

# BUILDING ASSET TRANSFORMATION

Decarbonising, Repurposing  
and Regenerating Existing  
Higher Education Buildings

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**BURO HAPPOLD**







# THE AGENDA

## Key Drivers, Challenges and Opportunities



**C**limate, communities, tenants and shareholders have coalesced in recent years to escalate demands to decarbonise, modernise and regenerate existing building assets and portfolios.

Nowhere is this more relevant than in Universities.

The effects of the COVID-19 pandemic are accelerating changes in learning and working practices. Space use is being reimagined with new practices emerging, as students and staff find different ways of studying, researching and working.

Zero Carbon targets are driving upgrades and greater attention on asset operation, with increasing emphasis on embodied carbon and rising construction costs all pointing towards reuse of existing buildings.



### Health and Wellbeing

Improving and evaluating environmental comfort and safety, meeting modern wellbeing and accessibility standards and attracting tenants looking for world class building environments.



### Economic Viability

Assessing the economic viability and developing the business case to refurbish or repurpose stranded or stranding assets, including evaluating and optioneering types and level of intervention, pre or post acquisition.



### New Patterns of Use

Increased use of blended learning, rising demand for informal study and collaboration space and change in office working practice are forcing a reappraisal of space requirements, with many universities already responding with refurbishments.



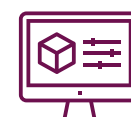
### Placemaking and Social Value

Breathing new life into existing buildings, preserving and celebrating architectural heritage, densifying spaces with infill and in-between spaces, minimising disruption with sensitive interventions and creating vibrant places that support our communities and the fabric of our cities.



### Programme, Cost and Risk

Delivering on time, reducing cost and mitigating risk. This might include dealing with limited existing information, unknown ground conditions, constrained sites and minimising disruption and loss of rental income.



### Operational Performance

Modernising and improving operational performance - including lighting, ventilation, heating and cooling - to reduce running costs, reduce operational carbon emissions, enhance occupant health, wellbeing and productivity and improve asset value.



### Sustainability and Embodied Carbon

Assessing embodied and whole-life carbon of existing buildings and portfolios, developing decarbonisation strategies, reusing existing foundations and structures, improving operational performance and post occupation evaluation, all working to support the Zero Carbon targets declared by many Universities.



### Planning, Heritage and Regulation

Navigating complex heritage requirements, unlocking difficult sites and meeting planning requirements related to fire regulation, building control, safety standards and facade retention.



### Adaptability and Resilience

Building in resilience and flexibility to assets and portfolios, preparing for and accommodating future change, including optimising spatial flexibility and MEP systems flexibility, reducing future maintenance and upgrade costs and improving asset insights to inform future decision making.





# NEW SPACE PARADIGMS



**For some time, many Universities have been using new ways of teaching and learning, with flexible lecture theatres, flipped and blended learning, and in some cases extensive use of remote techniques. The COVID-19 pandemic required an almost instantaneous change from techniques which in many cases had been purely in person to a fully remote range of offers.**

While in some cases this took a significant time to settle down, there is no denying that where this was adopted effectively, the online experience has produced significant benefits. Students can learn at their own pace, revisit material, and in many ways this has democratised learning within a University. Interactive sessions can be moderated to allow less confident students space to speak, and the more talented lecturers can be targeted to increase their exposure to students.

Having said that, over half of students have expressed their dissatisfaction with their university social experience - significantly

more than those who were not happy with their academic experience. The physical environment is a key generator of community integration and a rounded university life. Our previous studies have shown that physical interaction – whether for social or educational reasons – is a key driver of student mental health, and in turn their academic success.

Much has been said about the future (or otherwise) of the lecture theatre; while didactic learning has its limitations and can be an obvious candidate for remote application, there is something about the community of an entire course cohort coming together for a shared experience which can make them feel part of something larger and more significant. Many Universities expect that much of this interaction will take place in different space types – reinforcing the need to flexibility and adaptability as a they will need to accommodate variety of uses, with future space use patterns expected to evolve in future years.

As in other sectors, office-based staff are adopting different working practices, with extensive working from home becoming the norm for many. This has radically changed the space required for them on campus, with reduced desk provision releasing space for more imaginative and

collaborative ways of working – and of course to increase the area available for student-based functions.

Of the existing 22.5 million m2 of buildings in UK universities, more than half is now more than 40 years old. While historic buildings, and many of those from the 1960s, present significant challenges in how space can be reconfigured, there is



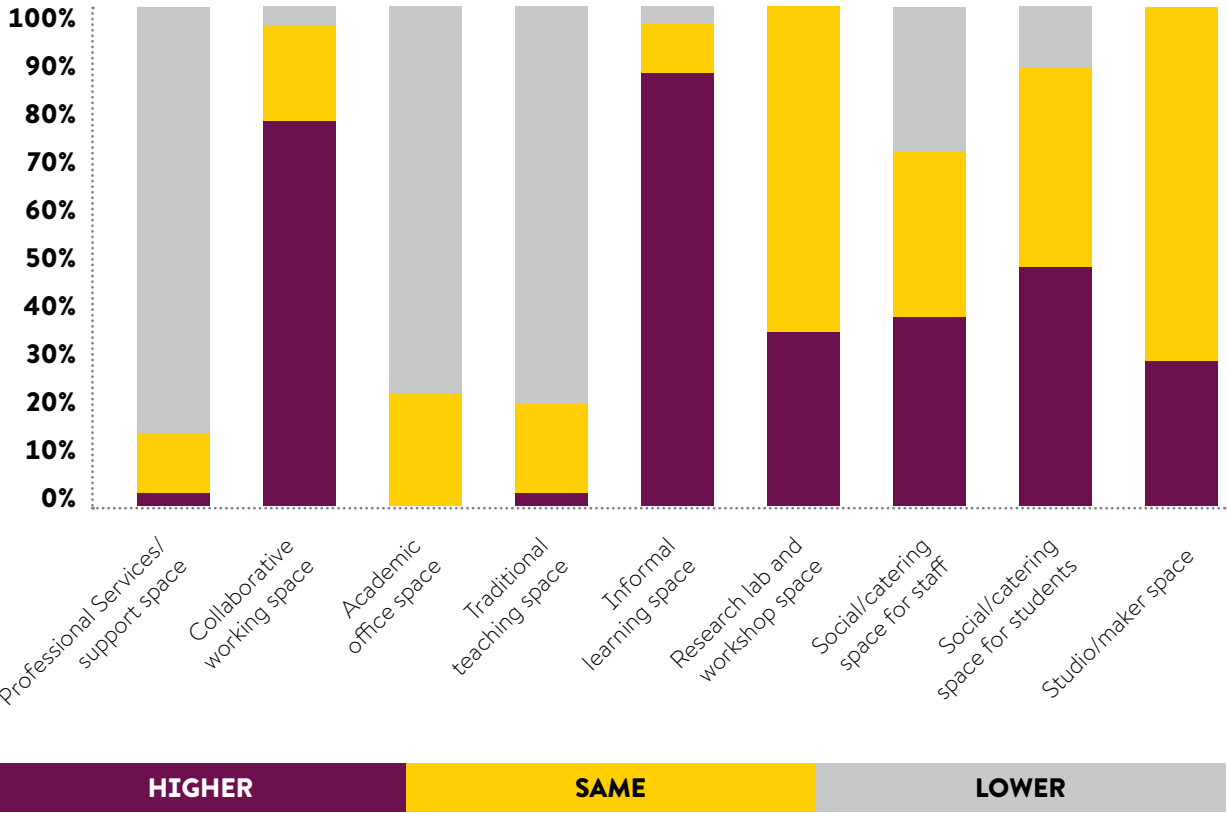
Image: ©Alan Williams Photography

great potential to reinvent the way many of them can be used, with fewer rooms with a fixed function and an increased emphasis on more informal teaching and learning spaces. This shift is confirmed in a survey Buro Happold undertook in conjunction with AUDE, in which over 100 estates professionals highlighted that they were envisaging significant shifts in space use.

This reinventing of space allocation and use has potential to enable universities to increase student numbers while improving their experience without increasing the overall space requirements

across the estate. While some buildings may be irredeemable, our experience enables us to help to unlock difficult spaces and provide 21st century learning and working environments.

Graph illustrating percentage of space change:







# FINANCE - A KEY DRIVER OF REUSE



**The days of UK Universities being purely publicly funded have long gone. Each institution must be financially viable and ensure that sufficient investment can be generated to keep estates up to date.**

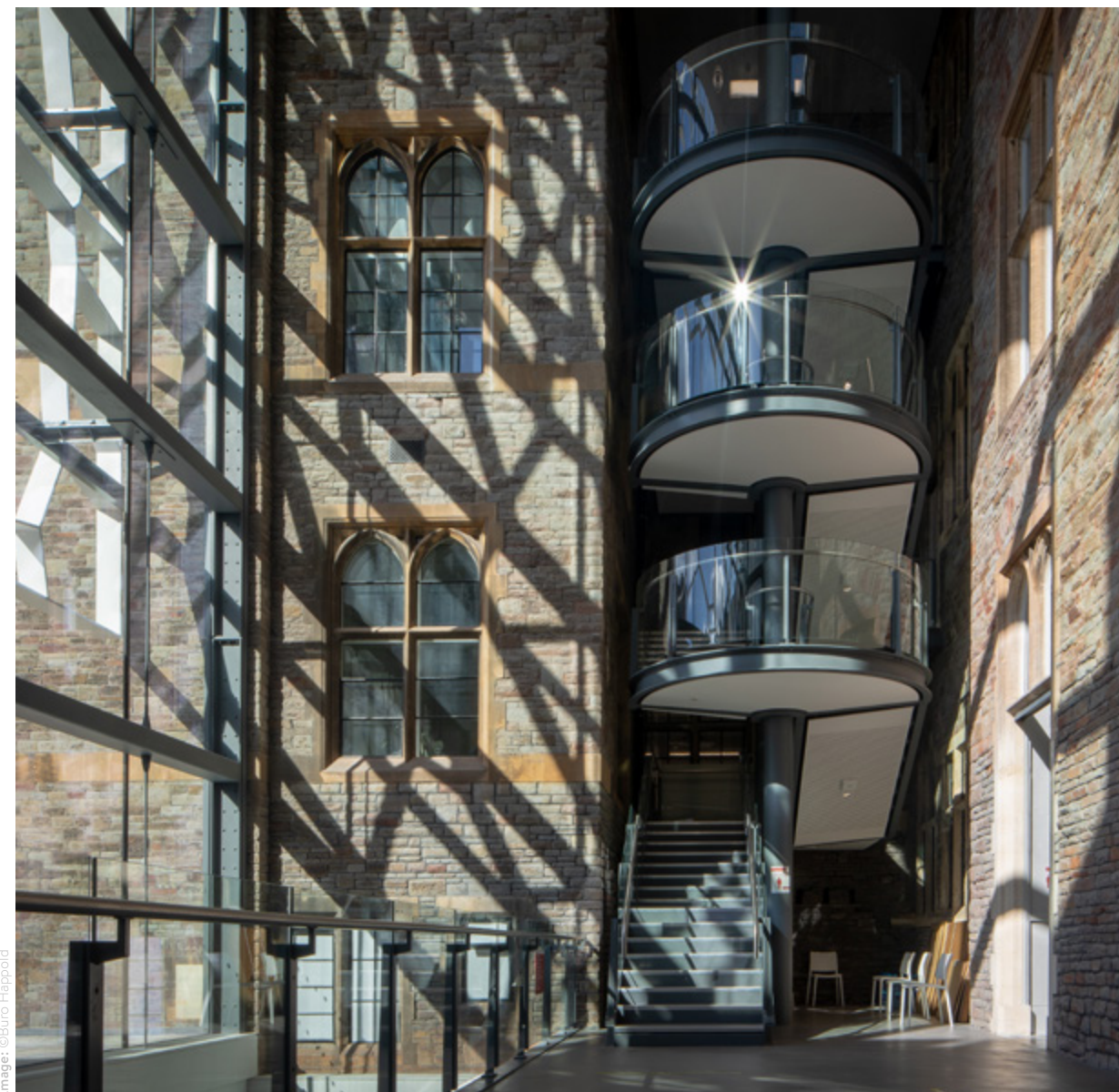
The pandemic has hit the finances of most universities, with the loss of income from accommodation, conferencing and fees from international student and professional development courses playing a particularly large part of this, exceeding £100 million at some institutions.

Tuition fees are continually under review, with rumoured reductions of 10-20% dating from the Augar review, and cuts to arts courses providing additional future cuts in income.

Brexit is also not helping; the government's own figures suggest that while Oxford and Cambridge may benefit from exiting the EU, its effect on other types of university is negative, with research collaborations and student mobility being particularly hard hit. While 65% of Universities paused or cancelled capital development projects during the pandemic, we are seeing signs

of this unlocking; projects are appearing on the horizon, whether in response to new estates strategies, or simply due to pressures which are still in the system. Universities are therefore more financially focused than ever before. Many are looking to expand student numbers to increase their income but will need to ensure that they can provide appropriate facilities of the highest standard to attract students and give them the service for which most of them are incurring significant loans. Reinvention of existing space is an obvious way of delivering increased capacity and improved facilities, but at a lower cost and with less disruption than new build projects.

This is confirmed by our survey of over 100 estates professionals, with many seeing reuse as being a key factor in future developments.







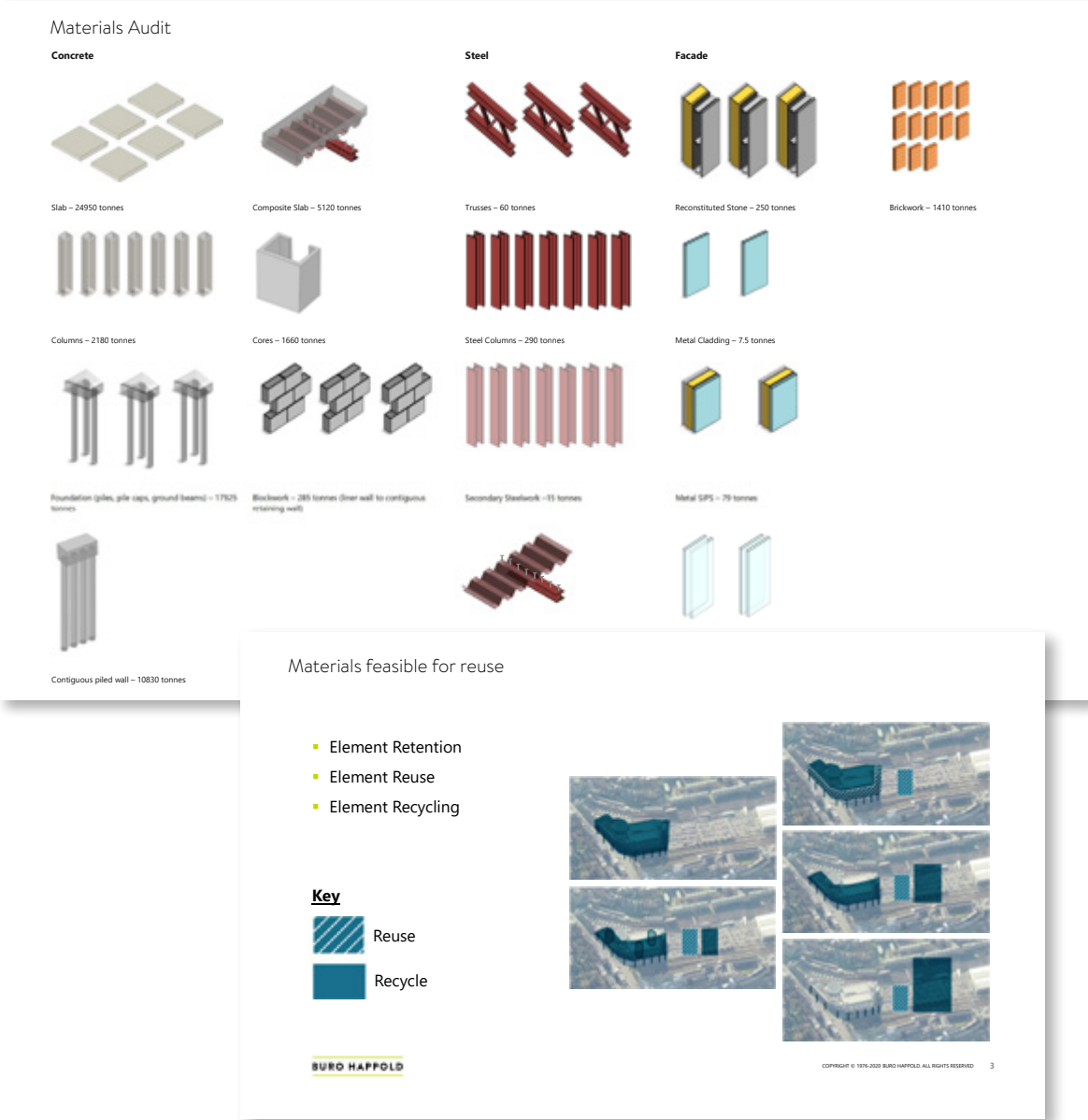
# MOVING TOWARDS ZERO CARBON

## Embodied Carbon

As building performance receives additional focus in support of zero carbon goals, both new and existing buildings are moving towards all electric operation as the grid decarbonises. Embodied carbon is therefore becoming an increasingly important part of the whole life carbon emissions of a building, often exceeding the in use emissions – and rising.

Reusing existing buildings – ranging from the structural frame through to building envelope and internal partitions – can therefore significantly reduce the whole life environmental impact of a project. While the materials from demolition can of course be reused, this is often difficult to achieve in a university context, with limited space to store and process for repurposing.

We have developed a series of tools which look at the effect of specific structural and MEP solutions on embodied carbon as well as performance in use.

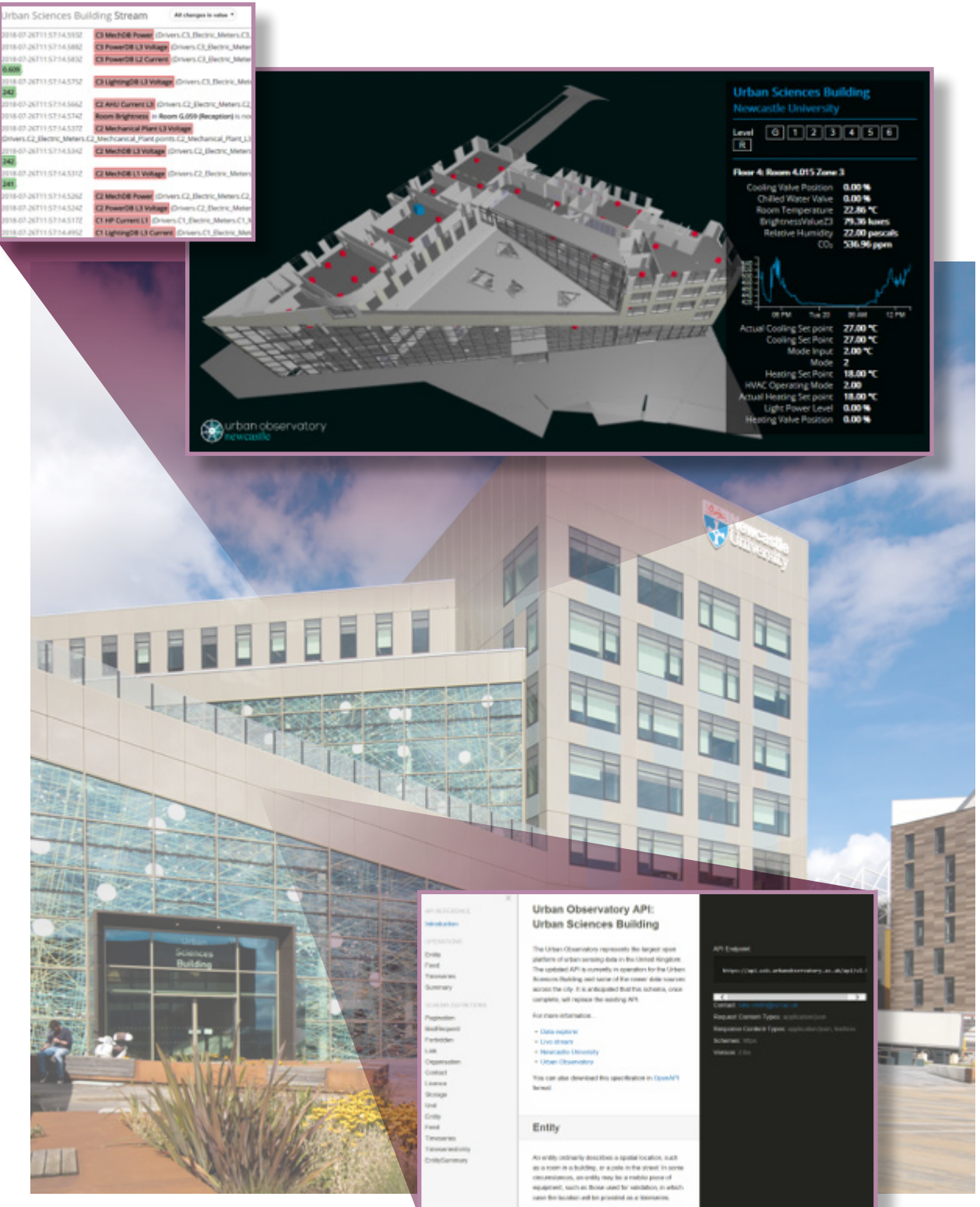


## Carbon in Use

While many existing buildings perform poorly with regard to carbon emissions, there is great potential for this to be reduced. There are many ways to reduce the energy consumption and carbon emissions of existing buildings, including fabric improvements and system upgrades. One key aspect of this is the improvement of the operation of the buildings; given the low utilisation in the sector, avoiding unnecessary wastage of energy when spaces are unoccupied or have few people in them is a critical step in reducing energy consumption.

Smart building systems can be installed in existing buildings to ensure that they respond to use with demand-led systems, rather than the more typical strategy of services remaining on “just in case”.

While most Universities engage proactively with their students and staff, an HEDQF survey from 2019 noted that while 1/3 of students wanted more information on carbon reduction, only 5% of them saw personal behaviour as the key to reducing climate change.







# RIGHTING THE WRONGS



**A**s well as energy and carbon, we must not forget that institutions need to provide facilities that are comfortable and promote health and wellbeing. The HEDQF survey highlighted that environmental performance was top of students' agendas, with over half prioritising good daylighting and winter/summer comfort – above issues such as fit for purpose rooms and good acoustics.

It is well known that many buildings provide poor environments. Summertime overheating has negatively impacted 21% of students' ability to study in University buildings, and an even higher figure (29%) have suffered from buildings being too cold in winter.

Improving building fabric – particularly in buildings from the 1960s which are often draughty and have little insulation – can remedy many of these issues; the simple structural frames which these buildings often have can be refitted relatively simply with new facades as part of an

overall refurbishment, and while storey heights can present challenges in many buildings. While fabric improvements cannot be financially justified by energy savings, the overall benefits in productivity, health and wellbeing, and space use can make renovation projects worthwhile – one example is the Bartlett School of Architecture, where the 1970s facade

presented an inferior impression of the building, providing poor quality internal space with inadequate daylighting. With Hawkins\Brown architects, we completely revamped the building, taking it back to the structural frame which was extended, with new layouts, facades and systems – in effect a new building saving many tonnes of embodied carbon.



Image: ©Jack Hobhouse



Images: ©Tim Crocker(B) / ©Richard Stonehouse(T)

## Bringing it all together

In assessing a building's suitability for reuse, there are many factors which need to be assessed, including;

- How can the building respond to changes of use in the coming decades?
- How can environmental performance be improved?
- What can usefully be retained? What is not functional in modern use? Frame/Facade/Circulation/planning grid/services infrastructure?
- What are the whole life carbon and cost balances between providing a new building and refurbishing the existing?
- Are storey heights adequate for good ventilation, daylight and to accommodate new MEP systems?
- Can the structure be exposed to provide thermal mass where this is useful?
- Can a change of use unlock an opportunity?
- What cost and programme savings can be achieved through refurbishment?

- What elements of the building can be retained? Will they need replacement or alteration in the coming years?
- Is the building a key one for the University? What disruption will new build or refurbishment involve?



Image: ©Nicholas Hare Architects/Alan Williams Photography







# WHAT WE DO

## Key Capabilities, Services and Tools

**B**uro Happold's end-to-end and multi-disciplinary approach to repurposing buildings is founded on technical expertise and a passion for transforming existing buildings and sites into world-class spaces and places.

From site acquisition and assessment, to strategy and brief setting, through implementation, design and delivery to post-occupancy assessment, our advisory, engineering and consulting specialisms help our clients across all project stages, typologies, sectors and levels of intervention.

### Pre-acquisition Sustainability Assessment

Buro Happold can help prospective buyers compare key criteria including air quality, noise, proximity to green space etc and provide a preliminary evaluation of key design interventions impacting on BREEAM, WELL, Passivhaus, Enerphit, operational energy and embodied carbon (e.g. reuse vs new build comparison).

#### Key Services:

- Net zero carbon transition advice
- BREEAM/WELL pre-assessments
- Energy and wellbeing audits
- Portfolio decarbonisation audits
- Circular economy workshops

#### Key Disciplines:

Sustainability MEP Structural Engineering

### Asset Consultancy

Asset Consultancy combines strategy, technology and management techniques, to assist organisations in maximising a building's efficiency while minimising running and operating costs. Engaging in the early stages of a project provides an end-user perspective with emphasis on operational needs, design life, plant operation and control, flexibility, sustainability and the maintainability of assets during the anticipated life of the building.

#### Key Services:

- Dilapidation Advice/Lease Negotiations
- Financial Planning for Capital and Revenue Works
- Condition Surveys and Reports
- Acquisition and Disposal of Property
- Project Design and Management
- Term Contract Development, Procurement and Management
- Contract Administration
- Defect Analysis and Remediation
- O&M Strategies
- Formulating Estate Objectives
- Health and Safety Reviews (Operational and Strategic)
- Maintenance Management
- Preparation of Asset Registers
- Preparation of Maintenance Task and Frequency Schedules

#### Key Disciplines:

Asset Consulting Asset Management







# WHAT WE DO

## Key Capabilities, Services and Tools

### Existing Building Evaluation

When assessing an existing building, we look at both user-centred and client-centred metrics to find the most effective interventions.

Evaluations include user satisfaction surveys, assessing energy use trends and undertaking energy audits to identify design interventions while minimising cost and disruption. We also look at loading assessments and historic structural systems to assess existing capacity and identify potential for reuse, repurposing and extensions.

#### Key Services:

- User satisfaction surveys
- Energy use assessment
- Energy audits
- Loading and existing structural capacity assessments
- Existing fabric re-use assessment
- Loading assessment and capacity checks
- Embodied carbon assessment
- Existing facade assessment
- Accessibility and Neurodiversity Audits

#### Key Disciplines:

- Structural Engineering
- MEP
- Facade Engineering
- Asset Management
- Sustainability
- Fire Engineering
- Acoustic Design
- Wellbeing
- Inclusive Design

### Heritage Advisory

Our Conservation Accredited Engineers (CARE registered) help clients with Historic England and any other associated regulatory requirements and internationally recognised conservation principles for sensitive repair, refurbishment and adaption of listed and conservation area assets, helping our clients unlock complex planning and de-risking their proposal from the outset.

#### Key Services:

- Historic building consultancy
- Detailed assessments of heritage building fabric
- Consultation with heritage bodies and local authorities
- Listed Building and Planning Application assistance
- Conservation strategies
- Strategy development for possible interventions

#### Key Disciplines:

- Structural Engineering
- Facade Engineering







# WHAT WE DO

## Key Capabilities, Services and Tools

### Design for Performance

Helping our clients to achieve low to net zero carbon developments, by improving operational performance and efficiency, designing cost-effective electrification systems and delivering NABERS UK energy ratings, helping our clients increase property value, rental receipts and lease lengths.

#### **Key Services:**

- Performance focused design, including NABERS UK Design for Performance and Passivhaus modelling
- Soft landings and organisational standards
- Control strategies and BMS specification
- Compliance services (ESOS, DEC, CRC)
- Commissioning and independent witnessing

#### **Key Disciplines:**

MEP Sustainability Facade Engineering

### Health, Wellbeing and Productivity

Our data-driven and people-centred approach to designing for health, wellbeing and productivity outcomes helps clients understand and embed these principles in their building: From prioritising natural ventilation, daylighting and stairs over lifts, to understanding how to design for neurodiversity, accessibility and inclusion.

#### **Key Services:**

- Health, wellbeing and productivity business case development
- WELL building standard assessment
- Health impact assessment
- Social value assessment and strategy (also see Social Value Consultancy)
- Health, wellbeing and productivity scoping
- Bespoke framework development and implementation
- Digital design consultancy
- Holistic performance evaluation and reporting

#### **Key Disciplines:**

Inclusive Design Sustainability MEP Acoustic Design



Image: ©Buro Happold





# WHAT WE DO

Key Capabilities, Services and Tools

## Social Value Consultancy

We can manage the social value impact of your project – or even your company - from beginning to end. We undertake stakeholder engagement, strategy, design and assessment to develop credible and robust social value strategies.

Using the power of your capital investment to unlock positive outcomes for all people impacted by the project, including offering community facilities on a permanent or meanwhile basis, directing supply chain spending into high quality local jobs, or a multitude of other socially valuable outcomes.

### Key Services:

- Stakeholder and local community engagement
- Holistic socio-economic assessment
- Design, management and economic strategies to achieve, monitor and report on delivery performance
- Intervention planning, programme and project design and business case
- Planning and approvals stage assessment including EIA, Socioeconomic appraisal, health and equalities impact assessment
- Implementation and procurement advice

### Key Disciplines:

Inclusive Design Sustainability

## Existing Building Optioneering

To help our clients explore and define their project brief, Buro Happold have developed a series of rapid prototyping tools.

These tools allow us to quickly explore a range of options, by altering the metrics and priority weighting by which the options are assessed, a range of possible solutions can be compared.

The rapid assessment of options helps focus the brief so that a small number of specific options can be explored in detail.

### Key Services:

- User Centred Metrics - daylight/noise/quality of environment/fresh air/circulation – taking stairs/optimising layouts/people flow
- Client Centred Metrics - expanding the envelope and maximizing the existing asset and assessing existing buildings – structure, facade, MEP systems – can do. This links directly to rapid prototyping of options to explore potential interventions
- Rapid prototyping of all elements that impact a design across the full range of disciplines

### Key Disciplines:

Structural Engineering MEP Facade Engineering Sustainability  
Fire Engineering Acoustic Design Social Value





# WHAT WE DO

Key Capabilities, Services and Tools

## Design for Construction

Designing for construction is embedded in everything we do. Understanding how our designs will be built is key to successful delivery. We use Modern Methods of Construction and/or Design for Modular Assembly, but more importantly it is an ethos to understand how things are built and ensuring the interfaces and connections are developed as these are often key risk items on a project.

### Key Approaches:

- Identify interfaces, assign responsibility, manage them through to resolution
- Resolution of details – focusing on assembly, achievable tolerances, repetition and standardisation
- Collaboratively identify the optimum construction sequence to respond to the site constraints and project drivers
- Maximising prefabrication and off-site assembly (DfMA)
- Develop a practical construction methodology and temporary works strategy

### Key Disciplines:

Structural Engineering MEP

## Post Occupancy Evaluation

Using our Post Occupancy Evaluation tools, we can critically assess the success of interventions and find ways to optimise the operational performance of the building. This is proven to increase occupant satisfaction, reduce maintenance costs and lower utility bills.

### Key Services:

- Occupant satisfaction surveys
- In-use energy verification
- Lessons-learnt workshops
- Thermal imaging
- BMS analytics
- Organisational POE standards
- Building performance and fault diagnostics
- NABERS UK energy ratings assessment

### Key Disciplines:

MEP Sustainability



# WHAT WE DO

## Key Capabilities, Services and Tools

### Building and Campus Analytics

The dynamic and complex nature of a university requires an analytics-based approach to performance improvements, whether in space effectiveness, experience, or working towards zero carbon. Our data-led approach uses our SmartViz engine to integrate information from a wide range of formats and sources to draw insights, making key decisions simpler and achieving buy in.

**Key Services:**

- Spatial efficiency and utilisation analysis
- People flow modelling
- Interaction and collaboration optimisation
- Carbon reduction planning
- Future scenario visioning

**Key Disciplines:**

- Asset Management
- Analytics
- Sustainability

### Smart Buildings and Campuses

As user experience and asset efficiency become more important, so the need for information regarding the performance of the estate increases. We use existing data from a range of sources combined with a sensor-led approach to help our clients optimise performance, plan for the future and get the best from existing buildings and campuses.

**Key Services:**

- Asset efficiency reviews
- BMS optimisation
- Performance reviews
- Integrated Sensor strategies

**Key Disciplines:**

- MEP
- Smart Buildings and Campuses
- Sustainability





# END-TO-END AND MULTIDISCIPLINARY

Engineering, Advisory and Consultancy

We help our clients throughout the project life cycle. The earlier we are involved, the greater impact we can have in shaping outcomes and delivering value for our clients.



SPECIALISM						
PRE-ACQUISITION SUSTAINABILITY ASSESSMENT	////					////
ASSET CONSULTANCY	////					
EXISTING BUILDING EVALUATION	////					
DESIGN FOR PERFORMANCE	////				////	////
HEALTH, WELLBEING AND PRODUCTIVITY		////			////	
SOCIAL VALUE CONSULTANCY		////			////	
OPTIONEERING FOR EXISTING BUILDINGS		////				
DESIGN FOR CONSTRUCTION			////		////	
HERITAGE ADVISORY	////		////	////	////	////
POST OCCUPANCY EVALUATION						////





# WHO WE WORK WITH

Some of our Key University Clients







# A FEW OF OUR PROJECTS

**35%** carbon emissions reduction



## David Attenborough Building, University of Cambridge

The £35M refurbishment of this brutalist landmark has transformed it into a sustainable home for the Cambridge Conservation initiative. A bespoke sustainability framework and interventions which have reduced carbon emissions by 35% while retaining 87% of the embodied carbon and improving productivity by 12.5%

## Bartlett School of Architecture

This CIBSE Building Performance award-winning project has saved University College London £110,000 in annual energy bills. The deep retrofit and reclad achieved a 60% reduction in energy use per m<sup>2</sup> and the retained concrete frame saved 400 tonnes of CO<sub>2</sub>.



**60%** Reduction in energy use per m<sup>2</sup>

## Institute of Education, UCL

Adapting and upgrading a Grade II\* Listed building required extensive consultation with the Heritage Officer, enabling the team to agree key principles that could be used to inform and achieve BREEAM Excellent ratings at all five phases of regeneration, in support of UCLs 2030 net zero carbon target.



**2,000m<sup>2</sup>** of repurposed space achieved

## Fry Building, University of Bristol

Transforming the 100 year old Grade II listed Life Sciences building into a home for the School of Mathematics enabled us to investigate how to upgrade historic building fabric, with responsive systems and key structural interventions to improve building performance and user experience







# A FEW MORE PROJECTS



## Glasgow Caledonian University, Heart of the Campus

A hybrid of new build and refurbishment of a number of key buildings in Glasgow Caledonian's University's 'Heart of the Campus'. The lower floors of two of the campus' 1960s buildings were entirely refurbished, linking them to the newly developed Saltire Centre to create an inspirational space for teaching and research. The addition of a stunning glass pavilion also created an impressive new entrance to the campus, also included landscaped courtyards.



Image: ©Andrew Lee Photography



Image: ©Photo © Roger Davies (cc-by-nc/2.0)

## Edinburgh University Business School

Refurbishment of a Grade B Listed building which forms part of a wider Grade A Listed Group of buildings for the University of Edinburgh. The refurbishment and redevelopment of the existing building included the formation of new upper/roof level accommodation and the creation of a new lecture theatre at podium/basement level.



Image: ©PZ Photography

## University of Exeter Library

A part of the £40M Forum development, the 1970s library was completely refurbished to make it a more attractive place to study. We improved the efficiency of the existing systems to reduce its energy consumption by over 30%, and the enhanced environment has increased footfall by over 100%.



Image: ©Hufton+Crow

## Nuffield Theatre, University of Southampton

The Basil Spence designed theatre dates from 1963 and is of historic significance as part of the original campus plan. We are working to bring it up to date with new systems and sustainable energy provisions, bringing our experience in refurbishing performance venues to complement our deep understanding of how universities operate.





# ...AND A FEW MORE



## Dyson School of Design Engineering, London

Our team held detailed consultations with Historic England throughout the planning process to determine how modern facilities could be successfully realised within the historic structure. Laboratories are located in the basement to reduce the impact of vibration on sensitive equipment, while services risers are hidden away at the back of the building to retain the beauty of the original facade. We also introduced heat, electricity and water metering throughout to reduce energy consumption and achieve very good BREEAM credentials.

## Appleton Tower

The recladding and refurbishment of this University of Edinburgh icon led to a 20% reduction in energy, saving the client £30,000-40,000 per year, with the embodied carbon payback period is just 5.8 years.



**20% reduction  
in energy use**



## Students' Union, Newcastle University

Refurbishing the Grade II listed Students' Union has given this building a new lease of life. We sensitively integrated new systems into the historic building fabric to provide facilities which are welcoming, bright and adaptable while retaining the character of the original 1920s building.

## UCL School of Management, Canary Wharf

Refurbishing two floors of one of the tallest buildings in Europe has provided UCL with flexible and adaptable space which befits this high profile and prestigious School, bringing executive training to the heart of London's new financial district.

More recently expanding to the 50th floor, our teams had to create innovative ways to mitigate noise ingress in order to maintain the studious, hushed tones of an academic setting. Our detailed approach ensured the space met the acoustic demands of SKA D29 accreditation.



Image: ©Nicholas Hare Architects/Alan Williams Photography





# OUR OTHER SPECIALISMS

Integrated Multidisciplinary Engineering



Buro Happold delivers world class engineering across a range of specialisms spanning buildings and cities.

We combine creativity with solid technical skills and an awareness of the key drivers that shape projects in numerous sectors.



Acoustics



Air Quality



Asset Management



Building Performance



Building Services Engineering (MEP)



Drainage and Storm Water Management



Earthworks



Economic Development



Economic Infrastructure



Environmental Consultancy



Environmental Impact Assessments



Facade Engineering



Fire Engineering



Flood Risk



Geoenvironmental



Geotechnical



Health and Wellbeing Consultancy



Highway Engineering



Inclusive Design



Integrated Development Planning



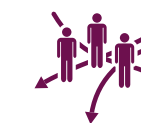
IT Communications and Control



Lighting



Organisational Development



People Movement



Procurement



Project Management



Regional Planning



Security Engineering



Smart Buildings and Campuses



Space Utilisation and Analytics



Strategic Infrastructure



Structural Engineering



Sustainability



Transport Planning



Utilities Engineering



Waste Management



Water Management



Whole-life Carbon Consultancy

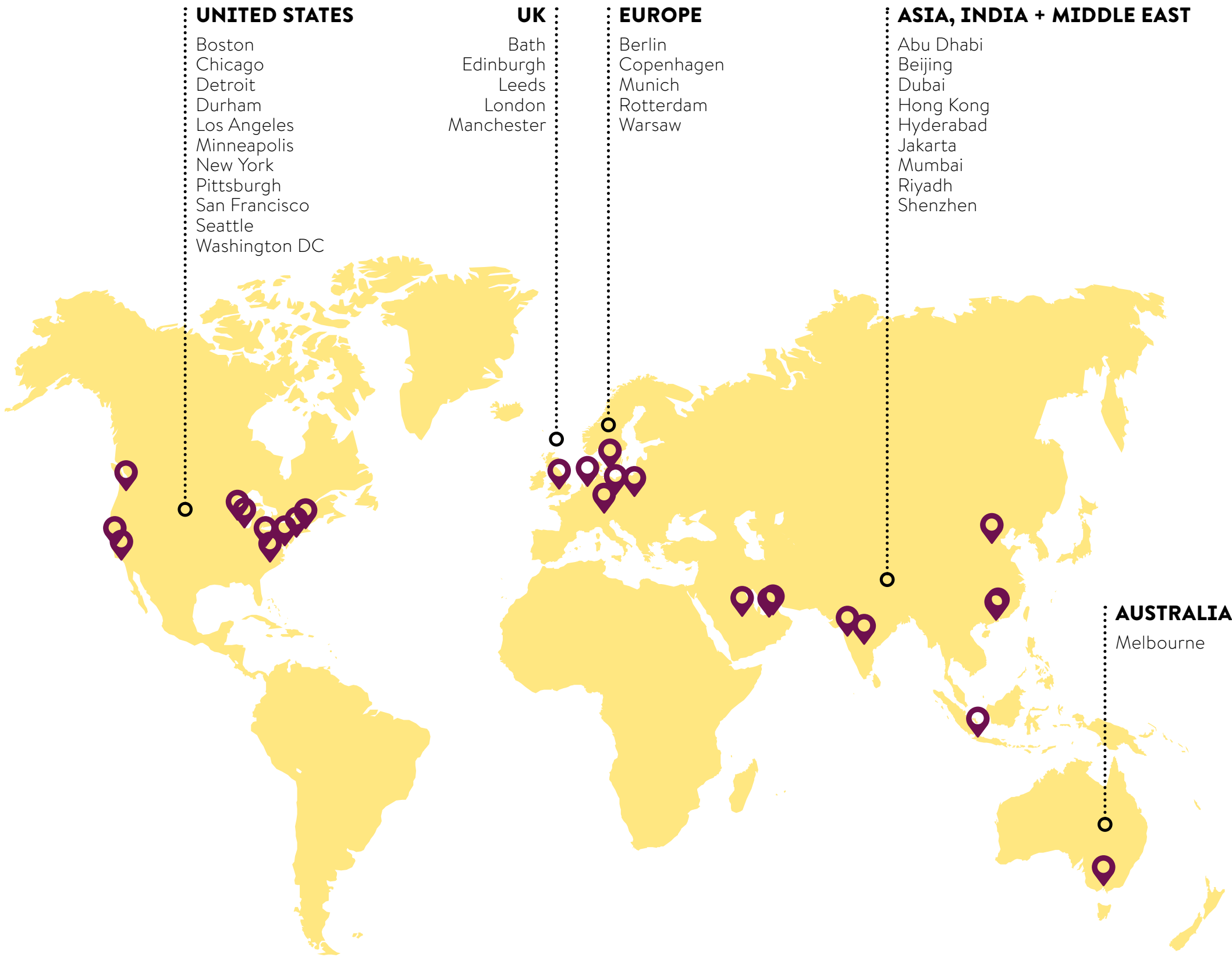
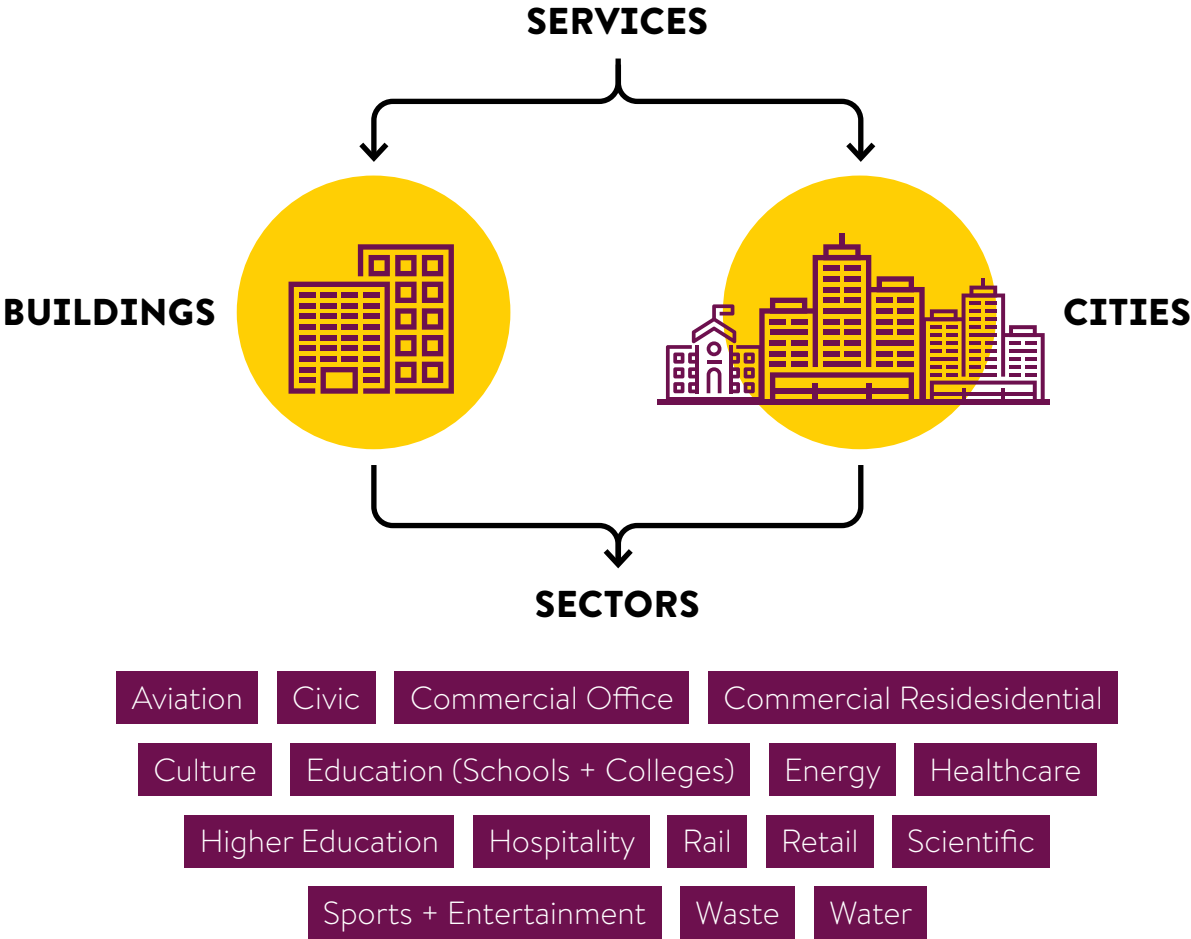




# ABOUT BURO HAPPOLD

Who and Where We Are

We are an international, integrated consultancy of engineers, consultants and advisers. Operating in 31 locations worldwide, with over 70 partners and 1,900 employees; for over 45 years we have built a world-class reputation for delivering creative, value led solutions for an ever challenging world.





# KEY CONTACTS

**We work with our clients to explore the specific challenges and opportunities of their project, at any stage of the project or decision making process.**

Get in touch with our  
**Higher Education Team**  
to discuss your project:



Visit our website to read more about how we help clients decarbonise, modernise and regenerate their buildings:



**BURO HAPPOLD**

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