



Cambridge University
Land Society

2023

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Editorial



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The theme for 2023 is entitled “2050: Trends and Disruptions in Real Estate” and invites the readership to pause and look to the future. Some say we are on the cusp of a significant slowdown, against a backdrop of longer-term economic, geo-political, and energy uncertainty, with the days of cheap money, easy yield compression and liquidity long gone. Others share a hope for stability and renewed investment activity, and see more positive signs in the capital markets, with inflation and base rates peaking, yet acknowledge the need for real estate to work much harder and smarter going forward.

Notwithstanding these global headwinds, it is the significant demographic and healthcare changes, the greater sense of environmental and social responsibility, the technological and digital revolution, and the new lifestyle choices and working patterns that are challenging real estate to be fit for purpose

and fit for the future. For 2023, we have invited authors to speak to this theme and bravely predict the future. We are delighted to feature articles across a wide range of topics, including the application of AI, robotics, and digital technology to real estate, the implementation of environmental sustainability practices, the drive to innovate in clean energy and water usage, and the new trends across life sciences, living, logistics, office, and hospitality sectors.

As ever, the production of this magazine would not be possible without the generous financial support of our sponsors, which for 2023 include British Land, Land Securities, and Taylor Wessing. On behalf of the membership, we extend a heartfelt thank you to Dan Nicholson our CULS President, Ali Young our Society Secretary, and our many CULS Forum Chairs, for their energy, enthusiasm and commitment.




Following 10 years in the role as Hon. Press Secretary, I am delighted to now pass the baton to Geoff Southern, Studio Director at Arcadis, who has graciously supported the production of the 2023 edition, ahead of leading the charge in 2024. It has been a wonderful privilege to serve the CULS membership in this way, and to meet so many inspiring people on the journey. Together we have published 10 editions, featuring close to 700 articles from over 500 different authors! Going forward, I am excited to share that in 2024 I will be re-launching and reviving the CULS Regional Forum. Watch this space!

Magazine Sponsors

Cambridge University Land Society would like to thank the following for their generous sponsorship and support of the 2023 CULS magazine.



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In keeping with the drive towards environmental sustainability and responsibility across real estate, we have ensured that the printing process of this edition has a reduced carbon footprint. The Premier Paper Group has partnered with the Woodland Trust to create an initiative called Carbon Capture, and funds raised go to the planting and restoring of Natural Woodland within the UK and thus reducing CO₂. For more information on the initiative please go to www.woodlandtrust.org.uk/partnerships/our-partners/premier-paper/

President's Report



Dan Nicholson
Executive Director
GPE

The past 12 months have been one of those periods when resilience, which I referred to in last year's President's report, comes to the fore. Not only has the news been grim with respect to war and social upheaval, it has also been tough on the economic front with rising interest rates, rampant inflation, and a too-small glimmer of light from the U.K.'s GDP candle to offset this.

However, as the real estate market resets against all of these negative metrics, easy gains on the back of margin financing are unlikely to return due to interest rates stabilising at a more normal long-term level. This is when we show our personal and professional mettle. The current market is exactly the time when real estate skills can make a difference to investors, albeit they may have been hurt by their existing ownerships decreasing dramatically in value. Now is the time to be returning to the market and seeking out opportunities at the end of metaphorical rainbows rather than muttering through gritted teeth about the overcast dark investment clouds.

I say the above in the context of the theme for this year's magazine, where our esteemed, dual editorial team of Werner Baumker and Geoff Southern has chosen to look forward from the current storm not just to a return to a more normalised market; but to 25 years in the future, to see what the market of 2050 could bring. Whilst it is reasonably easy to pick up and digest the demographic, social and economic changes which present themselves over the short term, as these are chewed over in our newspapers on a daily basis, this much longer-term forecast is a far more difficult timeline on which to make predictions. Werner and Geoff have bravely set this as their theme, and I congratulate them for collating

yet another series of thought-provoking articles around this topic.

It must be noted that this is Werner's 10th edition of the CULS magazine as editor, and this incredible achievement, that harks of Walpole, Djokovic or Adams (Bryan) in its longevity, must be noted and congratulated. Our sincere thanks must go to Werner for what he has achieved, and for undertaking such a complex subject for his final publication, with Geoff taking over next year.

Against this troubled backdrop, it is evident that CULS itself is in an excellent state. If the physical manifestation of diners at a Cambridge college is evidence of a return to CULS normality, the 70 present at Magdalene in July provided it. In addition, the Society hosted 22 in-person main events, as well as a further 14 with the Whitehall Group as host, all over the preceding 12 months. Each of them showed that our Society is thriving, and, more importantly, that our members have welcomed a return to in-person meetings and have rejected the theory being bandied around three years ago, that humans had no need to physically meet again.

Further evidence of the thriving nature of the Society is our membership, which recently climbed over 1000. To augment this yet further, we have appointed a new pairing of honorary membership secretaries, in the form of Steven Pitchford and Lesedi Kgaka. This intriguing pairing will provide some new thought leadership on how to ensure that students leaving the university join up to and then benefit from CULS; from which they can then grow their own professional networks and contribute to the thriving success of the Society by their subsequent contributions. I would like to convey the thanks of the committee to Steven and Lesedi for agreeing to take on this role.

We have a new rural forum head, James Stevens, and have found an excellent candidate for our new regional head – the very same Werner. These two new committee members will bring many new ideas and concepts to our already thought-provoking committee.

We also have a new vice president, Ami Kotecha, and I would like to congratulate her on her new role. Ami will be taking on the presidential baton in July next year, and I know that she has plenty of thoughts as to how CULS can further evolve.

Other elements of the society also thrive - the Silver Street Group sits under the careful aegis of James Webb and Charlie Stoneham. They have not only brought new energy to the SSG, but also have realised that they are the closest links on the committee to the student body, and we have very much appreciated their willingness to share how things look from their career perspective, which has been invaluable.

We will continue to bring new ideas and new people into the Society, and to ensure that we are welcoming of everyone. We will persist in extending our reach to members and to encourage the entry to our industry of people from every part not only of the Cambridge fold, but of the wider world. All of the above changes are moves towards fulfilling the intentions I made last year on taking on the presidency, being that of diversity and inclusion, topics on the minds and lips of many in our industry. We have widened the pool of those being brought into our committee in particular, and have spread its constituency and thus reach in terms of both race, gender and experience.

In an effort to get this topic of diversity and inclusion spoken about more openly, we have also held events, including a large gathering for which over 170 were registered at Deloitte, our kind hosts, in January; and at the other end of the spectrum, an intimate dinner in June organised by Ami Kotecha, both of which have brought the subject to the minds of people who are standard bearers of thought for our industry. Until recently, this was a topic that was discussed in the same hushed tones as sustainability was ten years ago, the consideration of which is now as essential to any real estate project as having a roof. Let's keep pushing, so that we can ensure that the opportunities in our industry become available to all.

An update would not be complete without the latest news about the (lack of a) new building for the Department of Land Economy. The current situation is that the University has engaged architects to look at the options for new accommodation for the Department, the leading ones being a new building just for the Department on the Sidgwick site or a bigger redevelopment

of the Sidgwick Site that would see the Department housed together with other departments or faculties. That study will be completed quite soon. Professor Howarth has been pushing hard, however the offer of help from the society is still there, both to the Department of Land Economy and Faculty of Architecture too, with many of our members willing to spend time and effort in ensuring that the Department gets exactly what it deserves in the form of a wonderful new building.

There are thanks due to many people who keep the Society thrumming, from all of the forum chairs to the unsung heroes of the Careers Fair (well done, yet again, Louise). However, I would like to single out the graft and tenacity of our treasurer Erik Ruane, whose sterling and dedicated work has kept us in good financial order over the last year. I would also like to thank the other members of the committee, who variously contribute in other energetic and diligent ways to ensure that the Society thrives in the manner it does.

Most significantly, there are two people whose work is instrumental to ensuring that the Society exists and runs efficiently. Those are Ali and Fiona, both of whom are critical to our organisation, and even existence; and I would like to thank Ali for her perseverance and resilience over the last year or so, in which she has faced a huge personal burden, which she has overcome with tenacity and good humour. Thank you both for everything that you do.

Lastly, I would like to thank Professor Howarth for this hard work in steering the Department through the last few years. He signs off in January, leaving the reins to Professor Martin Dixon, who has already been keen to engage with CULS after our offer of assistance, which we look forward to progressing. Professor Howarth, through his unstinting service, has stored away five terms' leave starting in Lent 2024, which he will be using to complete several book projects that he says "have made insufficient progress in the past four years". We hope that he is able to spend time on these projects, and he leaves the Department with the very best wishes and goodwill for the future from CULS.

I would lastly like to thank all of you for your dedication to the Society; and for your energy and vibrancy in ensuring our continued existence and purpose. The optimism and vision contained within many of the articles in this excellent magazine fill me with hope that not only is our Society in good and considered hands; but that the wider industry is populated with the same types who look forward to solving the puzzles of real estate with ingenuity, resilience and openness, all the way to 2050 and beyond.



2050 Trends and disruptions in Real Estate

Back to the Future?



Roger Madelin CBE
Joint Head of Canada Water at British Land

I make no apology for using the British Land Canada Water project that I have had the privilege of jointly leading to help answer this question.

‘They aren’t making more land’ and ‘name me a business sector that does not need real estate in some form’.

Two often heard statements as to why our industry will be resilient? It will be. All of you Cambridge Land Economy students and lecturers may rest easy!

The UN says that 68% of the world’s population will live in cities by 2050. London’s population is set to increase by 700,000 over the next 6 years and the urban area of Cambridge could/should double in size say some. We need to get building.

Cities and urbanisation are here to stay; how we deliver new urban areas and intensify and adapt existing ones is a major challenge but also a huge opportunity.

Interest rates, tumbling valuations, rising property yields, build cost inflation, return (or not) to the office, cost of living, AI, political instability globally, nationally and locally, climate change.....Is this period more challenging than previous ones? In my experience of working in, through and out of 4 economic downturns, yes. The worrying difference with this ‘downturn’ is the worst may still be to come?! No one knows.

So what can we use as a foundation to envisage and plan our journey to the ‘sunlit uplands’? We must remain optimistic. The good news is that most businesses become bored being pessimistic for too long and innovation flourishes in challenging times. A major write down in values and distressed disposals sometimes unlock new and exciting opportunities. Land values have always oscillated widely. The 58.5 acres of the King’s Cross development over the first decade of the 2000s was ‘valued’ at £120m then £200m then (informally) at almost £600m and in 2008 by one professional firm at

£58m. It has of course subsequently turned out ‘OK’ for the landowners and investors despite that!

In August 2015, my wife and I arrived at Canada Water Station to look around the 46 (now 53) acres that British Land had assembled over the previous decade.

The then CEO of British Land, Chris Grigg, had asked me if I might like to lead the Canada Water project. I was (finally after 29 years) leaving Argent at the end of 2015 and had no plans for a full-time property job other than IF an opportunity to build a whole new town presented itself. Unlikely? [500 acres in Cambridge, 9 minutes cycle from the station anyone?! Incidentally the same time it takes to cycle from Cambridge station to King’s College Chapel]. Chris Grigg said, ‘I have a new town for you to deliver.at Canada Water’.

After spending 16 years leading the King’s Cross development, there was a high bar for me to clear before getting excited about another full time and no doubt intense job. Could Canada Water really be that opportunity to deliver a new town that I and other former colleagues had always aspired to?

What was on the agenda of property and life in general in 2015?

1. Productivity
2. Mental health
3. Physical health
4. The ageing population
5. Affordability of housing
6. Environmental, economic and social ‘responsibility’
7. Climate change; CO₂ emissions and how to reduce them and adaptation and resilience.
8. Air quality and how to improve it
9. Urban mobility, cost and active travel
10. Embracing and optimising technology, not least the ‘agile work’ possibilities that were now widely possible

I was, and still am, proud of the King’s Cross development and most of the issues listed above were in our and the excellent planners at Camden Council’s minds. We did try hard during the early 2000s to do the right thing where we could. In terms of CO₂ emissions in use we focused particularly hard but embodied CO₂ in the construction process was not really on ours or the wider agenda. With Camden we did ‘OKish’ (some might say more than OKish) with spreading the benefits of the major regeneration into the wider communities and of course affordable housing was very much a key element.

The wonderful (if I may say so) public realm at King’s Cross in itself was/is terrific but the Euston Road and the general hinterland is still somewhat harsh. Despite high aspirations and lots of effort (still ongoing) the 58.5 acres of the King’s Cross ‘estate’ is an oasis with clearly defined boundaries sitting adjacent to a still economically, socially and environmentally challenged area.

So, what could Canada Water (a similar scale of development) offer that Kings Cross could not and why is it such an important opportunity to devise and deliver a ‘new and better urban model’. If we do it well, that will obviously be good in itself but it may also be able to signpost as to how other existing urban areas might be able to adapt and change to tackle some of the 10 issues listed above which are now all flashing in RED!

In August 2015 after 2 hours of walking around the British Land ownership and delving into the surrounding area, my wife and I knew that the opportunity at Canada Water to create a new urban centre and to try and tackle some of the challenges ahead was here in front of us. I took the job!

British Land’s 53 acres connects directly into a 64 acre park, a 20 acre, kilometre long recreational dock and a 40 acre wood. It really is worth coming to see! (It will take 2 hours to walk around it)

After the docks that had occupied the land for over a hundred years had closed in 1969 the land was developed in the 1980s as a typical edge of town shopping and leisure development and Europe’s largest state of the art printworks. So why now should it become a new urban or town centre?

‘If you are under 35 years old and live in Greater London, you can access Canada Water within 45 minutes using Public Transport or a bicycle more easily than any other central London location’. JLL 2023. That should certainly help?! The arrival of the Jubilee Line in 1999 and the dramatic upgrading of the intersecting Overground in the mid-2000s has made that difference.

If any business could offer the widest number of potential employees the easiest, fastest and least expensive accessibility one might think that would be enough to make Canada Water a resounding and instant success? It certainly is an important aspect, but other factors make a great place as we all know.

Working closely with the excellent Southwark Council planners (like the excellent Camden Council planners..... who says that planning is broken?) we have c200 acres of central London to create a new urban quarter which not only can fully respond to the 10 issues above from a 'clean sheet' but can hopefully then serve as a model for other parts of the urban environment to evolve. A lofty ambition but there are few, if any, opportunities of such scale, location and single ownership. No pressure?!

So how are the current trends and disruptions in real estate affecting, and going to affect, the aspirations, plans and current challenges for delivering Canada Water?

The simple business vision for Canada Water is, over time (maybe up to 12 years) in a sequence of economically viable mixed-use phases, to create a new urban quarter for central London that provides a full mix of symbiotic urban uses providing an opportunity for development profits and income streams from a diverse mix of growing income streams. That is why British Land is so excited by it and that is why in March 2022 Australian Super pension fund became our 50% partner.

What makes a good a town or part of a city? What the hell are 'symbiotic urban uses'?!

In 1772 the Austro-Hungarian empire invaded Poland and their army arrived at Lviv (sadly a lot in the news today). It was then not much more than a village. It was well located; a river, fertile land around and building materials under the soil. What a great location to make a city.

With 'a how to build a city' set of instructions and plans in the carriages following up behind the soldiers, they set about developing a new (15 minute/sustainable) city.

Ingredients? A 'government' administration building, an opera house, a theatre, schools, a hospital, a mortuary, a barracks, a church, a sports stadium, (well a horse performance area!) wealthy people (the invaders) housing, workers housing, a jail, agricultural storage and processing buildings, manufacturing 'work place' buildings, decent streets to get around by foot or horse, public spaces and connections to the wider trading area (rest of the Empire) get the picture?

Building materials? Curtain walling from China? How about the local stone, sand and lime? Homes, jobs, education, entertainment and food all in one development.

A sustainable city, a 15 minute city.....get the picture? There are 100s and 100s of towns and cities across the UK and Europe that we love which followed these 'simple ingredients'.

So, we like these old towns and cities and they remain successful but we do not seem to have delivered many new good ones recently. What went 'wrong'?

The ubiquitous ownership and use of the car and democracy! *

Democracy? What's wrong with that? Well.....land allocation for new development, particularly housing, tends to be where the incumbent politicians will get the least grief. Edge of town up against a noisy motorway anyone? *I do know it is not that simple but I only have 1000 words.

The opportunity that Canada Water provides, to my knowledge, is the only one (certainly in London) of scale that can try and respond to all of the challenges above.

Productivity and how to increase it has been on the agenda for 'ever'. Reducing sickness resulting in time off work (and lost productivity) should be an easy one to deal with? Southwark Park was built in 1869 with the purpose of improving the health and wellbeing of Southwark's residents (workers). It was the first municipal park in London. Workers could not be productive if they were absent from their workplace with diphtheria, tuberculosis, pneumonia or other ailments! Some fresh air and exercise would certainly help and decent housing of course.

Whilst the park was a wonderful gesture from the Burgher's of Southwark, one might cynically conclude that greater productivity of its citizens was the driving economic rational?

Nothing has changed; exercise, fresh air, access to nature are all good things and now scientifically proved to help with physical and mental wellbeing. Why don't we facilitate more of it?

Reducing stress, responsible for 25% of absent days from work, is more challenging than providing a park and a woods but outdoor space, easy access to it and a direct connection to nature is now widely endorsed as being of benefit to mental wellbeing and productivity.

A managed programme to help employees to become involved and to be and feel part of a wider community have also been shown to help too. The scale of Canada Water will enable us to set up varied opportunities and initiatives for volunteering and participating locally.

With around 3,000 new homes planned we can also work with Southwark Council, social care providers and the NHS to help with integrating and better managing the increasing aging population demographic. How we provide accommodation and care is a huge challenge but intergenerational living at scale, integrating health and social provisions, should provide benefits and cost savings for society and significant and opportunities for the property sector.

As for how to ever provide enough affordable housing, other than a major national government funded initiative I have no magic answers. It is a global challenge and from my recent travels I have yet to see a country that has 'cracked it'. Canada, Norway, New Zealand and Australia to name but 4 have recently surprised me with their own challenges.

All I can say about the UK is that the elimination of Housing Grant for social housing and the reduction in all housing grant overall in 2011 has had the consequences that were fairly obvious for a numerate 5 year old to see at the time. The UK needs an ambitious programme, possibly as ambitious as the post war 'New Towns' initiative?



As for CO₂ reduction opportunities, all buildings at Canada Water will be electric. No fossil fuels. 7 years ago we negotiated with UKPN to provide an 86MVA substation on our land. Every new building at Canada Water (some 35 or so) will be class leading; so they should be, but even for us that is not easy.

Our embodied CO₂ reduction plans are industry leading and industry collaborative but arguably none of us can move fast enough without a clear ambitious and funded National Strategy.

The UN said that the improvement of urban air quality was one of its top challenges.

Whilst some parts of London and other UK cities are improving, we can see the challenges (particularly political) over the past few weeks and months. Obviously having 120 acres of green and blue around Canada Water provides a huge advantage with a natural 'lung'. Greening other urban areas and reducing pollution is very much work in progress.

Cost and ease of travel. 'Shall I go to the office today?' Can I 'get away with not going'? For many, the cost and hassle of the commute is something to avoid whenever possible. An 'easy to get to' place that does not cost a lot to get there must therefore be appealing?

ROMO; the reality of missing out. What do I lose if I am not regularly with my colleagues? I can work anywhere now? We

are seeing a steady return of 'workers' to the best buildings in the best locations and for any business needing to innovate we see demand increasing.

So how can Canada Water continue to be delivered in this current and challenging environment? Simply, if there is demand for new accommodation and that demand would prefer to go to the best properties, in the best locations and environments, the 'moving parts' of the financial equations justifying allocating money to property will 'move'. Development happened with higher interest rates and higher valuation yields in the past. If the demand is there, the 'market' will deliver.

With interest rates likely to stay around where they are currently for a while, construction costs not going lower and land supply at negative values not being forthcoming, 'rents' will have to and will rise....and for the best new commercial property they will! The top office rent in the City of London in 1987 was £72 sqft. Today that would be £201 sqft which would still be, as a proportion of a company's outgoings, a lower percentage than in 1987. Other commercial, retail and leisure uses will also pay more for the best locations and properties because their business model will be able to justify it.

The challenge I have no answer to is how do we deliver more homes at affordable rents and prices? With a delivery of only 7,600 social rented homes within England in the past year 'Houston we have a problem'! Maybe the next CULs topic?!

Tough love for soft centres... ...a new deal for the high street



Liz Peace CBE
Serial Chair and Strategic Adviser to
the Property Industry
Chair of the Centre for London's
Industrial Land Commission

I make no apology for returning to a subject on which I have written many times before and on which we have seen a range of Government actions and commitment of funds but sadly no real progress in solving the problem and effecting a lasting set of solutions. That subject is the future of our town centres and high streets – which is something of interest to us all as residents of a place, but also of importance to the real estate industry since we are for the most part the owners of the property in town centres and as a result are regularly vilified as the bad landlords who are ruining poor struggling occupiers and their businesses through our unreasonable rental demands.

Two events have prompted me to revisit this subject. The Chair of John Lewis, Dame Sharon White, has recently called for a Royal Commission on the state of our high streets. And the Prime Minister has announced a fund of £1.1 billion to be allocated to a list of struggling town centres who could each be allocated up to £20 million each in a 10 year endowment. This feels a lot like Groundhog Day: I assume I am not the only one to remember Mary Portas's review in 2011, the subsequent somewhat derisory £1 million Future High Street Fund which led to a number of underwhelming regeneration initiatives, one of which I seem to recall involved Peppa Pig, and various subsequent task forces/forums which appear to have made not the slightest difference. But what concerns me more deeply about these two announcements is that they represent a misunderstanding of the problem and how it might be fixed. Let me elaborate.

It is clear to me that the traditional British high street/town centre has changed forever. We had already seen a massive change in shopping habits pre-pandemic, with people voting with their feet to do their basic weekly shopping in the out of or edge of town supermarket and their discretionary shopping in large malls that offered climate-controlled surroundings and a host of other services. And that led to the disappearance of the butchers, bakers, fishmongers, and small specialist shops that used to populate our towns. And then came the growing trend towards online purchasing, massively accelerated by the pandemic, and that finally finished off the more interesting discretionary retail such as the interesting little fashion boutiques where I would happily spend my salary on a Saturday!

For most places, this traditional high street/town centre retail is simply not going to return because we, the customers, don't actually need it anymore. We may bemoan the decline of our

town centres but in reality, we are the cause of their passing. As someone once put it to me – we love seeing our high streets, as we drive through them on the way to the out-of-town shopping centre!

But I would contend that there are some things for which we absolutely do need a town centre. I can't get my hair done online or my dry-cleaning managed via DPD and it is good to be able to meet up with friends for a coffee or pop out for a light lunch. There are also some functions that would actually be better in high streets – doctors' surgeries and other healthcare services, children's nurseries – which would in turn create a need for a pharmacy, a newsagent, a coffee shop. And it would also be hugely helpful to have a 'depot' for the online purchases and the inevitable returns – with preferably less of a queue than the average post office. There is also the potential for cultural offerings such as small pop-up galleries, exhibitions of local crafts etc.

These uses will require less space than is currently allocated to retail in our sprawling and relatively unplanned high streets. So what we actually need is a curation of the real estate in our town centres – which is of course problematic when the ownership is fragmented.

Back in 2014, a group of us working under the aegis of the British Property Federation produced a report setting out the concept of Town Centre Investment Zones. The idea was very simple. Somebody (and I'll return to who that might be in a moment) would draw up a plan of the town centre/high street that would identify at its core the area that would be needed for those uses for which people still wanted to visit town. That would become the new, red-lined, centre. And everything else outside that core would be re-allocated for non retail uses – probably, but not exclusively, residential.

I would be the first to admit this solution is not without its challenges. The obvious problem is the fragmented ownership to which I alluded earlier. The ideal solution to this would be for the owners of all the property affected to come together and agree to pool their assets into some form of collective investment vehicle from which they would all be allocated shares – and then receive back the financial benefits of the collective investment once the re-arrangement and redevelopment was completed. This vehicle could be the body that would appoint an asset manager who would oversee the re-allocation of space, the development of what would become the edge of town residential and other uses and the refurbishment and improvement of the town centre into suitable spaces for the remaining retail and services that people needed, not forgetting the need for some amenity space to make this a truly attractive location in which people might actually want to spend some time.

The trouble is we are not in an ideal world and it would be a miracle if every property owner was prepared to co-operate in this sort of scheme. So the alternative is for some body to

become, in effect, the ringmaster. And the obvious candidate for this is the local authority since they also have compulsory purchase powers which could be used – hopefully sparingly – to persuade those who wouldn't co-operate in the redevelopment of the town centre to play ball. At the end of the day property owners and occupiers wouldn't lose out since the reward of a reconfigured town centre would be spread evenly across all those who owned property and there would still be premises available for businesses to rent – except that they would be in the newly configured, red-lined, core and not in the places previously occupied by the sprawling town centre businesses.

I appreciate local authorities are under massive pressure and not looking for challenging new roles, possibly involving compulsory purchase which on the whole they seem singularly reluctant to do even if it is the wider public good. There is also the financial issue, especially since local authorities are hardly flush with cash at the moment. So where the industry needs to get smart is in coming up with some sort of financial model which involves a public private partnership (remember those!). We need an operator who can assemble investors who see the ultimate value in a wholesale re-ordering of land use – which will in due course produce a reasonable return in terms of sale value of newly designated residential land (or even income from new build to rent developments) and the rents from redesigned high street units.

Back in 2015, we took our BPF Town Centre Improvement Zone model around the investors and the politicians. I am sorry to say the latter ran a mile as soon as we mentioned the possibility of compulsory purchase. And the money folk we talked to couldn't or wouldn't see the opportunity in what we were proposing. Several pointed out that the switch to residential for a large part of the redundant town centre retail would only work in areas of high value and not in the depressed towns centres of, say, Lancashire which would actually be the places most in need of rejuvenation. But surely there are plenty of places in the supposedly prosperous south of the country for which this approach could be a game-changer. What I suggest we need, therefore, is a pilot scheme to prove the concept and a Government who would be prepared to invest the capital in that pilot.

And this is where I circle back to the two events that prompted me to write this piece. Dame Sharon White's idea of a Commission would be a monumental waste of time since its whole premise seems to be that by various financial interventions – rebalancing business rates for one – it would be possible to reverse the decline of the traditional high street or town centre. But it won't: the traditional high street has largely disappeared and will not be coming back and no amount of evidence seeking and public hand wringing is going to change that. Which leads on to the second event, namely the current proposal from the Government to funnel £1.1 billion into town centres.

Now this one could have legs – and the sum of money is rather more significant than that devoted to previous initiatives. But instead of doing what they have done in the past and spreading the £1.1 billion over a large number of locations, where they seem to be relying on all the usual piecemeal and hackneyed measures such as public realm improvement, street markets, tackling anti-social behaviour etc, why not allocate a more sizeable sum, perhaps as much as say £50 million, to one or two locations to kick start a pilot the Town Centre Improvement Zone concept?

It would be necessary to identify a forward thinking and innovative local authority or two who were up for such an innovative approach and prepared to use their CPO powers. And I am sure the British Property Federation could help the Government identify a group of investors who would be interested in co-operating in this public private partnership. This must surely be a better way of using public money – by recognising that our towns and high streets have changed for ever and proving a whole new model that could ultimately end up as the blueprint for saving many more failing locations. It certainly sounds better than the traditional approach of spreading the fund over a multitude of applicants who, without any blueprint for innovative solutions, are simply going to do more of the same old and take us back to where we ended up after the Portas pilots (though hopefully minus Peppa Pig).

And **now** for something completely **different...**



Jeremy Newsom
Founder Chairman of Cambridge Ahead

Over the last six years, since I ceased paid employment, I have gradually shed those items of identity which marked my career as a chartered surveyor. Not just the salary cheque but my desk, email address, suits and, of course, my job description and title. The challenge of retirement, which many find hard, is not about the excess of time but the loss of identity. (Hence, my immense gratitude to CULS, still recognising me as an Honorary Vice President.) What I have lost most of all over this time is knowledge - knowledge of markets, deals, players and people. I am no longer current and must bluff my way through conversations when I bump into former peers.

I might have sought a 'plural' life as a non-executive but I had done enough of that and wanted a new career that was entirely different. So, I wetted my paint brushes, not as a hobby but as my work. It's surprising how often we fill out forms with a box for 'Occupation'. 'Company Director' used to cover all manner of sins and the first time I used 'Artist', it was somewhat tongue in cheek. Gradually I have become more confident in asserting my new identity and, in a recent unfortunate encounter with a traffic officer, I confidently answered "Artist" (although I doubt that will save me from my fate).

I'm well aware that my new career will be shorter than my first but that's no reason to be less motivated. Like every ambitious youngster, I can dream the impossible while making the daily steps of progress. If there are improvements discernible by me or, more valuably, by others, I paint on contentedly. I read around the subject, learn



about dead artists and watch what living artists are doing with admiration. There are so many artists trying to make a living; this makes me privileged and also brings a particular advantage. When the painting is the meal ticket, you paint what sells whether that is what you want to paint or not. I can paint what I like. On the other hand, I never want my output just to sit in a corner and if the time comes when no-one wants any of my paintings, I will stop.

Friends are kind and supportive but I know I will never be 'good'. Those appraisal sessions we so enjoy don't happen for self-employed artists so I have to listen carefully to respected voices – for the nuanced opinions and relative judgements ("you're better at x than y"). I paint scenes that I appreciate, to capture a view, to memorialise beauty or colour or shape. I could stare at flowers all day; they have this immense power to elevate life from its ordinariness, to overcome our petty obsessions. And yet, I'm not so good at painting them! As for people, there is nothing more fascinating than the face and it's a portrait artist's privilege to stare and stare – not something we are otherwise allowed to do in our society. There is plenty of opportunity to paint strangers in classes and I do this as an exercise in improvement but it's another thing to be confident enough to ask family or friends to sit for hours with an uncertain output!

Most plaudits I hear are in relation to my buildings. Is that a coincidence or has my first career rubbed off in some way? I was fortunate that my work involved some of the most admired architecture and spaces in London – Mayfair and Belgravia. My first job (in 1976) was to be asset manager for the small hidden world that is Kinnerton Street. Belgrave Square has held a special fascination for me, comparing what is there today with the first-hand evidence of the architect's own painting of the square when built in 1820's. And I have always seen the iconic Eaton Square as the bedrock for what Grosvenor has become. So, these places mean a lot to me and I have an innate desire to paint them.

I'd like to say there is a connection between property development and painting but it would be quite contrived. What I have undoubtedly learned is how to see better. This new skill would have been useful in my former career. Too often I saw what was obvious and superficial and failed to appreciate the effect of 'light', 'context' and 'substance', whether actual or metaphysical.

This autumn, Grosvenor kindly provided space for a pop-up gallery and, piggy-backing on the superior skills of my two sisters, we held *A Sibling Show* where I could show some of my London paintings. For any newer artist, the first public displays are anxious moments – there is the embarrassment of showing to friends and the possibility of ridicule from strangers who have no sensitivities to worry about trampling. Anyway, the feedback has been encouraging and I feel I have climbed another rung of my new ladder.



Decision-Making in Real Estate: Some **Lessons** from the **Last Century**



Colin Lizieri
Emeritus Professor of Real Estate
Finance and Honorary Vice
President CULS

Given the University's compulsory retirement age and my new status as officially ancient, I took the opportunity to consider some of the lessons I've learnt from my time in real estate and some of the puzzles I've encountered. I set some of those ideas out in a keynote speech at the International AREUEA Conference we hosted in Cambridge in the summer¹. Thies Lindenthal, who has taken on the mantle as Grosvenor Professor, has kindly reviewed this elsewhere in the Magazine. Much of that reflection was about the role of individuals in real estate as key decision makers and opinion formers.

It is a commonplace that the real estate industry is a "people industry" where networks really matter – the success of CULS attests to that, after all. We don't always pause to consider why that might be the case or what the consequences are and there is a tacit assumption that this is a "good" thing. It certainly makes the industry more sociable! Perhaps, though, we should step back and think a little about the causes - and the consequences. I'll place this in a real estate investment context, but the thoughts here could equally apply to lending or many other aspects of property.

To some extent, it is the structure of the market that makes individuals so important, at least in the private real estate market. Deals are large and relatively infrequent, so individual transactions matter more than they might in public financial markets and public information is scarce driving reliance on private sources. That the market is private is important too in that it is characterised by information asymmetry: avoiding detailed economic definitions, if I am selling you a building and you are buying, I know a lot more about the nasty quirks of the building and the sociopaths who are its tenants! That means that trust relationships become critical. And, of course, that other mantra "all property is unique" matters too: we teach this as "heterogeneity" but fundamentally it means that a sound decision depends on being able to detect those individual nuances and assess their consequences for the performance of the asset. That most investors and funds have a relatively small number of assets under management means that these differences matter in a way that they might not in a portfolio of thousands of equities, where the individual, specific risk is diversified away.

So far, so rational ... some individuals have a natural feel for the market, this develops and grows with experience, they

learn from others with that feel, the trust networks that people build protect against the negative consequences of bad behaviour in private markets, reputation matters, as it should. Those with that feel become opinion formers in the market and shape its direction. And yet, and yet, this does not feel quite right. It fails to explain the cyclic pattern of boom and slump and that period when values in a market, in a sector seem to hover, suspended, over a chasm, defying gravity like Wile E Coyote in the Road Runner cartoons before plummeting down. It fails to explain why revered market personalities form funds that fail but then reappear with a new vehicle – and are supplied with yet more capital to lose. It fails to explain the persistent myths that are held in the market.

The myths are interesting. By mythology I mean a belief that may have some basis of fact or foundation but which is believed irrespective of facts or evidence. Some persist, some have a life and then fade, replaced by a new orthodoxy. I have a little list, but I do not have the space here to explore them in detail. Here are some: real estate is an effective inflation hedge; office rents capture economic value and grow in real terms; major global cities offer superior risk-adjusted returns; cap rates are a (positive) measure of risk; fund managers time their leverage decisions to enhance returns; the best managers consistently deliver (positive) alpha. These are commonly held views, but all are open to serious question. Nonetheless, they shape economic behaviour.

In the keynote, I went back a hundred years for insights from economics at Cambridge. The 1920s means Keynes, of course, but I am not sure "in the long run we are all dead" is the message an emeritus professor wants to hear. A colleague of Keynes's then was the astounding Frank Ramsey. Ramsey made significant and major contributions to mathematics and statistics, to philosophy and, almost in passing, to economics before dying, tragically young (I strongly recommend Cheryl Misak's recent, comprehensive biography). Ramsey's work offers us some intriguing insights.

His two major economics papers – on taxation policy and on the savings ratio in an economy – both led to Nobel-prize winning strands of work. But their importance is probably more about the methods use, years ahead of their time. To solve the mathematics of finding optimal solutions, Ramsey assumed a common utility function which made the problem tractable. It is often argued that this paved the way for the mathematical economics that dominated the second half of the twentieth century with its assumption of rational, utility-maximising agents operating in an economy. These models really underpin most of our models in corporate finance (and, hence, real estate finance). His work on the assessment of probability also strongly influenced von Neumann and led to game theory which provides an essential toolkit for finance. From this, we might surely expect to see rational, evidence-based decision-making dominating professional investment markets with, over time, the rational, evidence-based decision-makers driving others from the market.

What we observe, though, is rather different. As an example, when the Cambridge Real Estate Research Centre undertook the "hurdle rate" project for the Investment Property Forum, the research showed that many significant investors were using models and decision-making tools that were inconsistent with formal financial models. More importantly,

even where formal models were utilised, they were frequently over-ridden: in an investment committee, a senior individual would "feel" that a deal was right (or, more rarely, wrong) despite the modelled outcome. We asked whether there was a systematic back-checking of the impact of overrides and *in no instance* did we find such a process. We simply do not know the consequences of these informal practices.

The emphasis on individuals, on deals, on intuition and experience, I think also makes the industry reluctant to consider or adopt complex or innovative models. I am old enough to recall the resistance to discounted cashflow and spreadsheets in valuation practice; the rejection of the relevance of portfolio theory; widespread misunderstanding of the nature of property derivatives contracts and the information they contained and much more. In the run-up to the real estate downturn that followed the global financial crisis, warnings about inflated values and over-leverage were dismissed as a pessimistic misunderstanding of new market realities over-reliant on arid models. More recently, I have sat in industry forums listening to market leaders explain why, although, in aggregate, property valuations looked too high, their properties were of such great quality that they would be resilient to any correction. They are doing it today: my models tell me supply will adjust, is already adjusting, in "new" real estate sectors, their belief is that demand will continue to drive up rents justifying ultra-low yields despite the new interest rate environment. Cambridge is a prime site for such optimism.

So, can Frank Ramsey from a century ago help us to explain this? Perhaps. In his (mathematical/philosophical) work, he examined the way that beliefs form the basis of our initial assessments of the probability of an event occurring. We then adjust those probabilities based on new information and evidence that we obtain (this is Bayesian probability – needless to say he made critical breakthroughs here), but the adjustment process is anchored to those prior beliefs. And beliefs – he is clear on this – are not simply bounded by a single rational utility. The mathematical models of his economic papers are an abstraction, but beliefs and utilities are individual and varied. As a result, strongly held beliefs may limit the extent which new evidence or ideas lead to updating and, hence, change behaviour.

From this, we can perhaps see how the real estate market can be dominated by individual decision makers and why an understanding of their decision-making processes is so crucial. There are many reinforcement mechanisms: the belief that there are market gurus with particular market insights, the deal-driven, entrepreneurial reward structure, with those making the decisions acting as role models for rising workers who soon forget what we have taught them. It is possible that recruitment reinforce this by selecting candidates who fit that mould too – what is being sought in the filtering, assessment and interview process? Additionally, where do people gain the information and ideas that form their views and perspectives? It's that "people business", so internal networking plus the nature of professional and trade press and media which seek and publish the views of those opinion formers and the consultants that hold a mirror up to the sector. I am over-stating this, of course, but it's a powerful echo chamber. My mission, should I choose to accept it, is to explore this further!

¹The full keynote transcript can be found here: https://www.landecon.cam.ac.uk/sites/default/files/2023-08/lizieri_keynote6.pdf

APEC



Brian Waters (John's 1963)
Chairman APEC Forum



James Lai
Urban Planning Director @
Public Investment Fund



Martin Thompson

The Architecture Planning Engineering and Construction Forum was set up in 2013 and aims to support both the Faculty of Architecture and the Department of Land Economy.

The APEC Forum has become one of the most active Forums and has established a series of annual events. The main one is the Planning Update afternoon conference, the fifth of which, hosted by Dentons, was held on 21st March and opened with a keynote by the government chief planning officer Joanna Averley. For the full programme.

James Lai and I worked with Professor James Campbell to bring over a dozen leading practices together with about 60 graduating students in May. These were Donald Inshall Associates, Gort Scott, HTA Design, KLH Architects, MCW Architects, Owers Warwick Architects, Perkins & Will UK, Pick Everard, Pilbrow & Partners, Plan A Consultants, Populous, Purcell UK, Woods Hardwick. Previously recruited Cambridge student presented for some of the firms. Applications and jobs followed the event.

As in previous years CULS sponsored the annual show of work and brilliant catalogue which is entirely organised by the students.

We arranged a tour with the project director Tim Allen-Booth of Niall McLaughlin architects of the Sterling Prize winning Magdalene library before the July AGM and dinner in Magdalene. He was supported with a brief assessment by Paul Finch OBE, former editor of the Architectural Review and the Architects' Journal and now an honorary VP of CULS.

As well as the regular events, Michel Mossessian, architect of two Kings Cross buildings for Argent is arranging a walking tour around these which include Google Deepmind. He says we would not be given access inside as they are totally paranoid about the stuff they do inside...but what is important to share here is the space in between and 'sculpting the Void' of the public realm owned by all. Date to be announced.

So what next? The small APEC committee has met on Zoom and recently in Savills' boardroom and is starting to rebuild. New members please come forward. James Lai remains vice-chairman despite being now based in Riyadh and Martin Thompson keeps the records as Scribe. New members include Toby Parsloe a partner with Savills and Ben Lovedal a partner with architects Sheppard Robson

Current and recent members of the APEC committee include: Mike Adams, Martha Grekos, James Engwall, Melville Haggard, Rod Mcallister, Richard Morton, Dr Kevin Stone, Flora MacLeod, Sue Chadwick and Liliiana Shanbhag.

A big thank you to Professor James Campbell, for all he has achieved with the School of architecture and best wishes for his sabbatical year. He has introduced his replacement as head of department, Professor Flora Samuel. She has had a fascinating career, details of which I include here. We hope to see her on the CULS committee and to continue increasing collaboration with the department.



Professor Flora Samuel's strength is in connecting ideas and people from different backgrounds and fields – the scholarship of integration and application, making connections across disciplines and sectors, contextualising specialisms in the larger context and making sense of them to non-

specialists. Her current work focuses on inclusion through planning policy and processes evidenced through digital map making with communities and others, summarised in her most recent book *Housing for Hope and Wellbeing* (2023). With Eli Hatleskog Flora won a RIBA Presidents Award for Research in the Communities Category for their project *Mapping Eco-Social Assets*.

For Flora climate change is a social justice issue. She is the PI on the AHRC funded *Community Consultation for Quality of Life Project*, a project exploring the ingredients of inclusive community consultation for planning across all four nations of the UK. The urban room is a place where the community, university, local authority, industry and practice come together to debate the future of their cities. Flora is in the process of setting up an urban room for Cambridge.

Flora is passionate about the importance of developing research in architectural practice, summarised in her book *Why Architects Matter* (2019). She was the first RIBA Vice President

for Research and was twice elected by its membership to Council. She has lead on the development of several reports for industry bodies including the Architects Council of Europe *Value of Architecture Report* and the RIBA *Building Knowledge: Pathways to Post Occupancy Evaluation report*.

Over the last few years she has been developing methods for capturing intangible wellbeing outcomes in a format that can be fed into planning processes. An industry expert on social value, Flora was lead author on the RIBA *Social Value Toolkit*. She has contributed to a variety of social value initiatives across the construction industry and is regularly invited to speak on social impact by organisations across the globe.

An Architect trained at Cambridge and Princeton Flora has strong opinions on the future of architectural education and the changing role of architects. She taught for 10 years at Cardiff before leading the March at the University of Bath. She was then the first woman Head of the University of Sheffield School of Architecture. She left Sheffield for Reading University to help set up a new School of Architecture to deliver an education for uncertainty.

Flora began her academic career as a Le Corbusier scholar and has written five books on neglected aspects of his work and practice, several of which have been translated into other languages. She believes that history has a vital role to play in informing future practice.

Flora is a Trustee of the Quality of Life Foundation and on the Board of the Taskforce for Planning.

School of Architecture report

Dr James Campbell, Head of Department

Niall McLaughlin's successful scheme for the new Magdalene College library competition appears as an arrangement of very simple brick volumes which echo the typical gabled architecture of the existing College.

The library is a suite of interconnecting rooms lined with bookcases, reading desks and galleries. The spaces are single height, double height and triple height, rising to a long elevated gallery overlooking the lawn and the water. The larger spaces are flanked by smaller niches and rooms with glimpses connecting them together. The vistas along the length of the spaces frame views out over the quadrangles and towards the town. The façade towards the more private Master's Garden provides indirect light but no views. The facade looking towards the river contains projecting bay windows overlooking the water.

The interior spaces are made from a cross-laminated timber structure with hardwood shelves and tables. The intention is for all of the key features to be perceived as an interwoven set of elements. Roof lights, columns, shelves, light baffles, windows, desks and balustrades forming a coherent warp and weft throughout the space. The roof contains a subtle layer of light structures giving an even level of luminosity to the main reading rooms and balancing out sidelight and top light, thus reducing glare. The arrangement of baffles allows very little direct light to penetrate in to floor or shelf level but allows a lively play of light in the ceiling and window reveals. This combination of calm and animation is central to the character we would like for the space.



ESG & Sustainability Forum

Update – 2022/23



Ami Kotecha FRSA
Senior Vice President & Chair of ESG Forum, CULS
Co-Founder & Group President, Amro Partners
Board Member, British Property Federation

To achieve Net Zero by 2050, the UK’s real estate sector must broadly achieve a tripling of energy efficiency in our buildings by 2030 and a halving of our reliance on fossil fuel consumption by 2030. We are on our way to a decarbonised grid, however, well below target levels in decarbonising our standing stock of buildings. If we continue to rely on fossil fuel energy and don’t push the potential of moving to onsite and offsite renewable energy sources, we will not as a sector, achieve a future-fit, low operational emissions building stock. We have an equally large responsibility, especially for new builds but also for retrofits, to reduce embodied emissions that sit in the fabric of our buildings and in material supply chains and manufacturing processes. There is, therefore, a tremendous need within the CULS’s membership and beyond to share experience and lessons learned from decarbonisation journeys. Sharing best practises, thinking laterally and jointly about collaboration between stakeholders, evaluating policy and identifying gaps will all go a long way in helping us building capacity within the CULS community to deliver on targets that are urgent and key to future-proofing our sector.

In that regard, genuine, auditable actions to decarbonise, regardless of whether they get to precise outcomes, are valuable contributions and should not be considered as greenwashing. This was an important point made at one of our webinars where our subject matter experts agreed that there is no one single methodology to get to Net Zero but the clarity of targets that include all scopes of emissions and that prescriptively quantify outcomes ought to be encouraged.

Data (and the significant lack of it) appeared in many of our discussions. Data governance and the need to break data silos that allow for industry and sector benchmarking and that allow us as a sector to chart our progress have repeatedly come up as an issue that we must address. The growing complexities around the type of data required, for example to quantify bio-diversity net gain or the contributions of nature-based solutions was also brought up. After all, achieving Net Zero is a science-based process with quantifiable, measurable outcomes for which our industry needs to develop new capabilities quickly.

Our forum presented a wide-ranging set of topics through the year (examples include circular economy, nature-based solutions, greenwashing, social cohesion, localised energy grids, battery storage, the role of AI in the future of work) each with an ESG touchpoint, our discussions brought together subject matter experts who shared their distilled wisdom and introduced practical toolkits and showcased best practice. In most instances, we presented concepts in an inter-sectoral manner so that our engaged audiences could live up discussion during Q&A sessions and surprise our panellists with a mix of mechanistic and policy related questions. We value audience participation and strongly encourage feedback and continuous learning.

On that note, I must thank our kind sponsors, Savills. As a result of their generous annual sponsorship of our ESG & Sustainability Forum, we have been able to reach thousands of viewers and listeners by offering our webinars as free, non-ticketed events. We believe this is a key aspect of our ESG work at CULS and we hope that we can continue to receive sponsorship and carry on hosting this as a free and accessible channel.

Finally, I must thank my incredibly dedicated forum committee consisting of Munish Datta, Geoff Southern, Rahul Parikh and Kirsten Henson for their efforts at curating an excellent series of events. I am very pleased to welcome two new members who have joined our committee, Jane-Muir Sands and Emma Waterhouse. My thanks to our super impressive CULS President, Dan Nicholson and our supportive CULS committee – I am always amazed and the wealth of wisdom and experience that is available on tap!

ESG Forum Committee – 2022/ 23/24:

- Munish Dutta, Director of Sustainability, Specsavers, Fellow, Cambridge Institute for Sustainability Leadership
- Geoff Southern, Studio Director, Arcadis
- Jane-Muir Sands, Managing Director Corporate Services, HSBC
- Emma Waterhouse, Associate, Boreal Investment Management
- Rahul Parekh, Partner, 2150 Venture Capital
- Kirsten Henson, Founding Director, KLH Sustainability



Commercial Property Forum



Roderick Houston MA MRICS
Engagement Director, Construction / Innovate UK Peterhouse, 1986

It is a delight and an honour to report on the Commercial Property Forum's activities this year.

First and foremost, I'd like to thank:

- *Georgina Muskett (née Redsell) and Charles Russell Speechlys LLP (CRS)* for kindly hosting our quarterly Forum meetings, providing a room, refreshments and e-meeting links;
- *Marcus Geddes and LandSec (Land Securities Plc)* for stepping in and covering whilst Georgina is on maternity leave; and
- *Ali Young* for helping support the organisation and arrangements of our meetings.

Thank you! Without your support, running our Forum would be much harder, and I am very grateful.

Secondly, I'd like to thank all our Forum members for all your support, energy, ideas and inputs over the past year and many years - you're the ones who make this all possible. In particular, I'd like to thank:

- those who have decided to leave the Forum, in particular *Eleanor McMillan*, who's moved to join the new Residential Forum recently established by *Anna Clare Harper* and others (Eleanor, we wish you every success, both with CULS Resi. Forum and in your new ventures);

- those who have volunteered to join recently, including (in no particular order):
 - *Mike Gedye* of CBRE;
 - *Anila Thompson* of H.I.G. Capital; and
 - our newest member, *Ariel Levy* of GenTwo Real Estate
 - You are all most welcome, and I'm really enjoying the fresh energy and new ideas sparking off in our conversations.

Thirdly, of course, I thank our speakers and hosts / sponsors of our various events, which I outline below, and most of all, the team members who have made all these things (and others) happen, and supported us with ideas, encouragement, and contacts. I'm thinking especially of *Dan Nicholson, Dominic Masters* and *Ian Marcus OBE*, amongst others - your support is invaluable.

And finally, and most importantly, I thank all those members of the Land Society who have attended and / or encouraged others to attend our talks and debates - these are for you, so I hope you've found them interesting, insightful and useful.

Before I go into the "meat" of this update, just a few words on the world of commercial property generally - whoever it was who first said, "*The only constant is changing*" wasn't kidding, was s/he? Spiralling inflation has led to Central Bankers finally ending the long run of cheap money, with interest rates now back at the realm of "the old normal", whilst geopolitics suggest that, in fact, history isn't bunk at all. Whilst the Cost of Living Crisis and eye-watering borrowing by HMG and other Western economies is putting pressures on finances everywhere, the Climate Crisis and ESG seem to be really at the fore. A return to mass strike action, plus the Death and State Funeral of Her Late Majesty The Queen, helped remind us that not only do "events matter", but so does the stable, reliable running of our transport systems, in particular.

Unpicking what all that means for owners, operators, investors, managers, financiers and most importantly users of Commercial Property has been our continued focus. I am enormously grateful to colleagues on the Commercial Property Forum for pulling together, hosting / sponsoring and supporting our events this past year or so. These include:

- Our *Annual 2022 CEO Talk*, given by *Paul Williams, Chief Executive of Derwent London* and magnificently hosted by Goldman Sachs in their stunning auditorium at Plumtree Court, EC4, in October 2022;

- A long overdue "deep dive" into *Opportunities in retail*, entitled "*Now is the time to Invest*", hosted and sponsored by Land Securities and organised by *Roger Thornton*;

- Our 2022 Annual Market Update Panel, asking, "What Now? What's the New Normal?" - as always, generously hosted and sponsored by BDO in their Baker Street offices (with thanks to *Hira Sharma* of BDO and his team / colleagues / predecessors, who have hosted this since at least 2007, and *Robin Goodchild*, who kindly chaired again);

- Our third major panel event on the *Future Workplace*, *this one asking, "What Matters Most, When Everything Matters?"*, arranged by *Josh Singer, Mike Gedye* and *Nick Wright* of CBRE, who isn't a member but has been a great supporter (thank you, Nick!);

- Our *Tour of The Forge*, LandSec's state-of-the-art rebuild / refurbishment in Bankside, kindly arranged and sponsored by *Marcus Geddes*;

- Another tour / site-visit, this time to *British Land's Broadgate scheme* in the City, arranged and ably hosted by *Gareth Roberts* of British Land (who is a member of CULS, and working with us on other events, although has chosen to remain outside the Forum for the time being); and most recently

- Our *2022 Annual CEO Talk* given by *Toby Courtauld, CEO Great Portland Estates Plc*, kindly hosted and sponsored by SEC Newgate (our thanks to their CEO, *Emma Kane, Perry Miller* (who was perhaps one of CULS's newest members at the date of the event, having joined the day before!) and their colleagues.

As I write this, we're working towards our *2023 Annual Market Trends Update Panel*, which this year is, in a departure from tradition, focussed solely on offices, with the title 'K-Shaped Performance in Office Values - Where is the Office Market Heading?' I am delighted we have *Gráinne Gilmore* in the Chair, with another cracking panel, to peer into their crystal balls and try to make sense of the fascinatingly different signals coming out of different markets.

Interesting times, indeed... I wish all well in the Commercial Property world - may 2024 be a bumper year for us all, as well as (one hopes...) peaceful, healthy and happy.

Residential Forum



Anna Clare Harper
 CEO of GreenResi
 3 x author, podcast host
 Chair of the CULS Residential Forum
 Trinity Hall, 2008-11

The first year of the Cambridge University Land Society's Residential Forum is celebrating its first birthday! And there is much to celebrate...

We set out with the goal of:

- Supporting the Cambridge University Land Society to fulfil its objectives of giving alumni members an opportunity to meet, learn and grow together, as well as acting as a link between the University and alumni in the housing sector
- Helping to strengthen the reputation of the residential sector within the wider real estate industry through association with the Society.

In our first year, we have hosted three engaging, well-attended events:

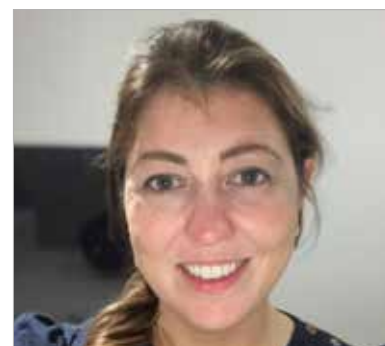
- A sell-out half day seminar, 'The Drive for Building Quality' on the significance of the Building Safety Act, legislation with wide-reaching consequences for all actors in the UK housing market. Special thanks go to Emma Fletcher for organising; Robinson College, Cambridge, for hosting; and our partners for the event, the Cambridge Forum for the Construction Industry.
- A lively and popular breakfast panel on 'The Politics of Housing: What good should look like?'. Special thanks go to Lucian Cook for organising; and our hosts, Savills.
- A tour of British Land's stunning Canada Water Development. Special thanks to Roger Madelin CBE and British Land for hosting, Alexandra Young and the Silver Street Group.

As we move into our second year, our footsteps are becoming confident. Our events schedule includes insights from leaders in the field on the latest trends and changes affecting investors, developers, homeowners and tenants to tackle nationally and internationally critical themes including:

- **UK housing forecast** - leading housing market experts, developers, economists and investors come together to make their predictions on what 2024 has in store for UK housing, capital values, rents, and yields, kindly hosted by CBRE
- **Innovation and Net Zero** - housing is responsible for 14% of Greenhouse Gas emissions in the UK, making it critical to the achievement of our legally binding national objective of Net Zero. This event will highlight innovations ranging from infrared wallpaper to solar batteries and energy arbitrage, kindly hosted by leading energy supplier, Octopus Energy. Such innovations are essential to reducing our carbon footprint without compromising our ability to house current and future generations.
- **What next for property technology** - what is next in housing focused technologies, from institutional investor reporting through to data driven analytics.

We encourage the current generation of Land Economy students to join our events, as they can be an ideal opportunity for students to learn about the property world and network with potential employers, clients and/or suppliers. Whenever possible, we provide free or subsidised places for students.

If you're interested in joining the CULS Residential Property Forum, please get in touch or come along to our next events.



The Whitehall Group



Colm Lauder
 Goodbody
 Whitehall Group Chair

Founded in 2014, The Whitehall Group, a forum of the Cambridge University Land Society continues to go from strength to strength. The Whitehall Group, is an influential London-based policy and networking group for (predominately) Cambridge University graduates, connected to the Department of Land Economy in particular. We count amongst our members and supporters current and former Ministers, Diplomats and senior business executives. The Whitehall Group hosts small, intimate lunches and dinners in London with a carefully selected group of FTSE CEOs, academics, politicians and diplomats to discuss and debate issues of the day. Membership to the Whitehall Group is corporate and allows members to alternate with non-Cambridge colleagues. Members are also encouraged to invite a guest to join them at events when capacity allows. The forum allows members and their guests to meet and discuss matters that are outside of their business/professional lives.

Chaired by Colm Lauder, the Whitehall Group organises a wide range of events covering macro-economic business and social issues. Past speakers have included Ambassadors, Ministers, Commissioners, leading academics and journalist. Topics have included Foreign and European policy; Education; Social Mobility; Infrastructure; Health; the Economy; Housing; Climate Change; Drugs; Transport; Conservation and Heritage; Mental Health; Devolution; Science and Technology; the Middle East, Russia and Belarus.

This year's speakers have included –

- **Sir Laurie Bristow KCMG**, former British Ambassador to Afghanistan
Subject: "Lessons from Afghanistan as we assess Russia's invasion of Ukraine"
- **Professor Sir Lawrence Freedman KCMG, CBE, PC, FBA**, Emeritus Professor of War Studies, King's College London
Subject: "Russo-Ukraine War"
- **Darren Baxter**, Housing Policy and Partnerships Manager, Joseph Rowntree Foundation
Subject: "The current housing crisis together with income and inflation challenges"
- **Alderman Vincent Keaveny**, the former Lord Mayor
Subject: "The outlook for the City of London"
- **Katie Schmuecker**, Principal Policy Advisor at the Joseph Rowntree Foundation
Subject: "The cost of living crisis"
- **Dame Kate Barker DBE** and **Darren Baxter** from the Joseph Rowntree Foundation
Subject: Housing Policy Discussion
- **Professor Richard Betts MBE**, Head of Climate Impacts Research, Met Office Hadley Centre and University of Exeter
Subject: "The climate crisis and the urgency of damage limitation"
- **Ambassador Wegger Chr. Strømme**, Ambassador to Norway, The Norwegian Embassy
Subject: Norway's SWF & its role in energy supplies to Europe / Norway's view of the role of the EU/Nato alliance
- **Florence Blayac**, Green Hydrogen Supply Chain Manager, Shell Global Solutions (UK)
Subject: World Scale Green Hydrogen Production and the Future of Sustainable Mobility
- **Lord Prior of Brampton**, former Chairman of NHS England
Subject: Life Sciences and the NHS – digitising the economy
- **Sir Tony Brenton KCMG**, British Diplomat and formerly Ambassador to Russia
Subject: Digesting the latest events in Russia

Housing Policy Discussion / Housing Policy White Paper

The Whitehall Group Lunch with Darren Baxter in November 2022 entitled "The current housing crisis together with income and inflation challenges" sparked further discussions from both members and wider industry experts. Darren based his policy discussion around two links – as below:

<https://www.jrf.org.uk/report/making-house-home-why-policy-must-focus-ownership-and-distribution-housing>

<https://www.jrf.org.uk/blog/new-housing-reforms-bring-increased-protection-renters>

Discussions resulted in a number of clear ideas as to future policies which it was felt were capable of being implemented as part of a government agenda in the form a Housing Policy White Paper.

To this end, Emma Fletcher, with the support of Anna Harper, Chair of the Cambridge University Land Society Residential Forum co-authored the Occasional White Paper which we published in March 2023 (see link below)

We are grateful to Darren Baxter and to Dame Kate Barker DBE who wrote the foreword to the paper.

The document can also be viewed directly on the Cambridge University Land Society website by the link below. We hope you enjoy reading the paper and would welcome further dialogue. (annaclareharper@gmail.com; Emmalindseyfletcher@gmail.com).

[Final_Housing-Policy-Whitepaper-Whitehall_Apr23_ART.pdf \(culandsoc.com\)](https://www.culandsoc.com/Whitehall_Apr23_ART.pdf)

Planned forthcoming events for 2023/2024

Details for all future Whitehall Group events are included on the CULS events planner towards the end of this magazine.

If you would like further information on the Whitehall Group please contact Fiona Jones, Group Secretary (fionajones.wg@culandsoc.com).

Asia-Pacific Forum – “Reconnecting the Knots”



James Lai
Urban Planning Director @ Public Investment Fund

In a whirlwind of six months, the CULS Asia-Pacific Forum (hereafter “the Forum”) has re-emerged from the great lock down in Asia. Three events were organised in quick successions in Hong Kong that reunited CULS members and Land Economy alumni based in Asia. The Forum’s mission was to connect and forge unbreakable bonds among CULS alumni who are knee-deep in the captivating world of real estate in the APAC regions.

The Forum thrives on creating exclusive professional networks for CULS members engaged in the captivating realm of real estate in APAC. While it plants its roots firmly in Hong Kong, the Forum has ambitious plans to extend its reach to other bustling Asian cities where CULS alumni have left their mark.

Let’s pause for a moment, take a deep breath, and embark on a delightful journey down memory lane, revisiting the exhilarating highlights of the incredible events that unfolded in the vibrant city of Hong Kong.

Dinner with Professor Helen Bao

On June 13th, the Forum’s inaugural event after COVID was held in Peking Garden, Hong Kong, featuring the esteemed presence of Professor Helen Bao, a highly respected figure in minds of many Land Economy students. Professor Bao, who was visiting Hong Kong for an academic trip, shared several updates about the Department and her views on the current market. Unsurprisingly, it was a full house with more than 30 alumni, who were all delighted to have the opportunity to reconnect with each other.

The dinner was a resounding success, filled with engaging conversations and evoked a multitude of emotions among those who had not seen Professor Bao in a long time. The event became a catalyst for rekindling old connections, sharing stories of getting caught by Trinity porters and complaining how fast the cap rate is expanding. It was a truly special occasion that left lasting impressions and reinvigorated the strong bond within the Land Economy community.

The committees responsible for organizing the event was praised and thanked for their efforts in bringing everyone together. It was a night of joy, camaraderie, and the celebration of the Land Economy/CULS’s community bond.



Before delving into the captivating details of the Forum’s second event, it is important to highlight that the dinner experience was not only emotionally invigorating but also a culinary delight, tantalizing the taste buds of all in attendance. The attendees were treated to a delectable feast arduously picked by the committee member Winnie. One dish that stood out and garnered unanimous praise was the Peking duck. The succulent and crispy skin, paired with the tender and flavourful meat, left everyone thoroughly satisfied, despite the crazy rate hikes impeding our alumni from closing big deals.

Happy Friday! Hong Kong Get-Together

This informal drink event was organised on September 1st at Hong Kong International Finance Centre, however, it was cancelled at the last minute due to the Super Typhoon Saola - which was the second most intense typical cyclone affecting South China Sea since 1950, and Hurricane Signal No 10 was issued in HK. Although the event was cancelled but it didn’t dampen the spirit of our alumni.

Lunch with Professor Thies Lindenthal

On October 18th, the Forum hosted a lunch event with Professor Thies Lindenthal in Hong Kong, the Grosvenor Professor of Real Estate at the Department of Land Economy, while he was attending the Real Estate Finance and Investments symposium in the city.

During the lunch, Professor Lindenthal shared updates of his research findings on systematically predicting Real Estate Investment Trust (REIT) returns using machine learning as well as his memories when he used to live in the city. The CULS alumni attended the lunch from various programs of the Department of Land Economy from different years, who are now pursuing careers in funds, banks, developers, and index providers of the real estate sector. The event provided an excellent opportunity for fellow alumni to get an update of the development of our department, general trend in Cambridge, as well as exchanging insights on the latest developments in the Hong Kong and Greater China markets, the delicious Chinese food just further added to the overall pleasant atmosphere of the event.



The Next Event

The Forum members were brimming with excitement as they looked forward to expanding their reach beyond Hong Kong and organizing high-quality events in different regions. The next anticipated gathering was set to take place in Shanghai on December 2nd, and the anticipation was palpable. The Forum aimed to bring together alumni based in mainland China to exchange ideas, share knowledge, and foster meaningful connections. While the attendees knew that Peking duck might not grace the menu in Shanghai, they were nonetheless eager to see how good is our committee member Ting’s taste on food. The invitation was extended to all, and the Forum members warmly welcomed anyone interested in joining this enriching experience.

We do hope as many of you as possible will join the events that the CULS APAC Chapter organise in the coming year.

Sports & Leisure Forum



Dominic Reilly
Past President
Chair of the CULS Sports & Leisure Forum
Gonville & Caius (1975-1978)

The Sports and Leisure Forum has been less busy in 2023 than in the years prior to COVID but the intention in the coming year is to put on a range of events for the CULS membership on a sporting and leisure theme to include a golf day, the continuation of our series of “in conversation with” and a University Challenge event, although this time in person.

In May the Forum organised and hosted a black-tie dinner in the Oxford and Cambridge Club which very quickly sold out. After a delicious dinner the floor was open to a debate where the motion “This house believes the traditional office still has its place” was debated in a competitive but light-hearted way. Simon Allford of Allford Hall Monaghan Morris and former president of the RIBA opened the proceedings putting forward a very convincing case for the traditional office. James Palumbo, Baron Palumbo of Southwark and founder of the Ministry of Sound then made an equally convincing response arguing that the traditional office has died and is being replaced with space that has an equal live and work functionality. After some responses from the floor a vote was taken and the motion was narrowly carried. Our thanks to Simon Allford and James Palumbo for making the evening so enjoyable. Our intention is to repeat the same format in May 2024.

I write this article just as the group games for the Rugby World Cup have been completed and the knockout stages are about to be commenced. It has spurred me and fellow members of our committee to consider selection

of a Land Economy World Rugby XV. It has not been difficult to find land economists who both represented the University and also some of whom went on to play at international level. What has been difficult has been selecting the right player in the right position, but the modern-day game now introduces a significant number of new players off the bench, so our apologies to those who have been selected to play out of position or who start on the bench although they should realise that once off the bench they are probably coming on to the pitch to finish and win the game. The choice of the selection committee is in the attached graphic and will no doubt cause some controversy. Those that also play for their country will not be controversial and they include players like Huw Davies and Marcus Rose who along with Rob Andrew, Andrew Harriman, Richard Harding, Charlie Vyvyan and Chris Oti all played for England. From Scotland we have Gavin Hastings and Eric Peters and from Ireland John Robbie who all played for their countries. For some unaccountable reason we have not selected any Land Economists who won international caps playing for Wales. For this reason the identity of the selection committee must remain a secret, but on

their behalf I make an apology to anybody that we might have unfairly overlooked.

My apologies also to our female membership, the historic lack of diversity in the Department has since been addressed, so with an equal gender balance, I am sure in years to come we will be able to select both an all-female and an all-male team.

In my time at Cambridge the Department of Land Economy had a reputation for nurturing Cambridge rugby and rowing blues, somewhat to the detriment of its reputation on the academic front. This perception still continues unfairly today, given the much wider breadth of the academic offering in the Department and the high quality of its research and teaching facilities. Whilst I am happy to champion those land economists who achieved much on the sporting field, I am equally proud to point out that gaining entry for the undergraduate degree in Land Economy is challenging; one of every 10 applicants is successful, which says it all.

We are looking for 2 new and younger CULS members to join the S & L committee, so if you are interested, please do contact myself or any other member of the CULS committee.

Land Economy Men’s World Rugby XV

Front Row: Huw Stevenson, Eric Peters, Andy Macdonald

Second Row: Adam Gilbert, Alastair Meadows

Back Row: Charlie Vyvyan, Richard Harding, Ian Marcus

Scrum Half: John Robbie

Stand Off: Huw Davies

Inside Centre: Rob Andrew

Outside Centre: Gavin Hastings

Wings: Andrew Harriman, Chris Oti

Full Back: Marcus Rose

On the Bench/Finishers: Simon Cooke, Simon Smith, Alan Wordsworth, Ian Peck, Steve Moriarty, Andy McGahey, Charlie Desmond, Peter Nixon, Bill Bidell, Chris Morrish, Peter Chalmers, Gordon Wood

Rural Forum



James Stevens
Partner - Saffery
Christs 2002

The Rural Forum’s vision is to extend the Forum’s reach to all CULS members with a rural interest – whether it be through professional involvement with the countryside, an upbringing in the greener parts of the world, a curiosity about what opportunities (in the widest sense) exist with rural land and property, or all of the above.

The Rural Forum has a new committee and is planning events – both inside and outside London – for 2024. If you would like to be kept informed of the Forum’s activities, please let James Stevens know.



Silver Street Group



James Webb
Senior Vice President
Eastdil Secured



Charlie Stoneham
Associate Director
Central London & International
Investment
Savills

The Silver Street Group is a social group for those members of the Cambridge University Land Society (CULS) who have graduated within the past 15 years. We arrange a series of social and networking events, mostly held in London and Cambridge.

Over recent months the Silver Street Group has organised a number of events including the annual black tie dinner, a tour of a London office redevelopment and SSG drinks. There are more events in the pipeline. By joining the SSG you will be added to the mailing list and can join in and meet some new faces. Events can be seen on our LinkedIn page or the CULS website:

<https://www.linkedin.com/groups/4663842/>
<https://www.culandsoc.com/forums/silver-street-group/>

The Cambridge Land Economy Advisory Board

The Cambridge Land Economy Advisory Board, CLEAB, comprises around 40 practitioners from the real estate industry who give part of their time to support the Department of Land Economy. CLEAB is a charity. Our main purpose is to act as a link between the Department of Land Economy, and the real estate industry, with a view to sustaining and enhancing the excellence of the Department of Land Economy's world-class research and teaching. CLEAB works alongside CULS, which is open to any student or graduate of the Department of Land Economy, or the Department of Architecture, and to any graduate of the University of Cambridge who works in the real estate industry.

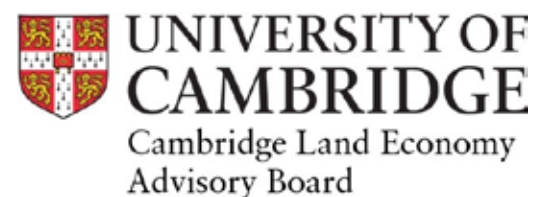
In addition to advice, CLEAB also provides financial support to the Department and acts to promote it as appropriate, both within the UK and overseas. The Department's new website, which received substantial funding from CLEAB, is now up and running, and overseen by the new Outreach Officer, who CLEAB also part funds. The Outreach Officer is building links to communities that have not historically sent many students to the Land Economy programmes.

CLEAB hosts an annual dinner providing opportunities for students to meet key figures in the industry and to discuss career ideas. We also host an annual mentors' drinks party, providing mentors the opportunity to meet the other mentors and mentees, and a drinks event in Cambridge for Masters students in the various programmes allowing them the same access to industry leaders. CLEAB has taken students on

tours of London, and arranged a series of careers talks to provide examples of the opportunities open to students.

Together with CULS, CLEAB supports a successful mentoring programme, finding mentors for more than 100 students each year as well as jointly supporting the Annual Real Estate Careers Fair, which is typically attended by more than 40 companies and 200 students.

CLEAB Chair, Jon Zehner says "Along with all the other members of the Board I am pleased to work closely with faculty and students to help maintain Land Economy's leading market position. Only by maintaining a vibrant programme will Cambridge continue to attract the best students and provide the talent pipeline which the world needs. Whether it's as academics or researchers, land use experts or (closer to my own business) graduates to work with quality companies that improve the built environment and provide the accommodation demanded by businesses and individuals around the world, the need for quality is apparent. No institution is better placed than Cambridge."

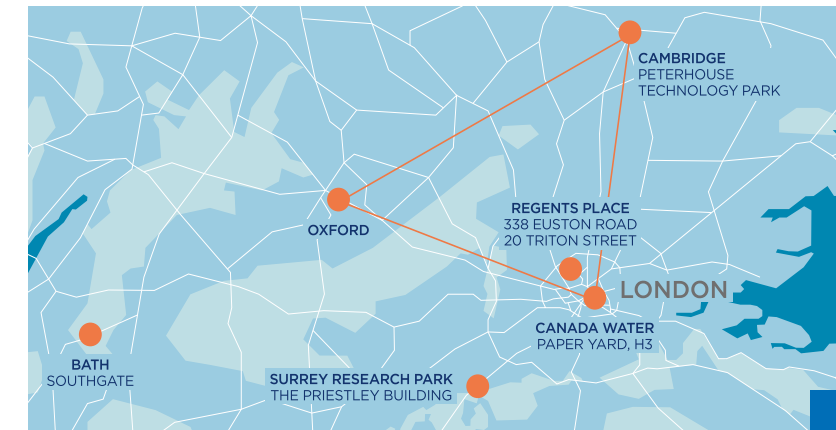


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50 Years On... revisited

David Garforth-Bles
Downing 1976

The 2000 Magazine celebrated the very eventful first 50 years of the Land Society. It looked forward '... to the next 50 years!'

Now we are about half way I was asked to review progress, plus a look forward to 2050!

In 2000 I wrote 'The Cambridge University Land Society is one of the friendliest Alumni Societies.' I'm pleased to confirm that is still very true, and brings out the best in people. The Society has flourished since 2000. And is well set to enjoy the best of continuity as the world adjusts going forward to 2050!

The Society is run on a really professional basis by Ali, and the wider committee of course. They immaculately manage over 20 events per year that cover a really interesting and relevant range of topics and interest groups.

Reviewing back to 2000

Looking back to 2000 recalls the Dot Com boom and Millenium Bug. The internet was becoming ubiquitous. Shares in Amazon were 0.8 dollars (share split adjusted). They are now about 120 dollars. Then £10,000 invested in Amazon, would now be worth £15m. It was a time of significant change. While the principles taught at the Department and fostered by the Society remain the same.

A cyclical boom from 2000 lead to the 2008-09 Great Financial Crash. A US property boom turned into collapse that set off a global downturn. Governments protected their economies with ZIRP (zero interest rate policy) like morphine, to ease the pain. With QE (quantative easing) like blood infusions, to boost the money supply and avoid deflation. These policies boosted asset prices, some say the policies went on too long.

Covid in 2020 prompted more government intervention. Full time WFH (work from home) for the majority was a trend that may have taken 20 years, but came in virtually overnight. Then Russia invaded Ukraine lifting energy prices, that pushed up inflation. The remedy in a series of interest rate rises, and QT (quantitative tightening) cut inflation, and economic activity.

By 2023 the internet has reached some 40% of the global population. It's facilitated much social and economic change while increasing globalisation.

To 2050

Looking ahead, by 2050 near 100% of the global population will be in contact by mobile phones, that will change perspectives.

In 1950 the urban population was about 750 million. Now it is around 4 billion. By 2050 it may be over 6 billion. That will increasingly need the skills and professional techniques taught by the Department, and fostered so well by the Society.

By 2050 the Economist estimates global GDP will have doubled. Asian and emerging economies have growth rates about 4%-5% pa. 2050 GDP ranking will see China top, then India, US, Indonesia, Brazil, Mexico, Japan, Germany and the U.K. Asia may reach over 50% of global GDP. While the EU falls below 10% of global trade. There will be adjustments to the Pacific region across the geo political, economic and social landscape.

The favourable demographics of emerging markets sees increasing workforces drive growth. While Germany and other EU states now have declining workforces, which by 2050 may be reduced by 20%-30%. There will be a large increases in retirement living across the West as aging populations live very much longer. Proposals for urban areas include 15 minute cities, low traffic neighbourhoods, more shared transport, local and domestic renewable energies, urban designs using Blue Zone principles, delivered goods like Amazon Air, and more recreation facilities as areas adjust.

The level of demand on urban areas in the U.K. is indicted by reports of Cambridge as the European Silicon Fen, close to the City for financing new hi tech companies, needing some 250,000 new homes. The Cambridge to Oxford Arc is proposed that may eventually add 1 million new homes and a re-established rail link. Electric and self driving cars will increase. National energy supplies will see a huge increase in renewables with solar reaching 50%, and wind at 25%. Climate change will effect global habitation, especially across African and Middle East, regions with high population growth and demographic change needing careful management.

Property, the environment, urbanisation, energy, water and transport will all see greatly increased demand needing more professional skills. Cities, offices, manufacturing and retail space are being adapted to other uses for new needs such as residential, leisure and laboratory. There will be adjustments with changes from AI, next generation GPT (general purpose technology), and allied uses like robotics. New areas of jobs will open up as others change.

Capital Economics indexed nations to benefit the most from AI across innovation, diffusion and adaptation. The US lead at 70/ 100, Singapore 60/ 100, U.K. 56/ 100, S Korea 52/ 100 and Canada 49/ 100. PwC expects AI to contribute some 15.7 Trillion Dollars to the global economy in 2030 with increased production and consumption.

Over 5 million workers in the U.K. services sector are adjusting to benefit from AI to add value. A similar trend in manufacturing with robotics improving productivity. One good job now would be to find the next Amazon in the AI sector.

Since 2000 there have been substantial changes to which the Society has adjusted and flourished. The Society can look forward to 2050 with confidence to enjoy the best of continuity and enjoy adapting as new trends emerge.

We are very grateful to all those who run the Cambridge University Land Society for their memorable work and making it such a great success. So ... to the next 50 years!



Life in 2062



Andy Martin
AJWM Consulting

Given the subject, I was minded to let chat GPT write this! I'll let you judge whether I did. Watching a robot lawnmower quietly go about its work in a friend's back garden, seemed like a taste of what's to come in the next 25 years.

Looking back, I am amazed at how technology has changed our lives in the last 25 years. Yet, some of these advances make us nervous. In the 1950's it was nuclear proliferation leading to a Cold War. Now the dinner conversation is the dangers of AI.

But more immediately, climate change requires a plan beyond the term decreed to any elected government. It is an immediate threat, and we are

lagging behind the targets we have set ourselves. As the declared biggest culprit, the way we build, use, operate, real estate will have to adjust by 2050 to give any chance of containing climate change to +1.5° celsius. This to my mind will be the biggest disruption we face.

Of course, some natural disasters cannot just be blamed on global warming. But it is undeniable that it is affecting life- just ask an insurer. The consequences are very easy to see in rising water levels. Insurance is increasingly difficult in potential flood zones but also in wildfire affected areas. Just taking the predicted flooding of much of the Fens and East London, there is a need for some quite dramatic infrastructure interventions here and on a global level. As I write this in the USA, New York has flooded in a big rainstorm. The storm drains can only cope with one and a half inches an hour. Despite all of the warning signs we remain unprepared.

Existing targets to remove fossil fuels from transport and heating options in phases to 2035 have big implications for the built environment. They bring some positive outcomes to least reducing airborne pollution in the cities, and as a result improving life expectancy. Irrespective of some loosening of the position recently announced by the current government we remain on a critical path. Transport and building heating and cooling will need new energy solutions. In respect of the built environment the obvious answer is to replace inefficient structures. However, this has big carbon implications and just adds to the problem. We must work on technology to provide conversion solutions, so we don't waste what stock we have and the embedded carbon in them. 80% of the building stock anticipated to exist in 2050 exists today, so it is a very real issue. We certainly can't be wasteful and we already have an idea of what the landscape looks like in 2050.

Insulating listed buildings is challenging. We will need to be more pragmatic. Progress also presents other challenges. Take data storage which is growing exponentially and laps up energy for cooling.

Similarly, every new EV car will improve the emission environment, but each one will have added to the carbon footprint through its manufacture. Perhaps we will find technology to viably convert existing vehicles.

Other sustainable energy sources need to be developed. This is where alternatives such as biofuels or hydrogen may come to be more important. As will be advances in battery storage so that we can smooth supplies for peak usage. Simple real estate strategies are being introduced for EV power delivery. New ultra low emission zones place further demand to switch to EV vehicles. How

does a fleet operator charge vans and lorries? Certainly not in the street! One business I am working with, Infinium, is providing real estate solutions to these operational problems and indeed in doing so is creating a new real estate asset class.

In construction embedded carbon requires us to look at new materials. CLT is often cited as a more sustainable structural solution, but we need to feel comfortable with it. Green steel is another solution and is expensive. To be genuinely green requires significant new, sustainable power. Nature magazine suggests for all steel to be green would require power equivalent to the total consumption in the USA each year- unlikely. That's why advances in fusion technology might give us heart.

Recently new development proposals in the Cambridge area were rejected for lack of adequate fresh water supplies. Few of the new reservoirs planned in the 1960's were actually built, the last was in 1991! We are not good at long term.

We have to act now to preserve what we enjoy and to protect those that come after us. This to my mind will weigh heavily on us in the next 25 years and our built environment will need to adapt rather than burden the future more.

So being positive, where AI will help is getting to solutions quicker. Whether medical diagnosis, design solutions, new material discoveries or just living, large language models will help direct us to solutions and probabilities much faster than we can imagine. It will hopefully help find ways of resolving some of our key problems in a more natural way through biomimicry. We have already learnt a lot in structures by studying the natural world. We can now develop this research at lightning speed.

I suspect we will embrace autonomous vehicles and perhaps no longer need to own anymore, certainly in cities. In turn, this should free up land given to existing roads. Indeed, one new business is focused on providing city terminals for flying taxis. Robotics will be commonplace undertaking more manual services to ease everyday life and also more complicated tasks such as surgery.

Imagine a world where we have technologies not emitting noxious fumes. Just how much cleaner the air will be and how much quieter the streets and skies could be. Ironically, Covid gave us a glimpse of this. Holographic meetings with immediate translation audio would perhaps change the way we work and what we demand from our workplaces and offer new cultural experiences.

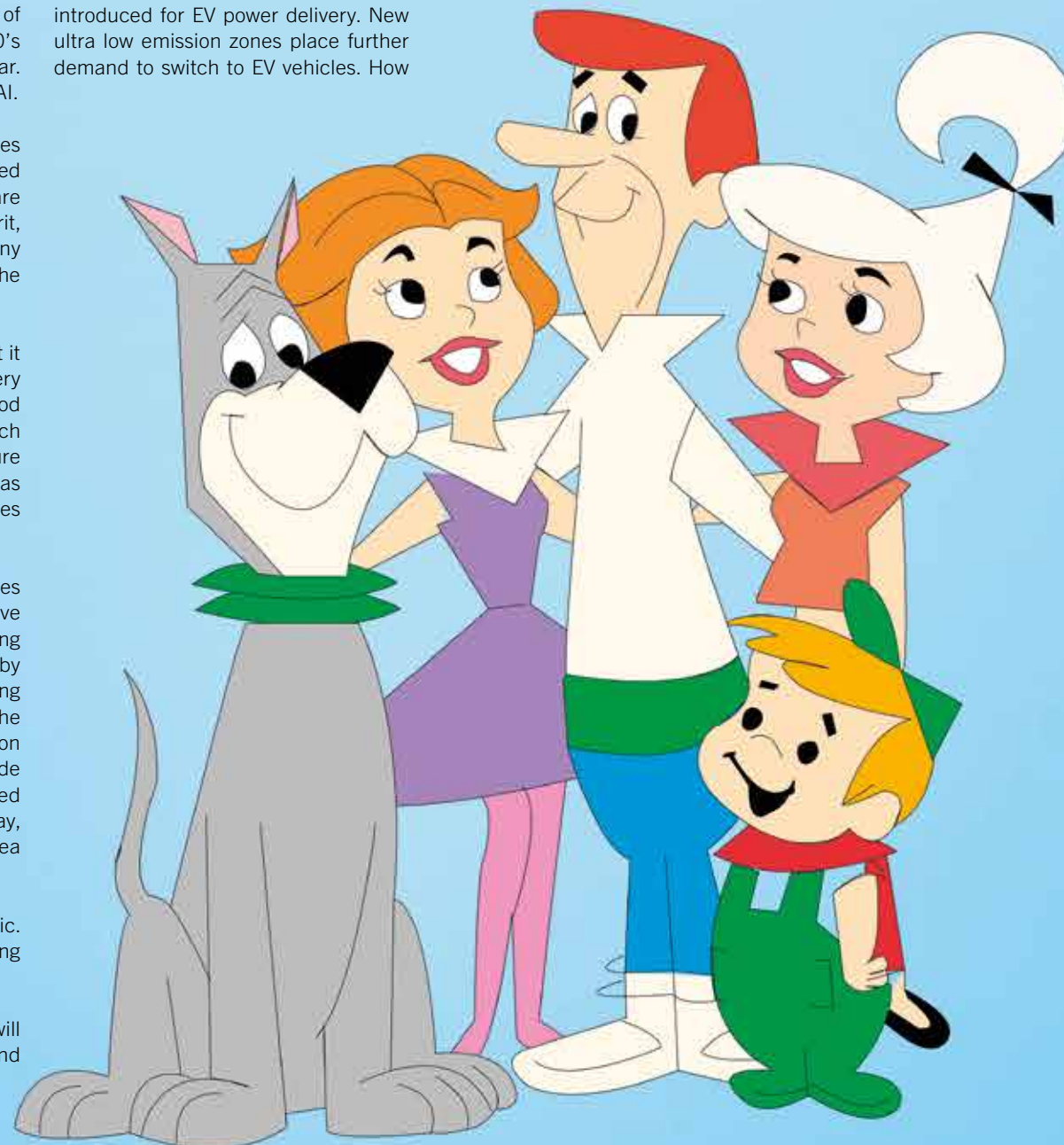
Buildings which adapt to changing weather conditions automatically to ensure energy systems are kept to maximum efficiency. I went to visit a glass manufacturer in Silicon Valley which has developed exactly this technology for shading. I suspect we will see urban farms create a new asset class too. I sense a move to localism too—the 15 minute city. Imagine vertical urban farms, 3D print shops as a high street retail offer. Inevitably we will face more carbon taxes and this will lead to more forestry where land values respond to the offset market. This is an area we are working on at Greenpoint partners as well as Kelp in the ocean.

The American scientist, Roy Amara, a futurist and President of the Institute of the future produced Amara's Law. "We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run" This to my mind is the dinner conversation response. We have some key decisions to make now which define our future. We should harness the technologies to help us make them and ensure the future life we and our successors can look forward to is the legacy we leave.

I was talking to a friend who was involved in the creation of the set design the futuristic film Minority Report. He was saying a lot of what he envisaged as the future is in development now. Take a look at the plans for Toyota's Woven City. Alternatively, you could watch an episode of "The Jetsons", a cartoon favourite when I was younger. Made in 1962, depicts life in 2062 so not far off our 2050 theme. The writers gave a glance of life which included the following:

- Video Calls
- Robotic Vacuums (They have them at terminal 5 now)
- Tablet Computers
- Robotic House Help
- Flying autonomous cars (actually folding into a briefcase)
- Smart watches
- Drones
- Holograms
- 3D Printed food
- The "Pill cam"
- Jet packs
- Flat screen TV's

None of this seems far fetched now!



The future of real estate research must be more interdisciplinary



Toby Parsloe BA (Hons), MPhil, PhD
Research Analyst
Residential Research



Kat Martindale
Head of ESG Research, Savills Earth
CCHPR Research Associate (2009)

It is no secret that we face profound challenges of increasing complexity in the built environment over the coming decades. The impacts of the climate crisis, biodiversity loss, an uncertain economic outlook, energy transitions, and demographic shifts, to name a few, are far reaching. For those of us working in real estate research, these evolving considerations require a continual reassessment of our understandings, priorities, and methodologies. How do we undertake research which is fit for changing purposes and a less certain future, and how can this help support the creation of places and buildings of real value?

Valuing our heritage

Heritage buildings are a key area where we can demonstrate how diverse research perspectives are fundamental to tackling the challenges we face. In recent analysis we examined the prices home buyers are willing to pay to access England's rich architectural heritage. This involved determining the premium for living in one of the country's 10,000 conservation areas, which are defined as 'an area of special architectural or historic interest, the character of which it is desirable to preserve or enhance.'

We found that homes in conservation areas in the last three years cost on average 31.0% more than those outside of them, a figure which had increased from 28.8% over the previous three year period. London had by far the biggest premium of 48.0%, more than double the North East, which came in second with 20.3%. Key areas in the top ten local authorities with the biggest premiums included Sheffield, Bath, Three Rivers, and Oxford, all over 40%.

It takes a range of quantitative and technical skills to come to these conclusions, as does the ability to examine big data, build economic models, and undertake geospatial analysis through mapping. Yet to tell a more comprehensive picture also requires qualitative approaches to understand exactly what buyers value in these historic environments and why.

Such approaches can consider how Bath, with the 7th biggest premium, intentionally imposed a visual homogeneity and coherence in its 18th century urban design. Its neo-classical architecture exemplifies the period's move away from inward

looking layouts to planting buildings within landscapes and creating vistas. They also reveal the city's lasting influence on architects such as the brutalist designer Peter Smithson of Robin Hood Gardens fame, whose book *Walks within the Walls* acted as his own love letter to the city.

This kind of analysis also helps interrogate the arts and crafts-inspired 'Metroland' architecture from the 1930s in Three Rivers, with the 4th biggest premium. This sought to present an idyllic vision of villages and open countryside and has had a long-lasting influence on Britain's suburban settlements and the styles house builders promote today.

Understanding the value of heritage, then, also demands understanding socio-cultural trends of architecture and its history. Furthermore, it demands contextualising in contemporary events: the increase in the premium is perhaps unsurprising in the context of a global pandemic that gave people the chance to critically reflect on their living situations. Heritage is able to provide a sense of rootedness at times of profound uncertainty, as many sought sanctuary in family or community while they prioritised wellbeing. This introduces the importance of the social value of heritage as part of wider definitions of value.

Making our historic buildings more sustainable

While we clearly value our built environment heritage, the buildings that are the cultural, historic, and architectural stars of our cities are often those which face the greatest challenges to improve their environmental sustainability. Their conservation requires adaptations that maximise their usability but do not compromise their architectural integrity. This emphasises another key set of considerations for researchers.

In other research we have analysed the challenges facing retrofitting historic buildings. This requires the ability to understand what people value about a building or place and how this built heritage provides economic, social, and cultural value. It then needs to balance this against current and future needs, and apply technical interventions to ensure any change does as little harm as possible to the elements of a place which establish value.

This includes improving the thermal performance of the building through, potentially, installing insulation, fitting double or triple glazed windows, and draught-proofing rooms. It also involves addressing the energy use of buildings and the potential for onsite production. For example, the National Trust have initiated a programme of solar panel installation using rooftop locations that are not visible from ground level. Where onsite generation is not an option, alternatives include swapping lighting to LEDs and purchasing green energy. The Dutch National Cultural Heritage Agency, who oversee heritage assets across the Netherlands, estimate savings of 20-30% in CO₂ can be achieved through such changes.

Research must also help develop policy frameworks and address financial constraints to improve sustainability. This may include identifying alternative uses for heritage buildings that may be more economically viable and would allow a building to remain in use. Where heritage buildings are not in public ownership, policy options such as a Listed Building Heritage Partnership Agreements can help mitigate planning bureaucracy and specify the types of sustainable interventions needed. This provides clarity for both owner and local planning authority. For homeowners in listed buildings, there is also a need for energy performance certificates (EPCs) to have a more nuanced

understanding of the construction of heritage buildings and provide more suitable recommendations than at present.

Costs remain one of the most frequently cited barriers to retrofitting listed buildings. This may be partially addressed by the increased value of houses in conservation areas, as highlighted by Historic England's 2017 report that demonstrated house price growth outstrips that in non-conservation areas, which could help offset costs. Places where this is not possible would require further investment or support from government and mortgage lenders to increase accessibility to green technologies. Understanding the relations between all these dimensions are crucial for heritage buildings to join the climate emergency conversation.

Toward an interdisciplinary research

Building heritage is just one field where diverse research perspectives are fundamental. The complexity of the city requires methodologies and ideas that are expansive in scope to navigate the tensions that exist between the built environment's competing aims.

There is a growing value in being able to simultaneously tell your Doric from your Ionic columns and run a hedonic regression model, all in the context of understanding a structure's U-value. The institutions and businesses that strive for this more holistic picture and equip themselves with these interdisciplinary skillsets will be best placed to tackle the most pressing issues. This not only helps investors, occupiers, developers, planners, and decision makers make better choices, but also helps reveal the richness of our built environment so that we may better thrive in the places in which we live and work.

2050: A new perspective for Real Estate will yield best value



Geoff Southern
Architecture Studio Director
Arcadis
Downing 1993

The year 2050 will showcase the significant changes and disruptions in the real estate industry which are now beginning. Against a backdrop of economic, geopolitical, and energy uncertainties, the sector is being challenged to adapt and evolve. In this article, I will delve into key trends in four sectors of particular interest: technology, healthcare, sustainability, and operational real estate. Some are small steps along the existing development landscape whereas others may require a giant leap (in perspective at least).

Technology: Reshaping the Real Estate Landscape

Technology has always played a crucial role in shaping industries, and real estate is no exception. By 2050, technological advancements will revolutionise the way we design, construct, and interact with buildings. Smart buildings will become ubiquitous, integrating advanced sensors, artificial intelligence, and automation systems that optimise energy consumption, security, and comfort. Overcoming the limitations of data privacy will be the key to enabling seamless connections between personal (preferential) data and building (contextual) data.

Innovative technologies like on-site production (from 3D printing structures as shown elsewhere in this magazine, to hyper-local food growing or even food printing) will transform low-mileage construction processes, enabling faster and more cost-effective building as well as low-impact consumption. Moreover, the utilisation of drones / automated vehicles will revolutionise property inspections and maintenance tasks, reducing costs

and improving efficiency. Movement such as maintenance and portering in hospitals may see the greatest changes.

New financial systems may exist (the antecedents of which are our digital currencies and blockchain technology) which will streamline property transactions, enhancing transparency and reducing the need for intermediaries. These decentralised systems will facilitate faster and more secure transactions, attracting both investors and homeowners.

Furthermore, the sharing economy will continue to shape the real estate landscape, leading to the emergence of co-living and co-working spaces which are not bound by their “red lines” and can actually engage with each other and contribute to a society or community of which they are a part. These flexible places and uses will cater to the changing needs and preferences of a mobile workforce, offering dynamic environments that promote collaboration and community.

Healthcare: Catering to an Aging Population

The aging population will significantly impact the real estate sector, particularly in healthcare. By 2050, the demand for specialised senior housing and healthcare facilities will soar, but they may not be where we have previously thought they would be. Real estate developers and investors will need to focus on creating age-friendly environments that promote wellness, accessibility, and community engagement, but need to be considering now how they can respond to the needs of a generation born in the 1970s or even the 1980s.

Sustainability: Building for a Greener Future

In 2050, sustainability will be a driving force in real estate development as the urgency to combat climate change intensifies. Buildings are already being designed and constructed to be energy-efficient, environmentally friendly, and resilient, but we now need to be making the salutogenic (providing more back than they take aka positive contributors).

Materials and construction techniques will also undergo significant changes. Developers will embrace bio-based sustainable materials, alongside recycled and low-carbon alternatives, minimising waste and promoting circular economies. Green roofs and vertical gardens will become a mainstream requirement, enhancing energy efficiency, improving air quality, reducing the urban heat-island effects, and providing urban residents with access to green spaces.

Furthermore, real estate developers will prioritise water conservation by implementing rainwater harvesting systems and even targeting “net zero water”.

Operational Real Estate: Adapting to New Workstyles

The way we work is also rapidly evolving, and operational real estate must adapt accordingly. By 2050, traditional office spaces will have undergone a transformation to accommodate remote work and flexible work arrangements. Co-working spaces and flexible office solutions will continue to gain popularity, providing businesses with cost-effective and agile alternatives to traditional leases.

The concept of the workplace will continue its shift towards collaboration, well-being, and productivity. Real estate developers will either incorporate or key into wider offers of shared amenities, such as communal spaces, fitness centres, and cafes, fostering a sense of community and promoting work-life balance. SME workplaces may break down into pixels, only coming together at certain times and otherwise relying on the integration of advanced technologies, such as virtual reality meeting rooms and smart office systems, to enhance collaboration and productivity. The “realness” of this interaction will only improve.

Operational real estate will extend beyond traditional offices to include logistics and warehousing facilities. The exponential growth of e-commerce will drive the need for strategically located warehouses and distribution centres, and developers will focus on combining other uses alongside efficient and technologically advanced logistics facilities that facilitate last-mile delivery and optimise supply chain operations.

Conclusion: A Glimpse into the Future

As we look ahead to 2050, the real estate industry will experience significant disruptions and transformations. Technology will reshape the way we design, build, and interact with buildings, making them smarter, more efficient, and connected. Healthcare facilities will adapt to the needs of an aging population, incorporating innovative technologies to provide convenient and personalised care. Sustainability will be at the forefront of real estate development, with a focus on energy efficiency, renewable energy, and eco-friendly materials. Operational real estate will cater to the evolving workstyles, providing flexible and collaborative workspaces that prioritise well-being and productivity.

To flourish in this evolving landscape, real estate developers and investors must embrace these trends and disruptions. By leveraging technology, prioritising sustainability, and understanding the needs of an aging population, the real estate industry can build a prosperous and resilient future. With careful planning and forward-thinking strategies, the real estate industry in 2050 has the potential to create innovative, sustainable, and inclusive spaces that meet the demands of a rapidly changing world. It just needs to seize every opportunity to change for the better.

Global demographic shifts: what are the implications for real estate?



Paul Tostevin
Director, Head of Department,
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London

As Generation Z comes of age and a growing global population embraces new ways of living and working, demand for real estate is changing and the mix of uses is becoming more fluid.

In November 2022, the global population reached eight billion. In the same year, India, with 1.4 billion people, overtook China as the world's most populous country. Over the next 10 years, India's population is set to be the fastest growing in the world, adding 100 million people. China's population, meanwhile, is expected to tip into long term decline, having fallen last year for the first time in 60 years.

This shift is emblematic of wider demographic changes globally: there are signs that the rate of population growth is slowing. While that's good for the planet, it also poses a number of challenges that will be reflected in the real estate market.

An ageing world

The developed world is ageing, as are China and many countries in South America and the Middle East. The balance of population growth is now shifting to Asia and Africa. Larger, older populations also mean more single-person households, creating a need for smaller homes.

Technology is set to play a vital role in helping people to stay in their homes for longer and improve healthcare for elderly people. Flexible rental models and new types of housing, such as unassisted senior living, can free up real estate for younger generations, while mitigating loneliness among the elderly.

Today, about 55 per cent of the world's population live in towns and cities, a trend expected to increase to 68 per cent by 2050, with most of the growth occurring in developing markets. Increased urbanisation has also compounded growing emphasis on ESG factors among investors and the general public. While occupying less than two per cent of the

world's total land area, cities produce 80 per cent of gross domestic product, but also 70 per cent of carbon emissions.

Demographic change will shape the future demand for real estate across the globe. While big cities, particularly in the developing world, will drive growth, smaller, more vibrant cities, such as Bristol in the UK and Austin and Denver in the US, will continue to attract younger populations through their strong knowledge economies and high quality-of-life ratings.

The digital generation

Generation Z – those born between 1997 and 2012 – is coming of age and has become the largest generation on Earth. This has profound implications for real estate and cities. The most in-demand hubs are changing, as the mix of uses for real estate evolves and becomes more fluid.

With their digital savviness, these youthful, global citizens are more mobile than previous generations, fuelling demand for student housing in the most popular education markets of the US, the UK and Australia. Drawn to cities and less inclined to drive a car out of environmental concerns, Generation Z may provide the tipping point for 15-minute cities.

To appeal to this cohort, property managers need to be environmentally aware and offer personalised, seamless online or app-based services. Generation Z tends to seek a good work-life balance, with a mixture of hybrid or remote working. But they also prize the sense of community that comes from being in the workplace.

In ageing societies with shrinking workforces, it is important to involve all age groups in the workplace. Flexible working can help keep older people in the workforce when they may have caring responsibilities for parents or grandchildren, or declining health. Extensive childcare, such as that practised in Sweden, may also boost labour market participation.

Responding to these changing, and often sometimes contradictory, trends will characterise the real estate market. Looking ahead, the watch word will be flexibility.

Visit www.Savills.com/Impacts to read more on the trends shaping the future of global real estate

People Property Place Podcast



Matthew Watts
Founder & Managing Director
Rockbourne

Ten years ago, I embarked on a career in real estate headhunting, and it has been a journey filled with remarkable encounters and invaluable insights. During this time, I have had the privilege of engaging with industry leaders, who have graciously shared their visions for business expansion, strategies for capital acquisition, and agile responses to emerging opportunities. This, combined with the allure of storytelling, the relationships

I've forged, the dynamic nature of the market, and the inherent matchmaking aspect, has been the driving force behind my enduring passion for a career in real estate search.

In the wake of these influential meetings, there have been moments when I wished I could turn back time and hit the record button on a dictaphone at the outset. The desire to revisit their profound insights, comments, and views, or delve deeper into the jargon that occasionally eluded me, has been a common sentiment. Moreover, I yearned to share these invaluable conversations with friends and colleagues, fostering collaborative understanding and market comprehension. Yet, like many of my peers, I often resorted to notes and memory, supported by a CRM system, to retain the wealth of information.

However, looking to other industries for inspiration. I thought I could establish a podcast where guests could narrate their stories, views, learnings, motivations, and the driving forces behind their various endeavors. This podcast would serve as a repository of wisdom, accessible for revisiting, watching, and sharing. In doing so, I hoped to inspire, educate, and broaden perspectives, paying it forward and ultimately fostering positive change within the real estate investment management industry.

While it is said that there are more podcasts than podcast listeners, it became evident that a niche was waiting to be filled. The real estate industry boasts numerous podcasts, each covering a diverse array of topics, viewpoints, and market sectors. However, there was a gap that I sought to bridge: a consistent and regular platform that featured the voices and insights I was most eager to hear. This aspiration gave birth to the "People Property Place Podcast," a creative outlet designed to share the untold stories of the movers, shakers, innovators and leaders within the real estate industry. Launched in November 2022, the podcast has quickly gained momentum, nearing the milestone of 50 episodes.

My initial intention was to release an episode weekly, yet I hesitated to make this commitment publicly, considering the considerable effort and challenges involved in securing top-tier guests. However, I have been pleasantly surprised in the willingness of guests to join me and openly share their stories (something just a couple of years ago I doubt would have been the case). Reflecting on these episodes and countless discussions, I've distilled five overarching themes that consistently reappear:

- **Planet:** The urgency to decarbonize the built environment and integrate sustainable practices throughout the supply chain.
- **Purpose:** The evolving aspirations of top talent, who seek alignment with firms driven by a clear mission and meaningful impact.
- **Partnership:** A growing commitment among landlords to support their tenants engage and retain talent and enable their businesses to expand, contract, network and fundamentally succeed.
- **Performance:** A shift from being just profit-focused towards a need to drive multidimensional returns on investment.
- **Posterity:** The industry's preparation for a diverse, digitally connected, data-driven, multigenerational workforce that prioritizes mental health, work-life balance, and financial security.

Additionally, there's a notable transformation underway in real estate capital management. Mid-sized companies are being absorbed by global private equity and institutional giants, driven by the need for scale to meet their investors' requirements.

The industry is evolving, and the lack of willingness of LP's being pooled together and locked into close-ended funds with limited discretion and visibility into investments has paved the way for a multitude of agile, specialist, single-track investment management firms, generously capitalized, to swiftly assemble extensive portfolios.

Often led by inspiring individuals a challenge they often face is - outside of their network, no one knows who they are, what they are doing, and fundamentally WHY they are doing it. Maybe a podcast could be a useful platform to control the narrative and share their thoughts may be a good idea...

As we stand at a critical juncture in the wider investment cycle that others are far better placed to expand upon, it is with great excitement that we anticipate the industry's responses to the key challenges on the horizon and its reinvention for the future.

In conclusion, I'll continue my quest to interview the movers, shakers, innovators and leaders within the real estate industry, sharing their views, opinions, and career journeys. Together, we'll uncover the intricacies of an evolving and dynamic real estate investment management landscape. Perhaps a rebranding to the "People Property Place Purpose Planet Partnership Performance Posterity Podcast" may be needed. But I am not convinced it has the same ring to it... happy listening.



A Sustainable slowdown? Or Abundant Opportunities?



Hannah Durden
Sustainable Development Director

Whilst hindsight is a wonderful thing, I try to look forward as much as possible. That said, it's useful to see what trends were being predicted in the CULS magazine last year and whether our collective crystal-ball-gazing played out. And what will the impact be over the following year?

This time last year we were waiting to learn the outcome of the decision regarding the M&S planning appeal on Oxford Street and here we are, 11 months on, with a decision to finally chew over. And it didn't disappoint unless you have recently submitted a planning application for a new build development in central London and haven't considered your refurbishment options. The costs linked to carrying out whole life carbon analysis on refurb options have certainly increased but are now essential to get a scheme in central London through planning. The required change in mindset – where 'retrofit first' is everyone's mantra – is vital if we are to reverse the decadent developer behaviour seen since World War II. The associated changes in global weather patterns, loss of biodiversity and impacts on human health and habitats that are evident off the back of this are considerable.

The lack of resources within Local Planning Authorities to analyse this increased level of detail prior to planning applications being submitted will, without doubt, cause issues. The programme risk of refurbishing buildings to meet ESG criteria has become significant and, in some cases, unviable. But is this because we are too short-termist? What if we look at a 50+ year time horizon? Or do we need new funding products to fuel the boom needed to create a more sustainable built environment? The availability of 'green' finance at improved rates is prolific but equally very 'tick-box' and many working in the industry find the policies too light-touch in terms of the product being delivered. But is anyone surprised given the legislative void that we are operating in?!

As the industry continues to deal with the perfect storm of high inflation and interest rates, wrestling with these additional reporting, design and planning requirements as well as longer timescales to get on site will only add to any form of slow down across the UK if, indeed, that is what we are already experiencing.

I don't see any impetus coming from political parties to change the status quo as they all start to focus on the next general election. With a likely date in the autumn of 2024 we will see perpetual inertia as they squabble over votes

across the country. The political reaction to the expansion of ULEZ that took effect in August was both fascinating and hugely frustrating as a Londoner who has lived with record levels of nitrate and particulate matter pollution for nearly 20 years. Will one of the main political parties pin their green colours to the mast? This seems an obvious opportunity for Labour but Starmer's response to Khan on ULEZ was wet at best. As someone who has a very clear view on the dangers to society of climate breakdown, I'm afraid the environment isn't high enough on Joe Public's radars when the nation is still grappling with a cost-of-living crisis.

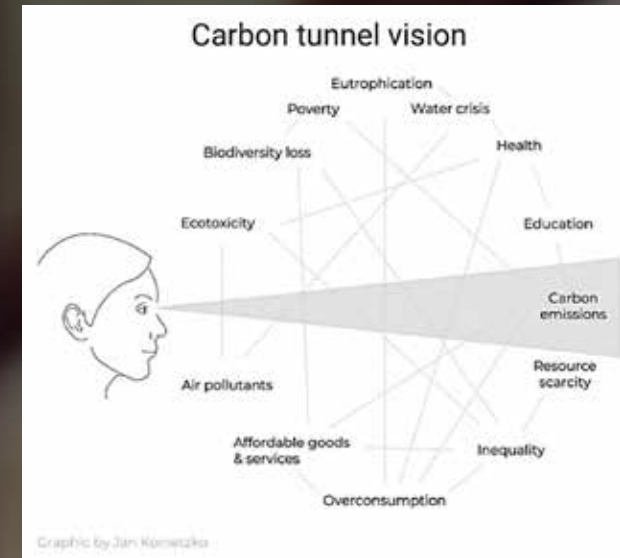
What gives me hope on the environmental challenge is the amount of material innovation that we are seeing. Recent discussions with the CEO at Paebbl regarding their involvement in the UK market show that the answer to many of our problems will come from the oil and gas industry. Many of her team come from Shell, Exxon Mobil and Chevron and are all now working on carbon capture and storage using cement products. The oil and gas industry has, without doubt, the engineering, problem-solving skills and economic clout to effect fundamental structural change across how we manufacture and use materials. If only they had the conscience to invest the quantum of resources needed for a Society in the grips of climate breakdown.

One of the other areas of our industry where I see huge opportunity across biodiversity net gain and ecological strategies. This is in advance of the end of a two year transition period in November 2023 since the Environment Act became legislation in 2021. This puts a mandatory obligation on developers to deliver a minimum of 10% biodiversity uplift on new developments in England.

Whilst this will put a further pressure on consultant costs the benefits to biodiversity in the UK – where, according to the recent State of Nature report, 1 in 6 native species face extinction – and to those people and businesses occupying the new developments being built, will be significant even if not necessarily measurable in pounds and pence. As touched upon last year, the biodiversity and climate crises are inextricably linked and there will be a wider benefit globally if biodiversity is put at the forefront of decision-making.

Economies such as Costa-Rica are superb examples and Michelle Sanchez recently focussed on this in her article for Dezeen (July 2023 edition). She reiterated that 'sustainability as a concept goes beyond environmental impact [referring to our intense focus on carbon emissions]. Sustainability was defined back in 1987 by the UN as the balance of the environmental, economic and social impact of any project – this is the Sustainability Triple Bottom Line. We are forgetting that sustainability engages with a far greater range of issues than carbon emissions alone.'

She also highlights the damage our industry is doing beyond the 38% contribution to emissions and reminds us that we 'need to look at sustainability as a whole and see other areas where our industry is causing harm'. Going back to ULEZ, particulate matter and other forms of air pollution beyond carbon emissions are up there. Supply chains will also come under increasing scrutiny: understanding where things come from and how people working to make those materials and products are impacted. We all need to look in depth at how this is fuelling (or not) modern slavery (MS) and ensure that our MS policies are effective. Even if you don't legally require a MS statement, do think about developing a supplier charter that starts to ask questions of your supply chain.



Back to last year and I note that I was excited about the number of buy-side conversations I'd been having. This certainly hasn't waned and there will be a raft of Wilkinsons and WeWork-style liquidity issues that result in re-structuring deals and opportunities. The main consultancies will be bolstering their re-

structuring teams. Re-pricing continues apace as expectations of vendors are lowered with the ongoing challenging economic conditions that we are seeing. The test of whether a business and its funding structure, along with its social and environmental policies, is genuinely sustainable is being challenged.

Without doubt these conditions also generate opportunities and innovation. Data and tech developments continue apace with the use of Chat GPT and AI to streamline the collection (including automation) and analysis of data. This helps to improve efficiencies across business and 'nudge' human behaviour whether as occupants of buildings, individuals at home or to influence the outcomes of elections.

Finally we've been speaking about a 'brown discount' being seen on older, non-ESG-friendly assets so I was delighted when JLL announced the green premium being seen for Net Zero assets in central London earlier this year. Having recently switched to a cheaper 100% renewable energy tariff at home, I have no doubt that similar trends will emerge across other asset classes, especially where opex margins will drive business performance such as hotels and BTR. My own residential energy audit looked at the difference between an EPC D (130kWh / sq m / year) and a Passivhaus (15kWh / sq m / year) and the impact on your energy costs is - unsurprisingly - significant. Translate this into larger blocks on commercial tariffs and one can easily justify any additional expenditure of delivering energy efficient buildings.

If the research demonstrating increased value, liquidity and opex margins isn't enough to persuade the industry naysayers to change, then I'm not sure what is. Possibly an extreme weather event to rip the flimsy roof off their badly insulated building.

Hannah Durden founded CNZW Developments in 2020 and has been advising on sustainable development strategy and delivery for both buildings and businesses. Please do not hesitate to get in touch with hannah@cnzw.co.uk



Sustainable Real Estate: A constellation of risks and opportunities



Munish Datta
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As the compounding effects of an accelerating climate emergency, ecological breakdown and social inequality become ever more apparent, the urgency of transitioning to a sustainable future has never been clearer, and real estate is at the core of this transformative shift.

Real estate absolutely underpins human society, it provides us with habitation, a place to gather, rest, learn, play, heal and work – in fact we spend most of our lives in buildings. However, for a sector that covers 1%¹ of the world's land, it has a hugely disproportional

environmental footprint: 40% of global carbon emissions, 50% of all extracted materials, 33% water consumption and 35% of generated waste.² As our planet's finite resources become scarcer, user demand changes rapidly, in a challenging macroeconomic context with increasing regulatory demands, the economics of building and operating real estate are under pressure. To turn these risks into opportunities, real estate needs to focus on six urgent priorities:



1. Energy Efficiency and Renewable Energy: The International Energy Agency roadmap to Net Zero Emissions by 2050,³ highlights the important role of buildings in terms of reducing energy consumption and carbon emissions. Incorporating energy-efficient heating, cooling, lighting systems, utilising renewable energy sources, and implementing smart technologies lead to substantial operational and long-term cost benefits. To have any chance of achieving the roadmap, by 2030, 20% of existing buildings and all new buildings must be zero carbon ready. This means that we need to be retrofitting 2.5% of our existing buildings per annum and the financial return for energy efficiency has never been better.⁴

2. Enhanced Resilience and Risk Management: A recent survey of 1,000 built assets across Europe and US⁵ assessed their physical climate risk against a 'Business as usual', unabated emissions, climate scenario. As indicated in the figure below, without mitigation, by 2025, most of these assets could face social and financial 'value at risk' because of heat stress, precipitation, and wind. By integrating resilient design principles, such as flood-resistant structures and green roofs for stormwater management buildings can better withstand and recover from increasingly regular extreme weather events. This proactive approach to risk management enhances the long-term viability and attractiveness of real estate assets.

Risk category distribution	Overall Cervest Rating by risk category and % of assets exposed to risk under a BAU climate emissions scenario		
	2025	2050	2100
Heat stress	C 71% of assets	D 92% of assets	E 100% of assets
Precipitation risk	B 46% of assets	C 60% of assets	D 86% of assets
Wind risk	C 68% of assets	C 68% of assets	C 68% of assets

3. Resource optimisation: Escalating resource scarcity, energy constraints, and material shortages have put inflationary pressures on global construction costs.⁶ In 2022, globally we consumed 100 billion tonnes of materials⁷ and the real estate and infrastructure sectors used about half of these and wasted up to 60%. This inefficient use of resources

¹<https://ourworldindata.org/land-use#how-the-world-s-land-is-used-total-area-sizes-by-type-of-use-cover>
²<https://worldgbc.org/what-is-a-sustainable-built-environment/>
³<https://www.iea.org/reports/world-energy-outlook-2022/an-updated-roadmap-to-net-zero-emissions-by-2050#abstract>
⁴<https://www.iea.org/reports/energy-efficiency-2022/executive-summary>
⁵<https://cervest.earth/news/physical-climate-risk-earth-day>
⁶<https://www.spglobal.com/marketintelligence/en/mi/info/pp/ihs-peg-ecci.html>
⁷<https://www.circularity-gap.world/2023#download>

not only contributes to environmental degradation but also influences the cost viability of real estate projects. Making the most of what already exists, and prioritising circular economy principles are helping reduce costs and enhance the overall financial viability of real estate development. Furthermore, the choice and efficient use of building materials used in construction and operation is an important consideration of to reach whole life net zero carbon emissions.

ECCI from PEG and S&P Global Market Intelligence - May 2023					Rate of Change	Trend (Months)
	May	April	Difference	Direction		
Current Pricing						
Headline Cost Indicator	54.4	65.2	-10.8	▲	Slower	31
Materials/Equipment	52.7	63.7	-11.0	▲	Slower	5
Subcontractor Labor	58.3	68.6	-10.3	▲	Slower	31
Expected Pricing in 6 Months						
Headline Cost Indicator	73.2	72.8	+0.4	▲	Faster	36
Materials/Equipment	67.6	72.9	-5.3	▲	Slower	36
Subcontractor Labor	86.5	72.5	+14	▲	Faster	33

▲ = Higher Prices ◻ = Neutral Prices ▼ = Lower Prices

Source: S&P Global Market Intelligence ©2023 S&P Global.

4. Nature and Wellbeing: The incorporation of nature into real estate projects provides numerous benefits to planet and people. Integrating green spaces, rooftop gardens, and urban forests into developments not only enhances aesthetics but also improves air quality, reduces the urban heat island effect, contributes to the health and well-being of occupants, and supports biodiversity. Studies⁸ have shown that properties with access to nature command higher rental and sale prices, attract premium tenants, and experience increased occupant satisfaction. Nature-based solutions can provide up to 30% of the necessary emissions reductions,⁹ making them a key part of achieving net zero carbon.

5. Social Responsibility and Community Engagement: Shelter is a basic human need, yet the biggest problem for millions of people around the world is that housing is not affordable with income spent on rent going up. By incorporating affordable housing initiatives, mixed-income developments, and community spaces, sustainable buildings create inclusive environments that accommodate diverse populations. Furthermore, sustainable design principles prioritise accessibility; ensuring buildings are suitable for people of all abilities and ages. By offering affordable and equitable housing options, sustainable buildings contribute to mitigating housing crises, improving living conditions, and fostering social cohesion within communities.

6. Adaptive reuse: For many real estate markets, the last three years have seen the biggest shift in the way we use buildings; homes as offices, offices as homes. And in the last six months, a rapid adoption of generative artificial intelligence, advanced robotics, and the metaverse are strong signals that the only constant is change. Though there are many social and governance considerations about the

adoption of these technologies, they pose serious questions about the purpose and design of real estate. Assets that can easily adapt to these changes, thereby prolonging their lifecycle, should remain relevant and more valuable in changing market.

We are amid a reshaping of the real estate landscape: climate risk, resource scarcity, nature, wellbeing, social value and changing user needs are critical priorities for real estate investors. There is strong evidence that the market is responding. Analysis of prices paid by investors for offices in London and Paris in Q3 2022, shows a widening premium of up to 35% for buildings that have sustainability ratings versus those that do not.¹⁰ Buyers in the UK are ready to pay a 9.4% premium on homes that sellers have retrofitted to be energy efficient.¹¹ More than a green premium, the threat of a "brown discount" or devaluation of, or even of outright stranding of built assets, is far greater. By 2030, \$21trillion worth of global real estate assets could experience major write-downs in value given climate risks and the economic transition.¹² Conversely, decarbonising the built environment is already a market worth up to \$1.9 trillion¹³ in new annual value especially in resilient materials and systems, and in retrofitting existing assets.

Like all constellations, risks and opportunities cannot be considered in isolation, they are deeply connected. By incorporating sustainable practices into real estate projects, investors can unlock long-term financial benefits while simultaneously addressing environmental challenges of mitigation and adaptation, solving social issues of improving occupant well-being and equity and, future proofing assets for changing market demand and regulatory compliance.

This article first appeared in the BNP Paribas REIM H2 2023 EUROPEAN PROPERTY MARKET OUTLOOK in July 2023.

⁸<https://www.ons.gov.uk/economy/environmentalaccounts/articles/urbangreenspacesraisenearbyhousepricesbyanaverageof2500/2019-10-14>
⁹<https://knowledge.uli.org/en/reports/research-reports/2022/nature-positive-net-zero-the-ecology-of-real-estate>
¹⁰https://www.msci.com/quick-take/london-and-paris-offices-green/03510893060?utm_source=LinkedIn&utm_medium=social&utm_term=Real+estate&utm_content=100003547206449
¹¹<https://www.santander.co.uk/about-santander/media-centre/press-releases/a-green-premium-house-buyers-willing-to-pay-almost-10>
¹²<https://worldgbc.org/wp-content/uploads/2022/08/WorldGBC-Beyond-the-Business-Case.pdf>
¹³<https://www.mckinsey.com/capabilities/operations/our-insights/accelerating-green-growth-in-the-built-environment#:~:text=Decarbonizing%20the%20built%20environment%20can,for%20players%20in%20the%20ecosystem.>

NZN Project Greenbuild



Roderick Houston MA MRICS
Engagement Director, Construction / Innovate UK
Peterhouse, 1986

When Winston Churchill said, “*We shape our buildings, thereafter they shape us*”, he could not possibly have imagined that his words would take on an altogether different resonance 80 years later, as we face into a climate crisis caused by humankind. Our focus on extractive growth, to build and fuel the places in which we live, work and play, is now coming back to bite us. Beyond their physicality, what and how we build is shaping our now, and will shape our future in an ever more acute manner, with buildings and construction contributing about 40% of annual CO₂e emissions globally¹:

Meanwhile global urbanisation is proceeding at such a pace that humankind is building the equivalent of Paris every week – *every week!* – and will go on doing so for decades².

The urgent need to decarbonise everything everywhere makes the case for value-chain-wide sustainability in the construction industry vital and increasingly pressing.

This is not new news, and building sustainably is not a new idea. All the major industry bodies are actively involved in driving many major initiatives to improve awareness and promote sustainable construction, but uptake among SME subcontractors is low and slow.

A new approach is required. And I’m excited to be working on a project I think could become a real game changer. Net Zero Now, a climate-tech company, has secured financial backing from Innovate

UK, the UK Government’s national innovation agency, to improve carbon accounting and drive decarbonisation in the construction supply chain. This will deliver tools to allow the sector to more accurately calculate and manage the embodied carbon in any build project, enabling SMEs to cheaply, easily, quickly and simply capture, estimate, record and report both their forecast and actual CO₂e emissions, on a business-by-business or project-by-project basis.

Net Zero Now has an impressive track record of establishing sector-specific guidelines, systems, processes and action plans to enable SMEs to accurately measure their carbon footprints, work systematically towards reducing them and become certified as Net Zero. These ‘protocols’ take global scientific guidance and combine it with sector-based insight to make it completely relevant to an SME audience.

But it has not done this on its own. For each of the 10 protocols it has developed, it has brought together sector leaders, academics, trade associations and practitioners to ensure that its climate expertise is complemented by the sector experience and insight needed to deliver truly tailored, simple and affordable support.

The approach that we’re taking as we set out to develop guidelines for the construction industry is no different. We have assembled an impressive steering group, made up of key players –including clients, prime contractors, building material suppliers and leading industry bodies such as the CIC’s ‘CO₂nstruct Zero’ group, the RICS and the UK Green Building Council (UKGBC) – who will help shape our thinking.

Their collaboration is vitally important in a sector that is large, complex and highly fragmented. There is a multitude of players – architects, builders, electricians, joiners, plasterers, plumbers, surveyors, suppliers, the list goes on – who contribute to the embodied carbon present within any build project, making total emissions reporting difficult. The ONS record over 480,000 companies in the UK involved in construction or construction-related activities, of which over 90% have less than 10 employees, and less than 2,500 have more than 100 (~0.5%)³.

Meanwhile the sector’s impact is huge, which makes the case for developing a more systematic approach to carbon reduction particularly compelling. UKGBC report that 42% of the UK’s total greenhouse gas emissions are influenced by our built environment; 25% are controlled by it. They estimate that embodied emissions – from manufacture of building materials all the way through to demolition – amount to some 40 to 50 million tonnes of CO₂ annually⁴. Whilst there has been great progress across the sector to start addressing this, there is much more to do, especially amongst SME ‘Tier 3’ subcontractors.

When faced with such scale and complexity, focus becomes key. Our objective is to provide tools to enable buyers of ‘Tier 3’ specialist sub-contractors⁵ obtain an up-front carbon quote as part of the tender process – allowing them to identify and reward lower emissions suppliers, and to measure and report more accurately on the actual footprint at conclusion of the project.

³Source: ONS: UK business: activity, size and location - Table 19 - Number of VAT and/or PAYE based local units by Standard Industrial Classification (SIC) class by employment sizebands
⁴Source: UKGBC 2021, reflecting c 400 million tonnes of materials used by the UK construction industry each year, and about 100 million tonnes of waste.
⁵“Tier 3 sub-contractors” = those that supply firms sub-contracted to supply the main contractor

Delivering this necessitates two key workstreams:

- The first involves developing a methodology to measure and report carbon emissions, that builds on existing data sources, such as Environmental Product Declarations (EPDs) and Emissions Factors, to provide a holistic view of Tier 3 supplier emissions. Net Zero Now will work with industry leaders to develop, test, peer review and publish standardised methodologies for measuring and reporting carbon emissions for businesses in each sub-sector – initially joiners, plasterers, plumbers and steel-workers.
- The second is technical, requiring Net Zero Now to integrate its carbon accounting technology, configured to reflect each Sector Protocol, into existing Construction ERP (/ tender) systems to enable businesses in each sub-sector or trade to simply and affordably forecast, measure and report on their carbon footprint and provide main contractors and end clients with project-level Carbon Quotes and reports.

Work is well underway on both main workstreams and our plan is to run a Proof of Concept test in Spring 2024 on a couple of live build projects.

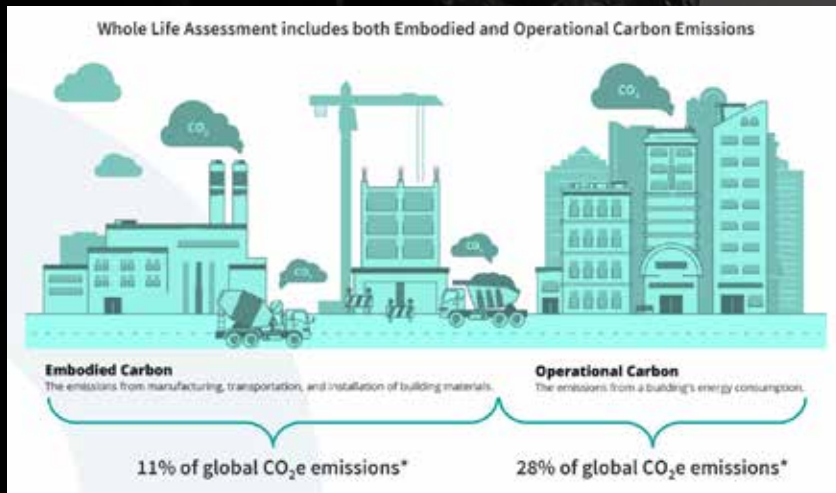
I’m genuinely excited about the opportunities this work affords. Done well, in collaboration with our industry partners, and received well, this could help deliver significant decarbonisation in a high impact industry. Imagine...

- Imagine a construction sector transformed when carbon quotes become a routine consideration in any tendering process.
- Imagine a generation of SMEs who are able to access easy to use tools that enabled them to develop a clear understanding of, and get a handle on, carbon emissions.
- Imagine a level playing field where a low carbon footprint is the source of competitive advantage, and one day may be an essential part of a firm’s licence to trade.
- Imagine a future where every part of the construction supply chain globally is working together to minimise actual emissions, and evolve past “Net Zero”, towards what I call “Net Negative” – when every single building on the planet absorbs more carbon than it emits over its life-cycle, and generates more energy than it uses.

Every single contractor will at some point need to understand their carbon footprint, and how they can reduce it. Our aim is to give them cheap, easy-to-use, simple tools to do so.

It’s taken trillions upon trillions of actions by billions upon billions of human beings to cause the Climate Crisis. It will take the same to unwind it. We’re adding a new tool to the toolbox to make much-needed actions easier for SMEs in construction, because every little helps.

If you’re interested in getting involved – sponsoring, contributing, supporting – please do let me know.



¹Source: International Energy Agency (IEA) / UN Environment Programme - IEA 2019
²Source: UN-EFIA, 2017

Retrofitting



Chris Brown
 Founder of igloo Regeneration, CEO of Climatise and advisor to the board of Nationwide Building Society on climate and the built environment.

The biggest disruption in housing today is retrofitting our homes to make them fit for a zero carbon future.

Climate Change is now a 'this generation' problem. It is no longer something that will only impact our children or grandchildren.

The signs of the damage we have already done to the planet are everywhere. Unprecedented high temperatures, floods and wildfires around the world,

and truly scary disappearances of ice from both poles, the 'third pole' of the Himalayas, and closer to home in the Alps.

We no longer know if we have already triggered the first of the climate tipping points, that will cascade like dominos, leading unstopably to planetary change that will transition through huge economic and social dislocation to the end of human life on this planet.

The better news is that we are the first generation to understand this, and we know that we are the last generation with a chance of fixing it.

Housing has been one of the biggest contributors to the desperate situation we find ourselves in and many of CULS Magazine's readers, me included, have been responsible for this damage.

The biggest thing we can do now is to transition the heating of our existing homes away from burning oil and gas to decarbonised electric heating.

But they aren't 'our' homes. No single body owns the UK'S homes. They are mainly owned by millions of individuals and couples.

While most of those homeowners want to do something about the climate, when it comes to their homes they generally aren't aware of the changes needed, and if they are they either don't know how to do them, or often they have already tried and failed.

For people to be able to act effectively they have to have cheap, easy, trusted solutions that deliver immediate selfish benefits - lower bills and warmer healthier homes.

And these solutions can't be imposed suddenly, they need to be signalled in advance and garner widespread public support.

The classic situation today is that a homeowner's fifteen year old gas boiler fails and they ring up a gas engineer to come and fix it. Unsurprisingly, rather than being advised to go electric they are sold a new gas boiler as an emergency purchase.

The responsibility for this state of affairs lies heavily with the mis-information pedalled by gas suppliers and a complicit Government. Money talks, but often not truthfully.

Another uncomfortable truth is that the climate damage has mainly been done by the wealthy, and the impact is mainly suffered by the poor.

So how do we solve this 'wicked' problem?

There are many areas where Government action would be hugely impactful. Grants and public investment, Minimum Energy Efficiency Standards, and changes to leasehold and social rent legislation for example but the deliberate prevarication and delay we have witnessed recently means that we cannot currently rely on our Government to act.

The Climate Change Commission's recent evisceration of Government's inaction is frightening.

Where we can communicate the facts more widely, whether to friends, family or colleagues, or through media of all kinds, it is our responsibility to do so. Where we have agency, as voters, investors, consumers, employees we can, indeed must, use it.

Our choices as employees are particularly hard though young people increasingly don't want the responsibility of working for climate damaging firms. The knowledge that property development is bad for the planet has taken a jump forward recently, though industry greenwash continues to conceal this and the Advertising Standards Authority hasn't yet got round to removing it from the built environment sector.

The property development supply chain; architects, engineers, cost consultants, contractors and manufacturers are also currently in the cross hairs of the net zero standard setters and will soon be forced to recognise the extent to which they help enable the threats to human life on our planet.

For most employees the best they can do is work every day to reduce the damage they and their firms are doing.

If not now, when, if not us, who?

Happily there are some heroes out there applying entrepreneurial endeavour to the immense market opportunity this challenge presents.

Many of them are challenging the groupthink, myths and fake news that have helped to delay effective action.

These include ideas like 'heat pumps don't work when it's cold' and 'all homes need to be massively insulated'.



In reality almost every home is suitable for a heat pump and the climate damage from manufacturing insulation, combined with a fast expanding and decarbonising grid, means that electrification of heat is far more important than insulation for most homes.

The innovations I'm watching with interest include Talarna who may have found a way to circumvent the regulatory and financial constraints to retrofitting social housing by charging residents for warmth rather than gas or electricity.

Another start up with a different take to most is econic who have recognised the practical barriers to electrifying heat and are delivering hybrid heating systems that combine a heat pump and a gas boiler (which rarely gets turned on).

In the new world of a decarbonised grid, flattening the peak demand is critical and a huge number of firms are trying to crack

this with clever algorithms. Octopus Energy probably lead this pack and their wider system wide innovation is extraordinary.

Further afield the Irish have a nice line in One Stop Shops where homeowners can buy a retrofit package at a net of grant price from a trusted source.

And close to my heart is the retrofit developer model where poor quality homes are purchased vacant, often from the Buy to Let landlords currently exiting the market, retrofitted and relet before being sold when the green premium on the house price in the UK closes in on the 15% levels typically seen across Europe.

If public policy can adapt to support these private sector innovations I would be genuinely optimistic that the built environment sector can fix its problems. Let's hope we can do it quickly enough.

Do new eco-homes achieve a premium (and how much more do they cost)?



Lucy Greenwood MSc MA (Cantab) PhD
Director
Residential Research and Consultancy
New Hall, 2005

With changing building standards on the horizon, we are regularly asked the question of whether new eco-homes achieve a premium and how much more they cost to build. The answer has an impact on how much developers pay for land or have to accommodate in their margins. In this latest analysis we find that there is typically no premium for smaller homes, and a premium of 12% above similar standard new build for larger homes. However, the homes cost more to build – sources estimate that an additional 4-8% is needed to meet the Future Homes Standard or an additional 10-14% to build to net zero in operation (assuming the national grid is decarbonised).

Developers need to account for the additional cost without necessarily getting it back through the selling price. And landowners, promoters and developers need to be aware of the extra costs in order to secure sufficient grid capacity needed to deliver sites with more electricity hungry homes.

0-12% premium for more efficient new homes

4-8% additional cost to meet FHS

10-14% additional cost to meet net zero home

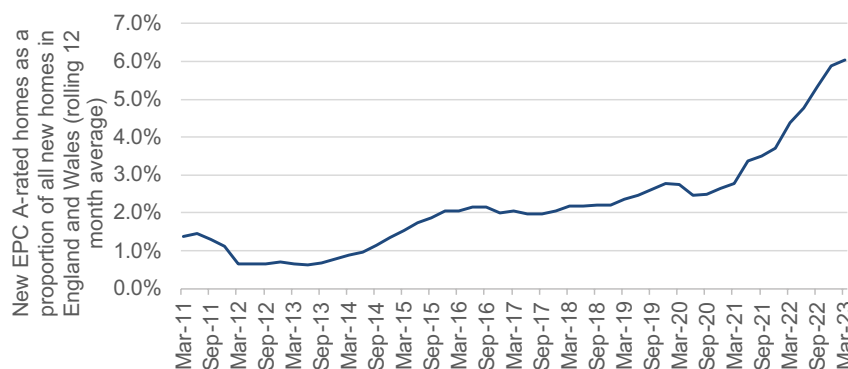
Net zero requirements for new homes

In the drive toward net zero, from 2025 all new homes in England will need to be built to the Future Homes Standard. This requires new build homes to emit 75-80% less carbon than homes built to 2013 standards, meaning that they need to be future-proofed with low carbon heating and high levels of energy efficiency. In practical terms there is no defined means of achieving this standard, as the Government is keen to encourage industry innovation in developing new solutions, but is likely to include thicker walls and triple glazed windows for greater insulation (lower U-values), as well as heat pumps instead of gas boilers, and ventilation systems with heat recovery. Alternative low carbon, non-fossil fuel heating systems could include infrared, geothermal and hydrogen, with district heating systems more suitable in some locations and home types.

Even today, higher standards are being implemented through local authority planning policies so that new homes are net zero carbon (in operation). Practically this means that rooftop photovoltaic panels are likely to be needed to balance energy consumption and generation, and therefore meet net zero carbon targets.

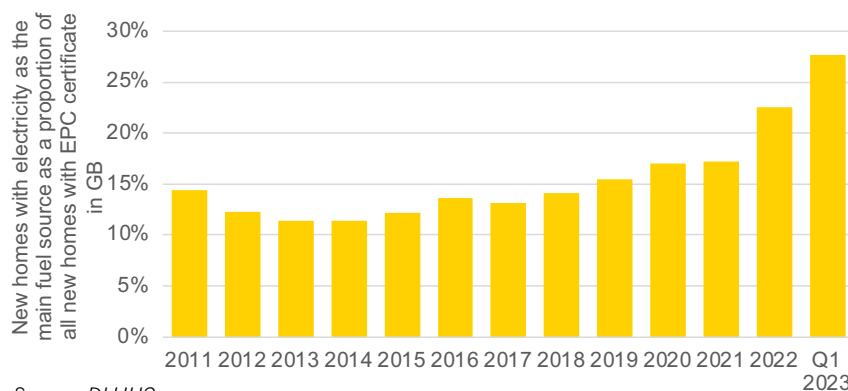
Even where it is not yet required, some builders are choosing to build to higher energy-efficiency standards ahead of the deadline. This is shown in the proportion of homes with an EPC rating of A and the proportion of new homes with electric heating. Both of these measures have more than doubled in GB in the last five years with 6% of new homes in the last year rated EPC-A and 28% of new homes completed in Q1 2023 in England and Wales having electric heating.

Increase in new homes with EPC A-rating in the last decade



Source: DLUHC

Increase in electric heating as the main fuel type in new homes



Source: DLUHC

What's the cost?

As there is no set way of meeting the Future Homes Standard yet defined, the additional costs of getting to the standard will vary depending on the type of home, the approach taken and the scale of the development. Various sources have attempted to estimate the costs. The Future Homes Hub estimate that to meet the 2025 standards it would cost an additional £5,600 per home above those built to the 2021 standard, based on better insulation, triple glazing and an air source heat pump. It would be an estimated £11,600 more with infrared heating and PV to achieve a similar reduction in carbon emissions. Others have estimated costs to reach the standard are £5,000-10,000 per home. This equates to a 4-8% increase in build costs for a typical house.

To reach net zero emissions including heat recovery systems, and extensive PV, as well as air source heat pumps and thicker insulation, the cost could be closer to an additional £20,000 per home according to the Future Homes Hub. This, and other sources including the Passivhaus Trust, indicate that this is equivalent to 10-14% increase in costs. As these technologies become more widely used the costs are expected to reduce.

Is there a premium?

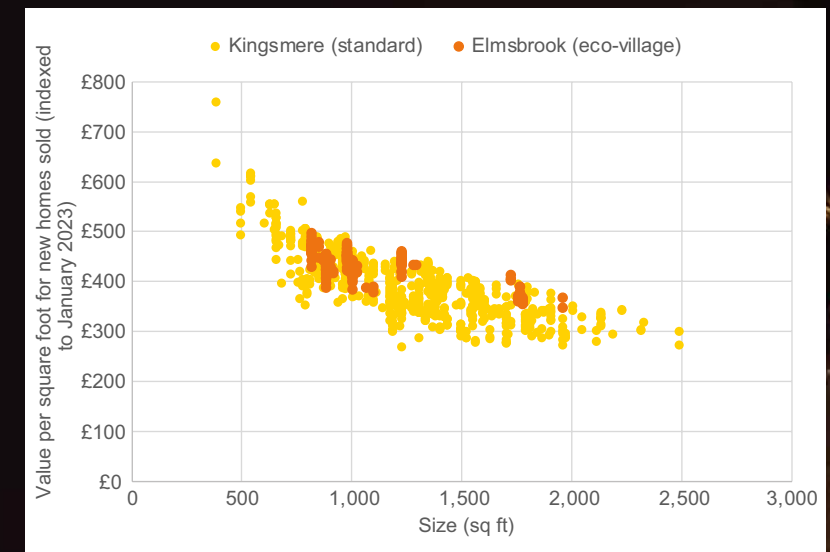
There continues to be more interest in sustainability with a sharp increase in the number of people who have adopted a more sustainable lifestyle in the last year according to Deloitte's 2022 sustainability report. But cost is a barrier; 52% of those surveyed by Deloitte said the primary reasons for not adopting a more sustainable lifestyle are related to cost. Running costs are the most important reason for choosing a low carbon home according to a separate survey by L&G in 2022. This means that if the running costs are lower, a more efficient home will be more appealing to buyers and renters, but the upfront additional cost may be prohibitive.

Our latest analysis, examining the largest eco-village in the country, shows that new moderately sized energy-efficient homes do not achieve a premium, but larger homes do. We find that at Elmsbrook (the eco-village at Bicester) the new highly efficient homes between 800 and 1,050 sqft (typically small two and three bed houses) achieve the same values as those on the standard new build development nearby (0.4% premium). However, homes between 1,200 and 2,000 sqft achieve a premium of 12%.

By looking at the values achieved on large highly efficient homes on smaller schemes, we also find they achieve a higher premium of typically between 10 and 20%, albeit the other high-quality features in these bespoke schemes also contribute to the premium. As we have found previously, it is the affluent eco-conscious who are able to pay more for more efficient homes, but the mainstream market is constrained by affordability.

There are steady shifts towards increasing the affordability of energy efficient homes. Green mortgages, for example, factor in the running costs associated with these types of properties. However, until factors such as these are at a scaled enough to help buyers stretch their budgets to pay for such homes, we will continue to see low levels of participation in the mainstream market.

Larger homes achieve a green premium but smaller ones don't



Source: Savills using Land Registry, DLUHC

What's the impact?

For housebuilders this means that they will need to absorb the additional cost of meeting these higher standards for the majority of their homes, but may be able to offset some of the additional build costs on the larger homes. To do this they will either need to squeeze their margins or account for the additional cost in the price they pay for land, the latter being something they are generally already doing. The design of homes also needs to be considered to ensure there is space for thicker walls with greater insulation, and equipment such as water cylinders and batteries are accommodated into the internal layout and heat pumps are located appropriately outside new houses.

For landowners this means that they will need to ensure that the developer buying their land has accounted for the additional build costs when accepting their offer to ensure they don't need to renegotiate later in the sales process. It also means that if a landowner wants highly efficient homes to be delivered on their land, they may need to accept a lower land value to ensure the site is deliverable.

The switch away from gas heating will mean more electricity is needed for the new homes and greater grid capacity will be required. Due to the nature of the grid and the pressures it faces with decarbonisation, a lack of grid capacity in some areas is already impacting the delivery of developments. Landowners, promoters and developers will need to engage early with Distribution Network Operators (DNOs) to secure the grid capacity needed to deliver their sites successfully.

In the future, we would expect these more energy efficient homes to be in greater demand due to their lower running costs, meeting the higher standards needed to let homes and the ESG requirements on lenders. This is likely to mean a more significant difference in value appears between less energy efficient homes and those with greater energy requirements.

Biodiversity Net Gain: friend or foe?



Daniel Clyne
Real Estate Partner, Kingsley Napley



Charlotte Jeanroy
Trainee Solicitor, Kingsley Napley

How can developers deliver BNG?

BNG can be achieved through an on-site approach, an off-site approach or a combination of the two.

On-site solutions may come in the form of already familiar green walls, brown roof space or blue infrastructure such as wetlands and ponds. Developers will also have the option of tapping into habitat banks to secure gains from the start.

Where on site gains will not be sufficient, the legislation allows for off-site mitigation. This could bring good news (and possibly windfalls) to private landowners who will be able to capitalise on the new legislation through what people are calling the “off-site unit market.” Natural England will be running a national register of biodiversity units on which landowners (and local authorities) can list land they have enhanced for developers to purchase or let.

Through this, landowners can realise financial gains by selling and leasing land to developers, brokers and local authorities, allowing developers to generate quick biodiversity gains from using the grassland reserves of adjacent farmers, for example.

This market will also provide an opportunity for developers to monetise any excess of BNG beyond the 10% target.

For those in areas of concentrated development and limited green space, such as Cambridgeshire, this will certainly be a sellers’ market.

The 10% mandatory Biodiversity Net Gain (BNG) requirement for new developments is fast approaching. Although the government recently announced that they are pushing back the coming into force of this new requirement from November 2023 to January 2024 and some of the detail is awaited in secondary legislation, the consultation period has revealed how this might affect developers in practice.

The government’s aim to is ‘to leave the natural environment in a measurably better state that it was beforehand’ by embedding BNG considerations at the earliest stage of development.

Although not yet in force, several local authorities already impose BNG requirements. Others, such as all of the London boroughs, have yet to embrace the move despite many having declared a climate emergency.

This legislation will compel developers to consider BNG from the outset by requiring that planning applications are accompanied by a “biodiversity gain plan” outlining the strategy for delivering and maintaining BNG. Whilst smaller sites may not see this enforced until 2024, all developers should be preparing now.

How will BNG be measured?

Defra have developed a metric for calculating BNG and the calculation involves a comparison between the “baseline” biodiversity value of the site (which has been arbitrarily chosen as being the biodiversity value of the site pre-development) and the anticipated post-development biodiversity value.

The measurement of biodiversity value at each stage will take into consideration the distinctiveness, condition and strategic significance of three types of “biodiversity units”:

1. Area habitats – such as grasslands, woodlands and mudflats
2. Linear hedgerows and lines of trees
3. Linear rivers and streams

Developments will need to report separately for each unit type.

In the meantime, whilst this market establishes, the government will be offering a statutory biodiversity credits scheme. Where developers cannot achieve BNG gains either on or off-site, these credits could provide a final fall back. However, it is clear these are to be considered a last resort with a heavy price tag.

Beware of ongoing obligations

One of the most important points for all developers to remember is that this is not just a matter to be resolved during the development phase. BNG must be maintained for a minimum of 30 years post-completion, which is expected to be enforced via Section 106 obligations and Conservation Covenants² depending on the location of the site. Developers could seek to offset their ongoing liabilities post development with the (likely costlier) off site option.

How should developers prepare?

1. Opportunity favours the prepared

There is no doubt that BNG will add to the already overstressed planning system, increasing timeframes and costs for all involved.

When designing or appraising a development, ecological surveys of the site will be required along with the preparation of the new BNG Statement to accompany the planning application. Full details of what this statement should contain are not yet clear.

In terms of maintaining BNG post-completion there, will be requirements for ongoing site surveys and ensuring the maintenance of BNG. Early preparation will be crucial to ensure cost-effective solutions and this could be achieved,

in part, by scoping out all on and off-site options as soon as possible. Particularly, given funding for the 30+ year maintenance of BNG will be secured by way of pre-commencement conditions.

Unanticipated changes to the biodiversity of a site caused by, for example, underperforming habitats, whether as a result of plants dying or drought-induced hosepipe bans, could easily threaten the realisation of net gains. Plans will need to account for such contingencies and guard against developments falling foul of the 10% threshold on reaching completion.

Developers should be warned to already have this in mind *now* for their pipeline and prospective projects.

2. Know your site

Know the land, know its value - and know it early. Lands such as grassland, brownfield and OMH which are particularly ecologically rich present a risk. Developing on such irreplaceable habitats should be avoided in the interest of preserving those net gains. The challenge will be balancing development goals whilst maximising the biological value of the land a developer has. Ecologists should be involved from the outset.

3. Master the metric

Understanding the metric will be key to making sure that developers achieve the required BNG in the most efficient way. Some important points to note are:

- The metric provides a greater BNG for local off-site biodiversity gains compared with off-site gains made outside of the local authority of the development site.
- The metric favours the early establishment of any new habitats created.
- Connecting into existing infrastructure such as sustainable drainage systems, nutrient mitigation land and SANG land could help deliver net gains.
- Developments in areas already enforcing BNG requirements should be aware of the need to review assessments under any previous metrics to ensure the calculations under the new metric don’t result in a different outcome.

It is hard to argue against the aims of BNG in restoring the UK’s natural habitats and tackling climate change. However, it is equally hard to envisage a scenario in which this does not add further pressure on the planning system. With the housing crisis intensifying and planning reform desperately needed in a way that reduces the burden on the system, there are understandable concerns on how BNG will impact this.

²Conservation Covenants, are legally binding, private voluntary agreements between landowners and a “responsible body”, such as a charity or public body. They can be used to impose restrictions or, more importantly, positive obligations (such as managing the land to delivery BNG outcomes) upon the landowner. The duties are to be registered on the Local Land Charges Register and to be monitored and enforced by the responsible body through the period of the covenant.

Change in Rural Britain



Lord Richard Inglewood
Hutton-in-the-Forest,
Trinity (1969 – 1973)

We all know that we are living at a moment of change in Rural Britain. No longer does the consensus apply that Rural Britain is predominantly for Agriculture and similar activities, which goes back to the Town and Country Planning Act and Agricultural Act of 1947.

This should not be a surprise as the consensus was reached over seventy-five years ago, and in all kinds of ways the World is now a very different place from what it was then.

What is a surprise, not least because it was clear that priorities were changing, is the policy chaos in which this change has become mired. There are a whole range of conflicting policy aspirations, and there is a marked unwillingness to get to grips with their financial implications either to the public generally or to the individuals affected. On top of this the legal mechanisms involved are in many cases unclear and certainly do not seamlessly fall into place with other policies and systems to which they are connected in practical terms.

In any market economy there is always a considerable degree of uncertainty. It is inherent in the nature of any market. However there has to be a general understanding of what that market is and how things interact within it. This

certainly does not appear to be the case now where within the 'marketplace' of Rural Britain (and it is equally true in Urban Britain too) there is a lot of chaotic uncertainty. Now, of course, there is a place for creative destruction in any economy, but it must not be equated with permanent revolution which is very destructive.

Whether you like it or not, Rural Britain and Agriculture has been a regulated economy for many years. Indeed, almost since the beginning of time, food has been a pre-occupation of government and often has been accorded special treatment. Although it was not expressed in those words public control and public money were in place to bring about desirable outcomes in respect of a whole range of things considered to be in the public interest. In short, public money for public goods. These outcomes may now no longer be thought to be as benign as they once were, but that is to miss the point. The underlying rationale is unchanged. A framework bringing policy aspirations and resources together and mechanisms to implement these policies has been in place for many years.

The current muddle is because they no longer work together coherently. On top of this the State both as creator of the legal framework and as the supplier/arranger of much of the funding appears more or less paralysed.

Clearly this paralysis is at least partly to do with the financial predicament in which any government of this country will find itself today, that of presiding over an economy which cannot generate sufficient cash to enable society as a whole to have everything it wants. It doesn't know what to do because of a perception, or perhaps it is an understanding, that necessary

measures may be politically unacceptable – at least from a populist, short term electoral perspective. On top of this there is a real sense that they neither really know what they want or how to bring it about. This is a real mess because knowing what you want has to be the starting point for sensible change.

One of the consequences of the 'Post War Settlement' was a general perception that the financial requirements of Rural Britain/England would be satisfied within the framework of the Agricultural Budget set within a particular land use regime. This, of course, is an oversimplification because, for example, environmental matters played a relatively small role, but nothing like to the extent they do now. Today it is completely different, the balance and with it the need for money and where it is deployed has changed.

Complaints about the C.A.P. were legion, and certainly in some cases, justified because of the way certain policies were implemented. It is, however, frequently overlooked that British Governments of all parties aimed within the considerable policy flexibility permitted to maximise physical food output at the expense of other aspects of the use of land, and to minimise the costs to the Exchequer. One can see what this has achieved in an era where priorities are now different.

Cheeseparating in the past means that more is required now. Criticisms from the tabloids of the lavish C.A.P. seem in retrospect to have triggered the current crises. It is not a case of too much being spent rather it was too little being spent in the wrong way.

Now it is not by definition necessary for money needed to lubricate the rural machine to come from Government, but the mischief of rural England becoming a neo-colonial satrapy of urban and suburban Britain is plain to see. Rural Britain, like the rest of the country, needs to pay its own way and not be a dependency.

While it is unlikely that food production alone can do this, it is now appreciated that there are a whole range of other outputs

- Energy, Carbon Capture, Leisure, Environment, Water etc, which if they are valued and paid for properly should provide the necessary money to do this.

The Government though sees these as sources for its revenues – it certainly needs them – and not as an additional legitimate and proper source of earned income for those responsible for doing the work, exploiting their assets to do something of economic and sound value for the wider public. It is easy to understand the temptation for the Government.

On top of this, how do you actually organise the legal framework and the specific instruments to bring it all about in a sensible and coherent way? All this looks simple enough until you drill down into the detail. For example, how should sorting out the problems of 'nutrient neutrality' relate to carbon capture? What is clear is that starting from the position that the money which changes hands should be based on 'agricultural income foregone' is nonsense on a whole range of levels.

In the case of carbon credits, for example, there may be evolving exchanges for big business to lock into to deal with its problems, but do they offer a fair deal to the smaller businesses who will actually do the work on the ground? Furthermore, what if any thought is being given to what is currently happening, often by happenstance, from which others are now obtaining considerable financial benefit at no cost to themselves. An example of this is the cleaning of emissions by Nature in the ordinary way of things as they have been for decades if not centuries. Now this has a real recognised value which can be calculated and monetised.

The inheritance of last Century's thinking and the rules of land management and land use seem to be getting in the way of bringing about a sustainable long-term rural economy based not on subsidy, but paying for goods and services which are actually wanted. Before the phrase went out of fashion this would have been called 'Levelling Up'.

Heat islands, biophilia & the need to be green

What, where, why and how



Jan-Maurits Loecke
Associate Director, Arcadis
Sustainability Fellow & AP

Nature has always played an important role in the human imagination and expression of the built environment. However, in 2022 the greening of our buildings and cities has taken on new meaning and purpose. For too long we believed in unlimited natural resources and infinite habitat, and only recently have we begun to understand that the world and nature have a limit. A rapid transition from a human-centric to a nature-centric understanding must take place to prevent further damage to the planet and the environment.

Without an immediate significant reduction in emissions across all sectors, it will be impossible to limit global warming to a maximum of 1.5°C, after which it would be irreversible. We must reduce, if not prevent, all new CO₂ emissions from the construction and operation of buildings, but also find ways to extract and store the carbon that is already in the atmosphere. Trees and plants are key to preventing global warming as they can sequester carbon from the atmosphere. Their evaporative cooling effect and shading help prevent urban heat island effects.

The 'urban heat island effect' refers to the difference in temperature in between a city and adjacent less developed areas but can also appear within a city context where large sealed non-vegetated areas are adjacent to a cooler, shaded urban fabric.

Cities like London, Dubai, Singapore and Los Angeles are prime examples. Here, the hotter and drier summers resulting from global warming are amplified by heat island effects, with some reports citing that it can be up to 10 degrees warmer in these cities than neighbouring rural areas. This can present problems particularly for the elderly or those with health conditions.

To combat this, we need to envision a built environment that not only promotes an ecological balance (sustainability), but most importantly, a restorative approach that gives back to the earth what was taken from it (regenerative).

Bringing vegetation into our buildings and cities isn't just about sequestering carbon. They have a positive effect on our health and well-being. A study by epidemiologist Dr. Payam Davvand (Centre for Research and Environmental Epidemiology in Barcelona) in 2015 showed how green spaces directly affects the cognitive development of primary school children, how each increase of landscaping in the environment over a period of one year leads to a five percent improvement in short term or working memory development. Inner-city landscaping also encourages active travel and physical exercise.

Lessons from London

London is leading by good example with over eight million trees and 3,000 parks. Reports show that 21% of the area of the city is covered with trees. The recent urban rewilding trend promotes biodiversity, clean air, physical and mental well-being and active travel. Rainwater gardens and butterfly corridors are being created, brownfield sites and existing structures are increasingly being re-used.

While many steps point in the right direction, much needs to be done on the ground below the tree canopies. Asphalted or paved areas can account for 50% or more

This issue has been acknowledged broadly. The London Assembly notes that 'through planning policy we are managing heat risk in new developments as well as increasing the amount of green space and vegetation to play a part in cooling the city.' Aligned to this, we are seeing positive, tangible shifts in urban design across London, and we should ultimately call ourselves lucky to have so many well-maintained gardens, parks and ever-increasing green initiatives.

One significant example of this is the Canary Wharf Estate, a historically grey, dense area of London that is undergoing significant green improvements. Today, it offers around 20 acres of landscaped parks, gardens and squares and 70,000 new seasonal plants being planted annually. The recent arrival of the Crossrail Place Roof Garden, one of London's largest, further renews this commitment to greening up, not only providing peaceful spaces for inhabitants and visitors but also helping to minimise the heat island effect. Paddington is another good example, home to its expansive green wall and canals as well as a collaborative strategy from the various landowners to make positive change.

The London Energy Transformation Initiative (LETI) sets out measures to help convert London's built environment to Net Zero Carbon. The Urban Greening Factor (UGF) is another tool used to assess the quality and quantity of urban greening. It enables and encourages important developments from the start of the planning process to determine how much urban greening is incorporated as a fundamental element of site and building design and how to meet the London Plan Policy G5 Urban Greening.

Urban Greening

Green space can act as a carbon sink, offsetting some of the carbon accumulation in urban areas with significant sealed surfaces such as sidewalks and buildings. Plants benefit human health by their ability to reduce noise pollution and remove pollutants including ozone. This has a direct impact on improving the health of city dwellers. According to some studies, only one square meter of green roof is needed to offset a car's annual particle matter emissions.

Green is not only good for the environment, but also creates added value, improves the quality of life and the neighbourhood. Greening strategies positively impact highways, communities, and productivity while increasing the value of businesses and real estate.

Another common aspect is so-called urban agriculture or roof farming. Urban farming not only has a positive impact on the social and emotional well-being of individuals and communities, but also on the environment. There is so much unused roof space in London and in cities the world over that can be cultivated. Locally grown food can help reduce the energy consumption of transportation.

This renewed focus on urban greenery neatly leads onto the concept of biophilia, which is defined as the 'innate human instinct to connect with nature and other living beings.' From an architectural point of view, the principle of biophilic design centres around connecting people and nature, bringing elements of our natural world into the built environment, such as natural light, water, plants, natural materials such as wood, and stone, the feel of textures, patterns, and shadows.

Biophilic design does not need to be complex and expensive, in the end it's very simple, we just need to provide nature the unsealed space it needs to live and thrive. Trees and plants are marvels of structural performance, functional efficiency and carbon sequestration. Maybe buildings could become like trees.

Inside out

Looking at interior design, we know that retail environments and shopping, for example is a highly emotional experience, and the look and feel of a store has a tangible impact. In order to design a stand out destination where people want to stay for long periods, biophilia can bring a natural comfort. Designing spaces to include water features, trees and semi tempered and open landscaped spaces can create an environment that delivers the kind of psychologically soothing and calming effects of nature that have been proven to attract people, lengthen dwell time.

By designing climate positive and sustainable buildings that amplify the connection to nature, we can make great change in our cities.

of the total area of a city. Concrete and petroleum-based asphalt have a significant carbon footprint, more recently, CO₂-reduced alternatives such as CO₂-reduced concrete, Greenbloc or a warm-laid alternative for asphalt are being developed. Large squares, streets, roofs and urban infrastructures in London remain heat islands.

Perhaps the most recognisable example of this in London is Trafalgar Square, a mass of grey concrete and tarmac surrounded by busy roads with little greenery. However, it was highly encouraging to see it transformed in April this year for a day with a 'green blanket' to help raise awareness of rewilding. A newer example is the Kings Cross redevelopment area opposite Google. While often celebrated as a great example of placemaking and regeneration, its uniform make up does little to address these concerns, with artificial grass on its steps that although looks green, brings absolutely no benefit.

Too much water, or too little? A liquidity challenge for real estate



Siena Golan
Property Research Analyst,
DWS Alternatives Global Ltd
Cambridge College: Murray
Edwards (2011)

Andalusia a desert? Amsterdam under water? These doomsday scenarios may seem far-fetched but by 2050, could be a real possibility.

Using Moody's Physical Risk Database, it is possible to analyse the physical risks posed to a portfolio from climate change. Focusing on Europe, the area most at risk is the Mediterranean region. The key issues here are water scarcity and heat stress. Precipitation will most likely decline by 4-22% in the next 80 or so years, depending on emission scenario, and severe drought is already affecting crop yields in the region.

This summer has seen devastation caused by wildfires and tourist numbers to the region have already dropped by 10% year-on-year. With the region warming 20% faster than the global average, heat stress is likely to become increasingly problematic, increasing demand for electricity from air conditioning units, reducing receipts from tourism during summer months, and causing risk to life particularly among the very young and elderly from heatstroke.

At the other end of the spectrum, low-lying areas in countries such as Finland, Germany, Belgium, and the Netherlands face growing threat from flooding, either due to rising sea levels or extreme rainfall events. The growing urgency of the problem is illustrated by the revisions to the Netherlands' national flood prevention programme. In 2014, the programme assumed 1m of sea level rise by 2100. Following the devastation of the 2021 European flood events, plans were revisited on the basis that climate change is happening faster than expected and 1.2m of sea level rise should be planned for. In the Netherlands, this challenge is compounded by the fact that in some places, land is sinking by an average of 8mm per year due to a combination of three factors: extraction of natural resources such as water or gas, land compression from the weight of buildings and infrastructure, and human habitation preventing the sedimentation processes that originally raised the land.

So what does this mean for real estate? At an asset level, in addition to minimising whole lifecycle carbon emissions, plans need to be made to adapt to a changing climate.

Designing for a 2050 climate

To withstand higher temperatures and deal with reduced availability of water, buildings in the Mediterranean region require some unique design features. We can learn what these are from parts of the world which have been dealing with very high temperatures for some time already. The Pearl Academy in Jaipur, India, is one example of how design can be used to keep temperatures 20°C on average lower than outside with no air conditioning. The outer skin, which sits four feet away from the building, uses a perforated design to allow light in while deflecting most of the heat. Most of the windows are oriented towards a large, shaded, internal courtyard. The main colour used for the building exterior is white, which is the most reflective colour of light and absorbs least thermal radiation.

Despite daily water consumption in Spain being only a fifth of that in London, water use will still need to decline in line with the trajectory of availability. This means reducing consumption, reducing waste, re-using grey water, and capturing precipitation. The COFCO LANDMARK building in Beijing (one of the world's most water stressed cities) is a good illustration of many of these processes. Multiple water meters have been installed at different levels of the building so that a leak can be easily and quickly detected by comparing readings on meters that are close to each other. Permeable pavement covers half of the hard surface of the site to reduce run-off and flood risk, and a water reservoir allows for precipitation to be stored on site, again to control runoff. Water stored here is used for irrigation.

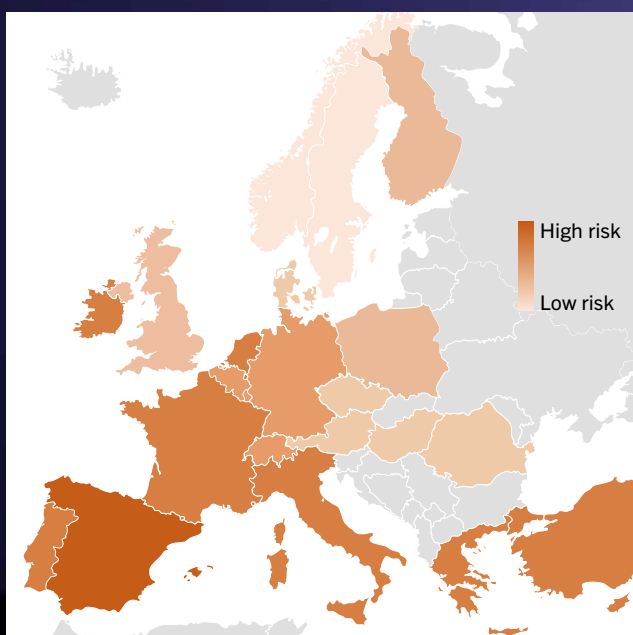
In Northern Europe, where too much water is likely to be the issue, action will need to be taken at every level and with a vision for change that exceeds the length of political cycles. In the Netherlands, for example, regional Water Boards (some of which were founded in the 13th century) are independently run from the national government to enable them to plan for change decades in advance.

In recent history, most water management efforts have been focused on hard engineering solutions. This might include increasing pumping, investing in underground water removal infrastructure, and raising storm barriers to respond to rising sea levels. There are, however, more nature-based approaches available which can be both cost-effective and flexible. Cities as diverse as Shanghai, New York, and Cardiff are experimenting with introducing urban wetlands, inner-city gardens, improved river drainage and plant-edged sidewalks to slow and absorb rainwater runoff within the city, rather than channelling it outside. This approach has been termed 'sponge cities' and, according to earlier research by global design firm Arup and the World Economic Forum, can be 50% more affordable and 28% more effective than hard-engineering solutions.

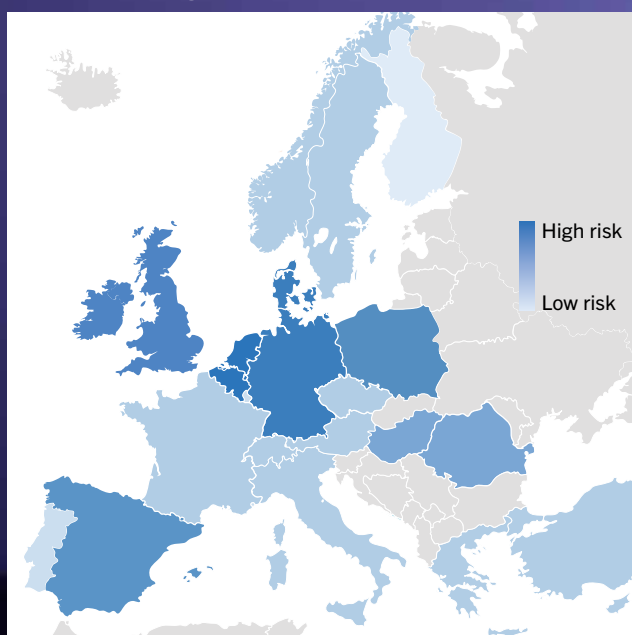
The challenges of a 2050 climate can be disregarded. But inaction comes with a price. The physical risk posed by rising sea levels or river flooding is likely to make some places uninsurable. This is already evident in some parts of the U.S. In June this year, the largest homeowner insurance company in California, State Farm, announced that it would stop selling coverage to homeowners in this state due to the high risk of wildfires. Higher insurance premiums mean greater risk for the next buyer who is likely to seek compensation in a lower capital value. A next buyer may not be available for particularly at-risk properties.

Without mitigating climate risk today, investing in real estate in 2050 could literally be a question of sink or swim.

Risk from water stress



Risk from flooding



Charging ahead or stuck in a rut?

An update on the fundability of UK BESS projects and the market for investment.



Gemma Goddard
Partner, Birketts LLP, Commercial Property, Investment and Clean Energy

In September 2023, we (the Clean Energy Team at Birketts LLP) hosted a panel discussion at our Cambridge Office in conjunction with CULS, where we welcomed experts Charles Lesser (Partner, Apricum), Giles Hanglin (CEO, Cambridge Power) and Nick Green (Director, Savills) to discuss the state of the investment market for a critical component in the future viability of renewable energy as a primary energy source: Battery Energy Storage Systems (BESS).

Our Clean Energy Team forms part of our wider Energy and Utilities Team, spanning all of our divisions (property, corporate, litigation and private client). We have a wealth of expertise across renewables, clean energy and more conventional energy and utilities supply chain matters. This particular topic is something that we had been planning to table in a panel discussion for some time, and one thing that was clear in the final product was the degree to which the market and horizon had changed, dramatically, in just a matter of months.

The event attracted a diverse audience (including developers, funders and other industry professionals as well as university students) and facilitated detailed conversations into a number of the challenges and opportunities within the BESS world. This article provides a summary of the key topics that were discussed.

Understanding Financing Challenges

The first and main topic explored was the intricate financing landscape of BESS projects. The industry confronts a number of funding and investment-related challenges, that are exacerbated by the relatively few lenders operating in this industry versus the high number of borrowers seeking funding. Key aspects discussed within this topic were:

- **Funding Misalignment:** A common issue lies in the disconnect between the nature of BESS projects and the funding products available. Often, BESS projects are treated as pieces of infrastructure. In many cases, this will lead to a fundamental misunderstanding of how the development will operate in practice and, consequently, how it needs to be funded. Ensuring the right funding product is matched with each BESS project is critical to success.
- **Pipeline Overflow:** The industry finds itself in the enviable (yet daunting) position of having an excess of projects in the development pipeline. Inevitably, some projects are more likely than others to come to fruition. This raises concerns regarding the feasibility of each project and heightens competition for the necessary resources, as well as giving rise to stricter and more risk-averse lender attitudes.

Grid Connections

Then, there is the issue of grid connections – specifically, the point at which the BESS is actually plugged into the grid and can be energised. The availability of a connection is the key to unlocking value from a BESS development and a big issue for developers at present, with many finding that grid connections lined up for 2023/2024 are being pushed out into 2030 and onwards – some into the late 2030s. Compounding the issue is that developers are finding it difficult to obtain a new grid connection at all, for developments further down the pipeline.

These delays put a huge strain on working capital, and contribute to the difficulty in obtaining finance, as lenders are more likely to need rapid capital deployment and sooner realisation of investments than the grid queues allow.

This also causes knock-on issues with land arrangements. In most cases, developers will locate a site for their development and enter into option agreements, under which the developer receives an option to either purchase or lease land from the landowner. As the period for which these ‘options’ are valid is generally centred around the anticipated grid connection date, as these dates have been pushed out, developers have needed to re-negotiate these agreements, sometimes at significant cost, to avoid losing the land rights altogether. Planning consents also need to be kept alive, compounding the pressure on developers before significant funding can be unlocked.

We know that National Grid have been working to try and unlock the root causes of these delays, and even since our event there is now more positivity behind the chances of grid connection issues easing; National Grid and Distribution Network Operators are beginning to adjust their modelling in a practical way. In a recent statement given by Alice Delahunty, president of National Grid Electricity Transmission, Alice commented “we’re committed to speeding up connections and creating a ‘fit for the future’ process for plugging projects into the grid”. This statement accompanied an announcement that National Grid is accelerating the connection of 19 BESS projects (worth around 10 gigawatts worth of battery storage) in England and Wales to a date, on average, around four years earlier than their current agreement – which is an encouraging sign for all BESS developers.

Resetting of expectations and work-arounds

As we now look back at the industry boom of 2020 for BESS projects, the landscape is changing as challenges and bottlenecks continue to be worked through and overcome. Stakeholders are working to find solutions and expectations are evolving. For example, co-located developments (coupling generation and storage e.g. solar and BESS) are quickly becoming the clear preference when it comes to new development proposals.

The framework within which landowner/developer agreements are negotiated is changing as well. The strength of the parties’ respective negotiating positions is adjusting, with landowners taking more risks early on, often through how rent is structured (where there is a lease involved). A caution was noted by our speakers in this context, however, as the more complex the negotiated agreement becomes, the less likely it is a funder will be interested.

Looking Ahead

As we have discussed, the BESS industry is grappling with several complicated challenges. The simple fact of the matter is, however, that if the UK is serious about renewable energy, the renewables pipeline and electrification, it also needs to find a way to couple this with energy storage systems to ensure a reliable and balanced electricity supply. The industry’s ability to adeptly navigate these challenges, and how National Grid and Distribution Network Operators cooperate with the industry as it does so, will undoubtedly shape the trajectory of, and timeline for achieving, the UK’s sustainable electrified future.

If you have any questions on the content of this article or otherwise, please contact the author, Gemma Goddard (Partner, Birketts LLP, Commercial Property, Investment and Clean Energy) (Direct line: +44(0)1223 326582, gemma-goddard@birketts.co.uk).

What effect will AI and Robotics have on Real Estate?



Iain Keys
Partner, Knight Frank,
Office Head, Cambridge

In the last five years there has been an explosion of interest, investment and planning applications in the UK, with Cambridge being the epicentre of the growth in Life Sciences. The real estate world has embraced the opportunity for growth, but the existence of life science work has been around for decades; Cambridge Science Park was conceived in 1970 on farmland and now totals nearly 2m sq ft of office and laboratory space. The total Cambridge market now measures 10.3m sq ft of labs and offices with a further 3.2m sq ft of labs and 1.4m sq ft of offices to be delivered by the end of 2026 and potentially 13.8m sq ft of labs and 6m sq ft of offices in the pipeline over a 10-year period.

Venture capital investment has boosted the sector on a global basis, particularly noticeable in the UK and Cambridge. With increased funding available we see a merging of life sciences and technology as not only a natural evolution but also a necessity to maintain the speed of research to meet demand.

Laboratories are complicated, highly serviced operational spaces when compared to more traditional commercial property. Buildings are split between labs, equipment rooms, write-up space, business support/administration and plant; with additional external requirements for gas storage and waste management. With chemical and biological hazards, servicing labs must be separated from office areas and public access. With the additional requirements for a controlled environment through air conditioning and ventilation, heavy laboratory equipment and sensitivity to vibration, labs require quite different building design:

- Slab to slab height: over 4.5m (offices usually 3.75m)
- Floor loading: 4-7 kN per sq m (offices 2.5 – 4 kN per sq m)
- Vibration resistance: 1Hz or below (offices circa 4Hz)
- Air changes: 6 – 20 air changes per hour (offices 2-3)
- Power use: 3 to 5 times higher than a standard office

When designing laboratories, architects and developers rarely know the specific needs of the end user; flexibility is key to accommodating the wide variety of types of science or areas of research within the life sciences umbrella; which applies to current occupiers and future ones. Occupiers frequently change processes and lab set up, so flexibility is crucial to allow the regular modifications.

But as we are creating new laboratory space we have to consider how lab use may change. The two key drivers for adaptation in research are AI and robotics. AI can be applied to research in many ways, especially in conjunction with robots. AI learning for robots will improve and enhance the ability of the robot to perform repetitive tasks in preparing samples, basic experiments and analysing samples and results. Robots can speed up the process and should be more accurate than humans leading to greater efficiency. The ability to perform tasks and analyse results can greatly accelerate research programs. This automation is applied to:

- Predictive modelling – helping to create more specific tests leading to a higher chance of success
- Screening – fast testing of materials or samples reducing time for product development
- Drug discovery – in tandem with AI, new structures and compounds can be analysed for efficacy and safety, then tested
- Safety – Robots can be operated in highly contained environments with great accuracy, reducing the risk to humans
- Remote access – robots can be established to perform tasks remotely operated by researchers
- Quality control – robots can be programmed to carry out stringent quality control to a greater accuracy and higher turnover

AI works principally in two ways: assisting the learning of the robot and vastly increased data analysis capacity and accuracy. AI will have a huge bearing on research speed and methods, the impact on real estate is also marked. Most of the AI power will be housed in data centres, accessed via the cloud. Security, power and connectivity will be the key considerations for the data centres but that is the same for all, not just life science research. Data centres require significant cooling capacity, the larger, more sophisticated systems are water cooled which has led to Microsoft reporting a 34% increase in water consumption in 2021 - 2022 and Google up 20% in the same period, leading to concerns over supply especially in already stressed regions such as Cambridge.

AI in conjunction with robots will require an “edge” presence (local instead of remote), i.e. the data analysis and learning will be integral to the robot as AI helps program the robot and fine tune the movements to perfect the process.

Dr Sally Ann Forsyth OBE, CEO, Stevenage Bioscience Catalyst, said: “Artificial intelligence and robotics are revolutionizing the life sciences industry, accelerating research and bringing new therapies and products to market faster than ever before.”

Robots can be desk-top or free-standing units, most automation will come from large units capable of multiple functions and movements. The weight of these robots is a significant change for real estate to adapt, weighing up to 300kg in the space of a person and a lab bench which may combine to c. 120kg, the floor loading becomes stressed, especially with the density of robot use.

London-based Automata Technologies, a biotech company that offers robotic automation solutions to life science labs has just announced the raising of \$40m (£32.9m) to expand on a global basis. Sphere Fluidics, based at Granta Park in Cambridge, is a University of Cambridge spin out which has developed machines to split and sort single cells faster and more accurately than people can. Nan Li, co-founder of Dimension, the life science R&D investor and backer of Automata, says, “the modern lab is a data factory” also commenting on the need for reliability, accuracy and speed.

We are witnessing the dawn of a completely new approach to computing, where complex statistical and mathematical problems will be solvable. Quantum computing uses the far more powerful language of qubits rather than the bits used in our everyday computers and handheld devices, making QC able to perform much more complex calculations. Every industry worldwide will be directly or indirectly affected by quantum computing.

In the biopharmaceutical industry, the research and development of molecular structures will be revolutionised and become more efficient, meaning drug development will rely less on trial and error.

Beyond research and development, quantum computing could enable automatic drug recommendations, helping to progress the preventative, rather than curative, age of medicine.

We must also consider the type of space required for the new research methods. Modern life science organisations are battling to attract the best talent, leading to a vast improvement in the quality of space and provision of amenities. There is a very human element to creating successful clusters, science parks and innovation districts, which has a notable cost implication. Robots and AI supercomputers do not need any of this enhanced environment, so to save money they will most likely be housed in more secondary locations where space is cheaper and transport less important.

AI and Robots will not remove the need for people, the output still requires laboratory testing, but it will speed up our ability to find solutions and complete research programs. So, whilst we will not dispense with the prime laboratory space being created, we may see a divergence in the way we interact with the technology drivers and need to consider the services provided by the real estate we create.

Science and Technology Clusters

Matt Lee, Carter Jonas' Head of Science and Technology discusses the firm's involvement at Culham Science Centre, Oxfordshire, as an example of how buildings remain crucial to scientific advances.



Matt Lee
Carter Jonas' Head of Science and Technology

As part of my role at Carter Jonas, I identify appropriate locations for new science and technology projects similar to campuses such as Culham, where some of the most innovative technologies are being developed.

The UK has been a leader in the fields of science and technology for many years, but we have experienced decades of low funding for necessary development in subjects such as nuclear research.

Despite that, we have some of the best academic institutions for science and technology; Covid and the drive for clean energy have sparked a realisation that we need to do more to stimulate innovation. In Oxfordshire specifically, UKAEA, Tokamak Energy, and First Light Fusion have all been active in nuclear fusion technology.

In January this year, the Government produced a white paper Advanced Nuclear Technologies, which reaffirmed its commitment to advanced nuclear technologies and international collaboration. There is no doubt that the cost of fuel, combined with a need for both greater energy security and more sustainable energy have played a role in bringing forward this policy change, and our business is proud to be playing a role in unlocking opportunities for innovation.

Culham Science Centre was recently the location of a significant breakthrough in nuclear fusion technology when the Joint European Torus (JET) laboratory exceeded its own world record for the amount of energy extracted by squeezing together two forms of hydrogen. The experiment produced 59 megajoules of energy over five seconds (11 megawatts of power) – more than double what was achieved in similar tests previously. While only enough to boil 60 kettles, this advance is significant because it validates the case for a bigger fusion reactor.

The Centre is also the location in which our team recently secured planning consent for a multi-million-pound Fusion Demonstration Plant on behalf of UK Atomic Energy Authority (UKAEA) and General Fusion. General Fusion is a Canadian-based company responsible for developing a fusion power device based on Magnetized Target Fusion (MTF) technology. This form of fusion uses the process that powers the sun to create carbon-free, safe and abundant electricity.

The Fusion Demonstration Plant is a critical step towards achieving commercial fusion power. The new facility seeks to demonstrate that fusion conditions can be practically achieved using MTF technology. The planning consent includes a test machine at 70% of full power plant scale to enable the testing and refinement of fusion technology through ongoing research and development based on actual performance. This testing and research is paving the way for the company's future commercial power plant.

Carter Jonas has been involved with Culham Science Centre for many years. Led by Steven Sensecall, our Oxford planning team worked for and secured the release of the site from the Green Belt and its allocation in South Oxfordshire District Council's Local Plan as a strategic employment site. This planning policy framework established the platform for further ground-breaking science and technology-related development at Culham, such as this facility.

Oxfordshire is the home to many scientific 'firsts', including pioneering work on the Covid-19 vaccine. As an example, at Harwell Science and Innovation Campus in nearby Didcot, our team helped secure planning consent for the accelerated construction of the Vaccines Manufacturing and Innovation Centre (VMIC) and has recently gained further planning consent at Harwell, on behalf of Moderna, for a purpose-built vaccine manufacturing and R&D facility.

Culham is not only home to the UKAEA and JET, but also to a two-tonne, five metre-long copper centre rod, one of the key components for the Mega Amp Spherical Tokamak (MAST) Upgrade, also the Spherical Tokamak for Energy Production (STEP) Programme and the Fusion Industry Programme. The various fusion programmes are grouped under the umbrella of CCFE (Culham Centre for Fusion Energy).

As a result of the significant work in these pioneering sectors, science campuses such as Culham and Harwell are defined as innovation clusters. Innovation clusters are the dynamic, high-tech components of larger regional communities which are based on sector commonalities and use similar technologies.

Science campuses offer the necessary infrastructure for the creation of unique opportunities in science and technology, including specialist facilities and opportunities to collaborate. Science parks invariably look to build around a cluster, usually one provided by a leading university or other collaboration/research opportunities such as an NHS health trust. In so doing, they attract the best talent available and, importantly, help in retaining that talent, which is vital to innovation. Clusters can be seen as an ecosystem for national and international projects, one which can extend the lifecycle of these projects through the development of ideas and retention and upskilling of talent.

On a more practical level, science parks provide specialist facilities for the research and development of technologies which is not usually provided for within city centres: in this case, large units containing reactors, which meet the requirements for high levels of power, very specific climate control and the storing of heavy machinery. Fusion power requires the technology to reach 1m degrees Celsius and the security in which to do it.

The work taking place at Culham today might not power our energy systems for many years, but it is an important part of a long-term plan which will significantly benefit future prosperity.

And with both an increased political focus on nuclear power, and the increased funding to support it, there is significant potential not just for Oxfordshire but for other cities in the vicinity of universities with nuclear research teams, including Cambridge, Manchester, London and Bristol. As the role of specialist clusters such as Culham shows, physical location is imperative to scientific success.

Have a little fAlth



Jonathan Jay
Co-founder of Conduit Real Estate

AI, short for Artificial Intelligence, is a transformative technology that employs mathematical algorithms and software code to enable computers to learn, understand, and generate information, similar to how humans do. Essentially, AI is a computer program like any other – it processes inputs and generates output – and is owned and controlled by people. AI is not synonymous with killer software or rogue robots that are depicted in movies, but the impact of AI on society extends beyond our current imagination

AI has the potential to redefine human history, by marking the end of its human-dominated phase. Our history is shaped by the interplay of biology and culture, where our needs and desires intertwine with cultural creations like laws and religions. However, when AI takes control over culture, it ushers in a new era. Unlike previous tools, AI has the power to generate entirely novel ideas, altering the course of history itself. Renowned historian and philosopher, Yuval Noah Harari, aptly put it: AI has effectively hacked the operating system of human civilization.

While technological advancements have historically led to job creation and increased productivity, there are crucial caveats. The new jobs emerging from technological changes require different skillsets, making the transition challenging. Retraining workers becomes crucial, and those unable to adapt need protection through a robust social safety net. Addressing these issues is costly and finding consensus between governments and private companies on how to share this burden is challenging. Furthermore, AI-driven displacement will occur more extensively and rapidly than previous transitions, causing economic and political upheaval on a global scale.

The notion that AI will lead to an apocalypse isn't new, aligning with a longstanding Western tradition of millenarianism. However, the automation-kills-jobs argument is based on the flawed Lump of Labour Fallacy, incorrectly assuming a fixed amount of labour to be done in the economy. In reality, technology increases productivity, lower prices, boosts demand and creates new industries and jobs. It empowers people, drives prosperity, and does not destroy jobs.

The recent wave of generative AI products, like OpenAI's ChatGPT and Google's Bard, has triggered a frenzy of investor interest across different industry verticals. Amnon Shashua, the co-founder of autonomous driving group Mobileye, who recently founded the digital bank One Zero, believes that AI tools are well-positioned to revolutionize the private banking sector by increasing efficiency and expanding access to services previously limited to the affluent. Bill Gates emphasizes the potential of AI as a "digital personal assistant" in the workforce, enhancing productivity by assisting various tasks.

AI's impact is also manifesting in the real estate industry. Brokers and professionals are increasingly leveraging AI tools for various tasks, raising questions about the future role of human brokers and associated fees. AI technology in commercial buildings enhances efficiency and reduces environmental impact, showcasing AI's benefits within the sector.

Despite these advancements, AI's full potential is hindered by limited availability of specific data from public sources.

The lack of comprehensive data hampers progress in combating climate change, particularly in enhancing energy efficiency in buildings. Jules Barker, Global Director of Product at WiredScore, emphasizes that sharing data globally from office buildings could lead to effective strategies for reducing carbon emissions. Barker suggests that if all office buildings globally shared data, it would enable the development of highly effective strategies for reducing carbon emissions.

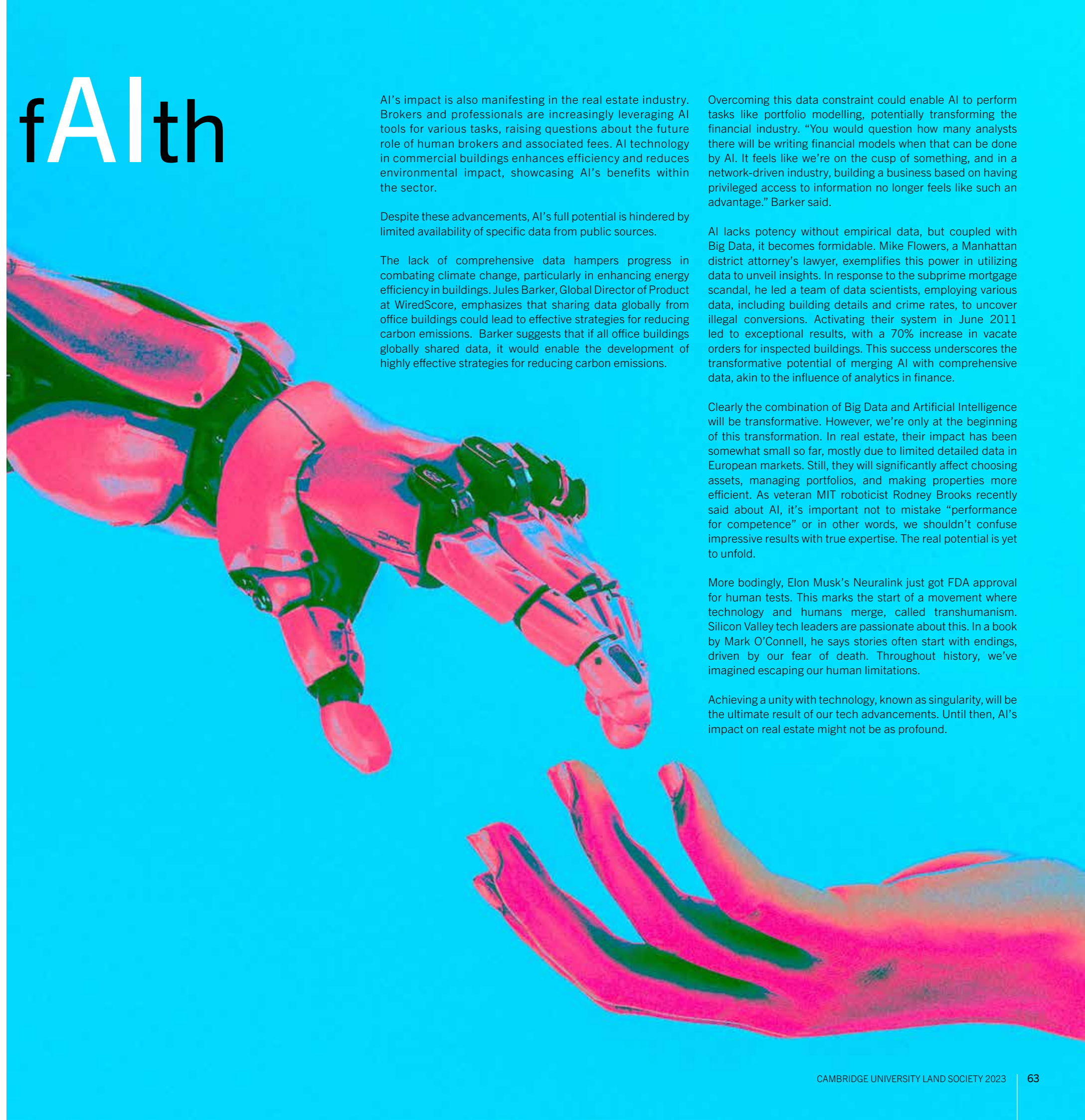
Overcoming this data constraint could enable AI to perform tasks like portfolio modelling, potentially transforming the financial industry. "You would question how many analysts there will be writing financial models when that can be done by AI. It feels like we're on the cusp of something, and in a network-driven industry, building a business based on having privileged access to information no longer feels like such an advantage." Barker said.

AI lacks potency without empirical data, but coupled with Big Data, it becomes formidable. Mike Flowers, a Manhattan district attorney's lawyer, exemplifies this power in utilizing data to unveil insights. In response to the subprime mortgage scandal, he led a team of data scientists, employing various data, including building details and crime rates, to uncover illegal conversions. Activating their system in June 2011 led to exceptional results, with a 70% increase in vacate orders for inspected buildings. This success underscores the transformative potential of merging AI with comprehensive data, akin to the influence of analytics in finance.

Clearly the combination of Big Data and Artificial Intelligence will be transformative. However, we're only at the beginning of this transformation. In real estate, their impact has been somewhat small so far, mostly due to limited detailed data in European markets. Still, they will significantly affect choosing assets, managing portfolios, and making properties more efficient. As veteran MIT roboticist Rodney Brooks recently said about AI, it's important not to mistake "performance for competence" or in other words, we shouldn't confuse impressive results with true expertise. The real potential is yet to unfold.

More bodingly, Elon Musk's Neuralink just got FDA approval for human tests. This marks the start of a movement where technology and humans merge, called transhumanism. Silicon Valley tech leaders are passionate about this. In a book by Mark O'Connell, he says stories often start with endings, driven by our fear of death. Throughout history, we've imagined escaping our human limitations.

Achieving a unity with technology, known as singularity, will be the ultimate result of our tech advancements. Until then, AI's impact on real estate might not be as profound.



The Role of AI in Sustainable Building Design and Lifecycle Management



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 Founding Partner, Sustineri Partners
 Pembroke College, 2014

In the quest for a more sustainable future, the construction and operation of buildings play a pivotal role. Buildings are responsible for a substantial portion of global energy consumption and greenhouse gas emissions. To address these challenges, artificial intelligence (AI) is emerging as a powerful tool for sustainable design, construction, refurbishment, operation, and even the eventual deconstruction of buildings.

Sustainable Design

AI in Sustainable Design: AI-driven tools are transforming the design phase of buildings. AI algorithms can analyse vast amounts of data to optimise building designs for energy efficiency, occupant comfort, and environmental impact. They can generate design options and assess their performance quickly.

Example: Autodesk's generative design software uses AI to create thousands of design variations based on specified parameters. It helps architects and engineers discover innovative, sustainable design solutions.

Construction

AI in Construction: Construction projects are notorious for delays and cost overruns. AI helps streamline construction processes by predicting potential issues, optimising scheduling, and enhancing safety.

Example: "Spot", the robot dog developed by Boston Dynamics, can navigate construction sites to capture 360-degree images, monitor progress, and ensure adherence to construction plans.

Refurbishment

AI in Refurbishment: Retrofitting existing buildings for sustainability is crucial. AI can analyse data from sensors and historical building performance to identify areas where improvements can be made, such as upgrading insulation or HVAC systems.

Example: Gridium's AI-driven building management platform continuously monitors and optimises building systems to reduce energy consumption and improve comfort without significant renovations.

Operation

AI in Operation: Once a building is operational, AI can optimise its ongoing performance. It can adjust heating, cooling, and lighting in real-time based on occupancy and external conditions to minimise energy usage.

Example: IBM's Watson IoT platform uses AI to manage and control building systems, leading to energy savings and improved occupant satisfaction in commercial buildings.

Deconstruction/Demolition

AI in Deconstruction/Demolition: When a building's life cycle ends, AI can assist in deconstruction planning to maximise the salvage of materials for reuse or recycling. It can identify hazardous materials and ensure safe demolition practices.

Example: Ecobot uses AI to automate wetland delineation, but its technology has broader applications, including identifying hazardous materials in building structures before demolition.

The Future of AI in Sustainable Building Lifecycle

Integrating AI into sustainable building practices is still in its early stages, but the potential benefits are vast. As AI technologies continue to advance, we can expect even more significant impacts on the sustainability of buildings. Here are a few trends to watch for:

- 1. Energy Efficiency:** AI will play a central role in optimising building energy usage. Advanced algorithms will anticipate energy demand and supply, reducing waste and costs.
- 2. Predictive Maintenance:** AI will predict when building components (e.g., HVAC systems) are likely to fail, allowing for proactive maintenance that reduces downtime and prolongs equipment life.
- 3. Circular Economy:** AI will support the circular economy by facilitating the recovery and reuse of materials from deconstructed buildings, minimising waste.
- 4. Resilience:** AI can enhance a building's resilience in the face of climate change by predicting extreme weather events and enabling adaptive responses, such as fortifying structures or rerouting resources.
- 5. Human-Centric Design:** AI-driven design tools will prioritise occupant comfort, health, and well-being, creating buildings that promote a high quality of life.

AI has a potential to be a game-changer in the pursuit of sustainability in the construction and operation of buildings. It empowers architects, engineers, and building owners to make data-driven decisions that reduce environmental impact, enhance efficiency, and improve the overall quality of facilities. As AI technologies continue to evolve, they will be essential in creating a built environment that meets the needs of the present without compromising the future. We better get on board.

Disrupting traditional construction through technology

The built environment is responsible for 38% of global carbon emissions and real estate is one of the largest industries globally, but we are behind the curve in terms of innovation and sustainability. The construction industry also faces significant cost inflation, impacting the speed, quality and sustainability credentials of new developments.

In particular, the way we build has not changed significantly for decades, but the implementation of innovation is now accelerating, including through modern methods of construction (MMC). MMC is an umbrella term for a range of techniques that provide alternatives to traditional construction, including offsite production, and is gaining momentum as awareness of the benefits and confidence in these techniques and products grows. Advantages include reduced construction time, fewer defects due to more rigorous testing in the controlled factory environment, improved safety, greater flexibility, and reduced energy use and waste. However, standardised products are not ideal in many cases, as each plot of land is unique, and developers often prefer a bespoke building.

3D printing of concrete is a rapidly growing and improving MMC which can be carried out onsite or offsite and has to date been used predominantly to produce walls for houses. Until now, the technology has not been leveraged to create structural elements for larger buildings such as beams, floor-slabs, frames and columns.

Let's take the beam as an example. There are currently three main options: concrete, steel and timber (glulam or laminated veneer lumbar) beams. Timber is the most sustainable option, but also by far the most expensive, partly due to its supply chain restrictions, i.e. space and time to grow trees. Fire safety aspects also result in higher insurance premiums. We expect timber to be a larger part of the future construction supply chain but likely limited to premium developments and / or locations close to the timber source.



Andy Coward
Founder & CEO, Net Zero Projects



Sarah Blake
Commercial Director & Co-founder,
Net Zero Projects



Concrete and steel share most of the global market for large scale construction and we expect that to continue. Each has their own well-known advantages, e.g. concrete's inherent fire protection, and steel's light weight which leads to time and cost savings in construction, smaller foundations and fewer columns. In the UK and many developed markets, the two are competitive on price, with different sub-sectors opting consistently for one rather than the other, e.g. city offices usually steel; hospitals usually concrete. However, in the rest of the world, concrete tends to dominate due to the ability to source locally and the higher cost of steel here. In fact, concrete is the second most-consumed material in the world after water.

The rectangular cross-section of a concrete beam with which we're so familiar stems from this being the cheapest formwork box in which to pour the concrete. Complicated formwork gets expensive. However, only a small portion of the material is actually required to take the forces applied and the rest is added weight.

Now there's an alternative option. Andy came up with the minimass concept two years ago, making the decision to leave his job - heading up the Engineering Department at Danish architecture firm Bjarke Ingels Group - to launch Net Zero Projects and make minimass a reality. minimass is a patented, low carbon and low cost improvement on traditional concrete and steel construction, for use in large buildings and bridges. 3D printing has been the key to unlocking this innovation, enabling precise placement of the right material, in the right place, for the right purpose, without any waste or complicated formwork.

By 3D printing the concrete in beams, we see the potential for immediate savings of up to 70% of embodied carbon and up to 50% of material cost for equivalent performance. Further cost and carbon benefits come from reduced labour, no formwork, and reduced transportation costs due to being extremely lightweight. 3D printing can be offsite, yet unlike most MMCs, it gives full design flexibility - e.g. beams of any length can be created.

The minimass USPs are maximised in larger buildings and structures including bridges, warehouses, manufacturing facilities, data centres, airports, hospitals, car parks, offices and big box retail. This is because the solution enables wider column spacing, desirable by many occupiers and providing further carbon and cost savings for developers.

Looking forwards, there are several future trends which will impact minimass and other technology and sustainability solutions for construction.

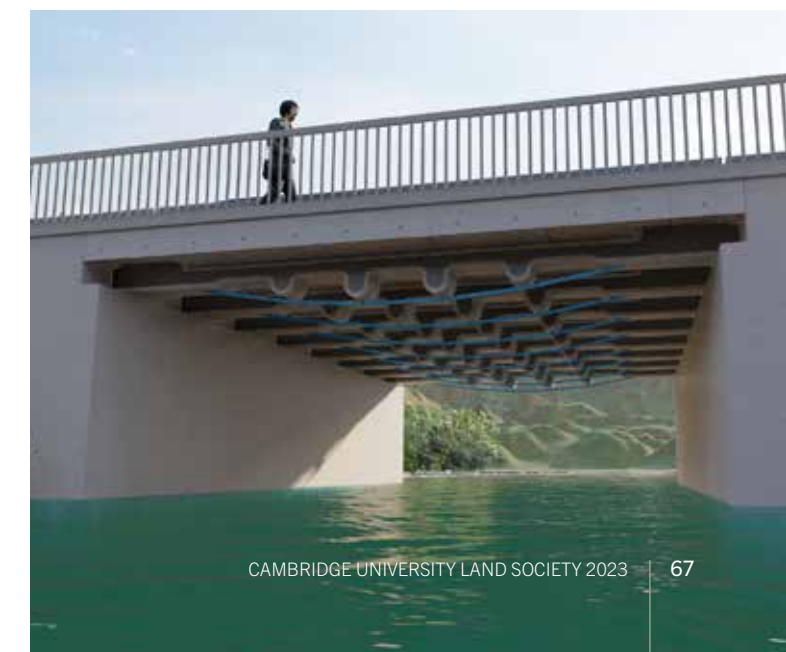
Firstly, materials... many businesses are developing low carbon materials to replace carbon-intensive concrete and steel going forwards. We predict a wholesale change in the composition of the built environment will come, but it could take a decade (or more) for the supply chain to adjust. We have future-proofed minimass, as the solution will be able to reap the benefits of these future materials - but for now, reducing the quantity of the traditional materials we use is a good first step. We also see potential for growth in hybrid structures e.g. using a combination of minimass beams and timber (CLT) floors. Regulatory and insurance change will be interesting to watch as timber use increases. Fire safety regulations and insurers will need to adapt, but developers are also under pressure from more stringent regulations post-Grenfell e.g. the new Building Safety Regulator means extra oversight for buildings over 18m or 7 storeys.



Secondly, digitalisation... this will accelerate, particularly where solutions remove labour from construction sites. Digital twinning - providing owners with a model of the building to predict the maintenance required - will be commonplace. The growth of offsite construction will accelerate rapidly over the next 5 years e.g. Laing O'Rourke has invested significantly in prefabrication, as this reduces rework and improves coordination. The reshoring of offsite production will continue, due to carbon, cost and geopolitics.

Lastly, sustainability... the (currently low) proportion of the global economy which is circular will increase, over and above carbon alone, leading to reduced waste of raw materials; there will be more emphasis on reusing, renovating and repurposing existing buildings. As the world moves towards net zero, the facilitation of innovation will need to improve, with tech investors needing to adapt their portfolios. At present, most avoid hardware, as their focus has been on the software revolution of the last 20 years and hardware typically involves higher capital intensity. This is presenting a barrier to hardware innovation, but only through combining software and hardware innovation will we generate the carbon savings the world needs.

Our beams are ready for use on projects in the UK and EU, with the first pilot projects due for completion in early 2024. If you have upcoming development projects and want to reduce both carbon and cost, we would love to hear from you.



Material Reuse **At Scale:** Reducing Waste and Embodied Carbon, whilst **Unlocking Value**



Morgan Lewis
CEO, Material Index

I am writing as the CEO of Material Index, a construction technology company that has a software for the cataloguing and sale of materials within existing buildings.

The reuse of the majority of components and materials from buildings being retrofitted, converted or demolished, will be completely normal in 2050.

Currently construction is responsible for over half of the UK's waste by volume. Often it's the case, particularly with interiors, that materials are being stripped out and sent to waste because the buildings they are part of are undergoing change and not because the components themselves are in any way defective or out of date.

In fact, almost everyone who has worked in property for a length of time will have seen expensive components, ranging from structural steel, to partitions, to lighting systems, that were recently installed at great cost, being disposed of as waste. However, we should expect this to change quickly over the next decade. Far more of those components will be reclaimed, exchanged, often through digital platforms, and ultimately reused.

Currently, less than 2% of all materials that arise from deconstruction are saved for reuse. There is an existing supply chain for purchasing many components, from beams to lights to bricks, as well as many new businesses entering the market, and existing manufacturers bringing in remanufacturing schemes. Whilst there can be additional costs to the dismantling and logistics involved in reusing components, we have found for about 20% of components within an office or retail unit, the resale value plus the savings made from lower waste disposal costs, make reclamation and resale worthwhile. This is far higher than the current industry average.

It should be expected that the reuse and shared economy revolution we have seen in other sectors of the economy, enabled by the growth of digital platforms and marketplaces, and driven by changing consumer and manufacturer behaviour, will come to the construction industry. Overall the secondary (second-hand) retail sector has been growing at 11x the rate of primary retail over the last five years in the UK and US.

There are many tailwinds that will accelerate this transition. As the grid and transport decarbonise, both the waste footprint and the embodied carbon of construction will become an increasingly important, and publicly-known, issue. Yet, many of the materials currently being wasted, are themselves potentially the source of low embodied Carbon materials.

The case of bricks is illustrative and astonishing. Each year the UK purchases well over 2 billion bricks, and also demolishes just over 2 billion, of which it is estimated less than 60 million are reused. Far higher brick reuse rates are possible, even with cement mortar walls, and plenty of new technology that is now commonplace in Scandinavia, can help with brick disaggregation. Meanwhile, it is extremely technically challenging to make a new fired brick as low-carbon as a reclaimed brick. It is highly likely the UK will continue to favour brick as an attractive and in-keeping facade solution and therefore that low-carbon reclaimed bricks will be increasingly in demand.

As a result of the need to decarbonise the economy the property industry should be prepared for the UK to follow Denmark, France and key US states in regulating embodied carbon in new builds and renovations. This was recommended in a recent parliamentary report: Building to net zero: costing carbon in construction Parliamentary. Within the UK, the GLA in London has been leading by requiring Whole Life Carbon Assessments, and Circular Economy statements for larger schemes.

There are however, real estate specific challenges to enabling reuse at scale beginning with simply knowing what is in a building prior to deconstruction and being able to know in advance of deconstruction, which of those components are worth dismantling for resale. While new, larger buildings often have advanced digital models that can contain this information, it is estimated that 80% of the buildings that will be around in the UK in 2050, have already been built. Most existing buildings have surprisingly limited information on their constituent components. Incidentally this is one of the reasons why it is so expensive when a building product, whether it be asbestos, combustible insulation or RAAC, turns out to be defective.

Material Index digitally catalogues the components within buildings, provide information on their reuse potential, and offers full traceability on those components after deconstruction. We tend to work on larger estates and only enable sales materials to accredited business buyers. Our services are offered on a consultancy basis to landlords, including pre-demolition audits, or our digital product on a subscription basis to contractors. Our clients include British Land, Sir Robert McAlpine, 3XN architects and General Demolition.

Recent showcase projects in Germany and Scandinavia have shown it's possible to source over 70% of common construction components from the reclamation industry, and possible to design buildings so over 80% of their components are profitably reclaimable at the end of a building's life. This is a long way from where we are today, but even if we get to half these rates of reuse by 2050 this will be transformative in terms of how we construct and deconstruct buildings. It will ultimately allow for a much more efficient use of resources. There will undoubtedly be challenges in growing the reuse supply chain, and no doubt major changes in the technologies used to digitise our built environment, but the ecological and financial benefits from this transition, in the long run will be enormous.



Navigating the Path to True Digital Healthcare Transformation



Con McGarry
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Arcadis

In the rapidly evolving landscape of healthcare, digital strategies have become synonymous with the promise of ground-breaking advancements. Health organisations around the world are fervently drafting their visions of a technology-enabled future, outlining ambitious transitions from legacy systems to a tech-savvy utopia. Yet, as the digital horizon expands, many are finding that merely having a

digital strategy in place is not the panacea they envisioned. The journey from concept to implementation remains a labyrinth, and a glaring gap between intention and outcome persists.

Why the disconnect? The reason is both straightforward yet elusive: many strategies end up as beautifully articulated words with minimal real-world impact. At their core, digital strategies serve as a blueprint for integrating technological advancements into healthcare services. They encompass aspirations of seamless data exchange, advanced telemedicine services, AI-driven diagnostics, and much more, all with the goal to enhance care delivery, streamline operational processes, and elevate the patient experience. Herein lies a critical oversight: while digital strategies often paint a vivid picture of a technology-driven future, they typically lack the detailed roadmaps or actionable plans needed for actualisation.

Moreover, as these strategies take form, a concerning trend emerges. Institutions, in their zest for modernisation, often prioritise the path of least resistance over the practical needs of their organisation. This results in organisations implementing technologies because they believe it is what they should have, rather than meticulously evaluating what they genuinely need. The very challenges the organisation seek to overcome - be it operational inefficiencies, gaps in patient care, or outdated infrastructure - become an afterthought. Instead of tailoring technology procurements to their specific challenges, needs, and crucially, constraints, they find themselves swayed by the complexity of implementation and the pressure for rapid impact. Furthermore, given the rapidly evolving digital healthcare landscape and ever shifting organisation priorities, many digital strategies become outdated almost as soon as they are published, making their realisation even more challenging.

The inevitable consequence? A layering of technology that is ill-suited, unscalable, and often incompatible. These misaligned technologies, at best, leave unresolved gaps, and at worst, can exacerbate existing challenges or introduce new problems, undermining the very goals the strategy aimed to achieve.

A digital strategy is not just about procuring cutting-edge tools or software; it is about weaving technology into the fabric of healthcare, in a way that addresses foundational needs, optimises processes, reshapes workflows, and targets the intrinsic challenges at the heart of healthcare, ensuring it complements and elevates existing systems and practices rather than merely replacing them. And this is where many institutions falter. The bridge between digital strategy and genuine transformation isn't constructed merely by acquiring solutions. True transformation demands a more holistic approach, one that integrates technology seamlessly into healthcare practices, places human needs at the forefront, and ensures a collaborative evolution between the two.

Unveiling the Reality Gap

Every healthcare institution is unique, with its own complexities and challenges. Despite the allure of off-the-shelf solutions, there's an increasing acknowledgment that a one-size-fits-all approach doesn't address the intricacies of each organisation. The answer lies in recognizing the missing link: an approach that goes beyond technology acquisition. A Digital Realisation Strategy is rooted in understanding the distinct challenges an organisation faces and quantifying them. It emphasises designing tailored solutions, while considering both singular and blended technology deployments. It weighs up the risk vs reward and considers other factors such as physical space reconfigurations and the underpinning digital infrastructure as core requirements and enablers of success.

The Digital Realisation Strategy is a blueprint that acknowledges the need for a paradigm shift, placing the people — healthcare professionals and patients — at the epicenter of change, but also recognising the tangible, logistical aspects that underpin successful technology integration.

From Concept to Reality: A Holistic Paradigm

The value of the existing digital strategy cannot be understated. These strategies, meticulously crafted, reflect genuine aspirations and provide a visionary glimpse into the potential of technology-integrated healthcare. Their importance as indicators of intent and directionality should not be diminished. Rather than replacing or dismissing the digital strategy, the Digital Realisation Strategy complements it, augments it and provides the granular detail, actionable steps, and iterative approaches required to navigate the complexities of implementation.

What sets a Digital Realisation Strategy apart is its holistic approach to transformation. It starts with acknowledging the human element and emphasises understanding the workflows, processes, and needs of the people who drive healthcare - the frontline healthcare workers and the patients they serve. It then asks the pivotal question: How can technology serve

as a catalyst for meaningful change while aligning with the original vision described in the digital strategy? Consider, for example, the UK National Health Service's ambitious digital-first approach. While 95% of general practices offer online appointments, less than 30% of patients are using these services. This gap underscores the importance of understanding patient behaviours, needs, and trust factors.

Quantifying The Impact

While digital strategies often paint broad visions of the future, they sometimes miss the finer details necessary to turn these visions into actionable and measurable steps. It's not enough to merely adopt the latest digital tools or platforms. What matters is the strategic alignment of these tools with the organisation's specific challenges and goals. Consider the broader healthcare sector, where numerous institutions have implemented digital tools, yet only a few have truly harnessed their potential and are able to report a tangible positive impact on patient outcomes. The difference often lies in how strategically these tools are integrated into workflows and how closely they align with patient needs and organisational objectives. The emphasis, therefore, should not just be on adoption, but on the thoughtful, targeted application of these digital innovations.

There is an imperative for organisations to quantify their specific challenges and draw a direct line to the realisation strategy meant to address them. This fundamental step of quantifying the 'before' and anticipating the 'after' is not something digital strategies are designed for and is often overlooked during technology implementations which tend to prioritise meeting project milestones and rapid rollout to demonstrate "progress".

Without this baseline, how can institutions measure progress or success of their digital strategy? Rooting the transformation process in quantifiable evidence not only illuminates the path forward but also ensures a tangible, measurable return on investment. By committing to a before-and-after analysis rooted in hard data, healthcare organisations can both track their progress and truly reap the rewards of their digital journey.

Bespoke Solutions for Targeted Transformation

Building on the data-driven insights, the crafting of bespoke solutions becomes the next step to transform the umbrella goals of the digital strategy into actionable, effective innovations. Consider a large healthcare institution aiming to refine the dynamics of its outpatient department. The broad goal, as defined in their digital strategy, is to "support the development of seamless digital pathways."

In seeking solutions, the institution considers a one-size-fits-all hospital management system. This software provides a suite of features: a digital calendar for scheduling, automated reminders for patients, and basic monitoring of patient flow. On paper, it seems to address the primary requirements. The administrative staff can digitalise their appointment systems, while patients receive timely reminders to reduce no-shows.

However, the intricacies of the institution's challenges aren't fully explored or understood. While the system might be able to manage the typical day-to-day patient flow, it doesn't consider the unique patient demographics of the community, or fluctuations caused by factors such as seasonality. There is no provision for a dynamic patient interaction system, which can adapt to real-time challenges and offer flexible scheduling

options. By solely focusing on a generic system, the institution misses the depth of problem-solving required to truly optimise their outpatient services. What is needed is not just a digital tool, but a comprehensive solution that is sensitive to the real-world complexities of the department.

A more robust solution could involve digitally optimising patient flow. By using real time analytics to forecast daily patient volumes, appointment slots can be dynamically adjusted to optimise utilisation. Deployed in tandem with an Adaptive Scheduling Interface, patients can choose, reschedule or cancel their appointments with real time feedback about availability and wait times.

This progression from vision to execution underlines the transformative potential of a plan that roots itself in detailed understanding and targeted solutions to challenges, aligning the intricacies of technology with the genuine needs of patient care.

Roadmap for Progress

With a foundation of evidence and targeted solutions in place, a phased approach to transformation becomes deeply rooted within the fabric of the institution, evolving from a periodic initiative which may or may not happen at an indeterminant point in the future, to a continuous aspect of 'business as usual'. This ensures that the journey of transformation is both calculated and manageable. Such a methodical approach paves the way for sustainable and scalable change, catering to both immediate needs and long-term aspirations. By prioritising interventions that hold the promise of maximum impact and continually revisiting and refining the plan based on evolving requirements and feedback, the institution remains agile and responsive in the face of the ever-changing digital healthcare landscape.

In the age of rapid technological advancement, standing still is akin to moving backward. While digital strategies provide an essential vision for the future, on their own, they risk leaving organisations adrift in a vast sea of possibilities. Recognising that these strategies, though crucial, require the supplemental guidance of a Digital Realisation Strategy is imperative. Without this tangible roadmap from aspiration to realisation, institutions risk stagnation, inefficiency, and ever diminishing quality of patient care. The message is clear: healthcare leaders must act decisively to actualise their digital strategy, weaving their vision with actionable steps, ensuring that aspirations don't just remain on paper but transform into focused and deliberate progress that truly benefits the patients of today and tomorrow.



Invested and Involved: How Operational Real Estate can drive Greater Value



Georgia Krell
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Jesus College, 2009

In June this year, Macfarlanes LLP, a London-based law firm, published its operational real estate report, compiled in collaboration with Montfort Communications. Georgia Krell, a senior associate in Macfarlanes' real estate team, discusses the report's contents and implications below.

From workplace gyms to neighbourly cinema screenings on the roof of a co-living high-rise, people are expecting more from the buildings and spaces in which they work and live. In fact, there has been a paradigm shift towards bricks and mortar

which incorporates service or 'operational' functions. The Operational Real Estate Report delivered by our real estate team here at Macfarlanes explores why, off the back of this shift, there are huge growth opportunities to be had in applying an operational approach to real estate investment across both alternative and traditional real estate markets.

The report defines operational real estate ("OPRE") as a real estate asset where income and values are linked to underlying operational performance. Typically associated with operationally intensive asset types, such as hotels, and more recently in emerging alternative sectors such as student accommodation and senior living, the report argues operational structures can be applied to traditional and emerging sectors alike to unlock potential returns for investors. Nicole Mitchell, head of real estate strategy at Macfarlanes, uses examples of retail and office sectors to demonstrate operational real estate application: "Could a specialist operator revitalise a shopping centre with a more experiential approach to shopping or could an enhanced service provision, with a focus on wellbeing, lure workers back to the office?"

The reason alternatives have led the way, according to the report, is because their business models are often inherently well suited to OPRE. For example, a co-living block can increase income through amenities and professional management. Mitchell says the development of the operational real estate markets in the UK represents a natural next step in the evolution of real estate, as asset owners are increasingly practising an active management approach to drive up returns.

So why is it that operational real estate is so attractive? Put simply, the report's findings demonstrate that generating better cashflow is key in today's real estate market. In the current challenged market, sustained higher interest rates have squeezed returns and capital appreciation is expected to be limited. Cashflow growth is therefore imperative. OPRE structures permit hands-on management of income and a chance to align the returns of the asset with the returns of the operator.

These potential rewards are reflected in the report's predictions for OPRE UK market size in selected alternative sectors. At the moment, the UK operational market is valued at approximately £240 billion. The report forecasts that this has the potential to expand to total in excess of £750 billion once fully saturated, with impressive percentage-change increases projected for the BTR, senior living, self-storage and data centre sectors.

The report doesn't just look at the 'why' but also moves on to assess the 'how'. In short, what kind of structures can be used to tie together the operator and the real estate to ensure mutually beneficial objectives? "Investment structures can range from relatively passive hybrid leases to management contracts to full on vertical integration when a company is brought 'in house' and owned and managed exclusively by either the investor or the manager" says Dan Marriott, partner at Macfarlanes. The route chosen will depend upon a number of factors including the particular investment perspective, the maturity of the sector and the investor's expertise and risk appetite.

There are of course risks to be carefully considered before jumping into OPRE. OPRE involves managing not only the physical asset but also the operational, legal, regulatory and reputational aspects of the business. To that end, it may require more specialised skills and experience than traditional real estate, as well as more coordination and collaboration with various stakeholders, such as operators, customers, regulators and suppliers.

Due to the higher degree of variability and subjectivity involved in assessing the income and expenses of a business, coupled with fewer comparable transactions to support valuation, valuing OPRE also has its challenges. Valuation complexities lead to two principal hurdles for OPRE investment: (i) securing debt; and (ii) exit strategy. Lenders for non-OPRE assets have traditionally focused on LTVs. But OPRE lending must take a broader approach, accounting for trading costs, past and future performance and supply and demand factors, alongside the real estate fundamentals, to give a truly holistic assessment of the viability of the operational asset. In terms of OPRE exit management, this is not only affected by valuation peculiarities but also by the intrinsic link between the value of the asset and its operational integrity – how does the investor extricate themselves from the enmeshed 'package deal' with the operator – and so exit strategies need to be considered carefully from the outset of the investment.

However, the possibility for attractive returns from well-run operational assets means that investment will only become more alluring. In many ways, OPRE produces a more sustainable income outlook when considered against the backdrop of a traditional long-leasing model because value is derived from all elements of the business rather than a simple rental stream, which is only as good as the covenant standing behind it.

Overall, the report illustrates a bright future for operational real estate, with opportunities to be derived from the macroeconomic environment including an ageing population, food security concerns and government-backed life sciences industry evolution. The growing focus on the social impact of the built environment is also particularly well suited to the end-user focus of OPRE strategies. Investors and laypeople alike will be drawn into, and affected by, this operational repositioning and acting now to get ahead of the curve could produce significant benefits. Time to get your gym gear on and put those assets to work.

For a copy of the report please visit the Macfarlanes website www.macfarlanes.com.

Hospitality in transition



Tim Dodd
Partner
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The hospitality industry is in transition. The pandemic, the ever-growing proliferation of hotel brands, the merging of international global hospitality companies, and the convergence of hotel hospitality with other operations including co-living, flexi-working, senior-living, serviced apartments, extended stay, wellness resorts and branded residences, means that the stand-alone hotel is likely to be a bygone relic by the year 2050. In this article we will take a brief review of some trends which are likely to shape the hospitality landscape of the future, and we also set out the overriding importance of the sector's swift adoption of sustainability measures in its development.

Following the release from lockdown, guests/consumers/travellers knew that they were never going to take travel for granted again. They wanted to see the world, exercise travel as their human right, and prioritise their spend of disposable income on experiences rather than consumer trinkets.

Some travellers (not knowing when a lock-down may hit again) 'carpe diem' and treated themselves to a dose of luxury. The premium/luxury hospitality sector immediately showed its gratitude – a recent Morgan Stanley assessment shows that luxury and lifestyle hotels currently (summer 2023) deliver 20% of the hotels sector's revenue, whilst only making up 4% of global inventory. Investors are quick to support luxury and lifestyle brands, as the segment appears to offer further potential for growth and greater returns, with hoteliers' Revenue Management departments nudging up rates as travellers become willing to pay more to enjoy the same experiences. STR's presentation at the International Hotel Investment Forum in Berlin in May 2023, indicated that travel would be the last thing that an overwhelming majority of consumers would cut from their personal budgets for the year.

Another trend has been an increasing desire for travellers to feel part of the community in which they stay. This may either be a natural effect from the Airbnb boom of the past decade, or it may be because hotel guests have grown to expect a more social aspect to their stays and not just the 4 walls, pool, spa and bar. After effectively being locked-up during the pandemic, their desire to be amongst other people has become most important. International hotel operators consequently increased their range of lifestyle brands which celebrate the features, landmarks and culture of the local community in which the hotel is located. Hyatt's Unbound Collection; Tempo by Hilton; Moxy by Marriott; Thompson Hotels and the Curio Collection, are just a small number of the lifestyle brands which have seen a widespread roll-out throughout NW Europe to satisfy traveller's requests for community.

Furthermore hotels are increasingly finding themselves at the centre of development schemes which also contain offices, health clubs, retail stores, food & beverage outlets, and a central recreational bar. Over time, the hotel is likely to become a hub for the local community as well as for travelling guests. It will locally promote its facilities for graduation parties, farmers' markets, co-working offices, childcare services, EV charging points, weekend parking etc as well as taking bookings for hotel rooms.

Consequently, hotel investors will look to enhance the value of their assets by requiring their operators to increase their skillsets to ensure they can efficiently maximise the revenue returns from each square metre of the investor's development, beyond the traditional hotel alone, so that any dip in hotel bookings can be offset by returns made in flexi-working spaces, branded residences, casinos, spas, bars, and other complimentary hospitality operations on site. So not

only will the geography, look and feel of hospitality developments change, but their operators' day-to-day operational responsibilities will need to be supercharged to facilitate the change. Investors have already kicked the ball, by starting to repurpose the hundreds of thousands of square metres of currently vacant city centre office space, to 'hotelize' it into their developments. The City of London Corporation wants to transform swathes of empty offices into London hotels as part of plans to turn the financial district into a "global leisure destination" that can draw holidaymakers and pleasure seekers alongside suited bankers.

Notwithstanding these trends, the United Nations estimates that nearly 40% of global carbon emissions come from commercial real estate. It is therefore of paramount importance that the sector promptly adopts sustainability measures in new developments to ensure that the net carbon zero target for the UK is achieved by 2050. Furthermore, in recognition that 80% of the buildings that will exist in 2050, already exist today, decarbonising existing properties is just as critical as creating low-carbon new builds.

Energy remains the largest contributor to hotels' carbon footprint (as well as being one of the largest operating costs for hotels). Some major hotel groups have introduced scalable initiatives to target a 46% reduction in emissions from the energy used across their owned, managed, leased and franchised estate by 2030, and have established audit partnerships for hotel owners' use. The industry recognizes that a comprehensive net zero strategy for hotels must address all areas, including the fabric of the building, technology and behavioural change. UK Hospitality launched a Sustainability Programme aimed at guiding the sector to net zero by 2040, by setting out 10 pledges in the four areas of waste, supply chain, skills and biodiversity. The Energy and Environment Alliance is another body specifically constituted to advise the industry on sustainability principles in many work streams including, hotel management agreements and franchise contracts, new sustainability regulations, green construction clauses for construction contract precedents, informing the industry on green finance, sustainability principles in hotels' day-to-day procurement, and green hotel leases.

The ongoing audit of sustainability measures used and refined in the development of hospitality spaces should remain a priority to ensure that the real estate hospitality landscape thrives into 2050 in the multi-operational clusters as described above. The key opportunity for shrewd third-party operators is to now widen their palette of expertise across the various sectors of operational commercial real estate, to ensure that they take their place at the centre of these hospitality developments of the future; 2050 and beyond.



Looking to the Future: Commercial Real Estate



Nicholas Frankopan
Managing Director
Oak Investment Management Ltd
MA (Oxon) MPhil (Cantab) MBA
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When we look to the future 20 years in commercial real estate (CRE) we must first appreciate the journey that the sector has been on for the last 20 years.

From a capital markets point of view, 20 years ago CRE was the neglected cousin of other investment classes. No sooner had CRE been brought into the fold, it was considered both the principal culprit as well as vector of the Global Financial Crash (GFC). Specifically, CRE

investments such as SunCal was one of the most volatile asset on the Balance Sheet of Lehman Brothers. Generally, Mortgage Backed Securities (MBS) instruments was seen to have brought the financial world to its knees.

Shunned in the wake of the GFC, CRE found its feet on the basis of a large spread between the borrowing rate and the nominal yield. Now that yield spread has evaporated or even gone into negative. What next?

From a sector point of view, 20 years ago space was a commodity that was dolled out. A developer would produce the hard infrastructure of a building and occupiers were largely asked to take it or leave it.

The occupier had to take a tenor risk (duration of the lease) as well as incur upfront investment (for the fit out). All this went on the balance sheets of the occupiers and at their risk. Offices and shops and everything in between was more or less the same. During boom times there was more pricing power by the developer during the lean times there was virtually none. In retrospect, this was exacerbated by the long length of the leases (but at the time this was culturally accepted and part and parcel of real estate leasing).

Things have radically changed in the last 20 years. First, there have been secular / cultural shifts affecting both the capital markets and the CRE sector. Capital markets are much more global and portable than they once were - this affects both

investment and occupation. The heights of any major market are more predictable and more alike than they were 20 years ago. They have been shaped by the same capital markets and global trends. Offices and shops have been forever changed by the impact of technology and the internet. Environmental awareness have changed what and how things are developed, what all stakeholders from occupiers to capital providers are willing to accept, and what governments are willing to allow.

Secondly, in search of higher returns developers have taken more and more risk, upside and involved in occupational detail than before. All at the same time as the bond like income has become more and more like 'pay for play' rentalised income i.e. weaker fundamental backing from the underlying generator of capital. WeWork is just the most extreme example of this shift.

The truth is that all developers and owners of real estate have had to accept shorter leases, more costs and more operational risk. Clearly in a rising tide none of this matters. But in straightened time who will take the pain? The abundance of wealth has created high expectations by occupiers, by government looking to minimise environmental impact of the built environment - all of whom are looking for developers / owners to pay. Developers / owners 'look' like they have the big cheque books so it is much more palatable politically (just like in residential real estate) to get them to pay than the employment generating occupier. The result is, of course (paradoxically) restricted supply and higher priced real estate that is not good for the economic development and employment.

There is a paradox generally too. Buildings are lasting longer than ever before (as a result of technological advances in the post WW2 years), yet their obsolescence without considerable capital investment is increasing at an even faster rate (think of the RAAC scandal at schools throughout the UK).

Looking ahead the trends that we have seen over the last 20 years are likely to continue: real estate as an investment class will become more mainstream; developers will have to become more specialised / operational to maintain their returns; stakeholders will demand that CRE does more for wider society that will necessarily increase costs; the extent to which these returns can be passed onto occupiers will determine the success or failure of those developing and owning real estate.

Demand for flexible office space is rising, but who is flex for?



Marcus Geddes
Managing Director – Workplace
Land Securities

It's often assumed that the flex market can only cater to start ups or small businesses. From our perspective, demand for flexible office space from businesses of all sizes is at its highest, but recent headlines might cause you to question the future of the flex market.

This is caused, in part, by the misconception that flex is just co-working spaces or shorter lease terms. Done properly however, flex is a way to make

the most out of a place where work and business gets done.

Getting the most out of workspaces isn't a new question for businesses. But people are reflecting more on how workplaces can evolve due to changing ways of working in recent years. One result of this is a clear trend towards design led, serviced space on flexible leases.

Across the board, both established brands and startups are investing in workplaces that enable productivity, collaboration and support their growth whilst attracting talent. High quality flex space appeals to both types of businesses equally.

Customisable flex options can provide the opportunity for employers to trial something new, allowing them to be agile whilst establishing their people's needs, without sacrificing character and culture.

Applying years of expertise delivering workplaces to newer approaches, like flexible offices, we believe that flex done right can be hugely rewarding for both customers and landlords. With our existing flexible office space almost at capacity, we feel confident flex is very much here to stay and are expanding our flexible office product, Myo.

Done properly, flex has the strength to adapt to business' ways of working as they want, and the freedom to make changes to workplace to support growth.

About Landsec

At Landsec, we build and invest in buildings, spaces and partnerships to create sustainable places, connect communities and realise potential. We are one of the largest real estate companies in Europe, with a portfolio of retail, leisure, workspace and residential hubs. Landsec is shaping a better future by leading our industry on environmental and social sustainability while delivering value for our shareholders, great experiences for our guests and positive change for our communities.



Following the Occupier



David Allen
Director of Holt Commercial

I had been considering long and hard how best to address what is a massively challenging topic set by the editor this year. I suspect that if one is looking at trends in real estate in the investment and development sector then the old maxim of following the occupiers is the correct way to proceed.

So, the popular sectors of build-to-rent both multi-family housing and single family housing with purpose-built student accommodation are the obvious occupier sectors whilst data centres, logistics and life sciences are also robust areas to invest in.

Retail has been often discussed as being in decline but I would still consider that retail warehousing has much to offer in terms of its asset management potential, whilst offices in my view, remain challenging across all but the prime market.

Here, I will pick out a number of the challenges within the market and look at perhaps just one or two aspects of their impact on specific property sectors.

I think we underestimate the demographic impact of an ageing population. It is reported that the replacement rate in terms of children per family should be 2.1 and most mature western economies are below that figure.

I can remember writing A-Level essays on this (which is many years ago!) about declining and ageing populations. In economic terms this has many impacts, notably being a smaller tax base and a much higher dependency in some areas.

In property terms, perhaps some of the aspects to look at are how do we free up the locked-up wealth in downsizing. My view has always been that high levels of SDLT is an impediment to liquidity and perhaps some direct reliefs on downsizing might help.

There are then the challenges of providing residential accommodation for the elderly and there does appear to be somewhat of a bias against this type of housing in planning terms and indeed making it financially viable.

At the other end of the scale, there is a bulge in the student age group and a shortage of purpose-built student accommodation. This area of research might well make for a future Land Economy prize.

Trying to achieve net zero carbon is a challenge everywhere. The West Midlands has a target of hitting net zero by 2041 but that will involve some very hard decisions as it is not only the new stock that we are discussing but the existing stock. That, combined with no consistency between EPC ratings, Fit Well, Passivhaus Classic, BREEAM, NABERS and Platinum wired scores make it incredibly confusing.

The level of upgrade needed for existing buildings is probably only now starting to come into focus. Retrofitting and a recognition of the circular economy, embedded carbon balanced against a building fit-for-purpose will be an ongoing debate. So are tired offices now a value add opportunity enabling tired offices to be repurposed.

Generally, on commercial property, a property EPC will have to be an E or better by April 2025 which, in and of itself is not particularly challenging, but making properties C or better by 2027 will be substantially more difficult. Achieving a B by April 2030 is particularly difficult.

As I previously mentioned, there is other research locally in the West Midlands suggesting that for general industrial only 14 per cent of stock is currently at an EPC A or B. There is significant expenditure to be applied purely to maintain a legal letting position. As I edit this the Government have announced relaxation in the timescales for upgrading residential properties with poor EPC so perhaps by the time of publication something similar will have occurred in the commercial sector.

A particular bugbear of mine over a large number of years in the business has been the increase in bureaucracy. This applies to everything from planning through to anti-money laundering administration and the cry goes up from all practitioners of why does everything have to be so complicated and take so long? It is a major drag on profitability and, like in many other areas of life, more seems to be spent on compliance than actually achieving anything! Does it always have to be a triumph for process over outcome.

One could throw in the curve ball as to whether the public sector is actually too large and whether the level of staffing and efficiency is good enough.

The other elephant in the room has been build cost inflation. While the rate of inflation is now reducing, the levels of building cost are still very high. Sadly, there have been several contractors which have exited the market. In the logistics sector the most recent of these has been Buckingham Contracting.

In an area which I have been working of late, namely the out-of-town drive thru market, the build cost of an 1,800 sq ft coffee drive thru has potentially increased from between £400,000 and £500,000 for the unit to in excess of £800,000. That, combined with yields moving up as base rate has increased, should have meant a reduction in land values. That has not yet adjusted.

The lease terms that were agreed at the outset are difficult to carry and in all probability, have RPI increases collared at two per cent and capped at four per cent, which seems somewhat out of kilter now with current rates of inflation. This has put extreme pressure on profitability on committed projects. Given the desire to increase the number of these units, lease terms are being varied to make the equation work.

The same has been seen in residential schemes especially multi-storey BTR. Previous appraisals in the regions using £175psf build cost are now nearer £225/240 psf. To make appraisals work, at least on paper as yields have moved out and total return targets increased, rents have been increased.

That is largely based on market evidence but there is only so far this can be pushed before growth disappears and impacts the ability to let. Many funding deals are stalling if not falling over. There may just be a glimmer of hope if Chinese cost deflation due to a poorly performing home property market is exported.

Both these last two sectors had yield starting with four per cent or five per cent so it is not difficult to see the impact on capital values of a 25bps or even 50bps shift.

With this change is where the crystal ball comes in and not my guesstimates. Perhaps modular was not the answer as a committed production line was needed but flat pack may well be the answer to reduce build costs.

Hopefully this is not too much of a random thought process but a few issues which need to be addressed, of which some have been in the press, but not all.

What is the next chapter in the urban logistics ‘storey’?



Sam Parker
Associate Partner
DTRE

Over the last decade, London has lost around 100 hectares of industrial land annually as councils attempt to satisfy pledges to deliver huge numbers of new homes in the capital. To add insult to injury, there is a shortage of good-quality industrial and logistics units that is creating a severe supply-demand imbalance. As a result, we are going to see the industrial landscape change dramatically.

The price per square foot for industrial real estate in Greater London has more than doubled in the last 15 years. As demand continues to grow, rents have grown from an average of £8.50psf in 2009 to nearly £20psf in the same period. In some areas, rents for new warehouses are now well over £30psf. With rental growth starting to tail off, increasing density is going to be the only way to drive income and increase capital values meaningfully.

The availability of suitable sites is scarce, with land prices and construction costs dramatically higher than before. At the peak of the market in 2021, the supply constraints were such that land values for logistics were on par with residential, but this has slipped since the start of the war in Ukraine. However, even taking into account the geopolitical and economic turmoil of the last 18 months, developers are still having to compete with other uses (primarily residential) for sites.

The challenges are not limited to land prices and construction costs. New legislation has put pressure on landlords to provide buildings with improved ESG credentials. As older buildings become redundant and the cost of refurbishment has skyrocketed, re-development is the most viable solution for long-term profitability. However, this comes at a cost, particularly within the M25. As inflation has grown faster than rents in the last 18 months, it has become increasingly difficult to make a development appraisal stack up.

That said, it remains the case that for a variety of occupiers, ‘last mile’ logistics space is non-negotiable: reducing transport costs and maintaining speed of delivery are essential to their business. Consumer e-commerce now accounts for over 30% of the total retail market, with this number set to double by 2030. As we increasingly expect our shopping to arrive the next day (or even the same day), logistics operators are looking to add to their network with more capacity in towns and cities.

As a result, we have seen more and more developers talking about how to maximise space on a plot to make their investments work. London has a limited land supply, and so the topic of multi-storey development has become more prevalent as they look to disrupt the current landscape. If you can’t build out, there is only one other way to go.

Drawbacks

Of course, there are a few reasons why this kind of development is yet to catch on in the UK as it has in Asia and, more recently, Europe. Firstly, construction costs for vertical warehouses are considerably higher than horizontal building. The requirement for strengthening the vertical structure requires different materials as well as ramps around the building for vehicle access. Although this is not an issue that is constrained to the UK, it is particularly problematic here. In 2023, London is second only to Geneva on the International Construction Costs Index, with Bristol, Manchester and Birmingham all in the top 20 globally. By contrast, cities with more multi-storey logistics, such as Paris and Berlin in Europe, or Singapore and Hong Kong in Asia, are considerably further down the list, even accounting for the more limited land supply in the latter. Furthermore, with inflation still stubbornly high in the UK, developers are less likely to take on the cost risk here than abroad.

Secondly, there is bound to be discrepancy between the demand for the lower and upper levels, and the constraints on yard space resulting from the exterior ramps will have ramifications for rents. As yet, this kind of space is untested in the UK, but as the number of these developments inevitably grows, we will see occupiers adjust to the new normal. There is no evidence to suggest that tenants would not be willing to move into multi-storey developments, as it is a model that works on other continents. However, it will require speculative development in more nascent multi-storey markets as it is unlikely that tenants will be lining up to pre-let this kind of space.

Finally, in its current state, the UK planning system is extremely painful for developers. Local planning councils can often be a thorn in the side of developments. Indeed, a 2020 government white paper said that the UK’s growth potential was being “artificially constrained by a relic from the middle of the 20th century.” One would hope that by 2050, we will at least have made some improvements.

Benefits

The potential for positive impact is huge. Developers can make maximum use of floor space by building upwards. Although the ground floor plate has to decrease slightly to allow for exterior ramps or vertical loading with lifts, there is a much more efficient use of land with multi-storey warehousing.

As consumers become more demanding, retailers will look to improve their delivery efficiency. Research from abroad shows that customers who are serviced from multi-storey warehouses receive their goods faster and are ultimately more satisfied than those who don’t.

The environmental benefits are also clear. Shorter journey times will reduce traffic and pollution. To start with, warehouses will be located closer to the consumer, decreasing the need for travel between urban and suburban areas, or even beyond. Then there is the potential for more use of electric vehicles due to less requirement for delivery range. This will be an advantage both for consumers and businesses – lower cost, lower emissions, less traffic.

So where are we headed?

Asia is the most relevant example of where vertical logistics is already thriving, and on a mind-boggling scale. Take Goodman Interlink, a 2.5 million square foot development across 22 floors in Hong Kong. Although Hong Kong has a more constrained land supply than London, the fact that this was delivered in 2012 shows just how far behind we are in the UK.

We have already seen British Land receive planning consent for a 455,000 square foot multi-level logistics hub in Enfield. The development, split across two levels, will have solar panels on the roof, which will offset 80% of the site’s carbon emissions. We can also expect to see a 426,000 square foot development over three levels at G Park in London Docklands in the not-too-distant future, as well as construction on a few smaller multi-storey developments in London completing imminently. Should these projects prove to be successful from a cost and occupier perspective, it will pave the way for considerably more multi-storey development in the next decade.

There is no doubt that multi-storey development is the future of urban logistics in the UK, it is just a question of when. The land supply for logistics is dwindling, and the skyline will change with it as developers take advantage of the air space above their sites. As ever more buildings become obsolete, and with limited options to increase square footage and rental value, the winners will be those that are willing to take a risk on multi-storey urban logistics.

The Future of European Self Storage: Five Key Trends

What do moving house, marriage, divorce and death all have in common? Apart from being some of the most significant moments in a person's life, they are all key demand drivers for self storage which have fuelled the multibillion-dollar US industry in recent decades, pushing supply of self storage space to nearly 10.0 sq ft per capita. Across the pond, the latest FEDESSA Industry Report finds that Europe supplies around 0.25 sq ft per capita of space, a multiple of 40x versus the United States. Ron Havner (Chairman of Public Storage and former Chairman of Shurgard) estimates that if the European market were to replicate the number of facilities to the same population density as the US, it would mean an additional 80,000 facilities. With only 5,500 currently across the continent (versus just over 2,000 in 2013), this begs the question – can the European market ever hope to replicate the impressive scale of its American cousin?



Lewis Britain
Associate, Eastdil Secured

Currently, the European market remains fragmented with the top-10 operators accounting for just over 20% of the total number of facilities. The remainder of the market is dominated by smaller, less institutional “mom-and-pop” style operators with older, lower quality facilities, presenting a ripe opportunity for market consolidation and value add investments. In recent years, signs of this consolidation have begun to emerge with the increasing entry of institutional investors into the sector with notable deals such as Nuveen's \$240m acquisition of 24 Storage, the Swedish operator, and Heitman's €125m investment in Ireland's U-Store-It. Although the European market

has yet to produce transactions equal to the \$2.2bn acquisition of Simply Self Storage by Public Storage, advised by Eastdil Secured, or GLP Capital Partners' record-breaking \$1.5bn self storage fund, market consolidation and greater presence of institutional capital will continue to fuel growing platforms and generate larger deal across the sector.

Looking forward to 2050, the evolution of the self storage sector and the chance of creating a market to rival the US will likely be defined by five key trends: customer demand, demographic changes, improved technology, sector consolidation, and ESG developments.

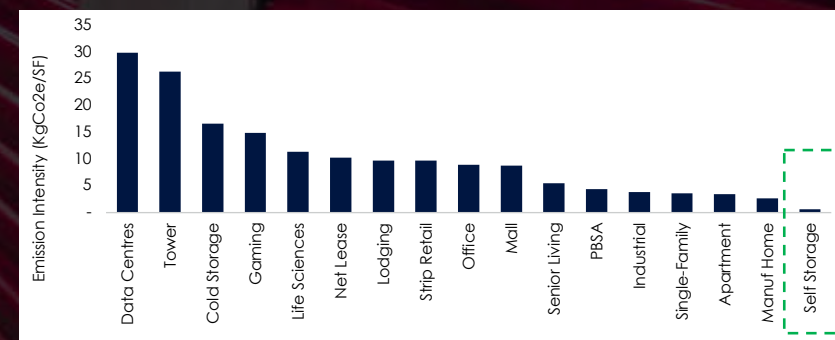
The first driver of the self storage industry will be customer awareness of and demand for the sector. Across Europe, awareness of the sector is lower and used less widely than in the US; over 10% of households in the US currently utilise self storage versus just 2% in the UK, Europe's most mature market. This trend is already well underway with the percentage of people who have not heard of self storage in the UK falling from 23% in 2014 to 7% today. Increasing awareness and the use of the sector is expected to continue as more facilities are built across the continent, improving brand and sector recognition. However, due to the low starting base of supply, it will likely take many years before self storage becomes a commoditised product with American levels of awareness and demand.

The second driver involves wider demographic changes across the continent. By 2050, the EU predicts that urbanisation – a key driver of self storage demand – across Europe will increase to nearly 84% from the current levels of 72%. In these urban areas a number of factors including population density, high land costs and shortage of space are expected to fuel the growth of self storage. In addition, the shift towards working from home has generated additional demand as people clear out spare rooms to accommodate new home offices. For business customers, the same principles apply as a shortage of flexible urban warehousing space drives demand for self-storage as small business and e-retailers seek storage space. However, increased urbanisation and population density may also contribute to rising land costs as supply of land decreases and alternative uses increasingly compete for sites targeted by self storage operators.

The third driver is technology, which is expected to transform the self storage industry from both a customer experience and operating perspective. For the consumer, using a self storage facility will be streamlined with the user journey being fully automated from booking to utilising to checking out. For operators and owners, full automation of facilities and centralisation of operating costs can significantly reduce staffing costs, currently the largest component of operating costs at 31% of total costs, thereby increasing operating margins. Beyond site-level operations, technology is already revolutionising marketing and pricing techniques, with Shurgard deploying machine learning to improve their predictive pricing and optimise revenue streams. Automation also means that sites which were previously unviable, namely prime urban sites too small to justify a staffed store, may now be feasible – expanding the available space for self storage operation which is particularly important in the context of increasing urbanisation.

The fourth driver is the increased consolidation and scale expected in the fragmented market as operators continue to grow and more institutional capital enters the space. To fully reap the benefits of a technological revolution, platforms will have to be of a sufficient size to benefit from the economies of scale available and justify investment in centralised technology platforms. For example, Public Storage, the largest American platform, operates nearly 3,000 facilities vs over 240 for Shurgard, Europe's largest operator. As platforms mature, they generate significant economies of scale through lower central and marketing costs as a percentage of revenue, as well as increased customer demand from higher brand recognition.

Last but not least, as with all other sectors, the growth of self storage will be defined by ESG, driven in no small part by the increasing involvement of institutional capital, which has more stringent ESG investment criteria. From an environmental perspective, self storage already benefits from the lowest emissions intensity of any real estate sector (shown in the graph below) due to its low energy use and relatively straightforward construction, easily meeting environmental requirements. On the social front, operators are increasingly deploying funds into local social and charity organisations through vehicles such as the The Big Yellow Foundation, a trend which is expected to continue as investors set increasingly rigorous ESG requirements.



Source: Green Street, 2023

Although Europe remains far from matching the scale of the American self storage industry, the European sector is likely to undergo a period of sustained and significant growth in the coming decades. Fuelled by the drivers mentioned above, the sector is poised to flourish as demand and awareness increases, institutional capital invests, and technology transforms the operating and consumer experience. Whether the sector will ever match the US market for scale remains to be seen (it's worth remembering that the trends discussed will also be affecting the US market at the same time) but strong underlying foundations and dynamics have positioned the industry to benefit from these trends in the near future, ensuring it continues to play a crucial role in the most significant moments in a person's life.

At Eastdil Secured, we hope to play our part in the development of the European self storage sector and replicate our success in the US market where we consistently rank as the number one advisor, having advised on \$10.6bn of transactions since 2021. In the last five years, we are proud to have hired eight analysts from the University of Cambridge who have all had the opportunity to work on some of the most interesting and important real estate transactions across Europe and hope to continue this in years to come.

Generation Population Rent



Robert Cashmore MBE
Octopus Investments

That the UK housing market is in a state of turmoil is no secret. Rapidly rising house prices, declining relative wealth, and decreasing levels of home ownership – especially amongst Millennials – has already conspired to create ‘Generation Rent’: a segment of society decrying the ever-growing challenge of achieving home ownership. What often gets overlooked, however, is how the tentacles of this turmoil are stretching into bordering demographic cohorts whose members are likewise experiencing existential challenges to securing long-term living arrangements.

As these patterns entrench, it appears that we are experiencing far more than a blip in the traditional picture of housing. Rather, we’re entering a period of structural change in the history of the UK housing market; we’re moving from ‘Generation Rent’ to ‘Population Rent’.

Increasingly complex

Growing portions of Generation X, specifically those retiring now and between 2050, are – on average – ending their working years in a far more precarious position than their predecessors. Causations for this financial phenomenon include the movement away from defined benefit pensions and the carriage of significant mortgage burdens into retirement.

And then there’s Generation Z, born roughly between 1995 and 2012, who, suffering increased housing prices and higher educational debt, are purchasing their first properties later in life, using increasingly large mortgages. This naturally leads to extended periods of time paying off such debts, with Hargreaves Lansdown Opinium Survey 2023 reporting that 9% of respondents expecting to be over 70 when they repay their mortgage, if at all, with the average age of repayment rising to 60 from 57 one year earlier.¹

Such trends are set to cement yet further as the prospect of average mortgage length extends beyond 30 years. Accenture’s Household Finance Review estimates that 56% of mortgages are now 30-year terms or more, compared to 26% in 1980, with those still electing to buy their property doing so at an average age of 30.² These conditions mean that housing will likely become an increasingly complex issue for those approaching and entering retirement; further exacerbated by challenges surrounding UK housing suitability, affordability and supply.

Retirement living

The solution to housing elders in UK society certainly won’t come from models taken from previous generations: we’re witnessing a continued move away from nuclear family and inter-generational living. Retirees are less likely to be taken

in by their children, especially those struggling to house their own families. Add to this the UK’s chronic social care challenges, it’s acutely clear that the UK real estate market at risk of underserving the retiree demographic.

The fundamental need for UK retirement focused living assets is already apparent for consumers, investors and governments alike. Within this and given the aforementioned conditions of growing wealth inequality within society, the need to cater for both renters and buyers is equally evident, with the latter being the current focus of most Integrated Retirement Communities (IRCs). Despite the UK being a far cry from Florida “retirement villages” with populations of c.150,000+, it is hard to argue against claims that we’re now on the same trajectory as our North American brethren.

Unlocking a market that works for all

There is little doubt that private capital will play a crucial role in unlocking a functioning UK housing market for retirees and across the demographic board; a view which is wholeheartedly shared by government. Public funds stewarded by Homes England and similar state actors are proving to be an excellent catalyst for change, from corner-stoning private housing funds to helping finance the development of much needed modular housing factories. Octopus Investments’ Greener Homes Alliance, for example, is a solution which allows developers to push the boundaries of sustainability in new homes, such as reaching zero bills homes, all whilst utilising Homes England-funded discounts on borrowing costs.

Despite the current efforts of both public and private capital, far greater action is required. Across the country there is ample opportunity throughout the risk spectrum for investment into the UK’s living sector; for example, a Local Government Pension Scheme could provide equity or debt for affordable housing in its local area. Commercial prospects equally extend up the risk curve, such as the funding of niche sectors such as Extra-Care Housing, IRCs or Co-Living. Although many investors have already taken up this challenge, the housing sector needs to see dramatic increases in both debt accessibility and equity investment if it is to work for everyone.

It is often quoted that a stable, fair and affordable housing market is the route to realising that much quoted dream of “an Englishman’s home (being) his castle”. Given that the demographic changes in wealth and home ownership explored during this article are unlikely to abate, in order to help current and future generations secure quality homes at sensible prices - be it via ownership or increasingly via rental models - we must stop yearning for the past and instead accept the present and prepare for the future.

Those amongst us who busy ourselves daily with the problems of housing the UK’s growing and ageing population in the 21st Century, especially those seeking to develop long-term solutions, could do far worse than to accept – and then to act upon – the forthcoming needs of Generation Population Rent.

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‘Baby Boom’ generation will redefine ‘old age’



Richard Mazuch
Research & Development Director
Arcadis

Between 1946-1964 the largest generation was created. The ‘Baby Boomers’ radically changed society at every stage of their lives, as they will do so in their senior years, ‘from considerations regarding drugs, sex, rebellion, and rock ‘n roll, to end of life issues’, and ‘will challenge long-term facilities to instate new policies’. (James Siberski, co-author, with Carol Siberski, of an article titled ‘Boomers in Nursing Homes: Ready or Not, Here They Come’, in *Today’s Geriatric Medicine* 2015; 8 (5): 18). They have lived through post war food rationing to Deliveroo, from telegrams to the Internet, from Perry Como to Black Sabbath, from ‘The Year of Love’ to the bombing of Hiroshima, and

from Charlie Chaplin to Monty Python... Mods, Rockers, Skins, Hippies, Punks, Goths, and beyond.

The ‘Baby Boomers’ will redefine old age. This longer-living, ‘toughing things out’ cohort will face significant challenges – ranging from failing body systems to mental health issues. They will encounter everything from depression, Diabetes, Arthritis, cataracts, and incontinence, to loneliness, and from Dementia to substance abuse or misuse.

The Silver Tsunami is about to reach landfall, and hoping to see 2020 Design Vision for a very different future. Not one that is visually and mentally debilitating, containing Parker Knoll derivatives, fireplaces, over-sized clocks, rocking chairs, menageries of grabrails, flock wallpaper, and nicotine colourways, all saturated in a Biome of ‘senior home’ smells, unsuccessfully masked by rose or lavender scents.

Inhabiting this ‘new world’

What would inhabit this new world? Oxygen bars, Snoezelen Spaces, Virtual reality to enable one to fly a kite in Hawaii, ‘Zimmer’ band gigs, grannies boxing to reduce Parkinson tremors, dementia pubs and cafés, sheds to rebuild motorbikes, invention workshops, robotics, exotic pets, LED pillows, body driers, Tomek fittings, Toto WCs, Amazon, Google, Microsoft, digitised support, and ‘virtual’ mental health consultations.

A new tomorrow

The ‘Baby Boomers’ – The ‘Silver Tsunami’ has now reached landfall, abruptly interrupted by the COVID pandemic and much more. Our vision for a very different future has been severely impacted by worldwide climate change, an ongoing rise in energy costs, the escalating cost of living, rising fuel prices, decreasing economies, and multiple waves of exotic viruses and hybrid influences. Our vision of yesterday, and indeed tomorrow, needs to be recalibrated. In moments of great change there are real opportunities for great change. Within this new Third Era of Health, design has a very real opportunity to deliver optimal environments that are truly supportive of wellbeing, diagnostics, treatment, and recovery, in new settings – such as the smarter, salutogenic home, within a supportive and caring community. Let us deconstruct, reconstruct, and reboot, today’s obsolete concepts into forward-looking paradigms focusing on invisibility and symbiotically supportive features that create environments that offer experiences that empower. Let’s continue to create memories.

Healthy ageing – Centres of Excellence

This concept was initially developed for the St. Paul’s Healthcare Campus in Vancouver. It was designed as a beacon of research to provide spaces for innovation within the overall medical community of British Columbia. The entry floors of ‘Experience and Discovery’ feature simulation labs and virtual reality experiences for clinicians, caregivers, patients, and family, to engage with multiple aspects of ageing. The varied simulation suites include the exploration of conditions such as Alzheimer’s, Dementia, and Parkinson’s, etc.

Further spaces serve as ‘Exhibitions of products’ that are in the developmental stages. e.g. 3D printing of hip joints, prosthetics, ‘med bedheads’, ‘upside down walking sticks’, robotics, and exoskeletons, etc. The upper floors include Lab-Testing, product development, and workshops. The Teaching Centre consists of conference spaces, lecture spaces, and collaboration nodes. The ‘Innovation Hub’, meanwhile, is the central heartbeat of the centre, with multiple levels of libraries, Think Tank Pods, and Research and Testing Labs. The upper floors contain Assisted Daily Living Labs (ADLs). Ultimately,

the top floors will offer Wellbeing Spas, a Telehealth Hub, seminars on increasing longevity, and hotel facilities offering access to enclosed landscaped gardens, exercise spaces, leisure spaces, dementia cafés, and horticultural activities.

‘Boomers’ innovate

According to a New York Times story dated 17 April 2013, ‘More adults are becoming inventors’. It is often forgotten that seniors have a lifetime’s worth of experience and knowledge, and much more time to develop concepts and new ideas. Why not harness this wealth of knowledge to good effect? ‘Older innovators often have unique knowledge, foresight and insight’ – John Rav, 6 November 2018. ‘Global innovation now focuses on inventors that help seniors in daily life.’ We have to create a culture of innovation, a sense of purpose and engagement. Designers and planners have to develop opportunities and design spaces such as extended ‘Mind Gyms’, ‘Pop-up makerspaces’, ‘Brainstorming hubs’, man caves, garden sheds/pods, or start-ups like ‘Quirky’. These spaces have historically been the hotbed of innovation and great ideas.

New living – a new paradigm

Presently we inhabit an uncertain world of climate change, rapidly changing demographics, pandemics, and rapidly ageing populations. We are living longer, which will bring the problems of many levels of comorbidity. Technology will offer a sophisticated selection of armoury – from virtual reality and 3D stem cell printing, to pharma drones, telecare, e-health, and robotics, as well as an exotic selection of apps and augmented reality.

With an increasingly ageing population facing chronic health challenges and decreasing filial support, one’s understanding of healthcare strategies must be recalibrated. The focus must be toward delivering a ‘new look’ service embedded within the community. This could range from assisted living, selfcare, tele-care, and tele-medicine, within a single housing unit, to multiple units supported by social care services, nurses, doctors, physiotherapists, occupational health visitors, psychiatric nurses, and local pharmacists.

Chronic and lifestyle-related diseases are on the rise, and healthcare services are struggling to keep up with the consequent accelerating demand. Simultaneously, we are finding new ways of taking control of our personal health and wellbeing. Increasingly, the goal is to establish a long and fulfilled lifestyle, addressing preventative, as well as curative, health management regimes. We have a very real opportunity to deliver optimal therapeutic environments in our homes and the community that are supportive of wellbeing, diagnostics, treatments, recovery, and indeed singing, dancing, and rock ‘n roll.

Home Sweet Rental: Why UK Institutions are Embracing Existing Rental Investments, Bringing Good News for Renters



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The UK's Private Rental Sector (PRS) is emerging as an appealing prospect for institutional investors. This could be a boon for investors and crucially, for renters. This article explores the growing enthusiasm amongst institutional investors for existing UK rental properties and the positive implications for renters.

The Allure of UK PRS for Institutional Investors

Scale

One of the driving forces behind institutional investment in the UK PRS is the potential scale and value that the sector presents. The PRS is worth £1.4 trillion, 19% of the UK's £8 trillion housing market. The FTSE 100, valued at £2 trillion at the start of January 2023, seems modest by contrast.

Build to Rent schemes funded by institutions have been increasingly popular in recent years. Yet still, less than 1% of the UK's housing market is owned by institutions. This leaves huge potential scale, an attractive prospect for institutions seeking long-term, stable investment opportunities.

Yield

The potential for substantial, growing yields (income as a proportion of value) elevates the appeal of the UK PRS. Rental demand is dependable due to the necessity of the product, a home. This demand is on an upward trajectory due to pressures on the housing market from affordability constraints and population growth.

Demographic trends indicate the continuation of this trajectory, for example, the ONS forecasts that the number of households in England will increase by 1.6 million (7.1%) over the 10 years from 2018, from 23.2 million to 24.8 million in 2028¹. Growing housing demand, and within that, growth in the proportion of renters, translates to a source of dependable income linked to wage inflation.

Yields vary by factors like location and property type. 95% of the projected population increase is attributable to shrinking household sizes: one-person and multiple adult households without dependent children², making smaller housing options - which typically generate higher yields - attractive.

As a guide to regional variation, today's PRS offers yields ranging from 3% to 12% for single occupancy flats and houses, depending on the geography. The range of risk/rewards to

different geographies and archetypes facilitates investments across the risk spectrum, from 'core' returns in the safest locations, to 'value add' in riskier geographies.

Stability:

The reliability of residential property values is in contrast with the volatility of the stock market. For example, the FTSE 100, a trusted diverse source of value, can fall by 30% in a day. Other real estate sectors such as offices have fallen by 20% in the last year.

Investment values for PRS assets are driven by the income they generate, which is typically only increasing.

Environmental impact Opportunities:

Beyond financial gains, the Environmental, Social, and Governance (ESG) impact opportunities in the PRS have captured the attention of institutions. Regulations, social and media pressure have boosted investors' focus on sustainable investments, and the UK Private Rental Sector aligns well with this.

On the topic of regulations, Government intervention in the PRS comes in the form of penalties, focused on improving energy efficiency and quality of homes and their management. For example, Minimum Energy Efficiency Standards are currently EPC E though planned legislation will bring this to EPC C, rendering 2/3 of PRS homes unlettable. The Renters (Reform) Bill, published May 2023, aims to offer renters security, regardless of who their landlord is.

The overarching environmental policy objective underlying a great deal of policy on this is Net Zero 2050. In reaching this, improving the homes we already have is critical as the greenest home is the home that already exists. 98% of homes that will exist in 5 years time have already been built, and 80% of the housing stock in 2050 already exists³.

Using these homes better is vital for reducing the emissions associated with living. Many investors hope to lead the path to Net Zero, and here is a clear opportunity to do so: 14% of greenhouse gas emissions in the UK come from homes, and 2/3 homes are below planned minimum energy efficiency standards.

Until now, institutions have focused their 'living' investment on new build homes via Build to Rent apartment blocks and Single Family Rental schemes.

Such schemes have their limits, not least potential scale, which is limited to the plots of suitable land available. Existing residential instead offers potential scale of £1.4 trillion.

Build to Rent schemes average 5 years to positive cash flow, whilst existing PRS homes typically generate income from day 1, or < 1 year to stabilised cash flow even when deep retrofits are required. Once built, new BTR schemes are typically accessible only to the privileged few; and crucially, their carbon footprints are high, whereas existing PRS homes already serve all socio-economic groups, from wealthy international students to short term housing for homeless people.

Critically, it takes 10-80 years for replacement buildings to achieve a lower carbon impact than the rehabilitation of existing buildings.⁴ Existing PRS homes have none of the demolition/rebuild or new build embodied carbon emissions associated with shiny new rental schemes.

Key Trends Shaping Institutional Interest

Macro-Level Rental Growth Story:

A compelling macroeconomic narrative of rental growth is driving the surge of institutional investments. As the demand for rental properties continues to rise, the potential for capital appreciation and steady rental income becomes increasingly appealing to institutional investors.

Micro-Level Advantage:

The availability of data, advanced analytical tools and AI enable institutions to identify value and forecast income across well-selected, diversified rental property portfolios quickly. Access to data facilitates the efficient growth and management of diversified portfolios.

Swift decisions are critical in the face of a landlord exodus. The combination of costly regulations, taxes and higher interest rates are triggering a widespread exit of smaller landlords, who have come to dominate the sector. 82% of english landlords owned <5 properties in 2021⁵, and for such investors, higher interest rates have acted as the 'final straw', causing such landlords to seek a rapid escape route.

ESG Focus - Retrofit and Community Impact:

There is a huge opportunity in retrofitting existing homes to improve their energy efficiency and quality. Upgrading homes from an EPC D to B rating can lead to a 50% reduction in emissions, equivalent to two tonnes of CO₂ per house annually. Government intervention will be a key driver for retrofit, but until then, professional investors are effectively 'self-regulating' in line with planned Minimum Energy Efficiency Standards.

The ESG narrative for pre-existing PRS homes encompasses more than just reduced carbon emissions. The social impact of improving homes in existing communities is clear. Facilitating better rental experiences, taking a long term perspective on rental pricing, and offering higher quality homes within existing communities can alleviate families' cost of living crises and help strengthen existing communities. The enhancement of homes within existing communities is a social responsibility to be proud of. It is quite distinct from previous approaches including segregated new build schemes, or even new builds designed for resale, but acquired by non-resident foreign buyers.

Fundamentals

The fundamentals are attractive. The PRS is rapidly evolving into one of the most significant tenures, carrying substantial political significance. Demand is growing, while supply dwindles due to a landlord exodus. The result is a strong economic case alongside a strong social case. Without institutional investment, there is a risk that we no longer have a PRS, meaning the next generation have the choice to continue to live with their parents or to live in Social Housing - a tenure already cracking under the pressure of excess demand.

Reasons for Renters to Rejoice

Better quality of homes and management:

As institutional investors pour resources into the UK PRS, renters stand to benefit from a higher quality of rental homes, and better management. Professional investors are keen to ensure well-maintained properties that offer comfortable living experiences, creating a positive impact for tenants.

Positive Impact Narratives:

Investors are keen to showcase positive impact stories, and to be held accountable through mandated and optional ESG reporting. Currently, there are 30 ESG services and tools applicable to institutional investment in residential property in the UK, from benchmarks to risk management calculators. There are plenty of areas for development in the realm of measuring ESG impacts, but the important benefit for renters is that there is a clear desire to do right, and to be able to showcase this, leading to better accountability and governance than has ever been seen in the UK PRS.

Avoidance of Negative Stories due to learning from others:

Some countries already have extensive experience of institutional investment into the local PRS equivalents. For example, the US and German rental markets have strong institutional ownership. In many cases, early adopter investment strategies including institutionally backed iBuying and Single Family Rental (e.g. Invitation Homes) highlight the potential social problems of institutional investment in the PRS.

The benefit for UK renters is clear. UK investors have the opportunity to learn from the mistakes of others, and they are keen to embrace ethical and sustainable practices.

Conclusion

The convergence of financial potential - in particular compared with returns available from other real estate sectors - and ESG opportunities in the UK PRS bodes well for both investors and renters. Institutions who proactively enhance the quality of rental properties and contribute positively to local communities have an opportunity to transform a vital sector, with benefits for all stakeholders involved.



¹Household projections for England - Office for National Statistics

²<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/householdprojectionsforengland/2018based>

³Climate-neutral building stock by 2050: A highly ambitious goal, Deutsche Bank, March 2021.

⁴<https://nextcity.org/urbanist-news/we-cant-build-our-way-to-net-zero#:~:text=The%20analysis%20performed%20with%20the,%20rehabilitation%20of%20existing%20buildings.>

⁵<https://www.gov.uk/government/statistics/english-private-landlord-survey-2021-main-report/english-private-landlord-survey-2021-main-report-2>

The future of personal compromise in the housing market

Making compromises has always been a part of home buying, be it trade-offs in the location, size, or type of property. However, the increasingly competitive housing market that has emerged in recent decades has led to more fundamental compromises being made in other aspects of life, especially for first-time buyers (FTBs).

When the average house price has increased to over eight times the average salary and over 12 times in London, buyers must increasingly stretch their personal finances as they compete to outbid one another. This continual stretch to buy inevitably leads to buyers making compromises elsewhere. What compromises have been made in order to keep up with significant growth in house prices and, looking ahead, what scope is there for further compromises to be made?

Longer mortgages and delayed life choices

The last decade has seen FTBs adapt in a number of ways to keep up with rising housing costs. First, they have increased the average length of their mortgage from 27.5 years in 2011 to just under 31 years today to help reduce monthly repayments. For an individual buyer, this move to a longer mortgage has decreased their monthly bill and made it easier to overcome affordability hurdles. But across the market as a whole, buyers stretching themselves in this way have made longer mortgages the norm rather than the exception. This has created capacity for price growth which otherwise would not have been there. The end result is that buyers are now faced with both higher house prices and the prospect of a longer (and therefore more expensive) mortgage.

In this vein, buyers have also made compromises in their personal lives. The average FTB in 2023 is almost two years older than in 2011, as they need longer to save for a deposit. Furthermore, couples are choosing to start a family later in life, with the average mother more than a year older now when they give birth than in 2011. They are also having fewer children than they initially wanted to, a concept known as the fertility gap. Between 2011 and 2021 the total fertility rate fell by 17% from 1.91 to 1.61 children per woman. While there are many factors at play, the rising cost of housing undoubtedly contributes, as it becomes more costly to upsize and less income becomes available to fund childcare.

Adults are also living with their parents more frequently and for longer, with the number up 14.7% in 2021 compared to 2011. The median age of adult children at home increased from 23 to 24 over the same time period, while in some boroughs of London this has reached as high as 26. This all points to the fact that the affordability crisis in housing, and the compromises that must be made to purchase a home, is contributing to less freedom in lifestyle decisions. Competition



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in the market creates a constant incentive to compromise further. But in doing so, this makes acquiring a home which meets people's needs and aspirations more difficult. This helps explain why the number of FTBs today, around 350,000 a year in the 2010s, is radically lower than 20-30 years ago when annual numbers were around 480,000.

Where will we go next?

The ability to compromise has natural limits. The average FTB, approaching 33 years of age, borrowing on the average FTB mortgage term of 31 years, will finish repaying their mortgage aged 64. This leaves little wiggle room to extend terms further going forward as banks are wary of lending to borrowers who will be paying into retirement (although some lenders will now extend their age cap to 70). And while buyers may be willing to delay starting a family by a few years, they cannot do so indefinitely. This means a constantly changing set of new compromises is required, especially without large scale delivery of new housing. Looking at the road to 2050, where is there capacity for these to be made and how can they be as constructive as possible?

An obvious starting point is location. As housing has become less affordable, particularly in London, buyers have moved further from their place of work into the commuter markets of the South East, in search of larger family homes which represent better value. According to the Trades Union Congress, the average commute in the UK had risen since 2008, with the increase being largest for those in the South East. These buyers have compromised on where they live, but have for the most part not had to compromise on where they work.

The increasing acceptance of hybrid working has allowed some buyers to move further from work to more affordable locations. Many of those working in London are now happy to live two hours from work, commuting just twice a week. But the bulk of jobs cannot be done remotely – even at the peak of lockdown under 30% of employees were working from home

exclusively. And in those which can, employers are increasingly asking for more in-person attendance. Buyers may therefore have to start compromising on where they work to find housing which is affordable. This could benefit regional cities such as Birmingham and Manchester, who currently lose skilled residents, particularly graduates, to the bright lights of London. Firms may also take increasing interest in the dynamics of housing affordability, as costs increasingly drive how they attract and retain talent as well as where they choose to open their offices.

Another option is the formation of multi-generational households, enabling people to start families while living with parents. Multi-generational living has benefits including assistance with childcare and providing care for elderly relatives, but it is often out of necessity rather than choice that these households are formed – multi-generational households are 7.7 times more likely to be overcrowded than the average household. This is in large part because our housing stock is designed for nuclear families and is ill-equipped to deal with the dynamics involved in multi-family households.

How can we help?

As long as there are affordability pressures in the UK housing market, buyers will compromise on their aspirations and quality of life to secure housing. It will be important to monitor the impact this may have on health and wellbeing, and whether there are other knock-on economic consequences such as lost productivity or increased healthcare expenditure.

The key way to mitigate these impacts is to tackle the chronic undersupply of housing in the places it is needed. We must also explore other options including how compromise could be harnessed to help people as well as our towns and cities thrive. This could include the provision of transport and communications infrastructure to enable commuting and flexible patterns of working. It could include large-scale Levelling Up investment to facilitate a range of high-skilled high-paying jobs in regional cities. And it could include the provision of a more diverse range of housing, which allows more affordable multi-generational living without undermining the privacy and intimacy which couples and families desire.

Understanding the compromises people are willing to make, and also those which they are not, will be crucial in delivering homes which provide the best possible quality of life in the right locations and at a price which is affordable.



A New Model of Affordable Housing Investment



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The UK housing market has been afflicted with protracted supply shortages and chronic affordability constraints that have driven a housing crisis that has spanned several decades. The government has failed to meet its audacious 2019 manifesto pledge of 300,000 new homes in any year since the target was set, and this goal only appears more unattainable in the current high-rate environment that constrains housebuilders and prospective homeowners alike. Broader housing supply and demand disequilibria have inevitably resulted in even more pronounced dislocation in

the UK affordable housing sector, which itself plays an integral role in improving economic mobility.

The UK affordable housing sector has historically been dominated by Housing Associations (HAs), which deliver, own, and manage a considerable share of the existing affordable housing stock². A majority of HAs are not-for-profit, with surplus income reinvested into the delivery of new schemes or used to service debt. These associations have struggled to address supply shortages, with the 2012-2021 10-year average of affordable housing delivery standing at 50,000 new homes per annum - 66% below the 145,000 new homes needed to address current demand³.

HAs are also facing a number of headwinds driven by both idiosyncratic and systematic factors that are likely to hinder their ability to accelerate affordable housing delivery in the short to medium term. Essential decarbonisation and fire safety expenditures will reduce available liquidity for investment in new projects, with capital constraints only exacerbated by the limited availability of local authority grant funding. Balance sheet pressures may represent the largest obstacle for HAs looking to develop new homes. As of 2021, the 15 largest housing associations in London by homes under management had combined assets of £54.8bn and debts of £25.5bn, equating to a gearing ratio of 47%⁴. The same 15 HAs saw their interest coverage ratio, a metric used to assess a company's ability to service debt, fall 36%-pts between 2018 and 2020 to 138%. Rising debt exposures, increased servicing obligations, and overall balance sheet pressures are only likely to have grown since 2020, pointing to the need for new sources of capital to stimulate affordable housing delivery.

The involvement of private capital in the affordable housing sector is not a new phenomenon, but its role in the delivery of new stock may be more pertinent than ever. As of 2018, just 2% of housing associations in the UK were for-profit⁵, but investor

appetite for affordable housing has grown in line with the increasing weight of institutional capital targeting residential assets across the continent. Aside from the societal need, affordable housing represents an attractive opportunity for institutional investors. The asset class is counter-cyclical and weakly correlated with fluctuations in the economic cycle, while index-linked income provides defensive cash flow generation potential during inflationary periods. Both opportunistic players looking to develop affordable housing over short timeframes and core investors seeking income stability have been drawn to the sector, which provides an opportunity to enhance Environmental, Social, and Governance (ESG) credentials and address investor appetite for assets that deliver societal value.

Clearly, there is both a need for private capital and a willingness from institutional investors to deploy it; and unless there is a considerable policy shift from the government, grants made to HAs are unlikely to address existing funding gaps that obstruct the delivery of new affordable stock. This draws attention to the need for a new model of investment into affordable housing and the adoption of alternative investment structures that enable private capital to flow into a sector historically dominated by public sector investment.

For-profit registered providers (FPRPs) can play a vital role in boosting aggregate affordable housing investment. FPRPs are typically backed by institutional capital with the goal of developing and holding affordable housing assets, with existing HAs often instructed to manage portfolios based on their operational expertise. FPRPs have the potential to deliver as many as 130,000 affordable housing units by 2026 and commit £23bn to the sector in the same timeframe⁷. Despite operational similarities such as identical regulatory standards and access to grant funding, the ability of FPRPs to pay dividends to shareholders means they can access liquidity more efficiently than their not-for-profit counterparts.

Public-private partnerships between investors and local authorities enable public sector bodies to access private capital, as well as the resources and skills of institutional investors. Investors and local authorities may often partner on estate regeneration projects that deliver affordable housing, with affordable units leased to local councils for a fixed period before ownership is transferred to local council pension schemes. Rents to the institutional investor are often set below local housing allowance levels, ensuring local authorities receive a surplus throughout the lease period while investors receive a stable investment

return⁵. Partnerships between housing associations and investors are an equally effective vehicle for channelling investment into the affordable sector. A number of prominent institutional investors have raised affordable housing funds to deploy capital into the sector, with stock often managed by existing HAs.

These investment structures no doubt facilitate the flow of capital into the affordable housing sector, but we must be mindful not to equate capital flow to an increase in housing supply. In many cases, private investment and housing association investment may be competitive rather than complementary, and competition for investment may restrict the delivery of additional affordable housing units. Evidence also suggests that private investors may favour affordable tenure types, such as shared ownership, that deliver higher returns, creating supply imbalances in the types of affordable homes delivered and failing to address shortages for certain tenure types. Of the 14,000 units owned by FPRPs in 2021, over 60% were of low-cost home ownership tenures, while supported housing tenures represented less than 5%⁵.

There is also an important ethical dimension to consider. To many, growth in the institutional ownership of housing, in the backdrop of chronic housing shortages, is evidence of investor strategy to capitalise on structural housing supply and demand imbalances at the expense of those experiencing housing uncertainty. The increased flow of private capital into the housing sector may only entrench the commodification of homes as an asset class rather than viewing housing as a basic right. These concerns are only heightened in the affordable housing space, where the objective of housing associations has historically been to support local communities through the provision of affordable homes rather than the pursuit of excess returns. The intentions of private capital must be aligned with broader social objectives, and investment structures that facilitate the involvement of private capital must do so in a way that ensures broader housing objectives are upheld.

New affordable housing investment models that enable access to private capital certainly represent an opportunity to address affordable housing supply deficiencies, especially where traditional housing associations face significant barriers to effective provision. But it is imperative these models do not compromise the needs of the individuals and communities the sector seeks to serve.

¹<https://www.bbc.co.uk/news/61407508>

²<https://centrusfinancial.com/will-private-capitals-love-affair-with-affordable-housing-last/>

³<https://reactnews.com/article/34bn-more-funding-required-every-year-to-meet-affordable-homes-shortfall/>

⁴<https://reactnews.com/article/building-safety-levy-extended-to-all-new-homes-as-35-developers-sign-goves-fire-safety-pledge/>

⁵https://www.businessdn.co.uk/sites/default/files/documents/2022-10/BLDN_Report_Affordable%20Housing_1.pdf

⁶<https://www.ncvo.org.uk/news-and-insights/news-index/beyond-charities/focus-on-housing-associations/#/>

⁷<https://pdf.euro.savills.co.uk/uk/spotlight-on/spotlight---private-capital-in-affordable-housing.pdf>

Symbiosia



Esther Wiskerke
 Founder Symbiosia
 Visiting Fellow of the LMU
 within the School of Social
 Sciences & Professions

At its core, Symbiosia Community Interest Company aims to do more than just revolutionise the UK’s residential social care model. It has a bolder ambition: to blend exceptional care with nature’s biophilic charm and irresistible, unbridled fun. Conceived by Founding Director Esther Wiskerke, Symbiosia seeks to address critical issues, such as the lack of affordable and quality nursing home provision, staff retention problems, intergenerational disconnect and a sector that is at financial breaking point.

Picture this: a quirkily designed, carbon negative residential social care facility enveloped in an eco-friendly leisure park. But this is not just any leisure park, it is a wonderland that includes zip wires, climbing walls and other exhilarating activities designed to attract visitors of all ages. Stimulating healthy living for people and planet, and always fun. Think of it as merging ‘Fun with Care in Nature’.

And the magic does not stop there. Imagine rooms overlooking an atrium designed like a whimsical, sensory-friendly village square, complete with shops and pop-up stalls, cafes, restaurants, live performances, meeting and games rooms, health services, an early years nursery (for staff as well as the local community) and a spiralling slide from the top floor, through the canopy outside and twirling back into the atrium. This multi-functional space will serve as a lively community hub, encouraging interaction between residents, staff and visitors.

This visionary approach is not just about creating an attractive space. It intends to dispel the societal stigmas tied to nursing homes and offers a financially sustainable model for residential social care. By integrating community, ecology and the joy factor, Symbiosia is carving out a future in which residential social care settings are not places people dread, but destinations that become irresistible to visit.

The responses

In these times, when the challenges facing social care are monumental, Symbiosia resonates as an intuitive solution that naturally attracts people. The vision is garnering momentum, demonstrating its timely relevance. Melding compassionate care with intergenerational fun and sustainable living offers a compelling vision that many feel is long overdue. “Symbiosia is a vision which will redefine care for the elderly”, says Brian Ford, Emeritus Professor at the University of Nottingham. “It is radical and timely and deserves our support.” Director of KP Social Care Training Ltd Karen Patterson’s plea speaks volumes: “I have been involved in social care for over 30 years and this idea could not be timelier, especially as my mum has now been diagnosed with dementia. I want Symbiosia and I want it now”. In an era when time is often equated with money, the extraordinary wave of pro bono commitments from professionals across various sectors also speaks volumes about the compelling allure of Symbiosia.

The momentum is growing. Julie Hall, Deputy Vice-Chancellor at the London Metropolitan University, will soon be chairing Symbiosia’s new advisory board, continuing to steer Symbiosia towards realisation. Her decades-long experience promises to inject the project with an invaluable strategic edge.



To date

Shortly after the idea was born, co-Director Henry Trumpington joined. As a recently retired barrister, his profound legal insights have been invaluable in establishing Symbiosia as a Community Interest Company, not to mention the ongoing operational legal support he offers.

Testing the appetite for the vision not only with the public, but also within academic and professional circles, was an initial focal point. This process enriched the intellectual and practical underpinnings of the Symbiosia concept.

Running a company has been an educational odyssey for the Symbiosia team. Learning the nuts and bolts of corporate governance and operations has been an enlightening, albeit steep, learning curve. But the milestones are telling: the newsletter’s subscription list has soared past the 500-mark, indicative of a concept that is clearly capturing hearts and minds.

Whilst developing its vision at a high level, Symbiosia has been implementing community programmes (addressing Symbiosia’s care theme) and various events (resonating with Symbiosia’s fun element) to grow awareness and pilot its model. Fuelled by securing funding on four distinct occasions, its community programmes initiative has launched a series of legal advice and support clinics combined with mindfulness retreats for people experiencing financial and emotional hardship. To meet demand and building on Symbiosia’s intergenerational principle, opportunities were opened for university students interested in law (and other areas) to join and assist, whilst gaining valuable work experience. Though the clinics take place in various locations across London, the majority happen in an eco-conscious space, supporting Symbiosia’s nature agenda. It has been a humbling experience to see the overwhelmingly positive impact that these sessions have had on real people’s lives.

The challenges

While the momentum is palpable and the public and pro bono professional and academic support are growing, the venture is not without its challenges. The very core of Symbiosia’s appeal – its radical novelty – also poses inherent obstacles. The idea of embedding a residential care facility within an eco-friendly leisure park replete with zip wires, conference rooms in tree houses, artistic pop-up exhibitions and climbing walls is bound to raise eyebrows among traditionalists. Another challenge is the balancing act of staying true to its multifaceted mission while ensuring financial sustainability. Combining quality social care, environmental sustainability and the joy factor into a cohesive, profitable entity will require meticulous planning and execution.

Like any start up, Symbiosia must navigate the paradox of visionary ambition and pragmatic constraints. The form-filling clinics and mindfulness retreats have demonstrated meaningful community impact but operating them without a centralised office or dedicated administrative staff adds a layer of complexity. Presently, Symbiosia’s lifeblood is a weekly lottery coupled with sporadic donations (<https://linktr.ee/symbiosia>). Esther and Henry have put in an immeasurable amount of time and effort, yet neither has drawn a salary. Nevertheless, this has not weakened their enthusiasm to change the residential social care landscape.

The opportunity

While not everyone will need residential care, life is unpredictable: as that choice is not always ours to make. This can be a harrowing thought. Thus, turning residential social care into an inviting, enriching experience for everyone involved is an investment not just in the wellbeing of our current elders, but also in our own future and that of generations to come. Powered by growing public support and the unwavering tenacity of Esther and Henry, Symbiosia can be within reach, if we act now. The next step is to conduct a comprehensive feasibility study that could be the catalyst for securing targeted funding. To this end, we are actively seeking land or underused property that could serve as a launch pad for the pilot phase of the project. Be it a small, medium or full-scale rendition of the vision, having a physical space will lend credibility and tangibility to Symbiosia’s ambitions. Such a site would not only facilitate our feasibility study but also act as a concrete proof of concept that might draw in further investment. In essence, it is a virtuous circle waiting to be initiated: each component, from funding to feasibility, contributing to shifting the paradigm of the UK’s residential social care model. The opportunities are vast: we simply need the springboard to dive into them.

Book an explorative chat with Esther. (<https://calendly.com/symbiosia/culs-magazine-discussing-opportunities>)



The Future of Property Valuations – Science, Art or a Regulated Process?



Professor Graham F Chase
Chase and Partners LLP
FRICS FCI Arb C. Arb FRSA
FInstCPD(Hon)

2023 is one of the most important years in the valuation of real estate for many decades with UK property and its valuation subject to radical change.

The recent RICS Valuation Review, the publication of the 2023 RICS “Red Book” and the implementation of the Basel III accord coupled with an overhaul of International Valuation Standards by IVSC have come together.

RICS has discarded the controversial recommendations on DCF valuation methodology and valuer rotation policies reflecting a refocused RICS which is back in touch with its Members in the “public interest”.

This is a welcome game changer as RICS will need all its muscle and experience to face new challenges with wide reaching implications for markets and valuers on a global basis.

When the Dutch settlers of Manhattan offered to purchase the Island from Native Indians they negotiated a payment of trinkets, beads and gold coins thought to equate to \$24 US. Regardless of retrospective opinion of the rights and wrongs of such a trade that was “Market Value” at the time. Nearly 400 years later we can see it was a shrewd investment. Bloomberg, in 2018 identified the land value of Manhattan at some \$1.74 Trillion but nobody could have predicted that outcome at the time of the purchase. What we do know is the evidence confirms two willing parties undertook a transaction in 1626 without duress, at a Market Value of \$24.

But now, after at least 400 years, valuers, under the Basel III accord are to be faced with the prospect of identifying not Market Value but “Prudent Value”. What does this all mean and what is the context?

What has happened that affects Valuers and Real estate

It is encouraging that RICS has been proactive and challenged some of the proposals for valuation methodology that were being put forward by various industry groups with vested interests that would have been impractical, distorted market activity and been impossible to enforce.

The all-important and globally recognised latest edition of the “Red Book” Global Valuation Standards with the recently published UK supplement has made two clear decisions on the issue of Discounted Cash Flow methodology and its adoption for the valuation of investment property and Valuer Rotation on portfolio valuation for corporate reporting and accounts purposes.

The original recommendation by the Valuation Review Group, that in future all Investment Property Valuations would adopt Discounted Cash Flow as the Principal Valuation methodology has been abandoned and Valuer rotation proposals has been amended.

RICS members were quick to point out that neither of these recommendations as issued, were either not practical or not relevant. Further the Committee rewriting the Red Book agreed with Members that it was not for the Practice Statement to tell valuers how to value but state the standards required.

The 2023 RICS Red Book does not require all Investment Property to be valued by reference to DCF methodology but continues to require valuers to adopt the methodology necessary to identify “Market Value” in that particular sector.

The second recommendation was for the rotation of valuers to ensure that corporate valuations are undertaken independently and that coercion or familiarity over long periods of time does not blur the appointed valuers judgment. Absolutely nothing wrong with that with the new RICS Red Book UK Supplement including an update to UK VPS 3. This promotes a more realistic compulsory rotation cycle than adopted by the previous RICS SRB With the details as follows:

- a maximum single engagement period of five years,
- a maximum period of ten years before the rotation of a valuation firm
- a maximum period of five years before the rotation of an individual ‘responsible’ valuer,
- a minimum three-year break after rotating off an engagement,
- a two-year transition policy,
- In exceptional circumstances, a carefully controlled option to deviate from the requirements with notification to RICS Regulation.

What is particularly pleasing is that this outcome was the result of Member feedback indicating the new RICS SRB, does know what chartered surveyors do, how they do it and what they need.

What is happening that will impact on Valuers and Real Estate

RICS Regulatory Standards and the creation of Regulated Valuation Firms and Valuation Compliance Officers

RICS is now consulting on proposals to change RICS regulatory schemes for registration of valuers and regulated firms, introducing a register of firms undertaking valuation work to be referred to as Regulated Valuation Firms.

These policy recommendations involve changes that will impact valuers, firms, their clients and those who rely on valuations for investment decisions. There is also the wider public interest as valuation practice underpins financial and property markets. Any changes must be cognisant of markets and how they operate as well as adopting regulatory changes that are proportionate.

The aims of this initiative are important for valuations carried out for secured lending or investment decisions so as to provide more confidence to the public.

It is proposed that all RICS Regulated Firms will be required to confirm in their annual return whether they carried out valuations and to provide relevant information about the valuation work they undertake and who within the firm has responsibility for ensuring valuation compliance.

This register of valuation firms would not replace the VR scheme (which is for individuals), but rather sit alongside it. This will require an additional layer of regulation within RICS and participating firms, both administrative and expert, coupled with a new role of “Valuation Compliance Officer” all leading to higher valuation regulatory fees.

The Valuation Compliance Officer role will be assumed by the “Responsible Principal” who must be an RICS member and must comply with a role description that clearly sets out their responsibilities.

As to smaller firms who may only employ a single Registered Valuer a Compliance Officer role may have a responsibility to regulate compliance over several firms.

RICS is consulting with its Members and wider industry groups and seeking feedback on the proposals by 12th December via RICS iConsult or by responding to the survey questions and emailing the project manager, Helvi Cranfield (hcranfield@rics.org).

Basel III & 4 Accord.

The Basel Accords refer to a series of three international banking regulatory meetings that established capital requirements and risk measurements for global banks and are designed to ensure that financial institutions maintain enough capital on account to meet their obligations and also absorb unexpected losses.

One of the aim is to address the issue of consistency amongst risk-weighted assets for banks to limit their lending capabilities by the capital they have. Such a process helps prevent bank failure, which will see banks incapable of fulfilling their duties to creditors and depositors.

This includes the likelihood of less Capital for Real Estate due to the output floor requirement. Instead, investors and other interested parties may need to look for additional funding options for commercial properties other than banks to a less Supervised Sector that are not regulated.

This enhances risk to the real estate sector by these “Shadow banks”, and therefore individuals or companies planning to take out loans for real estate purposes should avoid banks that redirect their clients to the shadow banking and ideally find an alternative bank.

As banks tighten their capital requirements under Basel 4, property companies’ returns may decrease which in turn may reduce the bank’s credit provisions or increase credit costs, affecting property companies that rely on bank borrowing to fund their operations. Consequently Basel 4 will impact UK

real estate with the industry having little time to prepare for its effects before the framework is fully implemented in 2025.

But these new lending criteria are not to be considered in isolation as Following the findings of the Basel III 2017 Committee on Banking Supervision (BCBS) a new definition of “Prudent Value” should be adopted for valuations prepared for lending purposes is as follows:

“Value of the property: the valuation must be appraised independently using prudently conservative valuation criteria. To ensure that the value of the property is appraised in a prudently conservative manner, the valuation must exclude expectations of price increases and must be adjusted to take into account the potential for the current market price to be significantly above the value that would be sustainable over the life of the loan. National supervisors should provide guidance, setting out prudent valuation criteria where such guidance does not already exist under national law. If a market value can be determined, the valuation should not be higher than the market value. . .”

Further it is likely that the concept of “average value” will be required where “...the value of the property shall not exceed the average value measured for that property, or for a comparable property, over the last six years for residential properties or eight years for commercial immovable property or the value at origination, whichever is higher.” The use of the Market Value will no longer be permissible under the revised rules.

I am of the opinion and hope that common sense will prevail and that the use of the valuers “Market Value” as the robust basis for lending purposes, supports both a “Prudent Value” and “Sustainable value” reflecting the BASEL “Property Value”.

“Prudent Valuation” in the context of “Property Value” for the purposes of lending will be with us but in my opinion it is Market Value that must continue to be delivered by an independent valuer as the benchmark from which everything else should flow. It is for the banks and lending institutions to determine what is the prudent valuation for loan purposes against their assessment of “Property Value” as that is their risk and not that of the valuer.

IVSC Initiatives

In addition, and to complement the Basel Accord valuation changes, IVSC, are launching a major initiative to modernise standards, increase understanding by users and future proof standards for new assets and liabilities.

These initiatives will require two types of reports with the first setting out the Valuation Process review and the second being the Valuation Conclusion review and requiring the following assessments to be included:

- Environmental, social and governance inputs used and considered,
- Significant or special assumptions and/or limiting conditions,
- Findings of a specialist or service organisation,
- Value and rationale for valuation,
- IVS compliance statement,

Much of this, especially the ESG requirements, is already covered in the current and recently published new RICS Red Book standards but there are some important changes that may well impact on valuers approach to valuation.

For those involved in real estate, especially valuers and owners, 2023 is the year to remember it all changed!

Building Safety Act



Paul Conway
Director
ArchitecturePLB

In response to the unsettling combination of uncertainty and anxiety, ArchitecturePLB recently hosted a round table discussion to consider the far-reaching impact of the Building Safety Act, reflecting on the commissioning, design, construction and management of buildings requiring approval from the new HSE Building Safety Regulator.

The invited panel was formed from a range of disciplines, sharing thoughts and concerns on arguably the most significant piece of legislation to affect our industry in decades, looking at the implications on programme, costs, contracts, products and insurance.

Contributors:

- Paul Conway, Matthew Gibbs- ArchitecturePLB (Architect and Lead Designer)
- Richard Holdaway- Gallagher London (Professional Indemnity Insurance Broker)
- Robert Lloyd- Caytons Law (Construction Lawyer)
- Neil Badley- Sweco UK (Approved Inspector)
- Toby Farzan- Rund Partnership Ltd (Project Manager)
- Grant Sable- Cundall (MEP Engineer)
- Thomas Vandecasteele- Legendre UK Ltd (Main Contractor)
- Mark Wilson- MSafe (H&S Advisor)
- Nick McSpadden- Fairhurst (Structural Engineer)

Programme, risk and costs

The new 'Gateway' process is underway with Gateway One, requiring a fire statement to support an application for planning permission, now reasonably well-understood. However, reports indicate that the vast majority of submissions received by HSE each month, are being returned

as unsatisfactory, leading to the view that early consultation is needed, and a suspicion that the Building Safety Regulator (BSR) may not have the capacity to assess the submissions.

Less is known about how Gateway Two will impact on projects, with particular concern over potential delays caused by an over-stretched BSR. We can safely assume that the full 12-week 'hard-stop' prior to construction will be required, and can also predict that submissions will have to be farmed out to competent 'level-3 accredited third parties'.

The biggest culture change will happen on site. Avoiding delays through unplanned 'hard stops' will be crucial, so we can no longer design as we go along, or change fire-related products at short notice. From a contractor perspective, the greater certainty offered by a more complete design can only be beneficial in managing cost and risk, but it requires a very different approach to procurement and timing of specialist design inputs.

Once the project is complete, efficient navigation of the Gateway Three process will have huge value. A scheme with lots of changes and little contact with HSE will undoubtedly require another lengthy hard stop prior to occupation. A well-managed scheme with an engaged BSR should, by contrast, gain approval without issue, allowing earlier handover.

Contracts and teams

So how will the Act change contractual relationships? Can we predict the end of D&B? The Grenfell enquiry identified this as a major contributing factor, however, we can probably expect D&B to remain the dominant procurement route, but with a greater reliance on early contractor input. Increasingly, RIBA stage 4 has been split into pre- and post-commencement activities in order to preserve commercial advantage, but this approach will likely need to change. Starting on site with 'design intent' information and then waiting for sub-contractor and specialist design just won't be possible.

On completion, the Principal Designer (PD) under the Act (most likely but not exclusively the architect) must be willing and able to issue a statement of compliance. This is a significant change and requires a depth of knowledge of what has been built which goes way beyond a typical scope of service on a D&B project. Perhaps we will see the return of the clerk of works, even employed by the PD? Technology can also play a big part here, with 3D image capture during construction providing an auditable record. There are also recent, international examples of compliance checking being carried out by AI.

Products and assemblies

Martlet Homes Limited vs Mulalley & Co Limited established that a BBA certificate cannot be said to amount to a form of "guarantee" or "passport" to compliance with the Building Regulations. Designers must distinguish between product conformity and the compliance of a collection of products when combined into an assembly. A crisis is brewing here. At the time of writing, the new National Regulator for Construction Products is yet to start assessing products, so with European ratings to become obsolete in the UK and British Standards being withdrawn, where does that leave us? All products won't

have to be retested, but we can no longer rely on brochures; specifiers must demand actual test data of every proposed arrangement.

Hackett described desktop assessments of external wall systems as 'shocking' with 'completely wrong assumptions'. As a consequence, we are moving from reliance on desktop analysis/extended test reports towards physical testing of actual assemblies, so there will be a huge pressure on testing capacity. There will be some advantages for designers, at least. It will become more difficult for contractors to change products during construction, given the greater difficulty to demonstrate equivalence, and a fear of non-approval from the BSR.

There may be unintended consequences of this upheaval, particularly in the short term. It will be much harder for manufacturers to innovate, which could lead to stagnation in the development of new products.

Liability and insurance

The update to the Defective Premises Act 1972 has extended liability from 6 to 30 years, imposed retrospectively. The test of whether a building is unfit for habitation, which was previously a very low bar, has now been raised a long way; a resident might have had to accept a leaking roof, but cannot live somewhere that is not fire safe.

Government wants to show it's taking a hard line and is pushing greater responsibility onto professionals. A lack of competence is now a criminal offence and the BSR will take no liability itself.

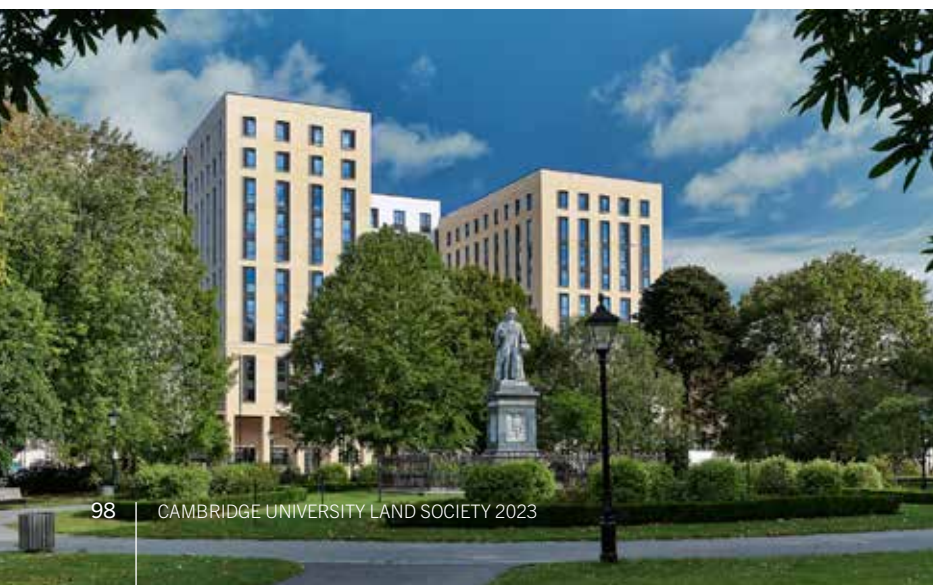
From a professional liability perspective, there will be much less room for manoeuvre when things go wrong. The use of reasonable skill and care is no longer enough, and this will be reflected in the insurance market, though premiums and exclusions change in response to claims, so it will take time to work through. Despite premiums currently becoming more competitive and cover improving for new projects, there are a large number of legacy, fire-related cladding claims with exclusions applied, resulting in a big gap between liability and cover.

Conclusion

Despite concerns about the impacts of this new legislation, nobody could argue that change was not needed. Our industry has a huge opportunity to do things better.

There is no denying that the transitional phase could be painful for some, with a lack of clarity, particularly around Gateways Two and Three and the testing and regulation of products, a big worry. Set against the other 'headwinds' faced by development and construction, we can only hope that a stuttering start to the new system won't create another obstacle to project viability.

However, when the processes become clear, and experience has been gained, the industry will be in a much better place.



It's been a **busy year** in the Department of Land Economy



Professor David Howarth
Head of the Department of Land Economy

With the Covid protocols now gone, the Department's building itself has regained a buzz, with many staff returning to their offices. Lectures, too, are all now in-person. It is refreshing to be able to say that things are finally back to normality.

We have warmly welcomed quite a few new members of academic staff: Professor Claire Colomb (from UCL), Dr Justin Kadi (from the Vienna University of Technology), Dr Philip Kalikman (from Yeshiva University, New York), Dr Daniel Ruf (from Goethe University, Frankfurt), Dr Sofie Waltl (from the Vienna University of Economics and Business), and Professor Harro van Asselt (from the University of Eastern Finland). All have made fantastic contributions to the Department already.

We have also just opened applications for our brand-new course: the MSt in Climate, Environmental and Urban Policy. This course will mirror the structure and length of our current MSt in Real Estate, but will focus instead on giving late, mid, and high-potential early career professionals a 360-degree view of how policy is relevant to the sustainability transformation. We are very excited to have already seen our first submitted application, despite the official deadline being in May! We will be hiring a suite of new academics who will be teaching on this course, which will bring further additions to our staff numbers.

The Department has been very active in its research this year, a welcome sign as we start to gear up to our next Research Excellence Framework (REF) submission. Research this year has covered, for example, stakeholder engagement in the creation of Smart Cities, the efficiency of carbon credits, and the relationship between birthplace economic adversity and an individual's economic, cultural, and political views.

As always, our research has tapped into popular opinion, and has been featured in a wide range of news publications, such as The Washington Post, The Times, The Guardian, The Financial Times, and Bloomberg to name a few.

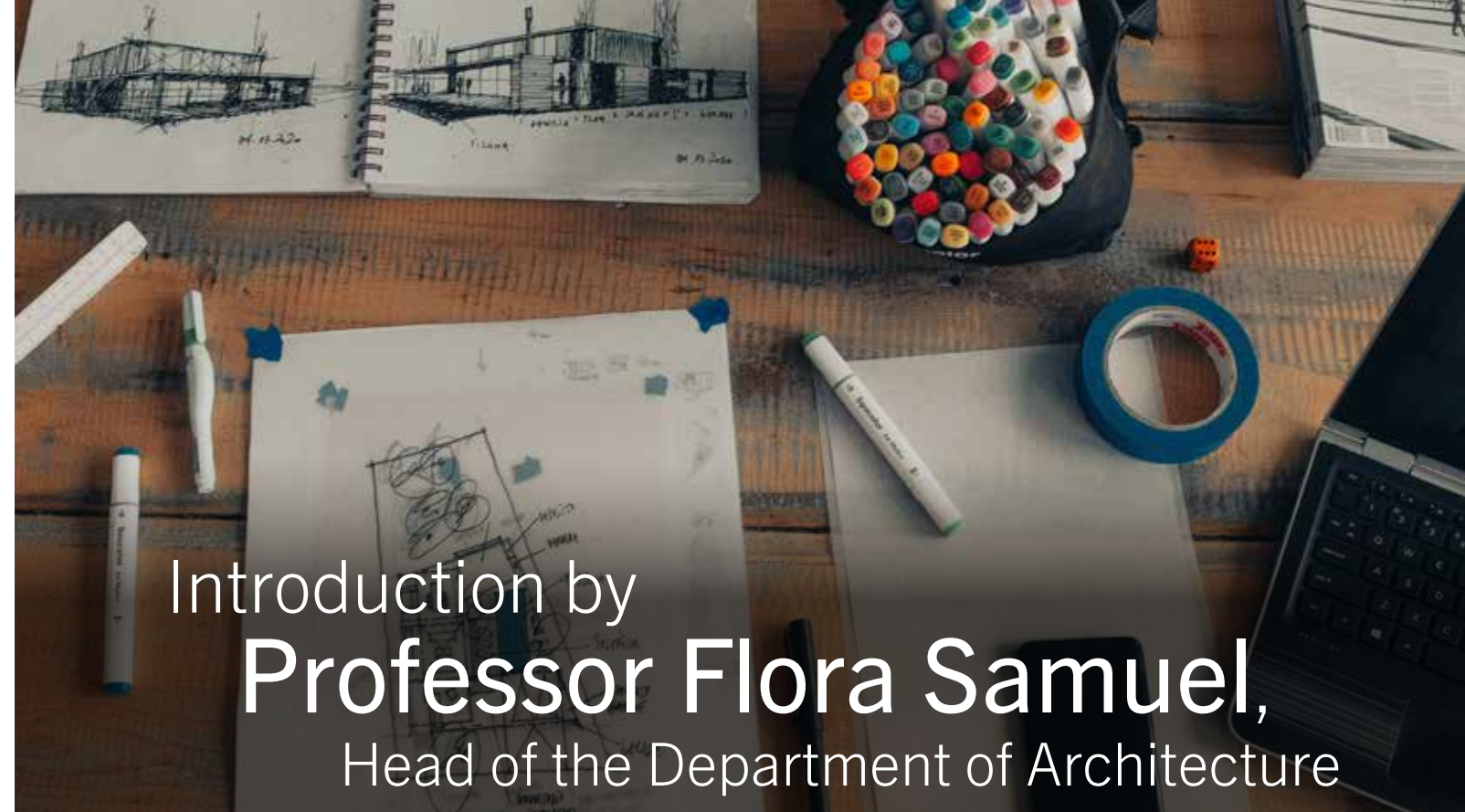
We also have a new research centre: Finance for Systemic Change, co-directed by Dr Belinda Bell and Dr Ellen Quigley. The centre will aim to understanding how institutions with considerable resources can maximise their ability to address social and environmental systemic risks. They will work with global asset owners to coordinate evidence-led and issue-specific actions to mitigate systemic risks. Among the portfolio of work they will also develop the Cambridge 1.5°C-aligned corporate bond index which will be the first of its kind to exclude fossil fuels, electric utilities, and financial sector issuers whose actions would result in global heating above 1.5°C.

The Department has also been very active in outreach this year. We ran presentations across the summer and autumn undergraduate open days. We had three sessions during the online postgraduate open day in October. We also spoke to prospective students on the Sutton Trust Summer School, and ran a successful Land Economy Subject Masterclass, featuring Professor Douglas Crawford-Brown and Professor Elisabete Silva. All of these are important for ensuring we get applications from the widest possible pool of students.

Another big event this year was the launch of our new website back in May. It has a modern, image-focused design and should provide a great platform for showcasing all our work to the public. It includes an innovative feature of having research tags at the top of every page, allowing any user to see exactly what subjects our research covers – a perennial problem for the Department of Land Economy.

While there has been lots to celebrate, there has also been sad news this year. We lost our former Head of Department, Dr Derek Nicholls, who will be greatly missed and worked as a tireless supporter and champion of our subject. We also lost Dr Emily Webster, our recently appointed Assistant Professor of Environmental Law, who died suddenly in October. Emily was so well-loved in the Department, and the messages of condolence that we have received are testament to the myriad ways she inspired so many.

There is lots to look forward to for the coming academic year: the launch of the Department's podcast 'Changing Cities', members of staff attending COP28, and preparations for the first intake on the new MSt in Climate, Environmental and Urban Policy. And that's in addition to the rest of the teaching and research that we do so well. In all, it's a very exciting time for the Department!



Introduction by **Professor Flora Samuel,** Head of the Department of Architecture



Professor Flora Samuel
Head of the Department of Architecture

In order to support others in the making of communities we need to practice making a community of ourselves. Having just arrived here at the Department of Architecture as Professor of Architecture I can see with some objectivity that it is a remarkable community of talented and caring people who are looking out for one another in all manner of ways. If you are new to the Department – Welcome – we hope that you will find your time here enjoyable

and productive in terms of learning about yourself and your relationship to others, including the natural world while, of course, acquiring the skills of an architect appropriate to this rapidly changing world.

This year has seen the hottest temperatures ever recorded on the planet. The need to address climate change through our work, thinking and the everyday things that we do has never been more urgent. This isn't just a technical matter. It is a matter of social justice – everyone needs the opportunity to make a difference. It is also an ethical matter. What we are doing on this side of the world is already having huge impacts on the lives of people across the oceans and as well as many here in the UK. Climate change is also a cultural matter. Culture can profoundly affect the way in which we think and feel about the world and our relationship to one and other as well as our health. Climate change is also, very obviously, an economic issue too. Politics and architecture are irrevocably tied together. We all have a part to play in addressing these things through our work and actions.

The Department is going through a period of considerable change too. We are joined this year by five outstanding young academic members of staff, with more to follow. I am sure this will be bring an exciting range of fresh viewpoints to our

teaching and research. All this has been made possible by the development of the new Design Tripos which is accepting students to start their studies in Michaelmas 2024. Small but important shifts are being made to the existing Architecture Tripos to facilitate crossovers between the two and to maximise the integration of the Department's remarkable research (it was ranked first in the UK for Built Environment research in the last Research Excellence Framework assessment) into teaching.

If Architecture is to be valued - and architects are to be paid properly - we have to develop the field as a research discipline, encompassing many different specialisations, with a clear contribution to 'public good'. This is becoming all the more important with the advance of automation. I argue in my book *Why Architects Matter* (2019) that architecture will increasingly focus on the design of experiences and transformations enabling non-experts to get involved in shaping the future of their places. Rather than building more we have to make the most of what we have. The need to reduce resource use has serious ramifications for the way in which architects think about themselves. I am sure there will always be a place for the sensory pleasures of tactile details and intriguing architectural atmospheres, but it is going to be interesting to see who makes them, as well as where and how they get made as technology evolves. I hope that some of you will turn your attention to the profession and its possible futures in your work as the field is in urgent need of critique and leadership.

I am taking over from Prof James Campbell as Head, and am delighted to be supported by Dr Maximilian Sternberg as Deputy Head for Teaching and Dr Ronita Bardhan as Deputy Head for Research (including PhDs). They should be your first port of call for issues relating to these matters. I am leading a large and intense research project over the next 18 months so won't be as involved in the daily life of the department as much as I would have liked but I intend to 'walk the floor' as much as I can. Please don't hesitate to come and say hello or to pop into the Head's office, up the stairs from the front door, if there is anything you need our particular help with. Sue Luxon and I will be there most days apart from Fridays.



Obituary of Derek Nicholls

Derek Nicholls who died on Tuesday 19th September aged 84, was a pivotal member of the Department of Land Economy in the University of Cambridge for 25 years, but his association and contributions both within and beyond the University extended well beyond that.

Derek's death breaks a direct link back to the founding ideas and approach to the discipline of Land Economy. Derek was brought up and educated in Cornwall. He took his first degree in Estate Management from St. John's College, with First Class Honours in 1961 and his PhD in Land Economy under the supervision of Professor Donald Denman, graduating in 1966.

After Cambridge, he held the Sir John Mactaggart Research Fellowship at the University of Glasgow, subsequently becoming Lecturer and Senior Lecturer in Town and Regional Planning there. At this time, Derek got to know Professor Gordon Cameron and they edited *Urban Studies* together between 1968-73.

Derek returned to Cambridge to take up the Gurney Lectureship¹ in Forestry in the Department of Land Economy in 1974, where he remained until he took early retirement in 1999; the first of a number of different retirements. He was subsequently an Affiliated Lecturer, continuing a substantial teaching load in the Department, lecturing on the third year Paper on 'Agriculture, Forestry and Rural Development' and taking a new role on the first year Paper on 'Land, Environment and Structural Change'. He retired from this in 2005.

Derek's scholarship was not limited into a single area; his work took him across the variety of subjects that can be found within Land Economy and across many countries. His PhD, awarded in 1966, focussed on aspects of forestry policies in England and Wales. The influence of Denman may be illustrated by the title of a 1969 Forestry Commission report '*Use of Land for Forestry within the Proprietary Land Unit*'. He worked particularly on forestry on private estates and he followed up his PhD survey work with subsequent surveys in 1980s, 1990s, and finally in 2005, giving a unique insight into estate forestry over that period.

But Derek's interests ranged well beyond forestry. His publications and presentations range over recreation and tourism, rural development, housing and house building, sustainable urban development, land use planning, real estate and real estate markets, and real estate education. He held many visiting and examining roles internationally, in some cases maintaining links first pioneered by Donald Denman such as at the University of Nigeria, but also elsewhere, including the United States, Hong Kong, Japan, and Malaysia.

Within the Department Derek took on a number of key leadership and administrative roles. My first contact with Derek was Secretary to the Appointments Committee, at that time run by academic rather than administrative staff. In 1983, I was in Australia when I applied for a lectureship in Land Economy. On being invited for interview, I had to decide whether the possibility of success made it worth my while to travel round the world for a short meeting in Cambridge and, of course, who might pay. This was negotiated with Derek, partly by exchange of telegrams and partly by phone. Derek was, of course, the soul of discretion: supportive, honest, and yet entirely neutral. In the end I decided to come.

Derek was Head of Department over two difficult periods for the Department. Donald Denman retired in 1977, prompting a debate within the University as to whether there should be a replacement to the Professorship, and by implication whether Land Economy itself should be continued. In a close run thing, it was agreed to establish a further single tenure Professorship

in Land Economy, leading to the appointment of Gordon Cameron as the second Professor of Land Economy. Derek acted as Head of Department through this period. He took on a second stint as Head of Department during Gordon Cameron's illness and later death, steering the Department through to the subsequent appointment of Malcolm Grant as the third Professor of Land Economy. This time the post was re-established on a permanent basis, reflecting the enhanced reputation of the Department and discipline within the University more generally.

Alongside his roles in the Department, Derek participated actively in college life and led extracurricular courses for visiting students from overseas and mature students within the UK. Derek held fellowships at both Wolfson College, where he had spells as Senior Tutor and Vice-President, and at Fitzwilliam College where he was Acting President.

While he was at Wolfson, Derek, with Carol Moore, established the International Programme, running short courses for visiting students from overseas universities (1992-95). In the early 1990s, in light of a dearth of qualified graduates for the surveying profession, it was agreed to establish a Centre at Fitzwilliam College to offer conversion courses. The Wilson Centre was generously endowed in 1993 by Peter Wilson, owner of the *Estates Gazette*, to meet this need. However, the employment market shifted and the Centre had a difficult start. As a result, Derek took his Centre to Fitzwilliam to establish the Cambridge International Land Institute that would both run the conversion courses and maintain a programme for visiting students. Derek remained as Director until 2004.

Further beyond the University, Derek was elected a member of Cambridgeshire County Council between 1984-1993, serving at different times as Chairman of the Structure Plan Steering Committee, the Policy Committee, and the Cambridgeshire Police Authority. As a councillor, he was assiduous in his attendance at local meetings where others are often less conscientious.

For all this, perhaps Derek's lasting legacy will particularly be in the fond memories of the students who have taken his courses and benefitted from his supervision over the years. He was President of the Cambridge University Land Society in 1983-84. Derek was a generous and thoughtful teacher. His undergraduate teaching was accompanied by visits to the Sandringham Estate and tours of Cambridge for first years to be introduced to Land Economy in action. His programmes at CILL were enlivened by such occasions as an organ recital at Kings College or a harpsichord recital at the Fitzwilliam Museum. But he will be remembered too for his personal kindnesses, such as welcoming overseas students to his home over the Christmas period.

Since his final retirement from academia, Derek has been active in the Methodist Church as a reader and lay preacher. He continued with this element of his life up to the end; he preached in Haslingfield on 3rd September.

Derek Nicholls might perhaps be seen as an 'old-fashioned' academic and scholar, whose work had breadth rather than technical depth. He gave time freely to his students and was a dependable attender at University meetings. He was held in high esteem by all and was a firm supporter to those facing challenges. But he didn't play the journal article game that is now a prerequisite to garnering reward within the University. However, this might be seen as a failure of the University system rather than a criticism of Derek's approach.



Ian Hodge
Emeritus Professor of Rural Economy
Life Fellow of Hughes Hall

Derek's funeral took place at the Wesley Methodist Church at 12 noon on Monday 9 October.

¹Sir Eustace Gurney, 1886-1927; Mayor of Norwich; Sprowston and Little Walsingham, Norfolk

Looking Outwards, Welcoming the World



Thies Lindenthal
Grosvenor Professor of Real Estate
Finance
Department of Land Economy

Cambridge is beautiful, especially in summer. We should not take that for granted—and also not forget that others love to come and enjoy it, too. In July, the real estate group at the department played that card very well. We organised the International Conference of the *American Real Estate and Urban Economics Association* (AREUEA). This is arguably the most prestigious and competitive academic real estate conference outside the US and we were thrilled to host 150 scholars for three days of research presentations and social events at Jesus College. The Department of Land Economy is located in the middle of Europe and right between Asia and America and our conference served as a bridge for academics from three continents.

The range of topics discussed was extremely wide. Singling out a few themes will not do justice to the richness of research questions and all the connections between the work presented. Still, climate change and its impact on the built environment stood out. Paper after paper discussed flooding risks, heat waves, hurricanes, carbon emissions and pricing, paths towards more sustainable buildings, effects on tenant health and productivity, “green premia” in investing, social implications, governance—just to mention a few topics. Environmental, social and corporate governance (ESG) and climate topics grew out of a niche discussion and started to occupy the centre stage over the last years. In June, they were the elephant in the room.

But there was more, of course. Machine Learning and its ability to reveal patterns in real estate data, mortgage markets, performance measurement and benchmarking, REITs, affordability and social equity, urban regeneration, development, technology and new data sources, labour markets, land markets, and many other pressing topics also received the attention they deserved. For each paper, we had recruited a dedicated discussant who provided in-depth feedback before we invited the audience for questions and debate.

To me, the highlight of the conference was the keynote speech by Professor Colin Lizieri, titled “Beliefs, Uncertainty and Decision-Making in Commercial Real Estate Markets”. In his talk, Colin reflected on his distinguished career journey, starting as a geographer and gradually shifting towards finance and real estate. He discussed the complexity of understanding cities and real estate markets, emphasizing the importance of interdisciplinary perspectives.

He then criticized the increasing specialization and siloing of academic disciplines, arguing that this narrows our understanding of real estate markets. He observed that assumptions and models in real estate finance often do not account for regional differences, institutional structures, and the individual decision-makers’ roles. Colin also critiqued the tendency in academic and professional circles to cling to certain entrenched beliefs or “mythologies”, such as real estate being an inflation hedge or certain cities offering better risk-adjusted returns, despite evidence to the contrary.

He further emphasized the influence of individual actors in the market, particularly in decision-making roles, and how their beliefs and biases can shape market outcomes. Lizieri stressed the importance of considering agency and the role of individual actors in real estate market research. He suggests that embracing interdisciplinary approaches and challenging core assumptions in existing models are crucial for a more nuanced understanding of real estate markets.

The speech also touched on the contributions of Cambridge economists Keynes and Ramsey, particularly focusing on Ramsey’s work on probability, utility, and subjective probability. Colin highlighted how these concepts can help understand how entrenched beliefs and biases affect market outcomes. He concluded by emphasizing the need for research that goes beyond conceptual models to test ideas in real-world settings, and the importance of interdisciplinarity in understanding complex market dynamics.

You can read Colin’s keynote in full here: <http://bit.ly/40Hq51b>

The main organiser of the conference, Dr Carolin Hoeltken, probably should have the last word:

“It was great to welcome researchers from all over the world who showcased their research on a diverse range of topics. The papers were of exceptional quality. We’d like to express our heartfelt gratitude to AREUEA and CLEAB. Without their support, this event would not have been possible.”

In similar news, we continued to organise our annual Real Estate Finance and Investment Symposium with our partners from the University of Florida and the University of Hong Kong. The symposium featured longer, more in-depth paper presentations and allowed time for discussion among presenters, assigned discussants, and other participants. The event was held in a setting aiming to inspire a critical mass of leading academics in the field to create new thoughts and insights on real estate finance and investment topics.

The 2023 symposium was held in Hong Kong and covered a broad range of topics: private equity real estate funds commercial mortgage-backed securities, leverage and capital structure, infrastructure investment and privatization, price index methodologies and performance measurement, international real estate investment, and technology and innovation including ML and AI applications.

In 2024, the symposium will return to Cambridge and we would be pleased to welcome practitioners, too. The news section of the departmental website will share the exact date in due course.



Participants of the Real Estate Finance and Investments Symposium 2023, jointly organised with the Universities of Florida and Hong Kong

2050: Thinking about the Future



Nick Mansley
Executive Director, Real Estate
Research Centre
Co-Course Director, Masters in
Real Estate

I have been involved in forecasting or thinking about the future for all my 36 years of working life and one thing I can say with confidence is that it is really difficult to get right! I remember in my economic consultancy days getting some things right about how energy demand changed over the next ten to twenty years and how deep-rooted some of the problems of industrial decline were. However, I also got some things wrong.

The performance of the UK cities in the last few decades, whilst it might still seem disappointing by some international comparisons, was much better than I and my colleagues foresaw in the late 1980s/early 1990s, particularly in London. The significant increase in the population of London from the late 1980s onwards came as a surprise after over four decades of decline. The difficulties of adverse trends (from the vicious spirals of decline - losing population (particularly the young) - losing economic activity and jobs- leading to out-migration and lower population) and how to address them were a large part of my early career. London, had enough strength in the 1980s to break out of its trend and attract both people and companies to make it their base.

Another challenge of forecasting is that you can essentially be "right" but it can be a very long time before markets really price it in. In the mid 1990s, it seemed to me that the office and retail sectors were over-invested in and there were better prospects and risk-adjusted prospects in particular in the industrial and residential/alternatives sectors. However, it was only really twenty years later that real difference emerged between sectors in total return performance.

So as we look forward over twenty five years what can we say about the future with any confidence? And even if we are right, when will it be priced into markets? Firstly, demographics. We know that the world population is likely to grow but ageing populations and overall decline, or at least a substantially negative natural rate of change, look likely to be a feature of the next thirty years for many higher income countries. Indeed, China's population may well have peaked in 2022. We don't know the extent to which migration will offset this, there has been more migration than expected over the last decade in the UK and other parts of Europe. Lower population growth is likely to lead to lower economic growth and lower growth in demand for property. One consequence of an ageing population is likely to be on savings – real interest rates were trending lower partly off the back of this shift to higher savings supported by the changing age structure of the population and this trend, supporting low real interest rates is likely to continue.

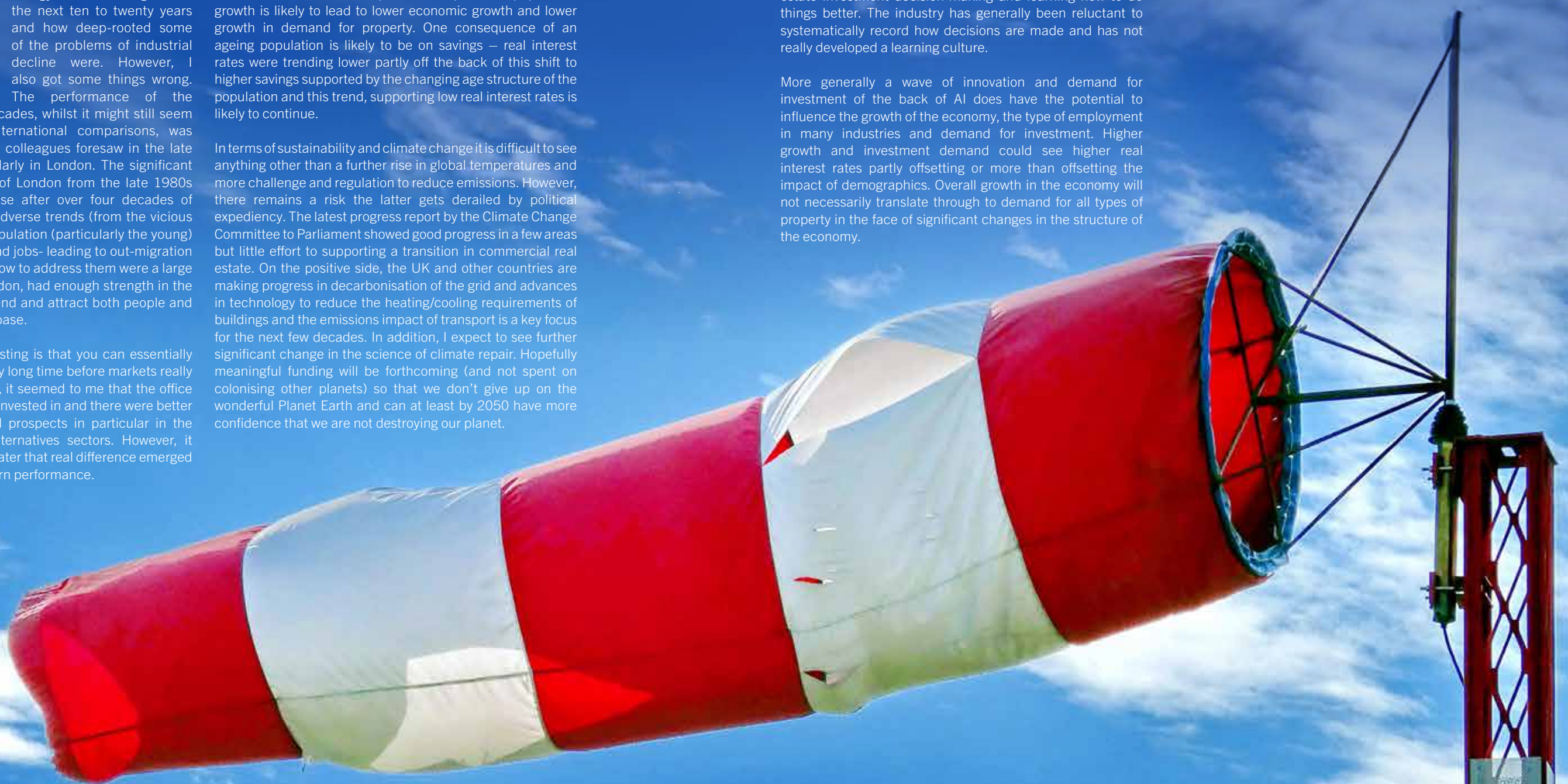
In terms of sustainability and climate change it is difficult to see anything other than a further rise in global temperatures and more challenge and regulation to reduce emissions. However, there remains a risk the latter gets derailed by political expediency. The latest progress report by the Climate Change Committee to Parliament showed good progress in a few areas but little effort to supporting a transition in commercial real estate. On the positive side, the UK and other countries are making progress in decarbonisation of the grid and advances in technology to reduce the heating/cooling requirements of buildings and the emissions impact of transport is a key focus for the next few decades. In addition, I expect to see further significant change in the science of climate repair. Hopefully meaningful funding will be forthcoming (and not spent on colonising other planets) so that we don't give up on the wonderful Planet Earth and can at least by 2050 have more confidence that we are not destroying our planet.

In terms of technological change there are some things we can see today that seem likely to become very widespread in years to come whilst there are others which are hard to imagine. The use of sensors to provide information and make products and services more efficient, safer, customised is not new but they are likely to become far more widespread. Integration with artificial intelligence (AI) could make sensors more effective in creating useable information. AI is the technological change that it is getting a lot of attention today, understandably so given its potential to transform the way some work is undertaken as well as many other aspects of our lives. If used wisely it should be able to bring new insights, speed up research and development processes, reduce routine and administrative tasks and bring many other benefits. However, it will need to be developed and used with care. Students today who use AI tools will find it can be very good but sometimes it struggles to differentiate what is good quality information and it can really struggle with some quantitative tasks (at least that is what it tells me!). It will be fascinating to see the extent to which AI is used in real estate investment decision-making and learning how to do things better. The industry has generally been reluctant to systematically record how decisions are made and has not really developed a learning culture.

More generally a wave of innovation and demand for investment of the back of AI does have the potential to influence the growth of the economy, the type of employment in many industries and demand for investment. Higher growth and investment demand could see higher real interest rates partly offsetting or more than offsetting the impact of demographics. Overall growth in the economy will not necessarily translate through to demand for all types of property in the face of significant changes in the structure of the economy.

Healthcare is an area where the use of AI combined with sensors and other diagnostic tools, and personalised therapies offers potential for significantly better outcomes. The Cambridge Global Centre for Healthcare Convergence is a new initiative by Cambridge colleagues to work on a more integrated and convergent business model to fully take advantage of the potential of new technology and to make it scalable and effective.

There is plenty of risk in the geopolitical sphere but that is nothing new. I think we can be pretty confident that in 2050 politicians and others will still be blaming other countries etc. I hope Cambridge will continue to be global in outlook and continue to focus on making a real difference in the key challenges facing the world today, not least climate change.



Is the **Green** Business Case a Dangerous Illusion?

Why We Need **Energy Sufficiency**, not just **Energy Efficiency**

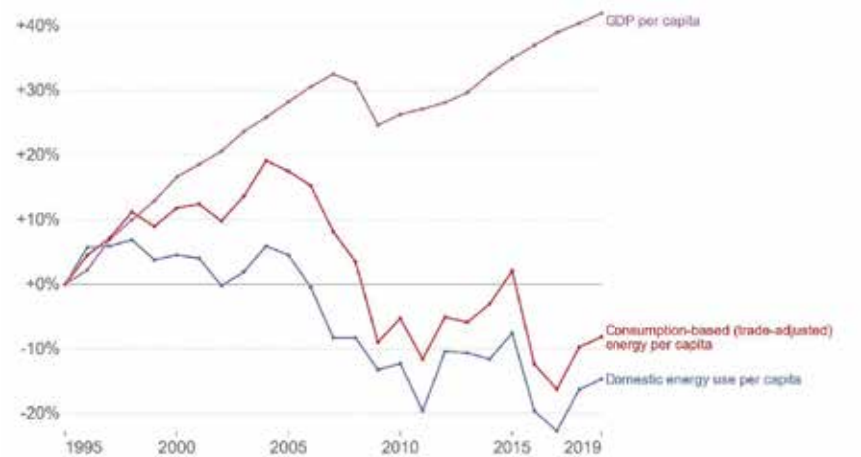


Franz Fuerst
Professor of Real Estate and Urban Economics
Fellow/Director of Studies at Trinity Hall

Nature and business have often been portrayed as incompatible or even inimical to each other. William Wordsworth, the great poet laureate and nature enthusiast captured this sentiment in his sonnet: 'The world is too much with us; late and soon, getting and spending, we lay waste our powers.' If we could only reconnect with our true origins and leave behind the artificial world that we inhabit behind, all environmental problems may fade away by themselves. But is this just wishful thinking or a palpable future scenario for our planet?

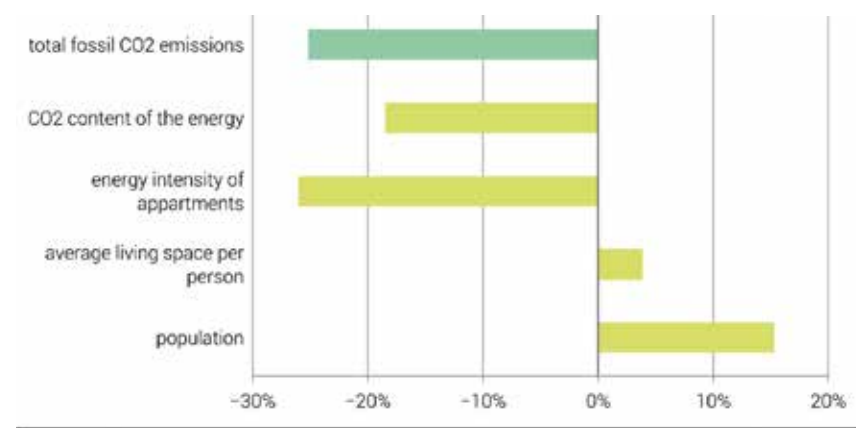
Over the last few years, one of the main themes of my research has been how the transition to energy-efficient buildings is facilitated by market signals, notably a green price premium. Writ large, markets that reward greener, more sustainable products and services simultaneously contribute to our global race towards a carbon-neutral future. Hence, climate emergency and economic growth are not a seesaw but instead work in tandem. Critics of green economic growth or the 'green business case' or indeed any attempt to marry capitalism with sustainability argue that we are collectively falling prey to a deceptive fallacy. The thinking behind the green growth idea seems to be this: Wouldn't it be nice if we in affluent Western consumer societies could hold

on to our way of life and continue to live in unbridled comfort and wealth whilst quietly and seamlessly decarbonising our economies behind the scenes? Wrong, dead wrong! contend the critics. To achieve the emissions cuts that are needed to prevent catastrophic climate change, these softer approaches amount to little more than tinkering around the edges. They might make you feel better but ultimately we are just fooling ourselves with this sort of green consumerism. What we need is change, radical change and that means changing our entire modus operandi. Unless we really get down to the engine room and switch off the profit motive button as the prime governor of our economic systems, all we will ever get is an endless succession of greenwashing cycles by companies that want to do as little as possible to maximise their profits. This is not (yet) a mainstream argument but from what I am observing it seems to be gathering momentum by the minute.



Source: Our World in Data based on BP, Shell Energy, UN Population & The World Bank
Note: Energy refers to primary energy, the energy input before the transformation in forms of energy for end-use (such as electricity or petrol for transport)

Figure 1: Changes in energy use vs changes in GDP per capita, United Kingdom.



Source: FSO – Environmental accounting © FSO 2021

Figure 2: Factors Influencing the Development of CO₂ Emissions of Household Heating in Switzerland, Rate of Change between 2000 and 2019.

Do these critics of green growth have a point? Let's take a step back. Most people would probably agree that we must at least decouple economic growth from resource use if we want to retain a fighting chance of solving some of the most pressing global problems. The good news is that the data are telling us that we have more or less achieved this in the developed world. The graph below shows this for the UK (Fig. 1).

Now of course you might argue that this is a mere artefact and is simply due to shifting the production of goods from the West to emerging economies such as China, thereby effectively offshoring our carbon emissions. Simon Kuznets was one of the first to argue along such lines more than 50 years ago when he postulated that as economies develop, they initially pollute and harm the environment more but this then abates again beyond a certain point. The famous inverted U-shaped environmental Kuznets curve is a textbook illustration of this idea.

However, when we adjust the figures for the shift in global production and consider consumption (rather than production) based energy and domestic energy use per capita (which cannot be offshored), we observe a similar decoupling pattern. This suggests that the decoupling effect is real and not just a cunning emissions accounting trick.

So far so good? Or is it rather 'so far so *not good enough*'? The main concern is that if the shift to a greener economy occurs while we are still holding on to the established economic growth paradigm and a fixation on GDP growth, we may fall woefully short of the necessary reduction in GHG emissions, the 1.5 degree target and other objectives to curb our harmful impact on the environment. Green buildings, green jobs, green cars etc. will then just be an addition to the current system, an addition to the range of available consumer products, creating undesirable and wasteful additional resource use, emissions and further environmental degradation.

It is hard to dismiss this logic when we take a closer look at the data. For example, the greenhouse gas emissions of domestic heating have decreased over the last twenty years due to higher energy efficiency of building fabrics and HVAC systems as well as lower CO₂ content of the energy. However, these improvements have been partially offset by increases in living space per person and population growth. Figure 2 illustrates this point using data from Switzerland but the picture would look quite similar in the UK, USA and other developed and developing regions around the world.

Examples of growth in total consumption outpacing any savings from tech abound. It is alleged that EVs and even building materials for net zero carbon buildings may not be the solution they pretend to be, they just cause different environmental problems in different parts of the world. To make matters even more confusing, even some recycled materials require relatively large energy inputs and are less green than you may think.

Hence, the expected gains from green growth are mainly *relative* to conventional production but what matters for protecting the planet is the *absolute* reduction of total GHG emissions and resource use. Ergo: If we do not curb overall consumption, we will simply not be able meet our targets. After all net zero emissions is an absolute, not a relative target.

Wherever you stand on this debate, one thing seems clear. The Green Business case may indeed be fatally flawed if it is (mis) used to ward off more decisive intervention and regulation. In other words, going 'light green' can end up being worse than doing nothing if it forestalls going 'deep green'. If that's the case, the critics of green growth may win the argument.

But here is where their argument may come apart at the seams: the same logic should apply to aspiring to changes that are too radical. Aiming for a complete U-turn on the economic structures that have sustained prosperity for billions of people around the globe, would almost certainly end up alienating the majority of people and risk achieving very little or nothing at all. Living an ascetic '1.5 degree lifestyle' with all its consequences may be impressive and hugely inspirational at a personal and human level, but it is certainly not a choice most people would voluntarily make, at least not at the moment.

At the same time, we all know that we desperately need to live these 1.5 degree lifestyles, at least those of us who live in affluent countries with their outsized carbon footprints. So how do we get there? Apart from relying on technology which is probably only part of the answer, it might help if we could show more clearly how sustainable living is not just a chore and a sacrifice but can actually help us live a better life. The list of benefits in terms of economic prosperity, jobs, health-well-being thermal comfort, living more meaningful and fulfilled lives is long. However, this is not simply an information problem in terms of spreading the word but requires removing existing barriers to creating intelligent products and systems that allow us to minimise the need for hard trade-offs between these objectives. It seems that there is a role for business and technology after all.

I know, choosing a carbon-neutral lifestyle voluntarily is quite a tall order for most mere mortals. Perhaps we could all make a modest start by not just pursuing *energy efficiency* (mainly through technology) but also keep an eye on *energy sufficiency* which revolves around the question of 'how much is enough'? This also happens to be the title of a brilliant book by brothers Robert and Edward Skidelsky from 2013 which argues for a shift from pursuing wealth to pursuing 'the good life'. This is by no means a straightforward proposition. What constitutes a good life in terms of material inputs might of course be different for each person, household or even business. The trouble is that if everyone thinks everyone else should make the first move and cut down on consumption, nothing will ever change. How can we break this stalemate? And will we solve this puzzle before it is too late? Perhaps a part the answer lies in another one of Wordsworth's lines: 'Come forth into the light of things, Let Nature be your Teacher'.

New staff at the Department of Land Economy



Sam Fearnley
Outreach and Communications
Administrator
Department of Land Economy

We are delighted to announce that the following new academic staff have recently joined the Department.

Professor Claire Colomb is the Professor of Land Economy (Planning, Public Policy and Urban Studies), and has joined us from UCL. Professor Colomb said:

“What attracted me to the department is its multi-disciplinary nature and embeddedness within the broader School of Humanities and Social Sciences. As someone with a mixed disciplinary background (combining sociology, politics and planning) and a keen interest in international comparative research, I am really looking forward to collaborating with

colleagues across the university. I am also excited about the pool of expertise that the department brings together in order to shape teaching and research on urban sustainability transitions.”



Professor Claire Colomb



Dr Sofie R. Waltl



Dr Philip Kalikman



Dr Daniel Ruf

Professor Harro van Asselt is the inaugural holder of the Hatton Professor of Climate Law, having previously been at the University of Eastern Finland, and said of joining Land Economy:

“The Department has become a globally recognised centre of excellence for research and education in environmental law, including climate law. I am thrilled to contribute to this with a focus on one of the greatest challenges of our time.”

We also have three new Assistant Professors in Real Estate Economics and Finance: Dr Sofie Waltl, Dr Philip Kalikman and Dr Daniel Ruf.

Dr Sofie Waltl has joined us from the Vienna University of Economics and Business, and said of her appointment:

“I’m very excited joining the Department of Land Economy that brings together scholars working on similar topics yet approaching them in fundamentally different ways. The Land Economy Department is a melting pot of scientists from different disciplines that are united in their conviction that space matters for understanding economic and social patterns.”

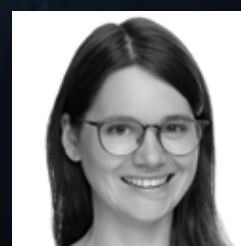
Dr Philip Kalikman joins us from Yeshiva University, New York, and said:

“It’s a delight to join such a vibrant community and to meet so many talented and dedicated students, staff, and scholars. I’m looking forward to learning from and collaborating with my new colleagues.”

Finally, Dr Daniel Ruf joins us from Goethe University, Frankfurt.

We warmly welcome all to the Department!

Insights and Learning Points for Policymaking in Rental Markets from the Berlin Rent Freeze



Sofie R. Waltl
Assistant Professor in Real Estate Economics and Finance at the Department of Land Economy

Assistant Professor in Economics at the Vienna University of Economics and Business.

In 2020, Germany’s capital Berlin introduced a rigorous and old-fashioned rent control policy - the “Rent Freeze” (in German “Mietendeckel”). Soaring rents ever since roughly 2010 and a scarcity of available properties for rent motivated Berlin’s regional government to react in a most radical way: the new policy basically switched off fundamental market economy mechanisms. Only 13 months after its enactment, the policy was declared unconstitutional and overturned by the German constitutional court.

The announcement alone meant broad attention by media outlets worldwide but also politicians in other countries saluted the policy initiative. For instance, the Mayor of London Sadiq Khan commented, “If Berlin can freeze rents for five years, there’s no reason London shouldn’t be able to freeze rents for two years in these extraordinary times.”

In a recently published study, Anja Hahn, Konstantin Kholodilin, Sofie Waltl and Marco Fongoni assessed the disruptions triggered by the announcement, enactment and eventual abolishment of this shortly-lived policy. While this policy was well-intended and indeed must have sounded appealing in the ears of renters and politicians alike, it was only successful in temporarily lowering the overall price level for newly advertised rental agreements in the German capital. Yet, several unintended side-effects triggered by the rent freeze ultimately led to disastrous consequences meaning even harsher conditions than before for people searching for accommodations to rent.

But first: What were the features of this policy?

Upon enactment of the policy on 23 February 2020, newly established rental agreements (excluding utilities) within the administrative borders of Berlin were ex post frozen at the 18 June 2019 level. By default, all residential premises were covered. However, the law mentioned a number of exceptions; most importantly those housing units that became ready for occupation for the first time on or after 1 January 2014, residential premises that were uninhabitable (and indeed vacant) for an extended period of time, or premises that were remodelled with efforts comparable to new construction. On top, the law defined a so-called valid rent ranging between 3.92 and 9.80 EUR/m² per month. The exact amount depended on the year of construction and amenities provided. Also, a somewhat higher rent was allowed for dwellings in two-family houses. Importantly, the location too was factored in meaning adjustments ranging between -0.28 and 0.74 EUR/m². Hence, the monthly valid rent could have been at most 11.54 EUR/m² corresponding to an apartment in a building built between 2003 and 2013, equipped with central heating, a bathroom and modern hardware, and located in a good neighbourhood.

These policy features led to various mechanical consequences as well as strong behavioural responses of market participants. Concerning advertised rent prices, the study documents a remarkable immediate aggregate drop of 7%–11% as compared to prices of unregulated units. Whereas comovements between sales and rent prices had long been rather the norm, the two market segments follow opposing trends ever since the rent freeze’s enactment, hinting at a substitution effect between sectors, which is also supported by the exceptionally large number of units converted from rental to owner-occupied dwellings following the introduction of this policy. Furthermore, there was a leakage and likely second substitution effect for Berlin’s neighbouring city Potsdam as well as for further small surrounding municipalities, where asking rents were surging at an accelerated pace.

The rent freeze was valid only within the administrative boundaries of Berlin yet not in its enclosing federal state Brandenburg although parts of it still belong to the same metropolitan area. Thus, price effects triggered by the rent freeze can also be tested for along both sides of the administrative border by checking whether the rent freeze had led to an artificial enlargement of any potentially pre-existing price gaps. Indeed, we do document an increased discontinuity in rents along the city border triggered by both: decreases within Berlin and increases across the border. This meant windfall wins for landlords advertising properties for rent close to yet (just) not within Berlin.

Though, the most worrying consequences do not concern prices but rather quantities: The incentives set by the rent freeze discouraged new construction, encouraged the conversion of rental units into owner-occupied properties and encouraged modernization of the housing stock. The latter comes at the expense of a loss of older yet affordable units. Indeed, following the introduction of the policy, there were three major observable changes affecting the trade volume on the rent market: increased numbers of conversions of rental to owner-occupied units, a reduction in newly built dwellings, and a drop in the number of properties advertised for rent.

Because of reduced supply, the housing search within the rental segment became more challenging for both established households in Berlin aiming for (life-cycle) adaptations in living conditions as well as would-be renters. These include newcomers and young first-time renters facing a double burden: low (initial) income and reduced availability of suitable housing options. The latter is quite problematic as people aged between 18 and 35 years are the largest group moving into German cities.

Hence, the study evidently shows that too plain attempts to regulate the rental market brings more harm than good. Therefore, alternative policies should be preferred; these include modern rent control designs that focus on limiting rent increases for sitting tenants yet not restricted initial price setting for new contracts as well as vacancy taxes and incentives for revitalising older residential neighbourhoods both aiming at increasing overall living space available for rent and thus decreasing the price pressure within the market. Also indirect policy attempts that focus on boosting minimum wages have been shown to have beneficial consequences for the rental market.

Making Net Zero a Term of Art



Douglas Crawford-Brown
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Stephen Walters
Research Associate, Genecon

Net Zero is now part of daily conversations. But is it more than a buzz word? Is it a 'term of art' with a concrete definition and ways to measure performance? Our claim is that it is not yet a term of art, although it is gaining clarity through the International Standards Organisation and UK government. Until it is well defined and rigorously evaluated, however, there is ample room for green washing.

Here are four definitions we have discussed with Homes England in advising on the Future Homes programme. You can understand them through the figure we show, where a property has five sets of performance characteristics to be considered in calculations. These relate to the thermal envelope of a building, the HVAC system and on-site energy generation (Parts F and L of building regulations), plus an additional issue we will mention in a moment.

- Carbon Neutral (Operational): The property has low HVAC-related CO₂ emissions during occupancy, perhaps with on-site energy generation and enhanced CO₂ absorption (think plantings). If this net value (emissions minus absorption) is above zero, this is offset by investment in emissions reduction and/or carbon absorption projects elsewhere.
- Carbon Neutral (Operational+Embodied): This definition is the same as the first, but now CO₂ emissions embodied in construction materials are included.
- Net Zero (Operational): The property has low HVAC-related CO₂ emissions during occupancy, perhaps with on-site energy generation, and enhanced CO₂ absorption. If this net value is above zero, further improvements must be made in performance. No off-site carbon offsets allowed!
- Net Zero (Operational+Embodied): This definition is the same as the third, but now CO₂ emissions embodied in construction materials are included.

The gold standard is the fourth definition. Carbon Neutral runs too large a risk of carbon offset projects being smoke and mirrors, propped up by a deceptive counterfactual of what would have been created by the recipient of the finance absent carbon offset revenue (see recent work by Land Economy's Andreas Kontoleon).

However, the fourth definition still hides ambiguity. For example, authors disagree as to whether the enhanced CO₂ absorption must take place 'on site' or can be funded elsewhere around the world (we prefer on-site). Also, in a programme such as Future Homes, 'Operational' refers to energy related to the HVAC system. It does not include plug load such as white goods. The argument is that the thermal envelope is influenced by the construction of the property while plug load is affected solely by consumer behaviour of occupants. Fair enough. But ignoring plug load omits a progressively larger slice of the property-related carbon as thermal envelopes improve and plug loads increase. So the true gold standard is the fourth definition with plug load added, which also corresponds to how the national carbon inventory is calculated.

Does a Net Zero building make sense financially? Three issues come to mind. The first is O&M savings. The lifetime savings on energy usually will be less than the incremental cost of construction to the Net Zero standard, recovering about half of that cost depending on the tariff change over the coming decades. This assumes people use the increased thermal envelope to decrease energy use rather than increasing interior temperature, an assumption often violated due to the Jevons Paradox.

The second is property value uplift. Land Economy's Franz Fuerst shows a 'green premium' for low carbon buildings. A green property is worth more per square metre, both in sales and rental revenue. One might expect another 20% of the incremental cost recovered in this way, although only if the property is to be sold on or let.

The third is Green Book carbon pricing, which currently is about £250 per tonne of CO₂. That would come to a monetised 'carbon savings' of about £30,000 over a lifetime of 30 years. But that is the price needed in the private sector to drive rapid technology change. It is not an economic transaction, so we doubt the property market has much interest in this.

Taken together, a net zero property might recover 70% of the incremental cost of construction, despite what the original Green Deal promised in its 'Golden Rule'. That other 30% is either a commitment to helping solve climate change or a state mandate.

Need we achieve Net Zero? In a recent study we conducted for West Yorkshire Combined Authority's ambitious climate action plan, our Net Zero and Climate Resilience Framework showed that reaching Net Zero requires almost 100% change

in every aspect of property construction, operation, energy production and occupant behaviour, as well as transport and re-vegetation. Theoretically achievable but well beyond past uptake rates of low carbon solutions. Fortunately, preventing large climate effects only requires a global average of about 1 tonne of CO₂ per person per year, not Net Zero. Good news there. However that is still a factor of 5 below most UK communities. That will not happen if new construction is far north of Net Zero.

We end with a sobering question: *what happens to the world's emissions if a Net Zero property is built?* Land Economy's Centre for Climate Change Mitigation Research used macroeconomic models to explore what happens when money is invested in low carbon solutions. Money spent on achieving Net Zero properties is not lost to the economy. It goes to other sectors. These sectors may have a higher or lower economic efficiency and carbon intensity than the property and energy sectors. And the energy savings in a home will yield higher discretionary income, perhaps leading to more holiday travel, producing CO₂. Without a macroeconomic approach, the country cannot truly understand the impact of Net Zero properties. But no current definition of Net Zero includes macroeconomics. Watch this space for further clarity!



The Project of the Future African City: Rethinking Urban Real Estate Finance



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As we stand on the cusp of the 21st century, a seismic global shift is underway—the urbanization of our planet. By extension, Africa, the world’s second-largest continent is in the throes of a profound urban renaissance. It is the fastest urbanizing region in the world today with UN projections putting the urban growth at over 100% by 2050. Studies reveal that majority of the cities that humanity will reside in by 2100 do not even exist currently (Shepard, 2019; McCartney, 2022). Considering Africa’s speed of urbanisation and population growth, the epicentre of this global urban revolution of cities is undoubtedly Africa. Many of these yet-to-exist and nascent cities are most likely to materialize on the African continent, redefining its urban fabric. However, Africa’s urbanization journey is a complex narrative, marked by both potential triumphs and pitfalls.

An African city is a place where African social activity and production is predominant in an organically occurring manner without artificial inducement. A pseudo-sense of inferiority in the heart of African urban policy partly induced through the long-term impact of colonialism and imperialist driven economics has made the current processes of African cities seem inferior to African urban policy makers and leaders. One pressing challenge confronting African cities today is the prevailing desire to mimic Western urban models. This “inferiority complex,” as observed by Vanessa Watson (2014), compels African cities to strive for Western-style infrastructure, architecture, and urban planning at the detriment of what is already working for them even better than what is working for the global north. In this pursuit of Westernization, resources are often misallocated, through a dangerous shuffling of the priorities of African urban residents. To chart a more sustainable path forward, African cities must resist the allure of urban models that do not prioritise their sustainable development by embracing strategies tailored to their unique challenges and opportunities.

The making of new cities in Africa is a huge opportunity as it presents a rare chance for Africa to re-write its own urbanity that has been imbued by macro socio-spatial mutations like colonisation, non-African religion as well as conflict. This new urban turn, however, comes with problems that in turn, stem from the existing socio-spatial mutations mentioned. One main parameter remains constant in the development of new cities: Land. The concept and economy of land are indispensable in the making of any city. Even the new rise of virtual urban spaces like the metaverse are built on the idea of territorial ownership, which is essentially digital land. The development and trajectory of real estate in Africa seems to be a major arena where most of the forces that forge an African city converge to interplay. In the engagement of the African urban turn, a major question looms: Who will make these new African cities and how will they conceive and operationalise real estate? This question broaches discussions of what an African city is, its challenges and the hierarchialisation of agency involved.

The current socio-political state of Africa has been a strong challenge for its own development as state and regional conflict abound across the continent. Countries across Africa now are hotspots of terror and extreme violence at the global scale and the adverse role of the west in this situation is far from negligible. This has adversely affected FDI in Africa (Ezeoha & Ugwu, 2015). The real estate sector has not been left out. However, FDI has taken a deflective framework towards Africa as it is perceived as ‘easier’ to finance new cities than to work within current ones. The issue with this is that the difficulty of real estate development in current cities is replaced with another problem which is uncertainty, in the development of new cities. But problems of current cities cannot just be swept under the carpet of the African urban turn. Challenges of security, governance and poverty need to be engaged at sophisticated levels of development planning so as not to repeat errors as Africa’s urban footprint expands. While problem-solving may not be an aim of the capitalist real estate market. ROI as well as urban infrastructure development will do better in an urban reality devoid of Africa’s current urban problems.

Following these concerns, the resulting issue flows to the welfare and development of the people of Africa. This is why poverty and inequality on the continent is a very important consideration. Sub-Saharan Africa has the poorest set of people in the world, yet the new cities are designed for the top 1% in income, who already have housing and sustainable means of production. Grossly asymmetrical trends of real estate finance are rampant in the middle east and some western regions. Macro-finance models are yet to realise that an inclusive city brings more returns because the inhabitants are more enabled to contribute to the society and market. Unfortunately, the finance of Africa cities is primarily in collaboration with sources from the global north who push for this urban inequality out of an aim of ‘quick-win’ profit. In some cases, intercontinental funding isn’t even needed but is sought to make the prospective city look ‘contemporary’, whereas temporality is spatial. While external funding can bridge critical infrastructure gaps, it frequently comes with capitalist motivations that may not align with the best interests of the inclusivity of all Africans. There are a number of new cities of this narrative across the continent. To safeguard against an induced low self-esteem and exploitation of Africa’s urbanity, long-term development goals of Africa should be imperative and magisterial when negotiating agreements with external partners. An example of such projects are large informal market masterplans in Northern Nigeria by practices like Ruban Office (*background image*). The project is developed with the welfare, culture, and economic enablement of its inhabitants in mind, using 99.9% reusable materials with a near-zero carbon footprint. It also provides the viable avenues of FDI.

The current finance and development framework for new African cities pose a risk of recreating the current problems of urban Africa in the future if not handled with care. It is essential to ensure that these partnerships benefit African cities holistically, rather than perpetuate socio-economic inequalities not only in real estate, but in African urbanity at large.

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The future of cities, beyond the data



Adam Moogan
Undergraduate, Department of
Land Economy

Initially, when CULS generously agreed to sponsor my summer internship in exchange for an article outlining my experiences, my initial plan was to discuss about my experiences of the company, industry, and market, but my most prominent and unexpected takeaway was about the city of London itself, and the mechanisms within it. Learning about the future of post pandemic cities in my studies had left

me with a relatively bleak outlook on their future roles in the urban landscape. There are a wide range of conclusions can be drawn as to their appropriateness in a remote working world, this uncertainty causing many concerns over their importance in the wider economy.

However, the fear of Covid damaging the cultures of the past is not one experienced when walking around the heart of the City of London's financial district on a Thursday evening, when you witness suits sprawling out of the ground floor pubs and bars, to enjoy an end of in-person working week. Company boundaries are broken down as industries become intertwined in the symphony of interaction. It seems that as the city has ridden over the wave of turmoil, producing a working model more efficient than the last. This was one of the more unexpected takeaways from my internship, and has shifted my paradigm from one of fear for the future of cities, to one of greater possibilities.

The hybrid working model not only seems beneficial to employee welfare and productivity, but presents cities with huge opportunities through shared office spacing and hot-desking, significantly increasing the effective employment density that the city can encompass. Could one go as far to say that this could see a return

to monocentricity, through the boost in central office supply making policy centric models less appealing, with residential concentric rings being more appropriate? This could be viewed as empowering the Marshallian externality of sharing local infrastructure, this time in the form of office spaces.

The benefits of hybrid working were certainly felt on a personal level during my internship. The ability to hot-desk kept each day fresh, not just in terms of view, but in the dynamics of those working around you, allowing for a more community feel and providing new opportunities each day to learn from those neighbouring you. When walking around the office with my mentor, the network effects of this were evident, everyone familiar with each other despite being an office of hundreds and split across many teams that have little professional overlap. It is this learning mechanism of the Marshallian externality that I believe this new city model will improve.

The ability to work from home multiple days of the week reduces the overall cost of commuting, thus expanding the bid rent model whilst allowing for an expansion of the effective labour pool. More workers can then participate in the selection process of employment, through reducing the entry barriers that residential living in a city can pose. This will result in an increase in the matching mechanisms that Marshall commemorated the city on. In addition, making labour more mobile, as oppose to needing to locate after a job is found, will create more opportunities to locate pre-job search. Workers will have less friction when finding a different job, making the labour force active, an essential part in the spreading of ideas and responsiveness to market conditions, therefore making the matching elements of the city more dynamic.

The Covid-19 Pandemic has shifted the urban landscape out of a path dependency that it has been trapped in, with the hybrid model empowering Marshallian externalities that are central to the success of cities. My experience of this has shifted my paradigm to one which visualises the post-pandemic world as one where cities are made more, not less, important in the urban landscape.

Metaverse Real Estate 2050: Transforming Pixels into Profitable Properties



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The metaverse is a virtual shared space that encompasses the entire digital universe. It is a concept that has gained prominence with the seamless convergence of physical and digital existence where users can interact in the metaverse just as they would in reality. Amidst this, virtual real estate is emerging as a growing investor market. The concept of owning, developing, and trading virtual space is increasingly gaining traction, and across the top ten metaverse platforms, there has been \$1.9 billion worth of real estate transactions. Where this appetite exists, there will be opportunities to make money, and many investors are already paying hard currency for the software real estate. This article will explore the meteoric rise of the metaverse and attempt to establish whether there is integrity in its potential. Looking forward, investors should consider investing into virtual real estate as it cements itself as a credible asset class by 2050.

The success of real estate within the metaverse is dependent on a number of key factors. The most significant of these is the activity of the user-base. This can be divided into footfall, and virtual spending. There is inherent value in areas with large exposure to people. This is the reason that Ben Francis opened Gymshark's flagship store on Regent Street. Whilst the operations of the store make a catastrophic loss, the presence of the Gymshark logo has led to a halo effect for online sales which make the company more profitable. This theory can be translated into the metaverse, where areas of high user-density bring value to businesses. Tokens.com spent \$2.4m for a plot in Decentraland's Fashion Street district, with the belief that virtual shops could soon be leased by fashion houses. Thus, high metaverse footfall could yield positive outcomes for physical world businesses. To do this, the user-experience must become a better value for money. As The Economist notes, popular metaverse platforms such as Decentraland and the Sandbox require graphics cards, VR headsets and superfast broadband for a realistic experience. Quality should develop with the growth of the industry. With regards to virtual spending, if a store in the metaverse could be operationally profitable, it will incentivise businesses to purchase online real estate. Investors need to know that demand for metaverse real estate has long-term product demand and earning consistency.

Implicit thus far is that metaverse real estate supplements land in the physical world. However, it is worth considering whether it could surpass the contemporary. By 2050, this is certainly unlikely without a serious catalyst that favours online environments. Whilst covid-19 amplified the importance of virtual connections, accelerating the social acceptance of virtual existence in personal and professional settings, the uptake of remote working faded, returning to better-established norms. Whilst it changed the composition of real estate markets, in the long run it definitely didn't cripple them, so it is difficult to predict an event that could catalyse a shift to the metaverse. Physical property has long been a useful investment tool and can be a safe haven for large amounts of funds. This was evidenced by the capital flight into major cities overnight, in response the GFC. Hit and hope to London, or the major coastal cities of the USA, was deemed the next safest place to invest after certain fixed income instruments such as Japanese government bonds.

Whether or not metaverse real estate trumps brick and mortar is trivial, but it does have some unique features. The market is facilitated by blockchain technology, generating scarce and unique digital assets. Additionally, physical architecture cannot replicate that of the metaverse because the laws of physics do not apply to pixelated properties. Within Decentraland exists Crypto Valley – the business district. The architectural brief for a new-plan development was simply "ridiculous and cool".

Perhaps it is this freedom of design in an online world of freedom within a more liberal generation, that has created an ironically tangible space for this type of real estate. There is evidence with the returns some investors have gained. For example, the digital Taj Mahal in The Sandbox virtual world generated approximately 200,000% ROI and there are many similar examples. The global metaverse market was approximately \$234.04 billion in 2022 and predicted to grow to \$3,409.29 billion by 2027. According to 25% of senior executives within the finance space, as much as 15% of corporate revenue is expected to come from the metaverse in the next half decade. Goldman Sachs analyst Eric Sheridan spoke on the 'Exchanges at Goldman Sachs' to suggest it could be an \$8 trillion opportunity on the revenue and monetization side. The timeframes here are within the decade, so it seems likely that virtual real estate will be a credible asset class by 2050.

To conclude, real estate in the metaverse is not a disruption to the sector, rather a new opportunity. Investors should be weary of early metaverse projects because the real estate is essentially a derivative from the trading currency in that virtual world. For example, if investors are bullish on Ape Coin crypto, then real estate its equivalent virtual world is likely to have a similar sentiment. This means that investing in the right real estate in the right virtual world is imperative. Very often, pioneering companies are exposed in the market crash, and from the ruins the projects with strong fundamentals rise to establish a healthy market with less volatility. It is similar to BlackBerry failing to adapt to changing market dynamics, leading to its decline, while Apple emerged as stronger and more innovative market. Within the crypto space there is definitely an element of creative destruction, so investors should begin to research the market now to anticipate projects that could establish a less volatile market. Pump and dump projects that arise from zero tension to millions in market capitalisation are not for institutional investors. Before metaverse real estate can cement itself as a credible asset class, digitalised currency will likely need to do so first. Both of these are likely to happen before 2050.

CULS Careers in Real Estate, Planning and Environment Fair 2023

CULS Careers Fair, 19th October 2023, kindly sponsored by Cambridge Land Economy Advisory Board (CLEAB), Eastdil Secured and Knight Frank



Louise Sherwin - CULS Honorary Careers Officer
 Director, Real Estate Development, Deloitte Giron (2001-2004)
 lsherwin@deloitte.co.uk

I'm delighted to report to members that CULS hosted another successful careers fair this year. The Guildhall was fully booked and it was fantastic to see so many connections being made between employers and students. Over 40 employers joined us, together with over 250 students from a wide range of subjects, including land economy and architecture. On the employer side, we welcomed a number of new and high quality employers to the event, with representatives from the public sector, leading propcos, investment banking, fund and asset management, surveying, law, planning and multi-disciplinary consultancies. Dan Nicholson (CULS and GPE) and Alistair Meadows (CLEAB and JLL) kindly spoke to attendees, sharing their career words of wisdom and their commitment to supporting the next generation.

diversity and engagement of the students. And lastly, many employer representatives reflected on how much they'd enjoyed taking the time to share the highlights of their roles and reconnect with Cambridge.

CULS is already planning next year's event – so if you would like to get involved, I would be very keen to hear from you. There are many ways you can support – for example including taking part in the careers fair, working with students on project case studies and dissertation research, or offering your time as a mentor. Another easy way to support students (and find some great talent!) is to ensure that your firms internship and graduate opportunities are listed on the Cambridge University Careers Service handshake portal.

Some of my favourite conversations at the event are around the benefits that the fair brings. It is always brilliant to hear from former students who are back at the event 'on the other side of the table', having successfully found their first roles in the industry. I received great feedback from employers about the quality,

The event wouldn't be possible without the very kind support of our sponsors and donors, as well as the many CULS members joining us – so a very sincere thank you to you all!



2023 Careers Fair Attendees

- AND London
- APAM
- Apollo
- Arup
- Avison Young
- BC Partners
- Bidwells
- Birketts
- Brockton Everlast
- Brydell Partners
- Cale Street Partners
- Cambridge University Land Society
- Cambridge Land Economy Advisory Board
- Carter Jonas
- CBRE
- Colliers
- Connells Group
- Crown Estate
- Deloitte
- Department for Levelling up, Homes and Communities
- Eastdil Secured
- EQT Exeter
- Gerald Eve
- Greystar
- Homes England
- JLL
- Knight Frank
- Morgan Stanley
- Northwood Investors
- Octopus Real Estate
- Places for London
- Real Estate Balance
- Real Estate Capital Partners (Revcap)
- RICS
- Royal Bank of Canada
- RTPI (Royal Town Planning Institute)
- Savills
- SEO/London
- Tristan Capital
- University of Cambridge Estates Division
- University of Cambridge Careers Service

CULS Prizes 2023

Triplos

Prize	Winning Candidate
The Noel Dean Prize for best overall performance in Part II	Brenan Niranjana
The Gordon Cameron Memorial Prize for best performance in Paper 7	Ruby Zhang
The Jeffery Switzer Prize for best performance in Paper 14	Brenan Niranjana
The Mike Turner Prize for best performance in Paper 15	Joshua Soane Giulia Meregalli
The CULS Prize for best overall performance in Part 1B	Ruby Zhang
The Nigel Allington Prize for Best overall performance in Paper 1	Tom Morgan Toby Linsell

MPhil Prizes

MPhil Prizes	Winning Candidate
The Douglas Blausten Prize for best performance in the dissertation for the Real Estate Finance MPhil	Rolf Cheng Long Hensgens
The Alistair Ross-Goobey Prize for best overall performance on the Real Estate Finance MPhil	Harvey Newiss

CULS Committee

CULS Committee Members	CULS Position
Dan Nicholson	President
Ami Kotecha	Senior Vice President, Chair - ESG Forum
Aubrey Adams	Vice President
Ian Marcus	Immediate Past President
Erik Ruane	Hon. Treasurer
Lauren Fendick	Hon. Secretary
Geoff Southern	Hon. Press Secretary
Louise Sherwin	Hon. Careers Officer
Robert Cashmore	Hon. Membership Secretary (resigned July 2023)
Werner Baumker	Chair - Regional Forum
Anna Harper	Chair - Residential Forum
Oliver Harwood	Chair Rural Forum (resigned July 2023)
Roddy Houston	Chair - Commercial Forum
David Howarth	Head of Department of Land Economy
Colm Lauder	Chair - Whitehall Group
Noel Manns	Chair - Real Estate Finance Forum
Rod McAllister	Committee Member
Dominic Reilly	Chair - Sports & Leisure Forum
James Saffrey	Chair - Rural Forum (appointed July 2023)
Flora Samuel	Head of Department of Architecture
Charlie Stoneham	Co-Chair Silver Street Group
Brian Waters	Chair - APEC Forum
James Webb	Co-Chair Silver Street Group

CULS Membership



Erik Ruane MA Hons MRICS
CULS Hon. Treasurer

CULS membership is open to alumni and students of Land Economy, Real Estate Finance and Architecture as well as many other CU graduates of other fields who are now involved in the real estate industry. As at the end of the academic year in June, CULS had an active membership of almost 1,000 ranging in age from new undergraduates to centenarians. The membership network continues to evolve with increasing numbers of international members joining the cohort living and working in the UK metropoli and regions. CULS is a truly global lifetime friendship network.

Through seminars, lectures, tours and dinners, CULS provides excellent learning, social and networking opportunities for members. In addition to some administrative costs of organising these events for members' enjoyment, CULS also plays an important role in support of staff and students in the Land Economy and Architecture Departments of the University. For instance, CULS funds Tripos prizes, provides financial support for two fellowships and has been, and continues to be, available to provide financial support for relevant student Tripos dissertations.

The Committee appreciates the ongoing support for the Society from its loyal membership. Subscription revenue is perennially vital to the long-term health of the Society. The Committee has held subscription rates since November 2017:

- Full members working and/or living within 100 miles of London (Charing Cross) - **£75 inc VAT**
- Full members working and living over 100 miles of London (Charing Cross), optional reduced rate - **£55 inc VAT**
- Concessionary & International members and over-65's - **£20 inc VAT**
- Current students and first year post-graduation - **FREE**

Subscriptions may be paid either by bank standing order or securely via the website www.culandsoc.com. All membership / subscription enquiries should be addressed to me or Ali Young at culandsoc@alibrinkley.co.uk. If you do move home or business, please take a moment to update your details on the website to stay in touch – a Society can only ever be as strong as its members!

After a period of virtual-only events, CULS is pleased to have been able to resume in-person events, fostering vital and vivacious direct membership interaction. Some events will continue to be offered online and / or hybrid.

The CULS is also extremely grateful to many corporate businesses for their continuing financial sponsorship and logistical support to the Society.

Upcoming CULS Events

Please book tickets online (www.culandsoc.com) or contact the Society Secretary, Ali Young (01638 507843, info@culandsoc.com).

Friday, 19th January 2024 12.30pm – 2.30pm Whitehall Group lunch	Speaker: Professor Danny Dorling , Professor of Human Geography, University of Oxford Subject: “The argument within the Labour party concerning housing policy - An update of All That is Solid: How the Great Housing Disaster Defines our Times, and What We Can Do about it”
Wednesday, 14th February 2024 8.00am – 10.00am Whitehall Group Lunch	Innovation and Net Zero in Housing. Further details TBC
Wednesday, 28th February 2024 8.30am – 9.30am ESG Forum webinar event	Subject: Bio Diversity Net Gain – A discussion of the potential and of policy pitfalls
Thursday, 29th February 2024 6.00pm – 8.30pm WG Policy discussion group meeting and reception	Subject: Digitising the NHS - A Vision for the Digital Patient: a valuable but underused resource - A Whitehall Group Policy White Paper
Monday, 4th March 2024 12.30pm – 2.30pm Whitehall Group lunch	Sir Anthony Seldon FRSA FRHistS FKC British Educator and contemporary historian (former vice-chancellor of the University of Buckingham) Subject: “Was Liz Truss so wrong?”
Tuesday, 19th March 2024 2.00pm – 6.00pm	Annual Planning Update. Hosted by Dentons UK & Middle East, One Fleet Place, London EC4M 7WS
Thursday, 21st March 2024 CULS Golf Day. 8.30am	Denham Golf Course, Tilehouse Lane, Denham Bucks UB9 5DE
Tuesday, 14th May 2024 4.30pm for 5.00pm	Tour of Quintain Build to Rent at Wembley. Further details TBC.
Tuesday, 9th July 2024 4.30pm to 10.30pm Whitehall Group Lunch	AGM & Annual Dinner. c/o Magdalene College, Cambridge, CB3 0AG

The Cambridge University Land Society would like to thank the following for their generous support in 2022–2023



