The Socially Sustainable Campus
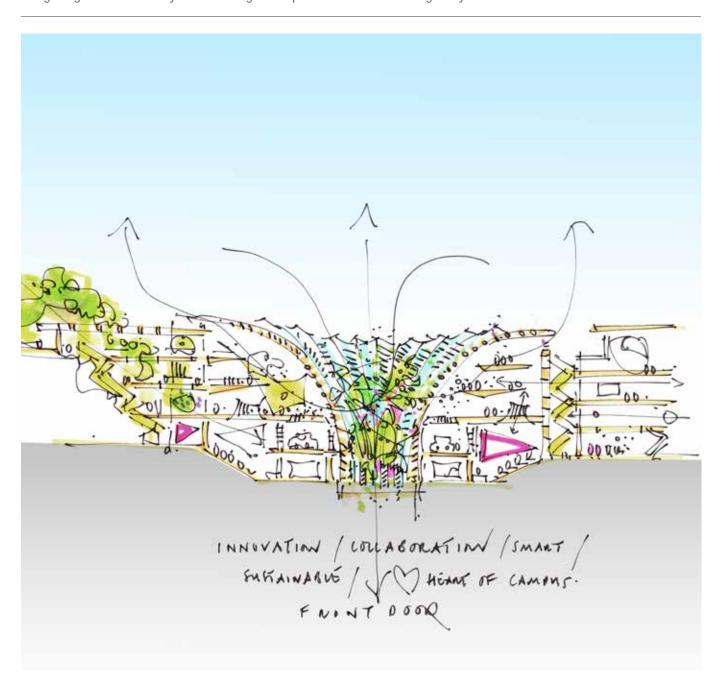
Imagining how university estates might adapt in a more technologically enabled future

INNOVATION / COLLABORATION / SMART /
SUSTAINABLE / ♡ HEART OF CAMPUS.
FRONT DOOR

Report summarising the virtual roundtable discussion convened by HEDQF Founder Member Scott Brownrigg and involving leading academics, university directors of estate, education advisors, campus design professionals and students.

This report summarises the HEDQF virtual roundtable discussion convened by Scott Brownrigg and held on 22 May 2020. We thank the panellists below, and audience for sharing their experience, expertise and ideas.

Professor Osama Khan, Pro-Vice-Chancellor, Education, University of Surrey
Osama is the University's strategic lead for education responsible for providing talented and motivated students from all backgrounds with an outstanding education that is inclusive, research-informed, technologically enhanced and professionally enriched with industry partnerships. He holds a Professor in Practice title at the Surrey Business School and manages the University's Departments Higher Education and Technology Enhanced Learning. Osama is currently leading on the Hybrid Education model the University is developing as a strategic response to the Covid-19 pandemic.

Dr Mark Mason, Deputy Vice-Chancellor (Student Experience), University of Chichester
Mark is Deputy Vice-Chancellor (Student Experience at the University of Chichester. His role covers all aspects of the student experience, including learning and teaching, student support and wellbeing and the National Student Survey (NSS). He also has line management responsibility for various academic and professional services areas across the University. In addition, Mark teaches and researches in his specialist areas of interest: the philosophy of history/historical theory, the work of Jacques Derrida, and critical pedagogy.

Julian Robinson, Director of Estates, London School of Economics and Chair of the HEDQF
Julian is service leader for the Estates Division at the London School of Economics and Political Science where he is responsible for the development and implementation of estates strategy, policy and performance including facilities management, capital development, property and space management, environmental sustainability and carbon reduction. Julian is an Honorary Fellow of the RIBA and is a member of the Civic Trust Awards National Judging Panel. He was HEDQF Chair from 2017 to 2020 and is a Trustee and member of the Events Group.

Jeremy Tanner, Director of Estates at Birkbeck, University of London
Jeremy is the Director of Estates at Birkbeck, University of London. His role covers all aspects of the supporting the maintenance and capital projects teams as well as timetabling and commercial services. With a background in conferencing and timetabling he has taken something of a non-traditional route to his current role, but one that affords him an ingrained understanding of customer service and supporting the student experience.

Ty Goddard, Director, The Education Foundation and Chair of Edtech UK
Ty is the co-founder of The Education Foundation and Chair of Edtech UK – a strategic body launched in 2015 to accelerate the edtech sector in Britain and globally. He is recognised as one of the UK's leading experts on education reform and is a regular commentator on the future of education in the media.

Michael Olliff, Managing Director, Scott Brownrigg and a University Governor
Michael is a Board member and Managing Director of Scott Brownrigg. He is a Chartered Architect with over 25 years' experience and has dedicated his career to designing schools, colleges and universities - translating educational visions into architectural realities and exploring the role design has to play in improving learning. In January 2020 Michael joined the University of Chichester's Board of Governors.

Jonathan Stewart, Managing Director, Gleeds
Jonathan is Managing Director of Gleeds' UK business and he leads teams to deliver project management, cost management, asset management and advisory services to commercial and public sector clients.

Phoebe Stewart, Recent Graduate
Phoebe graduated from the University of Nottingham earlier this year with a First Class Honours Degree in Product Design and Manufacturing (BEng). At Nottingham, she was a University Student Ambassador and Design Society Committee Member.

Dr Mike Entwisle, Partner, Buro Happold Engineering and is a HEDQF Research Group Member
Mike is the global education sector lead at Buro Happold. His experience includes a wide range of university projects including those at Cambridge, Oxford, Bristol, Bath, QMUL and Exeter. He has led a range of key initiatives including designing for student mental health and most recently the use of spatial analytics to support Universities as they reopen with social distancing in force. He speaks regularly at conferences on a wide range of themes and is a key member of the HEDQF.

Ian Pratt RIBA, Director and Head of Education, Scott Brownrigg
Ian leads Scott Brownrigg's Science, Health and Education design team. He is a Chartered Architect with over 16 years' project design experience encompassing facilities for learners of all ages - working with stakeholders to create sustainable and inspirational environments that invite innovation, promote social interaction, life-long learning and wellbeing. Ian's university projects include the award-winning, Spark at Solent University in Southampton.

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FOREWORD by Ian Pratt

Universities are experiencing unprecedented levels of disruption resulting from the global Covid-19 emergency. Campuses stood empty for months and as the threat of a 'second wave' looms large some fear students may not return this year. The student experience itself is being reconsidered and redefined and the implications for university campuses are wide-ranging and uncertain.

Earlier this year, teaching, learning, leadership and management activities were moved online over a matter of days – rapidly accelerating adoption of existing technologies. Income from summer schools, conferencing and student accommodation evaporated – creating extreme financial pressures exacerbated by huge uncertainty about student numbers and the associated fees that are the primary source of income for many universities.

Whole countries went into 'lock-down' and global travel was largely suspended. The lucrative market for international students may never be the same again. Students and academics were forced to work from home and support staff were furloughed. Social distancing measures (physical separation and isolation) remain in force and continue to exacerbate concerns for mental health and wellbeing. Campus construction projects were either put on hold or ground to a halt as material supply lines dried up, and the relevance of some projects may be questioned post-pandemic.

And yet universities continue to flourish. Virtual learning environments and virtual campuses have grown rapidly. Students, academics, university leaders and managers are becoming more connected than they have been in decades.

Universities are leading the charge against the pandemic – racing to develop vaccines, upscale testing, finding new ways to analyse and predict the spread of infection and to mass produce personal protective equipment, training front-line staff and advising government agencies about how best to protect and sustain communities. It is also clear that universities will have a leading role to play in rebuilding society and the economy after the pandemic.

The Spark at Solent University, designed by Scott Brownrigg

What will the lasting impact of this global emergency be on universities?

Will universities think differently about their campuses and physical space needs?

Will other global emergencies be taken more seriously now?

The existential threats of climate change and loss of biodiversity are undiminished and the pandemic has highlighted that unless we improve our relationship with other species and protect habitat we will increase the risk of future infections.

In the UK, the 'lock-down' experience varied widely. Some people were offered a tantalising glimpse of a different and more sustainable way of life. A technology enabled, back-to-basics, more locally focused and fulfilling existence. For others the experience was very different and characterised by difficulty, frustration, isolation, loneliness and hopelessness. And sadly many people lost loved ones to the virus.

Reflecting on and learning from the different experiences of 'lock-down' will be key to building stronger, more resilient communities. A more respectful, more appreciative, fairer and more equitable society – with no one left behind. Perhaps even unity in the post-Brexit era. The opportunity for a 'green recovery' must not be missed. Car-free streets, clear skies and clean air. Rapid falls in carbon emissions and other pollution. Wider appreciation of the need for private and public open space. Wider appreciation of the need for more and better homes. Bird-song and butterflies. A better work / life balance. Family time and schooling in the things that really matter. Home cooking and daily exercise. An altogether happier and healthier and more productive existence? A realisation that major socio-economic change could be within our grasp?

Perhaps the pandemic offers us the opportunity to push the global reset button? The opportunity to bring about a new Renaissance? A new Age of Enlightenment? With universities in the vanguard.

Will there be a paradigm shift in university campus design and development thinking?

THE KEY CHALLENGES FACING UK UNIVERSITIES

Universities are having to do to an enormous amount of work to rapidly transform higher education in response to Covid-19.

The impact the pandemic is having on the higher education sector is severe. Professor Osama Khan noted that potentially 230,000 students may not turn up for Higher Education at British universities, there is £2.6 billion hole in sector revenue (taking account of both tuition and accommodation fees) and 75% or more international students may not be able to receive the high quality education they seek.

The level of disruption universities are currently experiencing is not necessarily unparalleled. In Britain the higher education sector has already faced two world wars and Spanish Flu between 1918 and 1922. However, Osama suggested the pandemic is perhaps "*a wake-up call for the university sector to change its business model*".

As Osama observes, "*Technology has always allowed us to take full advantage of providing education in an equitable way to the whole world. But we kept to our traditional methods…I still take an enormous amount of pleasure standing in a lecture theatre, talking to 500 students, which really makes me feel like the sage on the stage. But is this really the model that we should be sticking to?*"

It is surprising that there are still many universities not taking advantage of the opportunities offered by technology. Osama notes that the only university he can think of that has been really bold and brave in this regard is Northampton which has no lecture theatres on its new Waterside Campus.

Is now the time to create campuses without any lecture theatres? Or is now the time to think about our specialities? As well as undertaking cutting-edge research universities are providers of education that can transform people's lives.

Osama asks "*why then are we managing all the estate that we hold on our balance sheet?*"

Is now the time for universities to follow the office, retail and hotel markets in off-loading assets to companies who can perhaps provide much better quality facilities to universities through long-term lease arrangements?

Osama concluded by saying that:

"*No matter what [opportunities] technology affords us… we are social animals. Providing education and doing research collaboratively, is fundamental to our DNA. So working together and interacting with each other is a prime requirement of university higher education*

Perhaps covid-19 is telling us that technology gives us the opportunity to move away from those big offices the professors have enjoyed all this time.

Maybe this is the time to move away all those professional services back-office operations that have always been on campus. Maybe this is the time for outsourcing."

"No matter what technology affords us... we are social animals. Providing education and doing research collaboratively, is fundamental to our DNA. So working together and interacting with each other is a prime requirement of university higher education ....This is definitely the time to create a beautiful campus providing a backbone for unification and interaction

-Professor Osama Khan

"What we need is to reconceptualise how we think about space in light of our philosophy of education. What we need is a radical conception of space and campus configuration, that fits with the new context that we find ourselves in.

-Dr Mark Mason

University of Chichester, photo by Donna Kirstein.

UNIVERSITY CONCEPTUALISATION AND CAMPUS CONFIGURATION

The various ways that very different higher education institutions, operating in very different contexts, configure their estates and learning spaces communicates something important. Dr Mark Mason notes:

"It says something quite powerful about the way that we think about the task of education, about how we conceptualise that. We really need to actively ensure that our philosophy of education is explicitly shaping those discussions about space utilisation, space planning, and the configuration of our institutions".

Mark noted that the organization of various material conditions can have a huge impact on the task of education for students and staff, both in positive and negative ways, *"At its best, it can give us a strong sense of community and togetherness, at its worst it has the potential to divide something which clearly we don't want".*

He explained that at the University of Chichester relationality and community are emphasised, in terms of how education is thought about. *"People matter to us and crucially we understand study as something that is undertaken with others. I think sometimes people think of study as quite an isolating task; we don't. Fundamentally our conception of study, is that it is undertaken with others. We are committed to the idea that study is what you do with other people, it's about talking, it's about walking around with other people, it's about dancing, it's about having fun, and it's about experiencing times of difficulty as well. So we think that our approach to how we configure ourselves as an institution and our spaces should reflect that commitment to study as something undertaken with others".*

The conceptualisation and configuration of an institution and how space planning is approached should ensure the experience of study feels good for everyone; aiding organisation, and making the task of education better. We need to think about how space can help us come together more effectively, and think together in ways that feel good.

Mark noted that at Chichester *"We want to ensure that the space we have reflects that relational community dimension.*

We want our spaces, formal and informal, to be places where students, staff and visitors can enjoy that process of study together, spaces that they're attracted to, that they want to spend a significant amount of time in. Fit for purpose spaces that facilitate deep learning relationships".

Mark highlighted that recent surveys of university applicants indicated that despite Covid-19 there was still a great desire for a campus experience, where people can experience studying together, where they can interact with others, and where they can feel a sense of belonging, of being part of a community; a learning community where they are known and they know others.

Conceptions of space and how a campus is configured should ensure that members of a learning community feel a strong sense of ownership of both the campus and the spaces in common which are theirs. Mark recognises that the Covid-19 pandemic has prompted universities to reconsider their philosophy of education, to revisit their modes of delivery and reflect on them.

"We need to understand that we will always have students that are anxious about studying, and it is important for us to reclaim as many spaces at our University where students feel safe and a place where they can work through the challenges and anxieties that we know many students face in contemporary education. This is a time of precarity that we are living through and our students are experiencing it".

Reflecting on these points, Mark posed the question:

How can the ways we configure space help those students work through the issues they are challenged by in a way that is positive and empowering?

Mark concluded by highlighting there is an opportunity to subvert spaces on campus *"I am a great believer in looking at corridors, cul-de-sacs, tucked out of the way places that can be used differently. They don't have to be perfect, I think the idea of perfection in education is overrated. But they can be used quite powerfully to develop that sense of relationality, community and learning together".*

THE FUNDAMENTAL TENSION: SOCIALLY SUSTAINABLE AND SOCIALLY DISTANCED

Passionate about the human benefits of great design, Julian Robinson highlighted that he is having to rapidly adapt in his role at the LSE as a direct result of the Covid-19 pandemic. Commenting on the immediate challenges facing UK universities, Julian noted:

"*My capital programme has been all but suspended. I have furloughed 300 of my staff and I'm implementing millions of pounds worth of cuts to my revenue budgets*".

Julian spoke about a fundamental tension between the notions of the socially sustainable campus and the socially distanced campus which is something he feels designers and indeed behavioural psychologists will have to address. Of his own experience, Julian noted that "*I'm coming at this with quite a jaded view I suppose, having worked at home for the last eight weeks, sat at my dining table for hours on end, staring at a Surface Pro*".

"*I would need some convincing that a socially distanced and sustainable campus is either possible or indeed, desirable*".

He believes that the social capacity of the office and its purpose for work and study has tremendous social benefits for well-being and productivity. The humanity of work is lost when everybody is working on screens remotely. There are few, if any synchronous and serendipitous moments. The immediacy of catching people when they're at their desks as you're passing, or in the kitchen is just not there. We need to rethink what really matters. Campus identity will become much more important. How a campus can make you feel. How can it offer a distinctive experience from the virtual world?

Thinking about the Socially Sustainable Campus and echoing the thoughts of the other panellists, Julian also predicted an increase in the use of outdoor space.

"*We can see this now happening with pubs which are beginning to open where you go in, you collect your beer and then you stand in your socially distanced position, drinking in the sun*".

And commenting on the internal environment he added:

"*We're going to have to use much more natural ventilation, which can only be a good thing, in terms of sustainability.*"

The campus should be "*a refuge, a safe space, from the digital world - providing facilities for greater human interaction and collaboration*".

"*At the LSE we have talked about not a campus, but an academic quarter in the inner city, a community of scholars, and a marketplace of ideas. As humans we are social animals, and I believe the increased provision of social space within the campus, that can have the right feel will be more important.*

Students living in halls in the city, working online in their solitary bedrooms will need to retreat to a different space: A collective, safe and secure mothership with appropriate support facilities. These will become even more important for mental health and wellbeing going forward. Therefore, being socially sustainable is both an opportunity and a potential disadvantage. And our design response will be critical to ensure it becomes a long-term force for good".

"**I would like to see the campus as a refuge, a safe space, from the digital world – providing facilities for greater human interaction and collaboration**

-Julian Robinson

ENVIRONMENTAL PERFORMANCE AND CAMPUS PRIORITIES

Jeremy Tanner began by highlighting that Birkbeck is an unusual institution in that it focuses on teaching in the evening, and has a very large Masters provision; most of its students are from London and it has a very small international contingent. He noted this presents some very different challenges but expressed relief at not having to worry about student residencies as many other Directors of Estate will be doing at this time.

Responding to earlier comments about remote working, Jeremy noted that *"Philosophically, I'm probably not struggling quite as much as some with working from home. I'm embracing the technology. I'm seeing more of my family…And the freedom this has given me….has been a real boost at what has been quite a challenging time".*

Jeremy then highlighted that working from home and the resultant reduction in the use of motorised transportation globally has had a positive environmental impact.

Whilst accepting that people are social creatures Jeremy commented that *"As sacrifices go, the one that we are all currently making at the moment doesn't feel like a huge sacrifice to me when stacked against the visible differences that the lightning of transport has made to our environmental performance as a planet".*

"We have been through the pain of an experiment… it is a costly one and I don't mean to understate that, but we have been forced to do things that we would not do. I do feel often like a turkey voting for Christmas, as a Director of Estates advocating for a shrinking estate. It is challenging, but I think it could be the right thing to do".

Reflecting on the past, Jeremy noted that 200 years ago if you wanted to go and see a master surgeon at work the only way you would be able to witness that is to go to his theatre and watch it happen. Now we have YouTube which can teach people to do all manner of things. Now, experientially there is a challenge there, but we must move and acknowledge that we are not in the place anymore where these large lecture
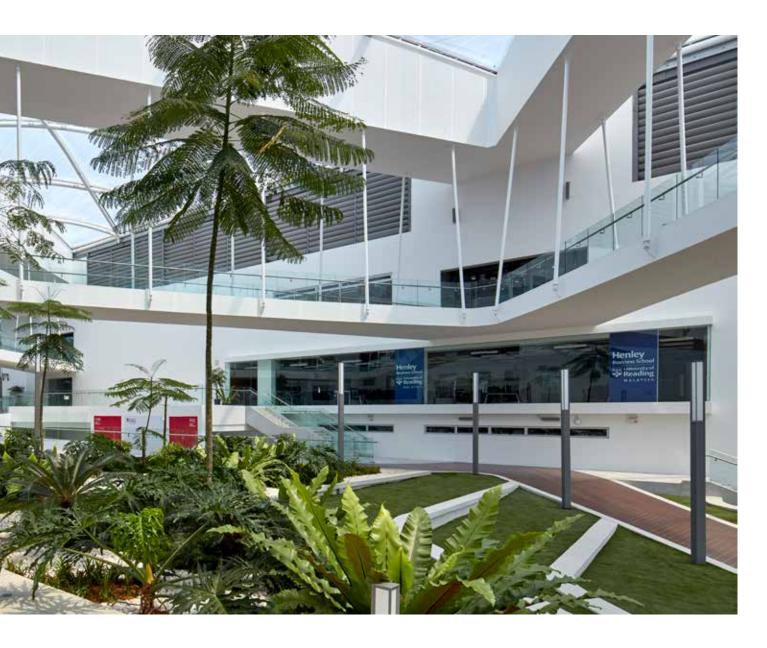

University of Reading Malaysia, designed by Scott Brownrigg

theatres and incessant amount of presence will be required. Jeremy called for a re-assessment of campus priorities arguing for acceptance that there is a strong social element to learning and that it is an interactive activity but also noting that *"universities are large, commercial creatures... and there's an awful lot that goes on in these campuses that is not focused solely on the student experience".*

Thinking pragmatically, Jeremy predicted a re-profiling of space which will hopefully put the student learning experience at the forefront and will be less averse to concepts of flexible working for support functions and in relation to professorial offices. He also noted there is a lot of functionality that could take place off-campus, benefiting those who are able to take the opportunity, and benefiting students. Although a cliché, the opportunity for a paradigm shift is there.

Jeremy commented he is about to build a lecture theatre at Birkbeck but is really worried about the relevance of

this type of space given that the future is going to be more about the blended learning experience which will give students optionality perhaps: One week a student may wish to attend a seminar in person; another week, a student may wish to attend the virtual equivalent.

"We're all going to get to know our IT directors very well if we don't already. I think the physical relationship between estates and IT is going to be hand in hand for the foreseeable future."

In closing Jeremy noted *"There is a short period of time here which we're going to find very challenging. From a design perspective, I don't think I find myself ready to launch into instructing a new project to go and design the campus of the future".*

Over the coming years, universities will be looking closely at one another and monitoring campus developments but ultimately, it is the students as customers who will determine the design of the future campus.

"They will have experience of learning now, and actually in as much as you listen to anecdotes and surveys from eminent professors, ultimately, the students will show us what has worked, and what hasn't. The key is to be able to capitalise on adopting the things that have gone well and acknowledge the things that have not gone quite so well".

> **"Universities are large, commercial creatures...and there's an awful lot that goes on in these campuses that is not focused solely on the student experience.**
>
> - Jeremy Tanner

TECHNOLOGY ENABLED LEARNING EXPERIENCES

Ty Goddard began by noting that the debate is fascinating because *"On one level, we haven't a clue what the future will bring, and on another level you can see trends. Somebody spoke earlier on having a glimpse ahead. I think we have got more than that. I think we have got a full frontal view of what the future could be. Both bad…but also good, in terms of delivering to the people this is all about, students".*

Ty then spoke about his work at the Education Foundation and his involvement in preparing new remote teaching and learning guidance for UK schools, learning lessons from schools overseas closed 5 to 6 weeks before the UK 'lockdown' was introduced.

Referring to the Education Foundation's recently published report entitled 'Protecting Learning'[i] which considers how schools and parents are limiting "learning loss" using digital technology to support students during the COVID-19 pandemic, Ty explained this is absolutely new for some schools that did not have digital infrastructure in place, and highlighted that many of them have established, overnight in some cases, fascinating new ways of working.

Picking-up on some of the points raised by Professor Osama Khan, Ty spoke about the "existential" economic threat the whole sector is facing as a result of the pandemic and cited a recent Universities UK report[ii] stating universities in the UK have incurred losses to date totalling around £790 million. Related to this, Ty highlighted the severe impact the pandemic is likely to have on student recruitment, retention and progression in September 2020.

The Education Foundation has previously considered digital universities and Ty noted "*not every university had the digital capability to be able to respond to the present situation*".

Speaking about the work of JISC[iii] (historically known as the Joint Information Systems Committee) he commented *"it is superb in terms of providing a world-class super-fast network (the JANET network) for universities and further education*".

However he noted that JISC's Digital Experience Insights Survey[iv] suggests that prior to the pandemic right across British Higher Education, the experiences of using digital were uneven and patchy and even though institutions moved to online and remote in a matter of weeks, experiences have still been "*a little bit too uneven*".

Ty talked about his fascination to learn what this will do to universities and predicted a *"massive uptake in the employment of learning designers….One of the big issues around digital [learning] is you can't just shove online what's been happening in that lecture theatre and hope for the best. You've got to have an ecosystem around that learning experience which must be really well thought out in order to maximize the benefits of going online".*

What effect will this have on space, space utilisation, and what kind of digital experience will carry on? How have students felt about it and also what does it mean for well-being, mental health and the social aspect of universities? In conclusion, Ty commented that moving forwards, economics will be a key driver for universities and *"rethinking will take place, but it will be patchy"*.

"I hope the sector comes together…and behaves like a sector. Often I think that there is a lack of unity perhaps across higher education….It would be great if COVID encourages a unity of approach, a unity of rethinking about what higher education is all about, and its relation to the global and the local".

Ty remarked this is long overdue and called for progression of the movement towards *"civic universities, deeply rooted in their communities, not withdrawn…not so called 'ivory towers'"* and *"connecting the campus much more to people, to students and to communities"*.

> **I think we have got a full frontal view of what the future could be. Both bad… but also good, in terms of delivering to the people this is all about, students.**
>
> - Ty Goddard

" **You can't just shove what's been happening in one of the lecture theatres and put it online. You've got to have an ecosystem around that learning experience which must be really well thought out in order to maximise the benefits of going online.**
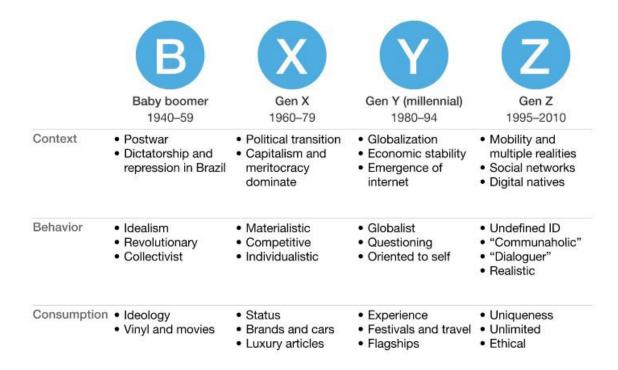
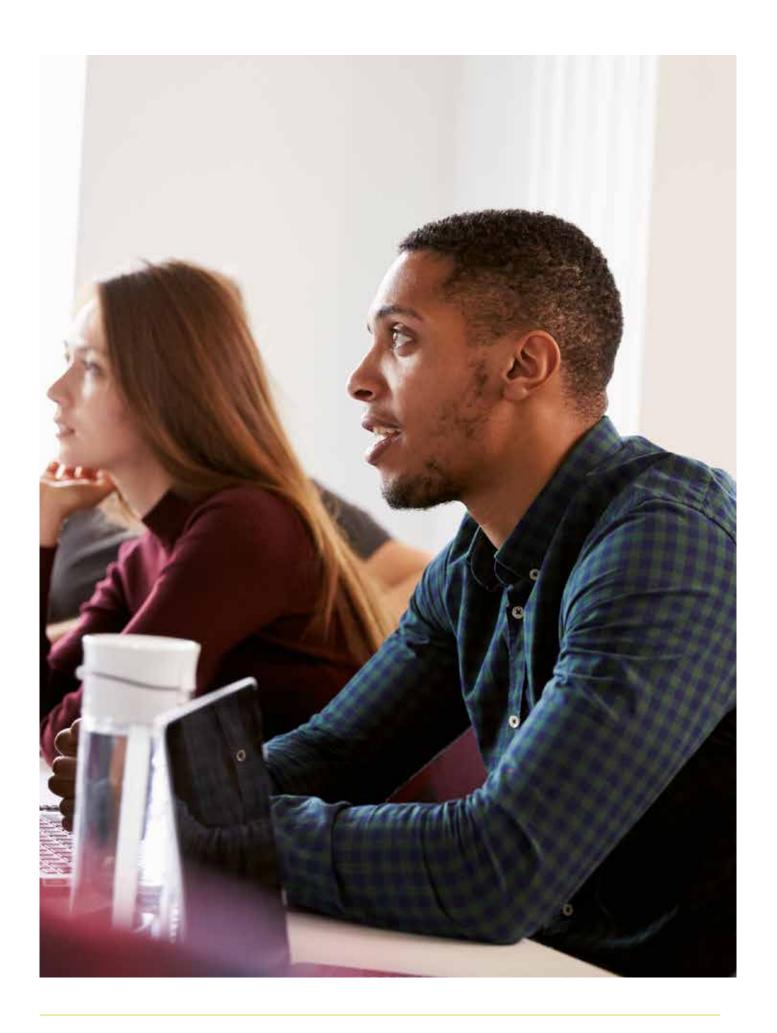-Ty Goddard

A SOCIALLY
SUSTAINABLE CAMPUS

Michael Olliff began by acknowledging the fascinating insights provided by the other panellists. He also picked up on Ty Goddard's comments about that existential crisis facing universities and predicted life beyond the current crisis will be very different indeed. He noted there seemed to be consensus between the panellists about how important 'sense of community' is and warned *"we ignore that social aspect of human life at our peril"*.

Whilst acknowledging the current focus is on working through the immediate impact of the Covid-19 pandemic and facilitating safe returns to campuses in the autumn, Michael argued for continued focus on other key issues.

"We must not forget there is a crisis in student mental health that has been developing in recent years. There are worries about levels of debt, issues around social media use, and students are being overwhelmed by the burden of the pressure to perform."

Acknowledging that Covid-19 has hit 'Generation Zᵛ ' really hard, Michael explained that students are feeling deprived of life experiences they cannot replace. They are missing their friends, and they are also being separated from their partners.

	B Baby boomer 1940–59	**X** Gen X 1960–79	**Y** Gen Y (millennial) 1980–94	**Z** Gen Z 1995–2010
Context	• Postwar • Dictatorship and repression in Brazil	• Political transition • Capitalism and meritocracy dominate	• Globalization • Economic stability • Emergence of internet	• Mobility and multiple realities • Social networks • Digital natives
Behavior	• Idealism • Revolutionary • Collectivist	• Materialistic • Competitive • Individualistic	• Globalist • Questioning • Oriented to self	• Undefined ID • "Communaholic" • "Dialoguer" • Realistic
Consumption	• Ideology • Vinyl and movies	• Status • Brands and cars • Luxury articles	• Experience • Festivals and travel • Flagships	• Uniqueness • Unlimited • Ethical

Source: McKinsey & Company
'Today's Young People Differ From Yesterday's'

He also spoke about the Climate Emergency noting that *"we can see the immediate impact that the reduction in emissions is having on the environment and we must not allow a sense of complacency to creep in….instead use this as evidence and an extra incentive to increase efforts to think sustainably".*

Whilst commenting that a lot has been learned in navigating the Covid-19 crisis, Michael said that remote working and learning have been proved possible *"although this is not necessarily preferable".* In accepting 'blended learning'[vi] is the new norm, Michael noted that the University of Cambridge has announced all lectures will be delivered online next year.

"The question now is about the extent that technology plays in the future….And with increased content of academic learning being delivered virtually, and academic and administrative staff working more remotely…the focus for us shifts to the kind of space that we'll now need on campus".

"To begin with we should ask ourselves what is special about learning at a university and what is unique about the university experience that technology cannot replace".

Michael then spoke about focusing more on the human experience of university life and the value of in-person, face-to-face interaction compared with Zoom, Teams and the other platforms many people have embraced during lockdown.

"Learning with your peers, making lifelong friends and partners, learning life skills. These are all essential experiences that technology cannot replicate".

There needs to be increased focus in the sector on the pastoral needs of students, for more tailoring of learning to meet individual needs and greater emphasis on designing for the student experience including wellness. Also, more space will need to be found for seminars, group study and face to face tutorials.

"Being controversial as others have said, perhaps now is the time to release the private, academic office space, and create more distributed, bookable spaces, around the campus".

"If we can break down the hard barriers between space, and dramatically enhance the outdoor environment then we can create campuses that can be true destinations, used all year round for many different stakeholders. Oxford and Cambridge do this really well, but of course they have the advantage of 800-900 years of heritage to build on".

> **"A truly sustainable campus, is one that not only delivers a fantastic learning experience, but one that supports local economies by driving entrepreneurial investment and works with partnerships to deliver local services**
> -Michael Olliff

Michael then shared thoughts and ideas about the architecture of the Socially Sustainable Campus:

Spatially fluid

The Socially Sustainable Campus is one where space is much more fluid and boundaries between indoor and outdoor areas are blurred.
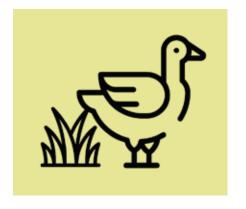
"The whole campus as a space for learning and working. One that provides spaces that celebrate the experience of being part of university culture".

Inspiring and purposeful learning landscape

Spaces between and around buildings are designed to work much harder. Hard and soft landscaping, structures providing shelter, furniture, power and data provisions create an inspiring and purposeful environment that will encourage students and staff to spend much more time outdoors.
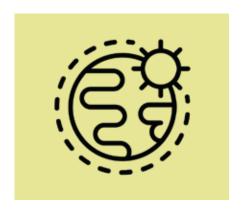
"Spending time outdoors, not only takes the pressure off internal spaces which, is good for social distancing, but also brings long term benefits in wellbeing and mental health".

Zoned to boost biodiversity

"We've seen how quickly nature and wildlife reclaim spaces when contact with humans is reduced, and this can be continued with more effective zoning of space, where wildlife corridors can be designed more effectively into the fabric of the university masterplan".
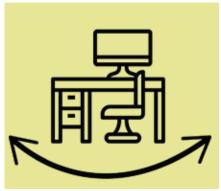
"The acres of tarmac reserved exclusively for cars needs to be reconsidered, and this space could be given back to students and nature".

Features alleviating climate change impacts

Climate change has increased the recurrence of flooding and socially sustainable campuses should seek to address this.

"Large campuses outside of cities can have a major part to play in managing storm water runoff, incorporating wetland areas that could work harder by also providing zones for habitat, as well as extensive water storage".

Re-imagined, reconfigured interiors

Indoor spaces should be much more fluid and the way we measure space utilisation should be reconsidered since social distancing is going to inevitably drive lower occupancies for the foreseeable future.

The shift of lectures going online provides an opportunity to reconsider indoor space use.

"There's already a huge demand for desk space in libraries, so perhaps they should be decentralised, and we can open up those former lecture theatres into mini resource areas, so that corridors flow seamlessly throughout".

Learners could then distribute themselves more evenly throughout the buildings on campus, working in open areas designed to facilitate effective group and individual working rather than being crammed into rooms.

Diverse, agile settings supporting hybrid learning and working

There are strong parallels here with the transformations that are happening in workspace where the focus is moving away from bland, repetitive, open-plan desk layouts, and onto settings that support the actual activities that staff and students carry out.

"Small booths for private, quiet work, desks and chairs for small group working, larger tables for more collaborative team working, and closed cubicles for private confidential meetings".

STUDENT PERSPECTIVES

Jonathan Stewart shared thoughts on the impact of the situation from two different perspectives. Firstly, from a historical perspective and secondly from the student perspective.

"Cambridge has been around for 800-900 years, Oxford University, 924 years some people say. And they've been through a number of crises in that time, and come out the other side. I'm sure we've got a crisis at the moment….But life will carry on, and most universities will carry on as well. In a historical context it's a blip, but it's an important one when you're in that blip".

Moving on to consider the student perspective, Jonathan introduced his daughter Phoebe who is in her final year studying design engineering and is *"one of the 2.4 million students out there"* whose university experience has been impacted by the pandemic. Jonathan then asked Phoebe to outline reasons for going to university.

Phoebe explained she had discussed this with friends and other students and that the consensus of opinion was that *"the course, and getting a degree were the major reasons for going to uni and also improved job prospects, potentially. But also the other side of the experience…the social aspect and the sense of community that you get. The independence and not living with parents. Life skills, and getting friends for life. Just generally having a good time".*

Jonathan noted that many of these reasons have been around for years and suggested that these key drivers for students to go to university are unlikely to change in the future.

Jonathan then explained his other daughter Antonia is due to begin university in September and that he had asked her and Phoebe the question: *"What are you looking for from a university?"*

The course came up, the modules on the course, location, place with a buzz, culture and life. Green spaces and facilities are important. The learning resource centre, and sports facilities came up. But also, can you visualise yourself at that university? And finally, the open day experience and the student welfare, how they were dealt with. These are also pretty important in deciding which university to go to.

Referring to the Student Academic Experience Survey 2019[vii]

Jonathan noted that one of the questions is: Which areas of university spend are the most reasonable use of tuition fees?
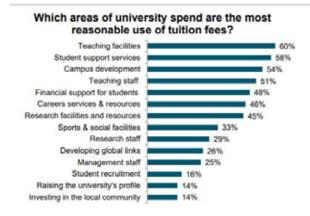
Citing the Survey report he summarised the responses: *"Teaching facilities were top, student support services second, campus development third, then teaching staff fourth and others below that".*

This shows students are interested in the physical campus. But will student these perspectives change significantly in the future? In closing, Jonathan noted that whilst lectures can be, and are being delivered online, other aspects of the university experience are much harder to digitise.

Picking-up on some of the points made my Michael Olliff, Jonathan forecast a reduction in the number of large lecture theatres but noted some multi-purpose lecture spaces will still be needed. He also predicted the extension of learning resource facilities and increased use over the short-term along with increases in *"smaller group spaces, open green spaces, social spaces for interaction with others…to have that community feel that is so important, and the mental health and student welfare part that comes through that".*

Jonathan also predicted environmental sustainability and net zero carbon[viii] will be back at the top of the agenda in the next 12 months.

Lastly and commenting on the digital learning experience, Jonathan highlighted the need to guard against '*technological discrimination*' which can be seen happening as universities move towards more technologically enabled environments on campus.

Which areas of university spend are the most reasonable use of tuition fees?

Teaching facilities	60%
Student support services	58%
Campus development	54%
Teaching staff	51%
Financial support for students	48%
Careers services & resources	46%
Research facilities and resources	45%
Sports & social facilities	33%
Research staff	29%
Developing global links	26%
Management staff	25%
Student recruitment	16%
Raising the university's profile	14%
Investing in the local community	14%

Source: Student Academic Experience Survey 2019 | Jonathan Neves and Nick Hillman

"The course, and getting a degree were the major reasons for going to Uni, and also improved job prospects. But also the other side of the experience... the social aspect and the sense of community that you get; the independence and not living with parent; life skills, and getting friends for life. Just generally having a good time.

-Phoebe Stewart, University Student

BIG DATA AND THE SMART CAMPUS OF THE FUTURE

Dr Mike Entwisle spoke about the work Buro Happold have been doing over recent years to gain a much deeper understanding of what students are looking for in their surroundings, and how this is informing design thinking, particularly around sense of place. Echoing comments made by the other panellists, Mike noted the current situation is unprecedented and highlighted:

"What's coming through loud and clear is the importance of place in what people are experiencing and what students and staff are experiencing. They're missing the social contact and the context in which that takes place. The remote learning genie is out of the bottle now, and blended learning is going to be very different even when the new normal returns, whatever that might be, and whenever it is".

He concurred with Ty Goddard's observations that some universities were better prepared for the journey than others and noted that:

"Research-led universities seem to be struggling more than teaching-led universities who have been on this journey for quite some time."

On demographic growth in the UK Mike noted that the numbers of 18 year olds will be significantly higher over the next decade than at present. Hopefully, this and the return of international students, combined with different ways of learning will stimulate demand in the sector. It will also place completely different stresses and strains on space and how it is used in the context of what students are looking for.

Referring to The Forum at the University of Exeter, Mike highlighted the continuing importance of generous informal learning spaces at the heart of the campus. Mike then gave a slide presentation summarising Buro Happold insight gained through surveys of over 5,000 students across the world, particularly in the UK and the US – forming a massive data set that is informing the company's approach to university projects and design.

"Even before the Climate Emergency really hit, two or three issues came through loud and clear. Sustainability

was very high on the students' agenda of what they wanted to see improved on their campuses. But what trumped that was the need for physical connectivity, the ease of getting around, most importantly the ease of getting to interact with people…to see friends and colleagues for social, learning or recreational purposes."

The survey results are supported by comments from students about exactly what it is they are looking for.

Connectivity and an ability to socially interact is a key part of what generates good mental health in students. A point reinforced during Buro Happold's "mental health design sprints" undertaken with various universities.

Buro Happold's analytics team have been reviewing interactions on both a campus scale and a building scale to promote social and outcome driven benefits.

"But with social distancing at universities going forward, the risk of social isolation is higher than ever. While many students will find their homes supportive and an appropriate place to study, others are having difficulty managing these conflicts."

Perhaps the most important opportunity for students is for social development.

"The opportunity to try new activities…and to shake-off some of the shackles of teenage years."

In developing analytics tools to see how buildings can be used, Buro Happold are exploring how universities might reopen while maintaining social distancing.

"This isn't limited to study spaces. The more difficult issues relate to informal work spaces, libraries, dining."

How do you move large numbers of people around buildings in a socially distanced future whilst maintaining safety?

"Technology driven, smart campuses have a part to play in this. Giving feedback to building managers, and users, about where they can go and how space is being used."

Referring to some of Jeremy Tanner's comments, Mike also note that the current situation has shown is the importance of the good environmental quality that we're having at the moment. Clear skies, reduced pollution levels, quieter streets, society is waking up to the opportunities of a low carbon

economy. One report suggests that Bristol University has saved over a thousand tonnes of carbon emissions from reduced travel in April alone. Looking beyond the Higher Education sector we've heard many organisations are looking at a zero carbon recovery from the current recession that would need to benefit all areas of society to increase social cohesion.

Returning to the importance of place, Mike highlighted that Universities UK[ix] and Student Minds[x] have for some time been working on the importance of mental health and how universities can address the serious issues experienced over recent years. Only very recently has this work begun to consider the role campus environments may have to play.

"Perhaps most baffling of all, in a world where students actually can't visit universities to get an idea of what the campus experience and facilities are like, none of the key university league tables actually include anything significant about the quality of the physical environment. Some of them ask about facilities spend but there's nothing in there about how you feel about the environment in which you study. It's a staggering omission about the way this information is dealt with within the sector."

Referring to a 2014 HEDQF Survey, Mike noted that nearly 40% of students in the UK have visited a university and rejected it because of the quality of the environment. So we know that environment matters to students, we know that it's important for social interaction, for wellbeing.

In closing, Mike commented that as we come out of this crisis, there are ways we can work, firstly in social distancing, but beyond that to make universities a better place for students to learn and study.

"There are virtual open days, but those themselves can be manipulated…so it is questionable what you get out of that".

"The importance of place needs to be front and centre in university strategy, whatever the investment pattern is going forward."

" **Nearly 40% of students in the UK have visited a university and rejected it because of the quality of the environment. So we know that environment matters to students, we know that it's important for social interaction, for wellbeing...**

-Mike Entwisle

AUDIENCE QUESTIONS AND PANEL RESPONSES

"**We are undergoing a dramatic redesign of curriculum for the next academic year whereby most of the teaching will be done online. This poses a big change management issue, but also a chance to reconceptualise how we think about physical space in a more blended manner than before. So going forward, how do you see this blend happening, both in virtual and physical learning? And the organisational issue, how do we bring collaboration between academics, estates, designers and students to then design physical spaces?**

"For me, reflection on technology, online resources and modes of delivery is crucial. It's about the sensibility that is brought to bear on them by those using them. Recently, I had a lightbulb moment when I read a book entitled 'Education is not an App: the future of university teaching in the internet age' by Poritz and Rees. They make the point that the technology needs to be inhabited by a particular sensibility so that it works most effectively. Going back to what I said at the start, it's about thinking about our philosophy of education. If we affirm this idea that study is something that is undertaken together, that it is something that staff and students embark on as part of one learning community mutually enriching each other, then I think that technology has tremendous potential to enrich. But technology itself doesn't constitute that kind of education. It's the sensibility that animates it" – Dr Mark Mason

"My background is in timetabling actually, so from that perspective I have a bit more of a detailed insight into how teaching gets put together. The key is that we have to move to a place where the technology delivery and the physical delivery are not that different. And they mustn't be in terms of quality and experience. That's a very challenging task but you tend to think this sort of thing [Covid-19] might happen again. There's something in our model where we're actually teaching people who are employed, the ability to decide going to a lecture or a session is no longer a binary decision. Using this technology to supplement the way that we're delivering things and making sure they're a compatible set of building blocks is going to be the trick probably" – Jeremy Tanner

"As with any change management programme it really needs careful planning and lots of consultation…..That's not something that can happen overnight. I'm interested in the talk about lectures and the blended manner of learning going forward. That experience of being in a lecture for me is really important. The idea of the virtual and physical. The experience currently in a lecture theatre is one where students have to sit quietly and listen to the lecturer. It's a kind of linear process. So there's an opportunity with lectures being delivered online to make the experience much more collaborative. With groups of students observing the lecture in a shared space. Where they can pause at any moment, have a conversation, rewind and go back, actually making it a much deeper experience. And for me it's important that the experience of viewing the virtual shouldn't be a miserable one, from a room late at night, in a student dorm….It could be fantastic if experienced in a space that is more open and collaborative." – Michael Olliff

"**We have had a decade with emphasis on space efficiency within university estates. And we are seeing lecture theatres become a resource at the moment, to create socially distanced spaces for larger cohorts. So does that raise the question of resilience within university estates? If we are just working off efficiency measures?**
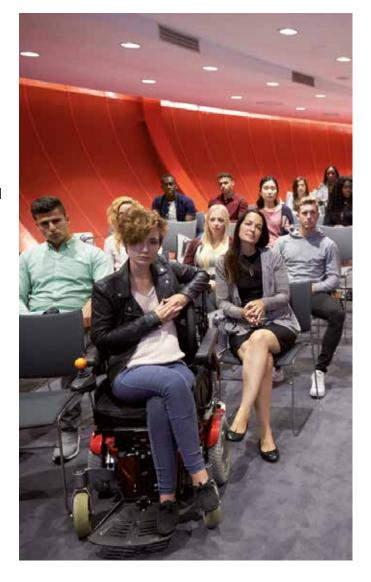
"Space efficiency is essentially the antithesis of social distancing….I think going forward, we're going to have to re-imagine university space….We're going to have to have looser, more flexible space and that space will have to be re-prioritised. There will be less space for administrative staff, and academic staff coming out of this. Whether there will be less space altogether I don't know. We will need to have looser fit campuses, because we don't know how long this social distancing is going to go on for. And whether or not we'll have to cope with a second spike or indeed a mutation of the virus." – Julian Robinson

Regarding the need for the campus to look more towards outdoor space in terms of inhabiting, and creating a sense of belonging, this challenges, certainly for the urban campuses the idea perhaps of territory, and where the city ends and the campus begins. That could be a very good thing, it might be a challenging thing for certain campuses and it also might mean the campus proper will need more space. What do you think about that and what that means for the relationship with the city?

"*I think there's going to be a paradigm shift in the property market. I think many employers now are thinking why do I need to have all this expensive real estate, with all my staff coming into the centre of London every day?....*

I think there will be a movement towards much more mixed-use, and there will be less demand for centrally located office space....That could allow us to re-imagine the city, and allow us to have more people living within the city.... This could rejuvenate local high streets and amenities.... I think universities can take advantage of that and also look at the spaces around them....Looking at deals with local authorities in terms of use of park space (not exclusive by any means)...with other third sector partners, but also other commercial providers, that may have spare office floors, or spare parts of floors, that have not been leased and need to be re-imagined. So I think there's a great opportunity there....And I do think it will be really interesting to see how the property market responds in cities." – Julian Robinson

"

We have heard a lot about lectures being the big hot spot of trouble. If we are not going to be able to continue with big group lectures which act as big draws to campus and are events that social learning often ripples out from, what other kinds of events might replace the big gathering of the lecture. Lectures are more important to teaching in relation to some degree programmes than others. Schools of architecture for example depend much more on the studio as the draw, which is obviously a terribly inefficient use of space, and universities tend to hate us as faculties because of how much space we take up. Is there any hope for studio learning making a comeback in the face of lecture spaces maybe not being so effective anymore?

"At the moment I am consulting our Guildford School of Acting which is part of our conservatoire education within the University of Surrey. We are reflecting on the pedagogy, because they don't lecture at all. They obviously congregate their musicians and actors into a performance theatrical area, and then that's how they disseminate their knowledge….

I would say that you're absolutely right, there is a lot of social learning that happens at the edges of the lecture….In the last few weeks, as we moved our lectures to an online session, our attendance rate has dropped to 15-15% which, is shocking compared to our lecture theatre attendance which used to be about 60-65%. Of course, these are average figures….

When we asked why this is happening, it is happening because there is a social element of coming to a lecture theatre. Not necessarily because they love to listen to me for 2 hours talk about finance and economics, but because they can meet their friends, they can socialise with them.

So, I think there is value on campus in…spaces like cafeteria, where you can choose to work together, or choose to be alone as a learner but together with others….

The cafe culture in 'Generation Z' is so popular because they like to feel part of a community, and they have fluidity to choose to be a lone learner or a group learner. And our space needs to provide that…. When you are sitting in the middle of a 500 [seat] lecture theatre…if you want to be a lone learner right in the middle, there is no way you can do that. It's time for us to re-imagine lecture space to be more like a cafe style area." – Professor Osama Khan

"

The role of the university is to facilitate learning, whether that's through teaching or research. If we look at capital investment in the UK, universities have mostly created the platforms for the progression of technology to be successfully implemented. And we have all seen that in the way most universities have been able to switch from a physical to a virtual environment, mostly in a successful way. Where will future adaptations take place? Frank Duffy in his prime many years ago was talking about the loose fit office, and I don't think Higher Education has really learnt from his experience.

"I think in terms of admin - once the current pandemic is over, we will be looking at agile space. It will not be 1:1 provision because a lot of us can work from home, a lot of us prefer working from home, not me I have to say but other colleagues….

So we're looking at re-imaging the [estates] office, and we're also going to re-imagine the academic office. There's an awful lot of space tied up there….This has brought it very much into focus so it is an opportunity.

How we do that and how we adapt the space, I'll be honest, I haven't got round to that. At the moment…I'm still fire fighting, I'm chairing a return to campus working group for the whole of the LSE and every question that comes up generates another six….

But I can see this coming because economically universities have been so badly hit. We're looking at a huge loss. At LSE we just won't be able to have lots of rented space, particularly for our professional services. We will have to come out of that and focus very much on our existing freehold and then making that better. Making it also I would say more beautiful. For me, this really focuses attention on your existing campus, and your offer, and that's where attention will focus." – Julian Robinson

"In our survey of over 5000 students, the third highest priority for students was to see their existing buildings be invigorated. I think in terms of the tech driven future, it is an enabler. I have personal experience of working with universities, and of my daughter graduating last year from a top Russell Group university….And what was abundantly clear from her experience there is that the challenge to a tech-driven future is not the students and it's not the tech, it's actually the culture within certain universities. Getting researchers to realise that: A) They have to teach and; B) they have to teach in a certain way they are unfamiliar with….That's probably the biggest challenge at lots of institutions going forward….The tools themselves are probably… the quickest thing to fix." – Mike Entwisle

What is the panel's experience, good, bad or indifferent of formal student engagement in the process of capital development, both from pre-feasibility, before an idea even has a funding stream, right through to post-occupancy in the making of beautiful places and spaces?

"*At the LSE we have the students on the jury panel for selecting the architects. We have a sort of general plebiscite in terms of an online and physical exhibition and all students and staff vote on that….We don't just pick the winning scheme via that, there is a formal jury panel but that vote does guide the jury panel and has been very closely aligned to what the jury has come up with in terms of our schemes. And then we have a project board that actually manages the implementation of the project and students are on that. And we will always go back to students in terms of POE as follow up.*" – Julian Robinson

"*Just to mention one academic whom I respect hugely, Professor Stephen Heppell who is a visiting Professor at Bournemouth University….In my mind he is the glue in engaging learners in the design of space. He has been doing that for a long time. He has research that shows a bunch of kindergarten children inputting into school design and how they have developed ultimately as professionals…he has longitudinal data of that scale…. Myself and Ian worked on the Spark at Solent University…. And we tried a furniture scheme, technology and layout… over an entire year through a mock classroom, where we scheduled actual modules and took feedback from students, literally down to the details of whether the chair is comfortable, whether the angle of the screen is comfortable, whether the screen has glare, whether a whiteboard is looking good or not and all the things that we can get input on. And I thought that was a very meaningful engagement of the learners into the scheme.*" – Professor Osama Khan

CONCLUSIONS

"Let's try genuinely to listen to our learners, embrace technology where it is possible to embrace, and let's not go back to the way we were. To be honest, a lot of people say that COVID-19 is going to completely change us. I'm sceptical of that argument. As soon as the pandemic is over, I'll be the old, grumpy professor that I have always been. That's the worry that I have, so let's genuinely make some changes."
Professor Osama Khan

"I've been very struck by this notion of making more of the outside aspects of our campuses, and also the liminal spaces where the outside and inside spaces merge....What would it mean to have a tutorial or a seminar that is mobile, that is on the move, outside...? What are the implications of that for our estate? I also think decisions that we make about space, whether inside or outside, are decisions that all members of our learning communities should have ownership of....I know our students have been very clear with every recent building project that we've undertaken that they want spaces that feel personable, that are inclusive, that make them feel part of something that they can own - right the way down to the colours of the furniture. Space needs to reflect the ownership of those who are part of the community and a sense of common investment."
Dr Mark Mason

"My biggest concern is that we make sure we make the best of the opportunity. I don't think it will be like this forever.....If we can take a higher percentage of home working from this, that's all going to play through. People will reflect on requirements.... It's come at a high price, so I think it's incumbent on us to lead the way on this to take a social step, as opposed to a commercial one."
Jeremy Tanner

"A time of immense tragedy...and we need good things to come out of it....We have talked about glimpses of a different future for the climate, for the environment...for how we can reach people with technology. There are lighthouses, they are primary schools like Broad Clyst in Devon, they are FE colleges like Basingstoke College of Technology, they are universities like Leicester and Northampton that are thinking differently about technology and space. Those 'lighthouse projects' that have tried different things, pre-Covid and post-Covid, are out there. And learning those lessons are vital. Space and how you think about space has got to be different. The cost base, the existential threat, the economics, will drive some of those decisions. But we also want a new vision of teaching and learning that is supported by digital, that supports teachers and learners to be in the driving seat of that new vision. If you let it just be mitigated by the economics, I don't think we will reap all of the benefits that we need to out of this tragedy."
Ty Goddard

"The future is by no means certain. We can all pose various opinions about what life might look like, but those answers will come out over time, and we will need to have that perspective of time to make really important decisions....We can be certain that capital budgets are going to be dramatically reduced....I feel that this is a moment of 'More for Less', and we've been here before Refurbishment, remodelling will be absolutely essential. But there is a different angle now....It will be important economically in dealing with estates, but also it has an important role to play in terms of holistic design, the circular economy and sustainability. We are going to need to look really closely at those existing buildings on campus."
Michael Olliff

"I was speaking with somebody at the DfE earlier this week and they said they are seeing their staff wanting to go back to work. Particularly the younger, less-established in their careers, with less finance, and less of an environment at home to work in. They're looking to get back to work, to meet with their colleagues but also to have that learning by osmosis that goes on in an office environment….
I think there's a read-across into the student world as well here…in that they want to be together, and to learn by osmosis, through discussion and interaction outside and inside lecture theatres, student tutorials and seminars."
Jonathan Stewart

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"I would not want to lose all those reasons why I wanted to go to university in the first place. The whole sense of community and having a good time. That's what I wouldn't want to lose."
Phoebe Stewart

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"Each university and its students are different. So the demands that each of our clients have is different…. Remember the importance of place and what matters to students, staff, researchers and visitors to the campus. Don't let go of zero carbon ambitions and the opportunity for a zero carbon recovery. This is a crisis, but there's a lot of opportunity to restructure what we are doing as an industry and as a sector….. To quote Winston Churchill, let's not waste a good crisis."
Mike Entwisle

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"My takeaway is basically leaner, but more beautiful campuses, and a reappraisal of what we actually want from our campuses. This is the time to do it. A huge thank you to Scott Brownrigg for suggesting the idea of the roundtable and for organising and hosting it. I really do think it's been worthwhile and stimulating."
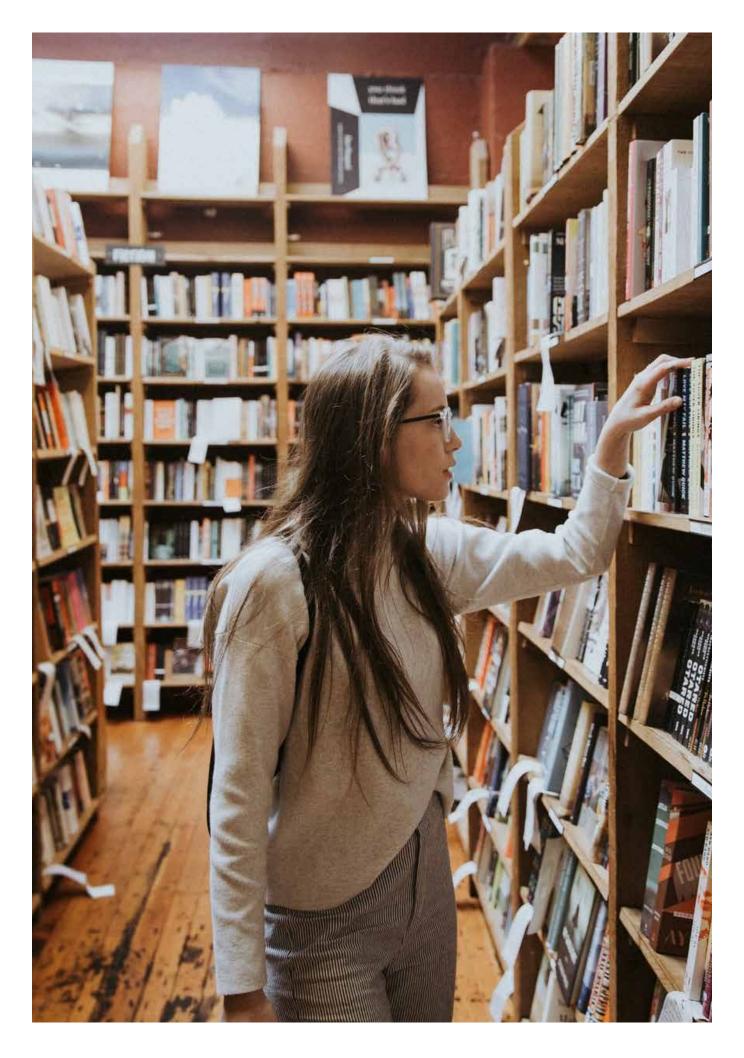**Julian Robinson**

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Newcastle Research and Innovation Unit, Newcastle University Singapore, designed by Scott Brownrigg

ENDNOTES

i   Protecting Learning – How educators and parents are supporting student learning during COVID-19: www.ednfoundation. org/2020/07/15/protecting-learning-how-educators-and-parents-are-supporting-student-learning-during-covid-19/

ii   Achieving stability in the higher education sector following COVID-19: universitiesuk.ac.uk/news/Documents/uuk_achieving-stability-higher-education-april-2020.pdf

iii   JISC: www.jisc.ac.uk/

iv   The Digital Experience Insights Survey 2019 Report: www.jisc.ac.uk/reports/digital-experience-insights-survey-2019-students-uk

v   'Generation Z': www.mckinsey.com/industries/consumer-packaged-goods/our-insights/true-gen-generation-z-and-its-implications-for-companies

vi   Blended Learning: edtechnology.co.uk/latest-news/ultimate-guide-to-blended-learning/

vii   Student Academic Experience Survey 2019 Report: www.hepi.ac.uk/2019/06/13/student-academic-experience-survey-2019/

viii   Net Zero Carbon: www.worldgbc.org/advancing-net-zero/what-net-zero

ix   Universities UK: www.universitiesuk.ac.uk/

x   Student Minds: www.studentminds.org.uk/

xi   Broadclyst Primary School, Devon: bcps.org.uk/

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