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BULLETIN

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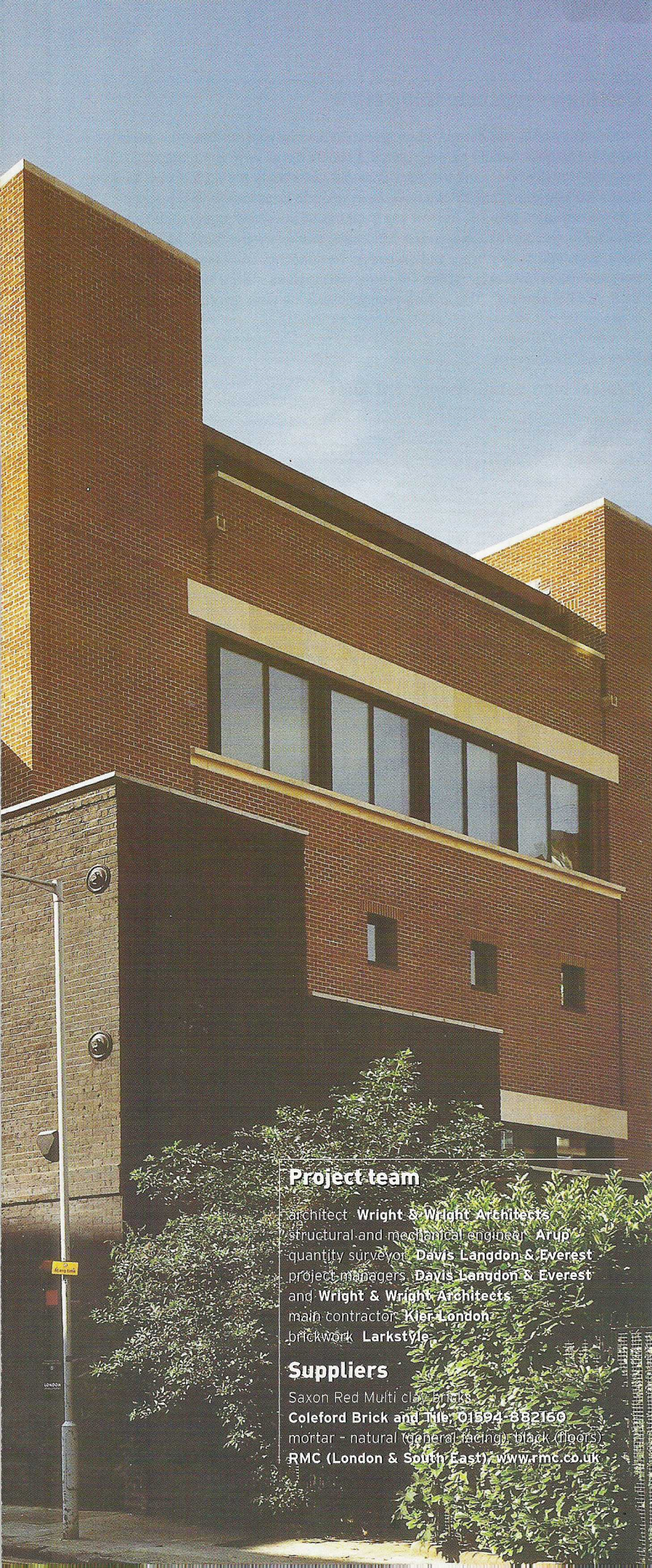
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CASE STUDY 1

A WOMAN'S PLACE...

This library in the City of London, winner of the best public building award, is Britain's main academic resource for those researching women's experiences. It is also a demonstration of the power and subtlety that brick can offer a sensitive architect
Words by **Will Jones** Photography **Peter Cook/View**





"HERE WE HAVE LET THE CONTEXT INFLUENCE and inform the solution. We have stitched the building into the very fabric of the city, to harmonise it with its surroundings," says architect Sandy Wright.

He is describing the Women's Library on Old Castle Street, at the eastern edge of the City of London. The building, designed by Wright & Wright Architects, has been slotted, stitched or even shoe-horned into position beside the old tobacco warehouses inhabited by its owner, London Metropolitan University, and in close proximity to 1960s housing blocks. But to look at this powerful chunk of construction, it would seem for all the world that it has grown there.

Millicent Fawcett, a campaigner for women's rights, founded the Women's Library in 1926. What started life in a converted pub in Westminster has since become the UK's most comprehensive research library on all aspects of women's lives, from domestic chores to political activism.

The Metropolitan University, or the City of London Polytechnic as was, acquired the vast collection of books, film, photographs, banners and artifacts in 1977. But, until recently, it was stored in a leaky basement across the road from the new building.

Wright & Wright's won the commission to design the library in 1995, and its brief shaped the resultant building almost as much as its surroundings. "It was basically to take this precious, fragile collection and house it in a building that was safe, secure and which exuded permanence," says Wright. For that, the architect has designed a monumental structure that harks back to the heyday of American architect Louis Khan and his predilection for geometric forms, heavy massing and brickwork.

Wright & Wright has worked with a limited palette of Tadcaster stone, grey painted metal, copper, American white oak and handmade Saxon Red Multi bricks. In the architect's words: "You don't need to stuff the entire contents of a builders merchant into the building; it's not a fruitcake." And this simplicity is part of what makes the building so special.

Emerging from behind the blackened, listed facade of an 1846 washhouse, the massive six-storey east wall of the library is almost devoid of adornment. Its sheer brickwork face is punctured only once above third-floor level. "With this type of construction, the brickwork is more than a simple veneer. It's celebrated," says Wright. "On most modern brick buildings, the beautiful bonds and coursing is lost because there is no weight or depth to the skin." The single window, set 450 mm deep into the brickwork reveal, accentuates the wall's mass and adds to the building's sense of strength (see the detail box on the next page).

The thickness of the walls is the result of their structural concrete core. But the thermal mass of all of this brickwork and concrete plays an important role in stabilising the temperature within the building and so protecting the archive materials. Wright explains: "Because of the scale of the structure and the emergent wall depths, the building is effectively wrapped in a thermal layer, making temperature control in sensitive areas a lot easier." The building is totally naturally ventilated. Arup engineers have predicted energy consumption for the building's central archives of about 20% of that of an air-conditioned equivalent.

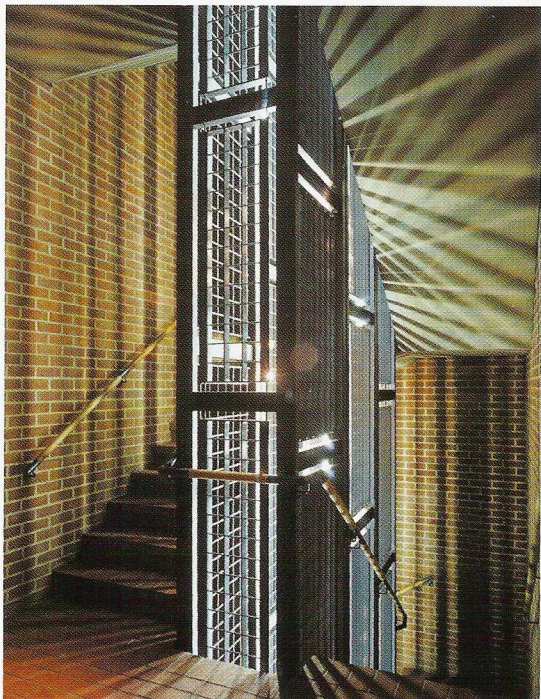
The colossal bulk of the east facade encloses a structural core, which houses a stairwell and lifts. ►

Project team

architect **Wright & Wright Architects**
structural and mechanical engineer **Arup**
quantity surveyor **Davis Langdon & Everest**
project managers **Davis Langdon & Everest**
and **Wright & Wright Architects**
main contractor **Kier London**
brickwork **Larkstyle**

Suppliers

Saxon Red Multi clay bricks
Coleford Brick and Tile, 01592 882160
mortar - natural (general facing), black (floors)
RMC (London & South East) www.rmc.co.uk

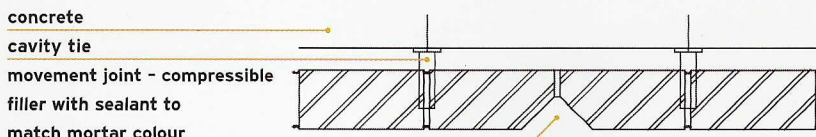


Brick is left exposed in the interior stairwells.

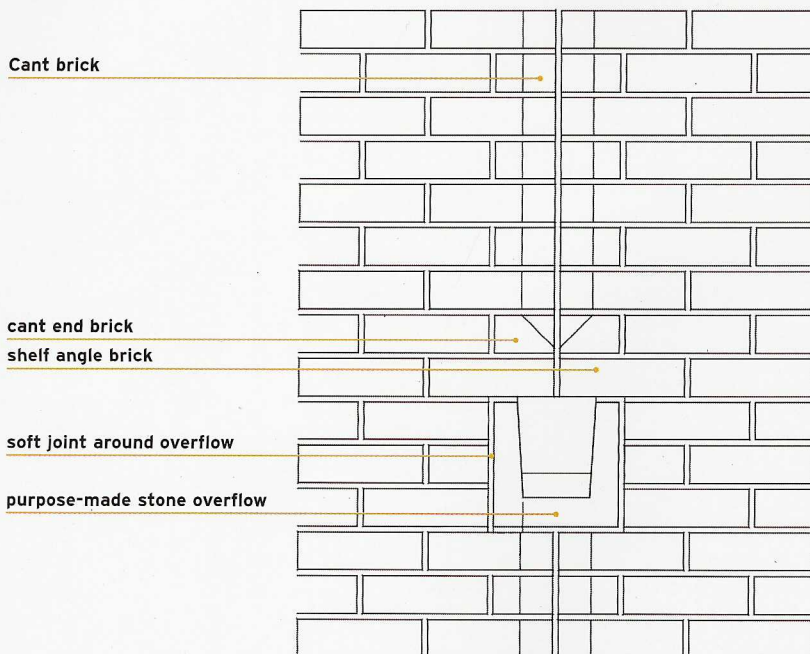
Getting every little thing right

"The beauty is in the detail," says architect Sandy Wright. The movement joint on the east facade demonstrates a subtle detail with a big impact. Instead of hiding the joint behind a downpipe or simply piping a brown sealant into a 20 mm gap, cant bricks have been used to accentuate the detail, carving a groove into the side of the building. A standard compressible fillet covered in a sealant to match the brickwork makes up the joint. At a higher level, cant end bricks bring the groove to termination one course above a purpose-made Tadcaster stone overflow, designed to match the stone copings at the top of the wall. The groove resumes directly beneath the overflow.

Typical plan detail: movement joint



Elevation at overflow



Michael Hammett: How the bricks and mortar were specified

For the design to be realised, with brickwork as the dominant material both externally and internally, a high-quality, long-life and low-maintenance facing brick was essential.

The specified bricks are handmade clay red multi facing bricks, conforming to BS 3921. They have durability designation FL, a high compressive strength and low water absorption. This last characteristic raised particular concerns when selecting the mortar type and planning construction schedules.

Water absorption in clay bricks varies from about 2% to 34%. Bricks of less than about 10% are considered to have low water absorption.

Normally, the water from mortar is drawn into the bricks together with fine binder particles to promote adhesion. The low water absorption of these bricks means that they draw very little water from the mortar and could "float" if the mortar was too wet. The use of stiffer, low-water content mortar from RMC was found to be necessary, as was the need to keep the bricks dry before use to ensure that the small amount of suction they had was available to promote adhesion.

A third consideration is the rate at which the mortar will set. Low-water absorption bricks tend to keep the mortar in the joints moist and slow down this process. Therefore, it is recommended that

the number of courses laid in one session be limited to avoid the risk of unset mortar being squeezed out by the weight of the bricks above. Broad areas of brickwork on the project presented no problems of delay when following this guidance. However, work on piers progressed simultaneously, rather than raising them individually.

These basic rules, followed to the letter, have produced a building that is a fine example of what brickwork can bring to a project.

Michael Hammett is the former senior architect at the Brick Development Association and technical consultant for the Women's Library.

► This is matched on the west side to form a sandwich, with the filling made from the central exhibition, seminar and office areas as well as the archive and library. From the north, this gives the building an industrial feel, but here the bulk is cut through with a massive slab of white Tadcaster stone, which sits astride a bank of large windows. Below them are four square peepholes between the bookshelves.

"The glazed panels between the bookshelves give a view of the treetops in the courtyard. They allow you to orientate yourself," says Wright. Simple interventions like these point to where you are within the structure. They also tease the best out of the architect: Wright has an inherent love of materials, their looks, feel, weight and implied history. He specified brick to stitch the building into its surroundings, but it also reflects his appreciation of the sensuous qualities inherent in the material. "I have always had an interest in brick, and especially the handmade stock," says Wright. "The mix of colours - reds, blues, oranges - and textures give a special quality to a handmade brick. It almost has a tweed to it."

Wright's preoccupation with materials extends to the whole project. Each element in his palette has its own visual and tactile qualities. And entering the library is possibly the best way to discover them. Through heavy grey metal gates, hung on the 1846 facade, visitors enter into a reception area that is a mix of washhouse and drawing room. A heavily paneled oak ceiling plays foil to a brickwork floor, laid with black mortar.

Doors and frames, the reception desk and ceilings to many public areas are all crafted from fine-grained American oak. In contrast to this warmth and luxury, the floors throughout the circulation and exhibition areas are of brick. The materials lend an institutional air to the place. But, although the extensive use of brickwork - it is used as an internal wall covering in many areas - harks back to the noise and heat of the washhouse, the oak and stone elements seem to instill a library's hush.

Louis Khan once said: "When the work is completed the beginning must be felt." The Women's Library is finished but just as its content teaches the beginnings of women's struggle for equality, the very fabric from which the building is constructed reveals its history through touch, smell and sight. Wright & Wright has crafted a beautiful building with a sense of place and permanence, elements often lost in many high-tech architectural solutions of today.

Cost breakdown - brickwork

External walls

General facing	1171/m ²
Cant bricks (horizontal and vertical)	210/m
Cant stop bricks	50 each
Shelf angle bricks	72/m
Flat arches	31/m
Sills	5/m
Reveals	60/m
Cost	£65.86/m²

Internal walls

General facing	814/m ²
Ornament band	4/m
Cost	£54.63/m²

Costs based on 1999 prices and exclude inner blockwork skin, cavity ties, dampproof courses, preliminaries and VAT.

What we see in the window

On the new building Wright & Wright has used brickwork detailing in a manner that defers to the building's use but still hints at the structure's power.

A section through the fourth-floor window, visible on the east facade above the washhouses sign, displays the thickness and mass of the building envelope. Brickwork skins to both the internal and exterior walls cloak an insulated core of structural concrete.

The glazing is set far back in the reveal and the window opening is detailed with six courses of plinth bricks sloping from its base to accentuate the feeling of depth. At its head, a course of pistol bricks tidies the edge of the steel lintel and soffit panel, while tipping a nod to the arches in the old facade below. The dampproof course steps through brickwork at sill level, throwing any moisture away from the floor slab, which is built into the thick wall.

Section through fourth-floor stair window

