

Knowledge Foundations

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What's in this month's issue

- Latest UCEM News incl. New research calls Government to improve the apprenticeship system to create a better skilled workforce.
- Things you need to know this week – Seven to share £180 million town deal funding. The first locations have been offered funding under the government's town deal programme to drive growth.
- Latest Research from JRF, RICS, CBRE, and more.

Issue 12 - December 2020

Welcome to UCEM's monthly *Knowledge Foundations* newsletter (formally the Library e-bulletin), a compendium of news and views, research and resources relating to the educational sector and Built Environment.

The UCEM Library aims to disseminate information, promote current awareness and share good practice, to assist in the continual professional development of all those working and aspiring to work within the Built Environment/Property and Construction industries.

"The mission of librarians is to improve society through facilitating knowledge creation in their communities"

(R. David Lankes)

The initial aim of this UCEM Library current awareness service was to help keep students and staff informed of the education sector and industry specific news, share current and best practice, highlight the latest research and identify case studies that will support studying and supplement teaching and learning resources. However, over the years and upon request, the readership has now expanded.

We welcome news and information from readers to include in future editions - please **email us**.

Supported Online Learning

The readership of *Knowledge Foundations* has expanded (to include Alumni) and is now promoted further afield, with the latest version appearing on the UCEM Website.

Visit Supported Online Learning

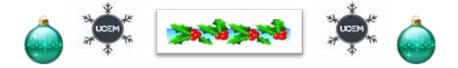
Happy Reading!



UCEM News

As this is the last issue of *Knowledge Foundations* for 2020, can I take this opportunity to wish you all a very

Happy Christmas and a prosperous New Year!



New research calls Government to improve the apprenticeship system to create a better skilled workforce for vital infrastructure projects.

High skills, high tech construction apprenticeships are needed to boost the skills needed in infrastructure projects to drive the UK's economic recovery.

This is what is being called for by the authors of a new research report, released on 19 October 2020, entitled '*Build back better: Improving the apprenticeship system to better support infrastructure*'.

The report, written on behalf of the Construction Industry Council (CIC), UCEM and the Technical Apprenticeship Consortium (TAC), with data used from a CIC survey of employers, recommends that Government works with CIC, employers and the professional bodies to:

- Recognise the value of technical and higher-level apprenticeships leading to a professional registration;
- Increase the flexibility of the apprenticeship levy;
- Join up and improve the apprenticeship systems across the UK
- Celebrate and promote apprenticeships

Aled Williams, who co-authored the report and is CIC Champion on Higher Education and UCEM's Director of Research, Innovation and Partnerships, commented:

"The construction industry is integral to the UK's financial health and can provide the catalyst for an economic recovery accelerated by the COVID-19 pandemic.

"Apprenticeships are hugely important for employers to train workforces with the appropriate skill set to achieve the ambitious infrastructure projects projected across the nation, however, both businesses and education providers need to have more input in how these are run. The research shows that there is a desire throughout the construction industry to get apprenticeships right and, if Government listens and acts upon the recommendations outlined, there could be huge benefits for the UK."

CIC Chief Executive, Graham Watts OBE, added: "CIC would like to thank UCEM and everyone else involved for their time and expertise in pulling together this crucial report. Now is the time for Government to work with our sector to showcase and promote the careers across the full spectrum of employers and occupational roles, showing the opportunity that future talent can have in driving forward innovation and technological solutions that will share their environment for the better."

To read the full report, head to the **UCEM Latest Publications** webpage.

Access further information and the article 'New research calls Government to improve the apprenticeship system to create a better skilled workforce for vital infrastructure projects', in full.

New research calls for unified approach to UK real estate data standards

UK real estate data must be allowed to flow freely beyond the existing silos in order for the industry to flourish and standards have a key role to play in facilitating this.

This is one of the key findings from <u>the research report: 'The role</u> of standards in enabling a data driven UK real estate market', authored by Dan Hughes and released on 30th September 2020 on behalf of the Real Estate Data (RED) Foundation.

The research explores the role of standards in ensuring an effective low of data across the whole built environment, to set the scene for a sector-wide discussion on what is available, what is needed and the future tole of people.

Among the additional insights included in the report, funded by UCEM's Harold Samuel Research Prize are:

- Real estate has a well-established and robust set of standards
- Existing standards need to be more valued and more easily discoverable;
- The value and cost of standards and data needs to be recognised fairly;
- It will become increasingly difficult for professionals to have clarity regarding both data and the standards that influence it.

"The role that standards have to play in enabling a data-driven real industry is substantial, but it is also very complex. There are a number of challenges that must be faced at a sector level and whilst the way forward may not always be clear, it is not something that should be ignored."

Amanda Clack, Executive Director and Head of Strategic Advisory at CBRE and UCEM's Chair Designate added: "This comprehensive and well written research is clear that as we see decisions increasingly based on data from the full lifecycle, and that whilst today (see publication date) have well-established standards, as we see asset types increasingly blur, new factors such as productivity, sustainability and well-being will rise up the agenda and be even more data reliant.

"The next steps are clear: improve discoverability, increase connectivity, understand value and clarify the role of people. Our role now is to work together to put these next steps into action."

To read the report, head to the research webpage.

Access further information and the article 'New research calls for unified approach to UK real estate data standards', in full.

UCEM reasserts its commitment to organisational excellence with Advance HE membership

- UCEM has renewed its Advance HE membership for 2020-21, ensuring continued access to vital resources and supporting valuable partnership across the Higher Education sector.



© Advance HE 2020

The membership supports UCEM's vision 'to be the Centre of Excellence for Built Environment education'. In particular, the membership relates to the UCEM's strategy to have a positive impact on Higher Education through education policy lobbying, collaborative relationships and widening participations efforts.

UCEM Principal, Ashley Wheaton, commented: "Advance HE is a fantastic organisation with admirable aims to make Higher Education better for all. Advance HE's member institution list is hugely impressive and demonstrates the calibre of organisations it brings together for the good of the sector.

"Membership affords my colleagues and I opportunities to attend events and access resources which will greatly benefits us. I look forward to continuing to be an active participant of Advance HE on behalf of UCEM."

Membership provides UCEM with many benefits including: access to Charters transforming and supportin gender and race equality in HE and research; toolkits to support good governance;

consultancy and enhancement services, and erports, publications and resources available to staff across the institution."

Access the article 'UCEM reasserts its commitment to organisational excellence with Advance HE membership' in full.

Access further information on Advance HE.

For more on UCEM's ambitions, take a look at the institution's Vision and Strategy brochure.

UCEM continues Building People support with £50,000 donation

- UCEM has pledged support of £50,000 to enable Building People to work towards its aim of a more diverse and better-connected Built Environment. Building People was founded in 2017 and secured initial donations of £50,000 from UCEM. The Chartered Surveyors Training Trust (CSTT) and The Chartered Surveyors Company (TCSC) in 2018. Both UCEM and TCSC have committed to giving a further £50,000 in 2020.



© UCEM 2020

Phase one of the Building People launch has seen the aggregation of 1,000 + organisations and initiatives that provide work, learning or support opportunities across the Built Environment, as well as the bringing together of relevant information and resources from across the surveying profession.

Phase two sees the development of the connecting capabilities of the platform, as Building People provides technology to connect people to people (mentors / advice and guidance); a directory of learning and training opportunities and an events directory; plus work vacancies (from work experience, to apprenticeships, internships, placements and jobs). This model will be white-labelled so that other organisations can benefit from the aggregating and connecting technology at a fraction of the price they would have to pay for independent development, creating a 'network of networks' using the same technology and all enabled by Building People. Building People is also bringing together disparate providers that work with diverse audiences through the creation of communities, focused initially on young people, women, LGBTQ+, BAME, ex-military, and ex-offenders.

Ashley Wheaton, UCEM Principal, explains why UCEM is keen to supporting Building People: "UCEM is proud to be founding partner and continued support of Building People. Connecting the multitude of opportunities across the Built Environment is key to widening partnership in industry. If people from all backgrounds

can more easily find work, learning and/or support that is available from existing providers, then our industry will become more diverse and more innovative. It's win-win all round."

Rebecca Lovelace, Founder of Building People share the impact that such support has had: "The visionary leadership and fully collaborative approach of our three founding partners has made the world of difference to Building People. We have a simple aim – to create connections across the Built Environment to address the industry challenges of skills, diversity and social value – and it has been the investment, passion and commitment from UCEM, the CSTT and TCSC that has enabled us to move from vision to reality, and from planning to delivery. We have over 60 industry supporters but Building People would have remained a bright idea without the significant input from these three organisations that have all brough a holistic & inclusive approach to enabling change."

Access the article 'UCEM continues Building People support with £50,000 donation', in full.

Find out more about Building People.

Further information on Building People can also be accessed via the **Careers** Section later in this issue of *Knowledge Foundations.*

UCEM strengthens its Hong Kong Team with key appointment

- UCEM's activity in Hong Kong and the wider Asia-Pacific Region has been boosted by the appointment of Tim Bennett.

Tim – who joined the institution as Head of its Construction Faculty in 2014 and has been Dean – School of the Built Environment since 2018 – will lead UCEM APAC (Asia-Pacific) Office which is based in Hong Kong.

In his three-pronged role as Dean – School of the Built Environment (International), Head of APAC Office and Director of UCEM Asia Ltd, Tim will drive UCEM's strategy in the region in growing the numbers of Built Environment professionals and supporting the institution's Hong Kong students.

Since joining UCEM in 2014, Tim has led CPD events in Hong Kong, Singapore and Macau, building relationships with key stakeholders across the region to support UCEM's vision to be the Centre of Excellence for Built Environment education and collaborative effectively to enhance the sector in general.

"Outside of the UK, the highest number of UCEM students in one place is in Hong Kong and I look forward to meeting more of our students there and doing my very best to support them to succeed in their studies. I have always enjoyed my visits to the region and

will be heading over to Hong Kong more frequently to support the office and implement my strategy for Asia-Pacific."

Tim's appointment is the latest milestone in UCEM's 40-year association with Hong Kong. A Chartered Quantity Surveyor, Time has extensive experience in surveying practice, is a Fellow of RICS and CABE and holds a Master's in Professional Education and Training and a Bachelor of Science in Quantity Surveying.

Access further information and the article 'UCEM strengthens its Hong Kong Team with key appointment' in full.



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To find out more about UCEM's APAC Office, head to the <u>Hong</u> <u>Kong students webpage</u>.

COVID-19: University College of Estate Management (UCEM) response to COVID-19

As a responsible employer and educator, UCEM's commitment is to protect the health of all students, staff, clients and suppliers by adhering strictly to advice offered by Public Health England, The World Health Organisation, Office for Students, local and central government, whilst remaining committed to maintaining our usual excellent standard of student experience.

Please find below the steps we've taken to adhere to current and ongoing advice. As the situation is ever-changing, we fully review the guidelines and our actions daily and will quickly adapt if necessary (**Note** the publication date of this article).

- All staff who are able to work from home are doing so. We have been anticipating this situation and had prepared for it full. We have an advanced IT infrastructure in place to enable remote working, so we continue to operate as usual.
- As an online pedagogical institution, we are experts at online teaching and our deliver model will continue as normal
- The small number of staff remaining in Horizons head Office have been allocated seating at above the recommended distance away from each other.
- We are operating a policy of no external meetings and no visitors to Horizons Head Office

- All managers and department heads have been briefed with respect to our self-confinement policy and our treatment of any staff member displaying symptoms that may be linked to COVID-19
- All staff are continually reminded of the importance of following the 20-second guideline for handwashing.

If you have any further questions, please contact:

- Student enquiries Student Central on our VLE
- Employer enquiries <u>businessdevelopment@ucem.ac.uk</u>
- Other enquiries <u>reception@ucem.ac.uk/</u>, Tel: +44(0)118 467 2100

Our sincere thoughts are with those affected by COVID-19 and its impact around the world.

Further information and the latest developments can be found via

the <u>UCEM Website</u>, & don't forget that the UCEM <u>e-Library</u> can be accessed 24/7 (via the VLE-Virtual Learning Environment) with a wealth of valuable resources to help \bigcirc .

14th edition of Parry's Tables published to mark UCEM's centenary year.

Access and read further information about the new edition of Parry's valuation and Investment Tables.

Copies from the book – both online and in print – are available from **Routledge's website**.

Other UCEM News – Get a helping hand with UCEM's Postgraduate Scholarship Scheme; Built Environment Innovation celebrated at UCEM's first online Property Awards; UCEM's continuing commitment to sustainability recognised with NUS Responsible Futures reaccreditation, and more.

<u>Keep abreast of the latest UCEM News and events</u> – and read our blog to keep updated on Building Environment industry nsights, student case studies, and thoughts from UCEM Principal: Ashley Wheaton



Other News

Things you need to know this week: Seven to share £180 million town deal funding

- The first locations have been offered funding under the government's town deal programme to drive growth.

The government has named the first locations to receive offers of town deal funding, which are Barrow-in-Furness, Blackpool, Darlington, Peterborough, Norwich, Torquay and Warrington.

The seven are set to share in up to £178.7 million of government funding to help drive regeneration and economic growth. The debut deals include a £21.9 million allocation for Torquay to modernise its town centre and improve transport links, with a focus on walking and cycling routes. Peterborough is set to receive £22.9 million to promote low carbon living and enterprise, with planned projects including a skills centre for green technologies. Blackpool is in line to receive £39.5 million to update its illuminations and support development of the Blackpool airport enterprise zone.

Other developments include -

- Barking and Dagenham Council has sealed a deal with medial real estate business Hackman Capital Partners (HCP) to building a film and television production centre in Dagenham, east London

- Master developer St Modwen and landowner Crabhill Developments have completed the sale of a 4 hectare land parcel at their Kingsgrove site in Wantage, Oxfordshire, to housebuilder Taylor Wimpey.

- Liverpool City Region Combined Authority is investing £1.5 million to support the delivery of a new station for Liverpool's Baltic Triangle regeneration.

- Cultural infrastructure operator Really Local Group is to create a new cultural venue as part of a regeneration scheme in Canning Town, east London.

- Government agency Homes England has concluded an innovative funding deal with Lancashire housebuilder Kingswood Homes.

- An international competition has been launched to select the masterplanner for the planned 11,500 home Thamesmead Waterfront development, in south east London.

- Rugby Borough Council is to work with property consultant Avison Yong and masterplanner Allies and Morrison Urban Practitioners to development a regeneration strategy for the town centre.

(Please note that you will need to register to access these stories in full, although you can 'Register free for limited access.' Visit the website, scroll to the base of the homepage and note access route within 'Subscription and Registration').

Read the full 'Need to Know: Seven to share £180 million town dentre deal funding' article

Case Study: Adding homes to the fringe of a London estate

- The 1950s-built Frampton Park estate in Hackney is being brought up to date with injections of contemporary urbanism, as the author of this article writes.

The Frampton Arms and Lyttleton House sites in Well Street in Hackney, are separated by a distance of 270 metres along the street and the homes of the Frmapton Park Estate, on who fringe they are located. But both are being redeveloped by Hackney Council under its estate regeneration programme, which aims to deliver nearly 3,000 homes at 18 sites across the east London borough.

The schemesm both designed by architect Henley Halebrown and currently under construction, will contribute 45 homes of varied types and tenures towards the total. One, two and three bedroom homes and social rent, shared ownership and private sale tenures are on offer across the two.

Development also offered the opportunity to reinvigorate a 1950s estate characterised by mid-rise apartment blocks and fairly extensive open spaces, as well as the Well Street frontage.

A nicer place to live

The Frampton Arms site is located on the south western edge of the estate and was, as its name suggests, formerly home to a pub. The 0.3 hectare site is being redeveloped with three five storey buildings, two of which are linked by bridges, which create a collection of urban villas, making a visual connection to existing villas on the opposite side of Well Street.

The lower two floors of these contemporary villas contain houses with their own front doors onto the street. The upper storeys house apartments with maisonettes above, their facades punctuated by open galleries and balconies. To the rear, the 20 homes will look onto a newly landscaped courtyard, flanked on either side by existing Frampton Park Estate blocks, where private and communal gardens, play space and parking, will be created.

The Lyttleton House site, which is similar in size to its near neighbour, lies on the north eastern edge of the estate and was previously occupied by a house in multiple occupation. This wedge-shaped island site had been cast adrift from its

neighbourhood so the architect has reinstated former building lines, repairing the relationship between estate and street.

Once again, the 25 homes include diverse property types. The lower three floors of the building have apartments set around a three storey hall, while the top two floors have eight houses arranged around an open courtyard.

Both projects have robust masonry exteriors overlaid with precast concrete arcades,. On the Frampton Arms building the arcade and its balconies face away from the street, suggesting the gardens beyond. One the Lyttleton House site, the building and arcade follow the curve of the street. The projects are set for completion this autumn (2020).

Read the full 'Adding homes to the fringe of a London estate' case study

(Please note that you will need to register to access these stories in full, although you can 'Register free for limited access.' Visit the website, scroll to the base of the homepage and note access route within 'Subscription and Registration').

Analysis: How the pandemic could affect housing design

- A number of studies are looking at the pandemic's impact on people's lives and what they now need from their homes and neighbourhoods, finds the author of this article.

The way in which people live in their homes and communities, particularly in urban environments, has been brought into question by the constraints of the pandemic. Now researchers and architects are intrrogating people's perceptions and experiences, gathering learning and putting forward ways of improving or reimagining urban living that could potentially influence the design of future homes and neighbourhoods.

Research is focusing on both the home itself and its surroundings, with the latter forming the subject of early research by Danish urban design consultant Gehl. Its study looking at public space and public life during COVID-19 drew on people's experiences on Denmark's early lockdown in March 2020 and identified the shift away from city centres towards local meeting places and their pocket parks and squares. Since publishing its initial study it has released its initial study it has released a second report covering re-opening, which looks at how city centres and local neighbourhoods have changed.

It is being joined by a number of studies based on the experiences of people living in the UK. The Quality of Life Foundation, the housing research body established by architect Sadie Morgan, published its <u>Quality of life at home</u> study in September 2020. This highlighted the importance of adaptable homes, easy access to open space and local communities and infrastructure.

Following on from this comes the new report from research group Place Alliance, <u>Home Comforts during the COVID-19 lockdown</u>, published this month (see publication date). This study is based on a survey of 2,500 households, representing 7,000 people, and gauges views on homes, neighbourhoods and people's sense of community.

For neighbourhoods, the research points to a need for places to be greener, more mixed use, less trafficked and better connected, with essential shops and services with five to ten minutes' walk.

For homes, the research notes that those surveyed considered internal design and space as key to comfort, with fresh air, daylighting and good sound insulation been seen as fundamental.

Architects are already turning their minds to how the pandemic could influence home design. Post-pandemic living formed the theme of an internal design competition, organised by architect PRP, which built on the practice's work in exploring intergenerational and more universal home layouts, competition winner, Dimple Shah, has created a design for a 76 square metre, two-bedroom four-person apartment, which is showcased alongside other entires in PRP's report, **Beyond-19**.

The winning design is intended to be adaptable for home working and family living, its flexibility stemming from the use of moving walls that provide daytime spaces for working, study and retreat. At the end of the working or learning day, moving walls can be closed away to allow space for socialising, clearly different iating work time from leisure time. Such thinking and the wealth of research around living through the pandemic could well be informing the next generation of residential development.

Further information and read the article, 'Analysis: How the pandemic could affect housing design' in full.

(Please note that you will need to register to access these stories in full, although you can 'Register free for limited access.'

Visit the website, scroll to the base of the homepage and note access route within 'Subscription and Registration').

Government Spending Review 2020: Key points

- Chancellor Rishi Sunak has set out what the UK government will spend on health, education, transport and other public services next year (2021).

In a statement in Parliament, he also briefed MPs about the state of the UK economy and the latest forecasts for the UK's public finances, which have been battered by the Covid pandemic.

Here are the main points -

 Millions of public sector workers will see their pay frozen next year

- A million NHS workers and those earning less than £24,000 will still get an increase
- The UK economy is expected to shrink by 11.5% this year (2020)
- Unemployment is expected to reach 7.5% next spring (2021), with 2.6m people out of work
- Overseas aid budget is to be cut by about £5bn
- A new £4bn "levelling up" fund will pay for upgrading local infrastructure.

Access further information and the BBC News, UK Politics article, 'Spending Review: Key points from Rishi Sunak's statement', in full.

Government launches £7.1bn National Homebuilding fund

- The government will create a £7.1bn National Homebuilding Fund to unlock the development of 860,000 new homes.

The news came as Chancellor Rishi Sunak unveiled his spending review for 2021/22, in which he warned of the largest fall in output in 300 years – a drop of 11.3% - as a result of the Covid-19 pandemic. The economy is set to grow by 5.5% next year and 6.6% in 2022 as restrictions ease.

The new fund sets aside money for land remediation, investment in infrastructure help to deliver the brownfield fund, and loan support for housebuilders across the country.

It was one of a number of spending pledges from the Chancellor to help kickstart the post-Covid economy, which also included a £4bn 'levelling up' fund which will allow local authorities across England to compete for investment in a range of schemes up to £20m to improve the local area.

And the government renewed its commitment to build or rebuild 500 schools across the UK over the next five years, as well as to build 40 new hospitals over the next 10 years.

Meanwhile the government has published its delayed <u>National</u> <u>Infrastructure Strategy</u>, entitled 'Fairer, faster, greener', which aims to deliver improvements to UK infrastructure while putting the UK on the path to net zero emissions by 2050.

Within the document, the government pledged to accelerate and improve delivery of projects through reforms to the planning system, as well as improvements to the way projects are procured, and the greater use of construction technology.

Access further information and the *Construction Manager* article, 'Government launces £7.1bn National Homebuilding fund', in full.

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Coronavirus – latest developments [November 2020]

'Difficult winter' coming despite UK' economy bounce Summary:

- The UK's economy bounced back from recession with record growth of 15.5% in July to September 2020 – but is still 8.2% smaller than before Covid,
- Chancellor Rishi Sunak says there are grounds for "cautious optimism" but a "difficult winner" still lies ahead,
- There are warnings the economy may shrink again in the last quarter of 2020 because of the impact of lockdowns,
- Figure reveal huge growth in NHS waiting lists since Covid struck – with nearly 140,000 waiting over a year for routine procedures,
- WHO chief warns world not to get complacent about Covid-19 as it's not yet proven how effective vaccines will be,
- Wales has 983 Covid patients in hospitals more than at any time including during the first wave,
- Scotland temporarily bans alcohol from trains and stations to help social distancing – as nation's R number drops to one.
- The NI circuit-break lockdown will end 24 hours later than previously announced – at midnight on Friday (13/11.20) – after last-minute legal advice.
- Spain's coronavirus death toll has surged to more than 40,000, with infections passing 1.4m
- Germany's health minister says he expects coronavirus restrictions there to continue through the winter
- The US has confirmed its highest 24-hr infection total to date a world record of more than 144,000 cases.

Access the BBC News, Latest LIVE Coronavirus news feed

Coronavirus: Why some people want to keep working from home

- When lockdown started in March 2020, workers across the UK packed up their office equipment and set up workstations in their own homes. Bedrooms, kitchen counter-tops and dining tables became the new way of working for millions of people.

But now it's time to return to those communal workplaces, research from Eskenzi suggests that 91% of the UK's office workers would like work from home at least part of the time. So why are so many office staff keen to keep working from home?

Some of the reasons and case studies provided in this article and include -

- 'It's like getting a pay rise' due to making savings on the commute
- \circ 'We're spending more time together as a family', and

o 'I've seen an improvement in my mental health'

Access the BBC News article entitled, 'Coronavirus: Why some people want to keep working from home', in full.

Related Link:

Coronavirus: How to be happier while working from home

This article from the Royal Institute of British Architects (RIBA) explains what we can do to keep us happier at home and include –

• Let in the light; • Shut out the noise; • Declutter; • Stand up; • Use plants; • and Social contact ... and not just online.

Access the BBC News article entitled, 'Coronavirus: How to be happier while working from home', in full.

Access BBC News > Coronavirus > Coronavirus pandemic > Your Coronavirus Stories and related articles in full.

Access the BBC News > World article entitled, 'COVID-19 pandemic: Tracking the global coronavirus outbreak' by The Visual and Data Journalism Team in full.

Access GOV.UK (2020) 'Coronavirus (COVID-19): what you need to know' [online]. Available at: www.GOV.UK

More about coronavirus:

- A SIMPLE GUIDE: What are the symptoms?
- NEW RESTRICTIONS: <u>What are they?</u>
- LOOK-UP TOOL: Check cases in your area
- MAPS AND CHARTS: Visual guide to the outbreak

The evolution of building surveying education during COVID-19

- In January and February 2020, as the pandemic was starting to gain momentum and spreading around the globe, universities in the UK were beginning to consider how to react. As a sector, UK higher education is relatively familiar with web-based methods of communication, teaching and learning.

In fact, the University College of Estate Management (formerly the College of Estate Management) and the traditional home of RICS correspondence courses, operates their business totally online.

A lot of universities operate a Virtual Learning Environment (VLE) which allows them to communicate with their students and provides the opportunity to interact with them in terms of online courses and assessments, and as a depository for learning materials.

This is allowing the students to revisit the materials to embed or reinforce their learning or to catch up if a session was missed. Common VLE's include Blackboard, WebCT, and Moodle. Their functionality and features are all relatively similar.

Although the physical libraries have closed, universities operate electronic libraries which offer access to a large number of electronic databases, and a growing number of books and journals, ensuring that the students and staff, can continue to access the majority of relevant information for their studies and research.

Further information and access to the article 'The evolution of building surveying education during COVID-19', in full.

Access further information about UCEM's Supported Online Learning > e-Library.

The Pandemic Has Taken Cars Off Urban Streets. Will It Last? - With a sharp drop in auto traffic due to Coronavirus, cities around the globe have closed streets to cars and expanded pedestrian thorough fares and bikes lanes.

But as life edges back to normal (see publication date), will these initiatives survive, especially if virus-wary citizens shun mass transit?

Access this article entitled, 'The Pandemic Has Taken Cars Off Urban Streets. Will It Last' in full.

Will COVID-19 accelerate construction's digital transformation?

- With many industry professionals forced to work remotely, is now the perfect time for construction to get up to speed with all things BIM and digital? *Construction Manager* magazine finds out if the coronavirus will change the way we work forever.

David Philp – Global BIM/MIC consultancy director, AECOM says, "It's an opportunity to rethink how we can use technology and innovate." (Philp 2020)

The coronavirus pandemic is forcing us to strive for more innovative and rapid solutions. From increased home working needs, maximising performance of our healthcare estates and ultimately how we can recover from the looming economic challenges, we need to usher in new ways of working.

This crisis will be an opportunity for us to rethink construction priorities, how we can better use technology and innovate in the use of joined-up data to support immediate societal needs and the creation of a more resilient built environment.

Mark Boyle – Global design direct, Robert Bird says, 'Our digital processes lend themselves to remote working.' (Boyle 2020), and

Gary Fannon – Technology director, Turner and Townsend says, 'Early digital adopters will be reaping the rewards.' (Fannon 2020)

T&T's technology team have all been set up to work from home for some time and the early adopters will reap the rewards from the

coronavirus lockdown. Design teams are ablet to continue working – creating a fully designed digital model that can be constructed to an excellent quality standard when work is able to begin on site. There are also secutiry questions about home working – we need to educate people and show them how to make home routers more secure. But overall, the enforced lockdown could show the industry how we can use digital technology to be more efficient and productive.

Andrew Gamblen – Digital manager, Willmott Dixon says, 'People will become more comfortable collaborating remotely.' (Gamblen 2020)

The effect of Covid-19 and social distancing is going to have a long-lasting effect on both the construction sector and the UK as a whole. There has been a huge increase in the use of technology and software that allows individuals and teams to communicate and collaborate remotely.

While this technology has been around for a while, and because we are in a position where we have to use it to keep working, people are starting to become a lot more comfortable with it and this is building up simple routines that will have a lasting effect.

Richard Saxon – CBE Chairman of JCT, client adviser at Deploi BIM Strategies says, ' "Wartime scenarios" will push the digital agenda.' (Saxon 2020)

The Covid-19 crisis is looking very like a war scenario. Organisations are sending out messages saying they will play their part through staff working from home. It's Keep Calm and Carry on again.

Technology has always developed rapidly in wartime. The Second World War saw the birth of computing radar, jet aircraft and nuclear power. Now we have a design and construction industry in lockdown, starting to rely on tools which only a few firms have used to far.

- Now cloud-based teamwork applications allow staff to work from home or on the move with full access to their firm's common data environment
- The pressure to role out superfast broadband and %G will be immense
- Social media apps allow for virtual co-working
- Onling meetings are well supported now and soon we will use Virtual Site Visit technology as normal
- Site work will be aided by augmented reality headsets and BIM caves

By the time a vaccine is available (see publication date), a year or more of forced advance in technology use is likely to have passed.

Things will not go back to where they were before: productivity will have improved; flexible working will have become normal; whole life thinking will have advanced.

<u>Read the Construction Manager article 'Will Covid-19</u> accelerate construction's digital transformation', in full.

Related links:

What will the post-pandemic office look like?

- Businesses have been scrambling to adapt their offices more Covid-friendly over the summer. But with remote working seemingly here to stay, anecdotal evidence suggests that firms are looking to cut office space by up to 40%. How is the workplace having to evolve to remain relevant.

<u>Read the Construction Manager article, 'What will the post-</u> pandemic office look like?' in full. '

Coronavirus to weigh on Q1 construction activity, despite recent pick-up

International construction activity picked-up in the last quarter of 2019, according the latest findings of RICS' series of international Infrastructure and Construction Surveys. However, rising costs remain a drag on the sector, and the impact of the Coronavirus could hamper short-term output.

Read the RICS article 'Coronavirus to weigh on Q1 construction activity, despite recent pick up', in full.

The future of build-to-rent podcast series by Shoosmiths UK law firm

In this podcast, the first in the series, real estate partner, Choisanne Man, speak with John German, Managing Director of Residential Investment at Invesco Real Estate, on the impact the COVID-19 pandemic has had on the build-to-rent (BTR) market, from an investor/funder perspective.

Issues discussed in this podcast include:

- Performance of the sector
- Rent collection rates
- Challenges of lockdown restrictions
- How buildings and amenity space will change as a result of the pandemic
- Where the market is going

Podcast series #1 – The future of BTR (Build to Rent)

Issues discussed in this podcast, the second in the series, include:

- Ongoing attractiveness of the sector
- Top three things to look for in a BTR scheme
- Future challenges for BTR
- The role of technology
- BTR housing

Podcast series #2 – The future of BTR (Build to Rent)

In this podcast, the third and last in the current series, issues discussed include:

- Planning reforms
- Permitted development rights
- Rise of residential in the high street
- Fire Safety
- Rent controls / regulations

Podcast series #3 – The future of BTR (Build-to-Rent)

Read the latest insights, articles and commentary from Shoosmiths UK law firm or explore their content library.

Access Shoosmiths Insights and articles

Free content related to Coronavirus, the management of epidemics and the wider impact on society

- Emerald Publishing, one of the UCEM e-Library subscription services, have brought together a number of research resources related to the Coronavirus group of viruses, and epidemics more broadly.

Emerald collated research and the management of epidemics and made it freely available to assist practitioners and researchers who are working to tackle the current situation and likely consequences. Whilst these materials do not only relate to the current clinical challenges of Novel Coronavirus, they may provide relevant context to how the world reacted to other previous Coronavirus outbreaks (notably SARS) and epidemics.



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Access Emerald Publishing's 'Coronavirus, the management of epidemics and the wider impact on society'

Cambridge University: All lectures to be onlineonly until summer of 2021

- There will be no face-to-face lectures at the University of Cambridge over the course of the next academic year due to coronavirus, it has been announced.

However, lectures will be available to students online and "it may be possible to host smaller teaching groups in person" if they meet social distancing requirements, the university said.

University campuses have been closed this term (see publication date) by the Covid-19 outbreak. Cambridge will review the decision if advice on social distancing changes.

All teaching at the university was moved online in March 2020, while exams are being carried out virtually.

- Students 'must be warned if courses taught online'
- Online students would still face full tuition fees
- Students 'being ignored' over fee-refund claim

It follows a similar move by the University of Manchester, which said its lectures would be online-only for the next term.

The university watchdog said students applying for university places in England must be told with "absolute clarity" how courses will be taught - before they make choices for the autumn. Universities can charge full fees even if courses are taught online. But Nicola Dandridge of the Office for Students warned against misleading promises about a "campus experience" if courses are to be taught online.

Read the article, 'Cambridge University: All lectures to be online-only until summer of 2021' in full and related item via the BBC website

Related topics / subject terms / keywords:

CORONAVIRUS SOCIAL DISTANCING

UNIVERSITY OF CAMBRIDGE

Learning and teaching reimagined: a new dawn for higher education?

- Exploring the 2020 experience as well as the changing aspirations of the nature and shape of learning and teaching for the future.

Summary

This report is the result of a five-month higher education initiative to understand the response to COVID-19 and explore the future of digital learning and teaching.

It involved high levels of engagement with more than 1,000 sector leaders, staff and students through webinars, roundtables, consultations, focus groups, surveys, interviews and case studies.

In this report the experience of 2020 and changing aspirations of the nature and shape of learning and teaching for the next academic year, 2021/22, and 2030, are explored.

Recommendations

Based on this research the following recommendations for universities, sector agencies and government are made:

1. Universities to use their strategic and structural planning processes to affect the digital transformation of learning and teaching, ensuring that sponsorship is provided by governing bodies and executive teams

Knowledge Foundations	Page 21
Back to top	2. Universities to review their strategic investment in digital learning and teaching
	3. Universities to make investment plans to mitigate the heightened cyber security risks that arise from greater dependence on digital technologies
	4. Universities to think radically about the scale and scope of their learning and teaching activities, prioritising blended learning approaches wherever possible
	5. Universities to accelerate the adoption of blended learning, with close involvement of students in all aspects from design to delivery
	Universities to ensure inclusivity and accessibility are integral considerations in curriculum redesign
	7. Universities to ensure their professional development plans include digital training, peer support mechanisms and reward and recognition incentives to encourage upskilling
	8. Universities and sector organisations to establish research to remain in step with the changing digital preferences and expectations of prospective in higher education students
	9. Universities, government and funders to provide additional funding or means to reduce digital poverty as a barrier to students accessing higher education.
	Maguire D, Dale L, and Pauli M (2020) <u>Learning and teaching</u> <u>reimagined: a new dawn for higher education?</u> Bristol: JISC
	Construction prepares for Brexit with new
	working group - Construction is readying itself for the UK's exit from the European Union at the end of the year (2020), with the creation of a dedicated working group on the issue.
	The Construction Leadership Council (CLC) has set up the Brexit Working Group in a bid to produce and signpost business guidance and information to help the construction industry get ready and maintain business continuity at the end of the transition period. The group will also aim to identify critical issues facing the construction industry in the event of no agreement that the government should address before the transition period expires, as well as championing opportunities for the construction sector in the pumerous oppoing trade deal periodications with the ELL and the rest

of the world.

The work of the group will be split into four workstreams covering:

numerous ongoing trade deal negotiations with the EU and the rest

- **Movement of People:** preparing for the new immigration rules, accessing alternative labour supply and reciprocal arrangements on skills and qualifications in new trade deals
- **Movement of Goods and Materials:** preparing for the new customs regime, guidance on WTO rules in the event of no

agreement with the EU and alternative sourcing opportunities in the rest of the world and the domestic market

- Standards and Alignment: guidance on the Construction Products Regulation, EU notified bodies, CE marking, UK designated standards, and UKCA marking
- **Data Adequacy:** business awareness of the potential impact and mitigating actions on data flow in the event of no agreement with the EU and no decision by the European Commission on the UK's 'data adequacy.

In addition, the existing workstreams of the CLC will also take on Brexit – readiness related work, helping to produce guidance on matters including procurement and contracts.

Read the Construction Manager article entitled, 'Construction prepares for Brexit with new working group' in full.

New guidance from CIRIA - Construction Industry Research and Information Association

The Management of advanced numerical modelling in geotechnical modelling (C791)

- CIRIA is pleased to announce (August 2020) of new good practice guidance *The Management of advanced numerical modelling in geotechnical engineering* (C791)

Numerical modelling is commonly carried out in engineering. Producing a numerical model is complex and if not used properly can be dangerous. However, if use with skill and care there can be enormous benefits.

<u>Read further information and gain access to Management of</u> <u>advanced numerical modelling in geotechnical modelling, in</u> <u>full.</u>

Methodology for quantifying the benefits of offsite construction (C792)

- CIRIA is pleased to announce the launch of new guidance that include, *Methodology for quantifying the benefits of offsite construction* (C792) in association with the Laing O'Rourke Centre for Construction Engineering and Technology, University of Cambridge.

This new guidance proposes a framework for comparing construction approaches, making it possible to keep consistent records across projects and identify all the possible benefits available. This guide also highlights the challenges that can be expected when assessing the performance of construction projects and developing robust benchmarks for comparison. It provides a framework for evaluating project performance that can be used by clients, construction management teams and designers to assess the value and benefits achieved on projects. The guidance is set to support decision making and facilitate wide industry collaboration across different sectors in the construction industry.

Back to top	Read further in formation and gain free access to the full published document, entitled, 'Methodology for quantifying the benefits of offsite construction'
	Grenfell Tower Inquiry – latest developments - The Grenfell Tower Inquiry was created to examine the circumstances heading up to and surrounding the fire at Grenfell Tower on the night of 14 June 2017.
	Phase 2 hearings – Inquiry hearings are streaming live. View the timetable for the week.
	COVID-19 information – The Inquiry takes health and safety guidance extremely seriously. Following a full risk assessment, it has put in place arrangements to ensure social distancing is maintained in all parts of its venue.
	A strict limit on numbers is essential for these arrangements to be effective.
	Phase 1 Report – The Inqury has published its report on Phase 1 of its investigations.
	Latest update from the Inquiry [November 2020] - The Inquiry has published an update on its work. This update provides a digest of:
	• Update from the Chairman – Monday 2 November, • October Newsletter, • Tier 2 Covid-19 Restrictions, and • Drop-in sessions – In line with current public health guidance on Covid-19, the inquiry has postponed its monthly drop-in sessions until furthe notice.
	Read further information from the 'Grenfell Tower Inquiry' website.
	Skills Agenda: Concerns for Skills Shortages in the 21 st Century: A Review into the Construction Industry, Australia The Australian Construction Industry is now facing skills shortages in all trades. As an industry focused on the skills of its workforce, there is now concern the Australian standard in quality, workmanship, and productivity will inhibit both national and international level.
	This research paper addresses the underlying, influential factors concerning skills shortages in the Australian construction industry. The influential factors addressed include funding, training statistics, employer expectations, financial limitations, Industrial Relations and immigration.
	Given the eference to skills shortages within the industry, and documented in related literature if skills shortages are to continue to exist their effect will impact upon the overall performance of construction companies through Australia.



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Read the full research report 'Concerns for Skills Shortages in the 21st Century.

Women in construction: building a career in a challenging environment

12 case studies of women working in the construction industry and their experiences.

Access Women in construction: building a career in a challenging environment

RICS Market surveys – leading indicators in the real estate industry

Market surveys from the Royal Institution of Chartered Surveyors (RICS) include:

- <u>UK Residential Market Survey</u> – used by government and key institutions, the Resi. Market Survey is a key indicator of conditions in UK residential sales and lettings.

- **<u>RICS/RAU Rural Land Market Survey & Land Prices</u>** – The RICS/RAU Rural Land Market Survey is the leading survey on demand, supply and prices in the farmland market.

- <u>UK Construction and Infrastructure Survey</u> – The leading sentiment indicator of the UK construction and infrastructure markets.

- <u>Hong Kong Residential Market Survey</u> – The Hong Kong Residential Market Survey is a leading sentiment indicator of conditions in the Hong Kong residential sales and lettings markets.

- <u>Global Commercial Property Monitor</u> – RICS global commercial property monitors are leading indicators of conditions in commercial property occupier and investor markets around the world.

- <u>UK Commercial Market Survey</u> – A leading indicator of developments in the UK commercial property occupier and investor markets.

RICS – The Future of Surveying

- We know the challenges facing the built environment and the surveying profession – now it's time to act. We know the challenges facing the built environment and the surveying profession – now it's time to tackle them.

For over 150 years, RICS has led our profession through change, enabling our members to take advantage of the opportunities and manage the risks it presents. This change is now happening faster

than ever, requiring us to think strategically about how we deploy our expertise and resource. To continue to provide leadership, we are constantly assessing our role as a standard setter, regulator, educator and global professional body – to deliver confidence to governments, markets and the public.

<u>RICS Futures Report 2020</u> is our action agenda to keep up in a changing world.

Access and download the Futures report to read RICS' full agenda for effecting change and responding to the biggest issues facing the natural and built environment, in full.

Read the article, 'Future of Surveying' and gain access to the Futures report in full.

GOV.UK, National Statistics - UK House Price Index [Last updated October 2020]

- The UK House Price Index is a National Statistic that shows changes in the value of residential properties in England, Scotland, Wales and Northern Ireland.

The UK House Price Index (UK HPI) captures changes in the value of residential properties.

The UK HPI uses sales data collected on residential housing transactions, whether for case or with a mortgage.

Properties have been included:

- In England and Wales since January 1995
- In Scotland since January 2004
- In Northern Ireland since January 2005

Data is available at a national and regional level, as well as counties, local authorities and London boroughs.

The summary report contains:

- Headline statistics
- o The economic statement
- o Price changes
- Sales volumes
- The property status
- The buyer status for Great Britain (excludes Northern Ireland)
- The funding status for Great Britain (excludes Northern Ireland)
- Housing transactions distributions

Read the GOV.UK, Guidance: 'House Price Index Summary: June 2020' (Published 16 September 2020)' in full.

Tackling mental health and wellbeing within the construction industry

Samaritans to work with roofers on mental health

- The National Federation of Roofing Contractors (NRFC) is working with the Samaritans charity to explore ways of supporting

tradesman in construction who may be struggling with mental illness.

The trade body is also supporting a Samaritans campaign, Real People, Real Stories, which aims to support working-age men suffering from the impacts of the coronavirus lockdown.

The campaign aims to use real-life stories to reach men struggling to cope and encourage them to seek help.

<u>Read the Construction Manager article entitled, 'Samaritans to</u> work with roofers on mental health' in full.

Wellbeing strategy model:



Source: BSRIA (2019). 'Wellbeing consideration to

property managers', Designing Buildings.co.uk Wiki [online], last edited 20 Aug.

Understanding Mental Health in the Built Environment

Access the CIOB's latest report *Understanding <u>Mental Health in</u></u> <u>the Built Environment</u>, including the results from the CIOB survey of over 2,000 professionals.*

Access CIOB online Policy Portal

Access CIOB surveys the sector to gather data on mental health and stress

How can buildings have positive impact on wellbeing? BSRIA's Henry Lawson discusses the importance of designing buildings that promote 'Wellbeing.' The theory sound compelling but in practice, creating such building is complex.

Access and read 'How can buildings have positive impact on wellbeing' in full.

Coronavirus and your wellbeing

You might be worried about coronavirus (also known as COVID-19) and how it could affect your life. This information is here to help. <u>Access MIND's article, entitled 'Coronavirus and your</u> <u>wellbeing'</u>.

Related Link and where to access further information support:

BBC Action Line [online]. Available at: bbc.co.uk/actionline

Telephone: 0800 066 066

Sustainable outcomes for buildings

The Royal Institute of British Architects (RIBA) has published guidance on targeting, designing and evaluating sustainable outcomes for buildings, defining concise measurable set of eight sustainable outcomes that correspond to key UN Sustainable Development Goals and can be delivered on building projects of all scales.

Access the RIBA Sustainable Outcomes Guide

National Trust planning principles

National Trust (NT), a charity that works to preserve and protect historic places and spaces – for ever for everyone. The National Trust protect historic houses, gardens, mills, coastline, forests, woods, fens, beaches, farmland, moorland, islands, archaeological remains, nature reserves, villages and pubs. While they are very passionate about open spaces and historic places, they also work hard in other areas too, including the environment, food, farming, transport and heritage – to name but a few.

Most of the work they do though is affected by much wider global issues, which is why their interests extend far beyond just bricks and mortar.

Access the National Trust website

National Trust (NT) – "Our planning principles"

The National Trust principles are used to guide them in their decision-making on the way land is developed and managed and include:

Seeking to influence – The NT seek to influence the Planning system at local, regional and national levels,

Supporting spatial planning – The NT support spatial planning which takes a holistic approach to its environment and its resources,

Sensible management – The NT promotes the wise management of the natural environment and built and cultural heritage,

Protecting our environment – The NT will seek to protect wild and remote landscapes from built development or urbanisation.

Using property management plans – In managing its land through management plans, the NT will support and help to achieve objectives,

Objecting to proposals, where appropriate – When proposing development on their land to meet justified needs, the NT will use a sustainable construction approach. This will include:

Knowledge Foundations	Faye 20
Back to top	 Minimising resource use and generation of waste, Being energy efficient,
	- Minimising or preventing all types of pollution and risk of flooding,
	- Safeguarding important wildlife, landscape and historic interests,
	- Respecting local/regional distinctiveness, supporting local sources for goods and services where practical, and - Encouraging community involvement and access.
	Read the National Trust Planning Principles
	The National Trusts' planning procedure
	The National Trust have developed the following criteria to ensure online suitable projects proceed:
	- Adhere to the policies in the relevant local plan,
	- Deliver energy efficiency and reduce carbon dioxide emissions,
	- Build in harmony with the local environment, built and natural,
	- Involve the local community throughout the process.
	Case studies are provided.
	<u>Read how the National Trust engage in planning: The NTs'</u> role as a developer.
	Foster + Partners Projects Foster + Partners Projects – one of the most innovative architecture and integrated design practices in the world. Over the past four decades the practice has pioneered a sustainable approach to architecture through a strikingly wide range of work, from urban masterplans, public infrastructure, airports, civil and cultural buildings, offices and workplaces to private houses and product design. By visiting their website, you can gain further information about their current and past work, upcoming projects and gain access to their-
	- Image gallery,
	- Sketches and drawings,
	- Construction,
	- Facts and Figures, and
	- Project downloads.
	Access Foster + Partners Projects
	New RIBA Plan of work 2020 RIBA Plan of Work 2020 . This blog takes a look at the new RIBA Plan of Work 2020.

Plan of Work 2020.

Back to top	What is the RIBA Plan of Work? The RIBA Plan of Work was first published by the Royal Institute of British Architects (RIBA) in 1963. It originally provided a matrix to show the roles of participants in the design and construction processes.
	It has since been updated in several editions, most recently in 2020. This has allowed it to adapt to the complexity of modern projects, industry demands and legislative and regulatory requirements.
	It now provides a shared framework for design and construction, including both a process map and management tool.
	What changed in 2020? In 2020, key changes were made to reflect the importance of sustainability and Building Information Modelling (BIM) in construction. The Plan of Work now also incorporates issues such as digitisation of the industry, Modern Methods of Construction, ethical issues, the value of aftercare and timing relating to planning applications and procurement.
	This has included restructuring and renaming of the work stages from the 2013 Plan of Work:
	0 – Strategic definition – no change
	1 – Preparation and briefing – brief amended to briefing
	2 – Concept design – no change
	3 – Spatial coordination – formerly Developed design
	4 – Technical design – no change
	5 – Manufacturing and construction – formerly Construction
	6 – Handover – formerly Handover and close out
	7 – Use – formerly in use
	RIBA Plan of Work 2020:
	0 1 2 3 Strategic Definition Preparation and Brief Concept Design Spatial Coordination 4 5 6 7 0 Technical Design Manufacturing and Construction Handover Use

© RIBA 2020

Source: Royal Institute of British Architects (2020) 'RIBA Plan of Work'

Note: The author of this blog, Jen Lemen-Hogarth is an Associate Tutor – UCEM and Partner – Property Elite.

Access Property Elite's, Building Better Property Professionals, 'New RIBA Plan of Work 2020' [Blog], in full

Autodesk and CIOB map the digital construction journey

Autodesk and the Chartered Institute of Building (CIOB) have prepared an infographic to help construction businesses visualise their position on the digital journey.

Access more information, view the infographic and read the article, entitled 'Autodesk and CIOB map the digital construction journey' in full.

Access further information from CIOB 'Digital Construction'

- Digital technologies are now an integral part of our built environment. The choice is not when or if built assets will use technology, but rather how much will be used.

Building Information Modelling (BIM) Step-by-step guide to using BIM on projects



Source: PCSG (2019) '<u>Step-by-step guide to using BIM on projects</u>', Designing Buildings Wiki [online] Last edited 5 April.

This step-by-step guide explains how level 2 building information modelling (BIM) can be used for the development of a built asset such as a new building.

Access the Step-by-step guide to using BIM on projects

Latest BIM+ Projects [November 2020] – John Sisk relies on BIM best practice to deliver Malmo data centre, 2nd November 2020.

- John Sisk & Son is nearing completion on a data centre project in Malmo, Sweden. Adopting BIM best practice has been crucial to keep construction on programme given a fast-tracked programme amid the Covid-19 pandemic.

The Multinational Data Center [sic] in Malmo will house and run a vast array of networks and servers for massive data processing and storage. That means state-of-the-art M&E installations and precise attention to the smallest of details for construction and handover are necessary.

Back to top	The John Sisk & Son team has nearly 40 years of experience in data centre construction and has brought a digital project delivery approach to the Malmo project.
	The Sisk team faced the challenge of an aggressive baseline schedule and a fast-tracked construction phase. Complex underground services infrastructure added another layer to the challenge. Meeting all the project demands was one thing: it was quite another when Covid-19 struck, and time collaboration was put to the test.
	While completing the site mobilisation, Sisk spearheaded preconstruction coordination for the underground services infrastructure.
	The process of aggregating the design team's BIM models was automated by integrated Navisworks clash detection tools with BIM 360. The cloud-based BIM approach helped optimise the design, and resolve all issues, helping to significantly reduce the risk of onsite issues.
	With the vast quantity of electrical services, Sisk relied on BIM to reach a new level with DfMA for efficient coordination, prefabrication, and installation.
	For example, every single bracket supporting the electrical cable trays – the main services in the building – was tagged with its exact location in the BIM model.
	In order to reduce time and waste, a new, systematic approach with BIM brought the M&E contractors together very early in the process. The elements were then fabricated in Ireland for shipment to Sweden.
	Sisk highlights some significant outcomes:
	 The Sisk team-built dashboards that stored live clash trend reports to track progress weekly, resulting in a 50% efficiency increase in the BIM management process compared to traditional, manual methods of construction coordination without the automating power of the cloud. The tight integration between BIM 360 Docs, Microsoft Power BI, and Sisk's own "Design Changes Control" dashboards provided the commercial teams with a faster way to visualise the cost and/or schedule impacts, reducing the overall take-off by a potential 40% By using BIM 360, the project continued uninterrupted as construction continued in Sweden during the Covid-19 pandemic.
	Access BIM+ that include project entitled, 'John Sisk relies on BIM best practice to deliver Malmo data centre' available in full.

Other BIM+ Projects include:

 Project: <u>Willmott Dixon takes centre stage on film school</u> <u>fit-out</u>, 12th October 2020.

- Willmot Dixon Interiors' transformation of a former factory in Islington into the London Screen Academy (LSA) film school, completed earlier this year (2020), showcases best practice in the use of BIM on a fit-out project.

The contractor completed the 54-week project for LcatED working in conjunction with the Department for Education. It involved the partial demolition of the central and southern section of the existing four storeys plus basement building, to be replaced by a three-storey plus basement building with an open terrace on the third floor to be used as an amenity space.

One of the customer requirements on this project was to implement a BIM Level 2 process to support the construction plus operation and maintenance stages.

 Project: <u>Mace use AI tech on Mayfair project to meet</u> <u>Covid-19 safety challenges</u>, 1st October 2020

Work was already underway on Lodha's No 1 Grosvenor Square flagship project when the lockdown and then social distancing added to the normal construction challenges.

- Client: Lodha
- Main contractor: Mace

Balancing the many requirements of a building project – cash flow, cost, quality, and timelines – is always a significant challenge for project leadership. The Covid-19 pandemic made the balancing act even more intense, costing projects valuable time at the start of lockdown and requiring adjustments to ensure the health and safety of all personnel on site as production restarted.

With guidance from the Construction Leadership Council (CLC), recommending 'one metre plus' distancing on sites, it has been a major logistical challenge to keep projects as functional and on schedule as possible, while maintaining safety prerogatives and priorities for all staff.

 Project: <u>BAM responds to Southampton NHS BIM</u> <u>Challenge</u>, 11th September 2020

BAM Construct UK has responded to the BIM challenge issued by its client University Hospital Southampton NHS Foundation Trust on the building of a £21m intense care unit. BIM is a priority for the trust as it strives to maintain a large and complex estate with multiple projects each year. BAM Construct UK was challenged by the trust to achieve a level of BIM output that was "probably more comprehensive than any of their recent projects", said Jeff Belk, the trust's

head of estates and capital projects.

The scope of asset data and assets labelling was designed to mesh BIM with the client's computer-aided facilities management systems and required significant fine-tuning. BAM was just a couple of months into the job when Covid-19 struck and non-essential visits to the project were suspended; the decision was made to roll out weekly virtual project walkthroughs, showing works as they progressed, using the 3D scanning system Matterport.

 Project: <u>Hard hat cameras ensure Claridge's project runs</u> <u>smoothly</u>, 3 September 2020.

Northern Ireland contractor Mastercraft has been using Oculo's hard hat camera site-scanning equipment to monitor progress on its work at Claridge's Hotel in Mayfair, London.

Oculo's 360 degree video camera is mounted on a hard hat to record progress each week during a usual site inspection. The system creates a virtual copy of the site that is navigable via an online platform, allowing users to zoom in on areas of interest and pin notes in the virtual space, meaning they can log RFIs, snags and notify clients or contractors about specific issues. Mastercraft adopted the technology when the Covid-19 travel ban came into force, meaning its project manager was unable to leave Belfast to visit the site.

Social distancing regulations also meant that other professionals on the project, such as the QS and design team, could carry out inspections and valuations remotely.

• Project : <u>Digital twin helps BDP Edinburgh project</u> progress, 4 August 2020.

- Work on the flagship Edinburgh St James project has been able to keep moving during the coronavirus lockdown thanks to digital collaboration.

- Client: Nuveen Real Estate
- Lead consultant/technical architect: BDP
- Main contractor: Laing O'Rourke

Despite the lockdown forcing the suspension of onsite activities for 12 weeks, work still continued apace behind the scenes on the £1bn Edinburgh St James project, a key development for the city. Digital collaboration gave designers, engineers and contractors an opportunity to seize something good from the crisis.

This approach meant that it was business as usual for design development and coordination for the project team during lockdown.

As a result of the restrictions on site, designers and engineers have relied more heavily on digital collaboration tools, and the use of Building Information Modelling (BIM). Integrated virtual design and construction solutions are also being developed to be used end to end, from project concept through to commissioning on what is arguably the most complex building project underway in Scotland. BDP Glasgow Studio is the lead consultant and technical architect for the design of Edinburgh St James, Nuveen Real Estate's developing, and is delivering the master plan as part of the Laing O'Rourke construction team.

Access the Chartered Institute of Building's (CIOB), BIM+ articles, projects, case studies and more, in full.

Latest BIM news – 10th annual BIM report 2020 available

<u>Construction Information Service</u> (CIS) *Insight 2020.* The Latest Edition focuses on the latest NBS Report – **NBS 10**th **National BIM Report 2020** that covers -

- UK BIM Framework,
- New RIBA Plan of work, and
- Importance of classification and going beyond BIM.

The 2020 annual BIM report marks the 10th year of recording over 1,000 industry professional's view about BIM. It illustrates how usage and perceptions of BIM have changed since 2011, progress made as an industry, and anticipated changes in the next decade

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Built Environment Research

Latest from Savills Impacts – The Future of Global Real Estate

- Market Trends: Savills.com

In-depth research and analysis into property market trends, forecasts from specialist research teams, and market leading commentary to help you make the right property decisions

The impact of Covid-19 on real estate

- From residential to retail offices to logistics, the long-term impact of Covid-19.

When Savills decided on the theme 'tipping points' for their 2020 *Impacts* programme at the end of 2019, various topics were discussed: climate change, demographics, technology and many more. What wasn't known at the time is that we were about to be faced with a pandemic. Covid-19 changed the way we work and live almost overnight and is likely to have a long-term impact on real estate.

As countries come out of their strict lockdowns but social distancing is still encouraged, the long-term impact of Covid-19 is yet to be seen. Many believe the world will emerge as a different place.

Here, Savills discuss the potential changes that may be seen across the different sectors. If you prefer to read a specific sector,

then select the relevant sections title to go straight there and include: Office sector, Logistics sector, Retail sector, Hotels sector, Institutional residential sector, Senior housing and healthcare sectors, End-use residential sector, and Conclusion.

Read the full Savills Impact Publication 'The Impact of Covid-19 on real estate', 2020'

Also: <u>Savills (2020)</u> 'Welcome to Impacts 2020' *Impacts*, May, <u>Savills [online]</u>. Available at Savills.com

Savills (2020) 'The impacts of the US-China trade war', *Impacts*, May, Savills [online]. Available at Savills.com

Savills Covid-19 Resource Hub

Latest Research from Joseph Rowntree Foundation (JRF) -

- Inspiring Social Change: The Joseph Rowntree Foundation is an independent social change organisation working to solve UK poverty.

UK Poverty 2019/20: Housing (Part of UK Poverty 2019/20)

- It's not right that high private rents are pulling low-income households into poverty.

We all need somewhere to live, so it's unacceptable that many of us are shut out of having a secure, affordable home.

Increasing numbers of families with children are being caught in poverty's grip because of high private rents, as well as a raft of changes to social security policy, which have made housing less affordable.

Read the article 'UK Poverty 2019/20 Housing' in full

UK Poverty Statistics from the Joseph Rowntree Foundation (JRF)

- The latest UK poverty data, statistics and analysis from JRF's Analysis Unit. This online toolkit can be used to find information about poverty rates and related issues in the United Kingdom.

Access the JRF UK Poverty Statistics toolkit.

Latest Research from The Smith Institute

- The Smith Institute is a leading independent 'think tank' which promotes progressive policies for a fairer society. They provide a high-level forum for new thinking and debate on public policy and politics. Through research, reports, briefings, monographs, events, lecturers, education, and their website, the Institute offers a platform for thought leadership on a wide range of topics.

A National Housing Conversion Fund: buying properties to boost affordable housing supply

September 2020

The Smith Institute's Affordable Housing Commission published a report into the national housing conversion fund.

The report examines two main ways a ring-fenced National Housing Conversion Fund could be achieved. The first is targeting funds to purchase homes on the secondary (existing) market. It examines which housing markets – in broad terms – the investment might be best aimed at, factoring in how it could help improve housing condition and support jobs and growth. This option could be weighted to support weaker housing markets by providing a floor for the market and helping those struggling and desperately needing to sell. Finding could be made contingent on investing in a property to raise standards. By focusing on low demand housing areas, a higher proportion of the investment would target jobs and growth rather than land costs in high demand places, where the economic rationale is weaker.

The second aspect concerns additional funding for social landlords to purchase homes for sale being built by housebuilders and converting them to social and affordable housing. With sites stalled and the prospect of construction workers losing their jobs, this approach would meet the strategic objective of making more housing affordable, as well as the shorter-term goal of supporting the recovery. It would also ensure that capacity and capabilities within the housebuilding industry is not lost due to the downturn but retained for when a recovery materialises.

The overarching case for a National Housing Conversion Fund rests not only on the urgent need to increase social and affordable housing and rebalance the housing system, but also as a quick and cost effective way of supporting the economy as we move forward from – what we hope – is the worst of the pandemic. And, as demonstrated in this report, such a scheme could also improve housing conditions and contribute to the government's strategic ambitions to level up the economy and reduce carbon emissions.

Read the full piece of research, 'A National Housing Conversion Fund: buying properties to boost affordable housing supply'.

Falling behind: The impact of Universal Credit (UC) on rent arrears for council tenants in London July 2020

This report was commissioned by Southwark Council, with the support of eleven other London local authority landlords and coordinated by London Councils. The research and report focus on two main questions:

Bac	k to	top

- How has the roll-out of Universal Credit (UC) affected rent payment behaviours among residents in local authority-owned housing across London?
- How are identified changes in behaviour or the absence of behaviour change – affecting the tenancies of those tenants who are receiving housing cost support under the new arrangements?

This research was commissioned against the backdrop of growing evidence of the impact that UC is having on rent payment behaviour and rent arrears, as well as broader concerns about how it is affecting the financial wellbeing of recipients. Much of the previous research in this field has focused one or two housing providers. The intention of this research was to understand what the overall impact might be across multiple providers and locations. To achieve that objective the research covered 12 participating London boroughs, who collectively own over 210,000 homes – 13% of council housing in England. 1 Including data from these 12 boroughs also offered a larger sample of cases. The study examined those making a new claim for the housing element of UC during a three-month period (July-September 2019) in the 12 London boroughs with final rental data running until December 2019. This falls after the roll-out of Universal Credit full service to all parts of London, which was completed by December 2018. It also follows a series of reforms made in 2018, including the abolition of the seven-day waiting period and the introduction of a two-week Housing Benefit (HB) run-on.

The report tells this story of financial stress through analysis of tenant rent accounts. The scale of the costs to social landlords is also apparent in escalating arrears after tenants make an effective UC claim.

By examining this impact and tracing rent behaviour over time, the analysis points towards what kind of reforms might be needed to improve UC to the benefit of both tenants and social landlords which are presented in the report.

Read the full piece of research, 'Falling behind: The impact of Universal Credit on rent arrears for council tenants in London'.

Consumer Rights in the Private Rented Sector July 2020

People who rent from a private landlord are at the sharp end of the housing crisis, but the truth is we have often more rights as consumers when we rent a car, buy a fridge-freezer or take out a loan than we do as private renters.

This has been reinforced during the coronavirus crisis, with people spending more time at home and many realising just how precarious their housing situation is.

This report sets out a new perspective on how we can improve the private rented market: by recognising the consumer gifts we're

used to having in other markets, from utilities to financial services, and looking at how we might apply those lessons to the private rented sector.

Read the full piece of research, 'Consumer Rights in the Private Rented Sector'

All things being equal: The final report and recommendations of the Enfield Poverty and Inequality Commission (EPIC) January 2020

- This report presents the findings and recommendations of the Enfield Poverty and Inequality Commission. The Commission, chaired by Baroness Tyler of Enfield, was made up of a mix local and national stakeholders and experts and was supported by the Smith Institute.

To undertake a review of poverty and inequality in Enfield and set out recommendations, the Commission:

- Initiated a 'call for evidence' to understand the views of local people and organisations. A feedback account was set up and promoted and comment boxes were placed in Enfield's four hub libraries for member of the public to summit evidence.
- Considered relevant existing datasets across a range of available evidence bases.
- Engaged directly with local people, service providers, community organisations and businesses, through public meetings, focus groups, and one-to-one interviews.
- Considered best practice that has successfully been taken forward in Enfield and elsewhere that may be replicated or adapted for wider use.
- Held four Commission meetings to hear evidence on the three threads with follow up discussions.
- A deliberative 'solutions workshop' at Green Hall Community Centre in Edmonton, inviting organisations and members of the public who had engaged with the Commission to come together and formulate recommendations.

The Commission's work focussed on three inter-connecting themes. These were:

- Living: To what extent does who we are and where we live affect our life chances and the services we can access?
- Learning: What barriers prevent local people from accessing opportunities through education and training?
- Earning: How can people on low incomes be better supported to secure long-term economic prosperity?

<u>Read the full piece of research, 'All things being equal: The</u> <u>final report and recommendations of the Enfield Poverty and</u> <u>Inequality Commission'.</u>

Safe as Houses 3: Have government reforms to Universal Credit reduced the rent arrears of Southwark's tenants?

- This report was commissioned by the London Borough of Southwark. The aim of the report is to better understand the impact that Universal Credit (UC) has had on the rent payment behaviour of the borough's own social housing or "council" tenants.

The report focuses on two main questions: first, whether there has been an improvement in rent payment behaviour since reforms to UC were introduced in 2018; and second, to see what the impact of UC has been long after tenants have transitioned onto the new benefit.

Read the full piece of research, 'Safe as Houses'.

Latest from the CBRE Research Blog: About Real Estate

The CBRE Research blog showcases a variety of informed viewpoints, spanning all major property sectors that include –

- Offices Discover up to the minute and future looking trends in the Office sector for occupiers, landlords, investors and developers
- Retail in detail,
- Industrial CBRE 'shed' light on all things industrial,
- **Residential** CBRE's 'house' vide on all things residential, and
- **Investment** addressing the challenges and opportunities facing commercial real estate property investors

Access the CBRE website and About Real Estate Research Blog

Latest Research / Publications from CABE – Chartered Institute of Buildings Engineers

Two new publication have been launched from the Competence Steering Group (CSG) in 2020 with the view to improving competence and driving culture change throughout the industry.

Setting the Bar – a blueprint to improve competence for those working on higher risk buildings and drive culture change has been set out by a cross-industry group representing more than 150 organisations, including CABE, in the fire and built environment industries

Setting the Bar is the second and final report of the CSG and is an update of its Interim Report, *Raising the Bar* published in August 2019. The work was initiated by the recommendations in Dame Judith Hackitt's review *Building a Safe Future*.

Access Setting the Bar - Final Report

Competence Requirements for new role of Building Safety Managers

The competence requirements for the proposed new role of the Building Safety manager was been set out in a new 2020 report *Safer people, safer homes: Building Safety Management.*

Under new legislation being introduced in the *Draft Building Safety Bill* published in July 2020, those deemed responsible in law for the safety of higher-risk building, such as the landlord, will be required to appoint a Building Safety Manager.

The role of the Building Safety Manager will be to look after the day-to-day management of fire and structural safety in higher-risk buildings and establish a clear point of contact for residents for fire and safety related issues.

<u>Access Safer people, safer homes: Building Safety</u> <u>Management</u>

Access the Chartered Association of Building Engineers for further information.

Access Building Engineer website

Latest Research from RICS

- The Royal Insitution of Chartered Surveyors (RICS) recognise the huge importance of property, land, construction and the built environment. Through their market surveys and research, they aim to advance the thinking of the profession and raise the profile of the industry.

<u>Note</u>: Latest research published by RICS is covered earlier within *Knowledge Foundations* and under **Other News > RICS Market Surveys**.

As of November 2020, the latest news & insights include:

- New cost prediction standard instils consistency in construction markets
- Time to Retrofit: Decarbonising UK buildings and economic recovery
- RICS Support Planning Reform
- BCIS analysis of the month: Early learning and childcare centre
- RICS Community Infastructure Levy Index 2021
- Construction industry adapts to COVID-19 measures
- Build back better: Is commercial property going green?

CIOB Research and Policy Portal latest

The quality of the built environment effects every member of society. As a professional body that represents the leaders and managers who work at every stage of the lifecycle of a construction project, The Chartered Institute of Building (CIOB) seek to influence government, industry and other stakeholders around the world with the aim of promoting the construction

Knowledge Foundations	Page 41
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	As of November 2020, the Policy Portal latest include:
	 Understanding Mental Health in the Built Environment CIOB response to the Building a Safer Future: Proposals for reform of the building safety regulator consultationm and Combined Action Needed to Tackle Severe Skills Shortages The Business, Energy & Industrial Strategy (BEIS) Select Committee Inquiry into Post-pandemic economic growth.
	Access the Chartered Institute of Building's Policy and Public Affairs website
	Latest Research and Resources from the House of Commons Library, the House of Lords Library and the Parliamentary Office of Science and Technology (POST) About the House of Commons Library - The House of Commons Library is a research and information service based in the UK Parliament. Their impartial analysis, statistical research and resources help MPs and their staff scrutinise legislation, develop policy, and support constituents.
	<u>Watch this quick video to find out how the House of</u> <u>Commons Library works</u>
	<i>Source:</i> UK Parliament (2020) 'How the House of Commons Library works', YouTube [video]. Available at: youtube.com
	As of November 2020 , the House of Commons Library has recently updated their website that is now broken down into the following sections or subject areas:
	Services that include Research, Resources, Training & Events,
	Brexit that covers Legislation, Negotiations, Policy, The EU, and Brexit explainer videos,
	Coronavirus – read the latest Coronavirus (COVID-19) research and analysis from UK Parliament.
	Economy, Business and Transport that include Business, Economy, Economic Updates, Transport, and Work & Incomes,
	Home Affairs incl. Communities, Crime, Family & Civil Law, Justice, Immigration, Security, and Culture, Media & Sport,
	Parliament & Elections that include Devolution, Elections, Government, Parliament, and Local Government,

Science, Environment and Technology that include Energy, Environment, Climate Change, Sciences, Local Data

Social Policy that include **Education**, Families & Social Services, Health, **Housing & Planning**, and Welfare & Pensions,

Back to top	World Affairs that is broken down into Africa, Americas, Asia Pacific, Defence, Europe, Institutions, and Middle East, and more.
	As of November 2020 , the latest House of Commons, Research Briefings incl.
	 Committee on Standards – lay members National Insurance Numbers (NINOs) Coronavirus: Support for businesses Regional and National Economic Indicators Coronavirus: Adult sosical care key issues and sources
	Under ' Education' and within 'Social policy', the top research briefings incl.
	 Debate on e-petitions 300528, 302855, 306494, 324762, and 552911, relating to tuition fees Funding for further education Coronavirus: childcare FAQs Coronavirus and schools: FAQs Education spending in the UK
	Under ' Housing and Planning' and within 'Social policy', the top research briefings incl.
	 Support for UK Veterans Constituency data: house prices Freeholders' estate and service charges Housing Market: Key Economic Empty housing (England)
	Under ' Energy', 'environment ' and ' Climate change ', and within 'Science, Environment and Technology' include:
	 Co-operative and Community Benefit Societies (Environmentally Sustainable Investment) Bill 2019-20 Housing and net zero, and Work of the Jet Zero Council Energy policy: an overview Agriculture Bill 2019-21 Reading list of UK and devolved Parliament and Assembly publications on the UK#s withdrawal from the European Union and UK-EU future relations.
	House of Commons Library search on 'construction industry' identifies 18 key documents, that incl. 'Taxation in the construction industry', 'CITB – Construction Industry Training Board Levy', and 'The construction industry: statistics and policy, December 2019' -
	Abstract: Construction industry – employment, new orders, output. Construction 2025, <u>The Farmer Review</u> and the <u>Construction</u> <u>Sector Deal</u> (part of the government's <u>Industrial Strategy</u>).
	Key statistics – In 2018, the construction industry contributed £117 billion to the UK economy, 6% of the total.

Economic output in 2018 was slightly down on 2017, the first fall since 2013.

There are 2.4 million construction industry jobs in the UK in Q2 2019, 6.6% of all jobs. There are more constructions jobs now than at any time since 2007, although throughout this period, roughly the same proportion of jobs have been in construction.

The construction industry is unusual because of the high proportion of self-employment in the sector -36% in Q2 2019, compared to the average for the whole economy of 13%.

New orders to the construction industry were worth £61.7 billion in 2017. This is 13% down in 2017, the first fall since 2011. New housing orders accounted for 35% of all construction orders, commercial orders accounted for 25% and infrastructure orders accounted for 19%.

Access and download the full report, 'Construction industry: statistics and policy

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Property and Construction Statistics

Latest Property and Construction Statistics from RICS:

UK Economy and Property Market Chart Book, Q3 2020

- A substantial rise in unemployment is likely towards the end of the year.

Economic Outlook – On the face of it, the UK is now in the recovery phase from what can only be put down as pretty much the worst quarter for GDP since records began. Looking closely at the latest labour market indicators however, it seems like challenging times still lie ahead. Flash estimates by HMRC for example suggest that employment through PAYE has already slipped by almost 750,000 in the last five months. What's more, experimental statistics by the ONS suggest that unemployment related universal credit claims have risen by 1.4 million since March. It is almost inevitable that these numbers will increase in the coming months as the government's job retention scheme is withdrawn. Predictably enough, the unemployment rate looks set to climb. It wouldn't come as a total surprise if the jobless rate rises from 3.9% currently to above the 8% mark in the last quarter of 2020.

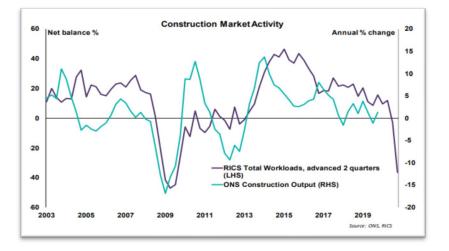
Also covered in this Q3, 2020 UK Economy and Property Market Chart Book

- GDP is set to fall sharply this year
- · Government debt levels look set to rise substantially

- However low interest rates could help to keep debt servicing costs manageable
- Housing sales are likely to recover in the coming months
- Infrastructure work could support activity in the construction sector

Construction Sector – With much of the industry required to close amidst the Covid related lockdown, survey data is consistent with a sharp drop in construction output in the first half of this year (2020).

Output looks likely to fall in the coming months:



Source: RICS Economics Research: *RICS UK Economy and Property Market Chart Book* (Q3 2020), London: RICS, p11 - Chart 20.

The Q2 2020 results to RICS UK Construction and Infrastructure Monitor (and reported in the last monthly issue of *Knowledge Foundations)* and consistent with a deterioration in market sentiment with the headline workloads net balance slipping further into negative territory over the quarter (see above chart).

Read the full piece of research 'RICS UK Property and Market Chart Book, Q3 2020

UK Residential Market Survey: September 2020

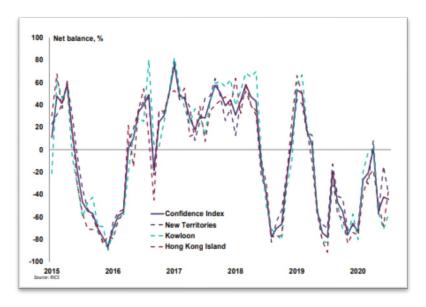
- Housing market activity continues to advance at a strong pace.

- Survey metrics on demand, sales and instructions remain firmly positive
- House price growth accelerating right across the UK
- Twelve-month sales expectations still portray a more subdued outlook further ahead.

The September 2020 *RICS UK Residential Survey* results continue to portray strong upturn in activity across the market, as indicators on enquiries, agreed sales and new listings all remain strongly positive. Nevertheless, respondents still foresee sales weakening further ahead amid the challenging macro-economic environment,

Back to top	evidenced by the twelve-month expectations' series moving deeper into negative territory in the latest returns.
	During September, a headline net balance of +52% of survey participants reported an increase new buyer enquiries. This marks the fourth consecutive monthly pick-up in demand, albeit the latest reading represents a slight moderation compared to net balances of +75% and +63% posted in July and August respectively.
	House price growth continues to gain momentum, as the survey's headline indicator on prices climbed once again to post a net balance of +61% (up from +44% last time). What's more, all parts of the UK are now seeing prices rise to a greater or lesser degree, albeit the rate of house price inflation appears to be more modest in London compared to all other regions.
	In the lettings market, tenant demand reportedly rose for the fourth month in succession (non-seasonally adjusted monthly series). That said, while respondents saw a pick-up in tenant demand across all parts of the UK last month, London now standards out as the only area in which a negative trend in tenant demand was cited in September (2020).
	This recent dip in demand has been reflected in short-term rental growth expectations across the capital, with a net balance of -67% of contributors anticipating rents in London will fall over the next three months. By the way of contrast, the national three-month rental expectations indicator returned a positive reading of +19%.
	Read the latest RICS UK Residential Market Survey: September 2020 in full.
	RICS - SPACIOUS 千居 Hong Kong Residential Market Survey: September 2020 - Demand from buyers and renters continues to deteriorate.
	 Confidence Index remains negative for the third consecutive month Expectations for New Territories, Kowloon, Hong Kong Island converge Rental market under pressure amid rising supply and weak demand
	Demand for housing from both buyers and renters continues to decline, according to feedback to the RICS-Spacious Hong Kong Residential Monitor. As can be seen in Chart 1, the Confidence Index* was little changed at -44 in September '20 from -42 in August '20, indicative of a deterioration in housing market sentiment. Chart 1 also shows sentiment amongst Hong Kong's three regions (New Territories, Kowloon, Hong Kong Island) appears to have once again converged in September after diverging in August.





Source: RICS Economics Research: *RICS Hong Kong Residential Monitor – September 2020*, London: RICS, p1 - Chart 1.

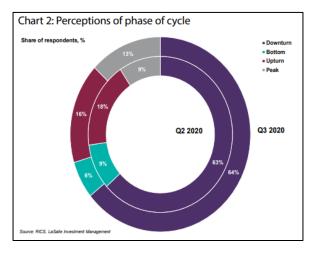
* The Confidence Index is a composite measure capturing overall market momentum, encompassing variables on short-term.

Read the latest RICS HK Residential Monitor: September 2020 in full.

Global Commercial Property Monitors, Q3 2020

- Headline rents and capital values expected to soften amid gloomy economic backdrop.

- Commercial property sentiment indices still stuck in negative territory around the world
- Retail and office sectors facing significant disruption while industrials show resilience



Source: RICS Economics Research: *RICS Global Property Monitors,* Q3 2020, London: RICS, p2 - Chart 2.

• 64% of respondents see their market turning down, with just 6% sensing conditions have reached a floor.

Majority of respondents see their market turning down

As shown within the Chart – Perceptions of Phase of Cycle, 64% of respondents worldwide currently view their local market to be in a downturn phase of the property cycle. This is more or less unchanged from 63% back in Q2.

Meanwhile, only 6% of contributors feel the bottom of the cycle has been reached, slightly less than the 9% of contributors who held this view in Q3.

Read the latest RICS Global Commercial Property Monitor, Q3 2020 in full.

Latest Statistics from the Office for National Statistics (ONS)

Construction Industry highlights include – Construction output in Great Britain: September 2020, new orders and Construction Output Price Indices, July to September 2020

Short-term measures of output by the construction industry and contracts awarded for new construction work in Great Britain.

What's covered in the latest bulletin?

- Construction output grew by 2.9% in the month-on-month all work series in September 2020, driven by increases in both new work (2.7%) and repair and maintenance (3.4%); this is the fifth consecutive month of growth but the lowest rise in that time.

- The level of construction output in September 2020 was 7.3% below that in February 2020, with only infrastructure and private new housing having returned to above their pre-pandemic levels of output; all other types of work in September 2020 have yet to recover, with public new housing the furthest below its February 2020 level at 29.4%.

- Quarterly construction output grew by a record 41.7% in Quarter 3 (July to Sept) 2020 compared with Quarter 2 (April to June) 2020; this was driven by record quarterly growth in both new work (40.8%) and repair and maintenance (43.4%).

Read the full statistical bulletin, 'Construction output in Great Britain: September 2020, new orders and Construction Output Price Indices, July to September 2020

Latest Statistics from HSE – Health and Safety Executive

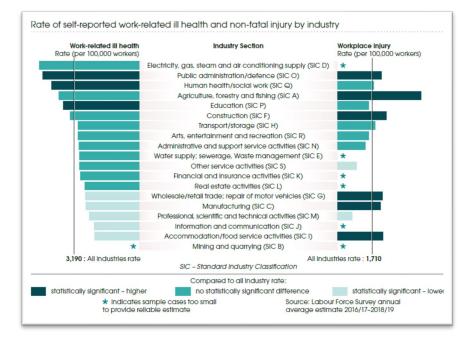
In 2018/19 an estimated 1.4 million workers were suffering from an illness they believed was caused or made worse by their work and 581,000 workers sustained a non-fatal injury at work.

However, the risk of injury and work-related illness varies across industry, being more likely in some industries than others. The chart that follows shows how the overall **rates** of self-reported work-related illness and workplace injury vary between industry groups.

- The industries for which the rate is statistically significantly higher than the average is generally not the same for work-related ill health and workplace injury;

- While the chart shows the overall picture for each industry group (that includes 'construction'), this may be masking differences at more detailed levels (for example illness type or more detailed industry sub-groups).

For 'Rate of self-reported work-related health and non-fatal injury by industry'



© Crown copyright 2019

Source: HSE (2019) 'Health and safety at work: Summary statistics for Great Britain 2019', Bootle: HSE, p9.

More detailed statistics on selected industry groups (that include 'construction' can be found from <u>the suite of health and safety</u> <u>statistics tables</u>.

Access further information on health and safety statistics from HSE – Health and Safety Executive.



e-Journal Review

Built Environment Industry Journal titles reviewed by UCEM e-Library

<u>Modus</u> - the RICS magazine that brings you the latest news and views, expert advice and in-depth features spanning the breadth of the surveying profession around the world.

In the latest digital <u>MODUS</u> (November 2020), RICS takes a look at 'FM post-pandemic: the crucial role of procurement' – Procurement is a key part of facilities management and in the COVID-19 era its role in keeping businesses functioning while driving value and reducing costs has become vital.

Latest articles:

- The heat is on: retrofitting homes to save the plant: Reducing energy usage and carbon emissions in houses is vital in the fight against climate change, and in cooler climates that means getting ourselves off gas. But what's the viable alternative?

- **Investment post-COVID-19: downtime in Europe –** Real estate in Europe has been hit hard by the pandemic, and there's not much sign of a let-up yet. Investors will be playing a defensive game.

- Following future leaders: the chartered surveyor to be – Mohamed Saâd Alami, 27, is from Casablanca in Morocco and is about to take his APC (Assessment of Professional Competence) – the final step to becoming a chartered member of RICS. He works at his family – owned real estate company leading its valuations department.

- Why the Dutch are masters of circularity: When it comes to circular construction, where nothing is wasted and everything is sustainable, the Netherlands is leading the way.

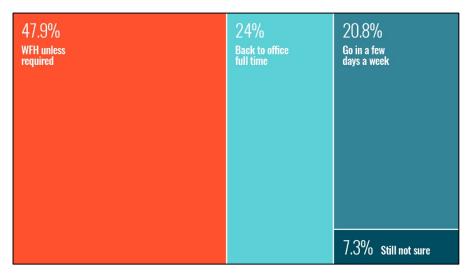
- The post-pandemic FMs: bringing it into the boardroom -COVID-19 has hastened a change in the remit of the facilities manager. The traditional office is in the midst of an existential crisis, and the FM has a big part to play in its future.

- **The circular economy in numbers:** *Modus* crunches the numbers on the challenge the construction industry has to become more circular.

- Following future leaders: the newly chartered surveyor: Winnie Che MRICS trained as a chartered surveyor after four years in the property industry. She tells us about becoming chartered during a pandemic, and how her career is all about people.

- Level up: the core skills of quantity surveying: Gain core knowledge and get a taste of what the profession is all about on the RICS Quantity Surveying: Foundation Programme.

- Working from home: how was it for you? Companies are calling for staff to get back to the office but the data (as shown overleaf) suggests that employees aren't all ready to return to the commute just yet:



Working from home: how was it for you?

Source: RICS (2020) 'The results of the RICS Modus Twitter poll on home working', *Modus,* 1 October, London: RICS.

Please note: In addition to *MODUS*, RICS publishes other journals that are free to view online incl.

- <u>Construction Journal</u> The journal helps quantity surveyors and project managers with the technical and professional aspects of their day jobs and keep up to date with developments and practical matters in the profession. It covers topics including contracts, cost management, procurement, construction law and regulations, communication and project management skills.
- <u>Built Environment Journal</u> (incl. Building Surveying, Building Conservation, and Building Control) - Coverage keeps practitioners in the disciplines of building surveying, building control and building conservation up to date on the latest developments, products, standards and guidance.
- <u>Land Journal</u> The journal emphasises the crossovers in these practice areas and their global nature, with articles contributed by experts from all over the world.
- 4. <u>Property Journal</u> The journal contains high-quality technical material in clearly defined sections, as well as some material that crosses professional groups to reach a wider audience.

Further information can be accessed via the RICS Website, Home > News & Insights > <u>RICS Publications</u> [online].

The Heritage Alliance's <u>Heritage Update</u>, the latest edition, November 2020 – Issue 431 focusing on Rebuilding Heritage, a free support programme to help the heritage sector respond to the ongoing impacts of the COVID-19 pandemic. For more information on the programme visit <u>the Rebuilding Heritage</u> website.

Institute of Workplace and Facilities Management (IWFM) <u>Facilitate</u>, the latest November 2020 edition focusing on the IWFM Impact Awards 2020: Brought to the fore – The Individual Category Winners, four being within the COVID-19 Response categories. Articles incl. 'Doing things differently' - Challenges bring out the best in us and nowhere was this more evident than at the IWFM Awards, the first Virtual Awards ceremony. Other articles incl. 'How do we create a fairer economy'; 'Disposable advice'; 'Peace in a pod'; 'Industry calls for a hospitality minister'; and more.

Contractors World International,

<u>Construction Manager</u> is the magazine of the Chartered Institute of Building (CIOB) who also publish the <u>Global Construction</u> <u>Review</u> (GCR).

<u>Construction Information Service</u> (CIS) *Insight 2020.* The Latest Edition focuses on – What is environmentally conscious building? that covers -

- Improving construction methods,
- Environmentally friendly techniques, and
- The project lifecycle and future of building.

Taylor and Francis Online incl.

- Construction Management and Economics,
- Building Research and Information, and
- Journal of Property Research

Henry Stewart Publications incl.

- Building Survey, Appraisal and Valuation,
- Journal of Urban Regeneration & Renewal, and
- Corporate Real Estate,

In-depth articles and case studies scheduled for the new volume, Vol 10 of <u>Corporate Real Estate Journal</u> incl.

1. COVID-19 – Implications for Real Estate

2. Workplace Strategy & Scenario Planning: Moving beyond the tangible to understand the future of work and place in a post pandemic world

3. Recognising the socio-technical opportunity of workplace: an analysis of early responses to COVID-19

Back to top	 4. How will the Covid-19 pandemic lead to a complete reinvention of our workplaces and offices? 5. Global-Warming and a new way to go to work, accelerated by Covid-19 6. COVID-19: Reimagine: How and where the work differently 7. New Demands for Resilience in Real Estate – Consequences of the Covid-19 pandemic 8. After the lockdowns – will we need less office space? 9. My home is my castle – An experiment-based home office analysis during COVID-19 10. Telia and Veolia: A Case Study of Shifting from Supplier to Strategic Partner 11. Energy Optimization and the Future: The Next Meaningful Cost Savings Frontier 12. Data Analytics and the Future of CRE Blockchain 13. Gen Z and the workplace: can we all get along? 14. The future role of Corporate Real Estate in delivering 'place' 15. CRE Leadership: Crisis Demands Transition to a Digital Ecosystem 16. Changing Priorities Have Accelerated Trends and Fundamental Shifts in the Supply and Demand Models for Corporate Reals Estate Outsourcing 17. Managing Global Property Portfolios, Transactions and Teams: Essays for Corporate Real Estate Executives: Part 1: Starting afresh, Part 2: Communications, Part 3: Assembling and Managing In-Market Teams, and Part 4: Transactional Risk Management in Multinational Context
	Educational Journal titles and Open Educational Resources (OERs) reviewed by UCEM e-Library <i>OpenPraxis</i> – peer-reviewed open access scholarly journal focusing on research and innovation in open, distance and flexible education.
	OPEN PRAXIS

July–Septemi 2020

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Back to top	 The latest edition, Vol 12(2) and third <i>Open Praxis</i> in 2020 includes six research papers and two innovative practice papers: Research articles include: 'Forty Years of Distance Education: Challenges and Implications at the Open University of Sri Lanka' 'Implementation of Learning Management System: A Way Ahead on the Digital Journey in Distance Learning' 'Examining eLearning system self-efficacy amongst instructors at the University of Dodama, Tanzania' 'Determining needs and priorities of learners with special needs for support services in an open and distance learning context in Turkey' 'A case study of work-based learning through the design of edX MOOCs for Latin America and the Caribbean' 'Academic Librarians Examination of University students' and Faculty's Perceptions of Open Educational Resources' Innovative practice articles include: 'Academic e-tandems as a strategy for English language learning in a Mexican university' 'If at First You Don't Succeed, Try Closing Another Assessment Loop: Implementing Online Co-Curricular Assessment. European Journal of Open, Distance and E-Learning (EURODL), an electronic, multi-media, open access journal. It publishes the accounts of research and presents scholarly work and solid information about open, distance, online and e-learning in technology-enhanced education and training in its most inclusive
	definition. Published in the latest issue, Vol. 23 (2020): Issue 1 (July 2020), article titles include:
	 'Virtual International Exchange as a High-Impact Learning Tool for More Inclusive, Equitable and Diverse Classrooms', 'Exploring the Problem of Establishing Horizon Emergent Technologies within a Higher Education Institution's Operational Framework', 'Five Learning Design Principles to Create Active Learning for Engaging with Research in a MOOC', 'Exploring the Relationship Between Interaction and the Structure of Questions in Online Discussions Using Learning Analytics', 'International Online Graduate Students' Perceptions of Col', 'Integrating Global Online Legal Education with an On-Campus Franchise Course: A Role for MOOCs'.
	The Online Learning Consortium (OLC) <u>Online Learning Journal</u> , latest edition, Vol 24(3). The third quarterly issue of Online Learning (OLJ) containing two sections, one devoted to the best papers from recent OLC conferences. Section one of this issue was edited by Patsy Moskal of the University of Central Florida,

Laurie Dringus of Nova South-eastern University, Paige McDonald

of George Washington University and Karen Swan, University of Illinois Springfield. In addition to the special section on papers presented at recent conferences sponsored by the Online Learning Consortium, this issue of OLJ also contains eight papers, broadly related to faculty and student issues as well as blended learning.

Henry Stewart Publications, Management e-Journal collection incl. Journal of Education Advancement & Marketing.

The Open Education Research Hub (OER Hub), and

The Directory of Open Access Journals (DOAJ)

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e-Book Review

Managing Diversity and Inclusion in the Real Estate Sector

Clack A and Gabler J (2019) *Managing diversity and inclusion in the real estate sector* [e-book], Oxon: Routledge. e-ISBN-13: 9780429428975

Research shows that high-performing organisations focus on diversity and inclusion (D&I). In any workplace, it is important to both understand and recognise the benefits that having a D&I workforce provides. It is integral to developing people within an organisation, serving clients as best we can, and playing an important leadership role in communities.

Managing diversity and inclusion in the real estate sector is the first to place D&I at the centre of successful real estate and construction organisations. It provides guidance to, and most importantly, actions for professionals in the sector who want to make D&I an inherent part of the culture of their organisation. This book has been written to bring the sector up to speed with what D&I is all about and how a D&I strategy can be implemented to secure future success. It presents a practical and easy-to-read guide that can help organisations and their leaders engage with and apply this agenda to win the war for talent in real estate and construction.

This book is essential reading for all property leaders and professionals working in the real estate and construction sectors. Readers will gain especially from personal reflections on all aspects of diversity by a broad range of people working in the property industry.

Adding some Tec-Variety: 100+ Activities for Motivating and Retaining Learners Online

Bonk C J, and Khoo E R (2014) *Adding some Tec-Variety: 100+ Activities for Motivating and Retaining Learners Online* [e-book]. CreateSpace Independent Publishing Platform, e-ISBN-13: 9781496162724

Knowledge Foundations	Page 55
Back to top	As this book states, "Motivation is central to all things human" and Online teaching and learning are no different.
	The authors of this free online book propose the TEC-VARIETY framework as a solution to the lack of meaningful engagement.
	It can shift learners from nearly comatose states to actively engaged ones. <i>Adding Some TEC-VARIETY</i> helps instructors focus on how to motivate online learners and renew their own passion for teaching. Using 10 theoretically driven and proven motivational principles, TEC-VARIETY offers over 100 practical yet innovative ideas based on decades of author experience teaching in a variety of educational settings.
	Access the free online book Adding Some TEC-VARIETY
	Please note: The authors have made an online version of this work available under a <u>Creative Commons Attribution-Non-</u> commercial-Share-Alike 3.0 Licence.
	Studying at a Distance Talbot C (2010) <i>Studying at a Distance</i> [e-book]. Maidenhead: Open University Press, e-ISBN-13: 9780335238057
	This essential guide provides practical help and support for those who have not previously studied at a distance and is ideal for students returning to study after a break. It covers fundamental issues such as motivation, goal setting, time management and coping strategies. Additional coverage in this third edition includes: specific information on the use of new technologies in distance learning; detailed coverage of referencing, citation and plagiarism; description of using mind maps and other techniques for planning and writing essays or reports; support for disabled students, particularly those with dyslexia; and, an expanded further resources section.
	Directory of Open Access Books (DOAB) The primary aim of DOAB is to increase discoverability of Open Access books. Academic publishers are invited to provide metadata of their Open Access book to DOAB
	Access the Directory of Open Access Books (DOAB)
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	UCFM e-l ibrary Portrait

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UCEM e-Library Portrait

Whether you are obtaining qualifications, undertaking Continuing Professional Development or researching a particular field, gaining access to a wealth of useful and credible information resources is essential!

UCEM e-Library:



© UCEM 2020

The UCEM e-Library (accessed through the Virtual Learning Environment - VLE) is a comprehensive and valuable online resource, enabling staff and students to access a wealth of up-todate, credible and subject-specific information to supplement teaching and learning materials, and support students throughout their studies.

At UCEM we recognise that in an information-rich age, everyone is pressed for time and it can be a challenge to keep up-to-speed with the latest research and find good-quality information when you need it.

The UCEM e-Library can:

- provide access to online resources around the clock,
- a first point of call for staff and students to access digital resources
- add value and depth to work
- · contribute to personal and professional development

What resources are available in the UCEM e-Library?



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Resources available within the UCEM e-Library include:

 Up-to-date information and online searchable databases from key educational and industry-specific sources incl. IHS's Construction Information Service, Estates Gazette Interactive, RICS's BCIS and ISURV, BSRIA, EBSCO

Business Source Premier, Emerald Insight and access to their 2500 eBook titles and their entire 'Property Management and the Built Environment' collection of journals, JustisOne, Westlaw UK, and more;

- · useful weblinks; e-books and e-journals,
- Research and reference material to assist and underpin written work,
- Current awareness on existing issues and trends surrounding the Built Environment, Property, Construction, and Real Estate.

Overwhelmed by the sheer amount of information out there?

The e-Library is here to help make finding up-to-date, credible and relevant information easier. Remember: "A Librarian is a powerful search engine with a heart, that listens and understands the library and information requirements of others and provides a response in a format that suits their needs"

Lucy Roper, UCEM Information Governance Manager and who can be contacted on the <u>library@ucem.ac.uk</u> email address

The work of the UCEM e-Library is endorsed and supported by <u>Emerald Publishing Ltd</u>:



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Student Career Services

The UCEM Career Services

The UCEM Career Services is part of the Student Outreach Team and Student Services. They offer careers Information, Advice and Guidance (IAG) to potential, current and past students. The service is confidential, non-judgmental and impartial.

Access UCEM Career Services

Building Better Property Professionals

Property Elite's sole aim is to build better property professionals – supporting your career every step of the way, whether you are completing a RICS accredited degree course, your RICS APC or simply seeking engaging CPD.

Back to top	Property Elite provides training and Continuing Professional Developments (CPD) services for property professionals, including students, APC candidates and corporate clients.
	Their Hot Topic Highlight blog posts will arm you with the information on the hottest topics – ready to tackle an important client meeting or begin revising for your RICS APC final assessment.
	This month (October 2020) the Hot Top Highlight – Motivation
	 This blog, written by Property Elite consultant, Blumzon, A., outlines motivation theory, and how it can be applied in practice.
	This blog is particularly relevant to the 'leading projects, people and teams' competency, as well as 'managing people' in the pre- August 2018 pathways.
	It forms useful reading to help understand diversity, inclusion and teamworking, and provides guidance for anyone who wants to improve or hone their leadership skills.
	This Blog covers:
	This week's blog will explore:
	 What is motivation? What is motivation theory? What is Maslow's Hierarchy of Needs? How can I use these theories in practice?
	In summary, motivation is the state of mind which pushes humans to perform things with positivity. The role of the leader or manager is to ensure that every individual in the team and the organisation is motivated. The various motivation theories help our understanding of what will motivate people.
	Lucy's Top Tip – If you are planning to sit your RICS APC/AssocRICS, make sure you are aware of Property Elite's APC Support services, including submission reviews, question packs, revision quizzes and e-mock interviews.
	Note: The author of most of these blogs, Jen Lemen-Hogarth is an Associate Tutor – UCEM and Partner – Property Elite. You can also download this blog <u>in audio format</u> and listen whilst on the move. When you're done, you can request further information and a free CPD certificate.
	Access Property Elite's 'Building Better Property Professionals', Latest Blogs

Other related web-links

<u>GoConstruct.org</u> website showcases the many career opportunities available in construction and the built environment.

The website helps to meet the future skills needs of the industry and to recruit a workforce that is diverse and ready for the challenge of the future.

<u>TARGETiobs</u> – All TARGETjobs graduate career guides and directories are available for you to view online and download for future reference and include <u>Property 2020</u>, <u>Engineering 2020</u>, and <u>Careers Survival Pack</u>.

<u>House Building Careers</u> – Part of Home Builders Federation (HBF), here you will be able to learn about the home building industry and how it benefits you, your community and the country as a whole.

<u>Access to: RICS Careers</u> – What is surveying? See how surveyors shape our communities and tackle global issues like climate change – and discover how you can improve the world around you.

Building People



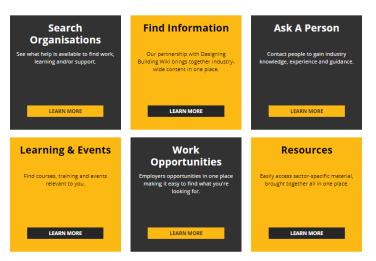
© UCEM 2020

Enabling connections for a competent, diverse and valued built environment workforce

The aim of 'Building People' was to create a technology platform and collaborative network, that enables connections and seeks to reduce the skills shortages across the Built Environment.

In 2018 UCEM's widening participation ambitions were boosted after acquiring the innovative Built Environment digital network. 'Building People', a social enterprise that aims to connect people traditionally not involved in the Built Environment sector with employers seeking to plug the skills gap via an online platform, is now a subsidiary of UCEM.

People Wiki



What are you looking for?

Building People and Designing Buildings Wiki have launched People Wiki, a free, open access knowledge sharing platform for diversity and inclusion, skills and careers, and social value.

The UK needs to build, but there is a shortage of competent and experienced workers, and the workforce we have lacks diversity. Building People joins the dots to help people find employers, opportunities and resources, and to help employers engage with a more diverse range of talent.

The launch of People Wiki is a crucial part of Building People's ambition to create a single platform that brings together a multitude of previously fragmented information, knowledge, resources, opportunities and needs focused on diversity and inclusion, skills and careers, and social value. This platform is now live and provides users with options to find organisations that can support them with built environment careers, as well as access to information and resources. In September the platform will expand to include directories that bring together events, courses and work vacancies (with an initial prototype focus on the surveying profession).

People Wiki has been created as part of Designing Buildings Wiki and is fully linked to its 10,000 existing articles and easily accessible by its 7.5 million annual users. This collaboration with an established and respected industry knowledge base will help Building People achieve its vision of a built environment that improves social and economic value by being better connected, more diverse and more inclusive

[©] Building People 2020



UCEM Sustainability Hub

UCEM has a Sustainability Hub within the VLE e-Library where you will find interesting resources, news, articles, projects and publications which support and information 'future skills' for sustainability within the construction, surveying and property industries.

Sustainability supports UCEM vision and core purpose to provide truly accessible, relevant and cost-effective education, enabling students to enhance careers, increase professionalism and contribute to a better built environment.

Building Research Establishment (BRE) Sustainability

• Practical guidance and support for delivering genuine sustainability benefits

Greater sustainability and its many benefits can be achieved for all buildings, homes, organisations and communities.

The BRE provides leading edge information and advice on all aspects of sustainable that include – Sustainable construction of buildings, Communities, Infrastructure, Sustainable organisations, Materials, products and services, Waste management, Energy management services, and Training and publications.

Access BRE Sustainability

The Routledge Sustainability Hub

The Routledge Sustainability Hub is an innovative Knowledge Centre for the global sustainability community, this Hub offers a wide range of resources for everyone – whether you are a teacher, a student, a professional or a citizen of the earth curious to discover more about the many facets of sustainability.

Access the Routledge Sustainability Hub

China Dialogue – China and the world discuss the environment

'A green Belt and Road'. Can China help countries unlock the circulate economy, green the global shipping industry and its overseas finance?

Access China Dialogue reports online.

QSAND and the Sustainability Goals

The UN Sustainable Development Agenda, adopted by world leaders in 2015, maps out a 15-year plan to fight inequality, end poverty and tackle climate change challenges. Quantifying Sustainability in the Aftermath of Natural Disasters (QSAND) is a self-assessment tool to promote sustainable approaches and

contributing to aid the achievement of several of these 17 goals in disaster affected global communities

QSAND and the Sustainability Goals



Source: Designing Buildings .co.uk Wiki (2019) 'Forgetting the big picture when considering sustainability' [online], last edited 31 March.

Note: Use of Wikis as a reference site

Wikipedia and use of other Wikis are increasingly being used by people in the academic community, as an easy source of information about anything and everything. However, citation of Wikipedia may not be considered acceptable, because Wikipedia is not a creditable source.

It is important to note that whilst Wikipedia may be one of the Web's most popular reference sites, it is not classed as a credible resource because anyone can be a contributor to the website.

This can be avoided by following two simple rules:

- Remember that an encyclopaedia (which include Wikipedia and any other Wiki) can be a good starting point for research, and not an ending point.
- An encyclopaedia can be good for getting a general understanding of subject before you extend your study of the subject further. But you then must consider the subject in more depth using books, journals articles and other appropriate and credible resources. What you find in these other sources of information will be more detailed, more precise, and more carefully reasoned than the summary you found in an encyclopaedia. The sources you reference/cite in your work will therefore be these more detailed sources you have used.

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Information Governance

UCEM is committed to advancing information governance and compliance, ensuring that the services provided comply with the General Data Protection Regulation (GDPR), Data Protection,

Freedom of Information, Records management, Copyright, and Information Security.

Information Governance:



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To make sure that information is available in the right place and at the right time to support others, the e-Library ensures that the information services comply with data protection and copyright.

Data Protection

With new technologies constantly emerging and us finding ourselves moving further into an ever more digital direction, our personal data, how it is used and who has access to it becomes a growing and global concern for all.

The General Data Protection Regulation (GDPR) was the first legislative change in recent years to address these concerns, with a broad aim to invoke a cultural shift in the way organisations manage personal data.

Further information, advice and guidance on Data protection, GDPR and more can be found at the Information Commissioner's Office (ICO), the UK's independent authority set up to uphold information rights in the public interest, promoting openness by public bodies and data privacy for individuals.

Access the Information Commissioner's Office website

Latest Data Protection News

GDPR – What's new?

The Information Commissioner's Office (ICO) website has a 'What's new' section that is updated on a regular basis to highlight and link to any changes as they occur, for example:

GDPR – What's new? [November 2020] – The ICO published detailed guidance on **criminal offence data**.

September 2020 - The <u>ICO published the Accountability</u> <u>Framework</u>, which provides detailed guidance on complying with the accountability principle.

February 2020 – The ICO published detailed guidance on <u>codes</u> <u>of conduct</u> and <u>certification schemes</u>.

January 2020 - The Danish Data Protection Agency has adopted <u>Standard Contractual Clauses (SCCs) which have been</u> <u>approved by the European Data Protection Board (EDPB)</u>. The ICO have updated their detailed guidance on <u>contracts and</u> <u>liabilities between controllers and processors</u> to reflect this.

Access the Information Commissioner's Office 'What's new?' section of their website

ICO Latest News [November 2020]

November 2020 - UK political parties must improve data protection practices

The ICO has set out how seven of the UK's political parties need to improve the way they handle people's personal data after assessing how they manage data protection.

Key recommendations for the parties include:

- Providing the public with clear information at the outset about how their data will be used;
- Telling individuals when they use intrusive profiling such as combining information about those individuals from several different sources to find out more about their voting characteristics and interests;
- Being transparent when using personal data to profile and then target people with marketing via social media platforms;
- Being able to demonstrate that they are accountable, showing how parties meet their obligations and protect people's rights;
- Carrying out thorough checks on all contracted and potential processors and third-party suppliers to gain assurances that they comply with the key transparency, security and accountability requirements of data protection law;
- Reviewing their lawful bases for the different types of processing of personal data used to ensure the most appropriate bases is used.

Read the article, 'UK political parties must improve data protection practices', in full

August 2020 - Global privacy expectations of video teleconference providers

Data protection and privacy authorities from around the world have **published on 21 July 2020 an open letter** to video teleconferencing companies, reminding them of their obligations to comply with the law and handle people's information responsibly.

The Covid-19 pandemic has resulted in a sharp uptake in the use of video teleconferencing software, increasing risks around the collection and use of personal information. The open letter provides video teleconferencing companies with principles to help them identify and address some of the key privacy risks, and better protect people's personal information.

Read the article, 'Global privacy expectations of video teleconference providers', in full

Further guidance provided by the ICO.

- Freedom of Information Self-assessment toolkit launched in 2020 helps identify gaps in compliance
- Further updates have been made to <u>guidance for handling</u> <u>Subject Access Requests</u> including
- a step-by-step guide for small businesses
- Building a controller to controller contract + template contract with guidance

Read the Blog: 'Access to information: driving change through education, engagement and enforcement', in full

Copyright

"It is important to remember that Copyright material in digital form is protected in exactly the same way as Copyright material in any other format. For example, text and images on a website are protected by copyright in the same way as printed material.

Please note: if there is something you really want to use for learning materials and someone else owns the copyright ... permission must be sought!

The copyright owner may wish to charge you, but often they just appreciate you asking them if they are happy for you to acknowledge their work and inform them of how the information will be used and who it will be circulated to".

Source: Salmon, Prof. G., (2013), E-tivities, London: Routledge

The Copyright Licensing Agency Ltd (CLA)

The CLA are a licensing body as defined by the Copyright, Designs and Patents Act 1988 c.48 (as amended) ["CDPA"]

The CLA licence organisations to copy and re-use extracts from print and digital publications on behalf of copyright owners – authors, publishers and visual artists. By 'copying' the CLA means photocopying, scanning and re-use of content from magazines, books, journals, electronic and online publications, as well as press cuttings or documents supplied by a licensed third party. Having a CLA licence helps to reduce the risk and potential cost of copyright infringement. This requirement applies to any organisation in the business, education, public or charitable sectors.

Note: UCEM holds a CLA 'Higher Education Photocopying and Scanning Licence'

Access the Copyright Licensing Agency website for further information

CLA Title Search tool

The <u>**CLA Title Search tool**</u> is an online search tool that lets you quickly find out what you can copy under your organisation's CLA licence. Whether you'd like to photocopy and distribute an article to colleagues or upload a report to an intranet or VLE, the CLA Title Search simplifies the steps required to ensure compliance

Check permission at CLA Higher Education Licence.

Introducing a new CLA Step-by-Step Guide and Interactive Toolkit for those checking permissions within their licence.

Latest Copyright News Article 13: UK will not implement EU copyright law

- Universities and Science Minister Chris Skidmore has said that the UK will not implement the EU Copyright Directive after the country leaves the EU.

Several companies have criticised the law, which would hold them accountable for not removing copyrighted content uploaded by users, if it is passed.

EU member states have until 7 June 2021 to implement the new reforms, but the UK will have left the EU by then.

Copyright is the legal right that allows an artist to protect how their original work is used.

Read the full BBC Technology news item 'Article 13: UK will not implement EU copyright law'

Government Guidance – Changes to copyright law from 1 January 2021

 This guidance covers the impacts on UK right holders, businesses, cultural heritage institutions and consumers. Note: It is not legal advice.

Access the GOV.UK 'Changes to copyright law from 1st January 2021', in full.

Keeping abreast of the latest developments in Information Governance



© CLA 2020

As UCEM Information Governance Manager I regularly attend the Copyright Licensing Agency (CLA) Copyright & Information Technologies in Education (CITE) Forum.

The CITE Forum is a place to discuss the CLA's technology and licence offerings (such as the Digital Content Store) but also an

opportunity for Higher Education Institute's to network, share and disseminate relevant copyright information. The Forum meets twice a year and publishes a biannual magazine for the CITE community containing the latest developments.

Copyright Licensing Agency (2019) '<u>CITE – 2020 Vision</u>', <u>CITE</u> <u>Magazine, Winter 2019, No. 3</u> [online].

Copyright Licensing Agency (2019) '<u>A CITE to behold</u>', <u>CITE</u> <u>Magazine, Summer 2019, No. 2</u> [online].

Copyright Licensing Agency (2018) <u>CITE Magazine - A biannual</u> magazine for the CITE Community, Winter 2018, No. 1 [online].

UCEM is committed to advancing information governance and compliance, ensuring that the services we provide comply with **GDPR**, **Data Protection**, **Records Management**, **Copyright**, and **Information Security**.

Part of my role as involves keeping abreast of the latest developments and benchmarking the work I do against that of others. I also undertake regular Continuing Professional Development (CPD), and an element of this is attending the CITE Forum attending events and conferences provided through my professional body, CILIP – The Library and Information Association, and others.

CILIP's National Copyright Conference 2020 in association with Naomi Korn Associates

Despite the current lockdown due to COVID-19, CILIP in association with Naomi Korn Associates, as well as great speakers and further experts in the field in attendance, made it happen albeit online this year.

This year's national annual Copyright Conference provided an opportunity to delve deeper into copyright issues and gain a better understanding of how policy impacts on libraries and the information sector.

Sessions covered broad copyright impact for the profession incl.

Taking Rights Away? - Reconsidering obstacles to copyright reform.

In policy debates in copyright, it is often argued that changes to the copyright legislation which may be favourable to librarians, information professionals and the users of their services, would deprive rights holders of established property rights. Such arguments were used to prevent the resolution of the '2039 problem' in unpublished works. In this keynote paper, Jonathan Griffiths, Professor of Intellectual Property Law, Queen Mary University of London argues that, when scrutinised carefully, these claims are often less convincing than they initially appear.

The EU Directive: Ground-breaking, Clarifying or Pointless

The EU Copyright Directive: What does this mean for libraries and the cultural heritage sector? Positioning new directive in the context of existing EU legislation and case law Dr Andrea Wallace, Lecturer in IP, Exeter University, and Anthony Misquitta, General Counsel V&A discussed how the new Directive will affect libraries and cultural heritage organisations.

Copyright Risk Assessment Framework

The National Libraries of Wales and Scotland have jointly developed and adopted a copyright risk acceptance framework. The framework is a pragmatic risk assessment and decision-making tool to aid the digitisation of collection material (Original Objects) and the making available of digitisations (Digital Surrogates). Fred Saunderson, Rights and Information Manager, National Library of Scotland.

Plan S from a Publishers Perspective: The benefits for Librarians and Academics

The push to Open Access has created a huge change within the industry, as well as opportunities, for academics, publishers and librarians. Sarah Greaves, PhD, will discuss Plan S from an Open Access publisher's perspective.

Copyright in the Courts

The session will consider a selection of recent, and not so recent judgements on copyright from UK courts, the Court of Justice of the EU and elsewhere as they affect librarians, archivists and other information professionals. Tim Padfield, Author, *Copyright for Archivists and Records Managers*

• Ensuring every pound and every licence advances Open Access: Transformative agreements,

Libraries entering into transformative agreements with publishers changes the business model underlying scholarly journal publishing, enabling more open access. In this session Lorraine Estelle, Director, Information Power Limited (IPL) shared a free transformative agreement toolkit, and insight into how these can be implemented by a wide array of libraries.

CLA Licensing Update for Librarians and Information Professionals

James Bennett, Head of Rights and Licensing, Copyright Licensing Agency updated attendees on the latest enhancements to the licences (esp. over this COVID-19 pandemic period and extending limits for licence holders) and workflow tools offered by the CLA and CLIA Licence Plus. During the day we were also updated about pertinent copyright issues incl. Unlocking sound heritage; Exploiting your library and information assets; Copyright Life Hacks for Librarians, in 'quick fire' five- minute lightening talks.

#CILIPCopy20 / #copyright

The Challenges of Remote Working at Present

For those who work remotely all or part of the time already, you or your employer [depending on whether you are self-employed / freelancer or an employee] will have safeguards in place that enable you to operate securely when handling commercially sensitive or others' third party data. The difference, in March 2020, is that at very short notice, organisations are having to move staff to homeworking often with literally hours' notice as the Government COVID-19 instructions are issued.

There are growing numbers of tips and survival guides online that include: Information Commissioner's Office (ICO) **Data protection and coronavirus: what you need to know**.

The challenges of remote working at present and point to consider from a data privacy perspective

Provided within this article are points to consider from a data privacy perspective that include:

Have a clear statement to all staff stressing that "The protection of personal data that we hold, and use is important to us and must be handled at all time in a way that is compliant with data protection law and our Data Protection and Privacy policies. While we have to adapt to comply with the official guidance, we will adjust out working processes to allow us to deliver our services. These are time limited instruction that will be kept under review.

At the end of the period then all data that is held temporarily on personal devices as a direct result of this exceptional times, will be deleted." (Tullo 2020)

The challenges of remote working at present and points to consider from a data privacy perspective cont.

- 1. Set out what use of data, contact lists, customer documents are being allowed.
- 2. As part of this exceptional response to homeworking keep a full record of where staff are working from and what equipment they are using.
- 3. State that you have assessed the best way of ensuring homeworking efficiency and are proposing that personal devices and mobile phones can be used. That you will review this [weekly seem sensible at present] in line with experience and how staff report it is working.
- Reissue and emphasis your usual security arrangements Virus and password protection, not leaving data visible to

others, having a PIN code, or not sharing their device with others in their family or household

- 5. Take care to be aware where data is being stored, even if temporary so that the security risk is managed and assessed. For the weekly reviews – have your Senior Leadership Team note the number of staff using personal devices, any queries or issues they are finding and demonstrate that you are monitoring the situation and are flexible in closing it down if any specific concerns arise.
- Choose your collaboration tool of choice and consider recording online meetings and note actions especially where team members are geographically spread out and where broadband speeds and kit may vary in guality.
- 7. You might also consider having a standard introduction for homeworking staff to explain that they are homeworking and not in the office, so callers understand the position.
- 8. This is where a nominated Data Protection Officer [DPO] or Data Officer can support the senior team in the messaging to colleagues.

Source: Tullo C, OBE (2020) '<u>The Challenges of Remote</u> <u>Working at Present</u>'. © <u>Naomi Korn Associates</u>, 2020. Some Rights Reserved. The text is licensed for use under the Creative Commons Attribution Share Alike Licence (CC BY SA).

Regarding UCEM we have followed these pointers:

(i) A clear statement went to staff, and UCEM has a designated area within their central SharePoint site for Business Continuity Planning (BCP) that has the following folders containing

- Official Communications [Internal and External]
- Human Resources (HR) guidance and support
- Information Technology (IT) technical support, guidance and documents

Data Protection guidance (incl. a new guidance note entitled, 'Processing Personal data when remote working'.

- The <u>UCEM Data Protection and Privacy Policies</u> have been updated and should be read in conjunction with IT Policies).
- & Hints and tips for working from home.

(ii) A retention and destruction schedule is in place that collates lists of data used within respective teams and departments; (iii) A register is kept of where staff are working from and equipment used; (iv) Regular online meetings and weekly All-staff keep everyone updated and ensuring regular communication; (v) IT provide regular updates and guidance; (vi) GDPR 2020 training has been launched to re-enforce the importance of knowing how data is used and where it is being stored, even if temporary so that risk is managed and assessed; (vii and viii) online equipment and collaboration tools are well established at UCEM as an online education provider, but are regularly monitored; (ix) As mentioned

above, hints and tips for working from home are provided, & (x) UCEM has a designated Data Protection Officer (DPO).

Please note: There are regular updates -

- On the UCEM Website,
- VLE Help Page (for students), and for all
- within the **e-Library** current awareness services, incl.
 - o Information blog and
 - Knowledge Foundations.

#BE Informed

 A short UCEM e-Library video (used within UCEM Marketing, <u>Social Media business channels i.e. LinkedIn</u> to promote the e-Library, *Knowledge Foundations*, regular information blogs, and more).

A to Z of useful references and web-links:

A - B - C - D - E - F - G - H - I - J - K - L - M N - O - P - Q - R - S - T - U - V - W - X - Y - Z

A

<u>Advance HE</u> (Previously HEA – Higher Education Academy) is dedicated to helping higher education shape its future. Providing insight, enhancing organisational performance, developing and connecting people, and accrediting achievements. Advance HE [online]. Further information is available at: www.advance-he.ac.uk [accessed 25 November 2020]

<u>American Society of Civil Engineers</u> (ASCE) Civil Engineering database provides free access to over 80 thousand abstracts taken from ASCE publications since 1973. ASCE [online]. Further information is available at: www.asce.org [accessed 25 November 2020]

Association of Researchers in Construction Management (ARCOM) brings together all those interested in construction management research. It aims to further the advancement of knowledge in all aspects of management in construction by support education, dissemination and research. ARCOM [online]. Further information available at: www.arcom.ac.uk [accessed 25 November 2020]

ARCOM Abstracts database – contains open access of every ARCOM conference paper since 1997 and is now a major resource for all active researchers.

ARCOM Newsletters - contains the latest news from the industry.

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B

<u>BBC Education</u> [online]. Further information available at: www.bbc.co.uk/news/education [accessed 25 November 2020]

BBC Search [online]. Further information available at: www.bbc.co.uk/search [accessed 25 November 2020]

BIM Task Group – The Building Information Modelling (BIM) Task Group support and develop the objectives of the Government Construction Strategy and the requirement to strengthen the public sector's capability in BIM implementation [online]. **N.B.** This group and programme are now part of the University of Cambridge, <u>Centre for Digital Built Britain</u> (CDBB) [online]. Further information is available at: www.cdbb.cam.ac.uk/AboutDBB/FAQs [accessed 25 November 2020]. Please refer to question 9 – What is the Digital Built Britain Programme? specifically.

<u>BIMForum</u> – The BIMForum's mission is to facilitate and accelerate the adoption of building information modelling (BIM) in the AEC (Architecture, Engineering and Construction) industry. Further information is available via the BIMForum Website [online] and at: http://bimforum.org [accessed 25 November 2020]

BOMA International (Building Owners and Managers Association International) – a federation of 91 BOMA U.S. associations and 17 international affiliates. Founded in 1907, BOMA's mission is to advance a vibrant commercial real estate industry through advocacy, influence and knowledge. **BOMA Research and Resources** [online] and available at: www.boma.org/BOMA/Research-Resources [accessed 25 November 2020]

<u>British and Irish Legal Information Institute</u> (BAILLI) Case Law Search [online]. Further information available at: www.bailii.org/form/search_cases.html [accessed 25 November 2020]

British Council of Shopping Centres (BCSC) was the professional body and authoritative voice for retail-led regeneration and for the management of and investment in shopping places [online]. Note: BCSC has changed and is now **REVO – Retail. Property. Community.**

British Institute of Facilities Management (BIFM) – The BIFM is now the Institute of Workplace and Facilities Management (IWFM).

<u>British Property Federation</u> (BPF) – The British Property Federation is a membership organisation devoted to representing the interests of all those involved in real estate ownership and investment. BPF [online]. Further information available at: www.bpf.org.uk/en/index.php [accessed 25 November 2020]

Building Conservation. com [online] – Information resources for conservation, restoration and repairs. Further information is available at: www.buildingconservation.com [accessed 25 November 2020]

Building Conservation.com Articles directory by subject [online]. Available at: www.buildingconservation.com/articles/articles.htm [accessed 25 November 2020]

Building Design Directory [online] – provides construction and environmental products / services / information for Architects, Engineers and Facility Managers. Further information is available at: www.buildingdesign.co.uk [accessed 25 November 2020]

Building Engineer [online] – Building Engineer website covers news and insights from the following topics: Building & Fire Safety; Business & Management; Construction & Building Materials; Energy & Sustainability; Health, Safety & Wellbeing; Policy & Regulations; Refurbishment; Technology & Digital Construction. Further information is available at: www.buildingengineer.org.uk/ [accessed 25 November 2020]

Building People - a technology platform and collaborative network, that enables connections and seeks to reduce the skills shortages across the Built Environment. Building People [online]. Further information is available at: www.buildingpeople.org.uk [accessed 25 November 2020]

Building Research Establishment (BRE) [online] is an independent and impartial, researchbased consultancy, testing and training organisation, offering expertise in every aspect of the built environment and associated industries. Further information available at: https://bregroup.com/about-us [accessed 25 November 2020]

BRE A-Z of BRE Services (from Accreditation to Zero Carbon) [online]. Further information is available at: www.bregroup.com/a-z [accessed 25 November 2020]

BRE Case Studies [online]. Further information is available at: www.bre.co.uk/podpage.jsp?id=1744 [accessed 25 November 2020]

Building Services Research and Information Association (BSRIA) [online]. BSRIA is a test, instrumentation, research and consultancy organisation, providing specialist services in construction and building services. Available at: www.bsria.co.uk [accessed 25 November 2020]

Building talk [online]. Available at: www.buildingtalk.com [accessed 25 November 2020] *Building Talk* is an email newsletter for Architects, Civil Engineers and Building Services Contractors.

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С

<u>Campaign to Protect Rural England</u> (CPRE) campaign for a beautiful and living countryside. They work to protect, promote and enhance our towns and countryside to make them better places to live, work and enjoy, and to ensure the countryside is protected for now and future generations. CPRE [online]. Available at: www.cpre.org.uk [accessed 25 November 2020].

<u>CBRE Research and Resources</u> - CBRE sets the standard for global real estate research by providing clients with accurate and insightful market knowledge. CBRE [online]. Available at: www.cbre.com/research-and-reports [accessed 25 November 2020]

<u>CPRE Resources</u> provides the latest news articles, policy guidance notes, published reports and research surrounding the following - Countryside, Farming and food, Housing and planning, Energy and Waste, and Transport. CPRE Resources [online]. Available at: www.cpre.org.uk/resources [accessed 25 November 2020]

<u>Centre for Architecture and Built Environment Research</u> (CABER) seeks to develop innovative approaches, procedures, technologies and techniques that support the design, management, reconfiguration, maintenance and operation of buildings, their fabric and the environments they create. <u>Note:</u> CABER incorporates the previous Centre for Construction and Property Research (CPRC). CABER [online] and available at:

www1.uwe.ac.uk/et/research/caber.aspx [accessed 25 November 2020]

<u>The Center for Construction Research and Training</u> (CPWR) is dedicated to reducing occupational injuries, illnesses and fatalities in the construction industry through research, training and service programs. CPWR [online] and available at: www.cpwr.com [accessed 25 November 2020]

<u>Centre for Digital Built Britain</u> (CDBB) is a partnership between the Department of Business, Energy & Industrial Strategy and the University of Cambridge to deliver a smart digital economy for infrastructure and construction for the future and transform the UK construction industry's approach to the way we plan, build, maintain and use our social and economic infrastructure. CDBB [online]. Available at: www.cdbb.cam.ac.uk/AboutDBB [accessed 25 November 2020]

<u>Chartered Association of Building Engineers</u> (CABE) is a member-focused non-profit organisation that brings like-minded professionals together. CABE shows knowledge, raises standards and developments professionals enabling a professional construction sector that works to create better, safer and more sustainable buildings that enhance people's lives. CABE [online]. Available at: https://cbuilde.com/ [accessed 25 November 2020]

<u>Chartered Institute of Building</u> (CIOB) [online]. The Chartered Institute of Building is the international voice of the building professional, representing an unequalled body of knowledge concerning the management of the total building process. Available at: www.ciob.org [accessed 25 November 2020]

<u>China Dialogue</u> [online] – China and the world discuss the environment. Available at: www.chinadialogue.net [accessed 25 November 2020]

<u>**CIOB Library</u>** Incl. Library and Information Services [online]. Available at: www.ciob.org/mediacentre/library [accessed 25 November 2020]</u> <u>CIOB's Construction Manager journal</u> [online]. Available at: www.constructionmanagermagazine.com [accessed 25 November 2020]

<u>**CIOB's**</u> *Global Construction Review* journal [online]. Available at: www.globalconstructionreview.com/ [accessed 25 November 2020]

<u>CIOB's Policy and Public Affairs portal</u> [online]. Available at: http://policy.ciob.org [accessed 25 November 2020]

<u>The CIT-eA Project Creating Innovative Technology – Enhanced Assessments</u> – a research project that explored ways to increase the amount of assessments in Further and Higher Education using technology. The CIT-eA Project [online]. Available at: http://citea.digitalinsite.co.uk [accessed 25 November 2020]</u>

Cities / buildings images database [online]. Available at: <u>www.washington.edu/ark2</u> [accessed 25 November 2020] is a collection of images of buildings and cities from around the world aimed at students, researchers and educators.

<u>C-Link</u> is a procurement software company who also provide resources (incl. guides, eBooks and other materials) created to help you make more money on your construction project. C-Link [online]. Available at: www.C-Link.com [accessed 25 November 2020]

College of Estate Management (CEM) – See University College of Estate Management (UCEM)

<u>Commercial Real Estate Services</u> (CBRE) is the world's largest real estate services provider, with a preeminent leadership position in virtually all key business centers globally. CBRE [online]. Available at: www.cbre.co.uk [accessed 25 November 2020]

<u>Community-Led Housing</u> (CLH) Toolkit: a resource for local authority and housing professionals' [online]. Available at: https://clhtoolkit.org/ [accessed 25 October 2020]. This Toolkit provides a wealth of technical and non-technical information on a broad range of issues relevant to CLH. There are five Toolboxes, covering (i) Housing (ii) Communities (iii) Legal (iv) Planning and (v) Finance.

<u>Confederation of British Industry</u> (CBI) is the UK's premier business lobbying organisation, providing a voice for employers at a national and international level. CBI [online]. Available at: www.cbi.org.uk [accessed 25 November 2020]

<u>Conference on Training in Architectural Conservation</u> (COTAC) was formed in 1959 to improve the standard of education of everyone involved in building conservation, including craftsmen, professionals and homeowners. COTAC [online]. Available at: http://ibbconline.co.uk/cotac2 [accessed 25 November 2020]

<u>COTAC Digital Bibliography</u> [online]. Available at: http://cotac.global/digital_bib/ [accessed 25 November 2020]

<u>Constructing Excellence</u> (delivered with **bre**) is a platform for industry improvement to deliver excellence through clients, industry and users through collaborative working. Resources include publications, tools and newsletter. Constructing Excellence [online]. Available at: http://constructingexcellence.org.uk/ [accessed 25 November 2020]

<u>Construction Enquirer</u> is a news website in construction. Construction Enquirer [online]. Available at: www.constructionenquirer.com [accessed 25 November 2020]

The **<u>Construction Index</u>** [online] provides a wide range of information services for the UK construction industry, that include a search engine of construction companies, daily construction news, market data, email newspaper letter, and Case Law analysis and legal commentary.

Further information is available at: www.theconstructionindex.co.uk [accessed 25 November 2020].

Construction Industry Council (CIC) – The representative forum for the professional bodies, research organisations and specialist business association in the construction industry. CIC [online] and available at: http://cic.org.uk [accessed 25 November 2020]

The <u>Construction Industry Research and Information Association</u> (CIRIA) [online]. Further information and resources are available at: www.ciria.org/default.aspx [accessed 25 November 2020]

<u>Construction Industry Training Board</u> (CITB) is the training board for the construction industry and partner in Construction Skills, the Sector Skills Council. CITB [online]. Available at: www.citb.co.uk [accessed 25 November 2020]

<u>Construction Manager</u> is the magazine of the Chartered Institute of Building (CIOB) [online] and available at: www.constructionmanagermagazine.com/ [accessed 25 November 2020]

<u>Construction News</u> [online]. Available at: www.constructionnews.co.uk [accessed 25 November 2020]

<u>Construction Products Association</u> (CPA) represents the UK's manufacturers and distributors of construction products and materials. Construction Products Association [online]. Further information is available at: www.constructionproducts.org.uk [accessed 25 November 2020]

<u>Construction Project Information Committee</u> (CPIC), responsible for providing best practice guidance on the content, form and preparation of construction production information, and making sure this best practice is disseminated throughout the UK construction industry. CPIC [online]. Available at: www.cpic.org.uk [accessed 25 November 2020]

Construction and Property Research Centre (CPRC), University of the West of England (UWE) – the CPRC's research activity is focused around the three inter-related stages of the built environment lifecycle, namely design, construction and maintenance. Note: The UWE <u>Centre for</u> <u>Architecture and Built Environment Research</u> (CABER) now incorporates the CPRC.

<u>Contractors World</u> magazines (incl. *Contractors World International* and *Contractors World UK & Ireland*) are the leading international digital publications. Delivering site reports, equipment reviews and comments of interest on the construction, mining, quarrying and related industries. Contractors World [online]. Available at: http://cwmags.com/ [accessed 25 November 2020].

COPAC exposes rare and unique research material by bringing together the catalogues of c.90 major UK and Irish Libraries. In a single search you can discover the holdings of the UK's national libraries (including the British Library), many University libraries, and specialist libraries. Note: From August 2019 Copac was replaced by <u>Jisc's Library Hub Discover</u>.

<u>Council for British Archaeology</u> (CBA) is an independent charity bringing together members, supporters and partners to give archaeology a voice and safeguard it for future generations. Archaeology for all [online]. Available at: http://new.archaeologyuk.org [accessed 25 November 2020]

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D

Delta T [online] is the Building Services Research and Information Association's quarterly journal.

Designing Buildings Wiki [online] and available at: www.designingbuildings.co.uk/wiki/Home [accessed 25 November 2020] is an industry-wide, cross-discipline forum for finding and sharing information.

Designing Buildings Wiki - Student resources [online] and available at:

www.designingbuildings.co.uk/wiki/Student_resources [accessed 25 November 2020] has a wide range of resources aimed at students of the built environment, as shown here.

Designing Buildings Wiki – Construction industry acronyms [online] and available at: www.designingbuildings.co.uk/wiki/Construction_industry_acronyms [accessed 25 November 2020] providing a list of commonly used construction industry acronyms.

The **Design Council** [online] champions great design that improves lives and makes things better and available: www.designcouncil.org.uk [accessed 25 November 2020]. See also **Inclusive Design Hub for the Built Environment** (a project of The Design Council).

<u>Directory of Open Access Books</u> (DOAB) is a service which harvests details of academic and mainly peer-reviewed books published on open access. DOAB [online]. Available at: www.doabooks.org/doab [accessed 25 November 2020]

Directory of Open Access Journals (DOAJ) covers all open access scientific and scholarly journals, using a quality control system to guarantee the content. DOAJ [online]. Available at: https://doaj.org [accessed 25 November 2020]

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Ε

<u>The Economics Network</u> [online] provides publications, events and other resources to support university teachers of economics throughout the UK and worldwide. Available at: www.economicsnetwork.ac.uk [accessed 25 November 2020]

Engineering and Physical Sciences Research Council (EPSRC) is the main UK government agency for funding research and training in engineering and the physical sciences, investing more than £800 million a year in a broad range of subjects – from mathematics to materials science, and from information technology to structural engineering. EPSRC [online]. Available at: www.epsrc.ac.uk [accessed 25 November 2020]

English Heritage cares for over 400 historic buildings, monuments and sites – from world-famous prehistoric sites to grand medieval castles, from Roman forts on the edges of the empire to a Cold War bunker. English Heritage [online]. Further information is available at: www.english-heritage.org.uk [accessed 25 November 2020]. Note: English Heritage has now separated into two organisations. If you are looking for information on listing, planning, grants or heritage research and advice, please visit **Historic England**.

<u>Estates Gazette</u> The UK's largest commercial property news team. *Estates Gazette Interactive* [online]. Available at: www.egi.co.uk [accessed 25 November 2020] incl. *Estate Gazette, News from the nationals* – Round-up of the top property stories with quick links.

European Real Estate Society (ERES) was established in 1994 to create an international real estate network between academics and professionals across Europe. ERES [online]. Further information is available at: www.eres.org [accessed 25 November 2020].

ERES Digital Library [online] and available at: www.eres.org/index.php/activities/libraryeres [accessed 25 November 2020]

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G

<u>Great Buildings</u> [online]. Available at: www.greatbuildings.com [accessed 25 November 2020] provides a database of buildings around the world and across all historic periods. You can search the database by building names, place or architect name. It provides access to 3D models, photographic images and architectural drawings.

<u>Glenigan</u> [online]. Available at: www.glenigan.com [accessed 25 November 2020] provides UK construction project sales leads, market analysis, forecasting, and company intelligence.

<u>Global Research Gateway</u>: CBRE's online resource for real estate research and reports. CBRE Global Research Gateway [online]. Available at: www.cbre.com/research-and-reports [accessed 25 November 2020]

<u>Global Construction Review</u> – An online journal from the Chartered Institute of Building (CIOB) [online]. Available at www.globalconstructionreview.com [accessed 25 November 2020]

<u>The Green Construction Board</u> (GCB) is a consultative forum consisting of key members of UK construction and property industry. GCB [online]. Further information is available at: www.constructionleadershipcouncil.co.uk/workstream/sustainability [accessed 25 November 2020]

<u>The Guardian, Housing network</u> – providing insight, advice and best practice from your community. The Guardian, Housing network [online]. Further information is available at: www.guardian.co.uk/housing-network [accessed 25 November 2020]

<u>The Guardian, Higher Education / Universities</u> [online]. Further information is available at: www.guardian.co.uk/higher-education-network [accessed 25 November 2020]

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Η

Health and Safety Executive (HSE) is the national independent watchdog for work-related health, safety and illness. HSE are an independent regulator and act in the public interest to reduce work-related death and serious injury across Great Britain's workplaces. HSE [online]. Available at: www.hse.gov.uk/index.htm [accessed 25 November 2020]

HSE, Health & Safety in the construction industry [online]. Further information is available at: www.hse.gov.uk/construction [accessed 25 November 2020]

<u>Heritage Alliance</u> - The largest coalition of heritage interests in England, the Heritage Alliance is the umbrella body for national and major regional Heritage NGOs. Heritage Alliance [online]. Available at: www.theheritagealliance.org.uk [accessed 25 November 2020]

<u>Heritage Update: the online edition</u> of the fortnightly Heritage Alliance's *Heritage Update* ebulletin [online] and available at: www.theheritagealliance.org.uk/update [accessed 25 November 2020]

<u>Heritage Help</u> - Created by the Joint Committee of the National Amenity Societies, Heritage Help offers information and advice on matters related to the management and protection of local historic environments. Heritage Help [online]. Available at: http://heritagehelp.org.uk [accessed 25 November 2020]

<u>Higher Education Academy</u> (HEA) – The Higher Education Academy champions excellent learning and teaching in higher education. The HEA are a national and independent organisation, funded by the four UK Higher Education funding bodies and by subscriptions and grants. Note: HEA is now **Advance HE**. <u>Higher Education Empirical Research</u> (HEER) Database comprises summaries of the latest published research on a range of topics related to higher education. HEER [online]. Available at: http://heer.qaa.ac.uk/ [accessed 25 November 2020]

<u>**Historic England</u></u> is the public body that looks after England's historic environment. Historic England champion historic places, helping people understand, value and care for them. Further information is available at: www.historicengland.org.uk [accessed 25 November 2020]</u>**

Historic Environment Local Management (HELM) - provides accessible information, training and guidance to decision makers in local authorities, regional agencies and national organisations whose actions affect the historic environment. Note: All HELM web content on the Historic England website [online] and available at: https://historicengland.org.uk/services-skills/trainingskills/helmtraining [accessed 25 November 2020].

Home Builders Federation (HBF) represents and serves its members in a range of ways including; Ensuring senior politicians and government officials are aware of housing issues and the challenges faced by our members; and working with Government officials to ensure housing policies are introduced that facilitate housing supply, in a way that is workable for the industry [online]. Available at: www.hbf.co.uk [accessed 25 November 2020]

<u>House Building Careers</u> (part of HBF). Here you will be able to learn about the home building industry and how it benefits you, your community and the country as a whole [online]. Further information available at: http://housebuildingcareers.org.uk [accessed 25 November 2020]

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Inclusive Design Hub for the Built Environment is a collection of the latest guidance and best practice on inclusive design in the built environment and a project of **The Design Council** [online]. Available at: www.designcouncil.org.uk/projects/inclusive-design-hub-built-environment [accessed 25 November 2020]

INFABODE connects its community of users with industry information from the Real Estate sector on one customisable online platform. Infabode reduces the amount of time people spend trying to access key information from the Real Estate industry. INFA**BODE** [online]. Available at: www.infabode.com/dashboard [accessed 25 November 2020]

Institution of Civil Engineers (ICE) is a registered charity that strives to promote and progress civil engineering. ICE [online]. Available at: www.ice.org.uk [accessed 25 November 2020]

ICE Virtual Library [online]. Available at: www.icevirtuallibrary.com [accessed 25 November 2020] is a free database that indexes all ICE journals.

International Council for Open and Distance Education (ICDE) is the leading global membership organisation for enhancing the quality of open, distance, flexible and online education, including e-Learning. ICDE [online]. Available at: www.icde.org [accessed 25 November 2020]

Institute of Historic Building Conservation (IHBC) is the principal professional body for building conservation practitioners and historic environment specialists working in England, Northern Ireland, Scotland and Wales, with connections to the Republic of Ireland. IHBC [online]. Available at: www.ihbc.org.uk [accessed 25 November 2020]

Institute of Workplace and Facilities Management (IWFM) – Formerly the British Institute of Facilities Management, BIFM is now the IWFM. The workplace has been incorporated into their new brand so that the status of the professional can help take careers further, regardless of

specialism. IWFM [online]. Further information is available at: www.iwfm.org.uk [accessed 25 November 2020]

IWFM Insight – discover leading research and resources for the workplace and facilities management profession. IWFM Insight [online]. Available at: www.iwfm.org.uk/insight [accessed 25 November 2020]

<u>IWFM News</u> – discover the latest news affecting the profession and gain expert insight and advice. IWFM News [online] Available at: www.iwfm.org.uk/news [accessed 25 November 2020]

IWFM Digital Magazine, *facilitate* - Informing workplace and facilities management professionals. IWFM *facilitate* [online]. Available at: www.facilitatemagazine.com [accessed 25 November 2020]

<u>*ITcon*</u> – The Journal of Information Technology in Construction is a peer-reviewed scholarly journal on the use of IT in architecture, civil engineering and facility management. *ITcon* [online]. Available at: www.itcon.org [accessed 25 November 2020]

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J

<u>JISC Library Hub Discover</u> – Library Hub Discover replaces COPAC* and SUNCAT, offering increased coverage of university libraries along with new facilities and improved response times. Library Hub Discover currently contains 42,397,777 records created from 106,833,532 records contributed by 144 institutions. Jisc Library Hub Discover [online]. Available at: https://discover.libraryhub.jisc.ac.uk [accessed 25 November 2020].

<u>JORUM Archive</u> – After 13 years delivering and sharing content across the higher education, further education and skills sectors <u>the Jorum service and website was retired on 30 September</u> <u>2016</u>. However, many of the open education resources (OER) that were available in Jorum, access to their Jorum Archive can be accessed via the JISC website [online]. Available at: www.jisc.ac.uk/website/legacy/jorum [accessed 25 November 2020] where you can also gain access to JISC's full digital resources offer.

Journal of Online Learning and Teaching (JOLT) - The <u>MERLOT Journal of Online Learning</u> <u>and Teaching</u> is a peer-reviewed, open-access, online publication that aims to promote scholarship in the use of the Internet and web-based multimedia resource in higher education.

<u>JournalTOCs</u> is the largest, free collection of scholarly Journal Title of Contents (TOCs) [online]. Available at: www.journaltocs.ac.uk/index.php [accessed 25 November 2020]

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Leeds Beckett University's – School of the Built Environment, Engineering and Computing

[online]. Further information that include Subject Area Research – 1) Civil Engineering and Building Services Engineering, 2) Planning, Housing and Human Geography, and 3) Surveying, Construction and Project Management is available at: www.leedsbeckett.ac.uk/school-of-built-environment-engineering-and-computing/research [accessed 25 November 2020]

Leeds Beckett University's - Leeds Sustainability Institute [online]. Further Information is available at: www.leedsbeckett.ac.uk/leeds-sustainability-institute [accessed 25 November 2020]

<u>Leeds Beckett University – The Library</u> [online]. Available at: http://libguides.leedsbeckett.ac.uk/home [accessed 25 November 2020] **Lexology** is a comprehensive source of international legal updates, analysis and insights. Lexology publish in excess of 450 articles every day from over 1,100 law firms and service providers worldwide across 50 work areas in 25 languages. Lexology [online]. Available at: www.lexology.com [accessed 25 November 2020]

Local Government Association (LGA) is the national voice of local government. They work with councils to support, promote and improve local government. LGA [online]. Available at: www.local.gov.uk [accessed 25 November 2020]

LGA Knowledge Hub - Knowledge Hub is the public sector's professional social network which helps people in local government connect and share online in a secure environment [online]. Available at: https://khub.net [accessed 25 November 2020]

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Μ

Multimedia Educational Resource for Learning and Online Teaching (MERLOT). The MERLOT project began in 1997, when the California State University Center for Distributed Learning (CSU-CDL) developed and provided free access to MERLOT [online]. Available at: www.merlot.org/merlot [accessed 25 November 2020]. MERLOT is a curated collection of free and open online teaching, learning, and faculty development services contributed and used by an international education community.

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Ν

<u>National Building Information Modelling (BIM) Library</u>, the construction industry's free-to-use resource of the NBS (trading name of RIBA Enterprises Ltd) standard BIM content [online]. Available at: www.thenbs.com/our-tools/nbs-national-bim-library [accessed 25 November 2020]

<u>National Building Specification</u> (NBS) is an integrated global platform for everyone involved in the design, supply and construction of the built environment. NBS [online]. Available at: www.thenbs.com [accessed 25 November 2020]

NBS Knowledge [online] is available at: www.thenbs.com/knowledge [accessed 25 November 2020]

<u>National Skills Academy for Construction</u> (NSAfC) is an industry-led framework supporting clients and contractors to identify, develop and realise employment and skills solutions across construction projects. CITB, NSAfC [online]. Available at: www.citb.co.uk/national-skills-academy-for-construction [accessed 25 November 2020]. Note: It is facilitated by the Construction Industry Training Board (CITB).

<u>The National Trust</u> protect historic houses, gardens, mills, coastline, forests, woods, fens, beaches, farmland, moorland, islands, archaeological remains, nature reserves, villages and pubs. The National Trust [online]. Available at: www.nationaltrust.org.uk [accessed 25 November 2020]

National Trust's Land & landscape [online]. Available at: www.nationaltrust.org.uk/land-and-landscape [accessed 25 November 2020]

<u>New Civil Engineer</u> (NCE) a weekly magazine published for the Institution of Civil Engineers (ICE). NCE [online]. Available at: www.nce.co.uk [accessed 25 November 2020]

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0

<u>Online Learning Consortium</u> (OLC) is devoted to advanced quality online learning by providing professional development, instruction, best practice publications and guidance to educators, online learning professionals and organisations around the world. Online Learning Consortium [online] and further information is available at: http://onlinelearningconsortium.org/ [accessed 25 November 2020]

<u>OLC's Online Learning</u> – the official journal of the Online Learning Consortium. *Online Learning* [online]. Available at: http://onlinelearningconsortium.org/read/ [accessed 25 November 2020]

Open Education Resources, Research Hub – OER Hub gathers research on the impact of open education resources (OER) on learning and teaching practices. OER Hub [online]. Further information is available at: http://oerhub.net/ [accessed 25 November 2020]

<u>Open Praxis</u> – published by the International Council for Open and Distance Education – ICDE, Open Praxis is a peer-reviewed open access scholarly journal focusing on research and innovation in open, distance and flexible education. *Open Praxis* [online]. Available at: http://openpraxis.org/index.php/OpenPraxis/index [accessed 25 November 2020]

Open University (OU) UK [online] and available at: www.open.ac.uk [accessed 25 November 2020]

Open University (OU) UK, Institute of Education Technology [online] and available at: www.open.ac.uk/iet/main [accessed 25 November 2020]

Organisation for Economic Cooperation and Development (OECD) iLibrary is the online library of the OECD, featuring its books, papers and statistics and is the gateway to OECD's analysis and data. Note: It replaced SourceOECD. OECD iLibrary [online]. Available at: www.oecd-ilibrary.org [accessed 25 November 2020]

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Ρ

Parliament.uk, Research briefings produced by the House of Commons Library, the House of Lords Library and the Parliamentary Office of Science and Technology (POST). Parliament, Parliamentary business, Publications and records, Research briefings. Parliament.UK [online]. Further information is available at: http://researchbriefings.parliament.uk [accessed 25 November 2020]

<u>Planning Advisory Service</u> (PAS) provide consultancy and peer support, training sessions and online resources to help local authorities understand and respond to planning reform. PAS [online]. Available at: www.local.gov.uk/pas [accessed 25 November 2020].

<u>Planning Officers Society</u> (POS) is the voice for public sector planning practitioners, pursuing good and effective planning practice within local government [online]. Available at: www.planningofficers.org.uk [accessed 25 November 2020]

<u>The Planning Portal</u> is the UK Government's online planning and building regulations resource for England and Wales [online]. Available at: www.planningportal.co.uk [accessed 25 November 2020]

<u>The Prince's Foundation</u> was created by the merging of The Prince's Foundation for Building Community, The Prince's Regeneration Trust, The Great Steward of Scotland's Dumfries House Trust and The Prince's School of Traditional Arts in 2018. This combined force enables the charity to achieve HRH's goal of creating harmonious communities, through three core tiers. The Prince's Foundation [online]. Available at: https://princes-foundation.org [accessed 25 November 2020]

Property People's Network (PPN) is open to all interested in land and property and provides a forum to network through a range of social activities and visits [online]. Available at: www.ppnonline.co.uk [accessed 25 November 2020]

<u>Property Week</u> – Commercial property news. *Property Week* [online]. Available at: www.propertyweek.com [accessed 25 November 2020]

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R

Regeneration and Renewal – <u>Placemaking Resource incorporating Regeneration & Renewal</u> <u>magazine</u> [online]. Available at: www.placemakingresource.com [accessed 25 November 2020]

<u>**Revo – Retail. Property. Community**</u> (formerly BCSC (British Council of Shopping Centres) is the professional body and authoritative voice for retail property and placemaking-led regeneration and for the management of and investment in shopping places [online]. Further information is available at: www.revocommunity.org [accessed 25 November 2020]

<u>The Royal Institute of British Architects</u> (RIBA) is a global professional membership body driving excellence in architecture [online]. Further information is available at: www.architecture.com [accessed 25 November 2020]

<u>RIBA Library</u> – Visit the RIBA Library [online]. Available at: www.architecture.com/contact-and-visit/riba-library [accessed 25 November 2020]

RIBA Home > Knowledge and resources > Resources > <u>RIBA Plan of Work</u> [online]. Further information is available at: www.architecture.com/knowledge-and-resources/resources-landing-page/riba-plan-of-work [accessed 25 November 2020]

<u>Royal Institution of Chartered Surveyors</u> (RICS) is an independent body committed to setting and upholding the highest standards of excellence and integrity in land, property and construction. RICS [online]. Available at: www.rics.org/uk [accessed 25 November 2020]

<u>**RICS > News & Insights</u>** [online]. Available at: www.rics.org/uk/news-insight [accessed 25 November 2020]</u>

<u>**RICS > Upholding Professional Standards</u>** [online]. Available at: www.rics.org/uk/upholdingprofessional-standards [accessed 25 November 2020]</u>

<u>**RICS Publications</u>** - RICS publishes a range of journals that are **free** to view online. Available at: www.rics.org/uk/news-insight/publications/ [accessed 25 November 2020]</u>

<u>RICS Library services</u> [online]. Available at: www.rics.org/uk/footer/library-services [accessed 25 November 2020

<u>RICS Library Online catalogue</u> - 2500 electronic documents selected and catalogued, plus books, magazine articles, law reports and transcripts [online]. Available at: https://library.rics.org/ [accessed 25 November 2020]

Royal Town and Planning Institute (RTPI) is the UK's leading planning body for spatial, sustainable and inclusive planning and is the largest planning institute in Europe with over 23,000 members. In 2014 they celebrate their Centenary. RTPI [online]. Available at: www.rtpi.org.uk [accessed 25 November 2020]

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<u>Savills Research</u> – Savills Research, Insight & Opinion provides advice and analysis to clients across the UK, with specialists in commercial, residential and rural property research [online] and available at: www.savills.co.uk/insight-and-opinion/research.aspx [accessed 25 November 2020]

Shoosmiths Insights & articles – Shoosmiths is a major UK law firm with a network of offices working together as one team. Read the latest insights, articles and commentary from Shoosmiths or explore their content library that include – Placemaking; Real estate; Diversity & Inclusion; Litigation & disputes; Governance; Employment, and more. Shoosmiths [online]. Available at: www.shoosmiths.co.uk/insights [accessed 25 November 2020]

Specification Online – the free to use news and online products resource for specifiers working across the architectural and building sector [online] and available at: http://specificationonline.co.uk [accessed 25 November 2020]

<u>Supply Chain Sustainability School</u> represents a common approach to developing sustainability competence in the supply chain. It is a free resource available to any supplier and is part of their continued commitment to lead the industry into a brighter, more sustainable future. Supply Chain Sustainability School [online]. Further information is available at:

www.supplychainschool.co.uk/uk/default-home-main.aspx [accessed 25 November 2020]

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Т

<u>The Telegraph – Property and construction industry</u> - The latest news, analysis and share prices on Britain's biggest construction and property companies. The Telegraph, Property and Construction Industry [online]. Available at: www.telegraph.co.uk/property-and-construction-industry [accessed 25 November 2020]</u>

<u>Trust in Digital Repositories</u> (TrustDR) – a research project that examined how to effectively manage the legal aspects of digital collections of learning resources and produced a policy development toolkit. TrustDR [online]. Available at: https://trustdr.digitalinsite.co.uk [accessed 25 November 2020]

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U

<u>University College of Estate Management</u> (UCEM) is the leading provider of supported distance learning for real estate and construction professionals. UCEM [online]. Available at: www.ucem.ac.uk [accessed 25 November 2020]

University of the West of England (UWE), Centre for Architecture and Built Environment Research (CABER) seeks to develop innovative approaches, procedures, technologies and techniques that support the design, management, reconfiguration, maintenance and operation of buildings, their fabric and the environments they create. Note: CABER incorporates the previous Centre for Construction and Property Research (CPRC). CABER [online]. Available at: www1.uwe.ac.uk/et/research/caber.aspx [accessed 25 November 2020]

<u>UWE Educational Resources for the Built Environment</u> (ERBE) produces unique and highly respected educational resources for academic and professional use and incorporates the **Video Project** and the **Construction Website.** Further information can be found on the ERBE website [online] and available at: www1.uwe.ac.uk/et/cp/erbe.aspx [accessed 25 November 2020]

<u>UWE, ERBE, Construction Films</u> concentrate on domestic building construction. The films explain the principles of modern construction and, where appropriate, trace its evolution over the last 100 years. ERBE Construction Films [online]. Further information is available at: www1.uwe.ac.uk/et/cp/erbe/constructionfilms.aspx [accessed 25 November 2020]

<u>UWE, ERBE, The Construction Website</u> is an interactive encyclopaedia covering construction, conservation and building history. It is expanded and revised on an annual basis [online]. Further information is available at: www1.uwe.ac.uk/et/cp/erbe/constructionweb.aspx [accessed 25 November 2020]

<u>UWE, Library, Search for things: A-Z</u> [online]. Available at: www1.uwe.ac.uk/library/searchforthingsa-z.aspx [accessed 25 November 2020]

<u>UWE, Research publications and reports</u> – Providing immediate world-wide open access to all UWE's research output. Research at UWE Bristol [online]. Available at: www1.uwe.ac.uk/research.aspx [accessed 25 November 2020]

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V

<u>Virtual Training Suite</u> - This website provides a set of free Internet tutorials to help students develop their Internet research skills for a particular University course. Virtual Training Suite [online]. Available at: www.vtstutorials.co.uk [accessed 25 November 2020]

Y

<u>Yale Environment 360</u> - an online magazine offering opinion, analysis, reporting, and debate on global environmental issues. We feature original articles by scientists, journalists, environmentalists, academics, policy makers, and business people, as well as multimedia content and a daily digest of major environmental news. *Yale Environment 360* [online]. Available at: https://e360.yale.edu/ [accessed 25 November 2020]

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Ζ

Zetoc: Informing Research - The monitoring and search service for global research publications, providing access to over 36,000 journals and more than 59 million article citations and conference papers through the British Library's electronic table of contents and over 875,000 Open Access (OA) article citations and conference papers from PubMed. Zetoc [online]. Available at: http://zetoc.jisc.ac.uk// [accessed 25 November 2020]

Note: The web-links provided were correct at time of compilation.

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