Martine Hamilton Knight)

Incurvo, Oxfordshire, by Adrian James Architects (photo: Fisher Studios)

