

Workplace architecture and design

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Features in this issue

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Project reports

The Edge, Amsterdam
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Workplace architecture & design supplement

contents

projects

4 Industry news and comment

10 Could this be the world's smartest workplace?

The multi-award-winning The Edge in Amsterdam proves it is possible to create a world-class intelligent office building that's truly green, looks fantastic, and helps people to work smarter as Ray Philpott discovers.

19 A tale of two transformed office buildings

Major internal and external renovations of two very different office buildings were driven by a desire to provide environments that workers will enjoy, flexible rentable workspace and collaborative communities for businesses. Jess Unwin finds out more.

26 Office life... but not as we know it

Converting a landmark 1970s building into a central London HQ is one thing, but designing it to deliver radical new ways of working takes the challenge to a whole new level. Ray Philpott reports.

features

14 The business case for occupant wellbeing

John Spicer, technical sales manager for Armstrong Ceilings, discusses the market drivers for a new focus on how building design and construction impacts on the health, wellbeing and productivity of occupants.

17 Bike shelters don't need to be a bore

Andrew Murray, managing director of Autopa, says that providing cycle parking is essential to achieve sustainability aims for modern commercial and office developments, but it doesn't have to mean visually unappealing structures.



23 Artistic design solutions to practical workspace challenges

John Sulzmann, founder and director of Artworks Solutions, explains how architects and designers can make the most aesthetic capital from acoustic art, glass manifestation and digital wallpaper, and what they should look for when selecting these options for a project.

30 Personal space

Forget what you think you know about office storage solutions because things are changing to meet the new needs of workers, writes Helen Owen, director of new business workplace furniture designers, Bisley.

33 Including the new WOW factor in workplace design

Professor Alan Hedge, a leading ergonomics expert and consultant with office furniture manufacturer Humanscale, explains how workplace design that encompasses new ways of working is essential for worker well-being.

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From the Editor



The way we work is undergoing something of a revolution, as businesses and organisations embrace new opportunities and approaches made possible by mobile and web technology.

Now we can 'set up shop' almost anywhere, working flexibly even in shared and social spaces once considered totally unsuitable for work, like coffee shops, terraces and even staircases. The conventional concept of the office as a series of fixed, cellular rooms where people sit and carry out tasks is fast becoming outmoded.

This, our first Workplace architecture and design supplement, captures the changes in workspace design and focuses on how architects and designers are creating buildings and spaces that meet the demands of this exciting, evolving environment.

For example regular ADF contributor Jess Unwin reveals how one architectural practice is transforming two rather different 'old school' suburban office blocks into landmark commercial buildings. Turning our attention to Amsterdam, we take a good look over The Edge, the world's greenest office building and the hi-tech home of a radically new vision for the workplace.

Our third building project feature focuses on Sea Containers House, a 1970s concrete office on London's South Bank relaunched with a dramatic internal redesign inspired by public exhibition spaces.

We also have thought-provoking commentaries from Alan Yates of BRE Global, who highlights the vital role BREEAM accreditation plays in shaping modern office buildings, and architect Alireza Ravanshad arguing we need to be designing more combined working and living spaces to suit modern lifestyles.

Elsewhere, experts offer advice and research on workplace furniture, ceilings, glass manifestation and digital wall art, plus acoustic and personal storage solutions.

We think you'll find it an informative, interesting read.

Ray Philpott



On the cover...

The multi-award-winning The Edge in Amsterdam.

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(For more information, see page 10)

Good design means catering for specific needs

Designers should avoid the “one-size-fits-all” approach and concentrate on individual needs if they want to enhance wellbeing in the workplace.

So said Elina Grigoriou of London-based firm Grigoriou Interiors at the UK’s newest architecture-focused event Vision London last month.

She identified six ‘wellness criteria’ – elegance, balance, symmetry, biophilia, harmony and stimulation – which can help designers to tailor workspace designs to the users’ specific needs.

Grigoriou also described an assessment method used to help clients understand what designing for well-being means which encompasses four environmental factors and how they affect different types of users.

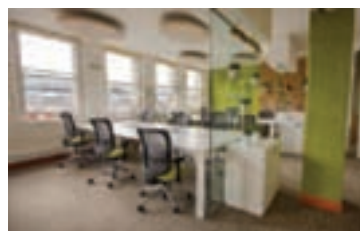
She said: “As well as physical, aesthetic and design delivery aspects it also looks at operational factors – how do you

know what’s working and what isn’t.”

The interior design expert also spoke about established interior design methodologies such as the fact that “objects with sharp edges can be used to enhance alertness and focus.” Grigoriou also highlighted the design issue of the “cathedral effect” – small rooms with high ceilings – which can increase stress for office workers.

When determining the type of entrance area, she said clients and architects “had to decide between a large entrance, which could confuse some, or a ‘softer’ entrance where areas were gradually revealed.”

Grigoriou Interiors shares the growing view that good quality design has a major impact on workplace productivity. Research published by Carnegie-Mellon University 2008 covering 15 individual case studies showed that that improved



indoor air quality in offices increased productivity by up to 11 per cent, while access to daylight increased productivity by up to 15 per cent.

According to Grigoriou, evidence showed that people who work in environments with a high wellbeing factor “tend to demonstrate greater flexibility and creativity, have higher levels of engagement, are healthier and have fewer sick days, respond better to difficult feedback and are happier and more positive.”

‘People who work in environments with a high well-being factor tend to demonstrate greater flexibility and creativity’

The cutting Edge of smart workplace design, revealed



Speaking at Vision London, the architect of what’s thought to be the world’s smartest office building, Amsterdam’s The Edge, explained why the project offered a glimpse of future workspaces.

Founder of PLP Architecture Ron Bakker shed light on how technology plays a huge part in creating a flexible working space with relatively few desks, but maximum efficiency. He told the audience the building worked as an ‘organism’, harnessing smart technology to provide environments which continually change to individual users’ requirements, helping energy savings of

30 per cent on energy consumed by Dutch offices.

“We worked out that only 25 per cent of people actually need a desk,” explained Bakker. “The one desk for one person idea disregards the fact that all people are different. A lot of people tend to spend their day talking on the phone, or are mainly using email.”

The Edge, which managed a 98.4 per cent BREEAM Outstanding score, is the Amsterdam HQ for global professional services firm Deloitte, an innovator in flexible working. The building accommodates 2,500 staff but has only 1000 desks and just a quarter of the building is traditional office workspace. Occupants control their immediate workspace using a smartphone app.

The award-winning project also boasts smart features, such as Ethernet-powered LED lighting, which tailor its

functions to users’ work patterns. “The building knows when individuals are going to be there and organises their environment for that day,” said Bakker.

The Edge’s design allows for a variety of workspaces to harness productivity, with open-plan areas and designated quiet areas around a vast daylight atrium. Bakker commented: “The number-one rule in energy-friendly building design is that sunlight is bad, daylight is good.”

The non-traditional way occupants are using spaces may prompt architects to rethink how they design workspaces, he said: “The atrium will become more important as a work area as it is where people meet. Maybe in the future it will be of greater focus.” In addition a noisy balcony has defied the architects’ expectations by proving to be one of the most popular working and meeting areas.

Client Deloitte is already noticing the benefits; Bakker said the number of job applications the firm received has doubled in a year. He explained, “The client now feels that The Edge is part of its team.” (See more on page 10).

From home to office, fast

Architect Alireza Ravanshad is the creator of Dandi Space, a whole new architectural approach to combining work and living space through smarter design. Here, he makes the case for challenging the traditional spatial divide between working life and home life.

‘Self-employment and working from home are on the rise so architects have to respond with intelligent solutions, even if that means reassessing traditional assumptions of commercial and residential real estate’

Architect Alireza Ravanshad, creator of Dandi Space



One of the things that most excites me about the world of architecture is that it is constantly evolving.

Creativity and passion refuse to be halted, and as a result, visionaries around the world create buildings and spaces that push boundaries, question assumptions and force architects to reconsider how they work.

However, in today's increasingly urban and overcrowded environments, architecture needs to evolve to meet the needs of modern city dwellers. London's recent mayoral elections are evidence of this, being heavily focused on plans to enable the city to grow sustainably.

Of course, one person cannot hope to service the demands of a city with millions of inhabitants. So, the architect must break it down and focus on an individual issue that needs attention.

For me, this was the need for architects to design spaces that are better suited to cater for contemporary ways of working. In years gone by the home and the office were kept as two very separate entities. As a result, each was designed with a single function in mind, which means most homes are ill-equipped to serve as a workspace and vice versa.

This is no longer the case. Self-employment and working from home are on the rise so architects have to respond with intelligent solutions, even if that means reassessing traditional assumptions of commercial and residential real estate.

This shift prompted me to start considering ways to seamlessly combine working and living spaces while, importantly, retaining the individual characteristics of both a home and an office.

One way to create functional, attractive properties that can be used as

both a home and an office would be to simply expand the surface area of the building. However, in overcrowded, overpopulated cities it is simply not logistically feasible or economical to do this, and designers and planning authorities now have a responsibility to manage space and budgets more carefully than they might have in the past.

These kinds of obstacles force one to think more creatively. In this context this meant thinking how to design a functional working environment within a home while ensuring that it is as space-efficient as possible. I worked out that this could be done in a space as small as 30 m² in total – and as a result the Dandi Space was born.

Adaptive approach

It is essential to provide an adaptive environment that caters for tenants' changing requirements throughout the day, so we introduced modular technology and interactive products that allow a bedroom to be transformed into a kitchen/living room and then into an office.

Allowing occupants to pull out or fold away the furniture that they need means that they have complete flexibility over what kind of atmosphere they set. For instance, a desk can be folded out from the wall when necessary, but when the working day ends the user can literally 'fold away' their professional life and transform the area from an office into a home, pulling out a bar and an ottoman to settle in for a comfortable evening.

The approach has required a departure from everything I and my lead architect Eva Siskinova previously understood about architecture. Abandoning well-



tested techniques can feel unnatural and it's unsurprising that people are often reluctant to do so, but sometimes altering an approach can lead to some revolutionary developments.

It is essential to understand the motivations for change. In this case, why do people want to work from home? What do they need to be able to work flexibly? Once you have a clear idea of what you're tackling, you are able to mould the development to provide as answers. For example, many people want to work from home to avoid the costs of renting an office space. Therefore, the solution is to ensure that the properties are affordable.

It's also important to be mindful of working practices; those working in more creative industries need open space, so make sure that the working area is not restricted to just a desk.

The solution that was arrived at in Dandi Space was to develop the technology to allow the bed to be raised to the ceiling, where it then becomes a light fixture and frees up the floor space below.

Ultimately, we need to continually develop new, innovative solutions to meet changing workspace demands, and architects are applying their expertise to providing those solutions.



'We wanted to deliver a scheme that played to the strengths of this period building and Dragonfly was completely on board with that vision. The quality of the fit-out is evident'

Lee Treanor, head of development at Bruntwood

REDEVELOPMENT

Dragonfly redevelops 97-year-old Manchester workspace for the 21st century

Commercial contractor Dragonfly has completed the total refurbishment of one of Manchester's most iconic workspaces.

The company carried out the extensive makeover of 5 New York Street, a four-storey Grade II listed building dating back to 1909 and located close to Piccadilly Gardens in Manchester city centre.

Dragonfly worked closely with owners Bruntwood to create a range of high-end office suites while retaining the character of the building and many of its original features.

Lee Treanor, head of development at Bruntwood, said: "We wanted to deliver a scheme that played to the strengths of this period building and Dragonfly was completely on board with that vision. The quality of the fit-out is evident."

Dragonfly completed the refurbishment of reception, common areas and

staircases and carried out major structural works to form a new lift shaft and install new lift cars and mechanisms.

The contractor was introduced to one of the building's new tenants, British Engineering Services, and created a bespoke office space for them.

Simon Daffy, co-director at Dragonfly, explained: "We worked with British Engineering Services to develop the client scheme all the way from initial design to finishes and furniture.

"The design required detailed structural and space utilisation and the incorporation of a mezzanine structure within the existing floor plate, which was particularly challenging due to access restrictions."

Some of the steel work required for the mezzanine was up to 5.5 metres long and Dragonfly organised a road closure and crane lift to load the steelwork. Originally planned to be carried out over

two days, the four flatbed crane lift was completed in just one owing to careful planning and a mammoth effort from the 20-strong site team.

Martine Coleman from British Engineering Services, who project-managed the fit-out, commented: "This was completely new territory for our business – moving out of a 'typical' office space into a custom-built environment. Dragonfly's support was second to none. No request was too difficult for them and they provided great assistance to me and everyone associated with the move."

Other Dragonfly projects include the Pullman Hotel in Liverpool and Manchester's Central Library and Town Hall redevelopment, which scooped a RIBA North West Award.

The company was also appointed as principal contractor for Neo, an £8m collaborative workspace in Manchester city centre.

Giving architects the tools to keep sustainability on track

Alan Yates, technical director, sustainability at BRE Global looks at how the BREEAM assessment method can assist architects in optimising building design, while keeping their clients happy too.



The commercial property sector is a fiercely competitive and fast-changing environment where clients have a keen eye on budget constraints as well

as seeking maximum return, BREEAM has offered architects the opportunity to substantially add value to projects by providing a set of guiding principles towards achieving a sustainable design and build. From the original building conception in any construction project, the design team including project managers, architects, engineering professionals, surveyors and cost consultants, forms an important and influential stakeholder group. However, they are seldom seen as being central players in instigating the key strategic decisions on sustainability that are so vital in driving enhancements in sustainable design.

This role falls to the funders, developers and, in some cases, the building's occupiers where they are known. Architects are often involved at an earlier stage than other design consultant, playing a vital role in initiating discussion, exploring options, presenting cases and implementing decisions on the detail, but not on determining the fundamentals of the scheme that all too frequently restrict the ability of the design team to innovate in the interests of higher performance.

For example, when Camden Council planned its new council offices together with state-of-the-art public leisure and community facilities at Five Pancras Square in the heart of London's King's Cross, it placed sustainability at the very heart of the project at pre-design stage.

As Councillor Theo Blackwell, Camden's cabinet member for finance and technology policy put it: "We had a clear plan from the outset. Our work with the architects took on board the council's main sustainability priority to focus on reducing energy spend, and cut CO₂ emissions by 27 per cent by 2017."

Consistent delivery on the sustainability criteria throughout the Camden project was assisted immensely by the inclusion of a BREEAM Accredited Professional within the team who helped ensure that all commitments made at architectural and design stage were being implemented throughout the construction phase.

'The process begins with a framework that can guide an architect's thinking through issues at the appropriate time'

In both the commercial and residential property markets, developers and designers must understand the benefits to their clients from reduced operating costs, better corporate image and, most importantly, increased occupant well-being. These costs are by far the largest for any tenant and are key to the promotion of more sustainable solutions. In more sustainable buildings the range of environmental and social impacts will have been considered, alongside the economic ones in order to maximise opportunities for achieving real benefits while keeping costs under control.

The BREEAM certification mark is the end of a process that begins with the setting up of a framework that can guide an architect's thinking through issues at the

appropriate time, and allow them to explain and justify their proposals.

The assessment method can also provide a structure around which the design team, clients and other stakeholders can discuss, make decisions, specify and monitor performance – effectively a process of keeping an eye on the broader holistic objectives whilst considering the detail as the design evolves and the building's constructed.

Yes, for architects the certification offers a simple label to show how credible the design is. But it can be much more. It also provides an overarching tool guiding the design process and ensuring timely actions and decisions are taken.

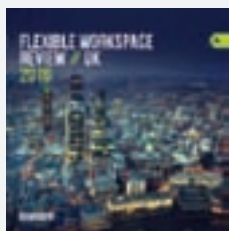
It allows tracking of performance across the life cycle to assist in understanding the performance gap. Such feedback, all too often lacking at present, is key to improving the in-use performance of our newly constructed or refurbished buildings.

High-profile, sustainable designs raise the profile of design team members, and future clients requiring more sustainable solutions will often look for evidence of past experience and success.

There is growing awareness of the need to reduce the performance gap and architects will increasingly be required to demonstrate how buildings perform in practice. This will increase the importance of credible schemes which can demonstrate this performance to a relatively uninformed audience.

A more holistic approach to design means the likelihood of smoother running projects and greater client confidence. Involvement in such projects, especially high profile ones, can significantly boost the chances of future work.

UK flexible workspace demand reaches record levels



UK demand for offices providing flexible workspace has increased by 11 per cent, according to a study carried out by workspace specialist Instant.

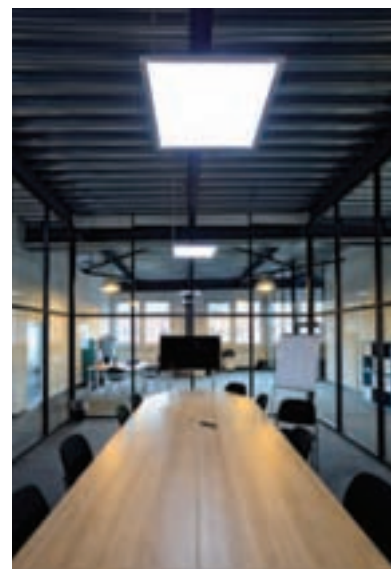
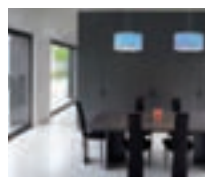
The Flexible Workspace Review revealed that the market has grown to cover 3,290 centres in 2015/16, including “co-worker specific” centres. Alongside the growth in flexible workspaces, enquiries for conventional workspaces were also up at 15 per cent, the report found.

London, which saw a 16 per cent increase, holds a third of the whole UK market. Growth in demand for suburban locations was ten times that for inner London however, at 22.9 per cent. Tim Rodber, CEO of The Instant Group, commented: “There is still high demand in traditionally popular areas such as King’s Cross, Euston, London Bridge, and Oxford Circus but operators are struggling to acquire the right floor plates at competitive rates that would facilitate increased supply.”

A 39 per cent growth in demand was recorded across the regions, with the highest number of enquiries in Brighton (66 per cent), followed by Bristol (51 per cent) and Birmingham (46 per cent). Manchester had the lowest demand at 20 per cent.

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Could this be the world's smartest workplace?

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The multi-award-winning The Edge in Amsterdam proves it is possible to create a world-class intelligent office building that's truly green, looks fantastic and helps people to work smarter. Ray Philpott reports.

Imagine an office more energy efficient and sustainable than just about any other in the world – a smart building that directly interacts with its users through a mobile app. Flexible workspaces enhance personal efficiency and creativity rather than 'chaining' occupants to specific desks and space is always used in the most energy-efficient way possible.

That would be a building of the future, surely? Actually, it's already here, and it's called The Edge. A substantial, gleaming steel and glass addition to Amsterdam's business district with superb transport links, it opened for business last year with forward-looking professional services giant Deloitte as its primary long-term tenant.

Designed for developer OVG Real Estate by leading British practice PLP Architecture, The Edge has been hailed as the greenest building in the world, rated BREEAM Outstanding with the highest sustainability score ever awarded – 98.4 per cent. It's picked up a number of international environmental

and design awards, including best new office building in the BREEAM Awards 2016.

OVG worked closely with Deloitte, who were looking for a green office building with attractive, socially interactive, flexible workspaces. In response PLP designed a highly energy-efficient, sustainable landmark building that embraced Deloitte's workplace philosophy. Its sophisticated, interactive building management system (BMS) monitors and controls how the building is used as well as its energy consumption.

"Deloitte wanted to bring together all of its Amsterdam employees in a building specifically designed to make them feel part of the larger organisation," explains PLP Founding Partner Ron Bakker.

"The real heart of this project is providing flexible office space, so there are no fixed office desks – not even for the CEO. Deloitte recognises that different groups of people have different ways of working and communicating so a flexible



'The Edge generates a substantial amount of the energy it uses, and it uses 70 per cent less than a typical contemporary Dutch office building'

© Dirk Verwoerd

design was needed to reflect that. Research by Deloitte has shown only 25 per cent of an office workforce needs to be sitting at a desk at one time – the other 75 per cent are doing something else."

Sustainability with measurable savings was also a major driver, says Bakker: "OVG and Deloitte wanted this building to be as sustainable as possible. Every decision to invest in sustainability needed to deliver a return within 10 years."

Design vision

The Edge is a U-shaped building constructed around a huge, central, north-facing atrium and is adjacent to a motorway, a bicycle route and various public transport connections. At 15 storeys it is the maximum possible height for its location near Schiphol Airport.

"The atrium generates the architecture and the massing of the building, and captures what the building is all about," explains Bakker. "It was on the table from the word go as an important part of Deloitte's vision. It enables building users to look out onto the outside world but equally the outside world can also see in.

"It's the hub that all the other elements are related to. Everybody operates in or around it and they can look across it or down and see each other quite easily. Being the location of the lift lobbies and reception it's a major circulation area as well as a casual meeting space. Additionally, the atrium helps mediate the noise and pollution from the nearby motorway."

With a minimal steel frame construction, daylight from the north floods the space. In fact, some two thirds of the building

benefits from this cool, mostly sun-free light, dramatically reducing solar gain. The roof has low-e roof glazing with solar controls but, surprisingly, the curtain wall glazing does not have solar-blocking characteristics.

With spans up to 40 m long, the atrium roof sits on relatively slender columns. This lightweight construction is possible because the roof is supported by the building on three sides and bolstered by two 'bridges' suspended from the roof on the sixth and ninth floors giving lateral stability and dealing with wind loading.

Other facades are exposed to more direct sunlight. The east and west facades are made from solid, punched load-bearing concrete slab, clad in aluminium with low-e glazing recessed 20 cm into the walls to increase shading. A similar approach applies to the south facade, but the vertical cladding comprises photovoltaic (PV) panels, providing shading for windows and creating a striped look from a distance.

They provide enough electricity to power all the laptops and telephones and up to 40 electric car charging points in the underground car park. When combined with the building's extensive rooftop PVs and a remote PV network on University of Amsterdam buildings nearby, The Edge generates a substantial amount of the energy it uses, and it uses 70 per cent less electricity than a typical contemporary Dutch office building.

Internal variety

PLP was responsible for the interiors of the public spaces, and materials for the reception and atrium areas including the stairs, and worked closely with Fokkema & Partners

‘Through a phone app, occupants can control temperature, humidity and lighting to enhance their local environment, and the building can even be asked to preset working conditions to people’s known preferences’



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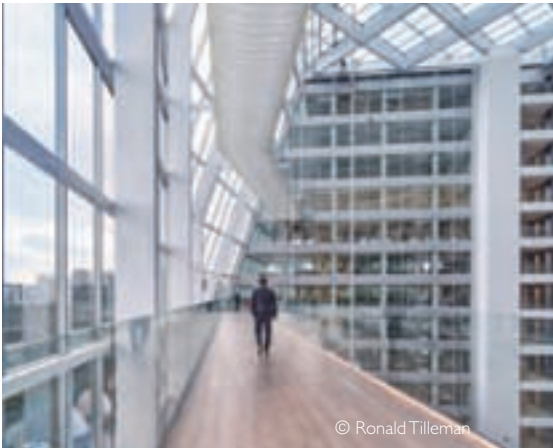
Architecten who designed the interior finishes on the other floors.

Bakker describes how the interior design ethos supports the client’s workplace ethos: “The wide variety of spaces reflects Deloitte’s approach to work and the fact that people like to sit in different spaces for different tasks. For example, there are coffee and breakout areas everywhere – making up a quarter of all workspace.” There are also formal meeting rooms, with glass cabins to offer greater privacy.

He continues: “There’s an indoor terrace extending from

the restaurant and this in addition to the atrium floor space can be used as casual work space. Only the receptionists and facilities management staff have fixed locations and only the toilet blocks, stairwells and car parking areas do not get natural light.

One unexpected surprise has been usage of a ‘deck’ area known as ‘the cabriolet’, sitting exposed, close to the atrium’s facade on top of a four-floor section containing offices and the restaurant (pictured left). Bakker explains: “We doubted people would want to use it because it has no ceiling, gets a



© Ronald Tilleman

downdraft in winter and technically speaking the light is substandard – yet it has proven to be one of the most popular work areas.”

World-class sustainability

The Edge’s ventilation and heating system exploits the local district’s natural aquifer beneath the building, using the water’s consistent 13°C heat to regulate the building’s temperature in summer and winter with minimal energy use, enhancing its sustainability credentials still further.

Water is pumped round a network of tubes within thermal ceilings on each floor, the water being relatively warm or relatively cool in relation to the air temperature, depending on the time of year.

Fresh air is drawn in and pushed into ceiling spaces and warmed or cooled by the pipes and mechanically circulated through the ceiling systems, then ‘leaked’ into the atrium to maintain a comfortable temperature, before being drawn back into the plant room at the top of the atrium. Rainwater is harvested and used to water the landscaped areas and gardens and flush the building’s toilets.

Externally, an attractive landscaped terrace sits between the building frontage and the motorway, forming part of a wildlife corridor. As well as its continuous path of carefully selected vegetation attracting bees and other beneficial insects, there are discretely located bird and bat boxes.

The Edge’s ‘workspace reservation’ system, linked to the BMS, also plays a crucial energy-saving role, a fact acknowledged by Andre Droge from DGMR, the project’s BREEAM Assessor (BREEAM-NL and BREAM International). He explains: “People book workspace in advance through the smartphone app. The BMS then offers them an optimum area in terms of both the task and energy usage.

“For example if it’s hot the system might suggest a workspace in a cooler north-facing area. This makes it possible to use some floors very efficiently; in some cases you don’t need use them at all, saving a lot of cooling and heating.”

Interactions between people and the building are carried



© Ronald Tilleman

out via ethernet-powered LED ‘connected lighting’ units, linked via wi-fi and each possessing their own IP address. They communicate with the building through sensors that measure movement, location of people, lighting, CO₂ levels, temperature and humidity.

Through the customised phone app, occupants control some of these elements – temperature, humidity and lighting – to enhance their local environment. The building can even be asked to preset working conditions to known preferences.

Droge asserts: “In many ways The Edge represents the future of office buildings. It has sustainability designed into its architecture and interiors, and boasts excellent energy performance and impressive ecological features. The flexible workspaces combined with building management and reservations systems allow for maximum efficiency.”

“To succeed in this way, sustainability has to be in the ‘genes’ of the entire team – clients, architects, stakeholders, constructors and suppliers. Everyone has to be ambitious from the outset – just going for the low hanging fruit won’t earn you BREEAM Outstanding.”

He concludes: “Only by stretching to grasp the difficult challenges, as the team behind The Edge did, do you create a world class example of a sustainable building like this.”

The Edge in numbers

- 2,300 work spaces (all businesses)
- 2,600 occupants (Deloitte)
- 1,100 work spaces (Deloitte)
- 25 per cent of space is coffee/breakout
- 40,000 m² gross built area
- 4088 m² of solar panels
- 28,000 sensors fitted
- 50 per cent less energy used than typical modern office block
- 15 storeys high

Project details

Clients: OVG

Project development: OVG

Architect: PLP Architecture

Interior architect: Fokkema & Partners Architecten

Local Architect: OeverZaaijer

Structural Engineer: Van Rossum

BREEAM assessment: Andre Droge, DGMR

MEP consultant: Deerns

Contractor: G&S Bouw

Sustainability consultant: C2N Bouwmanagement

Facade contractor: Rollocate

Glass roof: Brakel Atmos

Main lighting: Philips Power Over Ethernet

The business case for occupant well-being

John Spicer, technical sales manager for Armstrong Ceilings, discusses the market drivers for a new focus on how building design and construction impacts on the health, wellbeing and productivity of occupants.



Good floor-to-ceiling heights can help to improve air quality

The economics of the built environment have become as complex as building design itself. While they provide shelter, act as communication and data terminals, and are centres of healing, education, justice and community, buildings are expensive to build and difficult to maintain effectively over their lifecycle.

Yet the business case for getting it wrong, in terms of a building being designed or performing so badly that it impacts on the health of the people who work in it, is obvious.

Some 90 per cent of a typical business' running costs are staff, so it makes sense to look after the health and well-being of employees; but an influential study by the World Green Building Council into health, well-being and productivity in offices shows the impact of not looking after employees' health and well-being.

For instance, poor mental health costs UK employers £30bn

a year through lost production, recruitment and absence¹. Research carried out in Australia¹ found the aggregate cost to business of ill-health and absenteeism is estimated at more than £3.5bn per year, while presenteeism (not fully functioning at work because of medical conditions) costs over £13bn.

A 2014 study by the British Council of Offices (BCO), *Making the Business Case for Wellbeing*, identified nine key bugbears from office workers about their workplace conditions as being acoustics, lighting, sedentary working, decor, air quality, temperature, social areas, privacy and cleanliness. Main obstacles to wellbeing were identified as follows:

- buildings that were open plan and too noisy
- a lack of natural light, fresh air and colour
- awkward design
- no control over temperature
- no relaxation or meditation areas
- too many people walking past
- office clutter

Factors comprising good indoor environments are indoor air quality, thermal comfort, lighting/daylighting, and noise/acoustics – failures on these can result in physical problems leading to lack of productivity. The repercussions of a poor indoor environment include headaches, breathing disorders, fatigue, discomfort, eye strain, poor concentration, and all contribute to lower productivity.

Seminal research in 2003 into indoor air quality identified 15 studies linking improved ventilation with up to 11 per cent gains in productivity as a result of increased external air rates, dedicated delivery of fresh air to the workstation, and reduced levels of pollutants.

Similarly, in a 2011 lab test¹ which mimicked an office, a range of tasks were carried out with the presence of airborne volatile organic compounds (VOCs). Increasing ventilation from 5 l/s to 20 l/s improved performance by up to eight per cent. High CO₂ levels, which can also occur as a result of poor ventilation, have been found to increase tiredness and negatively impact decision-making.

Good floor-to-ceiling heights not only feel like large spaces but also help to improve air quality, as air combined with good ventilation allows air to mix well and reduces CO₂ build up. Appropriate ceiling materials include low-VOC tiles.



'Poor mental health costs UK employers £30bn a year'

Effective design and appropriate product choices for ceilings can help improve performance and wellbeing

How good design can benefit wellness

In terms of thermal comfort, a 2006 analysis of 24 studies on the relationship between temperature and performance² indicated a 10 per cent reduction in performance at both 30°C and 15°C compared with between 21°C and 23°C, leaving little doubt as to the impact this factor has on office occupants.

Phase change material (PCMs) create thermal storage when their wax inner core melts from a solid to a liquid during the heat of the day and, because heat rises, the ceiling is the perfect place to install PCM ceiling tiles. The process is reset when the PCM is reversed back to a solid at night.

In terms of acoustics, the BCO study rated this aspect as one, if not the major, bugbear and a study by Office Wars 2015 Orangebox found that when noise is over 85 dB all work suffers.

In areas requiring collaboration, ceiling canopies and vertical baffles are appropriate solutions to complement low or high furniture systems within and between areas, while in areas requiring focus, mid-to-high sound absorption and attenuation-rated ceilings to complement moderate to high furniture panels can be considered.

In areas requiring privacy, ceilings rated for high attenuation (to weaken sound waves) and moderate absorption, complemented by high attenuation-rated walls are appropriate.

In terms of visual comfort, a study³ in 2011 investigated the relationship between view quality, daylighting and sick leave of employees in the administration offices of a university campus. Taken together, the two variables explained 6.5 per cent of the variation in sick leave.

Highly light-reflecting ceilings contribute to daylight harvesting and can increase the amount and uniformity of light reflected deeper into the building space. For instance, when the light reflectance of a ceiling is increased from 0.75 to 0.89, daylight levels for spaces four to six metres away from the window are increased by 15-20 per cent. Window glazing can also be reduced by 11 per cent to cut back heating and cooling costs.

This is where we need to make the case for user-centred design, where individual team members consider the project holistically and how people will interact with it.

The integrated approach means that an interior is designed by the whole team at the same time so all options can be considered and improved upon.

¹ Health, Well-being & Productivity in Offices: World Green Building Council.

² Effect of Temperature on Task Performance in Office Environment: William J Fisk, QH Lei & Olli Seppänen.

³ Daylighting-Bias and Biophilia: Quantifying the Impact of Daylighting on Occupant Health: I Elzeyadi.

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Bike shelters don't need to be a bore

Andrew Murray, managing director of Autopa, says that providing cycle parking is essential to achieve sustainability aims for modern commercial and office developments, but that doesn't have to mean visually unappealing structures.

In an attempt to encourage workers to adopt a more sustainable approach to getting to and from work, cycle parking is an essential requirement for all new commercial buildings.

Creating a cycle parking area is a relatively simple task, but with a plethora of different storage options available in the marketplace, there is no reason why the finished area should not be as appealing as the architecture that surrounds it.

Bicycle storage solutions are available in wide range of styles, shapes, sizes, colours and materials, making it easy to create a bicycle parking area that will enhance and compliment the wider architecture of any site.

Stands and racks

The foundation of any good bicycle store is the cycle stand, the most familiar being the Sheffield Cycle Stand. Favoured by both cyclists and regulators alike, this simple yet effective stand has become a stalwart of British urban architecture and can be found in use across the country on a daily basis.

A range of hooped stands available in a variety of different styles and materials have been created due to the Sheffield's popularity. This gives specifiers the flexibility to customise their cycle parking areas to fit in with the wider aesthetics of a project.

A hooped stand is a simple and cost-effective parking option but the stands must be allowed room for bikes to be manoeuvred into place. To be able to secure two bicycles per stand, there needs to be a 800 mm space between them and they must be placed at least 400 mm away from any other obstruction. If you are working on a tight or awkwardly shaped



site, a cycle rack, rather than a collection of cycle stands, might be a better fit.

Cycle racks can be tailored to a site's exact requirements, and are designed to provide high-density cycle parking and exploit every last inch of space available. Semi-vertical or vertical cycle racks are ideal for narrow sites while an alternating-height cycle rack is perfect for sites that need to store a lot of bicycles in a relatively small space.

To gain the maximum number of BREEAM points on a project, you need to create at least two bicycle parking bays per 10 members of staff.

Take cover

Gone are the days of the traditional bike shed with its corrugated roof and rickety frame. Cycle shelters have evolved over the years to meet the ever-changing needs of cyclists and are now available in a wide range of materials and constructions to suit every architectural style. Free-standing, wall-mounted, cantilevered, curved roof, flat roof – there are wide range of options available to specifiers.



'To gain the maximum number of BREEAM points, you need to create at least two bicycle parking bays per 10 members of staff'



The most popular cycle shelters are freestanding structures, with a galvanised mild steel frame and a clear plastic sheet. These materials are ideal for shelters as they are flexible, hardwearing and require little maintenance throughout their life-span; perfect for a busy commercial site.

An open-sided, free-standing shelter is ideal where the cycle storage area is easily visible from the main building. For less visible parking areas, or for longer term cycle storage, a compound or secure shelter may be more appropriate.

Doors, side panels and gates can be added to certain styles of shelter to create a secure and sheltered cycle complex. A range of locking mechanisms can be used to further protect these areas, including padlocks, keypads and proximity card entry systems.

Under the BREEAM assessment method, all cycle parking must be covered overhead, either by a purpose built shelter or an existing building.

Location, location, location

The positioning of the cycle shelter compared to the other amenities on-site is essential to a parking area's success. Bicycles are expensive items and cyclists need to feel confident when leaving them unattended throughout the working day.

Installing the storage facilities as close to the main building as possible, in a prominent and well-lit location, will help assuage any fears that workers may have over using the allocated parking areas.

A further thing to keep in mind when considering location of the bicycle parking area is that to comply with BREEAM regulations it needs to be within 100 m of the building's entrance, and the area needs to be lit outside of daylight hours.

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A tale of two transformed office buildings

Major internal and external renovations of two very different office buildings were driven by a desire to provide environments that workers will enjoy, flexible rentable workspace and collaborative communities for businesses. Jess Unwin finds out more.

Architectural makeovers are breathing new life into two office buildings which were both suffering from dated and tired design, greatly increasing their asset value for the future.

The Charter Building and Thames Tower, situated at the heart of Uxbridge and Reading town centres respectively, have both been stripped back to their structural framework and are now gradually re-emerging with new personalities – both outside and inside.

Orchestrating the transformational changes are architects dn-a. Founding directors Stuart McLarty and Jai Sanghera knew from the outset that the projects presented very different challenges.

With The Charter Building, the team took on a 1980s groundscraper, a ‘fully glazed box’ which was the former UK headquarters of Coca-Cola, whereas the original Thames Tower structure was an 11-storey mini-skyscraper typical of 1970s commercial architecture, with smoked glass, bronze cladding and chamfered corners.

Fundamental targets

Notwithstanding the differing set of challenges the developers, a joint venture between Landid Property and Brockton Capital, gave dn-a the same fundamental targets for both buildings.

Pictured above:
The Charter House
South Entrance

Image courtesy of
Landid Property



The Charter House
North Entrance

Image courtesy of
Landid Property

First, repurpose them in such a way as to increase the net rental space and ensure that the workspace is more flexible and conducive to the modern working practices of the more forward-thinking and demanding tenants.

Next, create contemporary interior designs to attract high-calibre companies by offering them a modern workspace ambience that will in turn help them recruit the best staff. A further target common to both buildings was to introduce technologies and materials to improve the green credentials of the buildings through BREEAM and EPC rating.

Finally, a key goal linking the new design ethos of the two projects is, as McLarty puts it, to produce office buildings that are “trying to reach out to the community and offering something to the surrounding urban environment”.

This last objective is a real contrast to his description of the way The Charter Building used to feel: “Heavy metal railings and brick piers around the perimeter made the building appear fortified and divorced from the rest of the public realm, even though its northern entrance is just metres from Uxbridge town centre and its tube station. It was a bit like a castle with a moat around it.”

Architect d-na’s new design scheme replaces the old narrow northern entrance – guarded by forbidding ‘brick sentinels’ – with an open courtyard approach. There are changes at the building’s southern entrance too (which faces the Uxbridge ring road). McLarty says: “What we started with was a meagre, unfriendly entrance. To address that we’ve added a new five-storey block that brings the building back onto the street with a proper, defined second entrance.”

Although generous glazing to the south exploits impressive views, the overall aim has been to significantly reduce the amount of glass in the building’s new facade, replacing it with a champagne-coloured terracotta cladding system. McLarty says: “The previous mirrored glass box was more at home in a green field business park, not an urban setting like this. The new facade gives the building both gravitas and warmth.”

Inside, d-na is making an even grander design statement by creating an internal ‘street’ that runs at ground floor level for more than 100 m, from the north to south entrance. The changing height of this street – sometimes single-storey, sometimes three-storey and soaring to five storeys at the central atrium – is inspired by the architectural concept of ‘serial vision’.

Jai Sanghera explains further: “Serial vision is synonymous with Italian piazzas – the idea of going through a tall narrow street and then suddenly the space opening up into a piazza. That’s how we see this animated street working at The Charter Building.”

McLarty adds: “You move from intimate spaces to dramatic daylight lightshafts. It’s a rollercoaster journey which is terrific in adding interest and making the building out of the ordinary.”

According to Sanghera, the designers wanted this multi-let building to be a “collaborative environment, because that’s the way modern companies operate. The street is very important in creating a community feel as opposed to dead, echo-filled, empty spaces. The ambience will be more hotel lobby than corporate office and the idea is to spread that the full length of the building.”



‘Re-using the majority of the existing building, rather than demolishing and starting again, is a carbon saving in itself’

Stuart McLarty,
founding director, dn-a

Thames Tower
Station View

Image courtesy of
Landid Property

“Instead of having to create all their meeting rooms and break-out spaces within their own floorspace,” he continues, “tenants can share areas of collaborative working along the street. There will be food and coffee concessions, zones for quiet working and meeting points.”

The central atrium is not only the jewel in the crown of this shared space but is also a legacy of the building’s old design that has helped increase rental space. Sanghera explains: “The centre of the building featured an open, landscaped courtyard that was lifeless and underused.

“The solution was to put an atrium roof over it. In addition, we added a penthouse level floor. Together with the five-storey block at the southern entrance, these added an extra 50 per cent of rentable space.”

Ensuring that space can be broken down into sub-divisible lots of varying sizes, was an important goal for the interior

design, broadening the appeal of the building to different types of tenants.

Green features include coated glazing to help ensure internal temperature control, suspended LED light fittings, an underfloor displacement ventilation system, rooftop photovoltaic panels plus sedum green roofs.

Finally, as McLarty points out, re-using the majority of the existing building, rather than demolishing and starting again, is a carbon saving in itself.

Cladding inspired by Guaranty icon

At Thames Tower, dn-a is not only redressing the building in red terracotta cladding, the designers are also adding four additional floors of rentable space. The concept is to create an iconic structure that is visible from both the redeveloped

‘Architects need to keep a firm focus on the end game, which is to attract the best tenants in order to reinvigorate and inject life back to the building’

Jai Sanghera,
founding director, dn-a

Reading railway station and the main high street.

The cladding choice recognises the fact that Reading’s nearby Victoria Street has some of the finest examples of terracotta building facades but the design is also inspired by the Guaranty Building. Sanghera says: “The Guaranty Building, the first modern skyscraper designed by Louis Sullivan in Buffalo, New York, is of very similar proportions with beautiful filigree terracotta details. Hence the concept for Thames Tower is a 21st century version of that.”

He continues: “We’re giving the tower a base by reinforcing the double height colonnade at street level with a double height reception area. A two-storey window detail at the top balances this and crowns the building.”

The chamfered corners are gone and the use of two types of terracotta tile – one a flat face, the other fluted – will add detail and accentuate the height of the building. The result, says McLarty, should transform Thames Tower from “a pretty ugly duckling into a beautiful swan”.

Internally, Sanghera adds, the quality of the existing ‘beton brut’ concrete frame and floor slabs, have inspired dn-a to strip back the ceilings and choose exposed services and suspended light fittings, which are the interior ‘piece de resistance’ and hence treated as a fifth elevation. On the new floors, the steel structure has been left exposed.

McLarty says: “These changes in the aesthetics – the floors also change in volume and height as you go up through the building – adding to the choice for prospective tenants so it’s not the same boring, ‘vanilla’ space.”

Office space throughout the multi-let Thames Tower is being designed to provide everything that is needed for the modern commercial tenant, including the flexibility to customise everything from the design of the kitchen and communal areas to the occupation density of the workplace.

Collaborative working spaces

In common with The Charter Building there’s an ethos of trying to create a community in the building and collaborative working spaces, as McLarty confirms: “The penthouse area features a roof terrace with views across the Thames Valley and the idea is to create community space up there so that even if you only have some space on lower floors you still have access to the terrace.

“It will be an added amenity, providing more interaction with the building and integration of people, giving occupiers more than ceilings, floors and walls.”

Sustainability features are similar to those at The Charter Building but also include the latest lift control technology that more efficiently manages lift movements, taking you to the floor you want to go to – and only that floor.

Referring to both The Charter Building and Thames Tower, Sanghera says that the driver was to ensure that pleasant environments were created for staff: “People spend an inordinate amount of time working so it’s not just about creating a working environment, they want to enjoy the process too.

He asserts that remembering the client’s motivation is a key part of this: “Architects need to keep a firm focus on the end game, which is to attract the best tenants in order to reinvigorate and inject life back to the building.”

Chris Hiatt, director of Landid Property, gives credence to the success of the approach: “Thames Tower and The Charter Building were attractive to us as they both offered the chance to reinvigorate and reposition tired, out-of-date offices into contemporary workspaces that cater for the modern workforce. Both sites had clear potential.”

He adds: “We sought to create a new sort of working environment; one that promotes well-being among the occupants and allows them to work as easily and efficiently as possible.”

Both buildings are within a short walk of public transport hubs in their respective towns with quick access to central London, are centrally located and close to a range of shops and restaurants.

Hiatt concludes: “Reading and Uxbridge each have growing businesses that need a workspace that match their needs and aspirations.”

Project Details

Main contractor: Bowmer & Kirkland
Sub-contractor: Derrys Building Services
Project manager: Rider Levett Bucknall
Architect/Interior designer: dn-a architects
Quantity surveyor: Rider Levett Bucknall
M&E engineer: Ramboll
Structural engineer: Peter Brett Associates
Light consultant: Light Bureau
Facade consultant: Mike Crossley Consult
Landscape architect: Turkington Martin

Products – Thames Tower

Cladding: James & Taylor, Alphaton range, plain and deep grooved Oxydrot
Double glazing: Arcon, Superneutral A70 Sunbelt
Steel: Shipley Structures
Revolving doors: Boon Edam, Enhanced Crystal Tourniket
Lifts: Schindler, Times Square Range
Interior bamboo panelling: BCL Timber Projects

Products – The Charter Building

Cladding: James & Taylor, Alphaton range, hellgrau (light grey)
Double glazing: Toughened and HST SunGuard Glass Wagner
Steel: Shipley Structures
Revolving doors: GEZE
Lifts: Otis
Interior timber panelling: BCL Timber Projects

Artistic design solutions to practical workspace challenges

John Sulzmann, founder and director of Artworks Solutions, explains how architects and designers can make the most aesthetic capital from acoustic art, glass manifestation and digital wallpaper, and what they should look for when selecting these options for a project.

With a greater emphasis on sustainability, durability and flexibility and an ever-changing workforce, today's interior projects for business premises need to tick a lot of boxes.

Workspaces and commercial interiors were once simplistic and functional, with little room for creativity or embellishment. Today's businesses are looking beyond functional designs and increasingly seeking originality and sustainability from their premises, with an emphasis on health, well-being and creativity for employees.

Sustainability is also a key aspect for architects of contemporary projects primarily through achieving BREEAM accreditation – the world-leading sustainability assessment method.

Far from being a challenge to suppliers of interior products, many have risen to the design challenge of combining functionality, aesthetics and sustainability. In this article we look at three areas: glass manifestations, acoustic art and digital wall coverings.

'Designers have an opportunity to turn something necessary into something stylish, unique and, if required, branded.'

Glass manifestations

Glass manifestation is required by law in order to stop people from walking into the glass, but designers have an opportunity to turn something necessary into something stylish, unique and, if required, branded.

Designs for glass manifestations can have a massive effect on productivity and creativity – a key consideration for creative businesses such as design agencies or publishing companies.

Architects and designers now have a huge opportunity to incorporate beautiful bespoke designs onto glass partitions in office interior projects. They can transmit the branding of a company for a personalised work area, create inspirational or tranquil landscapes for staff breakout areas or provide more opaque manifestations for privacy.

Techniques such as transparency printing, acid etching filming, stained glass filming and one-way 'contravision'



can achieve a wide range of effects to meet any design brief. The use of sustainable, 100 per cent polyester, optically clear film in the printing process is an added benefit.

Acoustic art

A relatively new feature to interior projects, acoustic art panels effectively 'douse' sound and prevent it from travelling too far while bringing aesthetic qualities to a workspace or office. When architects are faced with having to reduce noise levels of particular rooms, the challenge has usually been to come up with solutions that won't compromise other aspects of the brief.

Acoustic art solutions are ideal for this. They can be applied to walls, ceilings, folding walls, free standing screens or even furniture cladding and can be shaped to any desired design. Acoustic-based solutions are only restricted by the creativity of those designing it – placing almost unlimited options at a designer's disposal.

But what makes most acoustic art solutions so appealing to architects is that they're re-useable and can be moved around when needed, adding flexibility to their many benefits.

Acoustic art can range from overhead ceiling baffles (including those with integrated lighting) to wall mounted multipurpose panels, ceilings, folding walls and furniture cladding printed to include artwork or branding, and also incorporating pin boards, dry-wipe surfaces and magnetic display boards. Class A acoustic products have a noise reduction coefficient (NRC) of 0.85, and are comprised of recycled PET core (polyester), as well as being recyclable.

'Creating sustainable workspaces is an investment that will bring great returns by improving the employees' quality of work'

Digital wall coverings

Digital wall coverings are an increasingly popular option in interior projects and are essentially a highly customisable type of wallpaper. Thanks to rapid advancements in digital printing, digital wall coverings ultimately put the beneficiary of the project in complete control of design and the only limitation is the designer's imagination and size of space, rather than choosing from a selection.

Digital wallpaper can be made from a huge array of materials such as acrylic, polyester, concrete, marble and fibreglass.

For corporate environments, digital wall coverings can become the centrepiece for the workspace, reinforcing branding – showcasing achievements and inspirational quotes and images to clients and prospects. In hospitality-based environments, they allow businesses to enhance their premises to create unique environments for their customers, providing talking-points or even an added 'wow' factor to ensure they return.

The latest addition to wall covering options, stretched fabric wall coverings, provide a flexible option which can offer dramatic transformation of any space through a simple seamless

polyester printed solution stretched over stainless steel framing and is a lightweight, sustainable offering.

Well-being

Clearly, businesses need to think beyond functionality and embrace the realms of sustainability, creativity and impact on well-being. Architects have an abundance of creative solutions available to help them design a huge range suitable environments – from busy brainstorming sessions, to quiet zones for getting through tight deadlines and quirky break-out areas to relax in.

For businesses, creating these environments is an investment that will bring great returns by improving the quality of work and output from employees.



Acoustic baffles on the ceiling can be attractive as well as practical



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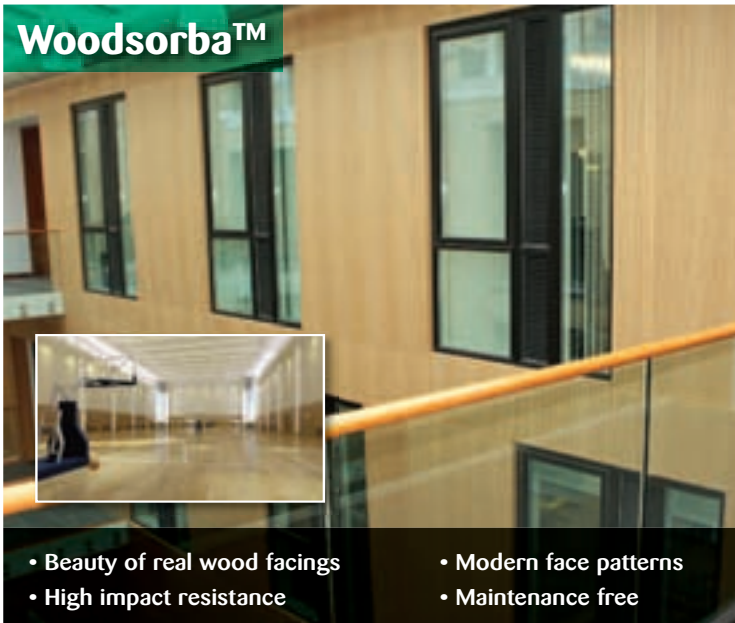
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Office life... but not as we know it

Converting a landmark 1970s building into a central London HQ is one thing, but designing it to deliver radical new ways of working takes the challenge to a whole new level, as Ray Philpott discovers.

Enjoying a prime location next to Blackfriars Bridge on London's South Bank, Sea Containers House was originally designed in the 1970s as a luxury tourist hotel overlooking the Thames.

But the envisaged hotel never materialised. Facing a struggling UK economy, the owners decided to open it as an office block instead.

It was originally constructed as a massive, heavy, concrete and steel grid over 11 floors with only a single circulation core and low floor-to-ceiling heights across much of the structure. It is, perhaps, not an obvious choice for relocating a corporate headquarters with the intention of bringing constituent companies closer together.

But global marketing and advertising agency Ogilvy and Mather Group UK did exactly that after commissioning BDG architecture + design and architects Matheson Whiteley to reinvent the interior.

Having spent 20 years at Canary Wharf, in January the company moved into a ground breaking workplace set in the creative and cultural landscape that includes the Royal Festival Hall, National Theatre, British Film Institute and Tate Modern.

Abandoning the traditional office concept

BDG Matheson Whiteley partnership has created a building designed for today's working life, moving completely away from the traditional 'cellular' office concept. The interior of the floors where the various companies are located have been opened out vertically and horizontally. On each level there's a mixture of working spaces to the east and west sides of the building and centrally, shared public and circulation areas encourage interaction between the businesses and offer informal working.



Stats and facts

- Longest commercial frontage on the Thames
- Net internal area (NIA): 21,000 m² over 11 floors
- 38 per cent of NIA contains workstations
- Holds 2,300 people and 1,700 workstations
- No 'traditional' cellular offices
- 30 per cent head count growth possible without modifying the building

Two newly created top floors contain exciting shared spaces including the Cucumber Terrace bistro, the Sunset Bar, staff canteen, 200-seat amphitheatre and rooftop terrace accommodating 140 people – all with superb views over the river and the capital. Although seamlessly linked together, these areas nevertheless retain a distinctive identity and character.

Artwork installations are located around the building and in certain areas the original concrete interior has been exposed as an attractive finished surface in its own right.

Ultimately, the overall impression the client and design teams have been striving for is to create something that feels more like a large, involving cultural space than an office environment for 2,700 people.

Initial brief

BDG Matheson Whiteley's involvement in the project began in 2013 after winning the design competition held by Ogilvy and Mather. The partnership had capitalised on BDG's office design expertise and proven talent of Matheson Whiteley's architects for creating public exhibition space, including work on the Tate Modern.

The client's fundamental brief was to relocate to a creatively stimulating office space suitable for flexible working. One that would bring its 10 branded companies together in a single building, creating a critical mass while enabling each company to retain a sense of independence, brand and cultures.

'On paper it didn't meet the demands of a modern office, but we argued the building's quirks could be exploited to achieve defined locations for the different brands'

Initially it was purely conceptual with no specified size or location but during the competition it was revealed that the new office would be at Sea Containers House, on a 21-year lease.

"All our concepts and thoughts now had to be applied to that building," explains BDG creative director Colin Macgadie. "It's a fascinating structure compared to the more modern buildings on the market at the time but presented a complex challenge, having been designed as a hotel around a dense structural grid and containing a variety of different environments."

Macgadie adds: "Our evidence-based design showed how a diversity of environment with the right mix of scale and type of space would work, retaining brand identities while enabling greater intermixing between them. At the same time this approach offers flexibility should the organisation contract or expand."

"Using scientifically-based analysis and modelling, we proposed creating many different work and social spaces.



© Gareth Gardner



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© Gareth Gardner

Some for small groups or round-table sessions, others for more informal working like steps, booths, high-quality coffee areas on every floor and breakout areas. Some spaces would be for collaboration, others for more intensive solitary work, and there would be bookable and presentation spaces.

These spaces, combined with the restaurant, bar, 100-seat canteen, grab-and-go facility and coffee shop – all functioning as informal work spaces outside lunchtimes – took 45 per cent of the space. Free moving circulation areas claimed 20 per cent and ultimately, only 38 per cent was allocated desk space.

“We knew this would be a massive cultural change, even for Ogilvy and Mather, but being a creative organisation, they embraced it,” says Macgadie.

Three distinct elements

Owner Archlane had earlier begun modernising and upgrading Sea Containers House to Category A fit-out standard. However, once BDG Matheson Whiteley got the green light, it asked Archlane to halt this activity and deliver the building as 50 per cent shell and core so it could progress its own architecture and designs without having to rip out already completed work.

The refurbishment involves part of the ground floor and all the remaining floors bar three, four and five. Three of BDG Matheson Whiteley’s redesigned floors are used by global media agency MEC and the remainder of the building is occupied by luxury boutique hotel the Mondrian London.

Architecturally, the project consists of three distinct elements. A two storey-high ‘base’ (at levels one and two) that is opened out across a large floor plate. Both floors feature central, shared space with company work areas to the sides plus extra-height glazing offering excellent river views.

The second element, from level six upwards, is a stack of six floors. “From a horizontally organised building we’ve created an environment that’s effectively three vertically connected blocks,” says Macgadie.

“The central tower consists of very open, ‘non-branded’ shared spaces that connect with the various company ‘neighbourhoods’ located in the east and west towers. This makes it easy for people to see and interact with each other.”

The building’s two top floors form the third element, containing the shared staff, hospitality and major catering facilities, amphitheatre and roof terrace – all offering superb city vistas through large windows.

While ventilation and heating systems are mostly mechanical, with much of the plant hidden under the roof terrace, the sophisticated building management system installed by engineers Arup, use of insulation and low-e glazing have earned Sea Containers House BREEAM Excellent status.

Public space

Matheson Whiteley Director Donald Matheson feels the partnership has been pretty successful in projecting Sea Containers House as a large public space.

“When you arrive it does feel like you are in a cultural type of environment, where the architecture defines the spaces, rather than lightweight, gimmicky features,” he says.

Vertical circulation was a big challenge and, in response, the team decided to remove substantial parts of the interior and cut out 12 new openings with staircases.

“We looked at classic examples in the Royal Festival Hall and National Theatre where large staircases have over-sized space around them, forming landmarks that are more than just about getting somewhere. Ours not only improve circulation, but the large ones set against the river view windows physically open up the surrounding ceilings and areas on each floor, bringing in extra light and creating a greater sense of space and scale.”

These have bigger, deeper treads to create a slower pace of circulation and can be places for people to sit, spend time or meet. Elsewhere, smaller more domestic-style stairs provide faster-moving, practical links between the various floors.

Staircases feature fine wire mesh balustrades which, the architects’ own trials have shown, create openness as they are actually less visible over distances than reflective glass panels.

Pointing out another prominent design feature, Matheson says: “Vast amounts of concrete were used in the original dense grid structure in a way that could never happen now. Where practical we’ve left this heritage material exposed, again echoing the exhibition space idea.”

The amphitheatre at the top of the building is a major focal point, too, providing a place for “town hall gatherings,” a facility the client did not have before.

“Essentially, it’s a very large staircase between the top two floors with a view over the Thames,” explains Matheson.

“You can use it to access the canteen and people can sit on it to eat if they want but it also has to work as a proper performance space, for pitches, open meetings or client presentations. Given its function, locating it among the other social spaces seems appropriate.”

Four covered balconies can be found on the upper levels, one of which runs along the the length of floor 12, offering yet more choice of social space.

Rewarding

The Sea Containers House project, largely completed last autumn, has won admirers and has been shortlisted for the 2016 New London Architecture Award for office interiors, due to be announced on 7 July.

While that’s a laudable achievement, both Macgadie and Matheson say the most rewarding aspect has been the client’s responsive, progressive approach.

Summing up Macgadie says: “They really embraced the science and a new, flexible way of working to create a best in class environment that’s really suitable for their business. Irrespective of the architecture, that’s definitely the best thing about the project.”



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Project details

Architects: BDG architecture + design and Matheson Whiteley

Project manager: Bollingbrook

M&E consultants: Arup

Sustainability: Arup

Fire/acoustics: Arup

Main contractor: Structure Tone

Catering: Green & Fortune

Exterior/feature lighting: Jason Bruges Studio

Landscape: Schoenaich Landscape Architects

Steelwork (secondary): Northvale

Feature concrete works: Precise formwork

Partitions and ceilings: PACE

Services: Phoenix



Respecting personal space

Forget what you think you know about office storage solutions because things are changing to meet the new needs of workers, writes Helen Owen, director of new business workplace furniture designers, Bisley.

It is no longer possible to consider office furniture solely in terms of the traditional discrete elements of desk, seating and storage.

A combination of the post-banking crisis economic squeeze, liberating advances in communication technology and a heterogeneous staff mix of Baby Boomers, Gen-X'ers and New Millennials has altered the office landscape forever. Individual and team-working can just as easily be undertaken at occasional furniture in a break-out or catering area as it can be at a traditional workstation or in a meeting room.

What the next generation office requires is a mix of furniture types that can be flexed to suit changing needs, however, even in the digital age we all still have stuff that needs to be stored!

The nature of office storage has changed beyond all recognition. This shift has been driven by two key factors, firstly the shift in emphasis of what needs to be stored and secondly the evolution of working practices to increased flexibility and mobility. While the completely paperless office

has eluded us, there is no doubt that there is less paper filing, matched by the corresponding growth in demand for personal storage provision, often of higher value items – laptops, iPads and cycling helmets.

Culture & technology

Beyond the physicality of the space there are also cultural issues to consider. If we can all work from home – why are organisations still spending huge amounts of money on their real estate?

The truth is actually reassuring; in our increasingly digital world that enables remote access to everything, human contact is becoming more valuable, and the necessity for companies to maintain a sense of belonging for nomadic workers is more critical and challenging.

Design is a major component in achieving this; it has the ability to support and uphold the culture of a business, brand and values, ensuring that the environment is somewhere that



employees and customers want to be. Workers need to feel connected to the space, so while they may no longer have their own allocated desk they do have somewhere to 'store their stuff', alongside workspaces which are appropriate to the task in hand.

The tools required for work today have had a marked effect on the type of storage provided. While not likely to be wholly nomadic, many individuals work in constantly evolving teams, often from more than one office location, and therefore must travel with many communication devices along with chargers, spare batteries etc. When touching down in a new location they need storage provision that enables them to be up and running as quickly as possible.

Here, overall standardisation with the option to personalise is the key to success. Personal lockers equipped with part-portable locks empower staff with the self-selection of available space, as close to their workstation as possible. Card-holders enable them to identify these for their period of tenure. Mail can then be delivered by colleagues or other staff via posting slots provided and interiors can be personalised by moving internal fittings and using magnetic pins to attach pictures.

A quiet revolution

Elsewhere more conventional storage is undergoing a quiet revolution. The perception of storage as a static piece of utility furniture is being challenged with storage becoming the pivotal and dynamic element of the office landscape.

Since the dawn of the open-plan office, storage has been used

as a visual and traffic barrier between groups and departments, however this is now being exploited in ever more enhanced and sophisticated ways. The tops of counter-height storage blocks are now equipped with power-managed tops, so that they can be used as touch-down meeting areas. At a more frivolous level, storage is even being used to support leisure activities such as table football.

Driven by advances in technology, lifestyle changes and a shifting demographic in the workplace (including an ageing workforce), the requirements for office furniture and how we expect it to perform have progressed immeasurably over the last 20 years and we want it work harder for us. We are increasingly seeing powered furniture solutions – bringing a plethora of applications and opportunity to support a modern working environment.

This is an exciting and critical development, addressing many of the workplace issues that face architects, designers and end users. As wonderful as mobile devices are, they often bring with them a regular search for power and if the furniture is electrified then workers can charge at any desk. Power also means the furniture can be lit, with ability to adjust light levels to individual users, to suit their personal preference at any given moment.

Enlightened organisations have understood for a long time that to get the best from their employees, they need to provide an environment that supports the new workplace agenda and creates an environment that is based on comfort, activity, and variety.



“

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Including a new WOW factor in workplace design

Professor Alan Hedge, a leading ergonomics expert and consultant with office furniture manufacturer Humanscale, explains how workplace design that encompasses new ways of working is essential for worker well-being.

Where do you work? When do you work? It may not be as easy to answer these questions as it used to be in the past. With the advancements of technology, workers can now adopt a mobile workstyle and do their jobs from several places or outside of the traditional nine to five, Monday to Friday pattern.

Working at a specific place for a set amount of time is no longer a necessity and this new-found freedom has led to rethinking traditional office workplaces. New ways of working (WOW) have emerged and they are now revolutionising commercial interiors, from general layouts through to the furniture used and the facilities that are provided.

What are new WOW workplaces?

New WOW workplaces tend to feature 'agile working', 'hotelling' and to a lesser degree 'hot-desking' – all referring to the principle that space isn't 'owned' by a single individual and

rather employees are encouraged to utilise space as required to address their specific needs throughout the day.

Companies provide a range of activity-based spaces such as quiet zones, team working areas and breakout spaces. At the same time employees are encouraged to move between locations throughout the day to enjoy a more varied workday and combat the perils of a desk-bound job.

Furniture too needs to be fully flexible and adaptable to suit the needs of each individual worker, whether this includes adjustable chairs, sit-stand tables and intuitive monitor arms or laptop trays.

The downside

Despite the benefits, there is a serious potential downside to new WOW. The freedom handed to employees to work from anywhere can see them working in places in the outside world that do not always provide ergonomic solutions.



'We must address these ergonomic design issues to prevent a generation that will be injured by the improper use of mobile technology'

In traditional office spaces, the Health and Safety Executive provides guidance on the ergonomic design of computer workplaces, including the relevant furniture. But for 'office nomads' working in a variety of places, no such clear-cut guidance exists.

Walk into any coffee shop, airport, library or modern office and you'll see people sitting on poorly designed chairs, hunched over their devices. Their backs are rounded like turtle shells, their necks flexed forwards putting strain on the back muscles, shoulders and neck, restricting free blood flow to the brain. One new disorder has been named as a consequence of sustained and prolonged working with poor posture: 'iPad neck'.

Poor neck postures can also contribute to developing carpal tunnel syndrome – a painful condition of the hand and fingers caused by compression of a major nerve. In the case of 'iPad neck', the median nerve is compressed as it exits the spine at the base of the neck and passes through the shoulders.

Incorporating new WOW into ergonomics

So what do we do to stop this? The answer is that in any new WOW design, any location and its office furniture needs to be designed to facilitate an ergonomic, neutral body posture. To combat the perils of sedentary work, employees should also be encouraged to change their posture frequently throughout the day. Cornell University has developed an ideal work pattern which calls for employees to:

- sit and work in neutral posture for 20 minutes
- stand and work in a neutral posture for eight minutes
- stretch and stroll around for two minutes
- repeat this cycle throughout the working day

To realise the benefits and ensure they are protected, employees need to be trained in ergonomics so that they learn how to maintain good posture. At the same time, ergonomic design strategies must be applied to every place in a building where an employee is likely to interact with technology.

To encourage the adoption of office ergonomics on a wider scale, the newly-established International Well Building Institute has launched the WELL building certification standard which gives credits for good ergonomic design and addresses issues of mental well-being.

WELL is hailed as the world's first building standard to focus exclusively on human health and wellness. It sets performance requirements in seven categories relevant to health in the built environment – air, water, nourishment, light, fitness, comfort and mind. Instead of meeting sustainability standards in building design or construction, it does so from the perspective of the occupant.

Ergonomic strategies are also being integrated into wellness programmes run by HR departments, with organisations recognising that ergonomic designs can reduce physical and mental stress.

While new WOW are here to stay, when these new methods are also combined with good ergonomic designs the result is a healthy and productive workplace for all employees – which also delivers economic benefit to the organisation.

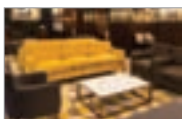
Alan Hedge is a professor in the Department of Design and Environmental Analysis at Cornell University, USA.

Task chair set to revolutionise office seating



Renowned for its pioneering advances in office furniture design, **Boss Design** continued to innovate with the unveiling of **Trinetic** at Clerkenwell Design Week – a unique task chair that incorporates a brand new type of movement to create a superior and completely natural user experience. With tangible ergonomic and commercial benefits, Trinetic will be the benchmark against which future task chairs are compared. Boasting a sophisticated and refined aesthetic, Trinetic is built around an aluminium cradle, which can be finished in a wide array of styles. The product is certified as a task chair against EN 1335 Part 1 and ISO 9241, as well as being accredited with FIRA's 'Ergonomic Excellence' Award.

New Lexe seating collection



A fusion of classic and contemporary design is successfully brought to life in a striking new upholstered seating collection unveiled by **Lyndon Design** at Clerkenwell Design Week. Lexe is a classic piece that is designed to add luxury and panache to both traditional and contemporary interiors throughout hospitality and corporate settings. The slimline Lexe provides designers and specifiers with tremendous scope and choice. The CMHR foam and fibre seat and back cushions provide the durability needed without compromising on style or design. Whilst Lexe features a handcrafted and superior timber frame structure, equal attention has been paid to the external timber leg detail. Top stitch detailing on the back cushions also adds a touch of luxury.

Bring a freshness into the office



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CDUK makes an impact for lawyers



Glacier White Corian® from **CDUK** has been used to create a stunning centrepiece reception desk for international law firm **Loyens and Loeff**. Designed by Louise Coombs at The Jones as part of a refurbishment scheme, the dual purpose desk allows the secretarial team to work in privacy, while still being available to greet and guide visitors. The minimalist styling exudes calm and order, while backlighting adds to the professional and welcoming ambience. The entire front of the counter was clad in 6mm Glacier White Corian® with a feature backlit logo. To achieve the backlighting effect, the Corian® was bonded to an MDF substrate with routing through the MDF removing half the thickness of the Corian®, allowing light to pass through.

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