

OPEN HOUSE

OPEN SITE 2005

17-18

September

"OPEN SITE IS A GREAT OPPORTUNITY FOR LONDONERS TO EXPERIENCE THE IMPACT THAT CONSULTANCY, ENGINEERING AND CONSTRUCTION HAS ON THE FABRIC OF OUR CAPITAL CITY. I'M DELIGHTED THAT THE ACE PROGRESS NETWORK HAS TEAMED UP WITH OPEN HOUSE TO HIGHLIGHT THE CRUCIAL ROLE OF CONSULTANTS, ENGINEERS AND CONSTRUCTORS AND THE TERRIFIC WORK THEY DO. AS WELL AS BEING INSPIRED BY OPEN SITE, I ALSO HOPE THAT YOU WILL GAIN A BETTER UNDERSTANDING OF HOW ENGINEERING IS SHAPING AND CHANGING OUR BUILT AND NATURAL ENVIRONMENT FOR THE BETTER.

NELSON OGUNSHAKIN, CHIEF EXECUTIVE,
ASSOCIATION FOR CONSULTANCY AND ENGINEERING (ACE)

ACE represents the business interests of the consultancy and engineering industry in the UK. We are the leading business association in this field, counting around 800 firms – large and small, operating across many different disciplines – as our members.



Open Site

INTRODUCTION

VICTORIA THORNTON, FOUNDING DIRECTOR

OPEN HOUSE

Open House London's annual celebration of architecture brings alive 600 great buildings that exist today. But what about the capital's future developments and buildings? How will they shape the cityscape? Who is creating the new skyline? How will it impact upon our city? How complex is it to design a great place to live or work in?

Open Site has been created through a collaboration between ACE's Progress Network and Open House enabling everyone to have the opportunity of engaging in the capital's future.

Visiting these landmark sites will enable a rare insight into the complexities of design and construction and a chance to witness at first hand the ideas behind the structures and the teams required to make it reality.

We hope you will be inspired by the future as much as by the present.

Victoria Thornton, Founding Director, Open House



Open Site

BUILDING PERSPECTIVES

OPEN SITE

17-18 SEPTEMBER 2005

Progress Network ACE's group for young consultants and engineers, has once again teamed up with Open House to help provide another opportunity for the public to see major projects under construction. Open Site 2005 is being held on 17 and 18 September as part of the Open House London event. Progress Network members will be present in some of the buildings to offer visitors additional information on the processes employed in the design and construction of London's new buildings.

Open Site highlights the vital contribution that engineering and construction makes to the fabric of our capital city and provides a rare opportunity to see at first hand the challenges, complexities, solutions and excitement in constructing some of the most interesting landmarks in London today.

Visit any of the venues at Open Site and you'll find out about the impact that engineering and construction has on our capital city. ACE Progress Network is proud to bring an engineering perspective to London's biggest live architecture event. We look forward to showing visitors details of four groundbreaking projects. Come along and be inspired by those involved at the sharp end of how engineering is helping to shape these high-profile London structures.

Open Site

AT A GLANCE

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Admission is free for all Open House London events on 17-18 September. Along with a brief description and the name of the architect, each building's entry contains its address, opening days and hours, access to visitors, pre-booking details where relevant, amenities and transport. Bus numbers are listed at the end.

Open Site

TERMINAL 5 HEATHROW

DETAIL:

TERMINAL 5, HEATHROW

THE HEATHROW AIRPORT VISITOR CENTRE, NEWALL ROAD, HEATHROW UB3

SAT/SUN 10AM-5PM. REGULAR BUS TOURS TO THE SITE FOR LIMITED NUMBERS, FIRST COME BASIS, REGISTER ON DAY. LAST ENTRY 3.30PM. D M P Q R T

EUROPE'S LARGEST CONSTRUCTION PROGRAMME. T5 OPEN SITE REVEALS SPECTACULAR NEW TERMINAL BUILDINGS AND INFRASTRUCTURE DEVELOPMENTS CURRENTLY UNDER CONSTRUCTION AT HEATHROW AIRPORT.

ENTRY: VISITOR CENTRE, SITE BY BUS ONLY. NB, SITE ACCESS SEVERELY RESTRICTED FOR SECURITY REASONS.

TUBE: HEATHROW AIRPORT TERMINALS 1,2,3; RAIL: HEATHROW EXPRESS TERMINALS 1,2,3; 81,105,110,140,285

KEY :

D = DISABLED ACCESS; M = MEET THE MAKERS; P = PARKING;

Q = QUEUES LIKELY; R = REFRESHMENTS; T = TOILETS

Terminal 5 is one of Europe's most exciting developments. Located between Heathrow Airport's two runways this £4.2bn construction project will open to passengers on 30 March 2008.

Already over 60 per cent complete, the structures of the main terminal and first satellite building are in place with extensive mechanical and electrical work now being undertaken on their interiors. Measuring 400 metres in length the main terminal is the longest single-span structure in the UK.

A 4,000 space multi-storey car park is under construction while underneath the main terminal work continues on a six-platform station that will house extensions to the London Underground Piccadilly Line and Heathrow Express rail links.

Already two rivers have been diverted, ten aircraft stands have been handed over for use by the airport, 13.5km of tunnel has been bored, 17km of baggage conveyor is being installed and a stunning new air traffic control tower is standing tall at 87 metres.

When fully complete Terminal 5 will provide Heathrow with an additional 60 aircraft stands and enable the airport to accommodate an additional 30 million passengers annually.

FASCINATING FACTS

- * THE T5 SITE IS 260 HECTARES – THE EQUIVALENT SIZE OF HYDE PARK IN LONDON. THIS IS JUST UNDER ONE QUARTER OF THE 1,200 HECTARES OCCUPIED BY HEATHROW.
- * THE TERMINAL BUILDING IS ALMOST 400M (A QUARTER OF A MILE) LONG – THAT'S THE DISTANCE FROM BOND STREET TO OXFORD CIRCUS IN LONDON OR THE EQUIVALENT OF 40 DOUBLE-DECKER BUSES PARKED END TO END.
- * THE TERMINAL BUILDING COULD FIT 50 FOOTBALL PITCHES ON ITS FIVE FLOORS – AROUND 10 PER FLOOR.
- * THE NEW 87-METER HIGH CONTROL TOWER IS DOUBLE THE HEIGHT OF THE CURRENT HEATHROW TOWER AND THE TALLEST IN THE UK.
- * T5 HAS THE CAPACITY TO SERVE AROUND 30 MILLION PASSENGERS A YEAR: TAKING THE NUMBER OF PEOPLE HEATHROW WILL SERVE TO APPROXIMATELY 90 MILLION EACH YEAR.
- * T5 IS SO BIG IT HAS BEEN BROKEN DOWN INTO 16 MAJOR PROJECTS AND MORE THAN 100 SUB-PROJECTS. THE SUB-PROJECTS RANGE IN COST FROM £30M - £150M.
- * AROUND 15,000 CUBIC METRES OF CONCRETE WAS POURED PER WEEK AT PEAK – ENOUGH TO FILL 2,000 CONCRETE MIXER LORRIES.



Terminal 5, Heathrow

Open Site

BBC BROADCASTING HOUSE

TEAM

CLIENT: BBC

ARCHITECT: MACCORMAC JAMIESON PRICHARD

STRUCTURAL ENGINEER: WHITBY BIRD

CONTRACTOR: BOVIS LENDLEASE

PROJECT MANAGEMENT: LAND SECURITIES DEVELOPMENT

DETAIL:

BBC BROADCASTING HOUSE

PORTLAND PLACE W1A

SAT 10AM-5PM. HALF HOURLY TOURS. PRE-BOOK ONLY ON 08700 100160.

SECURITY CHECKS BEFORE EACH TOUR. LAST TOUR 4.30PM. MAX 15 PER TOUR. D T FIRST EVER PURPOSE-BUILT BROADCAST CENTRE IN UK. ART DECO DESIGN AND ORIGINAL ARTWORKS BY SCULPTOR AND ARTIST ERIC GILL. CURRENTLY UNDERGOING RESTORATION AND EXTENSION AS PART OF £400 MILLION DEVELOPMENT. G VAL MYER / MACCORMAC JAMIESON PRICHARD (FUTURE BUILDINGS) 1932/(2008).

TRANSPORT:

TUBE: OXFORD CIRCUS: 88,C2

ENTRY:

REFURBISHED RECEPTION

KEY:

D = DISABLED ACCESS; T = TOILETS

The New Broadcasting House Project is the BBC's largest capital development project ever. Its aim is to create a dynamic and flexible 21st century broadcast centre in the heart of London.

State-of-the-art

When complete in 2010, this 80,000 square metre structure will provide state-of-the-art production and broadcast facilities for BBC Radio & Music, BBC News and BBC World Service, and be the hub of the BBC's national and international live output. It will house the largest live broadcast centre in the world.

Global

At any one time, over ten million people across the UK will watch or listen to output from the new Broadcasting House, and every week at least 150 million people worldwide will tune into the BBC World Service networks.

Creative

The new Broadcasting House Project will also call upon top architects, designers and artists, in order to create a truly inspirational and creative centre for the BBC, as well as a brand new landmark for central London.

Independently funded

The new Broadcasting House Project is funded by a special bond deal - no public licence fee is involved.

FASCINATING FACTS

- * THE ORIGINAL BROADCASTING HOUSE WAS THE FIRST EVER PURPOSE-BUILT BROADCAST CENTRE IN THE UK (BUILT 1932).
- * IT IS NOW A GRADE II* LISTED BUILDING AND A JEWEL OF ART DECO DESIGN.
- * ITS ARCHITECT, COLONEL VAL MYER, CALLED HIS ORIGINAL DESIGN 'THE TOP HAT DESIGN', BASING IT ON AMERICAN SKYSCRAPERS.
- * THE DEVELOPMENT PROJECT IS IN TWO PHASES: THE RESTORATION AND REFURBISHMENT OF THE ORIGINAL BROADCASTING HOUSE (COMPLETES END OF 2005) FOR THE BBC'S NATIONAL RADIO NETWORKS, FOLLOWED BY THE CREATION OF A NEW EXTENSION FOR BBC NEWS AND BBC WORLD SERVICE (COMPLETES 2010).
- * THE CONSTRUCTION IS HIGHLY COMPLEX, AS IT INVOLVES HERITAGE RESTORATION AND MODERNISATION, EXTENSIVE EXCAVATION IN A HIGHLY CONSTRICTED SITE AND OVER TWO TUBE LINES (VICTORIA AND BAKERLOO), AS WELL AS TECHNOLOGICAL AND ENGINEERING INNOVATION.
- * ALL THE CONSTRUCTION WORK HAPPENS WHILE LIVE RADIO BROADCASTING CARRIES ON AROUND THE SITE, SO NOISE AND RESONANCE ARE A BIG ISSUE.
- * DURING EXCAVATION OF THE NEW WING FOR PHASE 1, THE BASEMENT FOUNDATIONS WENT WITHIN 4 METRES OF THE CURRENT VICTORIA LINE - THE LONGEST EVER ZERO PILES INSTALLED (11 METRES).
- * THE BUILDING WILL HOUSE THE LATEST IN BROADCAST TECHNOLOGY FACILITIES WILL INCLUDE 36 RADIO STUDIOS, 23 RADIO CONTINUITY STUDIOS, 6 TV STUDIOS, 2 CENTRAL CONTROL ROOMS, AND 60 EDIT/GRAPHIC SUITES.
- * 10,000 MILES OF CABLEING WILL RUN THROUGH THE NEW BUILDING.
- * RESILIENT POWER AND COOLING INCLUDES DUPLICATE INCOMING POWER SUPPLIES, 100% STANDBY GENERATION, UPS (UNINTERRUPTABLE POWER SUPPLY) PROVISION.
- * THE BBC IS AN EXIGENT CLIENT BY THE END OF THE PROJECT, THE ARCHITECTS WILL HAVE COMPLETED OVER 10,000 ARCHITECTURAL DRAWINGS!



BBC Broadcasting House copyright: Hayes Davidson

Open Site

UNILEVER HOUSE

TEAM

CLIENT: UNILEVER

DEVELOPERS: STANHOPE

CONSTRUCTION MANAGERS: BOVIS LEND LEASE

ARCHITECT: KOHN PEDERSON FOX

CIVIL AND STRUCTURAL ENGINEERS: ARUP STRUCTURES

COST CONSULTANTS: DAVIS LANGDON

DETAIL

UNILEVER HOUSE

100 VICTORIA EMBANKMENT, EC4

SAT 1PM-5PM / SUN 10AM-1PM

FIRST COME BASIS, QUEUING IS NECESSARY. LAST ENTRY 15 MINS BEFORE CLOSE. OPPORTUNITY TO PREVIEW THIS LANDMARK CURVED GRADE II LISTED BUILDING WHICH IS BEING TRANSFORMED TO GIVE IT A NEW LEASE OF LIFE.

ENTRY

THAMES ROOM AND FACADE CONSTRUCTION PLUS OTHER AREAS UNDER TRANSFORMATION ON SITE - AVAILABLE TO VIEW BY WALKING THROUGH MANNED SAFE WALKING ROUTE.

TRANSPORT

TUBE/RAIL: BLACKFRIARS

KEY:

D: DISABLED ACCESS, Q: QUEUES LIKELY

London property developers Stanhope and global construction managers Bovis Lend Lease have joined forces to transform Unilever House. Their partnership will refurbish the historic building over two years, completing works in early 2007.

The site of Unilever House is overlapped on the north side by the original location of Henry VIII's Bridewell Palace, built in 1515-1520, as the Royal Apartments in Whitehall were destroyed by fire. It has also been the site of the De Keyser Royal Hotel that provided accommodation to Victorian London from 1875, and it is from this institution that Lord Leverhulme leased the site to build his London headquarters. He commissioned the construction of Unilever House in 1920.

Contrasting architects collaborated in the design and execution of the original building. The exterior and the overall planning of the building are credited to James Lomax-Simpson in collaboration with the firm of Sir John Burnet and Partners. Burnet was nearing the end of his career but his young partner, Thomas Tait, was to establish himself as a leading proponent of 1930s modernism. It appears that the relative conservatism of the exterior came from Lomax-Simpson, while the modern feel to the construction details stems from Burnet and Tait's familiarity with the latest techniques in office construction at the time.

The redevelopment of Unilever House will create a modern working environment and provide over 23,000 sqm of flexible open work space. The aim is to revive and celebrate the building heritage and original architectural features whilst transforming the interior into an effective work place. Symbolically, the original Victoria Embankment entrance is being re-opened as the main entrance to the building. The redevelopment also improves the sight line view of St Paul's Cathedral from Waterloo Bridge and South Bank by removing much of the rooftop plant and machinery.

Unilever, the client, have emphasized and supported the Unilever House redevelopment team's commitment to sustainable development and detailed recycling programme that encompass all facets of the project.

FASCINATING FACTS

- * We're aiming to recycle and re-use 95% of materials and equipment from carpet tiles to light fittings
 - * The site office and restaurant are furnished with the desks, shelving and kitchen from Unilever House
 - * Much of the furniture and equipment were donated to local London schools and charities
 - * Up to 5000 m² of original parquet flooring is being re-used
 - * Over 6000 tonnes of steel was removed during deconstruction and has been recycled
 - * Over 17000 m³ of concrete was removed during deconstruction and has been recycled
 - * As at summer 2005 we have recycled 88% of materials from the site
 - * Deliveries to site are consolidated in South East London to cut down the number of vehicles required, reducing pollution
 - * The waste compactor from Unilever House has been installed at the Consolidation centre
 - * Packaging materials used for the new Unilever building are being recycled
 - * Site office paper is recycled
 - * Waste minimisation training is encouraged for all workers on site
 - * 100% recycled concrete blocks are being used for the basement walls
 - * Construction materials are being sourced locally wherever possible to promote local trade and reduce long haul transportation
 - * Timber purchased for the project is from sustainable managed sources and FSC certified
- The project commenced in October 2004.



Unilever House

Open Site

TALL STOREYS

A walk around London's landmarks

DETAIL

SAT/SUN TOURS AT 11AM, 1PM AND 3PM

MEET: OUTSIDE LLOYD'S OF LONDON, ONE LIME STREET EC3

TOURS LAST FOR APPROXIMATELY 2 HOURS AND ARE GENERALLY EXTERIOR VIEWS.

ALL GUIDES ARE ARUP ENGINEERS. THEIR IN-DEPTH KNOWLEDGE OF ARUP BUILDINGS MEAN THEY CAN PROVIDE AN INFORMED BUT ACCESSIBLE COMMENTARY.

BOOKING TEL: 0207 7552659 (BOOKING PREFERRED) BUT PLACES MAY BE AVAILABLE ON THE DAY SUBJECT TO A MAXIMUM OF 20 PEOPLE PER TOUR.

THIS TOUR WILL BEGIN AT LLOYD'S OF LONDON, THEN LEAD ON TO 30 ST MARY AXE, PLANTATION PLACE, MINSTER COURT AND TOWER PLACE, TOWER OF LONDON, CITY HALL, MORE LONDON AND CONCLUDE AT TATE MODERN VIA THE MILLENNIUM BRIDGE.

TRANSPORT

DLR/TUBE: BANK; TUBE/RAIL: LIVERPOOL STREET

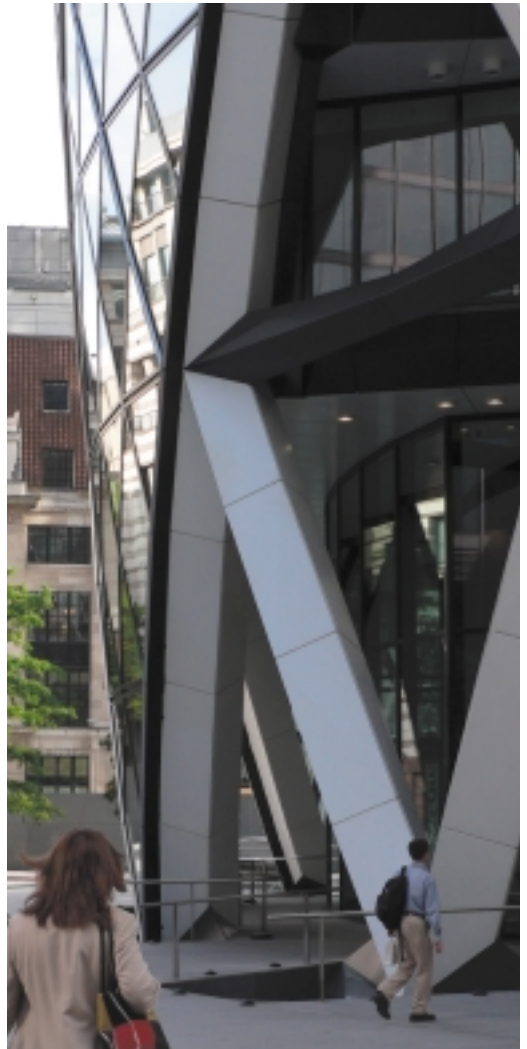
Ever wondered about the buildings you walk past on the way to school or work? This tour provides you with an insight into how London's cityscape is built. Arup engineers will reveal the stories behind the creation of some of London's landmarks including 30 St Mary Axe, Lloyd's of London, The Tower of London, City Hall, Tate Modern and the Millennium Bridge.



Right: Lloyd's of London



Above: MILLENNIUM BRIDGE
Below: MINSTER COURT
Right: 30 ST MARY AXE



To open another door into the the world of consultancy and engineering, several consultancy firms will invite visitors in to see their studios and in some cases examples of their work. Visitors will be able to discuss with engineers aspects of the many and varied projects they are and have been engaged with.

ALAN CONISBEE AND ASSOCIATES

1 – 5 OFFORD STREET N1

SAT/SUN 10AM-5PM

MAX 15 PEOPLE AT ONE TIME. TOUR ON THE HOUR AND HALF HOUR.

LAST TOUR 4.30PM

RECENTLY COMPLETED INNOVATIVE MIXED-USE OFFICE REDEVELOPMENT FOR ALAN CONISBEE AND ASSOCIATES BUILT AROUND A COURTYARD 'OASIS' WITH WATER, VEGETATED WALLS, TOWERING FERNS, OUTDOOR TERRACES, LIVING 'RUBBLE' ROOF AND NATURAL VENTILATION/LIGHT SHAFTS. PYLE BOYD ARCHITECTS 2004.

TUBE/RAIL: KING'S CROSS ST PANCRAS, CALEDONIAN ROAD

BUSES: 17, 91, 259, 274.

BUILDING DESIGN PARTNERSHIP STUDIOS

16 BREWHOUSE YARD EC1

SAT 10AM-5PM. D M R T

LATE 19C BREWERY BUILDING NOW HOUSING BDP'S STUDIOS. ORIGINAL FEATURES REMAIN INCLUDING GLAZED BRICK WALLS, STEEL COLUMNS AND VAULTED CEILINGS. BRADFORD & SONS / BUILDING DESIGN PARTNERSHIP 1889/2003. ENTRY: STUDIOS (VIA TOURS), GALLERY, RECEPTION.

TUBE/RAIL: FARRINGTON, BARBICAN: 243,55,153

ELLIOTT WOOD PARTNERSHIP LLP

241 THE BROADWAY SW19

SUN 10AM-5PM. MAX 20 AT ONE TIME. D M T

RECENTLY COMPLETED, NEW BUILD PHOTOGRAPHIC AND FILM STUDIO, JASMINE STUDIOS, SHEPHERDS BUSH ROAD. DESIGNED USING A STEEL FRAME WITH INSITU CONCRETE FLOORS. IT HAS A COMPLEX ROOF GEOMETRY AND LARGE INTERNAL VOIDS TO CREATE TWO STOREY SPACES WITH ROOF LIGHTS ABOVE.

TUBE/SOUTH WIMBLEDON; TUBE/RAIL: WIMBLEDON

KEY

D = DISABLED ACCESS, M = MEET THE MAKERS, R = REFRESHMENTS,
T = TOILETS

Open House is a registered charity whose aim is to broaden public awareness by welcoming a diverse audience to distinctive examples of architecture, engineering and design; to educate and inspire discussions of issues of excellence in architecture and to showcase outstanding new work as well as London's architectural legacy.

For further information about Open House please visit www.openhouse.org.uk
Contact admin@openhouse.org.uk or 020 7383 2131

Open House, 4th Floor, 297 Euston Road, London NW1 7AQ

ACE's Progress Network brings together consultants and engineers under 35 and provides them with networking opportunities, the chance to advance business skills and the inside track on the latest industry issues. The Network currently has more than 600 members.

For further information on the Progress Network, please contact progress@acenet.co.uk

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Open Site Working Group

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OPEN HOUSE LONDON IS PART OF OPEN HOUSE,
THE ARCHITECTURE EDUCATION CHARITY



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