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

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

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

(R. David Lankes)

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

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

Supported Online Learning

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

**Imaginations sparked at sustainability science fair**

Schoolchildren’s imaginations were fired up at a sustainability-focused science fair jointly by UCEM and Reading Museum on Saturday 8th February 2020.

Solar 'whirlies' and biodegradable plant pots were among the attractions which transfixed the 350 guests, comprising primary schoolchildren and their families, at the museum.

UCEM staff led interactive demonstrations for the many inquisitive guests, including planting seeds and beans, creating solar power and biodegradable plant pots, speed recycling, thermal imaging and replicating wind turbines.

[Access the article ‘Imaginations sparked at sustainability science fair’ in full.]

**New edition of Parry’s Tables published to mark UCEM’s centenary year.**

Richard Parry’s timeless book Parry’s Valuation and Investment Tables has been republished to mark UCEM’s centenary year.

The book – an essential guide for valuation and property professionals and students alike celebrated its own centenary six years ago and the 14th edition was published this year in recognition of Parry’s role as the institution’s first Principal.

World-renowned publisher, Routledge, approached UCEM to produce the 14th edition to celebrate the longevity of Parry’s indispensable tome and several staff members worked diligently to bring the project to completion.

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

Copies from the book – both online and in print – are available from [Routledge’s website](#).

**Other UCEM News** - First Honorary Degrees handed out at UCEM’s Graduation ceremonies in Reading; Amanda Clack becomes UCEM Chair Designate; Eight UCEM alumni and apprentice nominations at the RICS Matrics Young Surveyor of the Year Awards 2019, 100 volunteers reached in our centenary year, and more.

[Keep abreast of the latest UCEM News and events – and read our blog to keep updated on Building Environment industry insights, student case studies, and thoughts from UCEM Principal: Ashley Wheaton.]
Things you need to know this week: Ikea housing partnership buys first sites

Bristol, Worthing and Peacehaven are set to be locations of the first low cost, offsite-manufactured BoKlok homes.

Contractor Skanska and retailer Ikea have acquired their first three UK sites, where they plan to develop their BoKlok low cost, offsite-manufactured homes. The sites are in Bristol and in Worthing and Peacehave, in Sussex, and could accommodate around 400 homes, subject to planning permission. Most of the homes will be for market sale, with the remainder being sold to local authorities and housing association for social rent. Worthing is the first site to come forward, with a planning application for 150 homes submitted. Its deal would see the council retaining control of 30 per cent of the units.

Other developments include – West Midlands Combined Authority has introduced its own definition of affordable housing, which is based on local incomes rather than local house prices; An emerging garden village in County Durham is set tap into mine watr for its district heating; The National Infrastructure Commission’s design champions have launched the UK’s first design principles for national infrastructure, and are calling for them to be adopted in the government’s infrastructure strategy; Urban orchards, fast track planning for attractive housing and minimum standards for permitted development rights (PDR) are among the recommendations of a new report from a government backed commission; There are plans to create a demonstration community of 66 sustainable and flexible homes for all generations at Newcastle’s Helix innovation district; Hartlepool Council is backing the development of a swimming and recreational attraction as part of an investment in leisure facilities in the town.

(Please note you will need to register to access these stories in full, although registration is free).

Read the full ‘Need to Know’ article

Case study: Regenerating a city’s former industrial quarter

With its mix of uses and accompanying improved route to the city centre, Leicester’s Great Central Square forms a gateway to the Waterside regeneration area, as the author of this article finds.
The recent completion of Leicester's Great Central Square mixed use scheme marks the latest step in a broader regeneration taking place to the north west of the city centre. Developer Charles Street Buildings Group’s scheme brings office space, two hotels and other leisure and retail uses to this evolving area.

The scheme forms a gateway to the Waterside area, more than 60 hectares of former industrial land around the river Soar. The council has targeted this area for regeneration and investment, providing an early catalyst with Friar’s Mill, its conversion of a historic mill building to managed workspace, which it created five years ago with backing from the European Regional Development Fund.

Read the full ‘Regenerating a city’s former industrial quarter’ case study

(Please note you will need to register to access this and other case studies in full, although registration is free).

Analysis: How local authorities are stepping in to tackle declining shopping centres

Councils are having to take the lead in town centre regeneration as retail declines, and that can involve making some tough decisions about shopping centres. The author of this article finds out how.

Local authorities acquired more than £6.5 billion of commercial property in the three years to 2019, spending habits that attracted the attention of parliamentary watchdog the National Audit Office (NAO). Its report, published in February 2020, charts the spending patterns and the risks, NAO head Gareth Davies pointing out, “The benefits from this investment must be considered against the potential risks to authorities, particularly given the concentration of this activity and associated borrowing within a relatively small group of authorities.”

The report, ‘Local authority investment in commercial property’ (and accessed via the NAO – National Audit Office), finds that 80 per cent of that total spend came from just 49 local authorities, with many big spenders being in the south east of England. Acquisitions were mostly office and retail properties, with £3.1 billion being spent on the former and £2.3 billion on the latter.

Read the ‘Analysis: How local authorities are stepping in to tackle declining shopping centres’ in full.

(Please note you will need to register to access this analysis in full, although registration is free).
Environment Bill sets out vision for a greener future

- Landmark Bill will better protect our natural environment for generations to come.

Our precious natural environment will be better protected for generations to come with the introduction of a far-reaching Environment Bill.

The speedy return of the Bill to Parliament on 30th January, following the General Election underlines the government’s commitment to tackling climate change and to protecting and restoring our natural environment for future generations.

Access the Government News Story ‘Environment Bill sets out vision for a greener future’

£1.2 billion for the world’s most powerful weather and climate supercomputer

- Predicting severe weather and the impacts of climate change will be faster and more accurate than ever before.

• £1.2 billion investment confirmed for state-of-the-art supercomputer to improve severe weather and climate forecasting
• The latest supercomputing technology will unleash the full potential of weather and climate data for the UK
• Data from the supercomputer will be used to inform government policy as part of leading the global fight against climate change and meeting net zero emission targets.

Read the Government press release, ‘£1.2 billion for the world’s most powerful weather and climate supercomputer’ in full.

Grenfell Inquiry – latest developments / outcomes

The companies involved in the refurbishment of Grenfell Tower, completed the year before the fire that killed 72 people, have ignored an invitation not to indulge in “a merry-go-round of buck-passing”.

That’s according to counsel to the Grenfell Tower Inquiry Richard Millet QC, who opened the second phase of the investigation on 27 January 2020 with a strongly worded statement criticising the likes of main contractor, subcontractor, and architect.

Read the full article ‘Grenfell Inquiry: A merry-go-round of buck-passing’ from Construction Manager journal
Skills Agenda: Concerns for Skills Shortages in the 21st Century: A Review into the Construction Industry, Australia

The Australian Construction Industry is now facing skills shortages in all trades. As an industry focused on the skills of its workforce, there is now concern the Australian standard in quality, workmanship, and productivity will inhibit both national and international level.

This research paper addresses the underlying, influential factors concerning skills shortages in the Australian construction industry. The influential factors addressed include funding, training statistics, employer expectations, financial limitations, Industrial Relations and immigration. Given the reference to skills shortages within the industry, and documented in related literature if skills shortages are to continue to exist their effect will impact upon the overall performance of construction companies through Australia.

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 21st Century.

Women in construction: building a career in a challenging environment
12 case studies of women working in the construction industry and their experiences.

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

RICS Market surveys – leading indicators in the real estate industry
Market surveys from the Royal Institution of Chartered Surveyors (RICS) include:

- 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.

- 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.
- **UK Construction and Infrastructure Survey** – The leading sentiment indicator of the UK construction and infrastructure markets.

- **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.

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

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

**Building Cost Information Service (BCIS) analysis – student accommodation**

The market for UK student accommodation remains buoyant. According to the Higher Education Statistics (HESA), the total number of higher education students stood at 2,383,970 in 2018/19, an increase of two per cent from 2017/18. Student accommodation has a vital role to play, and universities that lack well located, quality accommodation with social facilities fun the risk of deterring potential students.

Read the RICS article ‘BCIS featured analysis – student accommodation’, in full.

**UK House Price Index for December 2019**

- The UK HPI shows house price changes for England, Scotland, Wales and Northern Ireland.

The December data shows:

- On average, house prices have risen by 0.3% since November 2019
- There has been an annual price rise of 2.2%, which makes the average property in the UK valued at £234,742

Read the UK Government Press release ‘UK House Price Index for December 2019’ in full.

**Tackling mental health and wellbeing within the construction industry**
Wellbeing strategy model:

![Wellbeing strategy model diagram]


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

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

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

*Access and read ‘How can buildings have positive impact on wellbeing’ in full.*

**Sustainable outcomes for buildings**

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

*Access the RIBA Sustainable Outcomes Guide*

**National Trust planning principles**

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

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

*Access the National Trust website*
National Trust (NT) – “Our planning principles”

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

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

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

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

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

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

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

- Minimising resource use and generation of waste,
- Being energy efficient,
- Minimising or preventing all types of pollution and risk of flooding,
- Safeguarding important wildlife, landscape and historic interests,
- Respecting local/regional distinctiveness, supporting local sources for goods and services where practical, and - Encouraging community involvement and access.

Read the National Trust Planning Principles

The National Trusts’ planning procedure

The National Trust have developed the following criteria to ensure online suitable projects proceed:

- Adhere to the policies in the relevant local plan,
- Deliver energy efficiency and reduce carbon dioxide emissions,
- Build in harmony with the local environment, built and natural,
- Involve the local community throughout the process.

Case studies are provided.

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

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


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

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

BIM made great strides in 2019 – where is it heading in 2020?

BIM has gone through something of a renaissance in 2019. Not that as a methodology it was outdated, but the interpretations and discussions around it have evolved over the last year (see publication date).
There is a clear sign that the industry has started to come together and collaborate around BIM to solve some of the key issues and challenges it faces. This also provides optimism for what might happen in the BIM arena in 2020.

There have been a few catalysts for the transition, such as a drive to progress the engagement with, and use of, specific BIM standards, including the Industry Foundation Class (IFC), an industry-specific data model scheme; and BIM Collaboration Format (BCF), or model-based, software-independent communication protocols. The way forward for the industry is in establishing standards but also identifying what to create a standard on.

There has also been an ongoing discussion about how to define industry terminology associated with BIM, such as the common data environment (CDE), digital twins, and openBIM. What a CDE and digital twin are, as well as where they intertwine, should start to become much clearer in the coming year.

Access the BIM+ article, ‘BIM made great strides in 2019 – where is it heading in 2020?’ in full.

**Built Environment Research**

**Latest Research from Savills**

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

**Real estate investment in 2020: global outlook, January 2020**

- Savills World Research examine the real estate trends and hot-pick assets for investors in 2020.

Income returns will remain the overarching theme for real estate investment in 2020. Offices in core city markets will be a focus for investors, but with opportunities scarce and yields at record lows, many will be forced to look elsewhere. Alternatives, such as student housing, multifamily, co-living and data centres are increasingly becoming mainstream.

These trends are set against a muted global economic outlook and heightened political uncertainty.

Read the full piece of Savills World Research 'Real estate investment in 2020: global outlook'
Latest Research from Joseph Rowntree Foundation (JRF) -

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

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

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

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

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

Read the article ‘UK Poverty 2019/20 Housing’ in full

UK Poverty Statistics from the Joseph Rowntree Foundation (JRF)

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

Access the JRF UK Poverty Statistics toolkit.

Latest Research from The Smith Institute

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

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

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

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

The Commission’s work focussed on three inter-connecting themes. These were:
• Living: To what extent does who we are and where we live affect our life chances and the services we can access?
• Learning: What barriers prevent local people from accessing opportunities through education and training?
• Earning: How can people on low incomes be better supported to secure long-term economic prosperity?

Read the full piece of research, ‘All things being equal: The final report and recommendations of the Enfield Poverty and Inequality Commission’.

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

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

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

Read the full piece of research, 'Safe as Houses'.
Latest from the CBRE Research Blog: About Real Estate

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

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

Access the CBRE website and About Real Estate Research Blog

Latest Research from RICS

- The 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.

As of **February 2020**, the latest include:

- Press release: Improved credit conditions boost global real estate sentiment, 30 January 2020.

CIOB Policy Portal latest

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

As of **February 2020**, the Policy Portal latest include:

- CIOB response to the Building A Safer Future: Proposals for reform of the building safety regulator consultation
- Press Release: Combined Action Needed to Tackle Severe Skills Shortages
Following what seemed to be a rather lacklustre couple of years for the UK economy, there is some evidence of an uplift in confidence going into 2020. In particular, the Q4 Deloitte survey of Chief Financial Officers suggests that the decisive general election result has bolstered spirits. Critically, the proportion of CFOs who said they were confident about the financial prospects of their company reached its highest level in eleven years whilst appetite to take greater risk on balance sheets also shot up. Alongside this, the Composite Markit PMI, a closely watched economic indicator covering the manufacturing and services sector rose to its highest reading in sixteen months (coming in at 52.4 January 2020 from 49.3 in December 2019) consistent with a pick-up in activity.

**Construction Sector – Workloads are still reportedly rising in most sectors**

Looking at the results on a sector level, RICS survey contributors did note a pick-up in activity across the private commercial sector with the net balance edging up to +11 in Q4 from +2 in Q3 (Chart 21). Alongside this, both housing infrastructure workloads were also said to have risen firmly which may continue with additional fiscal spending expected to be announced in the upcoming budget.
Read the full piece of research ‘RICS UK Property and Market Chart Book, Q1 2019’

RICS UK Residential Market Survey, January 2020

- Sales market activity continues to improve
  - Buyer enquiries, agreed sales and new instructions all rise over the month,
  - Respondents remain upbeat on the outlook for sales in the coming year,
  - House prices rise at the national level, driven by a turnaround in London and the South East.

The January 2020 RICS Residential Survey results signal a continued improvement in market activity over the month, with indicators on demand, sales and fresh listings all moving further into positive territory. What’s more, respondents across all regions remain optimistic that sales volumes will continue to gain momentum over the next twelve months (see publication date).

Read the latest RICS UK Residential Market Survey: January 2020 in full.

Latest Statistics from the Office for National Statistics (ONS)

Construction Industry highlights include – Construction output in Great Britain: December 2019 and new orders October to December 2019

What’s covered in the latest bulletin?

- Construction output increased by 0.5% in Quarter 4 (Oct to Dec) 2019 compared with Quarter 3 (July to Sept) 2019; this was driven by a 0.8% growth in new work, which offset a 0.1% fall in growth in repair and maintenance.
- The 0.8% rise in new work in Quarter 4 2019 was because of growth in all sectors apart from private new housing and public other new work, both of which fell 1.1%; the largest positive contributions came from private commercial and public new housing, which grew by 2.5% and 8.4% respectively.

- In repair and maintenance, the 0.1% fall in Quarter 4 2019 was driven by a 2.9% decrease in private housing repair and maintenance; in comparison, non-housing and public housing repair and maintenance grew 1.6% and 0.9% respectively.

Read the full statistical bulletin, ‘Construction output in Great Britain: December 2019 and new orders October to December 2019.

Latest Statistics from HSE – Health and Safety Executive

In 2018/19 an estimated 1.4 million workers were suffering from an illness they believed was caused or made worse by their work and 581,000 workers sustained a non-fatal injury at work. However, the risk of injury and work-related illness varies across industry, being more likely in some industries than others.

The chart that follows shows how the overall rates of self-reported work-related illness and workplace injury vary between industry groups.

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

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

For ‘Rate of self-reported work-related health and non-fatal injury by industry’ P.T.O.
Rate of self-reported work-related health and non-fatal injury by industry:

![Graph showing rate of self-reported work-related health and non-fatal injury by industry]


More detailed statistics on selected industry groups (that include ‘construction’) can be found from the suite of health and safety statistics tables.

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

Latest Research Briefings from the House of Commons Library, the House of Lords Library and the Parliamentary Office of Science and Technology (POST)

About the House of Commons Library -

The House of Commons Library is a research and information service based in the UK Parliament. Their impartial analysis, statistical research and resources help MPs and their staff scrutinise legislation, develop policy, and support constituents.

House of Commons Library, Briefing papers -

Gain access and read research produced by the Libraries of both Houses and by POST. You are able to filter the research
by date, type, or one of the 350 topics (that include Housing and Planning with sub-topics of Empty Property, Housing Supply, Planning, Regeneration, Regional Planning and Development, Sustainable Development).

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


As of **February 2020**, the latest House of Commons, Research briefings, and under ‘Business, industry and consumers’ and ‘Construction industry’ include:

- Industries in the UK, December 30, 2019;
- The construction industry: statistics and policy, December 16, 2019 (N.B. further information provided later in this document);
- New-build housing: construction defects – issues and solutions (England), August 1, 2019;

Under ‘Housing and Planning’ and ‘Housing’ include:

- Housing Market: Key Economic Indicators, February 19, 2020;
- Grenfell Tower Fire: Background, January 20, 2020;

Under ‘Planning’ include:

- Fire Safety Bill 2019 – 2020, January 8, 2020;
- Building Safety Bill 2019-2020, January 8, 2020;
- What is affordable housing? December 23, 2019;

Under ‘Regeneration’ include:

- Community Infrastructure Levy, December 19, 2019;

Under **Sustainable development** include:

- Commons Library Analysis of the Environment Bill 2019, October 24, 2019;

Under ‘Energy and environment’ and ‘Climate change’ include:

- Climate change: an overview, January 6, 2020;
- Net zero in UK, December 16, 2019;

Under ‘**Education**’ and ‘**Higher Education**’ include:
- Brexit: a reading list of post-EU Referendum publications by Parliament and the Devolved Assemblies, February 17, 2020;
- Careers guidance in schools, colleges and universities (England), January 24, 2020;
- Review of Post-18 Education and Funding, January 14, 2020;
- Degree apprenticeships, December 18, 2019;

Access Parliamentary business, Publications and records, Research publications, Research briefings

**House of Commons Library – The construction industry: statistics and policy, December 2019**

- 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 constructions jobs now than at any time since 2007, although throughout this period, roughly the same proportion of jobs have been in construction.

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

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

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

**e-Journal Review**

Built Environment Industry Journal titles reviewed by UCEM e-Library
RICS MODUS Digital Magazine, the latest edition (February 2020) focussing on how the profession is adapting to urbanisation, digitisation and global climate change. Industry leaders discuss how the role of the surveyor is being redefined and the ways they’re adapting in order to meet industry demand.

The Heritage Alliance’s Heritage Update, the latest edition focusing on driving the digital maturity of the heritage sector.

Institute of Workplace and Facilities Management (IWFM) Facilitate, the latest edition focusing on what the most pressing issues for 2020 within Facilities Management will be.

Contractors World International,

Taylor and Francis Online incl.
- Construction Management and Economics,
- Building Research and Information, and
- Journal of Property Research

Henry Stewart Publications incl.
- Corporate Real Estate,
- Building Survey, Appraisal and Valuation, and
- Journal of Urban Regeneration & Renewal

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

OpenPraxis – peer-reviewed open access scholarly journal focusing on research and innovation in open, distance and flexible education. The latest edition, Vol 11(3) includes five research papers, two innovative practice papers and a book review.

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.

As of February 2020, the most popular article titles include:
- ‘Recent Work in Connectivism’, Vol. 22(2)
- ‘How MOOCs can develop teacher cognition: The case of in-service English language teachers’, Vol 22(2)
- ‘Aesthetic Literacy: Observable phenomena and pedagogical applications for mobile lifelong learning (MLLL)’, Vol 18(1)
Managing Diversity and Inclusion in the Real Estate Sector

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

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

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

Adding some Tec-Variety: 100+ Activities for Motivating and Retaining Learners Online
Bonk C J, and Khoo E R (2014) Adding some Tec-Variety: 100+ Activities for Motivating and Retaining Learners Online
As this book states, “Motivation is central to all things human” and Online teaching and learning are no different.

The authors of this free online book propose the TEC-VARIETY framework as a solution to the lack of meaningful engagement. It can shift learners from nearly comatose states to actively engaged ones. Adding Some TEC-VARIETY helps instructors focus on how to motivate online learners and renew their own passion for teaching. Using 10 theoretically driven and proven motivational principles, TEC-VARIETY offers over 100 practical yet innovative ideas based on decades of author experience teaching in a variety of educational settings.

Access the free online book Adding Some TEC-VARIETY

Please note: The authors have made an online version of this work available under a Creative Commons Attribution-Non-commercial-Share-Alike 3.0 Licence.

Studying at a Distance

This essential guide provides practical help and support for those who have not previously studied at a distance and is ideal for students returning to study after a break. It covers fundamental issues such as motivation, goal setting, time management and coping strategies. Additional coverage in this third edition includes: specific information on the use of new technologies in distance learning; detailed coverage of referencing, citation and plagiarism; description of using mind maps and other techniques for planning and writing essays or reports; support for disabled students, particularly those with dyslexia; and, an expanded further resources section.

Directory of Open Access Books (DOAB)
The primary aim of DOAB is to increase discoverability of Open Access books. Academic publishers are invited to provide metadata of their Open Access book to DOAB.

Access the Directory of Open Access Books (DOAB)

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

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

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

The UCEM e-Library can:

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

What resources are available in the UCEM e-Library?

- Up-to-date information and online searchable databases from key educational and industry-specific sources incl. IHS’s Construction Information Service, Estates Gazette Interactive, RICS’s BCIS and ISURV, BSRIA, EBSCO Business Source Premier, Emerald Insight and access to their entire ‘Property Management and the Built Environment’ collection of journals, JustisOne, Westlaw UK, and more;
- useful weblinks; e-books and e-journals,
- Research and reference material to assist and underpin written work,
- Current awareness on existing issues and trends surrounding the Built Environment, Property, Construction, and Real Estate.

Overwhelmed by the sheer amount of information out there?

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

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

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

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

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Student Careers Services

The UCEM Careers Service

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

Access UCEM Career Services

Building Better Property Professionals

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

Property Elite provides training and Continuing Professional Developments (CPD) services for property professionals, including students, APC candidates and corporate clients.

Their Hot Topic Highlight blog posts will arm you with the information on the hottest topics – ready to tackle an important client meeting or begin revising for your RICS APC final assessment.

This month (February 2020) the Hot Top Highlight is RICS Professional Statement, Code for Leasing Business Premises 2020.
Lucy’s Top Tip – If you are planning to sit your RICS APC/AssocRICS, make sure you are aware of Property Elite’s APC Support services, including submission reviews, question packs, revision quizzes and e-mock interviews.

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

**Access Property Elite’s ‘Building Better Property Professionals’**

**Other related web-links**

- **GoConstruct.org** website showcases the many career opportunities available in construction and the built environment. The website helps to meet the future skills needs of the industry and to recruit a workforce that is diverse and ready for the challenge of the future.

- **TARGETjobs** – All TARGETjobs graduate career guides and directories are available for you to view online and download for future reference and include Property 2020, Engineering 2020, 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**

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

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

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

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

Building Research Establishment (BRE) Sustainability

- Practical guidance and support for delivering genuine sustainability benefits

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

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

Access BRE Sustainability

The Routledge Sustainability Hub

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

**Access the Routledge Sustainability Hub**

**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.

![Sustainable Development Goals](source-image)


**Note: Use of Wikis as a reference site**

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

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

This can be avoided by following two simple rules:

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

**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.

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

**Data Protection**

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

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

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

Access the Information Commissioner’s Office website

**Latest Data Protection News**

GDPR – What’s new?
Data Protection – What's new?

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

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

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

Copyright

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

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

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


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
licensure. 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 permissions at CLA Higher Education Licence.

**Latest Copyright News**

**Article 13: UK will not implement EU copyright law**

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

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

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

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

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

**Keeping abreast of the latest developments in Information Governance**

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

The CITE Forum is a place to discuss the CLA’s technology and licence offerings (such as the Digital Content Store) but also an opportunity for Higher Education Institute’s to network, share and disseminate relevant copyright information. The Forum meets twice a year and publishes a biannual magazine for the CITE community containing the latest developments.


A to Z of useful references and web-links:

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

A
American Society of Civil Engineers (ASCE) Civil Engineering database provides free access to over 80 thousand abstracts taken from ASCE publications since 1973. ASCE [online]. Further information is available at: www.asce.org [accessed 21 February 2020]

Association of Researchers in Construction Management (ARCOM) brings together all those interested in construction management research. It aims to further the advancement of knowledge in all aspects of management in construction by support education, dissemination and research. ARCOM [online]. Further information available at: www.arcom.ac.uk [accessed 21 February 2020]

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

ARCOM Newsletters - contains the latest news from the industry.

B

BBC Search [online]. Further information available at: www.bbc.co.uk/search [accessed 21 February 2020]

BIM Task Group – The Building Information Modelling (BIM) Task Group support and develop the objectives of the Government Construction Strategy and the requirement to strengthen the public sector’s capability in BIM implementation [online]. N.B. This group and programme are now part of the Centre for Digital Built Britain (CDBB) [online]. Further information is available at: www.cdbb.cam.ac.uk/AboutDBB/FAQs [accessed 21 February 2020]. 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 21 February 2020]

BOMA International (Building Owners and Managers Association International) – a federation of 91 BOMA U.S. associations and 17 international affiliates. Founded in 1907, BOMA’s mission is to advance a vibrant commercial real estate industry through advocacy, influence and knowledge. BOMA Research and Resources [online] and available at: www.boma.org/BOMA/Research-Resources [accessed 21 February 2020]

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

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


Building People - a technology platform and collaborative network, that enables connections and seeks to reduce the skills shortages across the Built Environment. Building People [online]. Further information is available at: www.buildingpeople.org.uk [accessed 21 February 2020]

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 21 February 2020]

BRE A-Z of BRE Services (from Accreditation to Zero Carbon) [online]. Further information is available at: www.bregroup.com/a-z [accessed 21 February 2020]

BRE Case Studies [online]. Further information is available at: www.bre.co.uk/podpage.jsp?id=1744 [accessed 21 February 2020]

Building Services Research and Information Association (BSRIA) [online]. BSRIA is a test, instrumentation, research and consultancy organisation, providing specialist services in construction and building services. Available at: www.bsria.co.uk [accessed 21 February 2020]

Building talk [online]. Available at: www.buildingtalk.com [accessed 21 February 2020] Building Talk is an email newsletter for Architects, Civil Engineers and Building Services Contractors.

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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 [accessed 21 February 2020].

CPRE Resources provides the latest news articles, policy guidance notes, published reports and research surrounding the following - Countryside, Farming and food, Housing and planning,

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 [accessed 21 February 2020]

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 [accessed 21 February 2020]

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 [accessed 21 February 2020]

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 [accessed 21 February 2020]


CIOB’s Construction Manager journal [online]. Available at: www.constructionmanagermagazine.com [accessed 21 February 2020]


The CIT-eA Project Creating Innovative Technology – Enhanced Assessments – a research project that explored ways to increase the amount of assessments in Further and Higher Education using technology. The CIT-eA Project [online]. Available at: http://citea.digitalinsite.co.uk [accessed 21 February 2020]

Cities / buildings images database [online]. Available at: www.washington.edu/ark2 [accessed 21 February 2020] 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 [accessed 21 February 2020]

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

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 [accessed 21 February 2020]
Community-Led Housing (CLH) Toolkit: a resource for local authority and housing professionals’ [online]. Available at: https://clhtoolkit.org/ [accessed 21 January 2020]. This Toolkit provides a wealth of technical and non-technical information on a broad range of issues relevant to CLH. There are five Toolboxes, covering (i) Housing (ii) Communities (iii) Legal (iv) Planning and (v) Finance.

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 [accessed 21 February 2020]

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 21 February 2020]


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 21 February 2020]

Construction Enquirer is a news website in construction. Construction Enquirer [online]. Available at: www.constructionenquirer.com [accessed 21 February 2020]

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 [accessed 21 February 2020].

Construction Industry Council (CIC) – The representative forum for the professional bodies, research organisations and specialist business association in the construction industry. CIC [online] and available at: http://cic.org.uk [accessed 21 February 2020]

The Construction Industry Research and Information Association (CIRIA) [online]. Further information and resources are available at: www.ciria.org/default.aspx [accessed 21 February 2020]

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 [accessed 21 February 2020]

Construction News [online]. Available at: www.constructionnews.co.uk [accessed 21 February 2020]

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 [accessed 21 February 2020]

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 [accessed 21 February 2020]

Construction and Property Research Centre (CPRC), University of the West of England (UWE) – the CPRC’s research activity is focused around the three inter-related stages of the built
environment life-cycle, 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 21 February 2020].

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

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 21 February 2020]


Designing Buildings Wiki – Student resources [online] and available at: www.designingbuildings.co.uk/wiki/Student_resources [accessed 21 February 2020] has a wide range of resources aimed at students of the built environment, as shown here.

The Design Council [online] champions great design that improves lives and makes things better and available: www.designcouncil.org.uk [accessed 21 February 2020]. 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 [accessed 21 February 2020]

Directory of Open Access Journals (DOAJ) covers all open access scientific and scholarly journals, using a quality control system to guarantee the content. DOAJ [online]. Available at: https://doaj.org [accessed 21 February 2020]

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 [accessed 21 February 2020]

Engineering and Physical Sciences Research Council (EPSRC) is the main UK government agency for funding research and training in engineering and the physical sciences, investing more than £800 million a year in a broad range of subjects – from mathematics to materials science, and from information technology to structural engineering. EPSRC [online]. Available at: www.epsrc.ac.uk [accessed 21 February 2020]

English Heritage cares for over 400 historic buildings, monuments and sites – from world-famous prehistoric sites to grand medieval castles, from Roman forts on the edges of the empire to a Cold
War bunker. English Heritage [online]. Further information is available at: www.english-heritage.org.uk [accessed 21 February 2020]. Note: English Heritage has now separated into two organisations. If you are looking for information on listing, planning, grants or heritage research and advice, please visit Historic England.


**European Real Estate Society** (ERES) was established in 1994 to create an international real estate network between academics and professionals across Europe. ERES [online]. Further information is available at: www.eres.org [accessed 21 February 2020].

**ERES Digital Library** [online] and available at: www.eres.org/index.php/activities/libraryeres [accessed 21 February 2020]

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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 21 February 2020]

Higher Education Academy (HEA) – The Higher Education Academy champions excellent learning and teaching in higher education. The HEA are a national and independent organisation, funded by the four UK Higher Education funding bodies and by subscriptions and grants. HEA [online]. Further information is available at: www.heacademy.ac.uk [accessed 21 February 2020]

HEA Knowledge Hub [online] and available at: www.heacademy.ac.uk/hub [accessed 21 February 2020]

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: http://heer.qaa.ac.uk/ [accessed 21 February 2020]

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 [accessed 21 February 2020]

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 21 February 2020].

Home Builders Federation (HBF) represents and serves its members in a range of ways including; Ensuring senior politicians and government officials are aware of housing issues and the challenges faced by our members; and working with Government officials to ensure housing policies are introduced that facilitate housing supply, in a way that is workable for the industry [online]. Available at: www.hbf.co.uk [accessed 21 February 2020]

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 21 February 2020]

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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/dashboard [accessed 21 February 2020]

Institution of Civil Engineers (ICE) is a registered charity that strives to promote and progress civil engineering. ICE [online]. Available at: www.ice.org.uk [accessed 21 February 2020]
ICE Virtual Library [online]. Available at: www.icevirtuallibrary.com [accessed 21 February 2020] is a free database that indexes all ICE journals.

International Council for Open and Distance Education (ICDE) is the leading global membership organisation for enhancing the quality of open, distance, flexible and online education, including e-Learning. ICDE [online]. Available at: www.icde.org [accessed 21 February 2020]

Institute of Historic Building Conservation (IHBC) is the principal professional body for building conservation practitioners and historic environment specialists working in England, Northern Ireland, Scotland and Wales, with connections to the Republic of Ireland. IHBC [online]. Available at: www.ihbc.org.uk [accessed 21 February 2020]

Institute of Workplace and Facilities Management (IWFM) – Formerly the British Institute of Facilities Management, BIFM is now the IWFM. The workplace has been incorporated into their new brand so that the status of the professional can help take careers further, regardless of specialism. IWFM [online]. Further information is available at: www.iwfm.org.uk [accessed 21 February 2020]

IWFM Insight – discover leading research and resources for the workplace and facilities management profession. IWFM Insight [online]. Available at: www.iwfm.org.uk/insight [accessed 21 February 2020]

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 [accessed 21 February 2020]


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 [accessed 21 February 2020]

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 21 February 2020].

JOURUM 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 [accessed 21 February 2020] 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.journaltocks.ac.uk/index.php [accessed 21 February 2020]
Leeds Beckett University’s – School of the Built Environment, Engineering and Computing [online]. Further information that include Subject Area Research – 1) Civil Engineering and Building Services Engineering, 2) Planning, Housing and Human Geography, and 3) Surveying, Construction and Project Management is available at: www.leedsbeckett.ac.uk/school-of-built-environment-engineering-and-computing/research [accessed 21 February 2020]


Lexology is a comprehensive source of international legal updates, analysis and insights. Lexology publish in excess of 450 articles every day from over 1,100 law firms and service providers worldwide across 50 work areas in 25 languages. Lexology [online]. Available at: www.lexology.com [accessed 21 February 2020]

Local Government Association (LGA) is the national voice of local government. They work with councils to support, promote and improve local government. LGA [online]. Available at: www.local.gov.uk [accessed 21 February 2020]

LGA Knowledge Hub - Knowledge Hub is the public sector's professional social network which helps people in local government connect and share online in a secure environment [online]. Available at: https://khub.net [accessed 21 February 2020]

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Multimedia Educational Resource for Learning and Online Teaching (MERLOT). The MERLOT project began in 1997, when the California State University Center for Distributed Learning (CSU-CDL) developed and provided free access to MERLOT [online]. Available at: www.merlot.org/merlot [accessed 21 February 2020]. MERLOT is a curated collection of free and open online teaching, learning, and faculty development services contributed and used by an international education community.

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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 [accessed 21 February 2020],

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 [accessed 21 February 2020]

NBS Knowledge [online] is available at: www.thenbs.com/knowledge [accessed 21 February 2020]

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 [accessed 21 February 2020]. 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 [accessed 21 February 2020]

National Trust’s Land & landscape [online]. Available at: www.nationaltrust.org.uk/land-and-landscape [accessed 21 February 2020]

New Civil Engineer (NCE) a weekly magazine published for the Institution of Civil Engineers (ICE). NCE [online]. Available at: www.nce.co.uk [accessed 21 February 2020]

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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 21 February 2020]


Open Education Resources, Research Hub – OER Hub gathers research on the impact of open education resources (OER) on learning and teaching practices. OER Hub [online]. Further information is available at: http://oerhub.net/ [accessed 21 February 2020]

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: http://openpraxis.org/index.php/OpenPraxis/index [accessed 21 February 2020]

Open University (OU) UK [online] and available at: www.open.ac.uk [accessed 21 February 2020]

Open University (OU) UK, Institute of Education Technology [online] and available at: www.open.ac.uk/iet/main [accessed 21 February 2020]

Organisation for Economic Cooperation and Development (OECD) iLibrary is the online library of the OECD, featuring its books, papers and statistics and is the gateway to OECD’s analysis and data. Note: It replaced SourceOECD. OECD iLibrary [online]. Available at: www.oecd-ilibrary.org [accessed 21 February 2020]

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P

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 [accessed 21 February 2020].

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 [accessed 21 February 2020]

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 [accessed 21 February 2020]

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 21 February 2020]

Property People’s Network (PPN) is open to all interested in land and property and provides a forum to network through a range of social activities and visits [online]. Available at: www.ppnonline.co.uk [accessed 21 February 2020]


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R


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 available at: www.revocommunity.org [accessed 21 February 2020]

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 [accessed 21 February 2020]


RICS Library services [online]. Available at: www.rics.org/uk/footer/library-services [accessed 21 February 2020]

RICS Library Online catalogue – 2500 electronic documents selected and catalogued, plus books, magazine articles, law reports and transcripts [online]. Available at: https://library.rics.org/ [accessed 21 February 2020]

Royal Town and Planning Institute (RTPI) is the UK’s leading planning body for spatial, sustainable and inclusive planning and is the largest planning institute in Europe with over 23,000 members. In 2014 they celebrate their Centenary. RTPI [online]. Available at: www.rtpi.org.uk [accessed 21 February 2020]
**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 [accessed 21 February 2020]

**Specification Online** – the free to use news and online products resource for specifiers working across the architectural and building sector [online] and available at: http://specificationonline.co.uk [accessed 21 February 2020]

**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 [accessed 21 February 2020]

**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 [accessed 21 February 2020]

**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 21 February 2020]

**U**

**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 [accessed 21 February 2020]

**University of the West of England (UWE), Centre for Architecture and Built Environment Research** (CABER) seeks to develop innovative approaches, procedures, technologies and techniques that support the design, management, reconfiguration, maintenance and operation of buildings, their fabric and the environments they create. Note: CABER incorporates the previous Centre for Construction and Property Research (CPRC). CABER [online]. Available at: www1.uwe.ac.uk/et/research/caber.aspx [accessed 21 February 2020]

**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 [accessed 21 February 2020]

**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 100 years. ERBE Construction Films [online]. Further information is available at: www1.uwe.ac.uk/et/cp/erbe/constructionfilms.aspx [accessed 21 February 2020]
**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 [accessed 21 February 2020]

**UWE, Library, Search for things: A-Z** [online]. Available at: www1.uwe.ac.uk/library/searchforthingsa-z.aspx [accessed 21 February 2020]

**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 [accessed 21 February 2020]

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**V**

**Virtual Training Suite** - This website provides a set of free Internet tutorials to help students develop their Internet research skills for a particular University course. Virtual Training Suite [online]. Available at: www.vtstutorials.co.uk [accessed 21 February 2020]

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**Z**

**Zetoc: Informing Research** - The monitoring and search service for global research publications, providing access to over 36,000 journals and more than 59 million article citations and conference papers through the British Library’s electronic table of contents and over 875,000 Open Access (OA) article citations and conference papers from PubMed. Zetoc [online]. Available at: http://zetoc.jisc.ac.uk// [accessed 21 February 2020]

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