

Welcome



Welcome to the autumn edition of *South Bank*. I'm delighted to announce that LSBU has been named University of the Year for Graduate Employment by *The Times and The Sunday Times Good University Guide 2018* – the latest in a run of successes, including a silver rating in the Teaching Excellence Framework and our entry into *The Guardian*'s Top 100 universities and two international university league tables for the first time.

It's a suitably feel-good opener for an edition focusing on the theme of sustainable communities. We kick off close to home, by unveiling exciting new plans for the redevelopment of our Southwark campus (page 8). These are complex times for businesses and communities alike: on page 10, Alex Bennett stresses the importance of strong leadership in building a sustainable business model, while on page 11 Julie Wilkinson shares her thoughts on dealing with anger, which she describes as one of the biggest challenges facing society today. People are also at the heart of our big issue feature (page 12), where we talk to some of the members of the South Bank family working towards a more sustainable future.

We know that thousands of memories have been made at South Bank and as we mark our 125th anniversary in 2017, we've been asking to hear some of yours. On page 20 the Food Science class of '85 share their stories; a classic reunion tale that's hard to resist! As Head of Alumni and Development I have the privilege of meeting some incredible alumni, but the afternoon we spent with Nicola Williams, the Armed Forces' first Service Complaints Ombudsman, was a highlight (page 24). Fairness and equality is simply part of her DNA, making Nicola an incredible role model for people and communities far and wide. Pure inspiration!

On page 28, Harry Lawner from our School of the Built Environment and Architecture explains how the need to tackle skills shortages and meet the future needs of our economy is driving LSBU's degree apprenticeships programme. Finally, on page 30 and on our back cover, you'll find details of two inspiring talks guaranteed to leave you feeling empowered to make a positive change. I hope to see you there.

Olivia Rainford | Head of Alumni and Development

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UNIVERSITY NEWS

Rugby team heads East

LSBU's men's rugby team travelled to China to help raise the profile of the sport at the third UK-China University Sports Week, held in July. The team took part in friendly matches, as well as student networking events. 'Only a few years ago, our rugby programme was almost non-existent and in a short period of time we have reached a competitive standard nationally,' says Phil Newman, Head of Sport and Recreation. 'This event gave us the opportunity to share our knowledge in building up the sport in China. It made for a great end to the 2017 season, which has been our best yet.'



LSBU's Accounting and Finance
Department
has been ranked
number 4 out of
102 institutions
in *The Guardian*'s
2018 UK university
league table, up
21 places on last
year's results

UNIVERSITY NEWS

Silver award for teaching excellence

LSBU has been honoured with a silver rating in the government's Teaching Excellence Framework (see the team celebrating, above). The scheme has been created to recognise excellence, and to help prospective students make an informed decision on where to study. The University was praised for its focus on personalised learning and on supporting graduates into employment. 'This award shows the significant progress LSBU has made over the last few years in improving the experience we provide for our students,' says Vice-Chancellor Professor David Phoenix. 'We're in The Guardian's top 100 universities, have entered two international university league tables for the first time ever and has also been named Entrepreneurial University of the Year. This award really demonstrates the improvements we have delivered for our students.'





UNIVERSITY
OF THE YEAR
FOR GRADUATE
EMPLOYMENT

UNIVERSITY NEWS

LSBU named University of the Year for Graduate Employment

LSBU has been named University of the Year for Graduate Employment by *The Times and The Sunday Times Good University Guide 2018*. Once again, the University challenged the UK's most prestigious institutions both on salaries and types of jobs held by graduates, as well as reaching the top 20 for graduate prospects. Average salaries for LSBU graduates going into highly skilled jobs are typically thousands of pounds above the national average, with the median salary

for an LSBU graduate now standing at £24,000. LSBU also jumped 14 places in the overall league table. 'This achievement recognises the importance LSBU places on delivering courses that are supported by industry and, where possible, accredited by professional bodies,' says Vice-Chancellor David Phoenix (pictured above). 'Students who want to develop the skills needed for success in finding work should be looking at LSBU.'



UNIVERSITY NEWS

Love to Learn, Learn to Love

LSBU staff, students and allies were out in force at this year's London Pride celebrations in July, proudly marching under the University's 'Love to Learn, Learn to Love' banner.



ARTS AND CREATIVE INDUSTRIES

Think | Make | Show

Our most prolific digital creators and consumers yet, Generation Z, had their say on the future of public service media at the latest in a series of events sponsored by LSBU's new Institute for the Creative and Digital Economy under the heading Think | Make | Show. High school, college and incoming university students spent the day discussing and developing their ideal 'BBC of the future' with a number of industry experts from the BBC itself and equivalents from Canada and Austria. 'Young people obtain much of their news via social media,' says LSBU's Head of Creative Technologies, Professor Lizzie Jackson. 'Public broadcasters need to be able to predict possible directions and future services that might be attractive to audiences who are currently aged 16-20, so this was a great opportunity to understand exactly what it is they want to see, read and hear from the media.'

News



ENGINEERING

New women's network

A new network for women in engineering aims to help address the ongoing gender imbalance in the industry. Sekinat Saka (BSc Electrical and Electronic Engineering, 2005, pictured above), now an electrical and lighting engineer at Atkins Global, spoke at the launch event in June. 'The opportunities at LSBU for career development and networking and the follow-up after graduation were amazing,' she says. 'I'm not sure I'd have got that level of support anywhere else.' Read Sekinat's story at www. Isbu.ac.uk/case-studies/sekinatsaka-bsc-electrical-engineering



The work of LSBU's Gary Francis (above) has been commended by the Nursing Times

Nursing Times nod for LSBU programme

Gary Francis, LSBU's Associate Professor of Practice Skills Learning and Simulation in the School of Health and Social Care made it into the prestigious

finals of this year's Student Nursing Times Awards, in the Teaching Innovation of the Year category. Although Gary's team's entry did not win this year, their efforts were recognised and highly commended. Gary was nominated for his outstanding work running LSBU's clinical skills peer tutor programme, a peer-led initiative set up to help health and social care students strengthen their clinical skills. The programme aims to provide a safe facilitative space for students in which they can practise skills and ask discreet questions. In providing this support to fellow students, peer tutors also gain invaluable skills and are able to develop themselves.



ENTERPRISE

Celebrating enterprise

The entrepreneurial spark burned bright when student and graduate entrepreneurs (pictured above) came together at Celebrate Enterprise, an event organised by the University to showcase new business ideas and to crown the winners of this year's Make It Happen competition (see right), who will receive cash prizes and ongoing support to take their enterprise to the next level. 'It's always inspiring to see our students and graduates taking risks and growing their creativity to develop their businesses, start-ups and freelance careers,' says Gurpreet Jagpal, Director of Research, Enterprise and Innovation. 'Celebrate Enterprise is a great opportunity to bring our students, graduates, staff and local community together to celebrate the University's entrepreneurial spirit.'



Make It Happen 2017: the winners

Best Freelance

Still I Rise, a non-profit organisation set up by Sandra Hibbert (BSc Criminology with Psychology) to tackle gender-based violence and mental health issues among people from Grenada Best Idea Music-lover – and mum – Sarada Chunduri-Shoesmith (BSc Integrated Care) launched Wake Up Gigs, which organises baby- and toddler-friendly live music events in east London Best Start-Up The award-winning Code and Wander, set up by Chris Underdown (BA Music and Sonic Media, 2015) along with business partners Alessia Sannazzaro and Liam McCabe, creates digital

HEALTH AND SOCIAL CARE

A better future for the NHS?

A new report published by LSBU in May calls for a fundamental change in thinking if the 44 Sustainability and Transformation Plans (STPs) launched in 2016 are to deliver an NHS that is fit for the future. To be effective, the report – by Sean Boyle, John Lister and Roger Steer of the School of Health and Social Care — argues that the STPs should be given the legislative powers and support needed to achieve effective collaboration, as well as clarification on their role. It recommends that STP leaders plan ahead based on the reality of their current situation, identify changes that are evidence-based, develop workforce plans that

match their ambitions, and focus on reducing demand before removing resources from the acute sector.

STPs: How serious are the proposals? A critical review is available at www.lsbu. ac.uk/business/expertise/health-wellbeing-institute/health-systems-innovationlab/sharing-innovation



experiences and products

mobile apps and websites

including branding,

Campus 2020

The planned redevelopment of St George's Quarter will create a new civic heart for our Southwark campus Plans have been announced for a major redevelopment of the north-western corner of LSBU's Southwark Campus. The plans — under the working title St George's Quarter Development — include state-of-the-art facilities for students, staff and the local community.

The focal point will be the central concourse shown in the image below, an all-weather setting for people to meet and chat and for events such as Welcome Week fairs, graduation ceremonies, food markets and performing arts.

A new Learning Centre



Estates masterplan

will feature a three-storey automatic book storage and retrieval system, clearly visible behind a dramatic glazed frontage. As well as exhibition space, retail outlets and a café, there will be a new student support centre and teaching space on the upper floors.

A new performing arts centre will include a 200seat theatre for teaching and public performances along with a 60-seat studio theatre and rehearsal space. There are also plans to turn Keyworth Street into a pedestrian-friendly zone with planting, tactile paving, bike parks and seating.

A planning application is now with Southwark Council, and the project is scheduled for completion in September 2020.

To see more images and read more detail about the plans, go to www.lsbu. ac.uk/about-us/campusdevelopment



The redevelopment (outlined in red) includes the Blackwells Building on London Road, the Grade II-listed Rotary Building, a former Presbyterian chapel on Borough Road and Hugh Astor Court, a vacant residential block



_Entrepreneurship

Risk and reward

Alex Bennett (BA Digital Film, 2006) of Smart Currency Business shares his insights into building a successful new business against a backdrop of global economic uncertainty

I don't think there's any great secret to success. It's a combination of hard work, constantly looking for opportunities to improve and building solid relationships based on mutual respect and understanding.

'For me, going to university was as much about honing my people skills and making connections as it was about getting a qualification. That's part of the experience that often gets overlooked — but it shouldn't be. I'm really proud of the fact that I arrived at LSBU knowing no one and left with a network of friends and contacts that will be with me for life.

'After university, I took some time out to work as a sailing and windsurfing instructor. It was a great time, but after a couple of years I realised it was time to step up and get on with my career. Some of my peers were starting to do quite well and I didn't want to get left behind.

'Sales was the perfect fit for me. I wanted to work in a fast-moving environment, where I was dealing with people all the time and, ideally, in a small set-up where I'd feel like I was making a real difference from the start. I went through a specialist agency, Pareto Law. I knew they'd give me access to opportunities I wouldn't otherwise get.

Istarted with Smart Currency
Exchange in 2004. There were only five
people in the team, focusing on private
clients, but they were doing well and
there was huge potential for growth.
I also really believed in the people,
including the founder, Charles Purdy,
who I still work with very closely today.



ALEX'S TIPS FOR BUSINESS SUCCESS

Seize every opportunity to develop yourself and your network, whether that's by taking a course at a business school or keeping your LinkedIn profile updated.

Be 100% consistent in the messages you're putting out and in what you deliver to your clients.

Remember, people are looking up to you: it's part of your job as a leader to provide a role model.

Surround yourself with good people: I subscribe to the Pareto Law principle that it's the top 20% of people who make 80% of the difference.

'Then in 2009, we decided to launch Smart Currency Business. Along with another colleague, I was put in charge of getting that off the ground. It was a pretty challenging time, just after the global financial crisis. So we've had to grow up dealing with a high level of volatility. Last year we saw a 20% swing in sterling/dollar exchange rates. If your margins are 5%, you could have all your profits wiped out in a single quarter if you get your calculations wrong. The stakes are high, and getting even higher. That's where we come in.

'Over the years, the forex market has become more and more commoditised.

"All of us senior managers live and breathe the business. For me, the most powerful thing you can do is lead by example"

In terms of pricing, at least, it's a race to the bottom. But we're not interested in being part of that. Instead, we position ourselves as partners, offering our clients an all-round service that eliminates the risk to their business from a forex perspective. Brexit proved the point: post-referendum, those clients that had products in place to help mitigate risk suffered a lot less than those that didn't.

'Today the Smart Currency Business team is 30-strong. We're still privately owned, and everything we make goes straight back into the business. We've still got that frugal, entrepreneurial approach. Right now, the focus is on continuing to develop our product mix, improving delivery and building our team. That's driving access to higher-value clients, who might deal with £1 billion worth of forex each year. We're not handling all of that — yet! — but we're in the room, having the conversation.

'We've definitely made mistakes. For the first 18 months, we did everything ourselves. As the business grew, we thought we could bring in people and expect them to do it exactly the way we did it. As a result we lost a lot of people, very quickly. We had to learn to be more inclusive, and make sure we were giving people real opportunities to grow. All of us in the senior management team still live and breathe the business: for me, the most powerful thing you can do is to lead by example.'

For the latest business and enterprise events at LSBU, go to www.lsbu.ac.uk/business/expertise/entrepreneurship-innovation-institute

Breaking the cycle

Through her organisation Brave the Rage, Julie Wilkinson (City and Guilds Professional Teaching Practice, 2007) is working to turn anger into a positive force

During my 20 years as a social work practitioner, I've noticed an alarming rise in the prevalence of anger – in adults, yes, but most strikingly among children and young people. Of course, anger is one of our most basic human emotions, and something we all experience at times. But left unchecked, or allowed to spiral out of control, anger – and the behaviours that go with it, like hostile thoughts or physical and verbal aggression - can have a negative impact on relationships, personal wellbeing, academic attainment and, ultimately. future life chances.

'So what's behind this worrying phenomenon? I know there's no one single explanation, but from my own experience and observations I believe that new technology has a huge part to play. The pace of life is getting faster all the time. We live in a world of instant gratification, where the things we want are just a click and an express delivery away. That raises expectations, encourages us to measure our happiness in terms of material possessions – and chips away at our patience.

'Social media is allpervasive, and adds to the



"Social media is allpervasive, and adds to the pressure: to have certain things, to measure up physically, to behave in a certain way"

BRAVE THE RAGE'S 5 STEPS TO CALM

- Pause Turn off your mobile phone and computer, and go somewhere quiet.
- 2. Comfort Sit down in a favourite chair, or find yourself a cushion.
- 3. Focus Observe the in and out flow of your breath.
 Breathe deeply.
- 4. Clear Don't let your mind wander. Put any thoughts to one side for later.
- 5. Practise Do this every day, even when you're not feeling stressed.

pressure: to have certain things, to measure up physically, to behave in a certain way. A lot has been written about the effect of sexualised imagery online and I see it in my own work, every day: the six-year-old who thinks she needs to shave her legs, or the eight-year-old who's already "sexting". The message is, this is the norm, and if you don't conform, you'll be rejected. It's not surprising that that pressure gets internalised and comes bursting out in an uncontrolled way.

Reading the signs

'Unchecked and unmanaged, anger creates a vicious cycle. The child who acts up in class runs the risk of punishment and then exclusion, reinforcing their sense of alienation. Aggressive behaviour in the form of bullying – whether in the real or the online world – can lead to more bullying too, as the victim turns bully themselves in an attempt to regain some power and control or simply to mask the pain and anxiety they feel.

'As adults, it's vitally important that we recognise the signs, and react in an appropriate way. It's the difference between feeding into that vicious cycle and seizing the

opportunity to teach a child skills – like negotiation, or understanding the difference between assertive and aggressive behaviour – that will stand them in good stead in many situations, and help them to start valuing themselves again.

Negative to positive

'In my work with Brave the Rage, I teach a wide range of techniques both directly to children and to parents, teachers and other adults who want to learn constructive ways of dealing with anger, and to turn a negative into a positive. Our 5 Step approach includes relaxation, mindfulness and breathing techniques—things we can all benefit from (see below).

'It's about personal management, and helping children to develop the self-awareness to be able to step back and say, "I realise this is going to be a tricky situation, but I know how to handle it". It's not easy − we're called Brave the Rage, because it takes courage to face your anger and deal with it − but it's so, so worthwhile.' ●

Brave the Rage provides anti-bullying and anger management training for children, young people, parents and professionals. Interactive workshops and a range of tools – including the 5 Step Solutions to Stress, Anxiety and Anger – aim to boost confidence, increase resilience and improve wellbeing, laying the foundations for future success. Find out more at www.bravetherage.co.uk



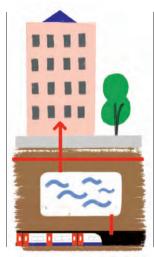
BUILT TO LAST

They're saving energy, increasing resilience, transforming infrastructure and generally improving our quality of life. Meet some of the LSBU academics, students, alumni and honorary graduates working to create sustainable communities: places where people want to live and work, now and in the future



reating a coherent narrative around a concept as broad as 'sustainable communities' might seem like an impossible challenge. But as we explored, and talked to more of the academics, professional services, alumni and honorary graduates engaged in the innovative projects profiled over pages 14-19, some clear themes began to emerge.

First, sustainability is about taking a longterm view: as architect Sadie Morgan says of her work on the HS2 project (see pages 18-19), 'We have to make sure it's something that we can feel proud of in the same way as we do all the wonderful infrastructure that the Victorians gave us.' Second, it's about people or, in the words of Chloe Hampton of LSBU's Sustainable Communities Institute,



'Yes, it's about really cool technology – but fundamentally it's about how we all live, now and in the future.'

That's certainly a vision that strikes a chord with LSBU's Sustainability Manager James Whittingham, whose remit includes developing and delivering LSBU's new Sustainability Strategy. 'In the past we were very much focused on the environment,' he says. 'But the forthcoming strategy reflects the need for a broader perspective. That's why we've based it around three pillars: Campus, Community and Curriculum.'

By way of illustrating that new approach in action, James cites the development of LSBU Elephant, a freecycling app for staff and students created by BSc Data Science student Nav Dhuti. Clearly, it's a project that >

LSBU's long-running MICAH project is finding ways to make use of London's waste heat



MICAH – or Metropolitan
Integrated Cooling and Heating
– started life in 2001 as a
groundwater cooling system
for London's Tube. Since then
the scope has expanded to look
at how excess heat from the
network – around 15 MW,
or enough to heat around
16,000 flats – can be fed into
district heating schemes
rather than being vented out
at street level, saving money
and reducing emissions.

'The basic principle is very simple,' says Professor Graeme Maidment of the Centre for Air Conditioning and Refrigeration Research (pictured left, on the right). 'We're moving heat from somewhere that's got too much to somewhere that's got

too little. That's addressing two problems for the price of one.'

This second phase began when project partner London Underground asked the team to carry out tests on heat exchangers in the disused Tube station at York Road, near King's Cross. 'The exchangers were very close to Islington Council's district heating scheme, so this gave us the perfect opportunity to investigate the feasibility of the idea,' says Graeme.

MICAH takes heat from the air underground at a temperature of between 20°C and 30°C, then passes it through an air source pump which transfers the heat into water. That water – now at around 80°C – can then be pumped to homes and businesses to heat radiators and provide hot water.

Currently, district heating networks — where heat sources such as boilers serve a wider 'district' or community rather than a single building—account for only about 2% of total heat used in the UK. But a number of such schemes are already in place in London, including in Islington, where the Bunhill Energy Centre network is heating more than 850 homes as well as a local swimming pool and leisure centre.

'At the moment, most district networks - including Bunhill get their heat from combined heat and power generating plants,' says Senior Research Fellow Gareth Davies (pictured left, with Graeme). 'But there is a clear opportunity to adapt existing infrastructure to make use of secondary waste heat.' Indeed, the Mayor of London's office has estimated that up to 25% of the city's heating needs could be met from decentralised sources such as secondary waste heat by 2025.

NOISES OFF

Stephen Dance of LSBU's Acoustics team is investigating one of the most controversial side-effects of urban development: noise



In a city environment, noise is ever present. And, as development continues, it's having a bigger and bigger impact on our quality of life. 'In London, as in so many cities. the problem is that there's no space,' says Stephen Dance. a specialist in environmental and architectural acoustics. 'Just look at the way developers are starting to use the land alongside railway lines now. In terms of noise, that has huge implications for people living and working in those buildings - and that should be factored in from the start.'

Working in partnership with architects Foster + Partners, the team has developed a cheap noise monitoring kit, which has been distributed to 25 schools in Wandsworth as part of the Listening to London project. 'The idea is that we used this very accessible devices, costing around £200, to create a citywide noise monitoring system,' says Stephen.

Ideally, of course, new developments would be sited and designed with local noise levels in mind. Often, though, this doesn't happen, and local residents are left to live with the consequences – as is the case for many people living by London Heliport, close to the the river in Battersea. 'When the heliport was first opened. the nearest residents would have been at least 400 metres away,' says Stephen. 'Now, that distance is down to 50 metres and, since tourist flights started operating out of Battersea, there can be as many as 80 take-offs and landings in a day.'

With complaints from local residents reaching levels that could no longer be ignored, Stephen's team was asked by the local councils concerned – Wandsworth, Kensington & Chelsea and Hammersmith – to run a six-month study to assess noise levels near the heliport. Four monitoring kits were rotated around different sites,

and checked once a month.
The information gathered
has helped to establish a
baseline and will be used to
support informed discussion of
the issues and – potentially –
lead to a change in policy.

'There's an 81 decibel noise limit in operation at the heliport,' says Stephen. 'It may well be that the helicopters themselves aren't exceeding that limit – but they're tested in a field! In this environment buildings are very close together, with noise bouncing off those hard surfaces and there's more high-rise development happening all the time. People are living in these lovely riverside flats with balconies, and every 10 minutes they're having to put up with a level of noise that's similar to being in a packed bar. We're independent, and it's not our job to make recommendations - but we can help by providing accurate data that reflects what's really going on.'

As part of the MICAH project, a model is now being developed to assess the impact of the technology on energy consumption, carbon emissions and cost. The next step will be to run a full-scale pilot programme with the potential to heat a further 1500 homes, a school and a nursery.

'This is a project with huge potential,' says Graeme. 'We're currently mapping all the vent shafts in London, as well as looking at ways of using heat from other sources including sewers, cable tunnels and rivers. Making better use of waste heat and creating more district networks has the potential to change the way we heat our homes, deliver major savings and have a significant positive impact on the environment.'

BUILDING LINKS

As Community Relations Manager for the Crossrail project, Nina Radford (née Massarik) (MA Planning Policy and Practice, 2007) was responsible for engaging with local residents and businesses



'In my patch – the City – many of the site neighbours were businesses, but it also included the Barbican which was directly affected as the Crossrail tunnels passed right underneath the estate and Arts Centre. We put out newsletters, ran a 24-hour helpdesk and held regular forums for both businesses and residents. We were lucky that the engineering and technology involved were so fascinating that people were naturally engaged. The TV programme [BBC1's The Fifteen Billion Pound Railway] really brought the project to life, inspiring pride that we could deliver a project on this scale on time, and to budget.

'The impact is ongoing. Contractors created community gardens, for example, and ran sessions for schools, including some specifically designed to get more girls into engineering. Overall, Crossrail also far exceeded its target of taking on one apprentice for every £3 million of contract spend.

'The archaeology programme also really helped bring people on board. We excavated a number of historic sites, including the old Bedlam Burial Ground at Liverpool Street. Working with experts from the Museum of London Archaeology, we held Q&A sessions and set up a viewing platform so people could see the site for themselves. People were impressed to learn that that was all part of the project plan. It's a great example of how the more people know, the more positively engaged they are.'

Read Nina's paper on stakeholder engagement at learninglegacy.crossrail.co.uk (search for 'Nina Radford')

brings benefits to the LSBU community and promotes the idea of a circular economy, but the impact goes further.

'It's a great practical example of how we're embedding sustainability into the curriculum,' says James. 'It's about giving our students opportunities to come up with creative ways of tackling some of the very significant challenges facing the world today and really fostering that entrepreneurial spirit.' Indeed, the Curriculum pillar of the Sustainability Strategy is a major priority for the team at the moment: a recent initial review carried out in partnership with PhD student Nuha Eltinay (see opposite for more on Nuha's work) assessed all courses for their sustainability content against various criteria, including the UN's Sustainable Development Goals.

Empowering people

It's just one of the huge number of initiatives under way, from the creation of a new wildlife garden on the corner of Keyworth and Ontario Streets to our commitment to paying everyone working on campus the London Living Wage. But perhaps more

"Enabling other people to take this agenda forward collectively is a pretty compelling example of sustainability in action"

striking than any of these projects is James's point about empowerment.

'The Sustainability Team consists of two people – me, and Sustainability Projects Lead Paul Crossley. It isn't about us doing everything, and it shouldn't be. A huge part of our role is about building capacity, so that other people can take this agenda forward. That's a pretty compelling example of sustainability in action in itself.'

It also brings us back to our overarching theme: people. That's demonstrated in the extensive community engagement programme so central to the Crossrail project (see page 15), in the involvement of local groups in shaping every aspect of HS2 (see page 18), and in the work being done by our staff and students to build sustainable community energy networks and make our cities cleaner and more pleasant to live in. It is, indeed, about how we all live.

Download the LSBU Elephant app from the App Store or Google Play. You can also follow the Sustainability team on Facebook @LSBUSustainability

PhD student Pegah
Mirzania's research
focuses on finding
sustainable models for
community renewable
energy projects



Community energy projects – where groups come together to invest in ways of reducing energy use and purchasing, managing and generating their own energy, independent of traditional providers – offer a whole range of potential benefits, from reducing emissions to raising awareness and strengthening local economies. Currently, there are around 5000 such projects up and running in the UK.

But since 2015, when the government announced plans to reduce subsidies and cut tax relief, the number of new initiatives being launched has fallen dramatically. 'What's urgently needed is a new model,' says Pegah Mirzania, a PhD research fellow in LSBU's School of the Built Environment and Architecture. 'The goal

now is to end dependence on external subsidies and find ways for these projects to become self-sufficient.'

One approach is for projects to find waysof storing energy, rather than - as is currently the case – selling it back to the National Grid. A pioneering project in Nottingham, the EUfunded SENSIBLE, has recently installed a battery unit to store excess solar energy and cheap off-peak electricity, which householders can then tap into when the weather is bad and prices go up. Other innovative approaches to demand-side management include peerto-peer trading and using incentives to shift energy demand to off-peak times.

But all this requires significant financial commitment on the part of group members — so raising awareness and

increasing engagement is key. Part of Pegah's work with South East London Community Energy (SELCE), an established project based in Greenwich, involves taking a solar trailer – essentially, a portable solar-powered generator – to community events such as festivals, so that local people can see clean energy in action.

'It's very powerful,' says
Pegah. 'Finding practical,
compelling ways to raise
awareness of the renewable
energy agenda is a top priority.
SELCE is a great example of a
project that is delivering real
benefits to its local community
– for example by putting any
profits made into a fund to help
residents facing fuel poverty.
It's really important that we
identify models that can help
to ensure that projects like
these are able to thrive.'



Goal number 11 of the UN's Sustainable Development Goals, first published in 2015, calls for our cities to be made 'inclusive, safe, resilient and sustainable'. Crucial to this is finding ways to mitigate the impact of natural disasters on critical infrastructure, so that cities can start functioning again as soon as possible.

PhD student Nuha Eltinav is part of a team of researchers looking at how lack of data can exacerbate the impact of disasters, and at the potential benefits of greater openness and information sharing. 'At the moment, such data as there is on critical infrastructure is often private, or in a format that makes it very hard to share,' says Nuha. 'It's our belief that this is standing in the way of accurate reporting on the impact of the disasters on infrastructure and essential services, and impeding our ability to understand how to respond effectively.'

The project sets out a practical framework for gathering detailed practical information, for example on the number of people affected by the loss of a particular service and the economic impact of that loss. It also makes the argument for open data – free to use, and accessible for anyone to read.

So what difference could this make to, say, our future response to another hurricane on the scale of Harvey or Irma? 'As an urban planner, I can see that this could have a huge impact on the planning process,' says Nuha. 'In the case of Harvey, many of the buildings worst hit were on a flood plain and not built to the right standards for such a high-risk area. This information could help us make sure that our houses, our hospitals, are better sited in the first place. But it can also help us work out how existing infrastructure can best be protected.'

BREATHE EASY

The MAGIC project aims to better understand the factors influencing air quality in our cities



The quality of the air we breathe has never been far from the headlines this year, with pollution levels in London exceeding even those in Beijing. Dr Elsa Aristodemou of LSBU's School of Engineering is a

co-investigator on the £4.1 million EPSRC project Managing Air for Green Inner Cities (MAGIC), led by Professor Paul Linden of Cambridge University. The project aims to eliminate air pollution and the urban heat island effect by 2050.

In the past, environmental control in cities has relied on ventilation and air conditioning systems that use energy and produce carbon emissions, creating a vicious circle. By developing a better understanding of the factors affecting air quality, MAGIC's

ultimate aim is to embed air quality management into the design and management of the urban environment.

'We're using a rangeof techniques, including laboratory and wind tunnel experiments and computational modelling, to explore the impact of factors such as building height and density, wind direction and traffic levels on air quality,' explains Elsa. 'We're also looking at the impact of green walls, green roofs, parks and water, and at how simple actions like opening windows affect pollution levels indoors.'

Another key element is real-site measurements. The team recently set up its first test site right by the LSBU campus, installing nine sensors within a 300m radius of St George's Circus. These will

gather data on levels of carbon monoxide, carbon dioxide, nitrogen dioxide and particulate matter, temperature and humidity.

'Identifying the most influential factors is a crucial step towards finding effective ways to mitigate pollution,' says Elsa. 'These sensors will help create a detailed picture of how pollution disperses - or doesn't – in a complex urban environment. We can use the model to predict what would happen if we planted more trees or converted all the vehicles to run on electricity or diverted buses to run on different routes. That's information government bodies and developers can use to inform decisions that will have a profound effect on all our futures.'



When it comes to infrastructure projects. they don't come much bigger than High Speed Two (HS2), the planned high-speed railway linking London, Birmingham, the East Midlands, Leeds and Manchester. Currently scheduled to open in 2026, the £56 billion project promises to transform the UK's transport network, slashing journey times from London to Manchester to little over an hour, and transferring up to 4.5 million journeys from the air and 9 million from the roads, cutting congestion and reducing environmental impact. It is also set to create tens of thousands of new jobs and, it is hoped, help address the economic divide between North and South.

'This is the biggest investment in infrastructure in this country in 150 years,' says Sadie Morgan (pictured above). 'It's going to have a huge impact on our economy, on connectivity and on the built environment, as well as helping to inspire the next generation of architects, engineers and designers. We

"This is the biggest infrastructure investment in this country in 150 years. It's going to have a huge impact on our economy, on connectivity and on the built environment..."

have to make sure that it's built to last, and that we can feel proud of it in the same way as we do all the wonderful infrastructure that the Victorians gave us and which is still so much a part of our everyday lives. We have world-class professionals here in the UK; so there's absolutely no reason why HS2 shouldn't be a world-class project.'

Put simply, the remit of the HS2 Design Panel is to ensure that the project is just that: world class. The group – drawn from what Sadie describes as 'the great and the good of the UK's creative industries' – exists to make sure HS2 remains true to the standards and objectives set out in the Design Vision document, published in April 2017. As chair of the panel, Sadie reports directly to the Secretary of State for Transport rather than to HS2, helping to maintain the group's integrity and independence. 'It's our role to act as a critical friend,' she says. 'But we won't shy away from holding them to account if we think it's necessary.'



SADIE MORGAN (Honorary Doctorate, 2016), architect

Sadie Morgan is a founding director of award-winning Southwark-based architectural practice dRMM, whose projects include Trafalgar Place at Elephant & Castle, Maggie's Oldham, Faraday House at the Battersea Power Station and Hastings Pier, which won a 2017 RIBA National Award and is shortlisted for the 2017 RIBA Stirling Prize. In addition to chairing the HS2 Design Panel, she sits on the National Infrastructure Commision and the Thames Estuary 2050 Growth Commission. In 2013, she became the voungest president of the Architectural Association

and was shortlisted for the AJ Woman Architect of the Year award in 2014. In 2016, she was awarded an honorary doctorate by LSBU in recognition of her achievements as an architect and an educator. Earlier this year, she was named Londoner of the Year at the 2017 New London Awards and she has recently been appointed as one of Mayor Sadiq Khan's 50 design advocates for the Greater London Authority and as a director of the Major Projects Association. Read our profile at www.lsbu.ac.uk/ case-studies/sadie-morganhonorary-doctor

Day to day, the panel's role includes reviewing and critiquing plans for every aspect of HS2 from trains to landscaping to ticket machines, often working in partnership with smaller local panels. Individual members run 'lunch and learn' sessions based around their own design specialisms, and also act as mentors to HS2 staff. One current area of focus is procurement, and ensuring that design considerations are embedded in processes. 'We've worked with HS2 not only to develop the right questions for potential contractors but also to help them assess the answers,' says Sadie. 'By upskilling their people, we're delivering a long-term benefit to the organisation.'

First-hand experience

When it comes to something as visual and experiential as design, of course, nothing is as powerful as a real-life example. Sadie and her colleagues on the panel have also led a number of field trips designed

The Design Vision sets out
HS2's goal of delivering
a project of the highest
quality and enduring value
by focusing on three
key principles:

PEOPLE: Design for everyone to benefit and enjoy PLACE: Design for a sense of place TIME: Design to stand the test of time.

It also recognises the importance of good design in helping to save resources and deliver the best possible value for money, and makes a commitment to delivering a high-speed infrastructure that looks good, works well, can be easily maintained and adds to both the 'cultural and natural heritage' of the UK.

Download the Design Vision at www.gov.uk/ government/publications/ hs2-design-vision to enable decision-makers within HS2 to experience other transport systems at first hand. 'Rotterdam's new central station is an excellent example of a station that combines a fabulous public realm with great wayfinding, user-friendly ticketing and good integration with retail spaces,' she says. 'It's also an example of a project that was delivered to a very tight timescale and came in under budget.'

Recently, too, the panel commissioned a team of world-class designers to create a specimen design for the proposed Colne Valley viaduct near Uxbridge on the outskirts of London. 'We wanted to say, "Look: *this* is what's possible, *this* is what you should be aspiring to",' says Sadie. 'You can work within the practical parameters and still deliver something that looks incredible.'

Future thinking

More broadly, the work of the panel is also sending out a strong message that design is about much more than just aesthetics, important though that is. 'Design isn't just about how things look,' says Sadie, who also now sits on the government's National Infrastructure Commission and is one of the 50 design advocates recently appointed by Mayor of London Sadiq Khan.

'Design is about problem-solving, it's about future thinking, it's about making this country fit for the next century. I'm now pushing for the Commission to set up its own design panel, to ensure that all big projects have a creative thinker on board. If we can convince people of the value of taking that perspective into account – and of getting those creative people involved from the start – I really believe that we can help to make the world a better place.'

Honorary Graduate Public Lecture Series: 25 October 2017

In the second in our series of Honorary Graduate Public Lectures, Sadie Morgan will be sharing her insights into people, place and community, set against the backdrop of one of the UK's biggest-ever infrastructure projects. The lecture will be held in the Keyworth Centre on Wednesday 25 October from 17.30. To find out more and to book your place, go to www.lsbu.ac.uk/whats-on

Food for thought

Earlier this year, the Food Science class of 1985 came together to look back at their time at LSBU, reflect on their careers — and look forward to the future. We caught up with six of them, along with former tutor Ken Spears

en Spears studied Food Science at the Polytechnic of the South Bank before becoming a lecturer on the BSc Food Science course from 1980 to 2014. 'Several of the class of '85 were recruited by the big employers through the milk round and there were good openings in the public sector too,' he recalls. 'Things are very different now, with more start-ups and more opportunities for postgraduate study. Indeed, there have been massive changes across the industry.

'Food scandals have led to improved safety systems. The trend towards consolidation and globalisation is being countered by small producers who focus on local sourcing and provenance. The growth in culinary technology has enabled creative chefs like Heston Blumenthal to borrow techniques from food science and technology, and the role of food in health and wellbeing is now widely accepted — most courses today include modules in nutrition.

'Yet while food is safer, of higher quality, generally cheaper and better legislated for, the industry overall has become less attractive, and fears about scientific production methods and "Frankenstein food" remain, despite the best efforts of bodies such as the Institute of Food Science and Technology. What would really help the food science cause now is a hero – someone to be the positive face of the industry.'

Who knows, perhaps the new face of food science will emerge from the class of 2017...







David Sherring, Technical Manager, Markus Products

Growing consolidation and rationalisation in the food industry meant I had to be willing to move around, especially early in my career, but also helped me gain broad experience. That trend is linked in part to the growing global market in raw materials. When I started out, very little was sourced from beyond Europe.

'The BSE crisis was devastating, but it led to the fantastic levels of traceability that I see being audited today. There's been huge growth in ethical sourcing and organic farming, while increasing allergy and

hypersensitivity levels in the general population have led to tighter regulation and controls. There have also been great strides in technology, from the use of microwaves and X-rays to increasing automation and use of robots.

'I see three main challenges for the industry: 1) the advent of superbugs; 2) food fraud – all food companies have to be increasingly on guard to mitigate the risks from economically motivated adulteration; and 3) Brexit, since so much of the UK's legislation around food safety and labelling has come from Europe.'

Steve Woolley, Chief Operating Officer, Picasso Foods (speaking via Skype from Sydney)

I never imagined food science would take me to Australia, but in 2015 my previous employer wanted to start operations in Sydney and I volunteered to head things up. The company quit the Australian



market after a year, but I decided to stay on. I'm now working for Picasso Foods as COO.

'Australian food retailers are about 20 years behind the UK. Premium chilled food is a category that's yet to develop. The scope is huge for private-label manufacturers who can handle high-risk, short shelf-life products, and there are great opportunities for qualified people here. In fact, the Australian government has just reinstated "food technologist" as a listed skill for visas. 'In the UK consolidation has led to fewer, bigger players both in retail and in the manufacturing

base. There's also

been a big loss of public trust with scandals such as horsemeat being passed off as beef. What we saw was that fraud in the supply chain to a single plant could lead to adulteration across multiple brands. It was a wake-up call and has resulted in better supply chain regulation.

'In recent years, price pressure from retailers has led to many producers and manufacturers being priced out. That means it's vital for people entering the industry now to understand processes such as Lean Manufacturing and Six Sigma. It's no longer just about ensuring that food is technically safe, it's also about engineering waste out of the supply chain.'



Becky Cheung, Chief Executive Officer, Best Key Consultants, Hong Kong

For me, the 1990 Food Safety Act changed everything. It required every food handler to attend a one-day hygiene course, but while 95% of Chinese people working in England at the time were in catering, there was no one who could deliver the course in Chinese. So I resigned my technical position and became a full-time trainer.

'After four hectic years I returned to Hong Kong. I spent several years in industry, working for Lee Kum Kee and then Pillsbury Foods Asia, but by 2004 I realised that the only way I could bring about significant change in Hong Kong and China — and reduce the number of food safety incidents — was to set myself up as a trainer.

'This year I helped set up HACCP and ISO 22000 training in Hong Kong and I've recently become a registered trainer for the International Register of Certificated Auditors. I've worked all over Hong Kong and mainland China and beyond, trying to change mindsets and culture so that food safety becomes the priority it should be in these rapidly developing countries. I'd like to see China become known as the world number one for food safety.'

"The BSE crisis was devastating, but it led to the fantastic levels of traceability that we have today"

Catherine Pearce, Lead Biology Technician, Sutton Valence Independent School

I decided to leave the food industry earlier this year, after getting my employer through its British Retail Consortium (BRC) accreditation. It's tough, particularly for makers of own-label foods for the large retailers. People don't always appreciate the work that goes into getting an own-label product on the shelves and keeping it there.

'The power of the supermarkets has grown significantly over my career and the burden this places on suppliers in terms of micro analysis, positive release,

v so the interest of the inter

specifications and KPI reports is huge. If they supply more than one retailer, they will have to work to several systems and specifications.

'Technical management roles, which I was in from 2012, are the toughest jobs in the industry. I think there's a risk of overregulation, with BRC and the individual supermarkets conducting audits, setting targets and imposing their varying codes of practice. At worst, it can drive suppliers out of business; at best, they may diversify into artisan/farm shop foods as in many cases they can make more money in a niche market. Where this leaves the food industry, I'm not sure.

"There's a risk of overregulation, with BRC and the supermarkets all conducting audits and setting targets for suppliers"

Mark Fincham, UK Technical Manager Food, LRQA

As knowledge of food science increases, so potential risks become more apparent. For example, when I joined Baron Meats in 1992, listeria was just becoming known about – and with more knowledge comes greater need for control.

'Since the horsemeat scandal we now have supply chain vulnerability assessments. Long and complex supply chains – and global sourcing – mean traceability is increasingly important. Morrisons was one of the few UK supermarkets to be untouched by the horsemeat scandal because they have full control of their supply chain, which means they are now in a position to guarantee only British fresh meat is sold in their stores.

'Currently there is a massive shortage of technical managers and staff in the food industry. It has become a particularly difficult job as retailers are increasingly moving the risk down to manufacturers, placing great strains on individuals and small businesses.

'The industry is getting better at horizon scanning and spotting potential issues around shortages and vulnerabilities in long supply chains. We can now audit against fraud and misidentification, of which the horsemeat scandal is not the only example. It's well known that far more Manuka honey (a particularly prized honey with medicinal properties) is sold than is verifiably produced!'



Nicola Stanley, founder, Silver Dialogue Ltd

After graduating, I did a PhD sponsored by Unilever focusing on creaminess, polysaccharides and sensory science. I went on to work in the company's ice-cream information centre, focusing on knowledge management, brand-based advice and internal communications. I then transferred these skills to the tea information centre, working on



social responsibility and sustainability issues for the Lipton brand.

'In 2002, I set up my own business, Silver Dialogue, a market research consultancy. I got back into a more food-related field by chance. My son was considering studying in The Netherlands and I started looking for jobs, in case we relocated. He didn't go, but I found a job spec that could have been written for me, and ended up doing a year's maternity cover for a large flavour and perfume business. Now I'm considering moving into the flavour industry full time.

'I'd urge any future food scientists to consider the flavour industry. At a time when consumers are bombarded with so much conflicting advice around food, it's vital that the food industry understands more about how food and beverages fit into people's lives, both culturally and emotionally. Flavour is vital to this.'





Do the right thing

As Service Complaints Ombudsman for the Armed Forces, making tough decisions is all in a day's work for Nicola Williams (LLB Law, 1984)

Nicola Williams is the first to admit that she likes a challenge. That's just as well, given that her role as Service Complaints Ombudsman for the UK Armed Forces involves implementing a fundamental overhaul of the way complaints are handled, as well as striving to overcome a deep-rooted culture of silence: 90% of Armed Forces personnel suffering bullying, harassment or discrimination do not make a formal complaint.

It's a major undertaking – indeed, Nicola herself has likened it to 'turning around the Queen Mary' – but the efforts of the Ombudsman and her 10-strong team of investigators are already paying dividends. In 2016, they dealt with more than twice as many contacts as in the previous year, and 76% of investigations were completed within the time target.

Raising awareness is a top priority.

'Last year, we had a particular focus on encouraging people to speak out about mental health issues,' says Nicola. 'This year, we're concentrating on Reservists. We really want to make sure that this group of people — who make such a vital contribution to the work of the Armed Forces — know we're here to support them too. I have a poster on the wall in my office that says, "Sometimes it takes more courage to pick up a pen than a rifle", and I really believe that. If you think you're being treated unfairly, you have a right to do something about it. You're not breaking the code, or letting your mates down.'

The period since early 2015, when Nicola took on the role has been one of significant change. Initially, she was appointed Service Complaints Commissioner, taking over from Dr Susan Atkins. 'The Commission was set up in the wake of the tragic events at Deepcut Barracks between 1995 and 2002,' she explains. 'But it faced some major challenges, including lack of resources and, at least in the early days, a reluctance on the part of the Services to submit to civilian oversight. It became clear that reform was needed, and that's the point at which I came in – first as Commissioner and then, since the start of 2016, as Ombudsman at the head of a new organisation.'

Game-changer

As Ombudsman, Nicola enjoys significantly greater powers than her predecessor, including holding the Services to a deadline for dealing with cases where it appears there has been undue delay, overturning unsatisfactory findings and tackling maladministration. Most significantly, though, she can now carry out her own investigations: something she describes as a 'game-changer' in terms of her office's capacity to make a difference.

Finding a way to utilise these powers fully, at the same time as respecting the prevailing culture of the military and maintaining effective working relationships with stakeholders ranging all the way up to Service Chiefs, is no easy task. 'From time to time I do remind people of my rank [the Ombudsman has a civilian ranking equivalent to that of a three-star general],' she smiles. 'It can be helpful in ensuring that people listen to you and respect the decisions you make. The fact that I sit as a part-time judge helps too, I think. But overall, I've encountered very little resistance.

In many ways, Nicola – with her sharp legal brain, empathetic manner and quiet but determined authority – seems like such a natural fit for the role that it's hard to believe she could ever have had doubts about her suitability. At the time it appeared on her radar, she was coming to the end of a stint as Complaints Commissioner for the Cayman Islands. 'Of course, there are many wonderful things about working there,' she says. 'But it's a tiny place, and after

"Once people realise to make tough decisions and stand by them, they will respect you. I'm interested in what's effective, and what's right"

that you're prepared

five-and-a-half years it was starting to feel a little like Groundhog Day. And the pushback from government was making it harder and harder to do my job.'

Shaping the future

The prospect of heading up the Service Complaints Commission appealed for a number of reasons. First, it offered a professional and intellectual challenge. It also meant Nicola – a lifelong Londoner - could return to her beloved city. And the fact that the organisation was in transition meant there was scope to shape its future, just as Nicola had done during her five-year stint as Commissioner of the former Police Complaints Authority, now the Independent Police Complaints Commission. 'I thought, I could do this,' she recalls. 'But I didn't think there was any way they'd give a job like this to a black woman. A friend of mine really encouraged me to apply. I said to him, "OK, if I do, and things work out, you can write me a reference". I never thought it would come to that - then of course it did.'

In terms of the culture. Nicola has found many synergies between the military

QUICKFIRE QUESTIONS

What's your top priority right now? Women and people from minority ethnic backgrounds are overrepresented among complainants, and we've made it clear to the Services that we expect them to take action. So we're monitoring that very closely. But I think if you asked anyone, they'd say the time taken to deal with complaints is the biggest issue. We set ourselves a deadline of 20 rather than 24 weeks, to make sure we're not adding to the delay. Outside the office, I'm trying to make time to

Looking back over your first year in office, what makes you proudest? Getting through the transition, for sure! I'm very proud of all the outreach work we've done too, visiting people everywhere from the Falklands to Bahrain to tell them

get on with my next book. I've just

been away on a writer's retreat, so I'm feeling really enthused.

about our work. And I'm delighted that we managed to produce a report that satisfied all our stakeholders, from the Royal British Legion through to Liberty. They are such a disparate bunch, I doubt we'll ever manage to achieve it again – but it's nice to have been able to do it once.

Tell us something surprising about yourself...

I love to dance! R&B, soul and funk are my favourites. I have to admit I am a bit conscious of my position, so I'm careful about where I do it these days. I recently went on the Soul Train Cruise, which was fantastic. Nobody knew who I was there!

Finally, how does the Ombudsman wind down?

I'm a film nerd. If there's a movie on made by a Tibetan monk that only six people in the world go to see, that's where you'll find me. And I love a good legal drama, too.

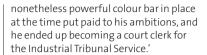
and the Bar, where she spent 16 years as a barrister focusing on both civil and criminal law, with a specialism in police misconduct cases. 'Both are hierarchical,' she says, 'but perhaps not as rigidly so as you might think. Once people realise that you're fair, but that you're also prepared to make tough decisions and stand by them, they will respect you. As Ombudsman, I'm not interested in who screams and shouts the loudest -I'm interested in what's effective, and in doing what's right.'

Then too she is not afraid to be unpopular. 'I have no problem whatsoever with being professionally disliked,' she says. 'Perhaps that's something to do with my background. As a black woman, who studied at a poly, I'm already so far outside the curve in this world, I may as well be proud of the things that make me different '

The roots of that pride – and that determination – can be traced back to Nicola's childhood. 'A big part of the reason I wanted to study law was for my father,' she says. 'He was a police officer in Guyana but he planned to study for the Bar when he came to the UK. The unofficial but

"As a black woman, who studied at a poly, I'm already so in this world. I may as well be proud of the things that

far outside the curve make me different"



Social iustice

Nicola's brother, too, was a victim of direct discrimination – at one point, the family returned to Guyana for four years, partly because he was at risk of being wrongly classified as having special educational needs, something that Nicola recalls happening to a lot of black children at the time. 'Coming up against those kinds of barriers is tough,' she says, 'but it also makes you very aware of just how hard you're going to have to work to be considered as good as everyone else.'

Such experiences also played their part in instilling in Nicola a passionate commitment to social justice – something that has guided her throughout her career. 'People always laugh when I say this, but I'm actually a shy person,' she says. 'Law is an odd profession for a shy person to go into, but there's something very different about arguing on behalf of someone else – and I've always felt a very strong urge to fight injustice and inequality.

'That's something that guided me through my years with the IPCC and then in the Cavman Islands, and it's still very much a priority for me now. Servicemen and women are very resilient and very stoic it's one of the things I admire most about them – but no one should have to put up with unfair treatment.'

LSBU has recently signed the Armed Forces Covenant, which commits us to supporting the Armed Forces community within the University by recognising the value of students and staff who are also serving personnel. The Covenant – a joint initiative by the Ministry of Defence and Veterans UK – represents a formal promise that the University will do all it can to ensure that those who sign up are treated fairly and not disadvantaged. Read more about the Covenant at www.gov.uk/government/ policies/armed-forces-covenant or find out how you can get involved with LSBU's work by contacting sseafcov@lsbu.ac.uk





Applied learning

Degree apprenticeships are helping to equip LSBU students for work — and tackling some of the UK's most critical skills gaps

SBU has always focused on preparing students for work.
Back in 1892, when the Borough Polytechnic first opened its doors, that meant providing 'technical and trade' classes in bricklaying, printing, hat-making and leather tanning. Fast forward 125 years, and LSBU is preparing to add a further 12 construction-based courses to its portfolio of degree apprenticeships, making it one of the broadest available anywhere in the country.

'This is an opportunity to really establish ourselves as the university that prepares graduates to contribute to their employer's business from day one,' says Harry Lawner (pictured above), Director of Education and Student Experience in the School of the Built Environment and Architecture. 'We know the demand is there: employers are literally waiting to send apprentices on these programmes. For them, it's about creating a robust, long-term talent pipeline.'

It's also about finding an effective way to tackle costly national skills shortages. According to a recent survey by the Open University, skills shortages are currently costing UK businesses more than £2 billion each year in higher salaries, recruitment

"LSBU is a natural fit. Over the years, we've stuck with what we're good at: delivering businessfocused courses" costs and temporary staffing bills – and 90% of respondents had experienced difficulty in recruiting workers with the skills they needed in the past 12 months.

Degree apprenticeships were first launched in the UK in 2015 and, as the name suggests, offer students the opportunity to study for a qualification up to masters level at the same time as working and earning a salary. A key factor in their success is the way they bring together businesses and educational institutions, involving both sides in developing and delivering programmes of learning that meet rigorous academic standards and reflect employers' needs.

Blazing a trail

LSBU played a significant role in developing so-called Trailblazer standards for 14 degree apprenticeships, and was one of the first universities to offer degree apprenticeships in Chartered Surveying, working with major employers including Gleeds, Transport for London and Vinci (see opposite) and developing a four-year, fast-track programme with Gardiner & Theobald. We are also at the forefront of delivery for health-related programmes, while plans are under way to create a new local hub for apprenticeships, training and skills at the Passmore Centre on our Southwark campus.

Meanwhile, demand is growing fast: research published by HEFCE this year estimates the number of students starting degree apprenticeships in autumn 2017 at more than 7,600, up from just a few hundred in 2015. That figure is only likely to increase further with the launch of the Apprenticeship Levy — a 0.5% tax on the wage bill of bigger employers — which took effect in April 2017 and is expected to generate around £3 billion annually to be spent on approved apprenticeships.

Harry Lawner believes LSBU is well placed to serve the growing need. 'It's a natural fit,' he says. 'Over the years, we've stuck with what we're good at: delivering business-focused courses. As a result we've got very strong partnerships with the industries we serve. What we're seeing now is a return to a model where there is a national strategy for developing our talent in order to fill those skills gaps and ensure that we can meet the needs of our industries in the future.'

"Degree apprenticeships are an important way of developing the talent we need"

Gemma Hassan is Learning and Development Adviser at construction giant Vinci

For us at Vinci, degree apprenticeships are a hugely important way of developing the talent we need to support our business. These young people are working in the classroom and on site at the same time, so they can put their new knowledge into practice straight away. It also means we can familiarise them with our processes and ways of working, so they're ready to hit the ground running.

'The common perception is that apprenticeships are for people at the start of their careers, and it's true that the number

APPRENTICESHIPS: A QUICK GUIDE

- The most common apprenticeships in the UK are intermediate level (level 2), equivalent to a GCSE
- Advanced (level 3) apprenticeships are equivalent to A-levels, while higher apprenticeships are at levels 4 to 5 – equivalent to the first two years of a degree course
- Degree apprenticeships are at levels 6 and 7 (equivalent to an undergraduate or masters degree)
- All combine work, on-the-job learning and part-time university education, funded via the levy
- More than 80% of graduate employers now offer apprenticeship programmes, a significant proportion of them at higher levels
- Uptake of degree apprenticeships has gone from hundreds to 7000-plus in just two years, and the range of courses available has expanded to include qualifications in engineering, law, health and product design as well as construction.

"When you go into the office, you're talking the same language as everyone else"

Sam Boyd has just started the second year of his degree in Quantity Surveying at LSBU, and works at Vinci

My Plan A was to do a degree in business management. Then I heard about degree apprenticeships. There are other routes to becoming a quantity surveyor too – you can do a straight degree or a BTEC, but I really liked the idea of getting that high-level qualification and coming out without any debt. I also think I've learned a lot more than I would

otherwise, by being able to put the classroom theory into practice straight away.

'The only thing that worried me a bit was the thought that I'd be missing out on student life. There's a good social life at work, but with a four-day working week, plus a day on campus and all the studying you need to do in the evenings, time is a bit tight. But when it comes to the weekend, you really appreciate having a bit of money in your pocket and it's brilliant to be able to afford a decent holiday too. It's a compromise. I've adapted to it now, and I don't regret my decision at all. I think it's taught me better time management skills, too.

'Right now, I'm working on Crossrail West, assisting with the management of subcontracts. Looking ahead, there may be an opportunity to work on HS2 as well. I like working on those high-profile projects - it's something everyone's interested in, and it's great to have on your CV too. One of the most useful things, though, is just picking up the terminology and really understanding what it means - so when you go into the office, you're literally talking the same language as everyone else.'

of recruits coming to us through the degree apprenticeship route is growing all the time, particularly since the new Apprenticeship Levy was introduced earlier this year. But we also use degree apprenticeships to upskill more experienced colleagues, or to support them through a career change.

'We spend a lot of time going out to schools to talk to pupils, and organising events like the Budding Brunels courses run in partnership with the Construction Youth Trust. Attitudes are definitely changing, I think. People are starting to realise just how many amazing career opportunities there are in construction, and we're starting to attract a more diverse group of applicants, too. That can only be a positive thing for us as a company – having a wider range of perspectives and experiences to draw on means we can all learn from each other.

'Currently, we're working with LSBU on the Quantity Surveying degree apprenticeship programme. But we're definitely looking to expand the range of courses. Digital engineering and Building Information Modelling (BIM) are areas we're focusing on at the moment and that offer some really exciting opportunities for collaboration. I think the tide is changing now, and people are recognising − or remembering − just how important apprenticeships are in ensuring we maintain the vital skills our economy will need in the years ahead.' ●

29 NOVEMBER 2017: APPRENTICESHIPS MADE EASY

This free interactive event is designed to give employers an opportunity to find out more about how apprenticeships work, how they're funded, what kind of support is available and what LSBU can offer. The event will be held in the Keyworth Centre and runs from 09.30 to 14.00. Find out more and book your place at apprenticeshipsmade-easy-291117. eventbrite.co.uk



FIND OUT MORE

To find out more about Rachel's lecture and to book your place, go to www.lsbu.ac.uk/whats-on The third – and final – lecture in our series of talks by honorary graduates to mark LSBU's 125th anniversary will feature acclaimed visual artist Rachel Gadsden, who received an honorary doctorate in 2016. Through her work – which includes high-profile public commissions such as the 2016 Paralympics opening ceremony in Rio – she explores themes of fragility, survival and hope, drawing on her own experience of living with disability. Rachel will also run a public workshop at LSBU in 2018, as she prepares to work on a very special 125th anniversary commission. See our spring edition for more details. ●

"For me, art is about sharing human stories, and exploring the things that bind us together despite our differences"



Listen and learn

When LSBU's Anechoic Chamber was built in the early 1960s, it was the first of its kind. Part of the National College of Heating, Ventilation, Refrigeration and Fan Engineering, it was used mainly by engineers for testing fans. More than 50 years on and two major refurbs later, the chamber may look the same (although the mineral fibre cladding pictured above has been replaced with health and safety-compliant acoustic foam) but the range of uses has grown exponentially. As well as supporting the research of LSBU's renowned Acoustics team (including Associate Professor Stephen Dance, whose work we profile on page 15) the chamber — which offers a completely sound- and vibration-free environment — is being used to create recordings for virtual reality applications and to test speech intelligibility, for example for public address systems. It's just one more example of how our state-of-the-art facilities continue to support the development of solutions that make a difference to all our lives.



LSBU Alumni Annual Lecture 2017

Why Work Must Change

THURSDAY 16 NOVEMBER 2017, 18.00 | LR-17, LONDON ROAD

Tech entrepreneur Glenn Elliot (BSc Computing Studies, 1991) is an author, speaker and blogger on company culture, leadership, engagement – and the radical idea of being nice to people. Book now for our annual LSBU Alumni lecture to hear why work must change and how we can make the world a better place to work

www.whyworkmustchange.eventbrite.co.uk