



**Ant Wilson MBE FREng
BSc CEng FCIBSE FEI FSFE MSL**

People, Places and Projects

AECOM

Imagine it.
Delivered.

CIBSE NE

Thursday 6th December 2018

My Dad – Colin Wilson CEng, MIMechE



University of Bath Student (1975-1979)

	UNIVERSITY OF BATH
	Identity No. 750246949
	School/Dept. Architecture
	Signature <i>A. P. Wilson</i>
	Date of Issue 1975
WILSON A.P. Name	



085



University of Bath

DEGREE CONGREGATION
AFTERNOON
WEDNESDAY, 27 JUNE 1979
ASSEMBLY ROOMS, BATH

2

AUDIENCE

The bearer is asked to be seated by 2.45 p.m.
PLEASE SHOW THIS CARD AT THE ENTRANCE

Joined Oscar Faber – July 1979

Bank of England



Palace of Westminster



Barclays Bank



Dr Oscar Faber



Earls Court



Oscar Faber (1886 – 1956)

ENGINEER BIOGRAPHY



Engineering timelines

All items by **Oscar Faber**
All items by **Oscar Faber & Partners**
Everything built ... 1886 - 1956

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Oscar Faber

Oscar Faber CBE 1944-45

born 5th July 1886, London
died 7th May 1956, Harpendon, Hertfordshire, UK
era Modern

Written by **Jane Monson**, edited by **Eleanor Knowles** and **Jane Joyce**

Dr Oscar Faber, OBE CBE DCL(Hon) BSc DSc MICE MIMechE AMIEE PPIHVE FCGI, was president of two professional bodies — the Institution of Mechanical Engineers and the Institution of Heating & Ventilating Engineers (1944-45). He was a pioneer of World War I work on non-magnetic mine casings and his work was recognized in the **House of Commons** after World War II.

Faber was among the small group of engineers working with the Institution of Mechanical Engineers in infancy. His pioneering work on the theory and practice of structural steelwork, particularly his development of what is now called 'limit state design', set the criteria for modern methods. Many of these became industry standard practice. He also made significant contributions to the design and their integration into structures. He liked form to be dictated by function so that practical buildings could be beautiful.

Perhaps his best-known work is the **new Bank of England** in London. Like his contemporary **OVE ARUP**, Faber relished opportunities to break new ground and believed that engineer/architect collaboration was essential. Nevertheless, on work such as the **underpinning of Durham** and **Spillers' mills**, he worked entirely successfully without an architect.



John Robert Kell, President IHVE 1952-53 (Oscar Faber & Partners)

Major Early Influences at Oscar Faber



Computers in Building Services Engineering

by P. L. Martin

Oscar Faber & Partners, St. Albans, Herts. AL1 3HT (Great Britain)

Build International (7) (1974)—© Applied Science Publishers Ltd, England, 1974—Printed in Great Britain

481

The development of computer programs in the field of building services engineering has accelerated considerably in the United Kingdom over the past five years. Whilst co-ordination by Central Government has been attempted, this has been only partially effective. Commercial bureaux offer a variety of simple 'closed circuit' programs but the real long term exercises are currently directed towards the totality of the design process, including cost control. The use of a CRT visual display unit in interactive design, with emphasis upon full co-ordination with the building structure, is probably the practice which shows most promise for the future.



Doug Oughton

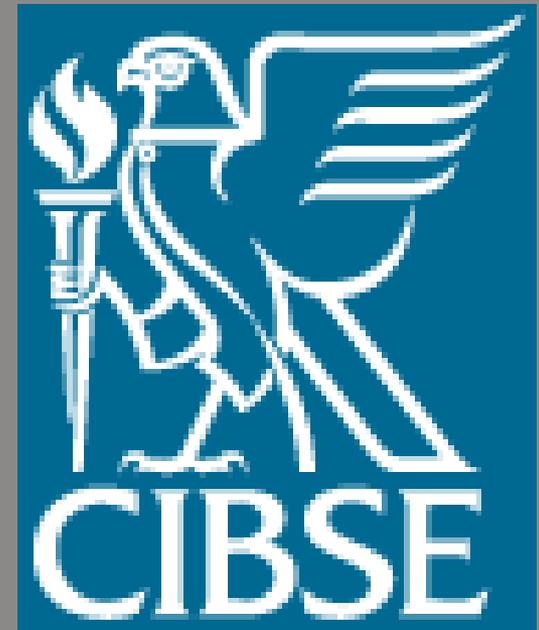
Roger Cunnings

Richard Tomlins

Oscar Faber Association with IHVE & CIBSE

Past Presidents of IHVE/CIBSE

Oscar Faber	1945&1946
Robbie Kell	1952
Peter Martin	1971
Jack Gura	1982
Alec Moir	1995
Doug Oughton	2002
Rob Manning	2010



Heating & Air-Conditioning of Buildings

First published 1936

Second edition 1943

Third edition 1957

Fourth edition 1966

Fifth edition 1971

Sixth edition 1979

Seventh edition 1989

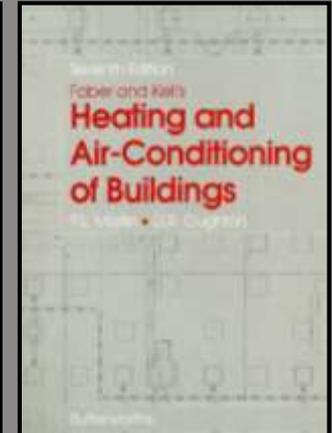
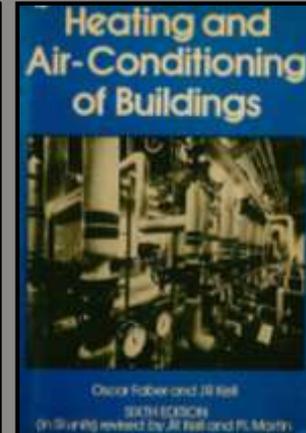
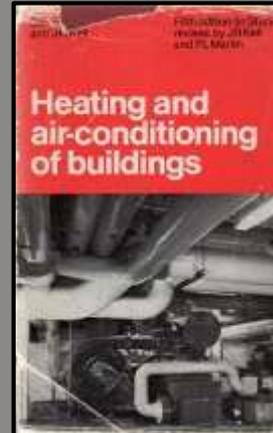
Eighth edition 1995

Paperback edition 1997

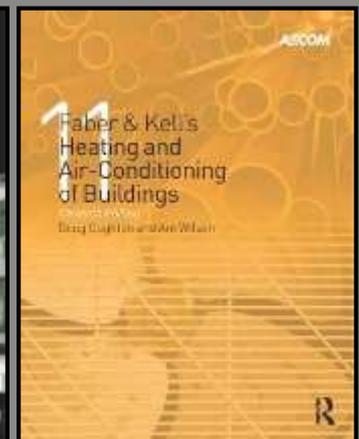
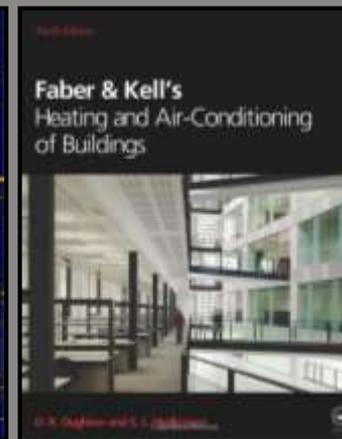
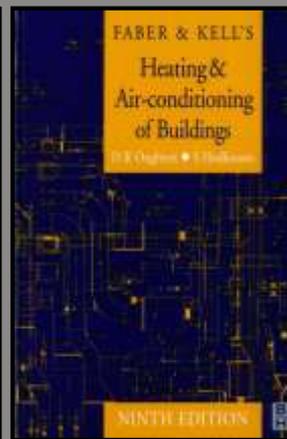
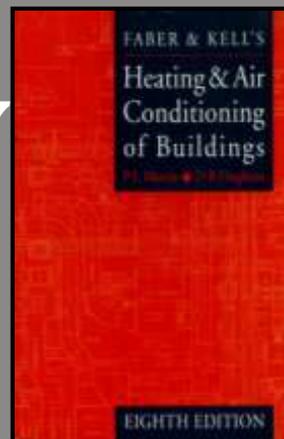
Ninth edition 2002

Tenth edition 2008

Eleventh Edition 2015



Faber & Kell



Faber Computer Operations



BSERT Paper 1981 with Steve Irving

BSER & T

Building Services Engineering
Research & Technology

- 151 Validation of a smoke movement program
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- Technical Notes
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Volume 2
Number 4

1981

CIBS Series A

Summary Deaths due to toxic fumes produced during a building fire account for over 50 per cent of all fire deaths. This has given rise to the need for more detailed studies of smoke movement, particularly in health buildings. The development of computer techniques has provided methods to model various smoke control systems and test their effectiveness for any given fire condition. This paper describes the validation of the computer program developed by Oscar Faber and Partners for predicting the spread of smoke through buildings. The predicted smoke spread is discussed in relation to the known smoke spread following a fire in a large hospital complex.

Validation of a smoke movement program

S. J. IRVING, BSc(Eng), MCIBS and A. P. WILSON, BSc

INTERNATIONAL ENERGY AGENCY
energy conservation
in buildings and community
systems programme

annex 1
computer modeling of
building energy performance

results and analyses
of
Avonbank Building simulation

level 1

IEA
ENERGY
CONSERVATION

april 1980

INTERNATIONAL ENERGY AGENCY
energy conservation
in buildings and community
systems programme

annex 1
computer modeling of
building energy performance

results and analyses
of
Avonbank Building simulation

level 2

IEA
ENERGY
CONSERVATION

april 1980

AIC and AIVC Conferences

EBC Energy in Buildings and Communities Programme

AIVC Air Infiltration and Ventilation Centre

Search

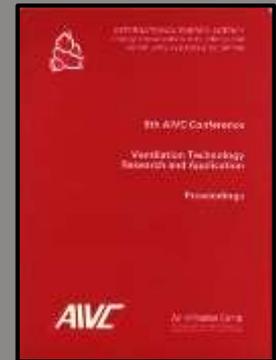
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8th AIVC Conference - Ueberlingen, West Germany - 21-24 September 1987
The 8th AIVC Conference - Ventilation technology research and application, was held in Ueberlingen, West Germany, 21-24 September 1987.
Contains 40 papers
[Volume](#) [View More](#)

7th AIVC Conference - Stratford-upon-Avon, UK - 29 September-2 October 1986
The 7th AIVC Conference - Occupant interaction with ventilation systems was held in Stratford-upon-Avon, UK, 29 September - 2 October 1986.
Contains 27 papers.
[Volume](#) [View More](#)

6th AIVC Conference - Southern Netherlands - 16-19 September, 1985
The 6th AIVC Conference - Ventilation strategies and measurement techniques was held in the Southern Netherlands, 16-19 September 1985.
Contains 32 papers.
[Volume](#) [View More](#)

5th AIVC Conference - Reno, US - 1-4 October, 1984
The 5th AIVC Conference - The implementation and effectiveness of air infiltration standards in buildings was held in Reno, Nevada, US, 1-4 October 1984.
Contains 24 papers.



CIBSE Lighting Design Guidance

TECHNICAL MEMORANDA

CIBSE STANDARD FILE FORMAT FOR
THE ELECTRONIC TRANSFER OF
LUMINAIRE PHOTOMETRIC DATA

TM14 1988

Photometric Data Task Group

A J Baxter
L Bedocs (*Chairman*)
J C Digweed
A E Glenny

Technical Secretary
K J Butcher

V P Rolfe
A I Slater
A P Wilson
D J Rowe (*Secretary*)

Co-ordinating Editor
B W Copping

Code for interior lighting

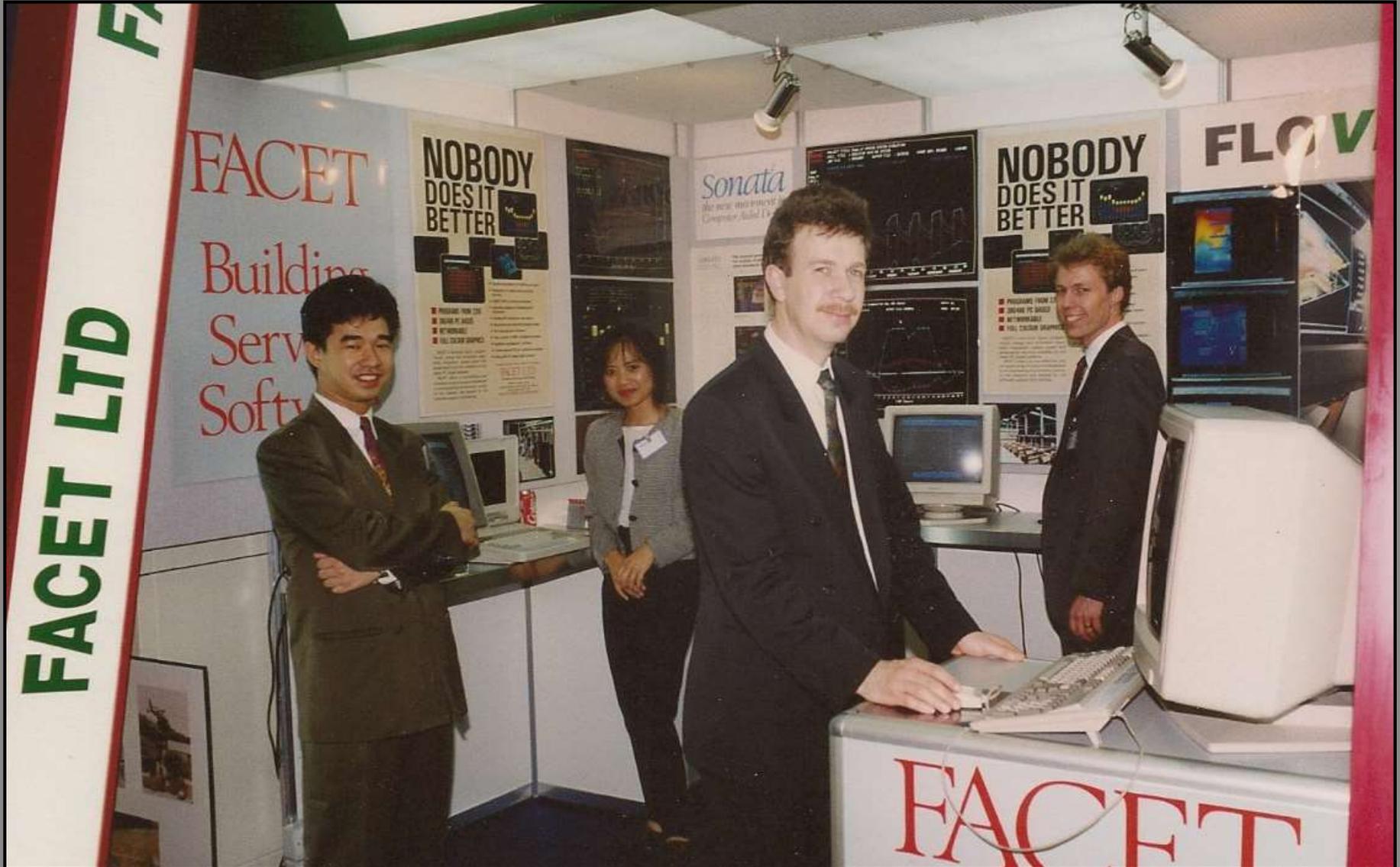


Task Group

R C Aldworth (*Chairman*)
J E Baker
R I Bell
D J Carter
E T Glenny
B D Jacob
R M Kerswill

C M Parry
K B Pike (*Secretary*)
A I Slater
A Tammes
P R Tregenza
A Wilson
A P Wilson

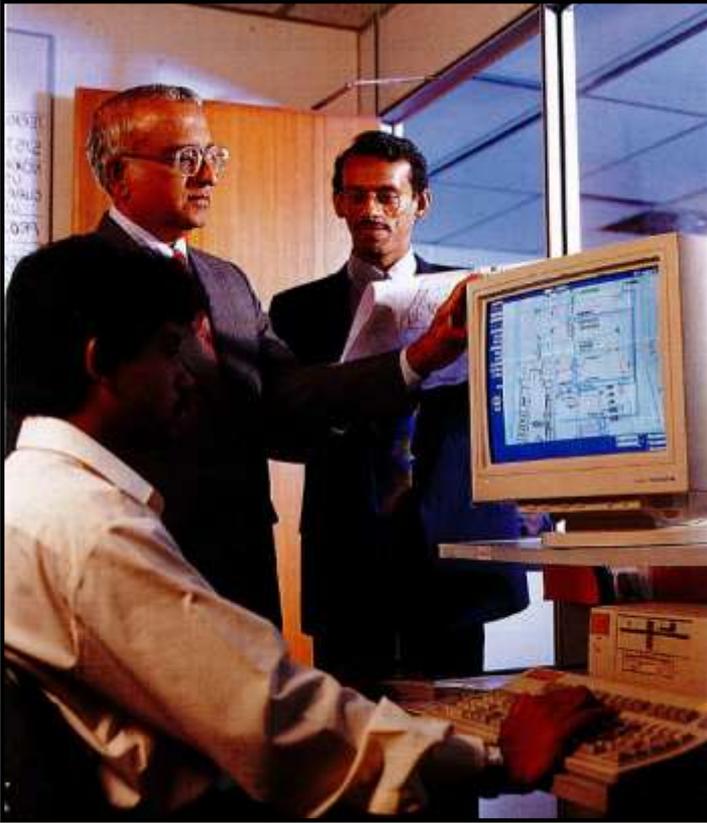
FACET with Sonata and FloVent – 1991



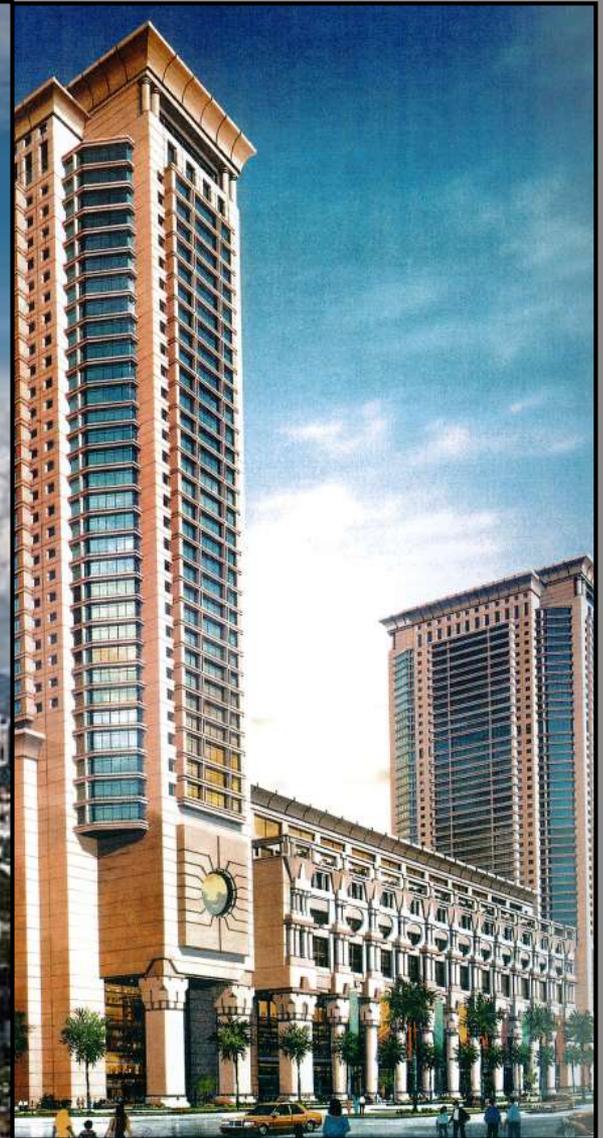
FACET Marketing in Shanghai 1994



Nair Ven Oscar Faber SDN BHD

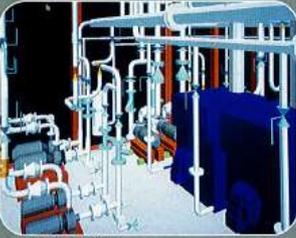


In order to aid our work **NAIR VEN OSCAR FABER SDN BHD** has invested heavily in computerising many of our work areas especially in design and drafting. By upgrading, we have improved the standard of service, the quality of drawings and co-ordination. To date we have Design Software Packages for Lifts, Air Conditioning, Electrical Services and Structural Analysis + Design Packages.

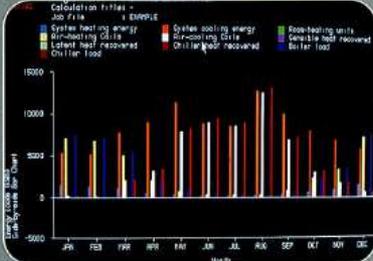


Design and Integration of Software

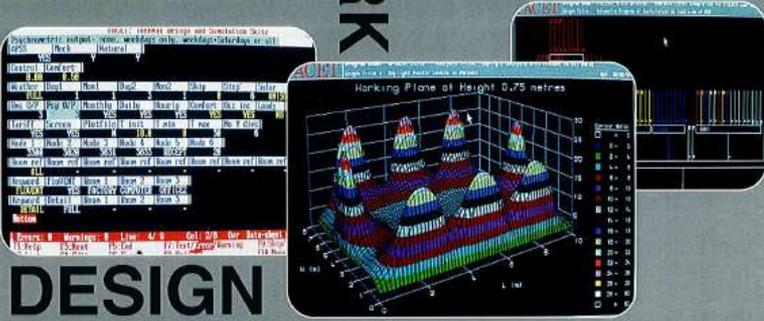
TAKE THE GUESSWORK OUT OF DESIGN



Courtesy of Nelson Young



Calculation Files -
Job File
EXAMPLE
 System heating energy
 Cooling energy
 System cooling energy
 Chiller/boiler required
 Cooling load
 Heating load
 Sensible heat required
 Boiler load



MARKING PLANE OF HEIGHT 0.75 METRES

DESIGN

- Full dynamic thermal simulation
- Windows compatible
- Duct, fan, pipe and pump sizing
- Networkable
- 16th Edition IEE cable sizing
- 386/486 PC and Unix based
- Electric and day lighting analysis
- CIBSE heat gain and loss analysis
- Full technical support and training

Contact Anthony Wilson or Simon Pinder-Hales

FACET LTD
Building Services Software

Marlborough House, Upper Marlborough Road, St. Albans
Hertfordshire AL1 3UT. Tel: (0727) 50830 Fax: 081-784 5700

Powerful integration to CAD systems



INTER FACET

Performance... Productivity... Profitability.

INTERFACET software, in conjunction with Intergraph MicroStation™, gives an immediate improvement in the speed and productivity of design and draughting within a single CAD environment.

Design and draft simultaneously.

INTERFACET can read MicroStation™ and Autocad® drawings directly, as well as importing DXF files.

Utilises the full power of MicroStation™'s graphical tools.

Easy-to-use - MicroStation™'s Graphical User Interface is based on MOTIF standards.

Enables better data management to increase quality assurance.

Creates in hours what used to take days.

Increases profitability through increased productivity.

Analysis of the building fabric for heat losses, heat gains, daylight and electric lighting.

Sizing of the ductwork, pipework and electrical systems.

Multi-platform, including PC and UNIX

CAD input to analysis can be from a simple sketch, or a detailed architect's drawing.

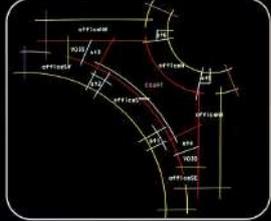
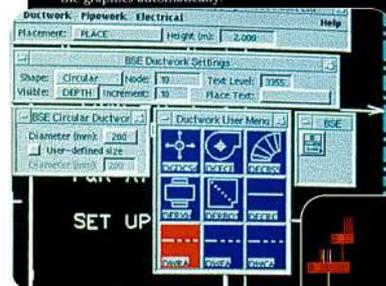
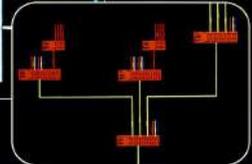
INTERFACET scans plans and extracts data for use in shading predictions, thermal analysis and lighting and airflow simulations.

Place pipe and duct fittings using icon menus; INTERFACET will then size the systems and update the graphics automatically.

Schematics generate data for cable sizing calculations. You can then move circuits graphically to optimise the design.

SET UP

ENGINEERING THE FUTURE


IES Acquire Facet Software



news from **integrated environmental solutions Ltd**

THE

integrator

volume one • autumn 1996

IES ACQUIRES FACET

In October 1996, IES expanded its business horizons with the successful acquisition of the FACET software from Oscar Faber, one of the world's leading building engineering companies.

Revealing the growing ambitions of IES, Doug Wilkie, the company's Commercial Director, described the takeover as "a move that underlines IES as the market leader in providing the most complete and relevant set of building design software for the construction industry."

and its proven validity, through hundreds of man-years of use within Oscar Faber and other organisations. This makes Facet a perfect match with the current performance based <Virtual Environment> software".

Shared Vision

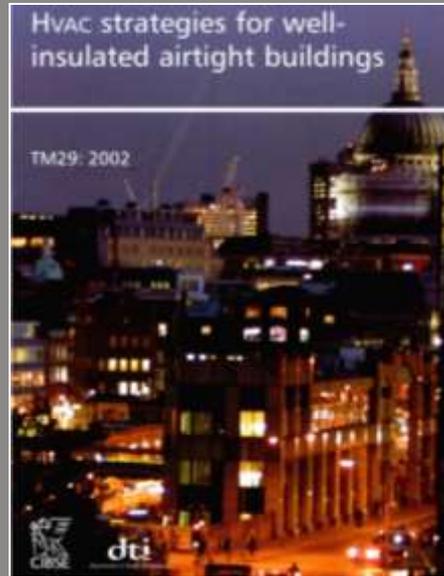
IES Scoops Start-Up of the Year Award

With its emerging <Virtual Environment> system, IES was recently announced winner of the Young Start category of The 1996 Glasgow Business Start-Up of the Year Awards. At the awards ceremony in Glasgow, the directors of IES were presented with £20,000, a trophy and a framed certificate.

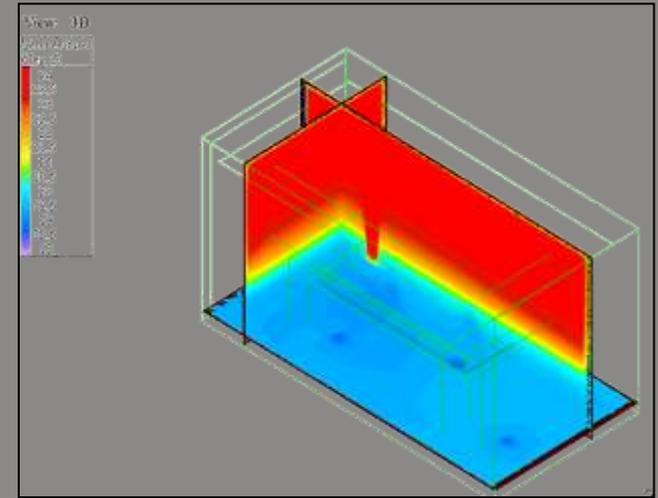
More than 200 firms entered the competition, which was run and supported by the Glasgow Development Agency (GDA) and sponsored by the Royal Bank of Scotland and The Herald newspaper. The awards are intended to highlight early successes and promote the

Oscar Faber Applied Research

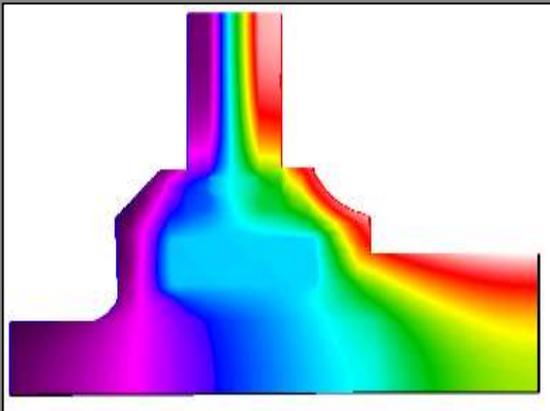
BRE Environmental Tests



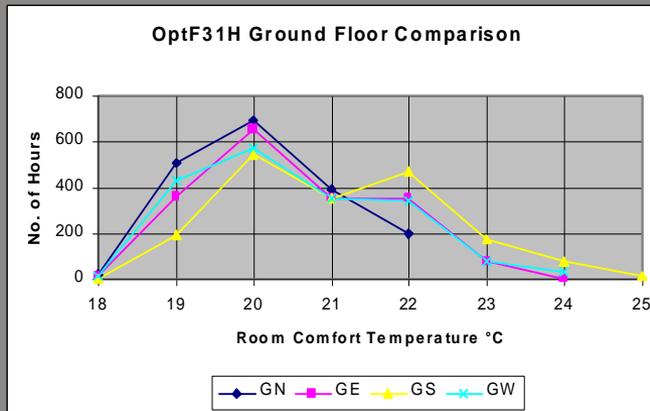
FloVent CFD Simulations



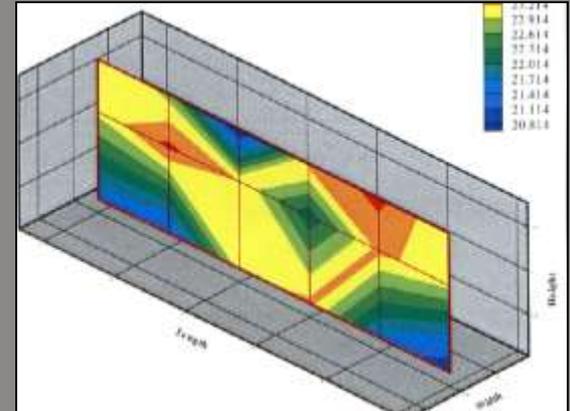
Pilkington Windows



APACHE Thermal Modelling

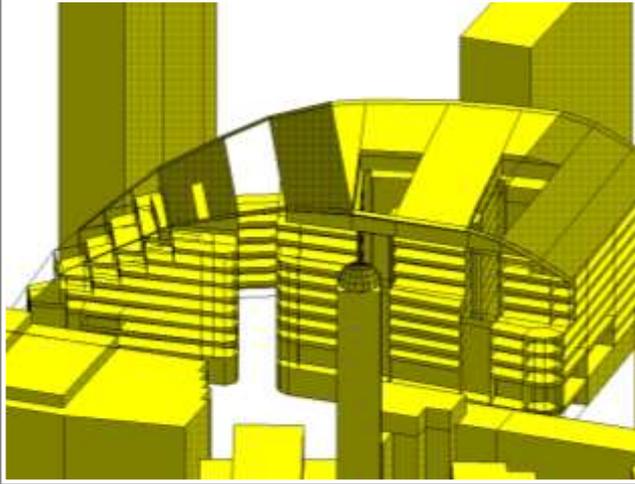


Test Results

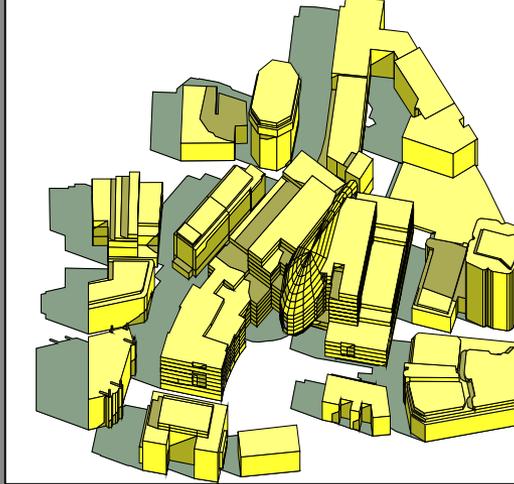


Computer Modelling

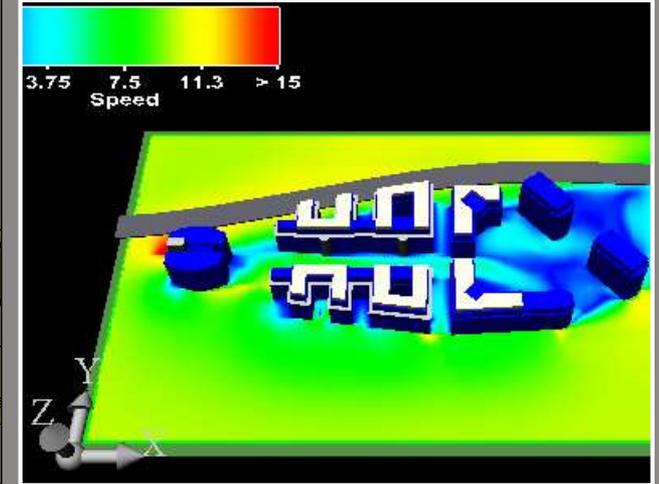
ModelIT



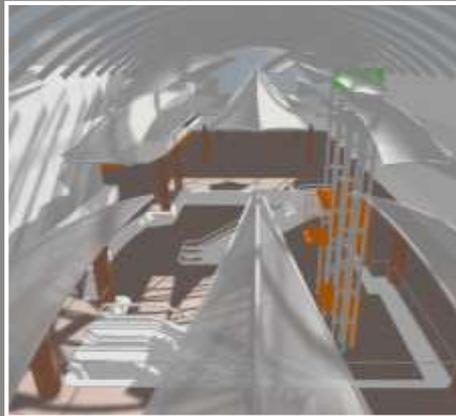
SunCAST



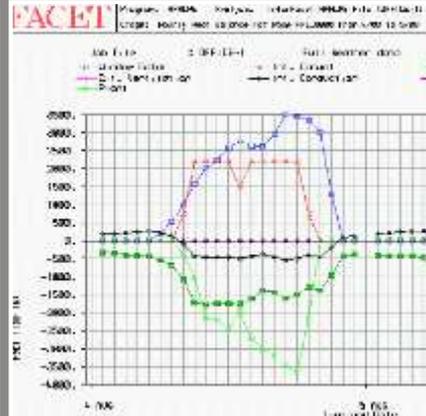
FloVent CFD Simulations



MicroStation



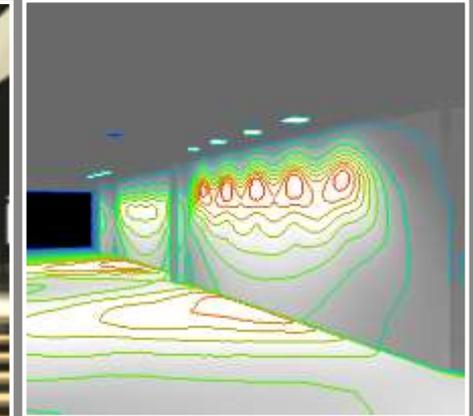
APACHE



Radiance Daylight



Electric Lighting



Integer House in Oscar Faber AR 1998

2 Oscar Faber Annual Report 1998

Oscar Faber Annual Report 1998 3



[DIALOGUE]: PROJECT TITLE: INTELLIGENT AND GREEN DREAMHOUSE, GARSTON, HERTFORDSHIRE. CLIENT: INTEGER

PROJECT COMPLETED: 05/98. WORK UNDERTAKEN: MECHANICAL & ELECTRICAL ENGINEERING. PROJECT BUDGET: £38K

"From a standing start - no site, no plans, no builder, no money - we created one of the most innovative fully-functional buildings in the world... in just 12 weeks. It was a triumph of teamwork, and Oscar Faber made a key contribution. Not only did they design and procure many of the building services systems, but also helped to install them. They took up the challenge and responded wholeheartedly, working closely with the other organisations who were involved. Their efforts went far beyond the call of duty."

Nick Thompson, INTEGER Project Director



"The INTEGER housing project shows how design and construction can benefit from technology within a partnership. We applied the most appropriate intelligent and environmentally sensitive technology, such as energy-efficient heating and water recycling, to provide state-of-the-art building services. Our expertise resulted in an innovative yet practical living environment."

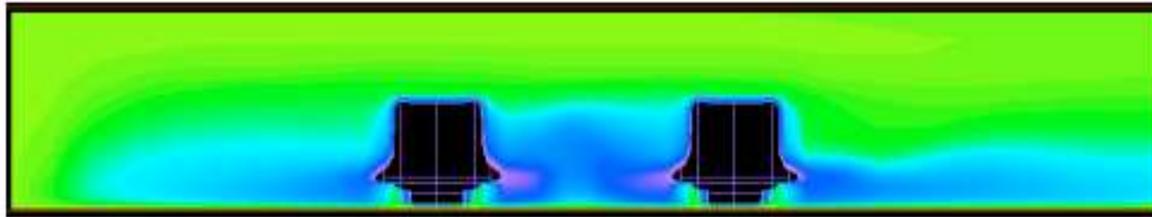
Dr Garry Palmer, Principal Consultant, Oscar Faber Applied Research



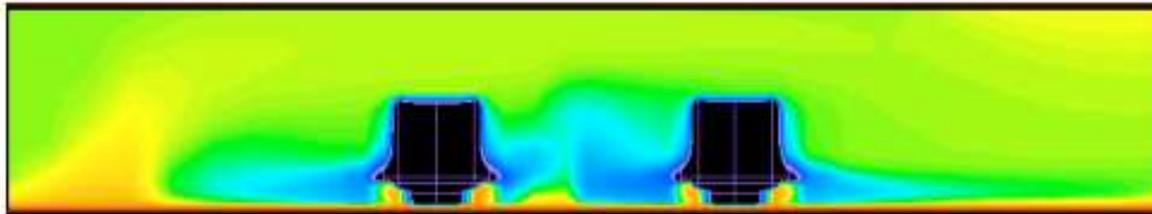
INTEGER House Projects



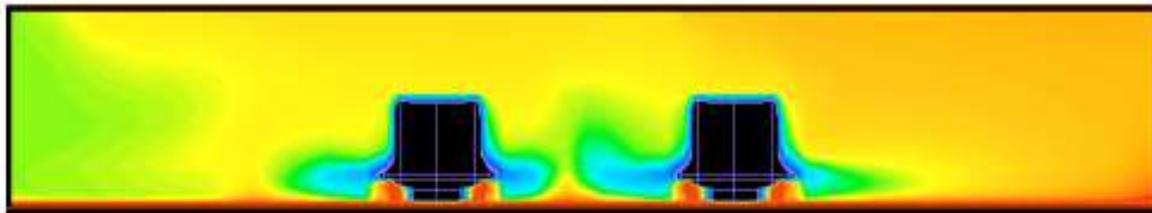
CFD Analysis of Food Store



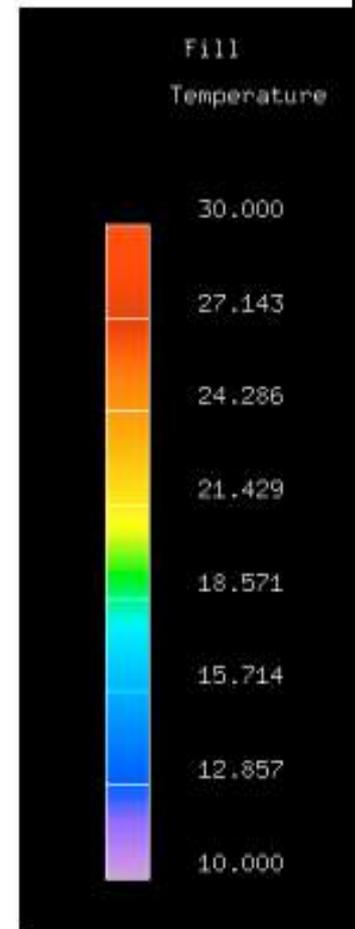
20°C floor



25°C floor



30°C floor



- Floor temperature of 30°C gives acceptable conditions

Sainsbury's Low Energy Store at Greenwich



Sainsbury's Millennium Store, Greenwich

SAINSBURY'S MILLENNIUM STORE, GREENWICH: A MILESTONE IN RETAIL DESIGN - ENERGY EFFICIENT, ENVIRONMENTALLY FRIENDLY, CUSTOMER-ORIENTED - A BLUEPRINT FOR THE SUPERMARKET OF THE FUTURE.

AINS SHAW
Regional Director

The Millennium Store project enabled Oscar Faber to work in partnership with one of Britain's leading retailers. There is now an ongoing commitment to prove that the innovative concepts implemented at Greenwich can be rolled out into Sainsbury's store network.

From left to right:
ROB GREEN Mechanical Engineer,
STEVE POCKETT Electrical Engineer,
ALAN FOX Associate Director

The building services design team used in-house expertise in advanced technologies and CFD modelling to validate the low-energy concepts. In close co-ordination with the architects and the structural engineers, they then merged the proposals into working systems.

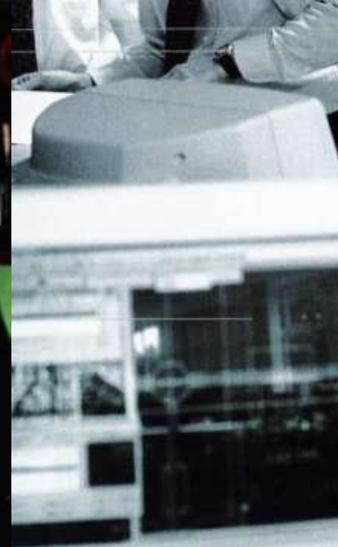


ANT WILSON
Director of Research

The technical challenge at the Millennium Store was not so much about checking the feasibility of the innovative low-energy concepts. The demanding part was making sure that they would integrate effectively to achieve the overall desired effect.



OSCAR FABER: ADDING VALUE IN THE RETAIL SECTOR - FEASIBILITY STUDIES, VALIDATION, MECHANICAL & ELECTRICAL ENGINEERING DESIGN - ACHIEVING EXCELLENCE THROUGH PRACTICAL APPLIED INNOVATION.



Work on John Hanson School, Andover

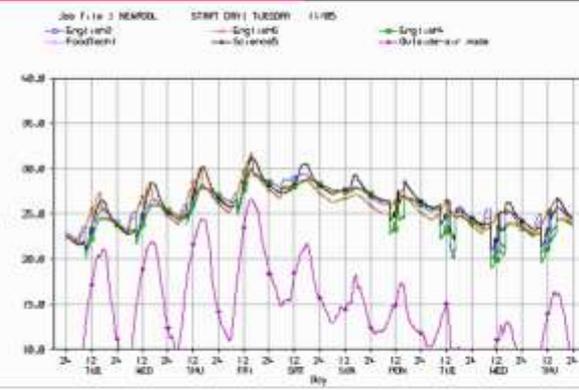
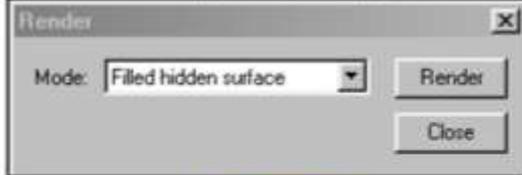
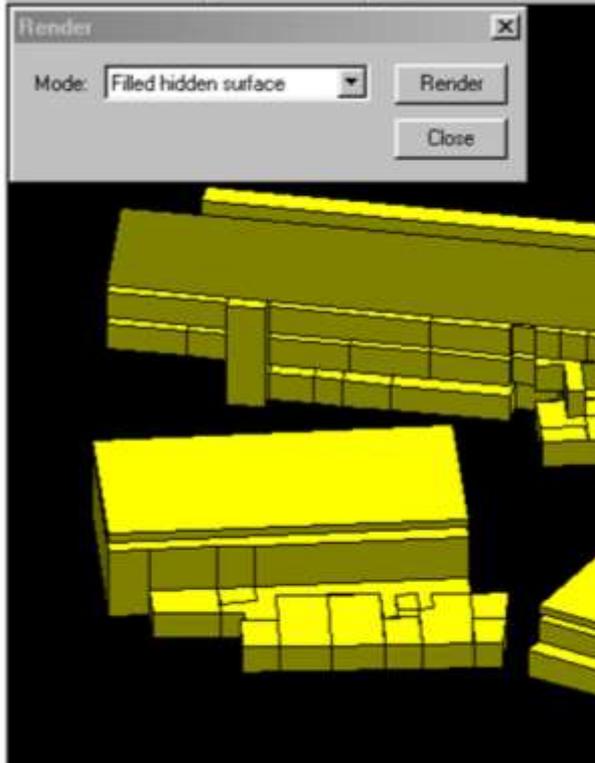


John Hanson School - Night Ventilation

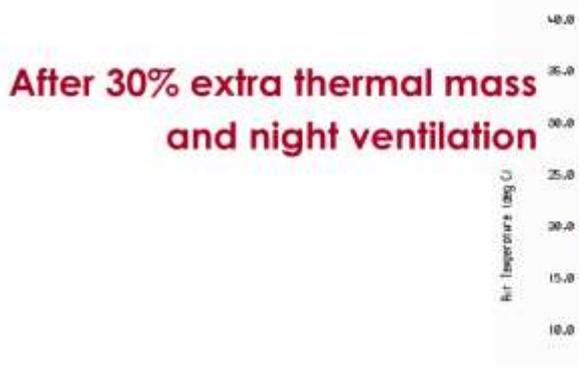
Thermal Model Generator



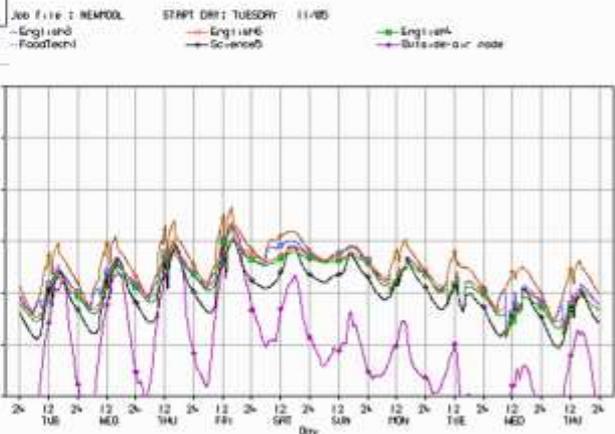
John Hanson School - Night Ventilation



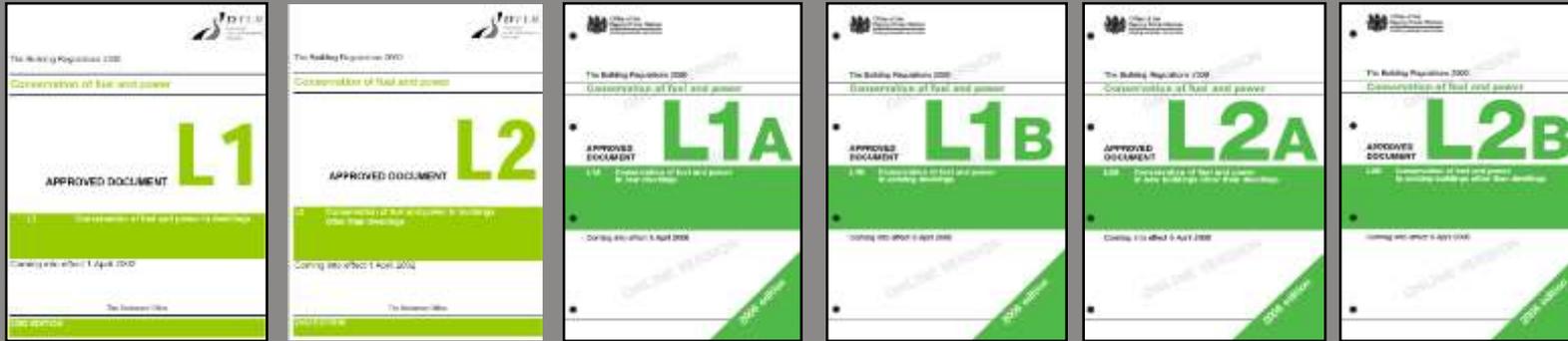
Before night ventilation



After 30% extra thermal mass and night ventilation



Building Regulations Part L (02, 06, 10 & 13)



Low Energy / Innovation Projects



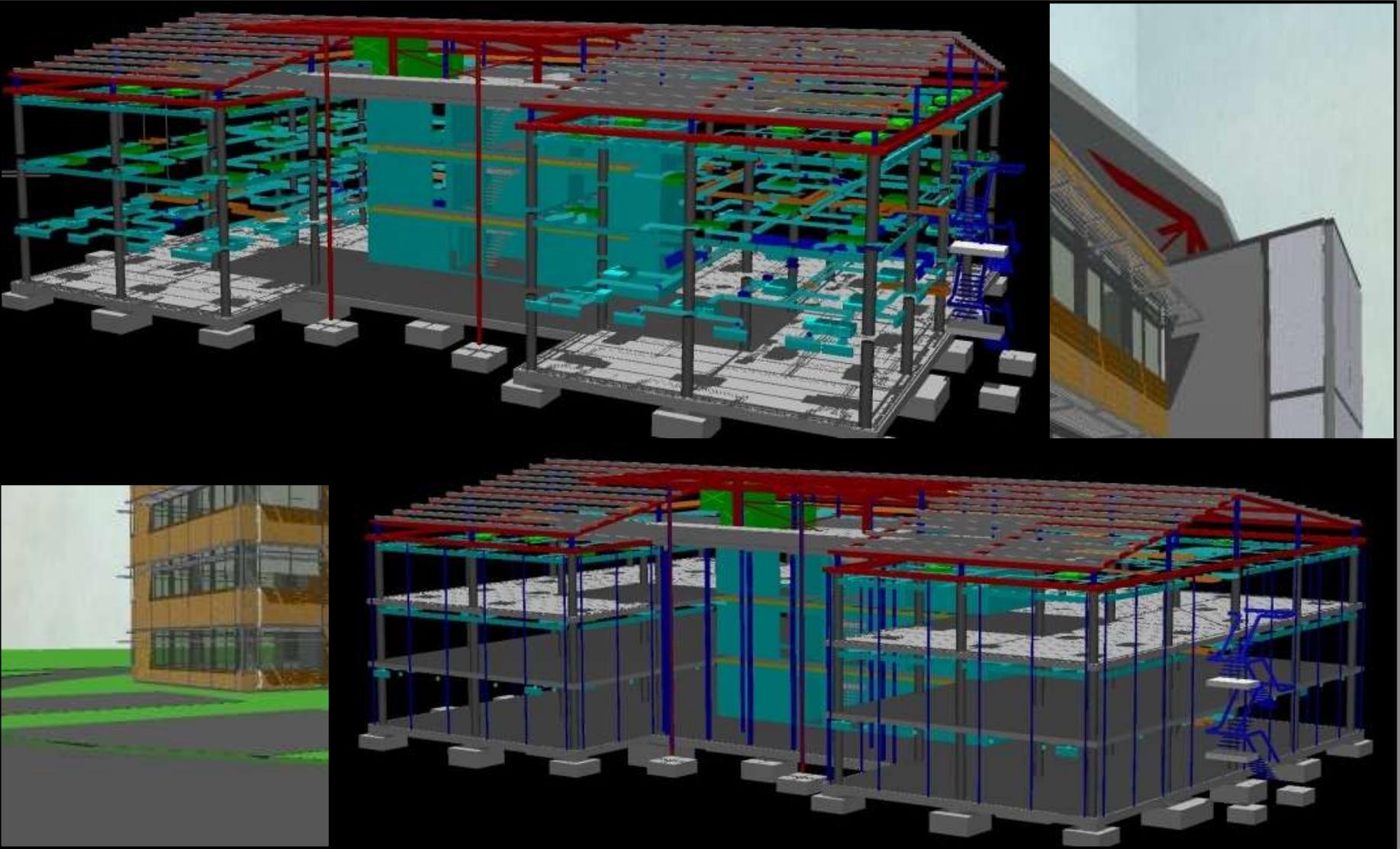
Xscape, Milton Keynes



The first Xscape opened in Milton Keynes in June 2000 and since then has had more than 4m visitors - only 1m fewer than the Millennium Dome ever managed during its miserable history. Housed in a huge hall that is kept two degrees below freezing, it has a 170m indoor ski slope - the longest in Europe at the time.



TEAMWORK 2000 (Bentley Award 2000)



Bentley 2001 Success Awards



2001 Success
Awards Winner
BENTLEY

School Energy Consumption Guides

ENERGY CONSUMPTION GUIDE 73

Saving energy in schools

A guide for headteachers, governors, premises managers and school energy managers



- Reduce energy costs and environmental impact
- Compare energy performance with benchmarks
- Implement an energy efficiency action plan



ENERGY EFFICIENCY

BEST PRACTICE PROGRAMME

ENERGY CONSUMPTION GUIDE 73



GOOD PRACTICE GUIDE 259

Saving electrical energy in schools

– good housekeeping for lighting, IT and other curriculum-based equipment



- No-cost good housekeeping practices to reduce energy costs
- Lowering carbon dioxide emissions through the energy-efficient use of electrical equipment



ENERGY EFFICIENCY

BEST PRACTICE PROGRAMME

GOOD PRACTICE GUIDE 259



Odyssey Sports Arena, Belfast



building Awards 2002 WINNER

Consulting Engineer of the Year

The Bid for Ground Zero 2002

Presentation to DMJM+Harris

FABER MAUNSELL

Ant Wilson – Director of Advanced Technology

- Overall responsibility for the utilisation of advanced technology techniques for your projects
- Responsible for the development of appropriate innovative engineering solutions
- Responsible for the integration of sustainable construction techniques into mainstream design
- Responsible for the development of low energy solutions
- 20 years experience of working with project teams in the development of advanced technologies



One World Trade Center & PATH



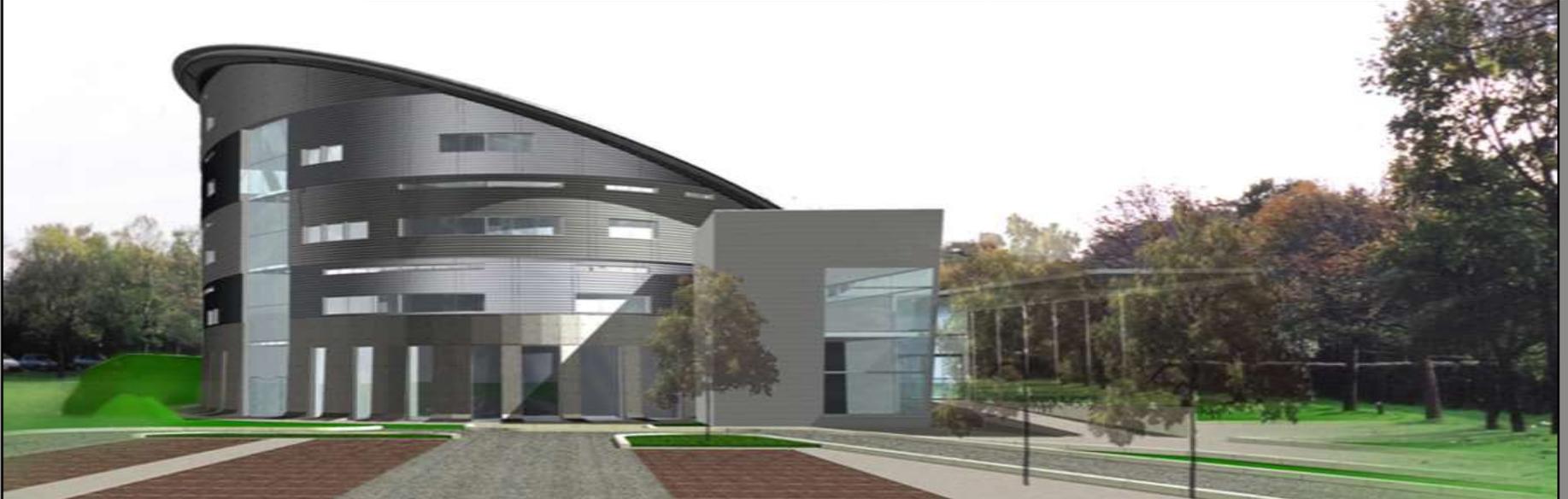
Path Terminal, New York City



Unity City Academy, Middlesbrough



Unity City Academy opened in 2003. It was formed by the merger of Keldholme School and Langbaugh School.



CIBSE TM35:2004 – Façades

Environmental performance
toolkit for glazed façades



Façade Selector 2004

Important:

1. The Façade Selector interrogates pre-calculated data based on 37 glazed façade options only, and therefore does not represent all systems available in the market.
2. All quoted cost figures are calculated based on 1Q/2004 South East England numbers.

Façade Selector [Close] [Maximize] [Refresh]

File View Help

Façade Selector

Orientation:

Glazing Type

Only Façades Without Shading Devices

Peak Heating Loads less than or equal to: (W/m² floor area)
Min Value: Max Value:

Peak Cooling Loads less than or equal to: (W/m² floor area)
Min Value: Max Value:

Peak Solar Gains less than or equal to: (kWh/m² floor area)
Min Value: Max Value:

Average Daylight Factor greater than:
Min Value: Max Value:

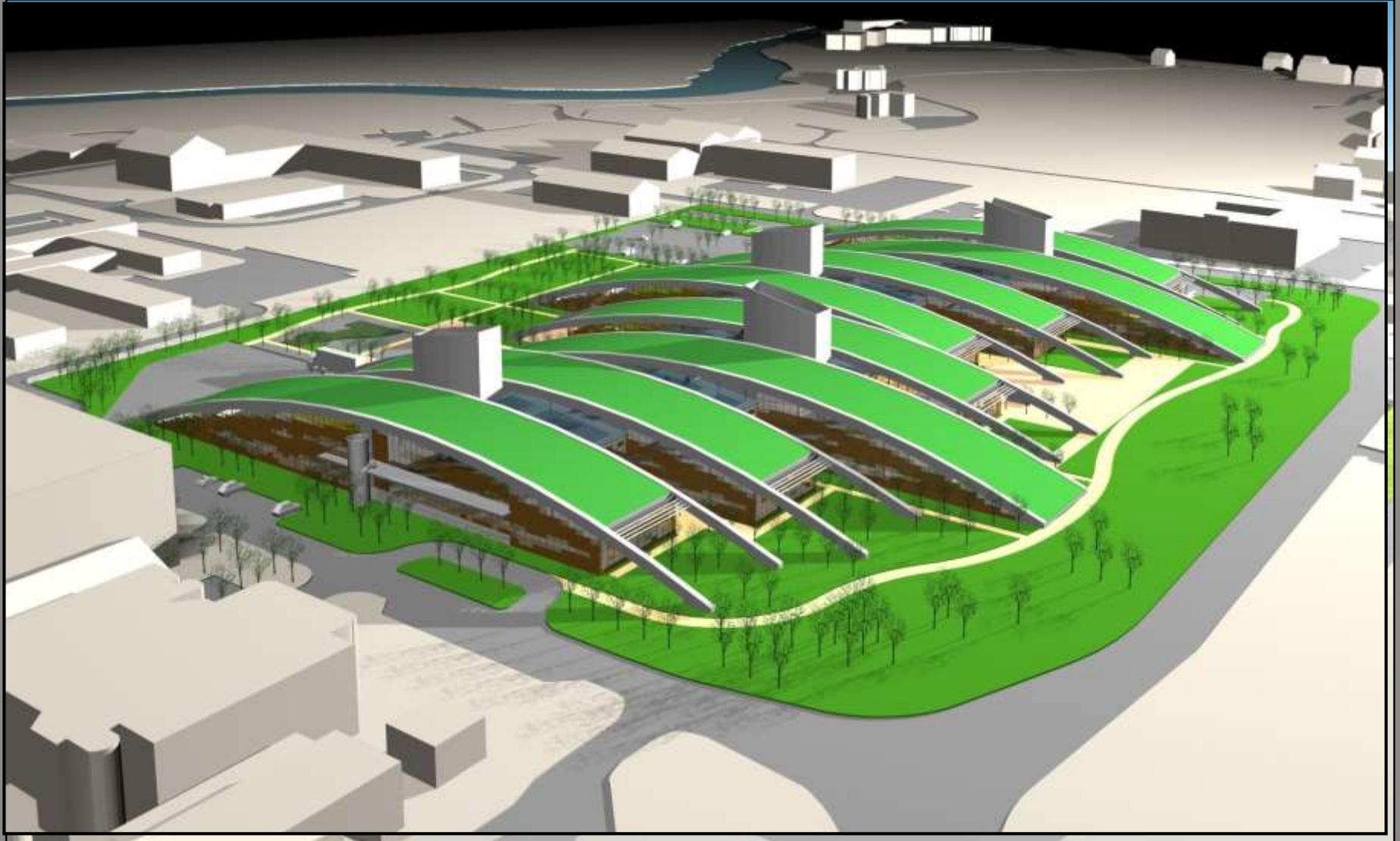
Glazed Façade Cost less than or equal to: (£/m² façade area)
Min Value: Max Value:

Note: The max and min values for each performance criterion denote the extremities of the criterion for the selected orientation.

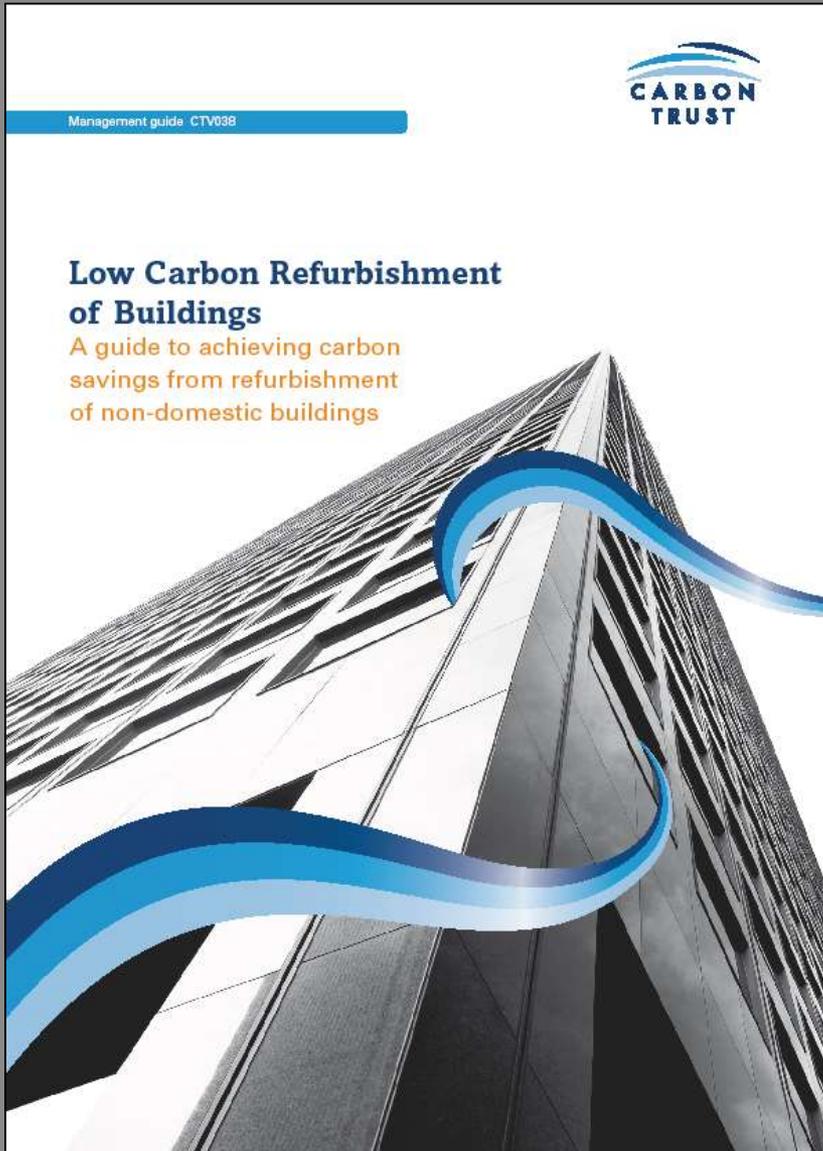
Society of Facade Engineering



BP Office Redevelopment, Dyce



Low Carbon Building Accelerator



Phase	Low Carbon Refurbishment Process	Page	RIBA Work Stages*
Prepare  ↓	■ Commit to a low carbon refurbishment	7	Preparation
	■ Establish a low carbon vision for the refurbishment	7	A Appraisal
	■ Develop a low carbon outline brief	7	
	■ Establish the current carbon footprint of the building	8	B Design brief
	■ Set carbon targets for the refurbishment	8	
	■ Undertake a pre-refurbishment assessment	9	
	■ Consult stakeholders	10	
	■ Consider a budget for low carbon elements	10	
	■ Appoint a carbon champion	11	
	■ Choose an appropriate design team	11	Design
	■ Empower the design team	12	C Concept
	Design  ↓	■ Keep the low carbon theme up front	13
■ Develop an integrated low carbon design		13	
■ Encourage exploration of a wide range of low carbon options		14	
■ Allow flexibility in design		15	
■ Use energy modelling data		16	E Technical design
■ Use whole life costing to support low carbon solutions		17	
■ Manage the budget and scope		17	
■ Approve the integrated design		18	
■ Include targets in contracting arrangements		18	Pre-construction
Construct  ↓		■ Ensure effective project management	19
	■ Choose an appropriate contractor and subcontractors	19	H Tender action
	■ Get buy-in from site workers	19	Construction
	■ Monitor site progress against objectives	20	J Mobilisation
	■ Ensure high quality commissioning	20	K Construction to practical completion
	■ Set up energy monitoring	20	
Use 	■ Make sure the occupants understand the building	21	Post practical completion
	■ Make sure the building operator understands the building	21	L Post practical completion
	■ Conduct a post-occupancy evaluation	22	
	■ Check energy use and comfort conditions and make changes	22	
	■ Make the most of the low carbon building	22	

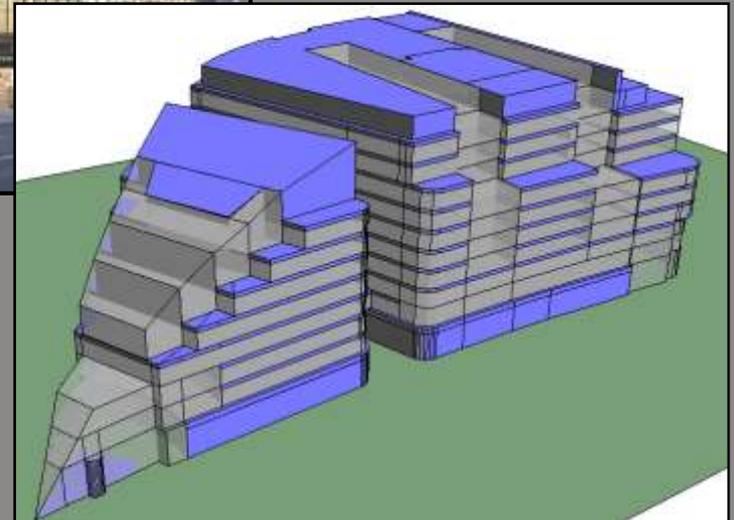
King Alfred Development, Brighton



Cardinal Place, Victoria, London

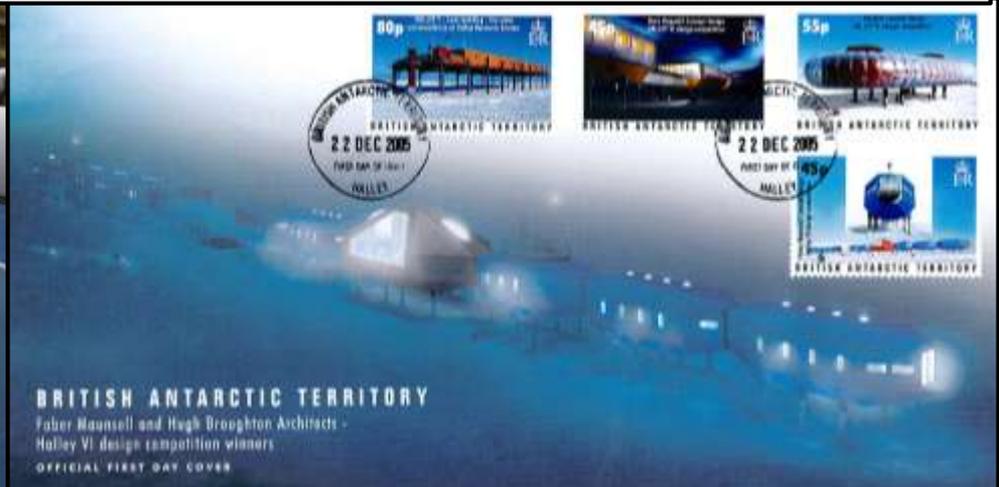


Cardinal Place is a retail and office development in London. The site consists of 2/3 buildings covering over a million square feet opposite Westminster Cathedral and was designed by EPR and topped out in December 2004.



BAS Halley 6 in Design & Operation

RIBA Competition
Launched 26/6/04
86 Teams globally entered



Michael Wright at BAS Halley V,



BBC SPORT ALL THE ACTION AS IT HAPPENS

● UK version ○ International version About the versions | [Low graphics](#)

Last Updated: Wednesday, 6 July, 2005, 11:49 GMT 12:49 UK

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London beats Paris to 2012 Games

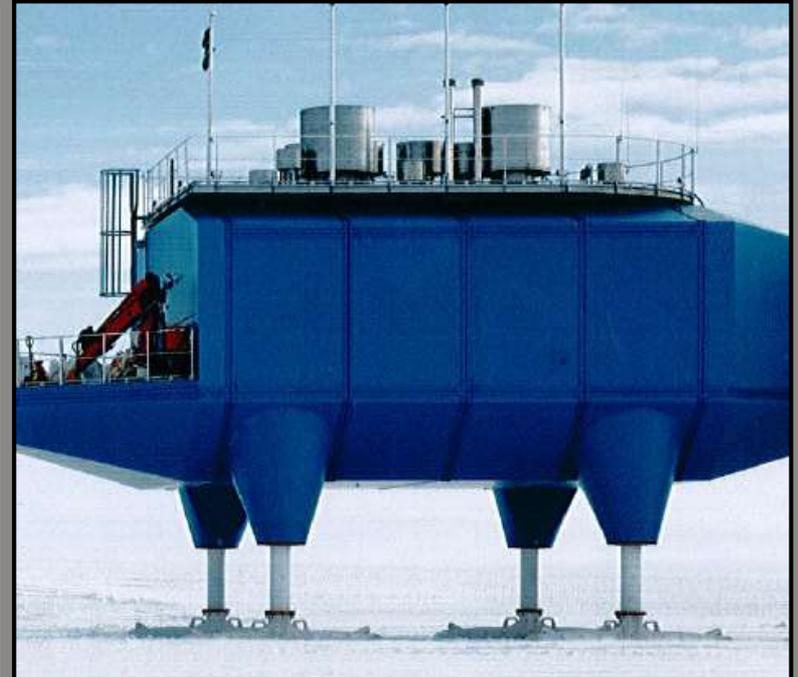
The 2012 Olympic Games will be held in London, the International Olympic Committee has announced.

London won a two-way fight with Paris by 54 votes to 50 at the IOC meeting in Singapore, after bids from Moscow, New York and Madrid were eliminated.



Photos: London celebrates

BAS Halley 6 in Operation



© Antony Dubber, British Antarctic Survey

Broadcasting House, London



AECOM Listed on New York Stock Exchange

AECOM Initial Public Offering marks Historic Company Event



AECOM and its more than 30,000 employees worldwide experienced a historic company event earlier this month when shares of AECOM common stock listed on the New York Stock Exchange (NYSE) under the ticker symbol "ACM."

The company received a warm Wall Street reception on May 10th, its first day as a publicly traded company.

Faber Maunsell makes FT Best Workplaces Table

Faber Maunsell has placed in the Financial Times 50 Best UK Workplaces 2007.

"We have been associated with 'Best Company to Work for' initiatives since 2001 and have received eight FT or Sunday Times awards since then," said Chief Executive, Ken Dalton. "As we have featured in this type of initiative for seven years, this 'Financial Times 50 Best Workplaces' Award displays our consistency as a good employer – but we are always seeking to improve further.

"We have certainly worked hard to develop a forward-thinking management philosophy that encourages individuals to realise their own potential and take a personal stake in the company's future. Our success in these awards, and our own staff surveys over the last nine years have shown that our people are proud of working for Faber Maunsell."

The Great Place to Work Institute@UK believes that to find the best places to work in the UK, you have to ask the staff, so that is what they did. Employee questionnaires were sent to a random sample of 400 Faber Maunsell staff. The results formed a vital part of the extensive research carried out to identify the UK's 50 Best Workplaces. Any

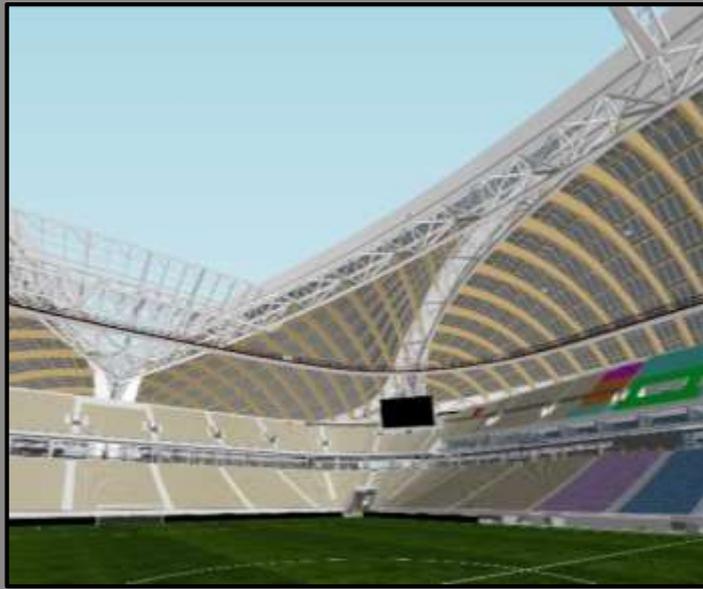
London 2012 Olympics



Rio Olympics 2016



Al Wakrah Stadium, Qatar



STEM Ambassador



MBS PERSPECTIVE

Introducing school children to the excitement of engineering

++++ If pupils at school do not know about building-services engineering, how can they express an interest in joining the profession? **Ant Wilson** shares his experiences in taking the initiative and making them aware of the excitement of engineering.

While many people express concern about the shortage of people and skills in the building-services industry, one will remark that there is more talk than action. Committees and working parties abound, discussing action plans and identifying needs.

Meanwhile in Hertfordshire a dedicated group of people from a large firm of consulting engineers is doing much more than just talk.

For many years, Ant Wilson of Faber Maunsell, which has a large office in St Albans, and a team of about 20 ambassadors, has been working with schools in the area to promote and introduce interest in engineering. This work is not a series of one-off operations but, rather, a continuous process of working and nurturing pupils so that interest can develop and blossom.

'It's about making children at school feel good about engineering,' says Ant Wilson. 'We don't just talk at school assemblies. We get children of all ages involved in the day-to-day experience of engineering by taking with us into schools hard hats, high-visibility jackets and goggles. The youngest ones love it.'

The process starts young and continues right through to sponsoring university students and placements.

Faber Maunsell has an ambassador link with most secondary private and state schools in St Albans and some further afield in Hemel, Beds and North London. They are all chosen by the Central Records Bureau.

Some pupils from schools in the area also obtain their work experience with Faber Maunsell when they are 14 to 15 years old. Some return for further experience, and Ant Wilson particularly recalls a pupil from Hildon Grammar School, some 15 miles from St Albans, following up a work's work experience at age 17 with a further two weeks when he was 18.

That successful work was followed by a further four weeks examining the effects of climate change — in particular, rising temperatures. He considered the UKCP (UK Climate Impacts Programme) scenario for 2021, 2050 and 2080.

Including a gap year before he started university, that pupil has now had links with Faber Maunsell for over seven years.

The work experience programme introduced by Faber Maunsell is 'a really promising prospect,' says Ant Wilson, 'and they build up an interest in the company before they go to university, which is very beneficial to our future staffing needs.'

The centre practice sponsors 40 students, including structural engineering, and recruited around 120 graduates this year.

The involvement of hands-on experience is taken into schools. As part of a series of rapid response challenges, six staff work with school pupils and new graduates on projects such as fuel cells, drainage and air for engineering.

'Why does Ant Wilson put so much effort and commitment into promoting engineering in schools?'

'I want there to be at least one that engineering is a good profession and discipline,' he explains. He also reveals that he did not embark on a building-services career until he had been at university for two years. He went to university to do structural engineering in a school of architecture. That course had a building services element, but he switched courses after two years.

Out in the schools, the approach is to make building-services engineering relevant. 'You can always bring up a project that people know of,' he says. 'In our case the Sage entertainment destination in Milton Keynes is an excellent project to discuss. It has an indoor ski slope, and the production of artificial snow is fascinating.'

'Other skills to generating interest include computer modelling, with a 3D through a building and discussing sustainable development — which is a big sell to young people.'

One issue that Ant Wilson and his team try to address is school pupils drifting away from subjects that will enable them to pursue a career in engineering.

'Pupils taking single science at GCSE certainly exposey science in the sixth form, so they are not to engineering,' explains Ant Wilson. 'So here to get our message to them well before they make their GCSE choice. The sixth form is too late.'

While he has long found working with schools to be a rewarding experience, Ant Wilson also acknowledges that it is not always easy. 'It really helps me that the most popular kind of one school non-work package, with 50 students, and only about three involving pupils in a large sixth form.'

Faber Maunsell has had links with schools for many years, which were developed into a formal homework seven years ago as part of a policy of becoming a world-class company.

However, Ant Wilson stresses that a company does not have to be large to work with schools. He himself started his involvement as a self-employed with a primary school.

His conclusion, 'To improve the quality of engineers in building services, we have to get into the schools and catch people young. The process must put in by Faber Maunsell certainly pay off — but some investment is needed from the rest of industry.' **NEWS**

Let's play it wrong, engineers — but where does the excitement in young children lie when they are 18

PHOTOGRAPH BY ANTHONY WILSON



Committed to introducing school children to engineering — Ant Wilson of Faber Maunsell.



H&V / CIBSE Graduates Awards



Judging H&V News Awards



JUDGING EXCELLENCE

The H&V
reputati
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and mar
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judges –
are es
awards.
building



The panel is comprised of: (front row, left to right) Peter Mayo, Ant Wilson, Nick Mead, (second row, left to right) Tony Amura,

Top "GREEN GURUS" Building 2007



ANT WILSON DIRECTOR, FABRIC
MULFCELL

What he does Gives sustainability advice to clients to get projects through the maze of green planning regulations

Wilson did a degree in building services, took the environmental options and has been working on things sustainable ever since. These days, he's involved with high profile projects, including Frank Gehry's mixed-use scheme in Brighton and the massive Land Securities development in Victoria.

He says clients recognise that green experts are crucial to securing planning permission for large schemes, which is why his department has increased 100% since last year.

One of the main challenges ahead, he says, is to make sure off-site modules can be recycled. "They have to be to be reusable or we're just creating more problems."

Technology tipped for success Hydrogen fuel cells, wave power and biotechnology

Myth exploded "There is a perception that sticking a windmill or PV on your house makes it really green. That's greenwash."

One of CIBSE Most Influential Figures

24 influential figures



Ove Arup

The influence of Arup is still strong two decades after his death. He founded his eponymous consultancy in 1946 with the dream of "achieving the perfect union of design and construction" and today it has 9000 staff in 52 offices across the globe.



Ted Hoppold

Professor Sir Edmund (Ted) Hoppold was an innovator who combined creativity with discipline. Twelve years after his death, he remains an inspiration at the consultancy he founded, Buro Hoppold, and throughout the building services sector.



David Gottfried

The HVAC engineer turned property developer turned "green guru" founded the US Green Building Council in 1993 and later the World Green Building Council. He has made a substantial impact across the world, including China.



Pooran Desai

Worked with Bill Dunster on the RedZED eco-village and has also advised government and industry. Appointed OBE for services to sustainable development in 2004, his projects have included reviving London's lavender-growing trade.



Sir Michael Latham

The Latham Report on construction in 1994 described the industry as "ineffective, adversarial and incapable of delivering for its customers". Not surprisingly, it prompted widespread reforms. Today he chairs ConstructionSkills, the sector skills council.

and is an influential and informative engineering histories. He is an expert on topics including air quality and energy efficient ventilation systems. He was president of BEMVA, the Federation of European HVAC Associations, from 1976 to 1979.

Peter Warburton

The Arup man was lead MEP designer on the Gateway 2 project for Wiggin Teape in Basingstoke. The seminal building, completed in 1983, provided a naturally ventilated workspace for 500 office staff thanks to a central, top-lit atrium which acted as a natural chimney. Warburton has worked to spread best practice, speaking at initiatives such as a British Standards Institution conference in China and the Institute of Physics energy management group.

Ken Yeang

The Malaysian-born architect is renowned for his work with high-rise buildings that are constructed and developed with special consideration for the ecological impact they will have. Yeang was the co-founder of the Tili Hanchi & Yeang practice based in Malaysia, and is a director of London-based architect and planner Linewyn Davies Yeang, which has projects in Kazakhstan, Uzbekistan and Canada on its books as well as Great Ormond Street hospital in London. His latest book is EcoSkyscrapers.



Ant Wilson

CIBSE awarded its silver medal to Wilson in recognition of his 30-year contribution to engineering. He leads Faber Maunsell's applied research group and his interests include the environmental performance of facades, renewable energy technology and dynamic thermal simulation. Many students have benefited from his lectures, including those at Cambridge and Loughborough.

Robert Higgs

Higgs, chief executive of the Heating and Ventilating Contractors' Association since 1989, has been instrumental in shaping UK policy on

Sir John Egan

The influential industrialist was picked by then deputy prime minister John Prescott to conduct a review of the skills and training required by built environment professionals to produce sustainable communities. The Egan Review, published in 2004, highlighted the need to change the "behaviour, attitude and knowledge of everyone involved". Formerly with Jaguar and the British Airports Authority, Egan has been chairman of Severn-Trent Water since 2005.



For the love of sustainability



Ant Wilson, 'offer the government passion for this'

Ant Wilson, head of sustainable development at Faber Maunsell, tells HVR editor Paul Braithwaite why he loves his job so much

ANT Wilson is a modest man. He seems genuinely surprised that I called him out of the best-known personalities in the building services industry.

He has also become the acceptable face of government, working tirelessly to bring the new legislative rules and regulations to construction, infrastructure and, yes, even residential. In a way which helps us to understand them, pitching his observations and lectures at a level which does not make us feel stupid.

He is also probably the best architect Faber Maunsell could have, listing a all levels with ge-

otechnical, organisational, overseas groups, et al.

Faber Maunsell is very much at the centre of the government's thinking on much of the energy efficiency legislation, being involved at the planning stages on parts L and F of the Building Regulations and housing planning rules.

Wilson admits he is often not the solution when it comes to policy-making leaving this to ecologists Steve Loring, but he is the one who is out there making the training.

"It is a case of getting the appropriate people around the table. Everyone there has a part to

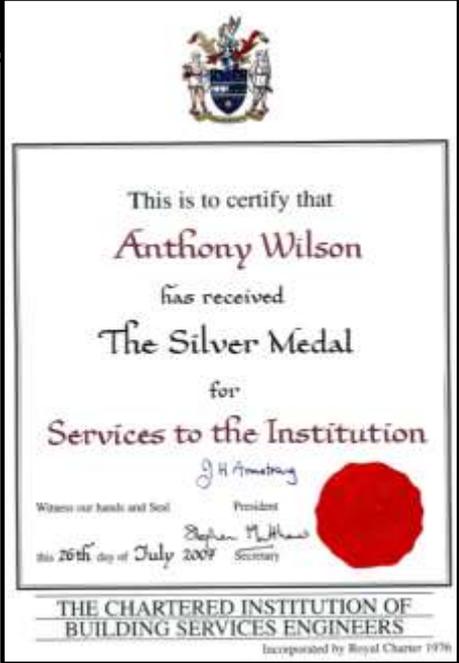
make — such as Greenpeace or the World Wildlife Fund, which have strong environmental views, alongside industry bodies such as FETA, BRL and government."

That's not far from it.

"What we have to end up with is a consensus which is also acceptable to the stakeholders."

He loves his job, a business unit director, Sustainable Development Group, every single facet of it. Faber Maunsell is an interna-

CIBSE Silver Medal – July 2007



Praise From H&V News 2008

8 TEN MOST INFLUENTIAL

The powers that be

Who has the biggest influence on UK building services today? H&V News has produced its second annual list, outlining the key players having a huge influence on the legislation, trends and techniques that are shaping your business.



10 - Neil Wilson
 Director of Applied Research at Faber Maunsel, Neil Wilson has been instrumental in the development of the industry's first low carbon building services research group. He has also been a key player in the development of the industry's first low carbon building services research group.

9 - Andrew Eastwell
 Director of Applied Research at Faber Maunsel, Andrew Eastwell has been instrumental in the development of the industry's first low carbon building services research group. He has also been a key player in the development of the industry's first low carbon building services research group.

8 - Craig Biddle
 Director of Applied Research at Faber Maunsel, Craig Biddle has been instrumental in the development of the industry's first low carbon building services research group. He has also been a key player in the development of the industry's first low carbon building services research group.

7 - Brian Moss OBE
 Director of Applied Research at Faber Maunsel, Brian Moss has been instrumental in the development of the industry's first low carbon building services research group. He has also been a key player in the development of the industry's first low carbon building services research group.

6 - Robert Hogg OBE
 Director of Applied Research at Faber Maunsel, Robert Hogg has been instrumental in the development of the industry's first low carbon building services research group. He has also been a key player in the development of the industry's first low carbon building services research group.

5 - David Rice
 Director of Applied Research at Faber Maunsel, David Rice has been instrumental in the development of the industry's first low carbon building services research group. He has also been a key player in the development of the industry's first low carbon building services research group.

4 - Lindy Hill of Clockwork
 Director of Applied Research at Faber Maunsel, Lindy Hill has been instrumental in the development of the industry's first low carbon building services research group. He has also been a key player in the development of the industry's first low carbon building services research group.

3 - Adrian Beckett
 Director of Applied Research at Faber Maunsel, Adrian Beckett has been instrumental in the development of the industry's first low carbon building services research group. He has also been a key player in the development of the industry's first low carbon building services research group.

2 - Professor Neil Blain
 Director of Applied Research at Faber Maunsel, Professor Neil Blain has been instrumental in the development of the industry's first low carbon building services research group. He has also been a key player in the development of the industry's first low carbon building services research group.

1 - Ant Wilson
 Director of Applied Research at Faber Maunsel, Ant Wilson has been instrumental in the development of the industry's first low carbon building services research group. He has also been a key player in the development of the industry's first low carbon building services research group.

OUTSIDE LOOKING IN
 How can we best manage the risks of climate change? This is the question that is driving the industry's first low carbon building services research group.

Result of the survey
 The survey was conducted by H&V News and Faber Maunsel. It was the first time that the industry has been asked to vote for its most influential figures.

All votes
 The survey was conducted by H&V News and Faber Maunsel. It was the first time that the industry has been asked to vote for its most influential figures.

How to participate
 The survey was conducted by H&V News and Faber Maunsel. It was the first time that the industry has been asked to vote for its most influential figures.

More about H&V
 The survey was conducted by H&V News and Faber Maunsel. It was the first time that the industry has been asked to vote for its most influential figures.

Ant Tops Most Influential List

25 June 2008 | Author: Paul Collins

Faber Maunsel's Ant Wilson has been named the UK's journal Heating and Ventilation (H&V) News.

Already a well known and much respected figure within building services, who have influence on the legislation



A statement from H&V probably the industry applied research group promoting low

The award is the second awarded the prestigious Services Engineers) f

Ant said: "To be considered and chief executives real surprise.

"However, the honours have all worked very

ACE, CIBSE and IMechE Awards



With CIBSE in Hong Kong in 2009



**Presentations for
HK IE - BSD
ASHRAE - HKC
CIBSE - HKB
PolyU - BSE**



Targetzero - All Five Reports



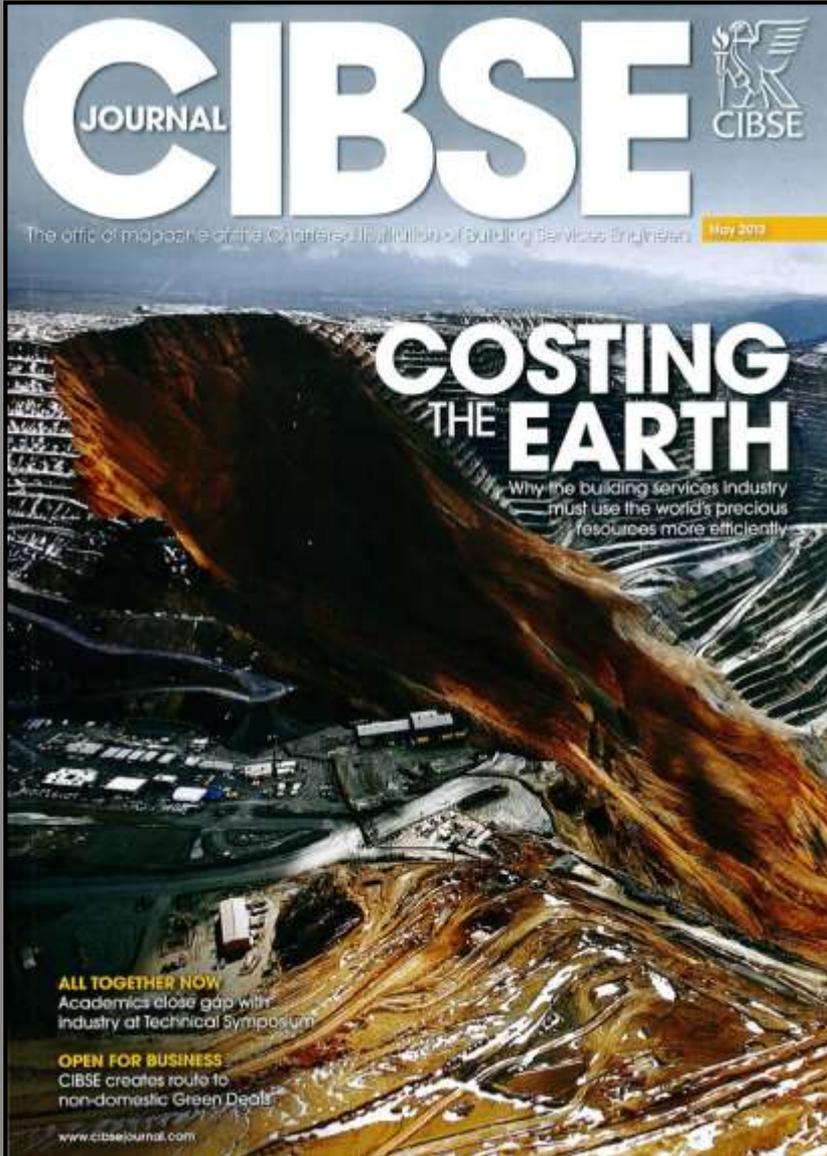
TARGET ZERO
www.targetzero.info



AECOM Fellows 2011



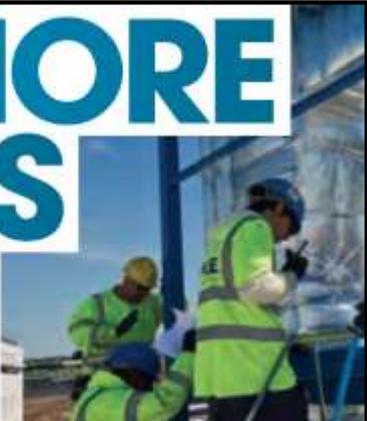
Doing More With Less – CJ May 2013



DOING MORE WITH LESS

There is a huge opportunity to use resources more efficiently in the building services industry. A groundbreaking initiative led by WRAP and CIBSE will look at how

Building services represent around 35% of the capital cost of a typical city office building and 40-50% of lifecycle expenditure over a 30-year period. Aecom estimates that building services represent 25-12% of the total embodied carbon of a typical building, with highly serviced areas such as trading floors and



“Doing More With Less” How Sustainable Is Our Design?



Ant Wilson
Director/AECOM Fellow
Building Engineering

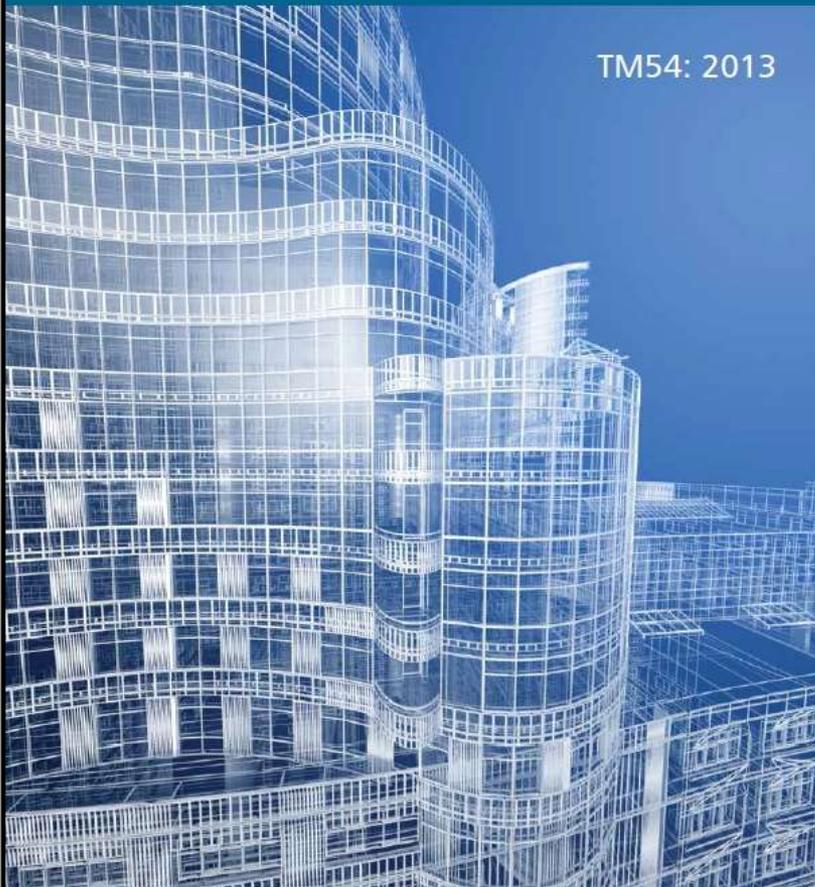
AECOM

27th October 2014



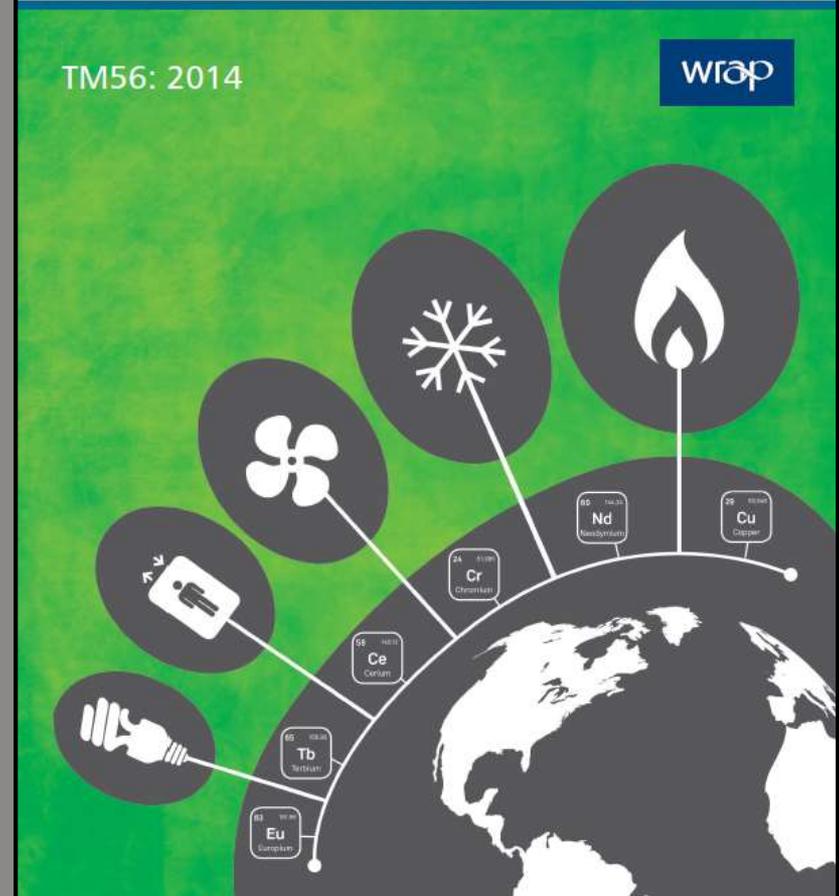
CIBSE TM54 & TM56

Evaluating operational energy performance of buildings at the design stage



TM54: 2013

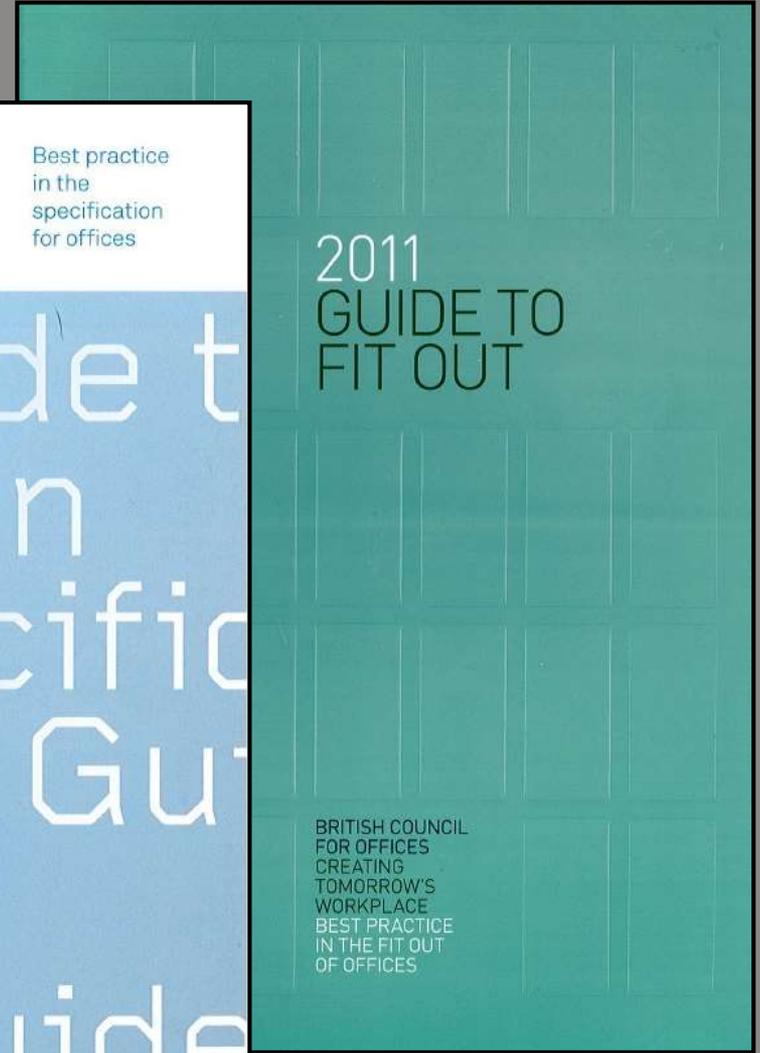
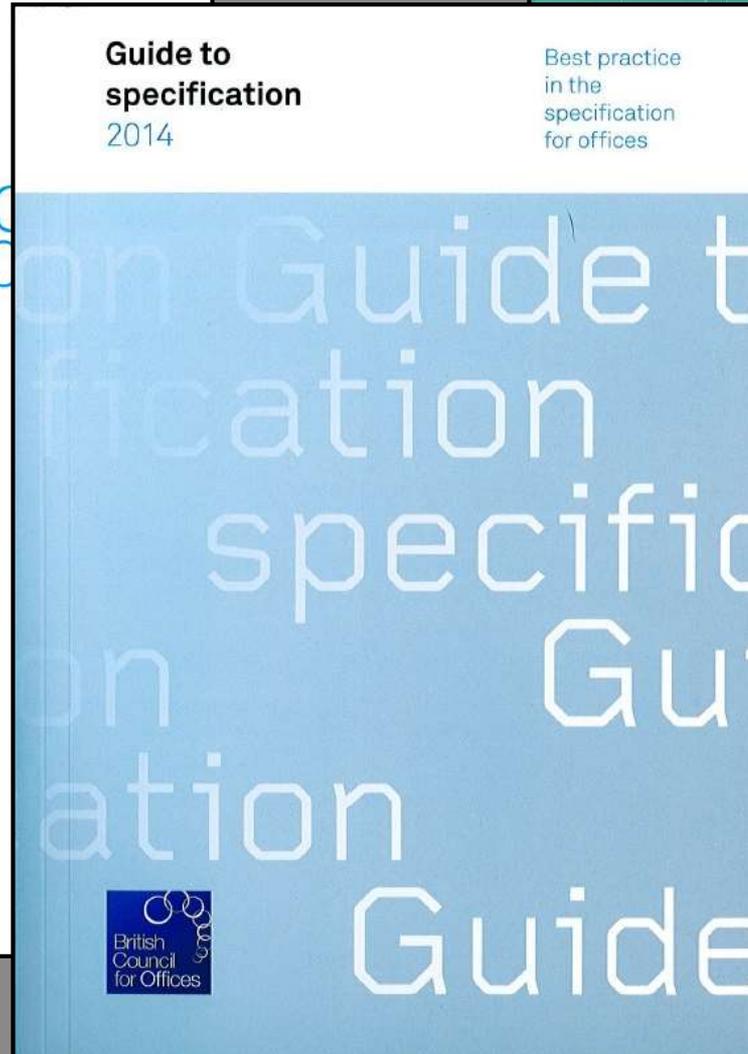
Resource efficiency of building services



TM56: 2014



BCO Guides 2009, 2011 & 2014



Qatar Green Building Conference

مؤتمر قطر
للمباني الخضراء
٢٠١٥ - الرؤية



Qatar Green
Building Conference
2015 - The Vision

Certificate of Participation

Awarded to

Ant Wilson

For Participating in

Qatar Green Building Conference 2015 – The Vision

Together, let's build a sustainable tomorrow

Sessions & Workshops are approved by GBCI for Continuing education hours for LEED professional credentials

Mansour Al Shama'i
Director
Qatar Green Building Council



QATAR GREEN
BUILDING COUNCIL

Member of World Green Building Council



Nottingham Zero Carbon Lab (GSK)



Zero Carbon Lab at Nottingham



Renewable Project of the Year – Commercial/Non-Residential

WINNER AECOM – GlaxoSmithKline's carbon-neutral laboratory for sustainable chemistry, University of Nottingham

The building sets a new higher benchmark for renewable design in laboratories. It is the first zero carbon laboratory in the UK and is believed to be the first chemistry lab to achieve combined BREEAM

Outstanding and LEED Platinum accreditation.

Renewable energy is generated by photovoltaic (PV) cells, a biofuel combined heat and power unit and biofuel boiler. The power and heat exported by these are sufficient to offset the carbon embodied in the construction of the building.

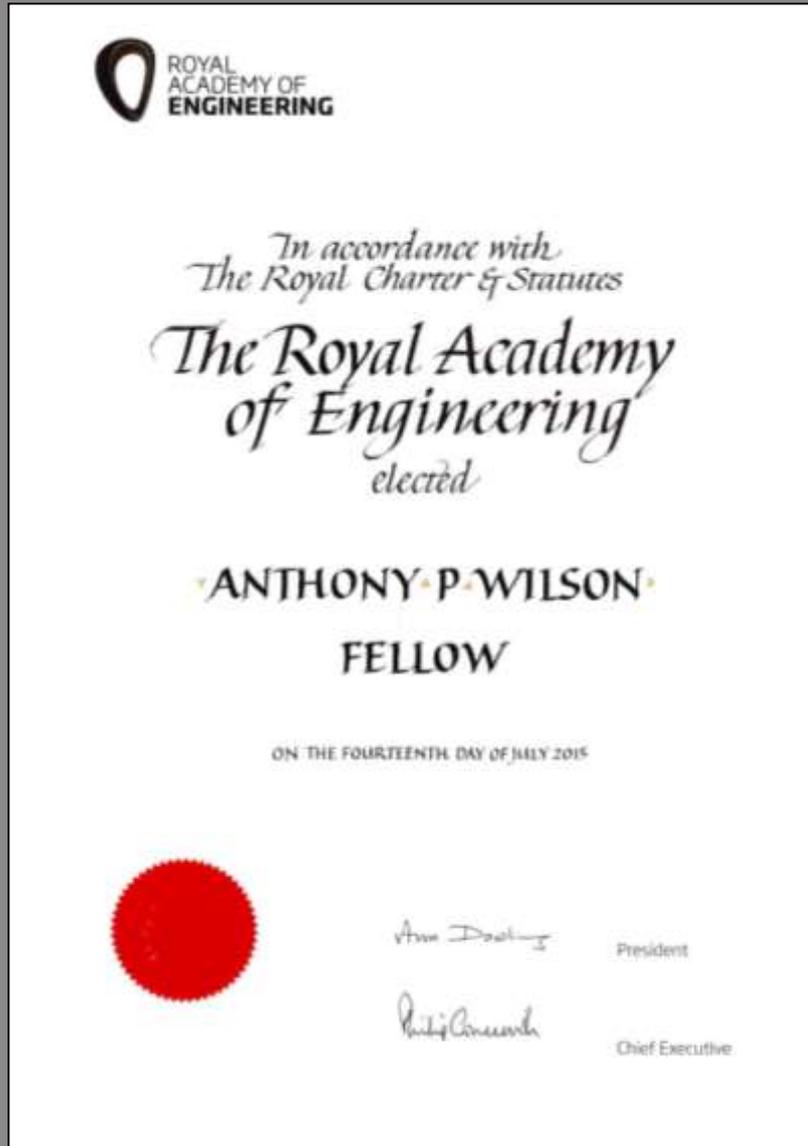
The PV is incorporated into the roof structure as well as the rooflights into the building's winter garden to allow light in while still generating power.

A biofuel CHP is used to provide heat and power with minimal carbon emissions. Additional heat is provided by a biofuel boiler, with the target of all heat generation being low-carbon. LTHW connections are provided to adjacent buildings to both maximise operation of the CHP and share the benefits of its low-carbon heat.

A biofuel CHP is used to provide heat and power with minimal carbon emissions



Royal Academy of Engineering



Press for the MBE was Amazing

'Mr Building Services' made an MBE in New Year Honours

Ant Wilson rewarded for more than 30 years' service to the industry

The man memorably described as 'the most famous person in building services' [by former CIBSE President George Adams] has been made an MBE in the New Year's Honours List.

Ant Wilson, director of sustainability and advanced design at Aecom, has been rewarded for services to building and engineering.

A CIBSE Fellow and Silver Medallist, Wilson has been a key figure in the sector for more than three decades. He has contributed extensively to the institution's work in building modelling, façade engineering, lighting, carbon reduction and energy certification. He was an adviser to the government on Building Regulations for many years, and was awarded Fellowship of the Royal Academy of Engineering in 2015.

Wilson was a member of CIBSE Council from 2003-2009 and served on the CIBSE Carbon Task Force. He was also a founding member of the Society of Façade Engineering, is a Fellow of the Society of Light and Lighting, and currently serves on the CIBSE Certification Advisory Group and on the CIBSE Knowledge Programme sub-committee.

A former winner of the ACE Engineering Ambassadors award and the Institute of Mechanical Engineers award for promotion of construction and building services, Wilson has

also served his local church in Dunstable for more than 30 years.

'CIBSE offers its warmest congratulations to Ant Wilson, who has made outstanding contributions to the engineering industry, and has been an exemplary voluntary contributor to CIBSE and wider society for more than 30 years,' said CIBSE President John Field.

'This latest honour is a richly deserved recognition of the impact he has had on a vital industry for the UK economy and society as a whole, and the difference he has made through tirelessly giving his time and energy to ensure that it continuously improves.'



MBE for Ant Wilson

Ant Wilson, director for sustainability and advanced design at multi-disciplinary consultancy AECOM, and perhaps one of the best-known figures in the building-services industry, has been awarded an MBE in the New Year's Honours List. He has worked for many years promoting and advancing engineering and sustainability. This includes being a STEMNET ambassador since 2002, which sees him making regular presentations in schools to promote STEM (science, technology,



A Big Thank You to BSRIA



NEWS

BSRIA Council member, Ant Wilson awarded MBE

BSRIA council member, Ant Wilson, Director – Sustainability & Advanced Design – Building Engineering at AECOM, was awarded an MBE in the New Year's Honours' List.

Ant Wilson is recognised as one of the UK's most influential building service engineers and works tirelessly in the promotion and advancement of Engineering and Sustainability. This includes becoming a STEMNET Ambassador (2002 – present) which sees him undertaking regular presentations in schools to promote STEM (science, technology, engineering and maths) subjects and in particular engineering as a viable long term career option, changing the perception of the built environment engineering from the traditional construction industry and aligning it to the reduction of both energy consumption and carbon usage.

In addition, Ant has been a member of the Building Services Research and Information (BSRIA) governance council since 2001, providing industry insight that allows BSRIA to take a leading position in the development and implementation of best practise for the industry.

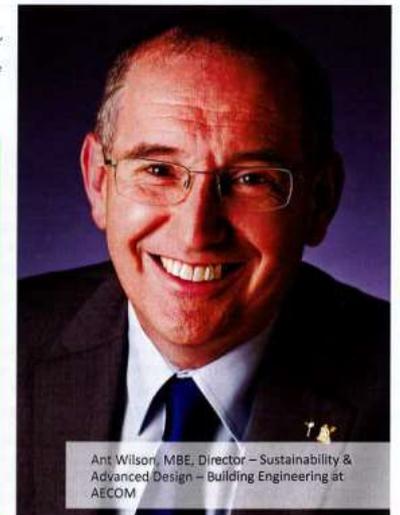
He has, as well as contributing to BSRIA and his work with STEMNET, worked with similar organisations within the engineering industry, receiving an unprecedented level of industry recognition for his contribution and these include: Fellowships of both the Royal Academy of Engineering and the Chartered Institute of Building Service Engineers (CIBSE). He was the first winner of ACE Engineering Ambassadors award in 2008 and awarded a CIBSE silver medal in 2007 for his contribution. In 2010 he was awarded the Institute of Mechanical Engineers award for promotion of construction and building services.

Source: BSRIA

Google's new £600m HQ in London

Lendlease is set to scoop a £600m deal to build Google's new HQ in London. Bids were submitted in November 2016, with Mace, Multiplex and Sir Robert McAlpine also tabling bids. The construction value for the project is £400m for the shell and £200m for the fit out. Currently Google are based in multiple sites in London, the new building will allow for all the staff to be brought together under one roof.

Source: Construction News



Ant Wilson, MBE, Director – Sustainability & Advanced Design – Building Engineering at AECOM

MBE Investiture at Buckingham Palace

Elizabeth R

Elizabeth the Second, by the Grace of God of the United Kingdom of Great Britain and Northern Ireland and of Her other Realms and Territories Queen, Head of the Commonwealth, Defender of the Faith and Sovereign of the Most Excellent Order of the British Empire, to Our trusty and well beloved *Anthony Peter Wilson Esquire*

Greeting

Whereas We have thought fit to nominate and appoint you to be an Ordinary Member of the Civil Division of Our said Most Excellent Order of the British Empire

We do by these presents grant unto you the Dignity of an Ordinary Member of Our said Order and hereby authorise you to have hold and enjoy the said Dignity and Rank of an Ordinary Member of Our aforesaid Order together with all and singular the privileges therunto belonging or appertaining

Given at Our Court at Saint James's under Our Sign Manual and the Seal of Our said Order this Thirty-first day of December 2016 in the Sixty-fifth year of Our Reign

By the Sovereign's Command

Philip

Grand Master

Grant of the Dignity of an Ordinary Member of the Civil Division of the Order of the British Empire to Anthony Peter Wilson, Esq.



BESA Gold Award at H&Vnews Awards 2017



Sponsored by **BESA**
BUILDING ENGINEERING SERVICES ASSOCIATION

BESA Gold Award

WINNER Ant Wilson MBE



It is hard to think of anyone who has done more to promote building and environmental engineering to future generations

The recipient of this year's H&V News Gold Award, sponsored by BESA and given for exceptional contribution to the industry, was once described as "the most famous person in building services" by former CIBSE president George Adams.

Ant Wilson is possibly the closest thing we have to a 'national treasure' in the sector and his selfless contribution to enhancing the world of building and engineering was recognised by an even higher authority than H&V News – when he was made an MBE in the Queen's 2017 New Year's Honours for services to building and engineering.

A graduate in Building Environmental Engineering from the University of Bath, Mr Wilson joined Oscar Faber as a software engineer in 1979 and rose to the ranks to become a director of the main group company when it became Faber Maunsell in 2001. Today the company is part of AECOM – one of the largest engineering and building modelling, façade engineering, lighting, carbon reduction and energy certification. He was an advisor to the government on the Building Regulations for many years, and was awarded Fellowship of the Royal Academy of Engineering in 2015.

He was a founding member of the Society of Façade Engineering; is a Fellow of the Society of Light and Lighting; and has worked closely with the Building Engineering Services Association (BESA) as an expert speaker, particularly on the Building Regulations.

In his career he has been recognised with awards from the Association of Consulting Engineers and the Institution of Mechanical Engineers. He was also named by H&V News in 2008 as "the most influential person in building services".

However, as well as being an outstanding engineer, Mr Wilson believes that what we do should contribute to creating a better society. He



Presentations and Innovation

Built Environment: Innovations, Trends and Opportunities

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12th June 2018

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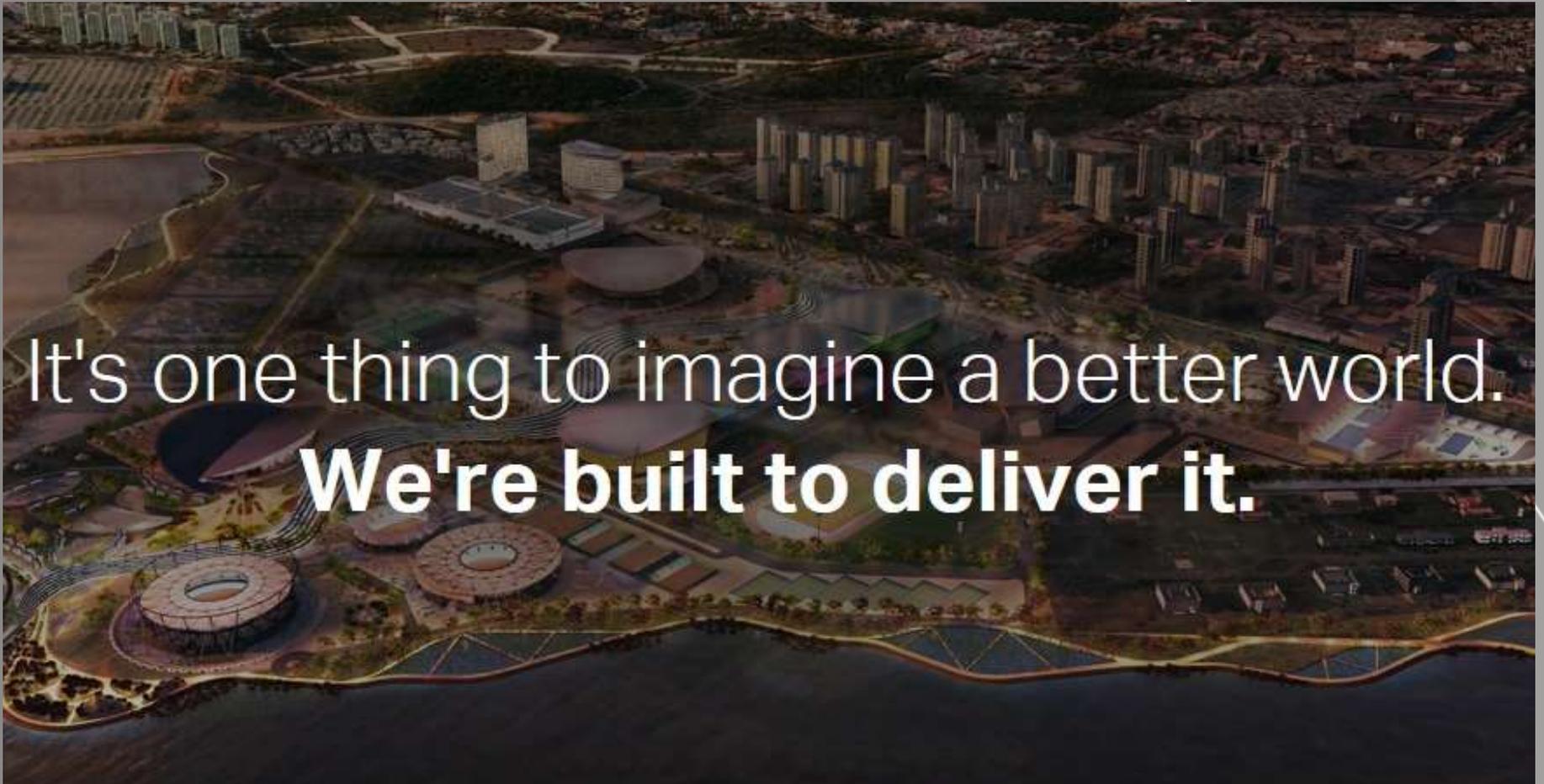
AECOM Working With Rinnai

Ant Wilson MBE, FEng, CEng, FCIBSE, FEI, FSFE & MSL
Director - AECOM Fellow
Building Engineering EMEA
AECOM UK

Family Still Support Me



THANK YOU FOR LISTENING



It's one thing to imagine a better world.
We're built to deliver it.

AECOM

Built to deliver a better world

6th December 2018

Future Thinking With Daikin