



**EPC Bulletin | February 2022** | Twitter [@EngProfCouncil](https://twitter.com/EngProfCouncil)

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Against a background of growing advocacy for bringing engineering ethics to the fore in engineering programmes, we have been delighted to launch our very timely Engineering Ethics Toolkit this month. We have produced a variety of ethics case studies and advisory articles to help engineering educators embed ethics into their programmes. Engineers play a vital, unique and important role in our society and we need to ensure both present and future engineers are well equipped with the skills they need to handle ethical issues they may come across. We are incredibly happy to be a part of ensuring engineering education is a force for good. See more about our ethics toolkit below...

This month we also saw the launch of another exciting EPC initiative: The Crucible Project, through a huge all-day event where we saw over 25 speakers discussing innovative collaborations between academics and industry in engineering, alongside engaging panel discussions surrounding regional differences, building successful relationships with industry partners, entrepreneurs in residence, funding, and addressing equality, diversity and inclusion. See more details about this event, links to the recordings and what is next for the Crucible Project below...

The discussions surrounding regional differences at our Crucible Project event couldn't be timelier with the government releasing the much anticipated "Levelling-up" white paper this month also, outlining the government's plan to ensure opportunity is spread across all regions in the UK, not just the South-East. The plan has 12 missions at its heart, all targets to be achieved by 2030. However, where are the details of the mechanisms needed to make these missions a reality, and where is the funding coming from? See more of our thoughts below...

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## **EPC news**

### **THE CRUCIBLE PROJECT**

We are happy to announce that our Crucible Project online event was a great success, with over 25 speakers and over 100 attendees joining us throughout the day to launch this exciting project on the 16<sup>th</sup> February. We saw a huge range of fantastic case studies outlining innovative and engaging collaborations between academics and industry, as well as a keynote by the EPC's President, Prof. Mike Sutcliffe and a guest lecture by Prof. John Patsavellas (Cranfield University). Case studies ranged from collaborating with industry to embed digital content into degree courses, to addressing the issue of attracting industry partners by making academics more easily discoverable online, and to much more specific research collaborations e.g. on space debris removal.

We would like to give great thanks to all of our panellists who gave wonderful presentations and engaged in thought-provoking discussions throughout the day – and with thanks to all of our incredible chairs: Prof. Andy Alderson (Sheffield Hallam University & Chair of the EPC's Research, Innovation and Knowledge Transfer Committee), Dr Sarah Peers (NMITE), Dr David Hughes (Teesside University), Dr Adrienne Houston (RAEng/University of Birmingham), Dr Rob Deaves (Dyson) and Dr Nikita Hari (Dyson Institute of Engineering & Technology).

This is just the beginning of the Crucible Project – a living and growing resource to provide best practice examples of academic-industry partnerships to help you find research funding, place graduates in employment, create work-based learning and many other collaborations. The case studies presented in the online event, in addition to many others, will be accessible via a Crucible Project Toolkit on the EPC website in due course, and to ensure the continuous growth of this resource, members will be able to contribute their own, or further case studies in the future also.

Access recordings of the event [here](#), read short highlights on twitter via [#EPCCrucibleProject](#), or summaries on our LinkedIn [Engineering Academics' Network group page](#). Be sure to watch this space for exciting new developments coming shortly.

### **ENGINEERING ETHICS: Launch of the ethics toolkit**

We are delighted to announce the launch of our Engineering Ethics Toolkit. This toolkit is being developed by the EPC with the support of the Royal Academy of Engineering, and we are pleased to launch the first phase of this project on the [EPC website](#). The EPC's President Prof. Mike Sutcliffe has written a short blog to welcome you to this ambitious new initiative to ensure engineering education is a force for good, which you can read [here](#).

The first phase of this project includes a range of [case studies](#) and [supporting articles](#) to help engineering educators integrate ethics content into their teaching. You can access these resources via the [EPC Engineering Ethics Toolkit](#), or as pdf documents on the [RAEng website](#). These resources are the result of a great team effort, so we would like to thank the EPC's [Engineering Ethics Advisory Group](#), with special thanks to Prof. Raffaella Ocone OBE for being a wonderful chair and Prof. Sarah Jayne Hitt for bringing her expertise in ethics and best practice to this project, as well as keeping us focussed and on track.

These are just the first resources to be added to this toolkit and we are currently working on several new exciting additions, including developing more case studies, a system to make the case studies searchable and the creation of "enhanced" cases where specific teaching materials such as lesson plans / worksheets are included alongside each written case study.

Access the Engineering Ethics Toolkit [here](#) and let us know how you get on. Additionally – we are looking for members who would be interested in contributing to the next phase of this project, so if you would like to get involved, please let us know at [info@epc.ac.uk](mailto:info@epc.ac.uk).

### **QAA SUBJECT BENCHMARK PANEL: Congratulations, Prof. Georgina Harris**

Our Engineering Education, Employability and Skills committee chair, Prof. Georgina Harris has been appointed to represent the EPC on an Advisory Group responsible for reviewing QAA's Engineering Subject Benchmark Statement. Subject benchmark statements describe the academic standards required of graduates in a particular field, e.g. what they are expected to know, do and understand upon completion of their studies, and are used as reference points for designing

academic programmes. QAA reviews these statements on a cyclical basis to ensure they are up to date and as useful as possible. As part of the Engineering Advisory Group, Prof. Harris will be reviewing the Statement this year, alongside 13 other academics, including Prof. Alistair Greig (UCL) as chair and both Dr Vaibhav Gandhi (Middlesex University) and Prof. Claire Lucas (King's College London) as deputy chairs. See more information on subject benchmark statements [here](#) and details of the other advisory group members [here](#).

## Upcoming events

### EPC ONLINE EVENT: Stackable credentials, Spring 2022 (date TBC)

The EPC will be holding a live webinar exploring an issue that is likely to dominate discussions for some time: the world of microcredentials, short courses and sub-degree courses. How will this affect engineering education and are universities ready to embrace the changes that the Lifelong Learning Entitlement will bring? We will have a panel of leading experts who are already at the forefront of delivery to help you understand what you need to know. Further details on this event and how to book will be circulated soon.

### EPC EVENT: Congress 2022: A Better World, 7<sup>th</sup> to 9<sup>th</sup> June 2022, UWE Bristol

Our flagship event of the year – the EPC Annual Congress – will be a face-to-face event in June. This 3-day event will pick up on our two-year theme: A Better World, which will focus on ethics, sustainability and recovery. It will be held at UWE, Bristol, from 7th to 9th June 2022 and is not to be missed.

The full programme is yet to be announced, but it will include high-profile speakers and leading experts, including **Dame Ottoline Leyser**, CEO of UKRI, and **Prof. Steve West**, President of Universities UK. **Simon Fanshawe OBE** will also be present to discuss his book *The Power of Difference* in which he explores how greater diversity and inclusion achieves better results (more information about his book is available [here](#)). Additionally, our Congress dinner will be served aboard the icon of engineering that is Brunel's SS Great Britain and you will have the opportunity to tour and see live demonstrations in the incredible Bristol Robotics Laboratory and UWE's new Engineering Block.

Bookings via the [UWE store](#) are open with substantially discounted early bird tickets still available, so be sure to secure your place soon.

## In the news

### LEVELLING-UP WHITE PAPER

We saw the much-anticipated "Levelling-up" white paper published in early February – setting out how the government is planning to tackle the issue of regional inequality in opportunity across the UK, through a mixture of new policies and previously announced ones. This paper presents a mission-oriented approach in which 12 missions are presented as targets to be achieved by 2030. Access the levelling up white paper [here](#) to see details on all 12 missions. Of particular importance to us are the missions relating to research and development. These include a commitment to raise investment outside the South-East by 40%. It is not clear, however, whether this is 40% in real terms or not. If not, then this might even be a reduction if inflation keeps rising. 55% of BEIS research & development spending is also to be outside the South-East by 2024/5. Greater

Manchester, the West Midlands and Glasgow regions are to be designated as new innovation accelerators with £100 million of new funding. This may be the only “new” funding in the entire white paper as the rest seems to avoid any new spending commitments.

Education and skills feature prominently in this paper as a way to tackle geographical disparities and close widening gaps. The focus is on a mission to improve attainment in schools. 55 new Education Investment Areas (EIAs) are to target where educational attainment is the weakest, with the DfE offering retention payments to allow schools to retain the best teachers in high-priority subjects. These “high-priority subjects” have been left undefined, but they are likely to include pathway subjects to engineering. The white paper proposes new specialist 16-19 free schools targeted at the EIAs. Would these schools be more selective and take the highest performing students from sixth forms already in place? Would this reduce which subjects the longer established sixth forms would be able to offer, particularly in STEM subjects?

Additionally, 9 new Institutes of Technology (IoTs) are to be established to boost higher technical skills in STEM subjects, 3 of these are linked to existing universities: 1. Solent University, 2. University of Derby, 3. University of Salford. The white paper suggests that these IoTs may apply to receive a Royal Charter to place them “on the same level as our world-leading historic universities”, and that the DfE will set out the criteria and application process for this in spring. A further mission outlines that the number of people completing high-quality skills training will be increased and be driven by 80,000 more people completing courses in the lowest skilled areas.

Universities are barely discussed in this paper, only referred to as anchor institutions and partners. There appears to be no central role for universities in this levelling-up proposal and no commitments outlined regarding access to HE as a means of levelling-up. We also find that while this white paper outlines a lot of targets and talks about how to measure them, it lacks the mechanisms on how these targets will be achieved. What are the steps to be completed between now and 2030?

Overall, reactions to this paper have been mixed, particularly with the lack of new spending promises. There is also no formal consultation process associated with this white paper, instead a comprehensive process of engagement and informal consultation is said to be put in place to inform levelling-up delivery. Nevertheless, the EPC is currently consulting on what form our response to the publication of this white paper should take.

### **DEGREE APPRENTICESHIPS: update on construction route review**

Last month a [new post](#) regarding the construction route review was published on the Institute for Apprenticeships and Technical Education blog. In 2021, the institute reviewed the way route reviews were undertaken and a new approach was suggested and is currently being piloted. Through this, the route panel members and trailblazer chairs are being worked with closely to agree how to implement the findings of the review, in addition to a public consultation. The institute is aiming to publish the route review report in Spring 2022.

### **AUGAR REVIEW RESPONSE**

After waiting for what seems to have been forever, the government announced its response to the 2019 Augar Review on the 24<sup>th</sup> February. Part one of its response is a Policy Statement on HE funding and finance, setting out how it plans to tackle the rising cost of the system while reducing debt levels for students/graduates.

This relates to England only and it is proposes:

1) Freezing maximum tuition fees at £9,250 up to 2024/25, meaning those students that start undergraduate degrees in the 2022/23 academic year will borrow less than if it had risen in line with forecasted inflation. Additionally, for new HE students (starting 2023/24), the rate of interest in and after study will be pegged to inflation (RPI+0%), to ensure students do not repay more in real terms than they borrow.

2) For post-2012 student loan borrowers – the repayment threshold will be frozen at the current level of £27,295 per year up to 2024/25, then increasing in line with RPI annually after that. This potentially represents a “stealth tax” in which graduates will be paying additional money this financial year compared to if the threshold had risen with inflation as per the norm. New HE students (starting 2023/24 onwards) will see their repayment threshold dropped to £25,000, increasing in-line with RPI from 2027/28. Coming at a time of skyrocketing living costs, the freezing and lowering of the thresholds (even if the £25k is higher than the rumoured £23k ministers may have been considering), could cause major problems for our young people who are likely to see continually rising taxes, housing and food bills. The new HE students will also see a repayment term of 40 years – a massive increase on the current 30-year cap.

Part two of the response is seeking views on proposals to supplement the changes to HE funding and finance, including incentivising high-quality provision by considering proportionate student number controls (SNCs) and exploring low level minimum eligibility requirements (MERs) to access HE student finance. They are additionally seeking views on access to HE in England including exploring the case of reducing foundation year fees and supporting provision and uptake of high-quality level 4 and 5 courses.

A separate consultation will focus on the government’s proposals to introduce a Lifelong Loan Entitlement. The idea is that adults in England would be entitled to borrow the equivalent of 4 years of HE tuition fees at any time to pursue education at level 4 or beyond (some level 3 components may be included). It is hoped this will create a culture of learning that promotes upskilling and reskilling throughout life to ensure labour market supply remains responsive to demand through hop-on-hop-off, stackable short courses. This is heralded as a landmark policy and, if the ambition is realised, it would indeed be a far-reaching change.

Read the [full response](#) for more details and access the consultation [here](#). The deadline for responses is **6<sup>th</sup> May 2022**. The EPC will be responding on behalf of engineering academics and details will follow shortly on how to have your say.

### **RAEng / ENGINEERING COUNCIL ENGINEERING ETHICS REPORT**

Last week RAEng held a webinar to launch the "[Engineering Ethics: Maintaining society's trust in the engineering profession](#)" report from the joint Engineering Ethics Reference Group (EERG), established 2019, by the Engineering Council and RAEng. This report builds on their [Statement of Ethical Principles](#) and sets out a summary of actions taken so far, in regards to ethical considerations in the engineering profession, and sets out their future vision and next steps. This vision wishes to see “ethics embedded in our culture such that society can maintain confidence and trust in the engineering profession”, and the report lays out five sets of actions: Leadership and accountability; Education and training; Professionalism; Engagement and communications; and Governance and measurement, to make their vision a reality. The Education and Training section

sets out actions to support the creation of ethics toolkits and case studies to help embed ethics into engineering education – of which our [Engineering Ethics Toolkit](#) is aligned with. Read more and access the report on the [RAEng website](#).

### ACCESS AND PARTICIPATION PLANS

Sighs of relief from universities can almost be heard after OfS's new Director of Access and Participation, John Blake revealed in early February that universities won't have to fully replace their 5-year access and participation plans. Instead, OfS intends to support universities in designing "variations" of existing plans, to allow them to better fit with OfS's new priorities, focussing on strategic school engagement / partnerships, improving quality for underrepresented students and developing non-traditional pathways / modes of study. If you are interested in the finer details, access the presentation slides from the announcement [here](#) and read John Blake's full speech [here](#).

## Consultations

### OFFICE FOR STUDENTS: student outcomes and teaching excellence

The Office for Students OfS has issued three related consultations with detailed proposals on their approach to regulating quality and standards in higher education.

As the three consultations are extremely long and detailed, the EPC has produced brief [summaries](#) of each of the consultations' key points to help distil the detail for our members (with thanks to [London Higher](#) for their starting point summary) and an introduction to the general policy implications for engineering.

Each consultation stands alone, the EPC has produced two **member surveys** to ensure the EPC's response to the consultations is fully representative: one on quality and standards (B3) and one on excellence (TEF). Where we think there is a particular relevance to engineering, we have also included some general questions on the detailed metric proposals; please skip these if they are too technical in nature or provide details where you think we should be making more technical comments.

We hope the [suite of information](#) we have provided will help you understand the proposals and respond to our surveys by **Wednesday 9th March**. Your comments will enable us to respond fully on members' behalf by the OfS deadline of 17th March.

## Opportunities

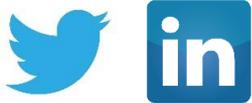
### RAEng VISITING PROFESSOR SCHEME: Applications now open

RAEng's Visiting Professor Scheme is now open for applications – this is an industry-into-academia initiative which aims to utilise the experience of Visiting Professors (including industrialists, entrepreneurs, consultants and innovators) to enhance teaching, learning, employability and skills of UK engineering students. The Visiting Professors will participate in curriculum development, teaching / mentoring of undergraduates, or the development of innovative approaches such as flipped-classroom, problem-based learning and team working in engineering teaching and learning. Following successful application by the host university the award supports the Visiting Professor's attendance at the host university for a minimum of 12 days annually, to a maximum of £10,000 per year for three years. RAEng is especially encouraging nominations / nominees from women and

other groups (e.g. post-92 universities) that are currently under-represented in the scheme. Applications close on **31<sup>st</sup> March at 4pm**. More information can be found on the [RAEng website](#).

### **RAEng INCLUSIVE CULTURES RESEARCH: Engineers needed for focus groups and interviews**

RAEng have commissioned DJS Research to undertake a quantitative and qualitative research study into the current culture of inclusivity in engineering, which will build upon and update on RAEng's 2017 review "[Creating cultures where all engineers thrive](#)". RAEng are looking for engineers and those working on engineering projects across all industries to take part in this new research study, through participating in both focus groups and in-depth interviews. Feedback gained from this will be part of the wider report and participants can choose whether they wish to be directly attributed to the comments or if they prefer to remain anonymous. As a thank you for participation, you will receive a £40 online GiftPay voucher, or a donation of the same amount to a charity. You can register your interest in becoming a participant [here](#).



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