



## UCEM Institutional Research Repository

<b>Title</b>	Knowledge Foundations, Issue 3 - March 2023
<b>Author(s)</b>	Lucy B M Roper
<b>ORCID</b>	
<b>Type</b>	Other
<b>Publication title</b>	
<b>Publisher</b>	UCEM
<b>ISSN/ ISBN</b>	
<b>Publication Date</b>	1 March 2023
<b>Version</b>	
<b>DOI</b>	
<b>Repository link</b>	<a href="https://ucem.repository.guildhe.ac.uk/id/eprint/66/">https://ucem.repository.guildhe.ac.uk/id/eprint/66/</a>
<b>Link to publication</b>	<a href="https://www.ucem.ac.uk/e-library/">https://www.ucem.ac.uk/e-library/</a>

### Copyright:

UCEM aims to make research outputs available to a broader audience via its digital [Repository](#). Where copyright permits, full text material held in the Repository is made freely available. URLs from GuildHE Research Repositories may be freely distributed and linked to. Please refer to each manuscript for any further copyright restrictions.

### Reuse:

Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page, and the content is not changed in any way.



# Knowledge Foundations

## Inside This Issue

- 01 [\*\*UCEM News\*\*](#)
- 02 [\*\*Other News\*\*](#)
- 03 [\*\*Property & Construction Statistics\*\*](#)
- 04 [\*\*Built Environment Research\*\*](#)
- 05 [\*\*e-Journal Review\*\*](#)
- 06 [\*\*e-Book Review\*\*](#)
- 07 [\*\*UCEM e-Library\*\*](#)
- 08 [\*\*Student Career Service\*\*](#)
- 09 [\*\*UCEM's Sustainability Hub\*\*](#)
- 10 [\*\*Information Governance\*\*](#)

[\*\*A to Z of useful references and web-links\*\*](#)

## What's in this month's issue

- **Latest UCEM News**, incl. - UCEM's Built Environment Apprenticeship Awards 2023.
- **Things you need to know this week** – Rachel Maclean named housing minister in mini-reshuffle. The PM also creates departments to focus on energy security and net zero.
- **Latest Research** from Savills, The Smith Institute, RICS, CBRE, Joseph Rowntree Foundation, and more.

Happy reading!

## Issue 3 – March 2023

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 practices, 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's current awareness service was to help keep students and staff informed of the education sector and industry-specific news, share current and best practices, 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\*\*](#)

[Back to top](#)

## UCEM News

### UCEM's Built Environment Apprenticeship Awards 2023

Winners of UCEM's Built Environment Apprenticeship Awards 2023 were announced at a presentation and networking events held in London on Thursday, 9 February.

The Orangery in Cavendish Square provided a wonderful example of the built environment where old meets new and set the tone for an inspirational and engaging evening. Taking place during National Apprenticeship Week, the awards celebrated the individual achievements of apprentices and their employers and also highlighted the crucial role that apprenticeships play in the built environment.

In his welcoming speech Ashley Wheaton, Principal, shared how far the university has come since launching the 125 apprentices in 2015 to over 1,900 by spring 2023. He also said: "It is an enormous privilege to play a part in training the next generation of professional in our field. If there were ever a time when the built environment really needed an influx of fresh talent, that time is now."

Focusing further on how apprentices can promote diversity and inclusion, guest speaker, and UCEM Chair of the Board of Trustees, Amanda Clack said, "We need more visible role models telling their stories to help inspire the next generation."

Find out who the winner were by accessing the article '[UCEM's Built Environment Apprenticeship Awards 2023](#)' in full.

Also:

### UCEM new master's degree supports the drive for a sustainable built environment



© UCEM 2022

- UCEM has launched a new master's degree to support the appetite and demand for sustainability and environmental skills in the built environment. The MSc Innovation in Sustainable Built Environments aims to equip senior leaders and sustainability

[Back to top](#)

experts with the language and capabilities to challenge and drive their organisation's sustainability agenda.

Access the article '[UCEM new master's degree supports the drive for a sustainable built environment](#)' in full.

Visit the [MSc Innovation in Sustainable Built Environments programme page](#) for further information.

**Related link:**

[UCEM sails through third sustainability accreditation](#)

### **Latest UCEM Article: 5 practical tips for saving energy costs**

- We are in the midst of a cost-of-living crisis which has spread across the globe. Significant increases to the cost of food and energy have outstripped worker's salaries, and spiralling inflation has plunged countless into poverty. While the tenth days (see publication date) of COP27 focusses on the decarbonising our energy systems, we look at practical ways to save energy that can be actioned without spending too much money.

1. Avoid leaving appliances on standby
2. Draught-proofing windows and doors
3. User your thermostat effectively
4. Monitor your water usage
5. Invest in energy saving appliances, like an air fryer.

Further information on COP27 and access to the article in full is available within the 'Sustainability Hub' later in this publication.

### **Other UCEM News**



© UCEM 2021

### **UCEM presents top 2022 Property Awards prize to the leader of The Crown Estate**

- Sustainability, innovation and equality were the themes recognised at UCEM's 35<sup>th</sup> Property Award.

Held at the Institute of Directors in London, the event saw the prestigious 'Property Awards' presented to Dan Labbad, Chief Executive of The Crown Estate in recognition of his outstanding contribution to the property industry.

[Back to top](#)

In his speech, Dan reflected on where his passion came from and what his key drivers are. He also spoke of the UCEM's work, saying, "I want to recognise the wonderful work UCEM is going to educate the young people of this country because ultimately it's them that will help shape – and save – our collective future."

Access the article '[UCEM presents top 2022 Property Awards prize to the leader of The Crown Estate](#)' in full.

## **UCEM gains indefinite degree awarding powers**

UCEM's journey as an independent institution has gathered another significant milestone.

The institute has been successful in applying to the Office for Students (OfS) for permanent degree awarding powers – referred to as 'indefinite degree awarding powers' which is an authorisation given to higher education providers to grant awards without a time limit.

The indefinite degree awarding powers follows a decade of UCEM being awarded taught degree awarding powers which were renewable on a six-yearly basis.

The latest milestone paves the way for UCEM to apply for full university title.

UCEM [first gained taught degree awarding powers in 2012](#) when operating as The College of Estate Management. This was [renewed by The Privy Council in 2018](#). Prior to 2012, UCEM had its programmes validated by the University of Reading and the Open University.

Access the article '[UCEM gains indefinite degree awarding powers](#)' in full.

## **UCEM Tutor shares research advocating greater adoption of renewable energy in Egypt**

- A UCEM Tutor engage with a captive audience of university, industry and government stakeholders on a trip to Egypt, sharing his research on renewable energy usage in the country.

To learn more about the project, head to [the research website](#).

Access the article '[UCEM Tutors shares research advocating greater adoption of renewable energy in Egypt](#)' in full.

## **Education Department implements successful anonymous forum post trial**

- Anonymous assignment forum posts could be here to stay after an encouraging pilot scheme led by two members of UCEM's Education Department.

Access the article '[Education Department implements successful anonymous forum post trial](#)' in full.

[Back to top](#)

## #StandWithUkraine

- Friday 24<sup>th</sup> February 2023 marks one year of the Russian invasion of Ukraine.

UCEM



© UCEM 2022

The All-Party Parliamentary Group for Libraries, Information and Knowledge (APPG) noted the '[Statement of Solidarity with librarians, archivists and information professionals in Ukraine](#)', produced by the Chartered Institute of Library and Information Professionals (CILIP) with signatures from more than 800 leading national institutions, including [UCEM e-Library](#).

[Access further information on Ukraine Crisis Hub](#)

**Also:**

**[CIOB and UCEM team up to deliver an apprenticeship with a route to chartered status](#)**

**[UCEM joins campaign to drive better gender balance at board level](#)**, and

- [Access further information about the 30% Club](#),
- [Access more information on UCEM's diversity and inclusion objectives](#)

**[UCEM reasserts its commitment to organisational excellence with Advance HE membership](#)**, and

- [Access further information on Advance HE](#).
- [For more on UCEM's ambitions, take a look at the Institution's Vision and Strategy brochure](#)

**Note:** [Keep abreast of the latest UCEM News and events](#)

– Read our blog to keep updated on Building Environment industry insights, student case studies, and thoughts from UCEM Principal: Ashley Wheaton.

Further information and the latest developments can also be found via the [UCEM Website](#), & don't forget that the [UCEM e-Library](#) can be accessed 24/7 (via the VLE-Virtual Learning Environment) with a wealth of valuable resources to help 😊. If you have any further questions, please contact:

- Student enquiries – Student Central on our VLE
- Employer enquiries – [businessdevelopment@ucem.ac.uk](mailto:businessdevelopment@ucem.ac.uk)
- Other enquiries –

Email: [reception@ucem.ac.uk](mailto:reception@ucem.ac.uk), Tel: +44(0)118 467 2100

[Back to top](#)

## Other News

### **Things you need to know this week: Rachel Maclean named housing minister in mini-reshuffle**

- Prime minister also creates departments to put more focus on energy security and net zero and science, innovation and technology.

Rachel Maclean has been appointed housing minister in the Department for Levelling Up, Housing and Communities (DLUHC) in prime minister Rishi Sunak's mini-shuffle. The MP for Redditch replaces Lucy Frazer, who served as housing minister for less than 100 days before becoming culture, media and sport secretary. The reshuffle also saw the creation of two new departments: the Department for Energy Security and Net Zero, led by secretary of state Grant Shapps, and the Department for Science, Innovation and Technology, headed up by secretary of state Michelle Donelan. The Department for Energy Security and Net Zero will this year focus on easing the cost of living crisis, with coordination of net zero objectives across government and bringing external delivery expertise to major projects being longer term objectives.

#### **Also, this month,**

- Network Rail and Transport for London have entered a partnership aimed at building 20,000 homes in London and surrounding areas within a decade. The transport groups have around 14,000 acres of land in ownership across the capital and are looking to prioritise affordable housing and social impact in their developments, as well as improving existing stations.

- Asset management business Aviva Investors has acquired a site in Ipswich with planning consent to develop more than 160 family homes, in its latest move to grow its single-family rental platform in partnership with build to rent developer Packaged Living. The partners are working with housebuilder Galliard Homes to deliver the scheme.

- Build to rent home provider Sigma Capital is partnering with developer Countryside Partnerships to deliver 865 homes across 11 sites in the UK. The sites represent an investment of more than £205m, are located across six regions of the UK and are part of Sigma's plans to scale up and deliver homes in existing and new regions, particularly in the south and north east of England.

- Developer HUB has signed a forward funding deal with real estate investment company Realstar to deliver a 488-home build to rent development in Leeds. The Latitude Blue project was acquired in partnership with Bridges Fund Management and is the second Leeds development from the partnership, following on from the deal for Latitude Purple on an adjacent site last year.



[Back to top](#)

(see publication date). Together, the two phases will deliver 951 homes. Latitude Blue is designed by architect Carey Jones Chapman Tolcher and contractor is RG Group.

- Government agency Homes England has committed £42m of funding from the government's Land Assembly Fund will support the building of highways, sustainable travel links, a part and nature reserve at the planned Burtree Garden Village neighbourhood. Homes England will work with local SME developer Hellens Group and Darlington Borough Council to deliver the neighbourhood, which is also expected to have 200,000 sq. m of employment space, a new primary school and community centre.

- London mayor Sadiq Khan's 2023 Design Future London Schools Challenge is inviting young Londoners to use their creative design skills to create sustainable changes to a Minecraft version of Croydon town centre.

**[Read the full 'Need to Know: Rachel Maclean named housing minister in mini-reshuffle' article.](#)**

(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').

### **Case Study: Integrating industry with community in the city**

- A London industrial estate has been transformed from hostile, car-focused environment into an inclusive place that is pulling in the punters at evenings, and weekends, finds the author of this article.

In cities across the UK offices, retail space and apartment blocks have pushed out many manufacturing industries. Those pockets of manufacturing and service activity that remain on industrial estates and in peripheral locations can now often appear isolated from their surrounding neighbourhoods and are often regarded as uninviting by local communities.

But one London local authority has changed both perceptions and experiences of the industrial estate, and its success points to the potential for a more integrated future for industry in the city. Waltham Forest Council has worked with architect We Made That to deliver a series of improvements at its Lockwood Way estate in north east London, all designed to transform it from a hostile, car-focused environment into a more sustainable, welcoming and inclusive space.

### **Challenges**

Lockwood Way estate is located in Blackhorse Lane Creative Enterprise Zone and has a history of craft making and



[Back to top](#)

fabrication. Its broad mix of public-facing and industrial businesses include two breweries with tap rooms – which are central to the Walthamstow Beer Mile initiative, a natural winemaker, bakery, scooter repair shop, metal fabricators, roofing supplier and a granite supplier. During working hours the environment is characterised primarily by loading and servicing for these businesses, but events attract the public to the area at evenings and weekends.

The council sought to improve pedestrians' experience of an estate that had, in the past, seen fly-tipping and other anti-social behaviours, and support more public-facing activity by tenants.

The key challenge was finding space on the estate to deliver interventions that would provide better amenity for both workers and visitors.

### **Solutions**

The project comprises a series of interventions, including:

- Giving a friendlier face to the estate: Installing glazed frontages to existing industrial units, repainting facades and adding wayfinding signage, playful road markings and wall artworks.
- Providing an environmentally sustainable public realm: removing parking to allow for 60sq m of rainwater gardens and 15 trees,
- Providing communal street furniture: A canopy structure between the breweries provides a continuous social zone, and a new 10m long bench-table-bar structure provides a communal space where visitors or workers can gather.
- Supporting events and markets: A series of new moveable 'forklift' events and activity furniture can be used by tenants to flexibly programme their yard spaces during events, while new pop-up power points allow increased scope for tenant-run weekend markets.
- Encouraging sustainable travel: A new entrance has been created to the adjoining Walthamstow Wetlands and new cycle storage provided
- Providing a safer night-time experience: Existing street lighting has been replaced with new LED lighting and five additional LED lights.

### **Outcomes**

For the council, the £600,000 projects has multiple benefits. Councillor Simon Miller, portfolio lead for economic growth, says, "This keeps investment in the heart of the borough and instils confidence for its future amongst our residents".

Individual interventions are each making their own positive impacts. We Made That has been working more broadly to help shape London-wide policy around good growth and productivity

[Back to top](#)

In the city, testing innovative industrial planning policies that have informed the London Plan 2021's ambition to retain industrial capacity.

[Read the Study entitled, 'Integrating industry with community in the city' 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').

### **Analysis: Property prospects for 2023**

- The UK may be destined for recession this year (2023), but property and construction industry forecasters see some bright spots among the gloom, writes the author of this article.

High interest rates, build cost inflation and a dismal economic environment have all set the scene for grim prospects for development in 2023, with industry body the Construction Products Association (CPA) predicting in its **Winter Forecast** that UK construction output will fall by 4.7 per cent over the year. "Private housing and private housing rm&l [repair, maintenance and improvement], two of the three largest construction sectors, are highly dependent on the wider UK economy, interest rates, real wages and consumer confidence. So, as the UK economy falls into recession, interest rates rise real wages fall and consumer confidence remains poor, construction output will fall sharply in these sectors," warns the CPA's economics director Noble Francis.

But the CPA points out that the present situation does not compare with the fall in output that occurred in the global financial crisis of 2007-2008, when construction output fell by more than 15 per cent in two years, and property and construction industry forecasters see some relatively bright spots among the current gloom.

The relative weakness of British currency and healthy yields continue to make the UK an attractive destination for overseas property investors, property consultant Knight Frank reports in its **2022 Capital gravity forecast**. It ranks the UK second in its listing of top five global destinations for cross-border investment, positively highlighting a number of sectors, including residential, retail and hotels.

**Ups and downs of retail** – With stationary retailer Paperchase falling into administration in January and clothing chain M&Co announcing the closure of its 170-store network in February, the retail sector's woes are continuing. But consultant CBRE reports in its **2023 Real Estate Market Outlook** that there is the potential for "modest expansion" for well positioned retailers in the best locations, citing the finding in its Global Live-Work-Shop survey that 71 per cent of UK consumers preferred to shop for essential items in store.

[Back to top](#)

Shopping centre assets could themselves prove attractive to some investors in 2023, Simon Eddy, director of capital markets at consultant Lambert Smith Hampton (LSH) UK reports in the company's [Investment Transactions bulletin](#) for the last quarter of 2022.

**Also in this article:**

- **The rise and rise of rented housing** – While housing's for-sale market suffers, the rental sector is expected to remain strong, as those closed out of homebuying by the present economic circumstances continue renting. This is likely to feed into the build to rent and co-living development pipeline, reports CBRE. Co-living tenure has been formalised in the capital through London Plan Policy H16, which sets out the requirements for large-scale purpose built shared living, and further consultation on space standards is providing additional clarity for this model of urban living.

- **Partner and repurpose** – Partnership often provides a way to work through difficult circumstances and consultant JLL points to its role in addressing today's regeneration and sustainability challenges. Investors, developers, local authorities and educational and research institutions could all be collaborating in areas such as life sciences, helping to drive regeneration.

[Further information and read the article, Smit, J \(2013\), 'Analysis: Property prospects for 2023' 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').

**Advice: Supporting community led housing**

- Community land trusts could play an important role in providing affordable housing in urban areas, but sites need to be identified and offered to them at below market prices, finds the author of this article.

With housing costs spiralling in many urban centres, communities and local authorities have been developing new ways to secure homes that are affordable in perpetuity. Community land trusts (CLTs) have provided homes in rural areas for a long time, but increasingly councils have recognised the need to promote housing which is based within communities in urban areas. CLTs hold properties in a not-for-profit trust and they can ensure that the homes are affordable in perpetuity, with rents generally linked to the incomes in their areas.

According to government figures, community led housing schemes, including CLT projects, have been building around 400 homes a year across England over the last couple of years.

[Back to top](#)

Here are four key ways that the provision of community led housing can be supported.

**1. Identify sites and target them at CLTs**

“Councils need to trawl through the land they own to identify sites which CLTs might take on,” says Tom Chance, chief executive of the Community Land Trust Network. “Local authorities own a wide range of small sites, some of which are unused open space or have derelict buildings on, which trusts could take on.”

**2. Be prepared to sell sites at social value**

CLTs cannot afford to pay a commercial value on the sites they purchase. “To make the homes affordable CLTs don’t charge the full market rent, so they can’t compete with private developers when acquiring sites,” says Paul Kelly, an accredited community leg housing adviser. “Councils can sell sites in their ownership for below commercial land value if there are social benefits,” he says. “Liverpool City Council’s Community Led Housing Asset Disposal Policy, agreed in January 2023, says that the price paid for the land will reflect the social value of the development on it.”

**3. Make CLTs a partner in new housing development**

“Developers should be encouraged to partner with a CLT if they want to secure local support,” says Steve Watson, director at Middlemarch CLH, a consultancy that provides technical support to CLTs. He points to a 100-home development at Chagford, a village on Dartmoor in Devon, which was built in partnership with the local CLT, after concerted pressure by the local community. The Bellacouche Meadows development is in an environmentally sensitive location, “but because the local community could see that it would benefit from 28 affordable homes that would be owned by the Chagford CLT, the proposal attracted few objections,” he says.

**4. Make CLTs a partner in new housing development**

“CLTs need a lot of skills to bring forward housing schemes,” says adviser Kelly. He says that there are hubs in most regions with advisors who will provide assistance. Some councils have staff that support the trusts. East Cambridgeshire District Council’s Bailey points to a grant fund which the council has established to help CLTs get established.

**[Further information and read the article, Kochan, B. ‘Advice: Supporting community led housing’ 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’).

[Back to top](#)

## Education Latest [February 2023]

[Access the latest Education news](#)

### [Three top tips on making an apprenticeship work](#)

- Norfolk apprentice shares top tips on making it work. An 18-year-old plumber has shared her top tips for new apprentices on how to make sure it is successful.

Sophie Maguire, from Norwich, said she “jumped at the opportunity” of learning something practical and applied for more than 50 **apprenticeships – [paid schemes which combine practical training in a job with study](#)**.

**See also:** UCEM student, Turner C (2022) ‘[Apprentice shares experience as she learns](#)’, *Built Environment Journal*, London: RICS. #BuiltForApprenticeships #BuildingControl #Apprentice

## BBC Latest – Climate [February 2023]

[Access the BBC News, Latest Climate reality check](#)

### [Millions at flood risk from glacial lakes - study](#)

- Just four countries account for half of the total population at risk of catastrophic flooding.

Up to 15 million people face risk of catastrophic flooding from glacial lakes which could burst their natural dams at any moment, a new study finds. The study led by Newcastle University is the first global attempt to map potential hotspots for such floods. The impact of global warming on glacial lake floods is yet to be defined, but it has increased **[both the volume and number of glacial lakes globally](#)**.

**Related article:**

- [A really simple guide to climate change](#)

**Also:** Please visit the ‘[Sustainability Hub](#)’ within *Knowledge Foundations* for further information and related articles.

## BBC Latest - Coronavirus – latest developments [February 2023]

### Coronavirus pandemic

- Last call for adults under 50 to get Covid booster,
- What’s behind the surge of Covid-19 deaths in Japan,
- China’s Covid wave ‘coming to an end’ - officials,
- NHS staff with long Covid face losing their pay,
- False Covid claims doctor given nine-month ban,
- Don’t blame poor cancer care on pandemic – charity,
- MP threatens to sue Hancock in Covid vaccine row, and
- Covid-19 in the UK.

[Access the BBC News, Latest Coronavirus pandemic news](#)

[Back to top](#)

### **Related Link(s): Coronavirus: Why some people want to keep working from home –**

[Access the BBC News article entitled, ‘Coronavirus: Why some people want to keep working from home,’ in full.](#)

**Also:**

[Living with Covid plan to restore our freedom - PM](#)

[What are the UK’s ‘Living with Covid’ plans?](#)

### **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 were 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.](#)

### **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

[Back to top](#)

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)**

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)**

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

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

**[Read the \*Construction Management\* \(formerly \*Construction Manager\*\) article ‘Will Covid-19 accelerate construction’s digital transformation’, in full.](#)**

**Related links:**

**What will the post-pandemic office look like?** - 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?

**[Read the \*Construction Management\* article, ‘What will the post-pandemic office look like?’ in full.](#)**

**‘Generation Work from Home’ – the impact of default flexible working** - The UK government has announced proposals to make flexible working a ‘day one’ right for employees, as part of reforms to the Flexible Working Regulation 2014.

**[Read the Shoosmiths article, ‘Generation Work from Home’ – the impact of default flexible working’ in full.](#)**

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



© Emerald Publishing 2021

Emerald Publishing, one of the UCEM e-Library subscription services, have brought together a number of research



[Back to top](#)

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, but they may also provide relevant context to how the world reacted to other previous Coronavirus outbreaks (notably SARS) and epidemics.

[Access Emerald Publishing's 'Coronavirus, the management of epidemics and the wider impact on society'](#)

### Covid-19 and the impact on business

**HSTalks**

© Henry Stewart Talks Ltd 2021

HS Talks - Interviews with academics and experts from the business community, on the impact of the Covid-19 pandemic, are now available in the HS Talks 'Business & Management' collection that UCEM subscribes to.

1. [The impact of Covid-19 on organisations](#)
2. [The impact of Covid-19 on psychological safety in the workplace](#)
3. [The impact of Covid-19 on cybersecurity and data privacy](#)

[Latest News: \*Construction Management \(CM\)\* \(formerly \*Construction Manager\*\) \[February 2023\] Question mark remains over Building Safety Act under REUL](#)

- A controversial Bill to 'sunset' European legislation by the end of the year (2023) had its second reading in the House of Lords this week.

Safety charity the Royal Society for the Prevention of Accidents (RoSPA) has spearheaded **a coalition urging the government to slow down the process.**

RoSPA and others argue this will allow time for proper scrutiny, and for laws to be replaced where needed.

Liberal Democrat Baroness Ludford raised concerns from the construction industry. She said: "The unexpected consequences of kicking out the EU undergirding of UK law could be very perverse and damaging, with what is left lacking legal coherence.

"In the field of construction, the Building Safety Act 2022 is premised on definitions in a set of 2015 regulations – the Construction (Design and Management) Regulations – implementing an EU directive and creating a framework for health and safety in construction.

[Back to top](#)

“Unless these regulations are kept switched on, the 2022 Act of Parliament will have its underpinning yanked away. What then exists?”

Also covered in this article –

- Further safety concerns, and
- Question mark over BAS remains.

Access and read the article in full, Coyne K (2023) '[Question mark remains over Building Safety Act under REUL](#)', *Construction Management* [online], 8 February. Available at: <https://constructionmanagement.co.uk/question-mark-remains-over-building-safety-act-under-reul/> [accessed 10 February 2023]

### **Latest News: Global Construction Review (GCR)** **[February 2022]**

#### **Bentley's Miami tower lets residents drive into apartments**

- British luxury car maker Bentley **says** four car lifts in its 61-storey “Bentley Residences” tower in Miami will let all residents drive straight into their apartments.

The “Dezervator” lifts, named after project developer, Dezer, will carry drivers to in-unit garages. Each apartment's garage will have electric charging points and room for up to four cars. Adrian Hallmark, Bentley Motors' chairman, said “The modern and progressive brand identity of Bentley Residences is at work in both the tower's interior and exterior spaces, rooted in authenticity, sustainability and innovation.” The Bentley Residences is due to open in 2026. Units will be available from \$4.2m.

Access and read the article in full, Quirke, J. (2023) '[SNC-Lavalin to replace Florida bridge](#)', *Global Construction Review* [online], 10 February. Available at: [www.globalconstructionreview.com/bentleys-miami-tower-lets-residents-drive-into-apartments/](http://www.globalconstructionreview.com/bentleys-miami-tower-lets-residents-drive-into-apartments/) [accessed 10 February 2023]

### **Shoosmiths UK law firm Insights and Articles**

- Read the latest insights, articles, and commentary from Shoosmiths UK law firm or explore their content library, or listen to the latest podcasts **[February 2023]** surrounding sectors such as **Real Estate** that include:

#### **Investing in Living**

- In this 'Investing in Living' thought leadership series, Shoosmiths try to unpick some of the latest issues impacting the Living sector in the UK.

#### **Also- Shoosmiths part of coalition launching new plans for town centre revival**

#### **Operating in living – Spring 2022**

[Back to top](#)

### **How developers can prepare now for the Building Safety Act series:**

#### **How developers can prepare now for the Building Safety Act: Part 1 of 3**

The Building Safety Act received Royal Assent on 28 April 2022. With aspect of the new regime unclear, this series of articles looks at what steps developers can take now.

#### **How developers can prepare now for the Building Safety Act: Part 2 of 3**

In Part 2, Shoosmiths discuss the dutyholder regime and look at the steps developers can take now to prepare.

#### **How developers can prepare now for the Building Safety Act: Part 3 of 3**

In this final part of this series, Shoosmiths take a look at the new gateway regime for higher risk buildings.

Keywords – Real estate, ESG, New How Perspectives, New How,

### **The future of build-to-rent market Real Estate Podcast series Podcast – Government policy BTR (Build to Rent)**

**The future of the BTR market from Shoosmiths' Living team:**

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

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; and where the market is going.

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

Issues discussed in this podcast include: Ongoing attractiveness of the sector; Top three things to look for in a BTR scheme; Future challenges for BTR; The role of technology, and BTR housing.

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

In this podcast, the last in this series, issues discussed include: Planning reforms; Permitted development rights; Rise of residential in the high street; Fire Safety; and Rent controls / regulations.

### **The Pathway to Lifelong Education: Reforming the UK's Skills System**

- The UK has a longstanding skills problems which is impacting on economic growth. Adult participation in learning has declined, particularly among part-time students, while fewer people in work are taking up training to reskill or upskill. More

[Back to top](#)

generally, there is a shortfall in vocation and higher technical qualifications.

In this first report, with Ashley Wheaton, Principal, University College of Estate Management acknowledged as one of the contributing experts, the Lifelong Education Commission seeks to recommend how the barriers to adult learning can be removed; what future investment is needed to support this; and what change is needed to ensure the maximum flexibility that will benefit learners and deliver on the promise of a whole system change for lifelong education.

**The Report makes a series of recommendations for reform, including:**

- A single source of careers advice, to 'professionalise' and regulate careers information, advice and guidance
- Means-tested Maintenance Grants for learners over and above the Lifelong Loan Entitlement, in order to subsidise costs and encourage uptake, particularly among those for whom debt is a barrier
- The abolition of the Equivalent or Lower Qualification (ELQ) rules, to support retraining at higher levels
- Extending the Apprenticeship Levy to cover a wide range of high- quality training, including short modular courses, in order to provide additional flexibility and incentivise employer investment in skills training
- Stronger HE-FE partnerships to provide integrated pathways to higher-level skills; and alignment with industry and online providers to enable better coordination between schools, colleges, universities, and employers.
- Reform of the regulatory framework to simplify the jurisdiction between multiple qualification bodies;
- Learning lessons from Scotland, where 'articulation agreements' offer clear routes between FE and HE allowing students with Higher National Certificates and Diplomas to access the second or third years of degree programmes.

**Access the summary and report, 'The Pathway to Lifelong Education: Reforming the UK's Skills System' in full.**

**Related Links:**

FE news.co.uk (2021) '[Reforming the UK's Skills System – First Report from the Lifelong Education Commission](#)'[online]. Available at: [www.fenews.co.uk](http://www.fenews.co.uk) [accessed 8 October 2021]

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

[Back to top](#)

Maguire D, Dale L, and Pauli M (2020) *[Learning and teaching reimagined: a new dawn for higher education?](#)* Bristol: JISC

## **New guidance from CIRIA - Construction Industry Research and Information Association**

CIRIA is pleased to announce [[December 2022](#)] new [free CIRIA practice guidance](#) and publications that include:

### **[Code of practice for property flood resilience \(C790\)](#) –**

This guidance provides confidence on the use of the standards within the code of practice that provides a benchmark for those procuring and delivering property flood resilience (PFR).

### **[The Management of advanced numerical modelling in geotechnical modelling \(C791\)](#) -**

This guide provides a framework for those who oversee the process, provide the information needed for this task and use the results of the numerical modelling.

### **[Methodology for quantifying the benefits of offsite construction \(C792\)](#) -**

This guidance proposes a framework for comparing construction approaches, making it possible to keep consistent records across projects and identify all the possible benefits available.

**Other guides include:**

### **[Retrofitting ground gas protection measure \(C795\)](#)**

### **[Grouted anchors and soil nails \(C794\)](#)**

## **Grenfell Tower Inquiry – latest developments**

- The Grenfell Tower Inquiry was created to examine the circumstances leading up to and surrounding the fire at Grenfell Tower on the night of 14 June 2017.

### **[Latest update \[January 2023\]](#)**

**Drop-in session** – The next drop-in session for BSRs and members of the public will be on Monday 30 January 2023 from 16:30-17:30 at The Bay20 Community Centre, 71 St Marks Road, London W10 6JG

**[End of Phase 2](#)** – The Inquiry has concluded hearings for Phase 2 and is closed to the public. The Inquiry Panel will continue preparing the final report.

**Phase 1 Report** – The Inquiry has published its report on Phase 1 of its investigations.

**Also: Latest update from the Inquiry [January 2023]** – The Inquiry has published an update on its next community drop-in session.

This update provides a digest of:

[Back to top](#)

- **December 2022 Newsletter** – The Inquiry has published an update on its work.
- **Closing remarks from the chair** – The Inquiry has published the transcript of the Chair’s closing remarks for the end of Phase 2 hearings.
- **End of Phase 2 Hearings** - The Inquiry has published an update on the end of Phase 2 hearings.

[Read further information from the ‘Grenfell Tower Inquiry’ website.](#)

### **Related Links:**

#### **Cladding: Panels failed fire tests 13 years before Grenfell -**

Leaked test results suggest the government and construction industry had early evidence of the dangers posed by cladding, 13 years before the Grenfell Tower fire.

Panels, commonly used on buildings in the UK, failed fire tests carried out in 2004. The Inquiry venue at 13 Bishop’s Bridge Road, London, W2 6BU. The results marked “Commercial in confidence,” were circulated within an industry advisory group.

They were recently passed to the BBC (see publication date) and, until now, never made public.





Hundreds of thousands of flat owners are now threatened with large bills because of construction materials which pose a risk in fires.

The 2004 results were among the first from a British test of full-scale building systems, developed in the late 1990s when there were growing concerns in Parliament about the risks of cladding.

The tests were part of research commissioned the then Labour government to determine what standards building systems should have to meet.

Symonds T (2021) [‘Cladding: Panels failed fire tests 13 years before Grenfell’](#), *BBC News* [online], 16 September. Available at: [www.bbc.co.uk/news/uk-58584348](http://www.bbc.co.uk/news/uk-58584348) [accessed 23 February 2022]

### **Related Topics**

-  [Construction industry](#)
-  [UK fire safety](#)
-  [Grenfell Tower fire](#)
-  [Grenfell Tower Inquiry](#)

### **Also:**

[RICS Fire safety Hub \[online\]](#) - containing advice for the public, building owners, landlords, corporate occupiers and RICS professionals and information on fire safety on buildings with external wall systems.

[Back to top](#)

## Government details fire safety-related changes to planning system

- The government has released details of new requirements in the planning system to bolster fire safety in high-rise residential buildings, in response to the Grenfell Tower Fire.

The changes come in the Ministry for Housing, Communities and Local Government's (MHCLG) plans to introduce '[planning gateway one](#)', which it said would deliver on one of Dame Judith Hackitt's recommendations following her independent review of Building Regulations and fire safety.

The new requirements aim to ensure fire safety matters as they relate to land use planning are incorporated at the planning stage for schemes that involve high-rise residential buildings.

The changes, which come into effect from **1 August 2021** will:

- involve the Health and Safety Executive (HSE) becoming a statutory consultee before permission is granted for development which involves or is likely to involve a high-rise residential building.
- require relevant applications for planning permission to include a fire statement to ensure applicants have considered fire safety issues as they relate to land use planning matters such as layout and access.
- help inform effective decision-making by local planning authorities or the secretary of state so that those decisions reflect and respond to the needs of the local community.

The new requirements will be introduced by making amendments to the Town and Country Planning (Development Management Procedure) (England) Order 2015.

As announced in the Queen's Speech (11 May), the Building Safety Bill is also expected to be introduced this year, which will establish a new building safety regime in England.

[Further information and access to the \*Construction Manager\* article, 'Government details fire safety-related changes to planning system,' in full.](#)

## [RIBA Stirling Prize 2021](#)

The RIBA Stirling Prize is the UK's most prestigious architecture award. The award is given to the architect of the building thought to be the most significant of the year for the evolution of architecture and the built environment.

**RIBA Stirling Prize shortlist 2021** included: (i) [15 Clerkenwell Close](#), (ii) [Cambridge Central Mosque](#), (iii) [Key Work Housing, Eddington, Cambridge](#), (iv) [Tintagel Castle Footbridge](#), and (v) [Windermere Jetty](#), and the **WINNER**,



[Back to top](#)

announced on 14<sup>th</sup> October 2021 was (vi) [Kingston University London – Town House](#),- essentially a library, but designed as a building for the whole community with cafés, an outdoor reading room roof terrace and a performance space. [@KingstonUniLib](#) by [@graftonarchs](#)

### **Skills Agenda: Concerns for Skills Shortages in the 21<sup>st</sup> Century: A Review into the Construction Industry, Australia**

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.



UTS ePRESS is Open Access and licensed under [Creative Commons Attribution 4.0 International Licence](#).

[Read the full research report ‘Concerns for Skills Shortages in the 21<sup>st</sup> Century’.](#)

### **Tomorrow’s Engineers**



© EngineeringUK 2021

Tomorrow’s Engineers brings together resources and evidence to support the engineering community in getting the most out of their engagement activity. It includes information and guidance on a range of topics curated from across the STEM community. Developed by EngineeringUK, the website is for anyone who funds or delivers engineering engagement activities and is designed to help improve the engineering community’s collective impact.

[Access the Tomorrow’s Engineers website](#)

### **Women in construction: building a career in a challenging environment**

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

[Access Women in construction: building a career in a challenging environment](#)

Also: Access - RICS President Clement Lau’s article, entitled, [‘Women are not equally represented in our sector’](#), RICS *Modus* [online].

[Back to top](#)

## **RICS Market surveys – leading indicators in the real estate industry**

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

- **UK Residential Market Survey** – Used by government and key institutions, the Resi. Market Survey is a key indicator of conditions in UK residential sales and lettings.

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

- **UK & Global Construction Monitor** – The leading sentiment indicator of the construction markets.

- **UK Facilities Management Survey** – The UK Facilities Management survey is a quarterly indicator of activity and sentiment across the facilities management industry.

- **UK & Global Commercial Market Survey** – The global commercial property monitors are leading indicators of conditions in commercial property occupier and investor markets around the world.

- **UK Economy and Property Market Update** – The Economy and Property Market Update is a new quarterly assessment of key macro, real estate and construction trends.

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

**Note:** Further updates are provided within the ‘Latest Property and Construction Statistics’ section of *Knowledge Foundations*.

## **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.

**RICS Futures Report 2020** is our action agenda to keep up in a changing world.

[Back to top](#)

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 August 2022]**

- 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 cash 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
- The economic statement
- 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, National Statistics: 'House Price Index: reports', Last Updated 17 August 2022' in full.](#)

Contents:

- June 2022
- About the UK HPI, and
- Archived reports and data.

Related Content:

- UK House Price Index: data downloads April 2022
- UK House Price Index for April 2022
- UK House Price Index: data downloads February 2022
- UK House Price Index: reports 2022
- UK House Price Index

[Back to top](#)

## Tackling mental health and wellbeing within the construction industry



© MHFA England

The construction industry reports some of the highest levels of workplace mental ill health.

Over the last three years (see publication date) Mental Health First Aid (MHFA) England has been working with Building Mental Health, the Construction Industry Training Board (CITB) and the Lighthouse Club Construction Industry Charity to create a freely available, industry-wide framework and charter to tackle the mental health crisis in the construction industry.

[Find out more about the social value of the programme](#)

### Related Links:

#### **Q&A with Harold Samuel Research Prize (HSRP) recipient, Dr Katharine van Someren**

Research is a fundamental aspect of university life. It is used to gain a further understanding for assignments and dissertations and by academics to explore topics that will broaden our understanding of society and the world around us. The HSRP is an annual opportunity for those interested in the building environment to submit a research proposal on a topic that could offer sector-changing insights.

What is the relationship between job and financial security and mental health in the construction workplace? UCEM spoke with HSRP recipient Dr Katharine van Someren, about her research on UK construction workplace poverty. You can access [UK construction workplace poverty: the impact of financial and job insecurity on mental health](#) on UCEM's publication page to learn more about Katharine's research.

Access the article '[Q&A Harold Samuel Research Prize \(HSRP\) recipient, Dr Katharine van Someren](#)' in full.

### **UCEM mental health strategy**

UCEM published its first mental health strategy on 10 May 2021.

The strategy is designed to benefit both UCEM students and staff, having been written with input from both stakeholder groups.

[Back to top](#)

At the core of the document is the vision which states: UCEM will take a whole institution approach to develop one community that enables students of all levels along with staff to prioritise mental health and wellbeing.

**There are five strategic aims supporting this vision which are:**

1. to create a supportive whole university community that promotes positive mental health, and ensures mental health is a key strategic priority.
2. to ensure the UCEM community is informed and aware of the importance of good mental health and works to tackle the stigma surrounding mental health.
3. to ensure appropriate and timely support is provided to those who need it.
4. to develop links with external support services and stakeholders
5. to use data to evaluate and monitor the effectiveness of mental health interventions and inform future strategic development.

For more details, take a look at [UCEM's mental health strategy document](#).

Access the article '[UCEM launches mental health strategy](#)' in full.

### **Understanding Mental Health in the Built Environment**

In May 2020, the CIOB published their report on Understanding Mental Health in the Built Environment. The report, which surveyed people across the globe, presented harrowing statistics of high numbers of workers experiencing extreme levels of stress over a prolonged period, with many people reporting that they had considered taking their own life in 2019.

Access the CIOB's latest report [Understanding Mental Health in the Built Environment](#), including the results from the CIOB survey of over 2,000 professionals. [Access CIOB online Policy Portal, & 'CIOB surveys the sector to gather data on mental health & stress'](#)

### **How can buildings have positive impact on wellbeing?**

BSRIA's Henry Lawson discusses the importance of designing buildings that promote 'Wellbeing.' The theory sounds compelling but in practice, creating such building is complex.

[Access and read 'How can buildings have positive impact on wellbeing' in full.](#)

[Read the Construction Manager article entitled, 'Samaritans to work with roofers on mental health' in full.](#)

### **Sustainable outcomes for buildings**

The Royal Institute of British Architects (RIBA) has published

[Back to top](#)

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:

- Minimising resource use and generation of waste,
- Being energy efficient,

[Back to top](#)

- 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.

[Read how the National Trust engage in planning: The NTs' 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.

**What is the RIBA Plan of Work?** The Royal Institute of British Architects (RIBA) first published the RIBA Plan of Work.



[Back to top](#)

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.

**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

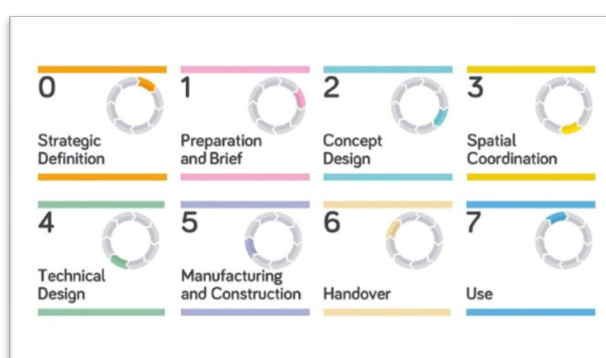
**4 – Technical design** – no change

**5 – Manufacturing and construction** – formerly Construction

**6 – Handover** – formerly Handover and close out

**7 – Use** – formerly in use

**RIBA Plan of Work 2020:**



© 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](#)**

[Back to top](#)

## 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)

[UK BIM Framework – BIM Standards, Guides and Resources](#) - the overarching approach to implementing BIM in the UK, brought together by UK BIM Alliance, BSI and CDBB. The guidance is structured as indicated below:

**Guidance Part 1** and **Guidance Parts A-F** support the implementation of the overall published ISO 19650 series. **Guidance Part 2 and 3** pick up on content specific to ISO 19650-2 and ISO 19650-3 respectively. Additional **guidance** is also available as part of the **UK BIM Framework** to support the transition to ISO 19650 and Government Soft Landings

[Access UK BIM Framework - Resources](#)

[Latest BIMPlus News and Projects](#)

**[February 2023]** –

- **Projects – William Hare's temporary and permanent steelwork challenge on 21 Moorfield**, 15 December 2022.

- Featuring an architecturally detailed exposed frame, Landsec's 21 Moorfields commercial development in London has steel at its heart. To meet the project's complexity, close attention to detail and effective coordination was a necessity. So steel frame specialist [William Hare](#) used [Trimble's](#) BIM software as a key part of its delivery.

**Project team: 21 Moorfields**

**Client:** Landsec; **Consulting engineer:** Robert Bird Group; **Architect:** Wilkinson Eyre; **Main contractor:** Sir Robert McAlpine; and **Steel frame contractors:** William Hare.

Located directly above London's Moorgate Station, the new 21 Moorfields is a 17-storey commercial development, offering 60,000 sq. m of office space. Reflecting the common themes of existing railway architecture, exposed steelwork was a key

[Back to top](#)

component of the architectural brief, featuring major trusses and structural arches.

Main contractor Sir Robert McAlpine appointed William Hare to deliver the steel detailing, fabrication, erection, temporary works and connection design – a mammoth undertaking.

Daniel Fenn, engineering manager at William Hare, explains: “3D modelling and the BIM discipline is a key part of our business offering. On projects like 21 Moorfields, the importance of BIM goes far beyond just clash detection – it becomes a central collaboration tool.”

**Complex works** – the project required a large amount of complex temporary works to enable the over-station build of 21 Moorfield and facilitate the construction of eight major trusses and six structural arches. Located above the busy Moorgate Station, with the new building essentially built on pile foundations and stilts, it was essential to ensure the existing station roof was not overloaded by the ongoing construction works. As such, the new development needed to be temporarily supported from underneath.

The article also covers: • Visualising the proposed design – Using BIM software, the William Hare team could quickly detail and portray specific steel elements and connections, before then using this visual model to host workshops with the architect to discuss and refine, and • Digital model drives fabrication, here the data from the digital model helped to drive the fabrication and production process.

Gain full access to the project case study article, entitled ['William Hare's temporary and permanent steelwork challenge on 21 Moorfields'](#), BIMPLUS Projects.

#### **Other BIMPLUS Projects include:**

- **Projects – Making the complex simple: Beard Construction's extension of Radley College's Grade II chapel**, 13 December 2022.

- How do you sequence complex works to be carried out by multiple specialist contractors when restoring a Grade II-listed chapel – and the client significantly changes the planned works once underway? [Beard Construction](#) faced that very challenge on its £4.2m contract to extend and reorder St Peter's College Chapel at Radley College in Abingdon, Oxfordshire.

Gain full access to the project case study article, entitled ['Making the complex simple: Beard Construction's extension of Radley College's Grade II chapel'](#), BIMPLUS Projects.

[Back to top](#)

**Other BIMPLUS Projects include:**

- **Projects – Applying BIM to asset management of water and wastewater plants**, 25 November 2022.

- Six years ago (see publication date), Hamilton City Council on New Zealand's North Island began a project to apply BIM technologies and processes to the asset management of its water facilities. Two and half years on from this [first piece about the work](#), Glenn Jowett, technical director, digital engineering advisory, at [design and engineering consultancy Beca](#), brings *BIMplus up to date*.

Gain access to further information and full access to the project case study article, entitled '[Applying BIM to asset management of water and wastewater plants](#)', BIMPLUS Projects.

- **Projects – Digital's role in Seismic's modular school building success**, 19 September 2022.

- Completed earlier this year (2022), the Seismic school building at the BRE Innovation Park in Watford is a successful demonstration of the benefits of modular construction. But digital had a role to play too.

Gain access to further information and full access to the project case study article, entitled '[Digital's role in Seismic's modular school building success](#)', Stanton, J., (2022) BIMPLUS Projects.

- **Projects – [BMW: the ultimate driving machine meets the digital twin](#)**, 25 August 2022.

- Automotive giant BMW plans to have digital scans of all its vehicle plants worldwide completed by early 2023 as part of its digital twin plans.

- **Projects – [Maber uses Archicad to aid collaboration on medical research facility](#)**, 8 July 2022.

- Maber used Archicad to engage with the client and to collaborate effectively with the supply chain on the development of a medical research facility at Nottingham Trent University.

- **Projects – [Communicating and solving design changes with technology](#)**, 17 May 2022.

- 80 Goodhall Street is a mixed-use development in west London. Architect airc.design had to respond to some challenging design changes that affected the project in RIBA stages 3 to 5, so it leaned on Archicad to help communicate the changes.

[Back to top](#)

## **BIM in action: 2020's top five projects**

22 December 2020

- Hospitals, housing, hotels: **BIMPLUS** covered case studies of BIM in action in all sorts of construction projects across the world. Given what happened in 2020, it's not surprising that three of the most read case studies focus on hospitals.

**2020's top five projects** (and all covered within this and previous issues of *Knowledge Foundations*) incl.

1. [Sisk reap rewards of high-tech approach at Wembley](#)
2. [Finland's Hospital Nova uses VR to involve staff in building](#)
3. [NHS Nightingale Hospital, East London – how BIM played its part](#)
4. [Mace uses AI tech on Mayfair project to meet covid-19 safety challenges.](#)
5. [AI tracks work quality at Norway's Stavenger Hospital.](#)

[Access BIM+ that include project entitled, 'BIM in action: 2020's top five projects' available in full.](#)

### **Related BIM+ Projects**

- **(1) Project: [John Sisk relies on BIM best practice to deliver Malmo data centre](#), 2<sup>nd</sup> 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 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.

#### **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.

[Back to top](#)

- **(2) Project: [Finland's Hospital Nova uses VR to involve staff in building](#), 28<sup>th</sup> April 2020.**

Lead Contractor: The Central Finland Health Care District  
BIM Tools: Tridify

- Innovative processes have been used in the co-design of Finland's new Hospital Nova using BIM models and involving more than 350 staff.

- **(3) Project: [NHS Nightingale Hospital, East London – how BIM played its part](#), 5th May 2020.**

Client: Barts Health NHS Trust, Royal Free London NHS Foundation Trust

Lead Contractor: Lead Designer: BDF

BIM Tools: Autodesk Revit

- The UK's newest (see publication date) and largest hospital, based at the ExCel conference centre in London's Docklands, is designed to care for up to 4,000 people affected by Covid-19. The hospital is now in standby mode and will be used should cases in the London area rise again.

- **(4) Project: [Mace use AI tech on Mayfair project to meet Covid-19 safety challenges](#), 1<sup>st</sup> 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.

- **(5) Project: [AI tracks work quality at Norway's Stavanger Hospital](#), 21<sup>st</sup> June 2020.**

Client: Stavanger University Hospital

BIM Tools: 100% International open standards, compatible with Revit, ArchiCAD, Solibri and others

- Oslo-based BIM developer Imeroso has been given responsibility to monitor work progress in one of the biggest public construction projects in Scandinavia.

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

### **Latest BIM news – 10<sup>th</sup> annual BIM report 2020 available**

**NBS 10<sup>th</sup> National BIM Report 2020** - The 2020 annual BIM report marks the 10<sup>th</sup> 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.

### **Construction Information Service (CIS) Insights**

The latest edition [**February 2023**] of NBS CIS *Insights* focuses on – **Concrete**, and covers:

- Pros and cons,
- Admixtures and reinforcements, and
- Defects and cracking.

[Back to top](#)



## Property and Construction Statistics

### **Latest Property and Construction Statistics from RICS:**

- Input from RICS Professionals ensure RICS surveys are leading indicators in the real estate industry.

#### **Latest: Market Surveys - RICS [February 2023]**

#### **UK Economy and Property Market Update, February 2023**

- Light at the end of the tunnel ... but a little way to travel first.

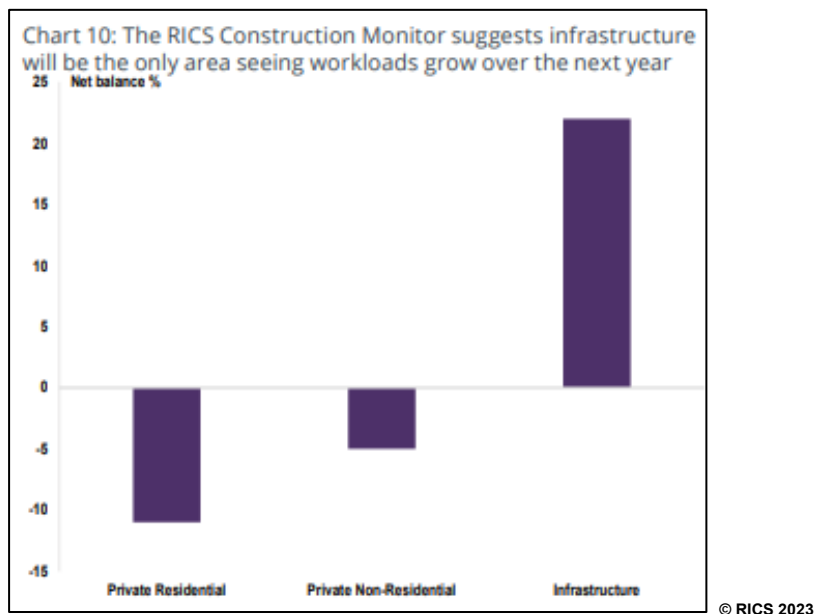
**Summary:** There is a growing sense that the interest rate cycle is close to peaking, but financial markets may be running a little ahead of themselves in envisaging an early reversal in the policy stance. The more challenging macro environment is clearly visible in both the commercial and residential sectors, with activity numbers slowing markedly. Meanwhile, infrastructure remains a key area of strength as other parts of the construction industry slow the development pipeline, albeit it only modestly.

**Construction Sector** – Official data on construction activity points to a broadly flat trend during the second half of last year (2022), leaving total output just over 2% higher than pre-pandemic levels (January 2020). The RICS headline workloads metric, which is captured in net balance terms, tells a broadly similar story with the latest reading standing at -1%. This stable picture does, however, mask significantly divergent trends at a sector level. While the feedback around infrastructure remains generally upbeat (net balance of +22% against +32% in Q3), the shift in the mood music around the housing market is beginning to manifest itself in the private residential workloads indicator (-13% compared with +17% previously).



[Back to top](#)

Looking forward, a broadly similar trend is expected to persist as highlighted in Chart 10. Further growth in infrastructure workloads will be supported by ongoing commitments to HS2 and Hinkley Point C amongst other projects.



Source: RICS Economics Research: *RICS UK Economy and Property Market Update* (February 2023), London: RICS, p5 - Chart 10.

Meanwhile, recent trading statements from the major housebuilders suggests a modest scaling back in completions. Reflecting all of this, the latest forecast from the Construction Products Association suggests that total output will decline by close to 5% this year (2023) even with a rise in infrastructure output of between 2 and 3%.

**[Read the full piece of research 'RICS UK Economy and Property Market Update, February 2023](#)**

**Also: [UK Economy and Property Market Chart Book, Q4 2020](#)**

- Agreed sales rise over the month with expectations modestly positive regarding the near-term outlook

**UK Residential Market Survey: [January 2023](#)**

- Sales volumes and prices continue to retreat across the housing market.

- Metrics on buyer enquiries, agreed sales and new instructions all remain negative,
- House prices continue to slip at the national levels,
- Forward-looking indicators still point to a subdued outlook for the market, and
- Build to Rent only seen playing a modest role in filling the gap in the lettings market

The January 2023 *RICS Residential Survey* results continue to

[Back to top](#)

depict a muted market backdrop at present, with new buyer demand, sales, fresh listings and prices all reported to be on a downward trend. What's more, near-term expectations suggest this picture is likely to remain in place for a while longer as the market adjusts to the higher interest rate environment. This is despite some more sanguine anecdotal remarks from a number of contributors.

At the national level, the latest net balance for new buyer enquiries slipped to -47%, down from a reading of -40% last month (see publication date). As such, this measure continues to signal a decline in demand, with the January return marking the ninth successive negative monthly reading for the new buyer enquiries series. Moreover, contributors in all parts of the UK saw either a fall in demand or a stagnant trend over the latest survey period.

Alongside this, respondents continue to see a pull-back in the volume of fresh listings coming onto the sales market, evidenced by a net balance of -14% of contributors reporting a decline in new instructions over January. Meanwhile, the number of market appraisals undertaken over the month was below that found in the equivalent period a year ago, according to a net balance of -42% of respondents. Consequently, relatively tight supply conditions appear likely to remain in place across the market in the immediate future.

At the UK aggregate level, a net balance of -39% of respondents cited a decline in agreed sales over the month. This is similar to the figure of -41% seen in December and remains consistent with a significant weakening in residential sales volumes. Looking ahead, sales are anticipated to continue to slip over the coming three months, evidence by the near-term sales expectations net balance coming in at -49% (albeit this is marginally less downbeat than -54% last month). At the twelve-month time horizon, the sales outlook does not appear to be quite as downcast as before (although still in negative territory), with the net balance moving to -20% compared to a much weaker reading of -42% seen back in December.

**[Read the latest RICS UK Residential Market Survey: January 2023 in full.](#)**

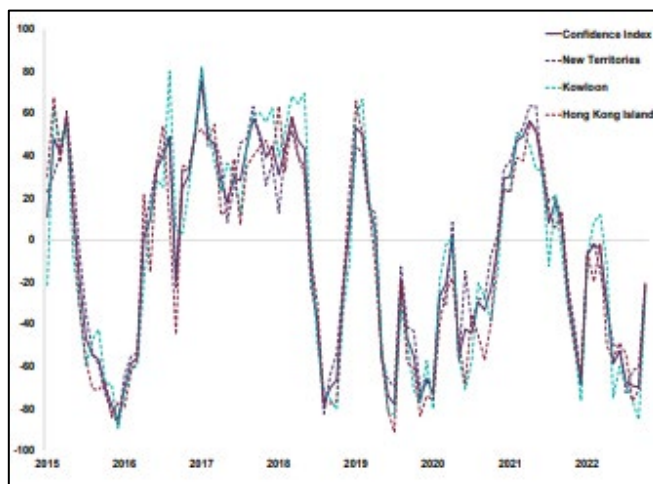
**RICS - SPACIOUS 千居 Hong Kong Residential Monitor / Market Survey: December 2022**

- Sentiment shows signs of relief in both the sales and lettings markets.

- Headline confidence indicator remains in the negative zone despite China's reopening,
- Sales and rental price expectations rebound to less negative zones, and
- Buyers enquiries and tenant demand also show downturn momentum easing.

[Back to top](#)

**Chart 1: Confidence Index\***



© RICS 2022

Source: RICS Economics Research: *RICS Hong Kong Residential Monitor – December 2022*, London: RICS, p1 - Chart 1.

\* The Confidence Index is a composite measure capturing overall market momentum, encompassing variables on short-term price and sales expectations. The Home Price Perceptions Index measures the perceived monthly change in home prices as reported by survey participants, where March 2015=100. The Rent Perceptions Index measures the perceived monthly change in rents as reported by survey respondents, where March 2019=100.

The December 2022 *RICS-Spacious Hong Kong Residential Property Monitor* results show market sentiment remains negative. As is illustrated in Chart 1, The headline Confidence Index recovered from -69 to -22, reflecting the early positive impact of China's reopening from the Covid-related lockdowns. Hong Kong Island (-20), Kowloon (-27), and the New Territories (-21) show broadly similar rebounds from previous months, recording the highest reading since mid-2022.

**[Read the latest RICS HK Residential Monitor: December 2022 in full.](#)**

- *RICS-Spacious HK Residential Monitor* is a monthly guide to the trends in HK's housing market. The report is available from the [RICS website](#) along with other surveys covering global housing, commercial and land markets, as well as construction industry.

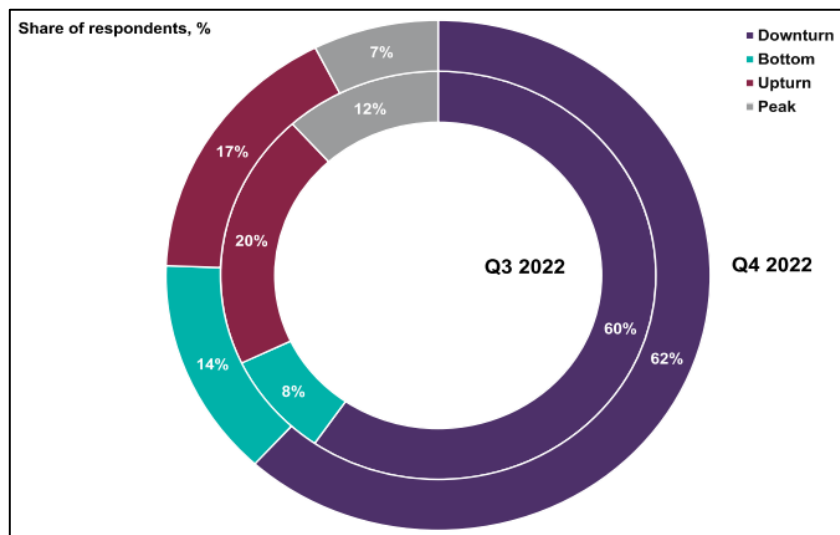
### **Global Commercial Property Monitors, Q4 2022**

- More weakness evident in some CRE markets as interest rates rise but other remain resilient

- The headline index capturing sentiment towards real estate at a global level slips a little further into negative territory,
- The picture remains mixed with some markets in APAC and the Middle East in particular showing a more solid trend,

[Back to top](#)

- The 'job-rich' macro downturn is visible in the somewhat more resilient occupier metrics.

**Chart 6: Global Perceptions Regarding Point in Cycle**

© RICS 2022

Source: RICS Economics Research: *RICS Global Commercial Property Monitors, Q4 2022*, London: RICS, p4 - Chart 6

**Real estate sentiment takes a further knock –**

With interest rates moving higher across much of the world and economic newsflow generally downbeat, it is hardly surprising that the overall tone of the *Q4 RICS Global Commercial Property Monitor* is one of caution. The headline aggregate indicator capturing the mood music, the Global Commercial Property Sentiment Index (CPSI), continued to weaken into the end of 2022, falling from -11 in Q3 to -15 during Q4. However, it is important to put this latest reading in some context; the Global CPSI was significantly more negative through the recent pandemic and, predictably, in the aftermath of the Global Financial Crisis. In the case of the former, it approached a low of almost -40, while, in the latter, it slipped to close to -50.

**Forward looking indicators on balance signal soft landing –**

The proportion of respondents who view the real estate market to be in a downturn globally now stands at around two-thirds (as shown in Chart 6 above) with a further 14% perceiving it to be at the bottom of the cycle. Significantly, this is a higher share than even during the early phase of the pandemic. However, the forward looking projections for both capital values and rents suggest that in most parts of the world, a relatively soft landing for the commercial property sector is seen as the most likely outcome.

[Read the latest RICS Global Commercial Property Monitor, Q4 2022 in full.](#)

[Back to top](#)

## Latest Statistics from the Office for National Statistics (ONS)

**UK economy latest** – A roundup of the latest data and analysis on the UK economy, business and jobs following Brexit and during the coronavirus (COVID-19) pandemic.

### **Construction Industry highlights include** – **Construction output in Great Britain: December 2022**

- Short-term measures of output by the construction industry.

#### **What's covered in the latest bulletin?**

- Monthly construction output is estimated to be flat (0.0% growth) in volume terms in December 2022; this came from an increase in new work (0.5%), offset by a decrease in repair and maintenance (0.7% fall) on the month.

- As the sector level, the main positive contributors were seen in non-housing repair and maintenance, and infrastructure new work, which increased 5.4% and 3.7%, respectively; the main negative contributors were seen in private housing repair and maintenance, and private new housing, falling 8.5% and 2.3%, respectively.

- Quarterly construction output increased 0.3% in Quarter 4 (Oct to Dec) 2022 compared with Quarter 3 (July to Sept) 2022; the increase came from growth in both new work (0.4%) and repair

### **Read the full statistical bulletin, 'Construction output in Great Britain: December 2022, new orders and Construction Output Price Indices, October to December 2022**

**Also: Construction statistics, Great Britain: 2020** - A wide range of statistics that are current available on the construction industry including the value of output, new orders by sector, number of firms and total employment, insolvencies and construction output price indices.

## Latest Statistics from HSE – Health and Safety Executive

### **Latest Key figures for Great Britain (2020/21)**

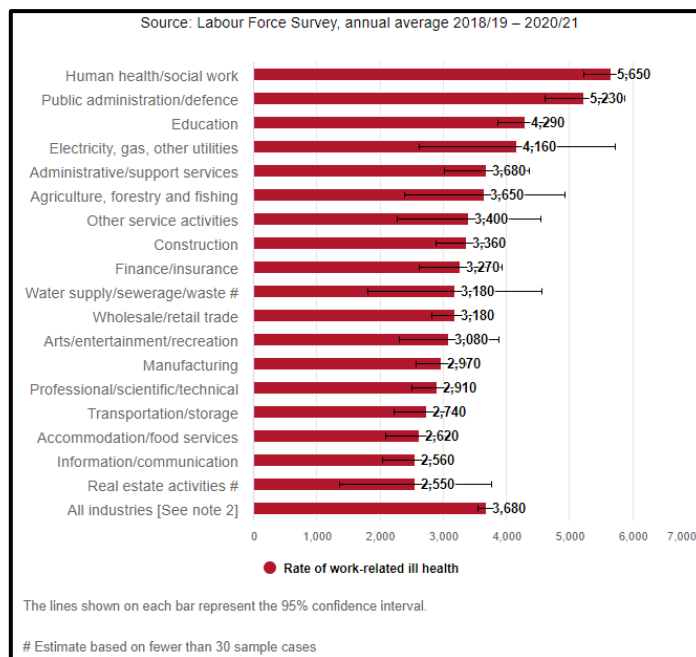
In 2020/21 an estimated 1.7 million workers were suffering from an illness they believed was caused or made worse by their work and 441,000 workers sustained a non-fatal injury at work. [Source: Self-reports from the Labour Force Survey]. However, the risk of injury and work-related ill health varies across industry, being more likely in some industries than others.

The chart overleaf shows how the overall rates of self-reported work-related ill health and workplace injury vary between industry groups. While the chart shows the overall picture for each industry group, this may be masking differences at more detailed levels (for example, illness type or more detailed industry sub-groups).

[Back to top](#)

**From the Health and Safety Executive (HSE), ‘Self-reported work-related ill health’, and covering ‘Construction’:**

**Rate of self-reported work-related health by industry for people working in the last 12 months (per 100,000 workers) [Note 1], [Note 3]**



© Crown copyright 2022

**Note 1:** Industry groupings based on the section level of the 2007 Standard Industrial Classification (SIC) & **Note 3:** These estimates are based on results from a survey and are subject to sampling error.

Source: HSE (2022) ‘Self-reported work-related ill health’, Bootle: HSE [online]. Available at: [www.gov.uk/statistics/industry](http://www.gov.uk/statistics/industry) [accessed 11 March 2022]

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

[Back to top](#)



## Built Environment Research

### Latest Policy and Research from:

#### **1) Savills Market Trends – Real estate investment in 2023: macro outlook**

- Market Trends: [Savills.com](https://www.savills.com), [January 2023](#)

No outlook for 2023 can avoid the topic of inflation. Coming into 2023 it was the overarching theme, fuelled first by the Covid pandemic and then the invasion of Ukraine.

On the other hand, there are positive signs. Easing supply chain shortages, falling commodity prices and weaker demand more generally, point to the possibility of inflation coming down rapidly in 2023.

[Back to top](#)

And yet the main concern for the world's major central banks is the pace of wage growth; tight labour markets, fuelled by a combination of strong job creation and a constrained supply of labour, are driving wages up.

**Labour markets the pivotal factor for 2023 macroeconomics -**

The outlook for 2023 is therefore contingent on developments across labour markets. Central banks are shooting for the Goldilocks Zone, but pitfalls lie either side of that target.

Too much tightening and they risk crashing the economy. Too little tightening and they risk inflation becoming entrenched via the notorious 'wage-price spiral' – necessitating a modern-day 'Volcker moment' that would also crash the economy.

Given the long and variable lags in the impact of rate hikes on economic activity, finding this sweet spot in monetary policy is extremely difficult.

Their messaging reflects this dilemma; central bankers are simultaneously emphasising a "data-dependent" approach and taking it "meeting-by-meeting," while incessantly pushing a higher-for-longer narrative on future interest rates. Clearly the two are incompatible – so expect more volatility across financial markets in 2023.

**World economies set for a slow start in 2023 –** In the meantime

In the meantime, recent economic data reveals little positive momentum being carried into the new year, while sentiment-based indicators suggest a further deterioration in activity in early 2023.

The global economy is likely to fall into recession, led by Europe and North America, where the cost-of-living crisis is most acute. However, the downturn should be relatively short and shallow – assuming a relatively modest deterioration in labour market outcomes.

Overall, the global economy is expected to grow by just 1.8% next year (2024), well short of the 3.1% average for the decade leading up to the Covid-19 pandemic.

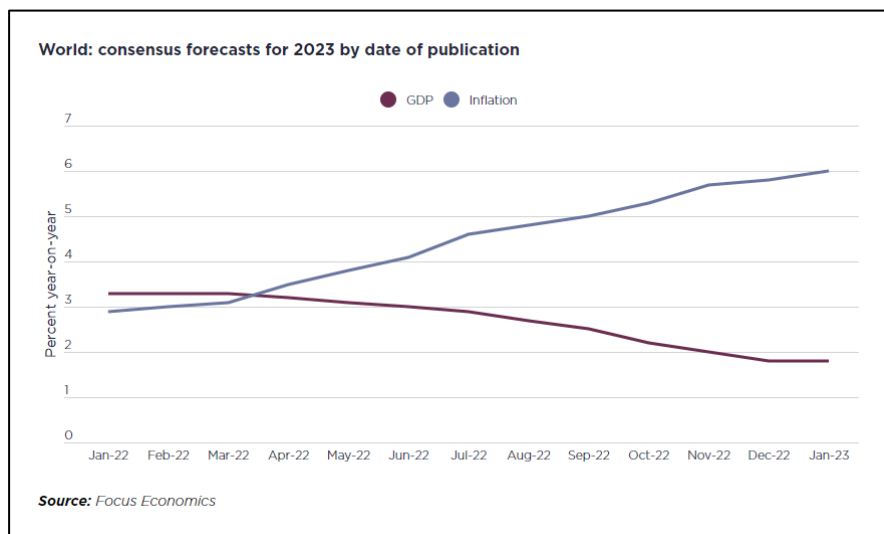
Fortunately, there are no obvious areas of systemic distress that could turn a recession into a depression. But there are myriad downside risks; not least in the potential spillovers from the rapid tightening of financial conditions over the past 12 months and the risk of policy misjudgements.

In the words of Warren Buffet, "It's only when the tide goes out that you learn who has been swimming naked." Highly leveraged parts of the global economy, such as housing markets, may well fall into this category. Meanwhile the war in Ukraine will continue, and warmer spring weather won't bring a sudden end to Europe's energy crisis.



[Back to top](#)

### World: consensus forecasts for 2023 by date of publication



Source: Salmon, O, (2023) *Market Trends: Real estate investment in 2023: macro outlook*, Savills [online]. Available at: [www.savills.com/impacts/market-trends/real-estate-investment-in-2023-macro-outlook.html](http://www.savills.com/impacts/market-trends/real-estate-investment-in-2023-macro-outlook.html) [accessed 10 February 2023]

But there are also reasons for cautious optimism. Inflation has peaked, with interest rates set to follow suit. If inflation follows the path of least resistance, then the central bank pivot, which will support ailing economics, is still in play.

Developments in China are also positive. The authorities have eased zero-Covid rules; if managed correctly, this could prompt a strong domestic recovery and provide some impetus to global growth in the second half of the year.

However, if recent experience tells us anything, it is to expect the unexpected. Any exogenous shocks – relating to geopolitics, climate change, or, indeed, Covid-19 – will continue to wreak havoc on even the most conscientious of economics outlooks.

**[Read the article, Salmon O \(2013\), Market Trends – ‘Four trends shaping global retail real estate’, in full.](#)**

**[Also: Read the Market Trends – ‘The total value of global real estate’, in full.](#)**

**Read Savills Investment tips and trends by region -**

- [Read more EMEA tips](#), ○ [Read more Asia-Pacific tips](#)
- [Read more North America tips](#)

[Read Savills World cities prime residential forecasts](#)

In earlier issues (05/20) 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](#)**.

[Back to top](#)

[Read the full Savills Impact Publication 'The Impact of Covid-19 on real estate', 2020'](#)

[Savills \(2020\) 'Welcome to Impacts 2020' \*Impacts\*, May, Savills \[online\]. Available at Savills.com](#)

## **2) Joseph Rowntree Foundation (JRF) -**

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

### **UK Poverty 2022: The essential guide to understanding poverty in the UK**

**Related topics** – Housing; Work; Income and benefits

- This is the first issue of the JRF's new-style *UK Poverty* report, which looks comprehensively at trends in poverty across all its characteristics and impacts.

What is the picture of poverty at the start of 2022, coming up to two years after a global pandemic struck? To an extent the picture is unclear: we don't yet have official poverty data covering the pandemic period, and we know that the quality of the very surveys we rely on for this information were affected by the onset of the pandemic.

But many sources make it clear that while some groups have been well supported and face better prospects as we enter 2022 (see publication date), others face deep and persistent poverty. In a way this is much better than might be expected given the economic and social shock the country has been through.

We know poverty at any stage in life can lead to negative impacts and so it is critical to scrutinise the data thoroughly to work out who is worst affected, determine how trends are changing over time and see what future prospects are.

This report gives a clear statement, agreed by JRF's Grassroots Poverty Action Group (GPAC), that we need coordinated commitment, effort and action on the intersecting issues and challenges identified in this report. This can turn back the tide of poverty, and offer security for the many people experiencing hardship across the UK.

[Read the JSR article entitled, 'UK Poverty 2022: The essential guide to understanding poverty in the UK' in full](#)

**Also gain access to the following free downloads that include:**

**Findings:**

[JRF \(2022\) \*UK Poverty 2022: The essential guide to understanding poverty in the UK\* \(148.85 KB\),](#)

[Back to top](#)

**and the Full Report:**

**[JRF \(2022\) UK Poverty 2022: The essential guide to understanding poverty in the UK \(3.71 MB\).](#)**

**Related Links:**

**[Read the JSR report entitled, 'UK Poverty 2020/21' in full](#)**

**[Read the article 'UK Poverty 2019/20 Housing' in full](#)**

**[UK Poverty Statistics from the Joseph Rowntree Foundation -](#)**

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.

**[JRF Spring Budget 2021 analysis](#)**

**[JRF Analysis of the 2020 Spending Review](#)**

### **3) 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.

#### **Temporary accommodation at crisis point: Frontline perspectives from London and Greater Manchester**

Farrelly, M., and Hackett, P, The Smith Institute (2022)

- This report examines statutory homelessness and temporary accommodation (TA) in London and Greater Manchester. It is a public-policy facing report to shed light on what is currently happening with the supply and demand of TA and to open up a wider discussion around what can be done to improve the situation going forward. It is not intended as an academic or technical comparative analysis of the different boroughs homelessness activities.

The findings and evaluations are based on extensive desk research and one to one interviews with housing officers and other housing professionals, housing providers, investors, politicians, experts, homelessness charities and campaigners. We also hosted two virtual roundtable discussions in the Spring of 2022 on Greater Manchester, chaired by Paul Dennett, Salford City Mayor and Deputy Mayor for Greater Manchester, and on London, chaired by Tom Copley, London Deputy Mayor for Housing and Residential Development.

Where relevant we have highlighted what specific boroughs are doing and have included examples of best practice and new ideas

[Back to top](#)

and approaches. We have laced the report with anonymised quotes from the interviews and made reference to the work of the GLA, London Councils, GMCA and other relevant organisations. We have evaluated the data and opinions and on the basis of what we've offered a series of talking points and policy recommendations.

The concept of a TA system as used in this report combines the boroughs' statutory duties under the Homelessness Reduction Act (2017) with their responsibilities under relevant housing legislation and regulations. We have also referred to the rules and regulations surrounding welfare benefits and housing policy more generally that impacts ON TA, as well as looking at local, city-wide and national plans and strategies. Although not quite a whole-system approach, the report does cover a range of inter-connected demand and supply side issues, including the different challenges the boroughs face preventing homelessness, managing and providing the different types of TA and finding settled, move-on homes.

The report covers the GLA and the 32 Greater London boroughs and the GMCA and its boroughs (Bolton, Bury, City of Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford, Wigan). The data was drawn mainly from DLUHC, GLA, GMCA and other official statistics, as well as information collated by the boroughs, housing charities and professional bodies.

**[Read the full piece of research, 'Temporary accommodation at crisis point: Frontline perspectives from London and Greater Manchester.'](#)**

**Understanding the impact of almshouse charities in the pandemic.**

Hunter, P., The Smith Institute (2022)

- This independent study, commissioned by The Almshouse Association, seeks to understand the impact of the pandemic on almshouse charities and their residents, examine the difference almshouse charities have made, identify the lessons that can be drawn from the past two years; and highlight challenges the sector faces going forward.

The report was informed by desk research, a roundtable discussion hosted by The Almshouse Association and non-attributable telephone/on-line interviews with a variety of almshouse charities and other housing organisations.

**[Read the full piece of research, 'Understanding the impact of almshouse charities in the pandemic.'](#)**

[Back to top](#)

**Housing allocations and the vacancy chain: how coordinating chains can better meet housing needs and tenant choice.**

The Smith Institute (2022)

- This report is an exploration into the factors influencing vacancy chains in London's social housing, covering general needs stock held by councils, ALMOs and housing associations, with interplays from supported and specialist housing. The report is in five sections, including a set of recommendations.

**[Read the full piece of research, 'Housing allocations and the vacancy chain: how coordinating chains can better meet housing needs and tenant choice.'](#)**

**Pulling at the Roots: A report by the Southwark Council Housing Resident's Working Part on understanding and mitigating the economic and financial impacts of Covid for residents of council housing in Southwark**

Southwark Council Housing Residents' Working Party (2021)

*The Smith Institute provided support for the Southwark Council Housing Residents' Working Part on understanding and mitigating the economic and financial impacts of Covid for residents of council housing in Southwark.*

To get a better understanding the Council helped establish a Council Housing Residents' Working Party (RWP), comprising tenants and homeowners in June 2021. The Working Party was tasked to examine the economic and financial impacts of the COVID pandemic, including paying special attention to who has been worst affected, what support the Borough's council housing residents have had, and what is needed to improve this morning forwards.

The RWP took oral and written evidence from Council officers, housing and debt experts, and representatives from the community and voluntary sector, considered government and Council held data on rent arrears and the impact of Covid; and conducted its own survey of over 1,800 tenants and leaseholders.

**[Read the full piece of research, 'Pulling at the roots: A report by the Southwark Council Housing Residents' Working Party on understanding and mitigating the economic and financial impacts of Covid for residents of council housing in Southwark.'](#)**

**A Just Transition: Ensuring responsible investment for a just transition to net zero.**

The Smith Institute (2021)

The Smith Institute supported the All-Party Parliamentary Group for Local Authority Pension Funds inquiry into 'Responsible investment for a just transition.'

[Back to top](#)

This report is based on evidence sessions and written submissions to that inquiry from investors, industry, academics, community groups, trade unions, and other non-government organisations. The inquiry report seeks to inform politicians, policymakers, stakeholders and the public on the roles and responsibilities that investors can play, with the support of their members and government, in enabling a just transition to net zero carbon emissions.

[Read the full piece of research, 'A Just Transition: Ensuring responsible investment for a just transition to net zero.'](#)

### **Publications – The Smith Institute**

[- The Living Wage Dividend: maximising the local economic benefits of paying a living wage.'](#)

[- Planning for the recovery and the shift towards homeworking: implications for poverty in outer London.](#)

[- A National Housing Conversion Fund: buying properties to boost affordable housing supply.](#)

[- Falling behind: The impact of Universal Credit on rent arrears for council tenants in London.](#)

[- Making Housing Affordable after Covid-19: A follow up report from the Affordable Housing Commission.](#)

[- Making Housing Affordable Again: Rebalancing the Nation's Housing System: The final report of the Affordable Housing Commission.](#)

## **4) CBRE Insights and Research**

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: Insights and Research](#)

[Access 'Sustainability in real estate decision-making: views from the coal face.'](#)

**LATEST:** [CBRE \(2023\) 'UK Real Estate Market Outlook 2023'](#)

[Back to top](#)

## **5) CABE – Chartered Institute of Building Engineers**

### **Latest news: Fire Safety Act and Regulations**

- **Changes to Building Regulations for fire safety in specific types of buildings**
  - On 1 June 2022, the Department for Levelling Up Housing and Communities (DLUHC) announced the outcome of its consultation on extending controls on use of combustible materials, and additional fire safety measures in higher risk buildings. These will come into force on 1 December 2022.
    - [Further information on the Changes to the Building Regulations](#) and
    - [More details can be found in the Amendment Document issued by DLUHC](#)
- **Coming into force of Schedule 1 of the Fire Safety Act relating to Fire Risk Assessments**
  - The Fire Safety Act 2021 will come into force in 2023, but ahead of this Section 1 – Premises to which the Regulatory Reform (Fire Safety) Order (FSO) applies and Section 3 – Risk-based guidance about the discharge of duties under the FSO of the Act commenced on 16 May 2022.
    - [Fire Safety Act Commencement Prioritisation Advice](#)
    - [Information on commencement of Section 1 and 3 of the Fire Safety Act](#)
    - [Fire Risk Assessment Prioritisation Tool](#)

### **Key publications from CABE**

***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. [Access \*Setting the Bar\* – Final Report](#)

Also: [Access \*Safer people, safer homes: Building Safety Management\*](#)

[Access the Chartered Association of Building Engineers for further information.](#) and [Access \*Building Engineer website\*](#)

## **6) RICS – Royal Institution 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.

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



[Back to top](#)

As of **February 2023**, the [latest news & insights](#) include:

- [RICS Fire Safety Hub](#) – read the latest guidance and development from RICS in the area of fire safety,
- [The future of BIM](#) – An overview of what BIM is and how it is evolving,
- **Sustainable innovation in the built environment: is it about ideas or execution?**
- **Construction project benchmarking: Six lessons from the COVID-19 vaccine development programme;**
- **Digital real estate transactions: Digital diligence,**
- **Climate-related stranded assets in real estate part 2: Is energy performance the best indicator?**
- **New RICS framework for increased autonomy of regulation of surveying,**
- **I Am Woman: A Discussion with Black Women in Real Estate, and How can we attract and retain more female talent?**

## **7) CIOB – Chartered Institute of Building**

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 CIOB seek to influence government, industry and other stakeholders around the world with the aim of promoting the construction management discipline and addressing the challenges that the sector faces.

As of **February 2023**, the latest CIOB Policy and Research include:

- **Future of Construction research** – *Aiming the Construction Industry for the Future: Recruiting from the military into construction.* Also access the latest Future of Construction - [CIOB Policy Team Newsletter – January 2022](#) (4<sup>th</sup> Feb 2022)
- **Ethics research** – *Understanding Mental Health in the Built Environment; Construction and the Modern Slavery Act: Tackling Exploitation in the UK; The State of Well-being in the Construction Industry, and Building a Fairer System: Tackling modern slavery in construction supply chains,*
- **Economics and social impact research** – *The Real Face of Construction 2020: Socio-Economic Analysis of The True Value of The Built Environment*
- *Job Quality in the Irish Construction Sector* (22<sup>nd</sup> April 2021)
- **Education and skills research** – *Exploring the impact of the ageing population on the workforce and built environment*
- **The Wider Built Environment** – *Overcoming the Barriers to Housebuilding in Ireland* (Feb '22); and *Understanding the Value of Professionals and Professional Bodies.*

[Access the Chartered Institute of Building's Policy and Research website](#)

[Back to top](#)

## **8) House of Commons Library, 9) the House of Lords Library and 10) 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.

### **Watch this quick video to find out how the House of Commons Library works**

*Source:* UK Parliament (2020) 'How the House of Commons Library works', YouTube [video]. Available at: youtube.com.

As of November 2022, the House of Commons Library 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,

**World Affairs** that is broken down into Africa, Americas, Asia Pacific, Defence, Europe, Institutions, and Middle East, and more.

As of **February 2023**, the latest House of Commons Library, **Research publications** incl.

1. The conflict in Ukraine,
2. Trade: Key Economic Indicators, and
3. GDP – International Comparisons: Key Economic Indicators.

**Review House of Commons Library, Research for this week**  
As of **February 2023** the latest **House of Commons Research:**

[Back to top](#)

Under '**Education**' and within 'Social policy,' the top research briefings incl.

1. Higher Education (Freedom of Speech) Bill: Progress of the Bill,
2. Equality of access and outcomes in higher education in England,
3. University strike action in the UK,
4. Research on the increasing cost of living and inflation, incl. How is the rising cost of living affecting students, and
5. Careers guidance in schools, colleges and universities (England).

Under '**Housing and Planning**' and within 'Social policy,' the top research briefings incl.

1. Green Belt,
2. Brownfield development and protecting the Green Belt,
3. Enterprise Zones,
4. Housing Market: Key Economic Indicators,
5. Helping tenants with damp and mould housing (England),
6. Progress towards the Government's Levelling Up Missions in the East of England,
7. Planning Policy,
8. The Cladding External Wall System (EWS), and
9. Help with paying for historical fire safety work: high-rise blocks (England)

Under '**Energy**,' '**Environment**' and '**Climate change**,' and within 'Science, Environment and Technology' include:

1. Independent Review of Net Zero, and Climate change and biodiversity,
2. Gas and electricity prices under the Energy Price Guarantee and beyond,
3. Rising cost of living in the UK, and Research on the increasing cost of living and inflation,
4. Landfill Tax Fraud: Backbench Business Debate, and
5. Future of the UK's canals and waterways,

[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, Dec. 2019**' -

Abstract: Construction industry – employment, new orders, output. [Construction 2025](#), [The Farmer Review](#) and the [Construction Sector Deal](#) (part of the government's [Industrial Strategy](#)).

**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 construction 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'](#)

[Back to top](#)



## e-Journal Review

### **Built Environment Industry Journal titles reviewed by UCEM e-Library**

#### **MODUS**

**MODUS** - 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 **MODUS** (**February 2023**), 'Green gauge: analysing the RICS Sustainability Report' – There is room for improvement in the way many countries are handling their approach to net zero. Is it lack of awareness, lack of legislation or lack of will causing indifference.

Subject Terms/Keywords: Energy; Environmental management; Environmental surveying; Facilities management; Land and resources; and Materials and resources.

#### **Latest articles within *Modus*:**

- **Buildings that elevated cities: EYE Filmmuseum** – Amsterdam's waterfront shrine to cinema is a story of determination and the vision that it would bring new life to a previously industrial area.

Subject Terms/Keywords: Cities and placemaking; Commercial property; Land and resources; Marine environments; Planning and development; and Projects and people.

- **'I begin invigorated at the prospect of what we can do'** – My first month as President brought three significant opportunities to meet leading members of our profession, to discuss priorities for the year and the way ahead.

[Back to top](#)

Subject Terms/Keywords: Commercial property; Corporate property; Corporate real estate; Projects and people; RICS standards and guidance; and Residential.

- **Brutal or beautiful? The Barbican Estate** – In 1969 the Barbican Estate welcomed its first residents to chic, modern flats in the heart of the city. But has it withstood the test of time?

Subject Terms/Keywords: Building conservation; Commercial property; Heritage and conservation; Housing; Maintenance and repair; and Residential.

- **From soldier to surveyor** – Ex-armed forces personnel have many of the skills that lend themselves to the surveying sector – *Modus* speaks to six people who have made the transition from military to the built environment.

Subject Terms/Keywords: APC; Building surveying; Facilities management; Learning and development; Projects and people; Quantity surveying and construction.

- **Future-proof: retrofitting commercial property** – Offices, restaurants and shops are among the most challenging buildings to upgrade, but global investment in retrofits is part of a push towards net zero carbon targets.

Subject Terms/Keywords: Commercial property; Commercial valuation; Corporate real estate; Energy; Facilities management; and Maintenance and repair.

- **Can we design away crime?** – Stretched police forces mean convictions for property – and street – crime are rare. The emphasis is now on preventing crime through smart design but planners are balking at the guidance.

Subject Terms/Keywords: Housing; Infrastructure; Infrastructure and services; maintenance and repair; Planning and development; Residential.

- **Down to a T: training Britain's surveyors** – T-levels could offer a new pathway for English students into careers in the built environment. But does the industry need to step up to ensure that this trickle becomes a stream?

Subject Terms/Keywords: Building surveying; Commercial property; Diversity and inclusion; Learning and development; Quantity surveying and construction; and Running your business.

- **Setting the pace: building a climate positive Olympics** – Zero waste, zero fossil fuels – it's an Olympian challenge but can Brisbane 2032 be the first officially net-positive games?

Subject Terms/Keywords: Cities and placemaking; Infrastructure; Infrastructure and services; Land and resources; Materials and resources; and Planning and development.

[Back to top](#)

- **Social climbing: how developers can help build equality** – “Social” was once the Cinderella of the ESG umbrella, but increased interest in community and education-based initiatives means that it is finally prioritised by businesses.

Subject Terms/Keywords: Corporate real estate; Diversity and inclusion; Ethical practice; Planning and development; Property finance and investment; and Wellbeing.

- **Inside and out: employing prison-leavers** – Bounce Back works in jails to train inmates for jobs in the construction industry on their release. *Modus* hears about this inspiring social enterprise and asks what RICS members can do to help.

Subject Terms/Keywords: Diversity and inclusion; Learning and development; Projects and people.

**Also: ‘Carbon blindness is a big issue across the industry’,** and more.

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

1. **Construction Journal** - 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, communications, and project management skills.
2. **Built Environment Journal** (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.
3. **Land Journal** - The journal emphasises the crossovers in these practice areas and their global nature, with articles contributed by experts from all over the ..
4. **Property Journal** - 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](#) > [RICS Publications](#) [online].

The Heritage Alliance’s (HA) [Heritage Update](#), the latest edition, **February 2023 - Issue 486** focusing on – Government Reshuffle and New Culture Secretary; Heritage Alliance’s Fiscal and Funding Priorities for Heritage; and Latest publications and Research for the Sector.

Also: **Engaging Digital Audiences**, available on the [HA project portal](#) - access webinars on diversifying digital audiences, how to plan great webinars, how to use exceptions to copyright in

[Back to top](#)

your digital activities & how to encourage your audience to create user-generated content.

**Institute of Workplace and Facilities Management (IWFM)**

*Facilitate*, the latest **January/February 2023** edition focuses on 'Make change happen in 2023' – "When will it end?" has been the common refrain in recent years, but the answer is much closer to home than you may think. As a workplace & facilities professional, the power to create positive change is within your grasp. It's when you focus on what you can control that change happens.

Read more related articles on the [IWFM Insight webpage](#).

**Contractors World International**,

**Construction Management** (formerly *Construction Manager*) is the magazine of the Chartered Institute of Building (CIOB) who also publish the **Global Construction Review** (GCR). Note: Latest articles from both journals are covered earlier within this issue of *Knowledge Foundations*.

**Subscriptions available via the VLE e-Library include:**

**Construction Information Service (CIS) Insight 2022**. The Latest Edition [**February 2023**] focuses on – **Concrete**, and covers -

- **Pros and cons,**
- **Admixtures and reinforcements,** and
- **Defects and cracking.**

**Taylor and Francis Online** and include the following e-Journals:

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

**Henry Stewart Publications** and include the following e-Journals:

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

***Corporate Real Estate Journal*** is the essential peer-reviewed, professional journal for corporate real estate executives.

Each quarterly 100-page issue publishes high quality articles and real case studies on new thinking, strategies, and techniques in corporate real estate. It cuts through the deluge of information facing corporate real estate professionals to deliver content, which is authoritative, practical, and relevant by providing a blend of genuine thought-leadership – which expands what can be achieved with corporate real estate – with detailed, actionable advice and 'lessons learned' from industry peers.



[Back to top](#)

In-depth articles and case studies scheduled for the new volume, **Vol 12, Number 2 (2022-2023)** of **Corporate Real Estate Journal** incl.

**Editorial.****Practice papers**

1. Starting with purpose: How a people-first strategy can support real estate decisions,
2. Using data-driven design to create a flexible and adaptable real estate portfolio while enhancing your employee experience,
3. The role of commercial real estate in shaping our carbon future,
4. The great upgrade: Why human performance metrics will drive the future of the workplace,
5. Designing for an adaptable future,
6. The power of presence: Re-establishing collaboration and innovation amidst a virtual revolution,
7. Developing the return on workplace investment (ROWI) tool.

**Other articles from *Corporate Real Estate Journal* (2022-23), Volume 12, Number 1:****Practice papers**

8. Unlocking the next wave of value in corporate real estate,
9. Modern lease monetisations: How to capitalise on market arbitrages to significantly reduce occupancy costs,
10. How technology is advancing capital planning,
11. Aligning experience data to return-to-office investments,
12. The return on investment of tenant engagement,
13. Leveraging technology for strategic workplace decisions,
14. Places to belong: Practical considerations for creating inclusive and impactful places of work,
15. Communities of work: Creating place in workplace.

**Book review:**

*Elemental Change: Making stuff happen when nothing stands still* by Neil User.

**Other articles from *Corporate Real Estate Journal* (2021-22), Volume 11, Number 2:****Practice papers**

16. Anticipating the next recession: What should corporate real estate do to prepare?
17. Why a hybrid office needs to understand and support employee commutes with transportation information
18. Data analytics and change management are transforming the future of the workplace: The opportunity to create value driven harmony between people, place and technology

[Back to top](#)

19. The great workplace reset: Pivoting to the human experience in the war for talent
20. Information strategy in view of enterprise real estate futures: The evolving role of information systems in corporate real estate and facility management
21. Liberated work: Responding to the unshackling of 'work' from 'place'

**Vol 12 (2022-23)** of [\*Corporate Real Estate Journal\*](#)

**Vol 11 (2021-22)** of [\*Corporate Real Estate Journal\*](#)

**Vol 10 (2020-21)** of [\*Corporate Real Estate Journal\*](#)

**Vol 10 (1) (2020-21) Special issue: COVID-19, CRE and workplace response**

**Vol 9 (2019-20)** of [\*Corporate Real Estate Journal\*](#)

## HSTalks

© Henry Stewart Talks Ltd 2022

HSTalks is a member of the Henry Stewart Group which has been a leader in providing graduate and continuing professional education in science, business, and management for over 40 years through peer reviewed vocational journals (such as the *Corporate Real Estate Journal*), conferences and online education for medical schools, business schools, universities, government, and commercial enterprises in over sixty countries around the world.

Henry Stewart Talks Ltd (HSTalks) provides specially prepared, animated, online, audio-visual lectures, seminar-style talks and case studies that accompany the 'Business & Management Collection' of e-Journals that the UCEM e-Library subscribes to.

### **Educational Journal titles and Open Educational Resources (OERs) reviewed by UCEM e-Library**

[\*Open Praxis\*](#) – peer-reviewed open access scholarly journal focusing on research and innovation in open, distance and flexible education. It is published by the [International Council for Open and Distance Education – ICDE](#).



This work is licensed under a [Creative Commons Attribution 3.0 Unported License \(CC BY 3.0\)](#).

[Back to top](#)

This latest *Open Praxis* special issue **Vol 14(3)** includes five research papers, one innovative practice paper and one book review.

**Keywords:** open education, distance education, e-learning, online education, LMS, engagement, eBook, OER, technology acceptance, learning design.

**Editorial:** Introduction to *Open Praxis* Vol 14(3)

**Research articles include:**

1. '(Re)considering Motivational Scaffolding: A Mixed- Method Study on Turkish Students' Perspectives on Online Learning Before and During the Pandemic',
2. 'The Value of Providing Online Students with Dedicated Affective Support, Particularly during Times of Crisis',
3. 'Exploring English as a Foreign Language (EFL) Teachers' Experience of Flow During Online Classes',
4. 'Investigation of Tendency among Instructors to Conduct a Massive Open Online Course: Case of Turkey',
5. 'Gaining an Insight into Learning Satisfaction in MOOCs: An Investigation through Blog Mining'.

**Innovative practice articles:**

1. 'Exploring Complex Concepts Through Storytelling: A Synchronous Online Health Policy Course Case Study and Recommendations for Implementing Across Disciplines'.

**Book review(s):**

1. 'Book Review of the *Encyclopaedia of Female Pioneers in Online Learning*'.

The primary objective of this book titles, *The encyclopaedia of female pioneers in online learning* is to record and disseminate the voices and contributions of women who pioneered online learning.

**Keywords:** Online Learning, Female Pioneers, Distance Education, Educational Technologies.

**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 of EURODL**, **Vol. 24 (2022): Issue 1 (October 2022)**, article titles include:

- 'A Device Free Lunch Break program: An experiment to promote a balanced use of electronic devices in Middle Secondary International schools,'
- 'Avatar-based virtual reality and the associated gender stereotypes in a university environment,

[Back to top](#)**Also, in EURODL -**

- **'Transcript and Accessibility: Student Views from Using Webinars in Built Environment Education,' by UCEM's Tharindu R. Liyanagunawardena**
- 'Vector AR3-APP – A Good-Practice Example of Learning with Augmented Reality',
- 'Educators' Digital Competence in Swedish Rural Schools,'
- 'Proposition for the Introduction of the Concept Telemathesis in Videoconferencing in Distance Education,'
- 'Developing E-Authentication for E-Assessment'
- 'Diversity of Students Testing the System in Higher Education.'

**Online Learning Journal (OLJ)**, the official journal of the Online Learning Consortium (OLC)

The [Online Learning Consortium's](#) premier journal dedicated to the development and dissemination of new knowledge at the intersection of pedagogy, emerging technology, policy, and practice in online environments.

The OLC [Online Learning Journal](#), latest edition, **OLJ 2022 Vol 26(2)**. This special issue of OLC's *Online Learning Journal* contains select papers presented at the 2021 OLC Accelerate Conference and the 2022 OLC Innovate Conference. This issue features four articles solicited from the many conference presentations at OLC Accelerate, held in fall 2021 and OLC Innovate, held in spring 2022.

Keywords: online learning, OLC conferences, educational research.

**2022 OLC Conference Special Issue**

1. Effect of Role-Play in Online Discussions on Student Engagement and Critical Thinking,
2. "It helped to know I wasn't alone": Exploring Student Satisfaction in an Online Community with a Gamified, Social Media-Like Instructional Approach,
3. A Case Study of Community of Inquiry Presences and Cognitive Load in Asynchronous Online STEM Courses
4. Teaching and Learning with AI-Generated Courseware: Lessons from the Classroom

**Section II**

1. Defining Different Modes of Learning: Resolving Confusion and Contention Through Consensus
2. Exploring the Factors Associated with Undergraduate Students' Online Learning Anxiety: Development of the Online Learner Anxiety Scale
3. Culturally Responsive Teaching in an Undergraduate Online General Education Course
4. Advising Sleep Deprived Students to Take Online Classes

5. Transitioning to Online Learning amid COVID-19: Perspective in a Civil Engineering Program
6. Creating a Social Presence Measure: Self-Rated Behaviours that Indicate Mediated Presence
7. Using Online Tools to Develop Higher Order Learning Among Tertiary Students
8. Enhancing College Students' Online Group Work Perceptions and Skills Using a Utility-Value Intervention
9. Get Connected: A Scoping Review of Advising Online Graduate Students, and more.

[ISSN: 2472 – 5730]

[Higher Education Pedagogies](#), an Open Access Journal.

[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)

[Back to top](#)



## 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

*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.

### Real Estate: The Basics

Forsyth, J. and Wilcox, J. (2022) *Real Estate: The Basics*, Oxon: Routledge. ISBN-13: 9780367725433

*Real Estate: The Basics* provides an easy-to-read introduction to the core concepts of the industry to students new to the subject or professionals changing direction within the sector. The book encapsulates the key 'need to know' aspects of Real Estate including the 'language' of real estate; its value and contribution to countries' GDP; its primary purpose, whether as an asset or as a resource; valuation concepts; asset classes; basic concepts of land law, and of landlord and tenant law; the increased role and

[Back to top](#)

importance of sustainability and technology; and an overview of the wide range of professionals involved in the industry.

### **Studying at a Distance**

Talbot C (2010) *Studying at a Distance* [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 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 a further resources section.

### **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. [Access the free online book \*Adding Some TEC-VARIETY\*](#)

Please note: The authors have made an online version of this work available under a [Creative Commons Attribution-Non-Commercial-Share-Alike 3.0 Licence](#).

### **Directory of Open Access Books (DOAB)**

The primary aim of DOAB is to increase discoverability of Open Access books.

[Access the Directory of Open Access Books \(DOAB\)](#)

### **Benchmarking Library, Information, and Education Services**

Roper, L. (2023) 'Benchmarking the impact, quality, and value of an academic online e-Library', in Baker, D., Ellis, L., Williams, C. and Wragg, C. (eds) *Benchmarking Library, Information, And Education Services* [print book], Cambridge MA: Chandos

The book contributes to practical outputs of general benefit to the sector, including customers, clients or stakeholders, offering ideas for how to identify comparative strengths and weakness and improve or enhance present practices regardless of how well institutions currently perform.

**Note:** In the book chapter I wrote, I look at benchmarking libraries, applying the latest quality research to current working practices and showing how the UCEM library and information services perform against its peers and the benefit this has in supporting the organisation's future strategic planning.

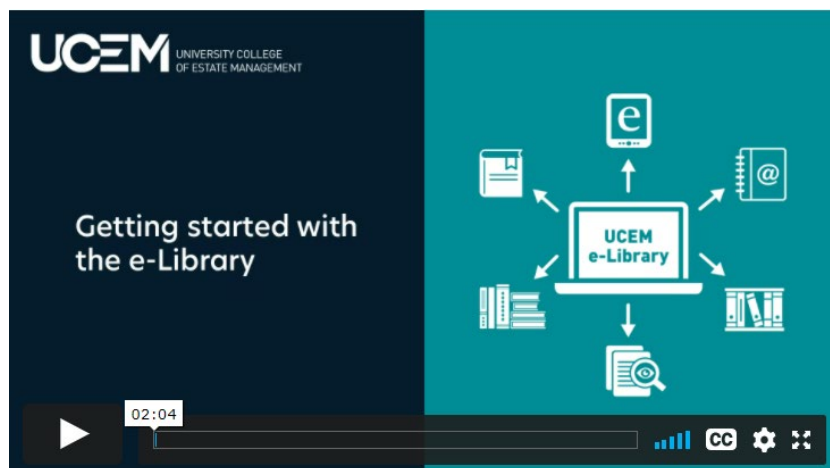
[Back to top](#)

## UCEM e-Library Portrait

### The aim of the e-Library

The aim of the e-Library is to:

- disseminate information, share good practices, and promote current awareness to assist in underpinning written work,
- add value and depth to our students' study experience, and
- support the continuing professional development of all those working and aspiring to work in the built environment.



© UCEM 2022

Source: UCEM (2022) *Getting started with the e-Library* [video], YouTube. Available at: [www.youtube.com/watch?v=iEg8DFUFiY&t=5s](https://www.youtube.com/watch?v=iEg8DFUFiY&t=5s) [accessed 15 July 2022].

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

Whether you are obtaining a qualification, undertaking CPD or researching a particular field, having access to a well-equipped library is essential.

The UCEM e-Library (accessed through the Virtual Learning Environment - VLE) is a comprehensive and valuable online resource, enabling students to access a wealth of subject-specific and credible information to support them throughout their studies and career development.

### What resources are available in the UCEM e-Library?

The e-Library is made up of eleven sections and provides students with around the clock access to online searchable databases from key industry and educational sources, thousands of journals, books, and resources, UCEM's entire collection of study materials and published work and UCEM's dissertation library.



[Back to top](#)

**The sections that make up the UCEM e-Library:**



© UCEM 2017

**Resources available within the UCEM e-Library include** Up-to-date information and online searchable databases from –

**Key educational sources** that include- Taylor and Francis Online, Ingenta Connect, Henry Stewart Publications and HS Talks, vLex | Justis, Westlaw EDGE UK, EBSCO Business Source Premier, Emerald Insight - access to around 2600 e-Book titles and their entire ‘Property Management and the Built Environment’ collection of journals, and

**Industry-specific sources** that include- IHS’s Construction Information Service, *Estates Gazette* (EG) digital journal and EG Radius, *Property Week*, RICS’s BCIS – Building Cost Information Service and ISURV online information service, NEC - New Engineering Contract Academia, BSRIA – Building Services Research and Information Association, and more.

**Where to find help - Overwhelmed by the sheer amount of information out there?**

Not only do libraries provide us with books to read, but they are valuable tools and resources. The UCEM e-Library is continually striving for improvement and changing to meet the demands of today’s technology and ever-expanding volumes of knowledge creation.

The e-Library is here to help make finding up-to-date, credible, and relevant information easier. Access the [2023 e-Library interactive brochure](#) for further information.

[Back to top](#)

**Supported by: Emerald Publishing Ltd**  
**The work of the UCEM e-Library is endorsed**  
**by Emerald Publishing Ltd**



© Emerald Publishing 2021

**Emerald Insight – the online platform for Emerald Publishing.** Emerald champions new ideas in advancing the research and practice of business and management, and manages a portfolio of nearly three hundred journals, including a 'Property Management and the Built Environment' collection that UCEM subscribes to.



© Emerald Publishing 2021

Emerald works in close collaboration with numerous academic (including UCEM) and corporate organisations worldwide. Emerald Publishing endorses the e-Library's tailor-made research reports – a service provided to UCEM tutors to help supplement teaching and learning materials on subject-specific areas.

**[February 2023]** - Here are some Open Access Journal articles available via Emerald, all around the theme of '**Artificial Intelligence**'.

**Note:** The following article examples are freely available via **Emerald Publishing Open Access**:

1. Bounatirou, M. and Lim, A. (2020) 'A Case Study on the Impact of Artificial Intelligence on a Hospitality Company', Ruël, H. and Lombarts, A. (ed) **Sustainable Hospitality Management (Advanced Series in Management)**, Vol 24, Emerald Publishing Ltd., pp. 179-187.
2. Kasie, F. M., Bright, G. and Walker, A. (2017) 'An intelligent decision support system for on demand fixture retrieval, adaptation and manufacture', **Journal of Manufacturing Technology Management**, Vol. 28, No. 2, pp. 189-211. Emerald Publishing Ltd.
3. Figuerola, C.G. [et al.] (2017), 'Analysing the potential of Wikipedia for science education using automatic organisation of knowledge', **Program: electronic library and information systems**, Vol. 51(4), pp. 373-386. Emerald Publishing Ltd.



© UCEM 2021

**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” says Lucy Roper, UCEM Information Governance Manager and who can be contacted on the [library@ucem.ac.uk](mailto:library@ucem.ac.uk) email address

[Back to top](#)

## Student Career Services

### UCEM Career Services

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 and read the UCEM Careers interactive brochure](#)

[Access UCEM Career Services](#)

### Building Better Property Professionals



© 2022 — Property Elite LLP

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 Assessment of Professional Competence (APC) or simply seeking engaging Continuing Professional Development (CPD).

[Property Elite](#) provides training and 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.

[Back to top](#)

### This month [[February 2023](#)] the **Hot Top Highlight – RICS Dampness in Buildings Part 3**

In this latest blog article, the author, Brian Robinson MRICS, Building Surveying consultant at Property Elite, discusses dampness in buildings. This is essential reading for any candidates with Building Pathology or Inspection as technical competencies. This is Part 3 of a three-part blog series, focussing specifically on types of damp and how to diagnose them accurately. Access [Dampness in Building Part 1](#) and [Part 2](#).

#### **What tests can be used to diagnose dampness?**

Below are a number of tests that can be used to help diagnose dampness. However, they are not capable of being carried out during a normal survey.

#### **Areas covered in this blog:**

- **Concrete Moisture Test** – One of the simplest, most economical test methods for determining whether there may be moisture in concrete is to duct tape a 450mm square piece of plastic onto the exposed concrete and leave it for 16 hours.

Condensed moisture accumulation under the plastic at 16 hours can indicate a problem.

- **Calcium Chloride Test** – Another test is where a calcium chloride disk is placed under a sealed plastic sheet and left to collect moisture vapor.

#### **Also:**

- **Relative Humidity Testing**
- **What is penetrating damp?**
- **What is condensation?**
- **What conditions are required for condensation to occur?**

#### **[Further details and access to the Property Elite Hot Topic Highlight – Dampness in Buildings Part 3](#)**

Also: [Property Elite Hot Topic Highlight blog: A-Z of Investment Terms](#), and [Access Property Elite's 'Building Better Property Professionals', Latest Blogs](#)

**Note:** The author of most of these blogs, Jen Lemen-Hogarth is an Associate Tutor – UCEM and Partner – Property Elite.

**Lucy's Top Tips** – 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

[Back to top](#)

packs, revision quizzes and e-mock interviews (available via the e-Library). You can also download this blog [in audio format](#) and listen whilst on the move. When you're done, you can request further information and a free CPD certificate.

### **Other related web-links**

Gerrard N (2022) '[CM reader survey: 'We're creating people's dreams'](#)', *Construction Management*, 3 January - What CM readers like most about a career in construction management.

[GoConstruct.org](#) website highlights the many career opportunities available in construction and the built environment. The website helps to meet the future skills needs of the industry.

[TARGETjobs](#) – All TARGETjobs graduate career guides and directories are available for you to view online and download for future reference and include [Explore Property](#), [Explore Engineering](#), [Engineering 2021](#), and [Careers Survival Pack](#).

[House Building Careers](#) – 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.

[Access to: RICS Careers](#) – 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**

[Enabling connections for a competent, diverse, and valued built environment workforce](#)



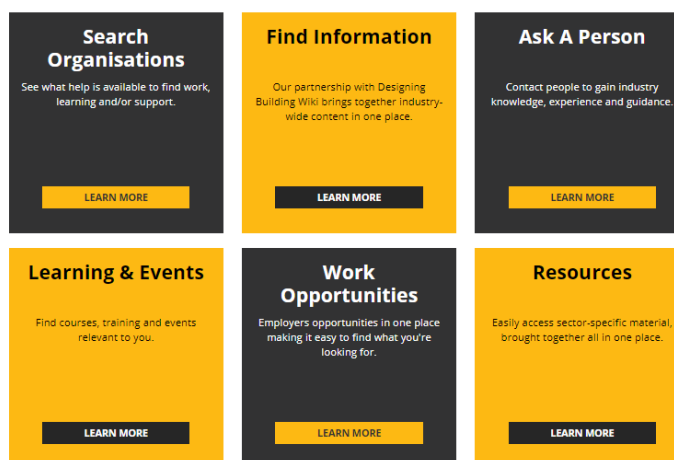
© UCEM 2021

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

[Back to top](#)

## People Wiki:

### What are you looking for?



© Building People 2021

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.

People Wiki (a free, open access knowledge sharing platform for diversity and inclusion, skills and careers, and social value.) 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.

### **Related Link:**

#### **UCEM incubate social enterprise, Building People, becomes a fully-fledged success story**

Building People, whose mission is to improve equality, diversity, and inclusion in the built environment, is now an independent entity.

Since its inception in 2018, UCEM has provided the enterprise with office space, founder job security and donations totalling £150,000. This gave Building People the perfect platform to deliver its collaborative 'dot-joining' activity, connecting people to opportunities across the built environment and enabling employers to engage with a more diverse range of talent.

With strong levels of support coming in from across the sector, both parties are in agreement that now is the time for Building People to fledge the nest and become a separate entity.

It is an exciting time for the social enterprise as it announces its three-year plan, which focuses on five key areas:

1. **Profile:** Positioning Building People as the go-to source for equality, diversity and inclusion best practice and activities, and thought leadership in the built environment,
2. **Partnerships:** Delivering maximum joined-up impact through the growth and development of Building People's supply and demand networks,
3. **People:** Enabling equality of opportunity through the provision of a simpler and more supported user experience in a fragmented careers landscape,
4. **Policy:** Aligning with and supporting the achievement and enhancement of relevant national sector policy and activity, and
5. **Planning:** Establishing a secure future of Building People as a sector-backed movement for collaborative change across the built environment.

Access the article '[UCEM incubated social enterprise, Building People, becomes a fully-fledged success story](#)' in full.

[Back to top](#)



## UCEM Sustainability Hub

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.

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.

### Building Research Establishment (BRE) Sustainability

- Access 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](#)



[Back to top](#)

## 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](#)

### 5 practical tips for saving energy costs

Posted on 15 November 2022

- We are in the midst of a cost-of-living crisis which has spread across the globe. Significant increases to the cost of food and energy have outstripped worker's salaries, and spiralling inflation has plunged countless into poverty. While the tenth day of COP27 focusses on the decarbonising our energy systems, we look at practical ways to save energy that can be actioned without spending too much money.

**1. Avoid leaving appliances on standby** - The average UK household spends around £65 a year on appliances that are left on standby. This is the energy consumed by an appliance when it is not in use and not switched off at the socket. You may not think about the devices that have low-level usage when not in use, such as broadband, smart speakers and telephones, but these are the ones that are usually turned on for 24 hours a day and the amount of electricity they consume adds up.. By remembering to switch off devices more often or buying a standby saver, you could be saving yourself electricity you didn't even know you were consuming.

**2. Draught-proofing windows and doors** - Draught-proofing is one of the most affordable and effective ways to save energy costs. It allows you to keep the warm air in your home by blocking out unwanted gaps that let cold air in – ultimately requiring less energy to heat up your home. By draught-proofing your windows and doors, you could save around £60 a year in a semi-detached house. Similarly, you could also save around £90 a year by draught-proofing an open chimney when not in use. A lot of draught-proofing can be done through simple DIY tasks at home, or professional draught-proofing can cost a bit more but last you longer.

**3. Use your thermostat effectively** – A large portion of your heating bills are absorbed by heating and hot water costs. By doing something as simple as turning down your central heating by just one degree, you could be saving up to £80 a year. You could also invest in a smart thermometer, which will heat your home more efficiently by only warming the room in use. They can be controlled by your phone and adapt to how long it takes to warm a certain temperature, so it can be set at exactly the right time.

**4. Monitor your water usage** - Water waste is something we may

[Back to top](#)

not realise is happening in our homes, but they add up and result in a large amount of total energy and water use. A dripping tap can waste more than 5,300 litres of water a year, so it's important to keep an eye on even the smallest amounts of water waster in the homes. By spending one minute less in the shower each day, a family of four could save up to £75 a year on energy and water bills. Similarly, turning off a running tap while you brush your teeth or wash your face can save more than 6 litres of water a minute!

**5. Invest in energy saving appliances, like an air fryer** – While it's good to buy home appliances based on their energy ratings, it's also good to research alternative types of appliances you can buy. One big change you can make is switching to an air fryer for day-to-day cooking rather than using a gas or electric cooker. Research by Utilita showed that on average they run at £55.91 a year, as opposed to a gas cooker on £121.06 per year and electric cooker on £335.57 per year.

**[Find out more about COP27 and access the article 'UCEM signs up to CIC's new 'carbon zero' climate action plan' in full.](#)**

## **UCEM signs up to CIC's new 'carbon zero' climate action plan**

UCEM is one of the institutions which has signed up to the Construction Industry Council's (CIC) new climate action plan.

CIC's Climate Change Panel, chaired by its deputy chairman, Stephen Hodder MBE, led on the initiative, with signatories to the plan agreeing that:



**Carbon Zero: the professional institutions' climate action plan**

The signatories to this Action Plan agree that:

- the actions listed are necessary for dealing with the challenge of climate change;
- they will implement those actions appropriate to them as an institution/organisation; and
- they will support the other signatory institutions and organisations in delivering the remaining actions

© CIC 2021

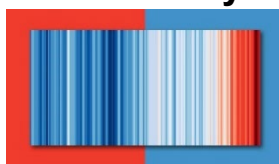
The document, entitled 'Carbon Zero: the professional institutions' climate action plan,' was released last week and coordinates the efforts of built environment institutions in meeting the UK government's 2050 net zero emissions target.

To read the plan, head to the **[CIC news story – 'CIC launches a Carbon Zero climate action plan for Professional Institutions'](#)**.

**[Access the article 'UCEM signs up to CIC's new 'carbon zero' climate action plan' in full.](#)**

[Back to top](#)

## UK sets ‘most ambitious’ climate target to cut emissions by 78% by 2035



[Image: courtesy Ed Hawkins]

(Climate stripes as shown in this image are sometimes referred to as warming stripes, or climate timelines and are data visualization graphics that use a series of coloured stripes chronologically ordered to visually portray long-term temperature trends.)

[Access further information and the PBC Today article, ‘UK sets ‘most ambitious’ climate target to cut emissions by 78% by 2035’, in full.](#)

## 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:

### Libraries’ contribution to SDGs

**Agenda Vision:** Universal literacy  
**Goal 3:** Good health and wellbeing  
**Goal 4:** Contribution to quality education  
**Goal 5:** Culture  
**Goals 5, 9, 7:** ICT skills and access  
**Goals 8 & 10:** Decent work, economic growth, reducing inequality  
**Goal 16:** Access to information

**Note:** Information plays a vital role in just about everything we do.



(UN.org 2022)

Source: Designing Buildings .co.uk Wiki (2021) ‘[Forgetting the big picture when considering sustainability](#)’ [online], last edited 19 January. Note: “The Sustainable Development Goals icons and colour wheel are free to use” (UN.org 2021)

[Back to top](#)

**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:

**1)** Remember that an encyclopaedia (which includes Wikipedia and any other Wiki) can be a good starting point for research and not an ending point.

**2)** An encyclopaedia can be good for getting a general understanding of a 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.

(Connors State College 2022)

**Book Review:**

**Climate Adaptation: accounts of resilience, self-sufficiency and systems change**

- Where is the world really heading, and what can we do about it?

This book takes an unflinching look at climate change, drawing upon the latest data to analyse what the next decades hold in store. With atmospheric CO<sub>2</sub> at unprecedented levels and insufficient action being taken to prevent a rise in temperatures above 2 degrees centigrade, we are not just looking at significant disruption but the possibility of societal collapse. For the first time ever, the magnitude of this challenge is faced head on, with avenues to truly address it presented. Case studies and models from sixteen authors around the world show ways that we can build adaptation and resilience, as well as what 'zero emissions' really mean. The book also provides a platform for those from a range of diverse backgrounds, whose unique experience and knowledge brings vital new perspectives.

Further information is available at:

**Source:** Thakore, Dr. R., Barinaga E [et al.] **Climate Adaptation: accounts of resilience, self-sufficiency and systems change** [print book], Arkbound Foundation, ISBN: 9781912092123

[Back to top](#)



## 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:



© 2020 iStockphoto LP, Royalty free

[image](#)

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 [February 2023]

#### **BBC News: Pembrokeshire: Top councillor accused of possible data breach**

- A senior councillor has been accused of creating an online voting system that could have potentially allowed members' votes on budget cuts to be tracked. **Keywords** include – [Data Breaches](#).

[Access the BBC News article, 'Pembrokeshire: Top councillor accused of possible data breach', in full.](#)

[Back to top](#)

### **ICO Latest News [February 2023] -**

23 January 2023 – **Building better business by responsibility unlocking the value of personal information**

- ICO offers advice to the UK's five and a half million SMEs
- UK regulator says getting good data practices in place from the start will save business owners time and money, and boost customer confidence.

ICO Blog: **Sharing personal data in an emergency – a guide for universities and colleges**. (09/21)

**ICO consults on how organisations can continue to protect people's personal data when it's transferred outside of the UK** (08/21)

**Access the Information Commissioner's Office, 'News, blogs, and speeches' section of their website**

### **Further information, advice, and guidance (IAG) provided by the ICO**

The ICO publish detailed IAG on:

- **Guidance on direct marketing and the public sector** (ICO, August 2021)
- **Sharing personal data with law enforcement authorities**,
- **Data sharing and reuse of data by competent authorities for non-law enforcement purposes**,
- The **Accountability Framework**, (ICO, September 2020),
- **Codes of conduct** and **certification schemes**. (ICO, February 2020)
- When using data analytics on personal data, the ICO is urging all organisations to look at its toolkit. It can be found at **ICO > For Organisations > Toolkit for organisations considering using data analytics** (ICO, February 2021)
- **Freedom of Information Self-assessment toolkit** launched in 2020 helps identify gaps in compliance.
- Further updates have been made to **guidance for handling Subject Access Requests** including a **step-by-step guide for small businesses**
- **Building a controller-to-controller contract** + template contract with guidance

### **ICO What's new? [February 2023]**

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 in their **ICO Guide to Data Protection** as they occur, for example: The ICO published guidance on the **National Security Provisions** in Part 3 of the DPA18 and updated the **Guide to Intelligence Services Processing** (04/21).



[Back to top](#)

The ICO have published:

Guidance on the [national security exemption](#) in Part 2 of the DPA18. (03/21)

Updated BCR communication following the EU-UK Trade and Co-operation Agreement to the [International transfers after the UK exit from the EU Implementation Period](#). (01/21)

[Data Sharing Code of Practice](#), alongside a [data sharing information hub](#) with further resources and support. (12/20)

**Further guidance provided by the ICO.**

[Read the Blog: 'Access to information: driving change through education, engagement and enforcement,' in full](#)

## Copyright



© iStock (2021)

“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

***Introducing Copyright: A plain language guide to Copyright in the 21<sup>st</sup> Century*** - Computers and the Internet have transformed the way we produce and distribute information and entertainment. This book explains copyright protection and what it means for copyright holders and copyright users. It also introduces readers to contemporary topics: (i) digital rights management, (ii) open licences, (iii) software patents & (iv) copyright protection for works of traditional knowledge.

*Source:* Hofman J (2009) *Introducing Copyright: A plain language guide to Copyright in the 21<sup>st</sup> Century* [e-book], Vancouver: The Commonwealth of Learning.

 **creative commons** [CC-BY-NC-ND](#)

[Access free copies of this book \(in PDF and EPUB formats\)](#)



[Back to top](#)

## **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 [CLA Title Search tool](#) 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 the CLA Step-by-Step Guide and Interactive Toolkit for those checking permissions within their licence.](#)

## **Latest Copyright News [February 2023]**

### **AI image creator faces UK and US legal challenge**

- Getty Images is taking legal action against the makers of an artificial-intelligence image-creation tool.

The agency, which sells the rights to use photographers' and illustrators' images, said Stability AI's Stable Diffusion system had infringed these. AI image generators "learn" to create images from simple text instructions by analysing human-made pictures, including images found online.

[Read the full BBC Technology news item 'AI image creator faces UK and US legal challenges'](#)

[Latest 'BBC Copyright News'](#) incl. [Banksy Copyright case](#)

### **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.

[Back to top](#)

[Access the GOV.UK 'Changes to copyright law from 1<sup>st</sup> January 2021', in full.](#)

**Keeping abreast of the latest developments in Information Governance: [Copyright Resources](#) – Naomi Korn Associates** has developed free and openly licensed copyright, licensing and data protection help resources.

### Copyright & Information Technologies in Education (CITE)



© CLA 2020

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.

As UCEM Information Governance Manager I regularly attend the Copyright Licensing Agency (CLA) CITE Forum and presented on '[UCEM's e-Library: Our Story So Far](#)', at the [CITE Winter 2021 Forum](#), held in November 2021. *Source:* CLA (2021) [UCEM e-Library: Our story so far](#), a presentation given at the Winter 2021 CITE Forum [video], YouTube. Available at: [www.youtube.com/watch?v=GmuENZHeGO0&feature=youtu.be](http://www.youtube.com/watch?v=GmuENZHeGO0&feature=youtu.be) [accessed 09 December 2022]. **Ref: From 58:05 until 1.28:41.**

- Copyright Licensing Agency (2019) '[CITE – 2020 Vision](#)', [CITE Magazine, Winter 2019, No. 3](#) [online].
- Copyright Licensing Agency (2019) '[A CITE to behold](#)', [CITE Magazine, Summer 2019, No. 2](#) [online].
- Copyright Licensing Agency (2018) [CITE Magazine - A biannual 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 2022**

This national conference was held on 18<sup>th</sup> May and in association with Naomi Korn Associates, as well as great speakers and further experts in the field in attendance.

[Back to top](#)

The Annual CILIP Copyright Conference provided a unique and important chance to update knowledge about the crucial copyright and licensing related issues and developments. It also provides an invaluable forum for in-depth presentations by UK experts, informed debate and opportunities to ask questions.

This 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 and covered the following:

- Intellectual Property in AI and Information Management
- Government Copyright Policy following Brexit
- eBooks and copyright
- Copyright Licensing Agency update
- Controlled digital lending and the UK legislative framework
- Use of the Quotation Exception.

Sessions covered broad copyright impact for the profession incl.

- **Keynote: NFTs and its Implications for Copyright Law, Libraries and Information Organisations**

Non-fungible tokens (NFTs) captured the imagination of creators and information organisation in March 2020, when an artwork titled 'First Thousand Days' sold for \$69 million. It has since been seen as an effective means selling digital assets, particularly those which form part of a limited edition or collection.

It has the potential to transform libraries and information organisations and this talk questions how NFTs can be useful and beneficial for these organisations? Based on research conducted by *Professor Dinusha Mendis*: Professor of Intellectual Property & Innovation Law, Bournemouth University, the paper takes a leap forward into the future in presenting the various opportunities NFTs offer for libraries and information organisations.

At the same time, NFTs are not without challenges. There have been many questions raised in relation to intellectual property (IP) and ownership. A string of recent IP cases has shone a light on just how challenging NFTs can be for the IP framework, which we have at present.

- **Exceptions to Copyright**

In this talk *Margaret Haig*: Head of Copyright Operations, The Intellectual Property Office (IPO) raises the question – How can the existing copyright framework help or hinder cultural heritage organisations in their work? This presentation highlighted some of the copyright issues and update on the latest relevant developments.

[Back to top](#)

- **The question of #ebookSIS: is copyright reform the answer?**

The Covid-19 pandemic highlighted the tensions and dysfunction of the academic publishing industry as never before, issues that had been bubbling under the surface for years were brought to a head by the sudden closure of universities and libraries and resulting pivot to entirely digital learning provision. The unavailability of many ebooks, the high prices, restrictive licences and building practice of many publishers meant that librarians were hamstrung by the impossibility of providing all the required resources for our users digitally.

The #ebookSOS campaign was born out of this situation and has been campaigning on several fronts for an investigation into the practice of academic publishers, wider awareness for staff and students on the impact of these issues, Open Access alternatives, and for copyright reform that will prioritise educational and research uses over corporate profit margins, via controlled digital lending, the reduction of restrictive licences to control use, and moves to allow libraries to own content, rather than merely licence access. These issues are not unique to the UK or indeed unique to academic libraries.

The #ebookSOS campaign has partnered with LibraryFutures (USA) and Knowledge21 (Europe) to raise awareness and coordinate international pressure to force change and make libraries more equal partners in our relationship with publishers.

**Caroline Ball:** Academic Librarian, University of Derby

- **An Act for the Encouragement of Lending? UK Copyright Law and Access to Digitised Collections in Libraries**

The ongoing pandemic has brought into sharp focus the difficulties faced by libraries in trying to meet the needs of their users through online provision of library resources. The cost of commercially available ebooks is one difficulty and gaps in availability of electronic versions of vital resources is another. One possible solution to the latter issue is Controlled Digital Lending, this is lending digitised copies of items in library collections under controlled conditions.

The aim is to provide access to items already owned by libraries without compromising the right to control use and income for rights holders. Lending of copyright works is a restricted act under UK copyright law. While copyright law provides for library lending, the legal bases for controlled digital lending are uncertain and current licensing schemes do not fully meet CDL needs. **Dr Adrienne Muir:** Senior Consultant, Naomi Korn Associates explored these issues and possible solutions further.

[Back to top](#)

- **The quotation exception in education and scholarly contexts**

In this presentation, **Professor Tanya Aplin**: Professor of Intellectual Property Law, King's College London, will consider the ways in which the quotation exception in s.30(1ZA) of the CPDA 1988 can allow for various uses of copyright works for educational and scholarly purposes.

- **CLA Licensing and Product Innovation**

**James Bennett**: Head of Rights and Licensing, Copyright Licensing Agency provided an update on new developments in CLA licensing and technology solutions for the education, corporate and public sectors.

**Other talks included:**

- **License to View: Copyright & Films in the Age of Covid at a Canadian University – Amy Lorenz**: Metadata and Copyright Librarian, Saint Mary's University – Halifax, Canada
- **The Trouble with TDM – Matthew Lamber**: Head of Copyright, Policy & Assurances
- **Towards Better Sharing of Cultural Heritage – Creative Commons' Agenda for Copyright Reform – Brigitte Vézina**: Director of Policy, Open Culture and GLAM, Creative Commons

**Lightning talks included**

- **Copyright and Research Data - Dr Hina Zahid**: Senior Research Data Services Officer, University of Essex
- **Going Ape! NFTS and ownership issues in Web3 – Eilish McLaughlin**: Sales and Marketing Consultant, PRFS Europe
- **The Modernist Archives Publishing Project (MAPP) and Copyright – Helena Clarkson**: Project Archivist, University of Reading

Further information is available at: CILIP (2022) '[CILIP Copyright Conference 2022 programme](#)'. CILIP.org.uk, Events.

[#CILIPCopy22](#) / [#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.

[Back to top](#)

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:

1. **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 always handled in a way that is compliant with data protection law and our Data Protection and Privacy policies. While we must adapt to comply with the official guidance, we will adjust our working processes to allow us to deliver our services. These are time limited instructions 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)
2. **Set out what use of data**, contact lists, customer documents are being allowed.
3. As part of this exceptional response to homeworking **keep a full record of where staff are working from and what equipment they are using**.
4. **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 seems sensible at present] in line with experience and how staff report it is working.
5. **Reissue and emphasize 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.
6. **Take care to be aware where data is being stored**, even if temporary so that the security risk is managed and assessed.
7. 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.
8. 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 quality may vary.
9. 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.
10. This is where a nominated Data Protection Officer (DPO) or Data Officer can support the senior team in the messaging to colleagues.

[Back to top](#)

*Source:* Tullo C, OBE (2020) '[The Challenges of Remote Working at Present](#)'. © [Naomi Korn Associates](#), 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 [UCEM Data Protection and Privacy Policies](#) 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 -

- (i) On the [UCEM Website](#),
- (ii) **VLE Help Page** (for students), and
- (iii) within the **UCEM Website Home > Supported Online Learning > e-Library** current awareness services, incl. Information blog and *Knowledge Foundations* (for all).

**#BE Informed**

(iv) A short **UCEM e-Library video** (used within UCEM Marketing, [Social Media business channels i.e. LinkedIn](#) to promote the e-Library, *Knowledge Foundations*, regular information blogs, and more)

**“Perseverance will get you anywhere.”**

@NASAPersevere / #NASAPersevere



[Back to top](#)

## 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](#)

[Back to top](#)

### A

**Advance HE** (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](http://www.advance-he.ac.uk) [accessed 27 February 2023]

**American Society of Civil Engineers** (ASCE) Civil Engineering database provides free access to over eighty thousand abstracts taken from ASCE publications since 1973. ASCE [online]. Further information is available at: [www.asce.org](http://www.asce.org) [accessed 27 February 2023]

**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](http://www.arcom.ac.uk) [accessed 27 February 2023]

**AJ Buildings Library** (AJBL) – The AJ Buildings Library highlights thousands of exemplar projects, most from the last 20 years but including major projects back to 1900. Available at: [www.ajbuildingslibrary.co.uk](http://www.ajbuildingslibrary.co.uk) [accessed 27 February 2023] (This valuable resource is just one part of the *Architects' Journal* subscription, available via the VLE e-Library > OpenAthens Library login > Construction Information Service (CIS) and/or EBSCO Business Source Premier).

**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.

[\[Back to A to Z\]](#)

### B

**BBC Education** [online]. Further information available at: [www.bbc.co.uk/news/education](http://www.bbc.co.uk/news/education) [accessed 27 February 2023]

**BBC Search** [online]. Further information available at: [www.bbc.co.uk/search](http://www.bbc.co.uk/search) [accessed 27 February 2023]

**BIDSTATS** [online] – Free UK tenders' portal. Find UK public sector contracts and further information available at: <https://bidstats.uk/> [accessed 27 February 2023]

**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, **Centre for Digital Built Britain (CDBB)** [online]. Further information

is available at: [www.cdcb.ac.uk/AboutDBB/FAQs](http://www.cdcb.ac.uk/AboutDBB/FAQs) [accessed 27 February 2023]. Please refer to question 9 – What is the Digital Built Britain Programme? specifically.

**BIMForum** – 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 27 February 2023]

**BOMA International** (Building Owners and Managers Association International) – a federation of 91 BOMA U.S. associations and seventeen 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](http://www.boma.org/BOMA/Research-Resources) [accessed 27 February 2023]

**British and Irish Legal Information Institute** (BAILLI) Case Law Search [online]. Further information available at: [www.bailii.org/form/search\\_cases.html](http://www.bailii.org/form/search_cases.html) [accessed 27 February 2023]

**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).

**British Property Federation** (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: <https://bpf.org.uk> [accessed 27 February 2023]

**Building Conservation.com** [online] – Information resources for conservation, restoration, and repairs. Further information is available at: [www.buildingconservation.com](http://www.buildingconservation.com) [accessed 27 February 2023]

**Building Conservation.com Articles directory by subject** [online]. Available at: [www.buildingconservation.com/articles/articles.htm](http://www.buildingconservation.com/articles/articles.htm) [accessed 27 February 2023]

**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](http://www.buildingdesign.co.uk) [accessed 27 February 2023]

**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/](http://www.buildingengineer.org.uk/) [accessed 27 February 2023]

**Building People** - a technology platform and collaborative network, which 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](http://www.buildingpeople.org.uk) [accessed 27 February 2023]

**Building Research Establishment** (BRE) [online] is an independent and impartial, research-based 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 27 February 2023]

**BRE A-Z of BRE Services** (from Accreditation to Zero Carbon) [online]. Further information is available at: [www.bregroup.com/a-z](http://www.bregroup.com/a-z) [accessed 27 February 2023]

**BRE Case Studies** [online]. Further information is available at: [www.bre.co.uk/podpage.jsp?id=1744](http://www.bre.co.uk/podpage.jsp?id=1744) [accessed 27 February 2023]

**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](http://www.bsria.co.uk) [accessed 27 February 2023]

**Building talk** [online]. Available at: [www.buildingtalk.com](http://www.buildingtalk.com) [accessed 27 February 2023] *Building Talk* is an email newsletter for Architects, Civil Engineers and Building Services Contractors.

**[Back to A to Z]**

## C

**Campaign to Protect Rural England (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](http://www.cpre.org.uk) [accessed 27 February 2023]

**CBRE Research and Resources** - 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](http://www.cbre.com/research-and-reports) [accessed 27 February 2023]

**CPRE Resources** 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](http://www.cpre.org.uk/resources) [accessed 27 February 2023]

**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] and available at: [www1.uwe.ac.uk/et/research/caber.aspx](http://www1.uwe.ac.uk/et/research/caber.aspx) [accessed 27 February 2023]

**The Center for Construction Research and Training (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](http://www.cpwr.com) [accessed 27 February 2023]

**Centre for Digital Built Britain (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](http://www.cdbb.cam.ac.uk/AboutDBB) [accessed 27 February 2023]

**Centre for Sustainable Energy (CSE)** is an independent national charity that shares our knowledge and experience to help people change the way they think and act on energy.

**CSE Resources** [online] include - Reports & publications, Toolkits, Advice leaflets, Websites, *Energise* newsletter, Videos on The fundamentals, Improving your community building, Community-wide energy saving projects, Neighbourhood and low carbon planning, Renewable energy projects, and further Resources for schools and educators. Available at: [www.cse.org.uk/local-energy/resources](http://www.cse.org.uk/local-energy/resources) [accessed 27 February 2023]

**Chartered Association of Building Engineers** (CABE) is a member-focused non-profit organisation. CABE shares knowledge, raises standards, and develops 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://cbuide.com/> [accessed 27 February 2023]

**Chartered Institute of Building** (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](http://www.ciob.org) [accessed 27 February 2023]

**Chartered Institution of Building Services Engineers** (CIBSE) – the prime source of expertise in the Building Services Industry. CIBSE [online]. Available at: [www.cibse.org](http://www.cibse.org) [accessed 27 February 2023]. N.B. Within the CIBSE website you can '**CIBSE - Search the Knowledge Portal**' covering themes such as BIM, Building Regulations, FM, Facades, Fire Safety, Lighting and Heating, Management, and project management, Residential, Sustainability, and more.

**China Dialogue** [online] – China and the world discuss the environment. Available at: [www.chinadialogue.net](http://www.chinadialogue.net) [accessed 27 February 2023]

**CIBSE Journal** [online]. Available at: [www.cibsejournal.com](http://www.cibsejournal.com) [accessed 27 February 2023].

**CIOB Library** Incl. Library and Information Services [online]. Available at: [www.ciob.org/library](http://www.ciob.org/library) [accessed 27 February 2023]

**CIOB BIM+** online newsletter [online]. Available at: [www.bimplus.co.uk](http://www.bimplus.co.uk) [accessed 27 February 2023]

**CIOB's Construction Management journal** (formerly *Construction Manager*) [online]. Available at: <https://constructionmanagement.co.uk/> [accessed 27 February 2023]

**CIOB's Global Construction Review journal** [online]. Available at: [www.globalconstructionreview.com/](http://www.globalconstructionreview.com/) [accessed 27 February 2023]

**CIOB's Policy and Public Affairs portal** [online]. Available at: [www.ciob.org/industry/policy-research](http://www.ciob.org/industry/policy-research) [accessed 27 February 2023]

**The CIT-eA Project Creating Innovative Technology – Enhanced Assessments** – a research project that explored ways to increase the number of assessments in Further and Higher Education using technology. The CIT-eA Project [online]. Available at: <http://citea.digitalinsite.co.uk> [accessed 27 February 2023]

**Cities / buildings images database** [online]. Available at: [www.washington.edu/ark2](http://www.washington.edu/ark2) [accessed 27 February 2023] is a collection of images of buildings and cities from around the world aimed at students, researchers, and educators.

**C-Link** 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](http://www.C-Link.com) [accessed 27 February 2023]

**Commercial Real Estate Services** (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](http://www.cbre.co.uk) [accessed 27 February 2023]

**Community-Led Housing** (CLH) Toolkit: a resource for local authority and housing professionals' [online]. Available at: <https://clhtoolkit.org/> [accessed 27 February 2023]. 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.

**Confederation of British Industry** (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](http://www.cbi.org.uk) [accessed 27 February 2023]

**Conference on Training in Architectural Conservation** (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://ihbconline.co.uk/cotac2> [accessed 27 February 2023]

**COTAC Digital Bibliography** [online]. Available at: [http://cotac.global/digital\\_bib/](http://cotac.global/digital_bib/) [accessed 27 February 2023]

**Constructing Excellence** (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 27 February 2023]

**Construction Enquirer** is a news website in construction. Construction Enquirer [online]. Available at: [www.constructionenquirer.com](http://www.constructionenquirer.com) [accessed 27 February 2023]

The **Construction Index** [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](http://www.theconstructionindex.co.uk) [accessed 27 February 2023].

**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 27 February 2023]

The **Construction Industry Research and Information Association** (CIRIA) [online]. Further information and resources are available at: [www.ciria.org/default.aspx](http://www.ciria.org/default.aspx) [accessed 27 February 2023]

**Construction Industry Training Board** (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](http://www.citb.co.uk) [accessed 27 February 2023]

**Construction Manager** is the magazine of the Chartered Institute of Building (CIOB) [online] and available at: [www.constructionmanagermagazine.com/](http://www.constructionmanagermagazine.com/) [accessed 27 February 2023]

**Construction News** [online]. Available at: [www.constructionnews.co.uk](http://www.constructionnews.co.uk) [accessed 27 February 2023]

**Construction Products Association** (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](http://www.constructionproducts.org.uk) [accessed 27 February 2023]

**Construction Project Information Committee** (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](http://www.cpic.org.uk) [accessed 27 February 2023]

**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 **Centre for Architecture and Built Environment Research** (CABER) now incorporates the CPRC.

**Contractors World** 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 27 February 2023].

**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 **Jisc's Library Hub Discover**.

**Copyright Licensing Agency (CLA)** [online]. 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. Available at: [www.cla.co.uk](http://www.cla.co.uk) [accessed 27 February 2023]

**Council for British Archaeology** (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 27 February 2023]

**[Back to A to Z]**

## 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](http://www.designingbuildings.co.uk/wiki/Home) [accessed 27 February 2023] 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](http://www.designingbuildings.co.uk/wiki/Student_resources) [accessed 27 February 2023] 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](http://www.designingbuildings.co.uk/wiki/Construction_industry_acronyms) [accessed 27 February 2023] 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](http://www.designcouncil.org.uk) [accessed 27 February 2023]. See also **Inclusive Design Hub for the Built Environment** (a project of The Design Council).

**Directory of Open Access Books** (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](http://www.doabooks.org/doab) [accessed 27 February 2023]

**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 27 February 2023]

**[Back to A to Z]**

## E

**Education and Employers Research** - Online research library marks its tenth anniversary. This online library provides a comprehensive repository of different and effective approaches to employer engagement and careers education. It brings together the latest thinking with selected research published over the past 40 years. Education and Employers [online]. Available at: [www.educationandemployers.org/research-type/research-library](http://www.educationandemployers.org/research-type/research-library) [accessed 27 February 2023]

**The Economics Network** [online] provides publications, events, and other resources to support university teachers of economics throughout the UK and worldwide. Available at: [www.economicsnetwork.ac.uk](http://www.economicsnetwork.ac.uk) [accessed 27 February 2023]

**EngineeringUK** is a not-for-profit organisation, which works in partnership with the engineering community to inspire tomorrow's engineers and increase the number and diversity of young people choosing academic and vocational pathways into engineering. EngineeringUK [online]. Available at: [www.engineeringuk.com](http://www.engineeringuk.com) [accessed 27 February 2023]

**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](http://www.epsrc.ac.uk) [accessed 27 February 2023]

**English Heritage** cares for over four hundred 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](http://www.english-heritage.org.uk) [accessed 27 February 2023]. 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**.

**Estates Gazette** The UK's largest commercial property news team. *Estates Gazette Interactive* [online]. Available at: [www.egi.co.uk](http://www.egi.co.uk) [accessed 27 February 2023] 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](http://www.eres.org) [accessed 27 February 2023].

**ERES Digital Library** [online] and available at: [www.eres.org/index.php/activities/libraryeres](http://www.eres.org/index.php/activities/libraryeres) [accessed 27 February 2023]

**[Back to A to Z]**

## G

**Great Buildings** [online]. Available at: [www.greatbuildings.com](http://www.greatbuildings.com) [accessed 27 February 2023] 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.

**Glenigan** [online]. Available at: [www.glenigan.com](http://www.glenigan.com) [accessed 27 February 2023] provides UK construction project sales leads, market analysis, forecasting, and company intelligence.

**Global Research Gateway**: CBRE's online resource for real estate research and reports. CBRE Global Research Gateway [online]. Available at: [www.cbre.com/research-and-reports](http://www.cbre.com/research-and-reports) [accessed 27 February 2023]



**Global Construction Review** – An online journal from the Chartered Institute of Building (CIOB) [online]. Available at [www.globalconstructionreview.com](http://www.globalconstructionreview.com) [accessed 27 February 2023]

**The Green Construction Board** (GCB) is a consultative forum consisting of key members of UK construction and property industry. GCB [online]. Further information is available at: <https://cic.org.uk/projects/project.php?s=green-construction-board> [accessed 27 February 2023]

**The Guardian, Housing network** – 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](http://www.guardian.co.uk/housing-network) [accessed 27 February 2023]

**The Guardian, Higher Education / Universities** [online]. Further information is available at: [www.guardian.co.uk/higher-education-network](http://www.guardian.co.uk/higher-education-network) [accessed 27 February 2023]

**[Back to A to Z]**

## H

**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](http://www.hse.gov.uk/index.htm) [accessed 27 February 2023]

**HSE, Health & Safety in the construction industry** [online]. Further information is available at: [www.hse.gov.uk/construction](http://www.hse.gov.uk/construction) [accessed 27 February 2023]

**HSE Publications** [online]. Available at: [www.hse.gov.uk/pubns/index.htm](http://www.hse.gov.uk/pubns/index.htm) [accessed 27 February 2023]

**Heritage Alliance** - 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](http://www.theheritagealliance.org.uk) [accessed 27 February 2023]

**Heritage Update: the online edition** of the fortnightly Heritage Alliance's **Heritage Update** e-bulletin [online] and available at: [www.theheritagealliance.org.uk/update](http://www.theheritagealliance.org.uk/update) [accessed 27 February 2023]

**Heritage Help** - 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 27 February 2023]

**Higher Education Empirical Research** (HEER) Database comprises summaries of the latest published research on a range of topics related to higher education. HEER [online]. Available at: [www.srhe.ac.uk/links/higher\\_education\\_statistics\\_and\\_research.asp](http://www.srhe.ac.uk/links/higher_education_statistics_and_research.asp) [accessed 27 February 2023]

**Historic England** 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](http://www.historicengland.org.uk) [accessed 27 February 2023]

**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/training-skills/helmtraining> [accessed 27 February 2023].

**Home Builders Federation** (HBF) represents and serves its members in a range of ways that include 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](http://www.hbf.co.uk) [accessed 27 February 2023]

**House Building Careers** (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 27 February 2023]

**[Back to A to Z]**

**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](http://www.designcouncil.org.uk/projects/inclusive-design-hub-built-environment) [accessed 27 February 2023]

**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. **INFABODE** [online]. Available at: [www.infabode.com](http://www.infabode.com) [accessed 27 February 2023]

**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](http://www.ice.org.uk) [accessed 27 February 2023]

**ICE Virtual Library** [online]. Available at: [www.icevirtuallibrary.com](http://www.icevirtuallibrary.com) [accessed 27 February 2023] 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](http://www.icde.org) [accessed 27 February 2023]

**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 Ireland. IHBC [online]. Available at: [www.ihbc.org.uk](http://www.ihbc.org.uk) [accessed 27 February 2023]

**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](http://www.iwfm.org.uk) [accessed 27 February 2023]

**IWFM Insight** – discover leading research and resources for the workplace and facilities management profession. IWFM Insight [online]. Available at: [www.iwfm.org.uk/insight](http://www.iwfm.org.uk/insight) [accessed 27 February 2023]

**IWFM News** – discover the latest news affecting the profession and gain expert insight and advice. IWFM News [online] Available at: [www.iwfm.org.uk/news](http://www.iwfm.org.uk/news) [accessed 27 February 2023]

**IWFM Digital Magazine, facilitate** - Informing workplace and facilities management professionals. IWFM *facilitate* [online]. Available at: [www.facilitatemagazine.com/](http://www.facilitatemagazine.com/) [accessed 27 February 2023]

**ITcon** – 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](http://www.itcon.org) [accessed 27 February 2023]

[\[Back to A to Z\]](#)

## J

**JISC Library Hub Discover** – 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 27 February 2023].

**JORUM Archive** – After 13 years delivering and sharing content across the higher education, further education and skills sectors the Jorum service and website was retired on 30 September 2016. 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](http://www.jisc.ac.uk/website/legacy/jorum) [accessed 27 February 2023] where you can also gain access to JISC's full digital resources offer.

**Journal of Online Learning and Teaching (JOLT)** - The **MERLOT Journal of Online Learning and Teaching** 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.

**JournalTOCs** is the largest, free collection of scholarly Journal Title of Contents (TOCs) [online]. Available at: [www.journaltoCs.ac.uk/index.php](http://www.journaltoCs.ac.uk/index.php) [accessed 27 February 2023]

**JSTOR Open Content** - a digital library for scholars, researchers and students, JSTOR provides access to academic journal articles, books, and primary sources in seventy-five disciplines. Note: UCL Press publishes peer-reviewed scholarly monographs, edited collections, textbooks and journals. All of its books are available on: (a) **UCL Press**, and (b) **JSTOR** websites

[\[Back to A to Z\]](#)

## K

[\[Back to A to Z\]](#)

## L

**Leeds Beckett University's – School of the Built Environment, Engineering and Computing** [online]. Further information that includes 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](http://www.leedsbeckett.ac.uk/school-of-built-environment-engineering-and-computing/research) [accessed 27 February 2023]

**Leeds Beckett University's - Leeds Sustainability Institute** [online]. Further Information is available at: [www.leedsbeckett.ac.uk/leeds-sustainability-institute](http://www.leedsbeckett.ac.uk/leeds-sustainability-institute) [accessed 27 February 2023]

**Leeds Beckett University – The Library** [online]. Available at: <http://libguides.leedsbeckett.ac.uk/home> [accessed 27 February 2023]

**Lexology** is a comprehensive source of international legal updates, analysis, and insights. Lexology publish more than 450 articles every day from over 1,100 law firms and service providers worldwide across fifty work areas in twenty-five languages. Lexology [online]. Available at: [www.lexology.com](http://www.lexology.com) [accessed 27 February 2023]

**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](http://www.local.gov.uk) [accessed 27 February 2023]

**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 27 February 2023]

[\[Back to A to Z\]](#)

## M

**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](http://www.merlot.org/merlot) [accessed 27 February 2023]. MERLOT is a curated collection of free and open online teaching, learning, and faculty development services contributed and used by an international education community.

[\[Back to A to Z\]](#)

## N

**Naomi Korn Associates – Copyright Resources** has developed free and openly licensed copyright, licensing and data protection help resources. Naomi Korn Associates [online]. Available at: <https://naomikorn.com> [accessed 27 February 2023]

**National Building Information Modelling (BIM) Library**, 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](http://www.thenbs.com/our-tools/nbs-national-bim-library) [accessed 27 February 2023]

**National Building Specification (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](http://www.thenbs.com) [accessed 27 February 2023]

**NBS Knowledge** [online] is available at: [www.thenbs.com/knowledge](http://www.thenbs.com/knowledge) [accessed 27 February 2023]

**NBS Publication Index** [online] - this index provides information about key industry documents which are or have been available in The Construction Information Service (CIS), or cited in NBS Guidance. Further information is available at: [www.thenbs.com/Publicationindex](http://www.thenbs.com/Publicationindex) [accessed 27 February 2023]

**NBS Digital Construction Conversations podcasts** – New to 2021, NBS are talking to inspirational industry leaders about the trends and technologies impacting the construction industry – from sustainability to regulations to change management. NBS Digital Construction Conversations [online]. Available at: [www.thenbs.com/podcast](http://www.thenbs.com/podcast) [accessed 27 February 2023]

**National Skills Academy for Construction (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](http://www.citb.co.uk/national-skills-academy-for-construction) [accessed 27 February 2023]. Note: It is facilitated by the Construction Industry Training Board (CITB).

**The National Trust** 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](http://www.nationaltrust.org.uk) [accessed 27 February 2023]

**National Trust's Land & landscape** [online]. Available at: [www.nationaltrust.org.uk/land-and-landscape](http://www.nationaltrust.org.uk/land-and-landscape) [accessed 27 February 2023]

**New Civil Engineer** (NCE) a weekly magazine published for the Institution of Civil Engineers (ICE). NCE [online]. Available at: [www.nce.co.uk](http://www.nce.co.uk) [accessed 27 February 2023]

**[Back to A to Z]**

## O

**Online Learning Consortium** (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 27 February 2023]

**OLC's Online Learning** – the official journal of the Online Learning Consortium. *Online Learning* [online]. Available at: <http://onlinelearningconsortium.org/read/> [accessed 27 February 2023]

**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/> <http://oerresearchhub.org/> [accessed 27 February 2023]

**Open Praxis** – 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: <https://openpraxis.org/> [accessed 27 February 2023]

**Open University (OU) UK** [online] and available at: [www.open.ac.uk](http://www.open.ac.uk) [accessed 27 February 2023]

**Open University (OU) UK, Institute of Education Technology** [online] and available at: [www.open.ac.uk/iet/main](http://www.open.ac.uk/iet/main) [accessed 27 February 2023]

**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](http://www.oecd-ilibrary.org) [accessed 27 February 2023]

**[Back to A to Z]**

## P

**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 27 February 2023]

**Planning, BIM & Construction Today** – The PBC Today website has compelling and informative features, news and products for a diverse audience serving a wide construction sector. PBC Today [online]. Available at: [www.pbctoday.co.uk/news](http://www.pbctoday.co.uk/news) [accessed 27 February 2023]

**Planning Advisory Service** (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](http://www.local.gov.uk/pas) [accessed 27 February 2023].

**Planning Officers Society** (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](http://www.planningofficers.org.uk) [accessed 27 February 2023]



**The Planning Portal** is the UK Government's online planning and building regulations resource for England and Wales [online]. Available at: [www.planningportal.co.uk](http://www.planningportal.co.uk) [accessed 27 February 2023]

**The Prince's Foundation** 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 27 February 2023]

**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.ucem.ac.uk/student-community/property-peoples-network](http://www.ucem.ac.uk/student-community/property-peoples-network) [accessed 27 February 2023]

**Property Week** – Commercial property news. *Property Week* [online]. Available at: [www.propertyweek.com](http://www.propertyweek.com) [accessed 27 February 2023]

**[Back to A to Z]**

## R

**Regeneration and Renewal – Placemaking Resource incorporating Regeneration & Renewal magazine** [online]. Available at: [www.placemakingresource.com](http://www.placemakingresource.com) [accessed 27 February 2023]

**Residential Landlord** – an online resource providing Landlord Resources, a Document Download Centre (containing templates and free tenancy agreements to amend and use as required), news and views, advice, and guidance [online]. Further information is available at: [residentiallandlord.com](http://residentiallandlord.com) [accessed 27 February 2023]

**Revo – Retail. Property. Community** (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](http://www.revocommunity.org) [accessed 27 February 2023]

**The Royal Institute of British Architects** (RIBA) is a global professional membership body driving excellence in architecture [online]. Further information is available at: [www.architecture.com](http://www.architecture.com) [accessed 27 February 2023]

**RIBA Library** – Visit the RIBA Library [online]. Available at: [www.architecture.com/contact-and-visit/riba-library](http://www.architecture.com/contact-and-visit/riba-library) [accessed 27 February 2023]

**RIBA Home > Knowledge and resources > Resources > RIBA Plan of Work** [online]. Further information is available at: [www.architecture.com/knowledge-and-resources/resources-landing-page/riba-plan-of-work](http://www.architecture.com/knowledge-and-resources/resources-landing-page/riba-plan-of-work) [accessed 27 February 2023]

**Royal Institution of Chartered Surveyors** (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](http://www.rics.org/uk) [accessed 27 February 2023]

**RICS > News & Insights** [online]. Available at: [www.rics.org/uk/news-insight](http://www.rics.org/uk/news-insight) [accessed 27 February 2023]

**RICS > Upholding Professional Standards** [online]. Available at: [www.rics.org/uk/upholding-professional-standards](http://www.rics.org/uk/upholding-professional-standards) [accessed 27 February 2023]

**RICS Publications** - RICS publishes a range of journals that are **free** to view online. Available at: [www.rics.org/uk/news-insight/publications/](http://www.rics.org/uk/news-insight/publications/) [accessed 27 February 2023]

**RICS Knowledge and Information Services** – The aim is to combine the best of RICS's traditional library service (**RICS library catalogue**) and space with an enquiry and resource service, RICS Knowledge and Information Service [online]. Available at: [www.rics.org/profession-standards/knowledge-and-information-services](http://www.rics.org/profession-standards/knowledge-and-information-services) [accessed 27 February 2023]

**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](http://www.rtpi.org.uk) [accessed 27 February 2023]

**[Back to A to Z]**

## S

**Savills Research** – 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](http://www.savills.co.uk/insight-and-opinion/research.aspx) [accessed 27 February 2023]

**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](http://www.shoosmiths.co.uk/insights) [accessed 27 February 2023]

**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 27 February 2023]

**Supply Chain Sustainability School** 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](http://www.supplychainschool.co.uk/uk/default-home-main.aspx) [accessed 27 February 2023]

**[Back to A to Z]**

## T

**The Telegraph – Property and construction industry** - 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](http://www.telegraph.co.uk/property-and-construction-industry) [accessed 27 February 2023]

**Tomorrow's Engineers** brings together resources and evidence to support the engineering community in getting the most out of their engagement activity. Tomorrow's Engineer [online]. Available at: [www.tomorrowsengineers.org.uk](http://www.tomorrowsengineers.org.uk) [accessed 27 February 2023]

**Trust in Digital Repositories** (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 27 February 2023]

**[Back to A to Z]**



## U

**University College London (UCL) Press** – UCL Press publishes peer-reviewed scholarly monographs, edited collections, textbooks and journals. All its books are available on: (a) UCL Press, and (b) JSTOR (see above).

**UK BIM Framework** – The overarching approach to implementing BIM in the UK. Further information on BIM Standards, Guides and Resources. UK BIM Framework [online]. Available at: [www.ukbimframework.org](http://www.ukbimframework.org) [accessed 27 February 2023]

**University College of Estate Management (UCEM)** is the leading provider of supported distance learning for real estate and construction professionals. UCEM [online]. Available at: [www.ucem.ac.uk](http://www.ucem.ac.uk) [accessed 27 February 2023]

**UCEM e-Library** is a comprehensive and valuable online resource, supplementing teaching and learning materials and enabling students to access a wealth of subject-specific and credible information to support them throughout their studies. UCEM e-Library [online]. Available at: [www.ucem.ac.uk/e-library](http://www.ucem.ac.uk/e-library) [accessed 27 February 2023]

**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](http://www1.uwe.ac.uk/et/research/caber.aspx) [accessed 27 February 2023]

**UWE Educational Resources for the Built Environment (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](http://www1.uwe.ac.uk/et/cp/erbe.aspx) [accessed 27 February 2023]

**UWE, ERBE, Construction Films** concentrate on domestic building construction. The films explain the principles of modern construction and, where appropriate, trace its evolution over the last one hundred years. ERBE Construction Films [online]. Further information is available at: [www1.uwe.ac.uk/et/cp/erbe/constructionfilms.aspx](http://www1.uwe.ac.uk/et/cp/erbe/constructionfilms.aspx) [accessed 27 February 2023]

**UWE, ERBE, The Construction Website** 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](http://www1.uwe.ac.uk/et/cp/erbe/constructionweb.aspx) [accessed 27 February 2023]

**UWE, Library, Search for things: A-Z** [online]. Available at: [www1.uwe.ac.uk/library/searchforthingsa-z.aspx](http://www1.uwe.ac.uk/library/searchforthingsa-z.aspx) [accessed 27 February 2023]

**UWE, Research publications and reports** – 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](http://www1.uwe.ac.uk/research.aspx) [accessed 27 February 2023]

**[Back to A to Z]**

## V

**Virtual Training Suite** - The Virtual Training Suite is a national eLearning service for Higher and Further Education in the UK, offering FREE "teach yourself" tutorials delivered over the Web, for students, lecturers and researchers who want to learn what the Internet can offer in their subject. This is a public service from **JISC**.

[\[Back to A to Z\]](#)

## Y

**Yale Environment 360** - 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 27 February 2023]

## Z

**Zetoc: Informing Research** - The monitoring and search service for global research publications, providing access to over 36,000 journals and more than fifty-nine 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 27 February 2023]

(Note: *The web links provided were correct at the time of compilation.*)

**UCEM e-Library** - The UCEM e-Library has a searchable database ([e-Library > section 9](#)) containing circa 1,000 [Useful web-links to e-Resources](#) for all subject areas covered within our programme of studies, pertaining to the built environment profession and the education sector.

### Disclaimer

**Knowledge Foundations (formerly the library e-bulletin) is intended to highlight news items and provide basic background information only. UCEM cannot accept responsibility for the content of external websites. Please view and refer to UCEM's [Terms of use](#).**

**Please note:** support for Internet Explorer is being removed by Microsoft and a number of platforms will no longer work on it, therefore you may need to use a **PC** with **Google Chrome**, Mozilla **Firefox**, Microsoft **Edge**, or other browsers.

**University College of Estate Management (UCEM)**, Horizons, 60 Queen's Road, RG1 4BS, UK – UK (Free): 0800 019 9697, International: +44 (0)118 921 4696, Email: [library@ucem.ac.uk](mailto:library@ucem.ac.uk)

**UCEM Social media:** [Facebook](#), [Twitter](#), [LinkedIn](#), [YouTube](#)

© Roper L (2022) *Knowledge Foundations* [online] Reading: UCEM. Available at: [UCEM Website > Supported Online Learning > e-Library](#)



This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](#).