

# Evidence briefing

## Tackling the challenges facing chemistry in UK higher education: A departmental snapshot

**Briefing May 2026**

### UK universities: Financial challenge and policy change

UK higher education is facing very real financial sustainability challenges and is undergoing changes in response to these challenges, including department and course closures, and mergers. In November 2025 UK government published its Post-16 Education and Skills White paper laying out its priorities for higher education and the wider skills system. Whilst tuition fee rises, further detail on an international student levy and the introduction of V-levels made the headlines we also saw government encourage UK higher education to specialise in areas of strength, collaborate for local and national interest alongside messaging on the role industrial strategy will play in UK government's approach to education and skills. We are already seeing UK government move towards implementation in some areas including research funding reform with publication of UKRI's detailed funding allocations.

#### **RSC's Recommendations**

We call on the Government to work in partnership with higher education and its stakeholders, including professional bodies, to:

1. Facilitate action to address the financial sustainability of teaching and research in higher education ensuring quality chemistry learning, research and innovation that meets economic, employer and student need across the UK.
2. Support the provision of high-quality chemistry education and training, including higher education, vocational and technical routes that are locally accessible for all.
3. Recognise the vital role chemistry higher education plays in delivering the innovations, skills and talent needed to deliver government priorities, including Industrial Strategy.

### Chemistry in UK universities: The national picture

Chemistry higher education is central to achieving the UK Government's ambitions<sup>i</sup> and delivering the jobs growth potential of the chemical sciences sector, which is projected to outstrip the rest of the UK labour market by 30% by 2032<sup>ii</sup>.

Higher education's universities provide a major training pathway through chemistry degrees with sector employers and priority Government sectors (e.g. advanced manufacturing, clean energy, life sciences and defence) dependent on the practical, digital and sustainability skills and knowledge that chemistry degrees provide<sup>iiiiv</sup>.

### Universities: A major training pathway

- **Life sciences:** [Quality Officer](#) at The [Wellcome Sanger Institute](#) with a Chemistry degree helps scientists make sure their work and the data they produce is accurate, reliable and reproducible.
- **Clean energy:** [Laboratory technician and higher apprentice, solar](#) studying for a foundation degree in chemical science working for a small company developing and testing the solar panels.

Universities are also central to the UK's research and innovation ecosystem, delivering chemistry research across the UK that advances healthcare and drives sustainability approaches, whilst developing the researchers of the future<sup>v</sup>.

### Chemical science research and Industrial Strategy

- **Advanced manufacturing:** Researchers in the University of Southampton's School of Chemistry developed pioneering techniques that enabled the discovery of advanced solid-state battery materials. This innovation led to the creation of Ilika plc in 2004, a spin-out now producing solid-state batteries for medical implants, electric vehicles and consumer electronics.
- **Clean energy:** The University of St Andrews' NEXGENNA project, led by Professor John Irvine, advances next-generation sodium-ion battery technology with major potential for scalable, low-cost energy storage. Combining fundamental chemistry and applied engineering, the team is improving sodium-ion cell performance and durability while developing manufacturing processes suited to industrial scale-up.
- **Life sciences:** PhD students are central to the UK's chemistry research ecosystem. Harry Desecroix's doctoral research in the Davis group at the University of Bristol on synthetic glucose receptors helped lay the foundations for spin-out Ziyo, which he co-founded with his supervisor Professor Davis. The company attracted significant commercial interest, and in 2018 Ziyo was acquired in a deal worth around \$800 million.

Current financial pressures are forcing universities to take difficult decisions. Recent cuts and closures to chemistry provision, including University of Hull, Bangor University, and the University of Bradford, are already impacting local and national course availability<sup>vi</sup>. This has resulted in an increasing number of cold spots where no chemistry provision is available within a reasonable travel time<sup>vii</sup>(see interactive [map](#)). Decision-making at institutional level may not always account for the local, regional or national skills and research capability needs when closing or merging courses or departments.

The changes to date raise concerns about the risk of universities closing chemistry programmes and departments that provide substantial long-term benefits to local and national economies. Effective collaboration between policy makers, the higher education sector and disciplinary communities is increasingly important to ensure the continued supply of the skills and capabilities needed for the future.

## What is happening now?

To provide real-time insight into departmental-level impacts, the Royal Society of Chemistry, in collaboration with the Heads of Chemistry UK standing committee, conducted a survey of Heads of Chemistry UK members in Autumn 2025. Heads of Chemistry UK (HCUK) is an independent body representing the interests of departments engaged in chemical education, scholarship and research in universities and similar institutions throughout the United Kingdom and Republic of Ireland. The survey achieved a 47% response rate, and all respondents were from within the UK.

## Financial Challenges

### **Departments consistently report financial challenges but expect these challenges to change over the next two years**

In a wider higher education sector context of falling funding per student from fees and government grants<sup>viii</sup> across the UK over the last decade, flat research funding and a drop in project cost recovery<sup>ix</sup>, resulting in universities being increasingly reliant on cross subsidy from other income sources, we see 100% of respondents reporting facing financial challenges in the current (2025/26) and previous academic years (2024/25).

The majority of survey respondents reported in the previous and current academic year;

- Hiring freezes or increased constraints on recruitment (96.9%),
- Staff reductions in your department (65.6%),
- Reduced support from professional services/support staff (65.6%)
- Potential closure of courses in your department (53.1%)

We also see 12.5% of respondents reporting that their department has faced potential closure.

When asked to look ahead over the next two academic years the number of survey respondents expecting:

- Hiring freezes or increased constraints on recruitment fell by 18.8 % from 96.9% to 78.1%
- Staff reductions in your department fell by 9.3% from 65.6% to 56.3 %
- Potential closure of courses in your department fell by 6.2% from 53.1% to 46.9%

However, the number of survey respondents expecting:

- Reduced support from professional services increased by 9.4% from 65.6% to 75.0%
- Loss of research expertise and/or capacity impacting delivery in your department's priority research areas increased by 18.7% from 31.3% to 50.0%.

We continue to see 12.5% of survey respondents reporting that their department could face potential closure.

Although the data indicates some modest improvement in a few existing pressure points over the next two years, these gains come from an already high baseline of challenge. Departments are expected to face ongoing financial challenges. We remain concerned that any future closures could create additional cold spots where no chemistry provision is available within a reasonable travel time.

## Resourcing pressure workforce and infrastructure

### **Departments consistently report reductions in staff with the reductions varying by career stage and staff type**

The size and shape of the higher education system in the UK is changing. Restructures, reorganisations, mergers, and course and departmental closures are affecting many universities and disciplines. This is impacting the number and shape of jobs and the resource available to deliver research and teaching activity.

On average between the 2023/24 academic year and the beginning of 2025/26 academic year our survey indicates that, academic posts in the chemical sciences have decreased by 10.8%, technical staff support has decreased by 10%, and postdoctoral positions have seen a smaller decrease during this time frame of 1.1%. 50.0% of respondents also report reductions in technical staff/expertise to maintain the teaching/research infrastructure, equipment or facilities.

As a practical discipline chemistry is dependent not only on specialist facilities and equipment but also the specialist skills required to run and maintain them. Although reductions in posts and wider capacity is a common trend in UK higher education, we remain concerned that as a strategically important higher-cost subject chemistry departments with higher over heads will find it increasingly difficult to deliver essential practical learning and access critical research resources including expertise.

### **A significant majority of departments report pressure on investment in research and teaching infrastructure, equipment and facilities**

Infrastructure underpins a chemistry departments ability to deliver a high-quality learning and teaching experience and cutting-edge research. Recent sector wide research undertaken by UUK, ARMA and CaSE has demonstrated that a growing number of universities are reporting reductions in research infrastructure investment with many indicating that they are considering further cuts<sup>x</sup>. Whilst the Office for Student's most recent financial sustainability report raises concerns that underinvestment in teaching facilities, infrastructure and equipment could lead to future financial sustainability concerns<sup>xi</sup>.

Our survey demonstrates that chemistry departments are facing significant constraints in the resources needed to maintain and invest in teaching and research infrastructure, equipment and facilities:

- 84.4% reported reductions in budgets for research infrastructure, equipment or facilities maintenance
- 71.9% reported pauses in capital investment for research infrastructure, equipment or facilities
- 68.8% reported reductions in budgets for subject specific teaching infrastructure, equipment or facilities maintenance e.g. labs
- 62.5% reported pauses in capital investment for subject specific teaching infrastructure, equipment or facilities e.g. labs

This is coupled with a high prevalence of requests to extend the lifetime of existing infrastructure, equipment or facilities for research (59.4%) and teaching (53.1%).

Chemistry is dependent on higher-cost specialist infrastructure, equipment and facilities. Underinvestment in the short term has potential to expose chemistry provision and research to longer

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term risks. Delays in capital and maintenance investment risk increasing the longer-term costs of supporting chemistry provision and research.

## Student recruitment: A mixed picture in a competitive market

Higher education provides the main route into the chemical sciences, with over 70% of the chemical sciences workforce possessing at least an undergraduate degree, compared to around 40% of the overall UK workforce<sup>xii</sup>. The chemical science workforce is projected to grow 30% faster than the wider workforce<sup>xiii</sup>. As part of this workforce graduates in chemistry already make significant contributions to UK government priorities and will be essential to meet future demand in life sciences, defence, clean energy and advanced manufacturing.

### Current and future workforce

- **Life sciences:** Scientific Leader in the Molecular Design Group at GSK, Stevenage with a PhD Computational chemistry. GSK is a global pharmaceutical company, researching and producing innovative, high-quality medicines.
- **Clean energy:** Section Leader Wind AkzoNobel qualified in Forensic Science developing new and innovative coatings for wind turbine blades for use on land and at sea.
- **Clean energy/ Advanced manufacturing:** Research Fellow at the University of Birmingham, PhD, developing sustainable methods to recycle electric vehicle batteries by separating and purifying their materials for reuse.

The factors that impact home and international student recruitment and undergraduate and postgraduate recruitment vary and university recruitment can differ significantly by institutions and discipline.

### Whilst the majority of departments report being on or exceeding targets in 2025/26 for undergraduate home student recruitment, international student recruitment is under pressure

HESA data for the 2024/25 academic year indicates an average increase on the previous academic year of +2% for all undergraduate (UG) enrolments, a 5% decline for all postgraduate taught enrolments and an 11% increase for all postgraduate research enrolments<sup>xiv</sup>. HESA analysis shows the number of enrolments for undergraduate chemistry starting to increase in 2022/23 compared to previous years<sup>xv</sup>. However recent UCAS applications data indicates a small drop in overall applications for the 2025/26 academic year<sup>xvi</sup>.

Home undergraduate student enrolments made up 84.3% of all UK UG in chemistry in the academic year 2024/25<sup>xvii</sup>. The majority of survey respondents (70.9%) indicated that they were on or exceeding home UG recruitment targets. 25.8% of survey respondents reported being under target for home undergraduate student enrolments.

International student fees are a significant source of cross subsidy for UK universities. 51.6% of survey respondents reported being below target for international student undergraduate enrolments. For those

institutions based in England we may see increased challenges in future years with the expected introduction of the proposed international student levy.

### **Postgraduate taught recruitment in 2025/26 is challenging for chemistry in home and international student markets**

Analysis of HESA data indicates that number of *taught* postgraduate (PGT) chemistry enrolments rose significantly, almost doubling between 2019/20 and 2022/23<sup>xviii</sup>. Since the peak in 2022/23, there has been a decrease of 13.6% for chemistry PGT entrants, which is being driven by a fall in international PGT students.<sup>xix</sup> The driver behind the large increases seen in taught postgraduate enrolments was a rapid increase in the number of first year PGT students from non-EU countries<sup>xx</sup>.

In academic year 2025/26:

- 41.9% of survey respondents reported that home postgraduate taught enrolments were below target for the 2025/26 academic year, whereas 29.0% reported they were on target, and 12.9% reported that home postgraduate taught enrolments were exceeding target.
- 50.0% of survey respondents reported that international postgraduate taught enrolments were below target for the 2025/26 academic year, whereas 16.7% reported they were on target and 16.7% reported they were exceeding target.

### **Postgraduate research recruitment in 2025/26 for chemistry is particularly challenging in-home markets**

Analysis of HESA data indicates that the total number of *research* postgraduate enrolments in chemistry has remained relatively constant over the last five years. The number of first-year research postgraduate enrolments fell slightly between 2019/20 and 2024/25 by 9.8%<sup>xxi</sup>.

In academic year 2025/26:

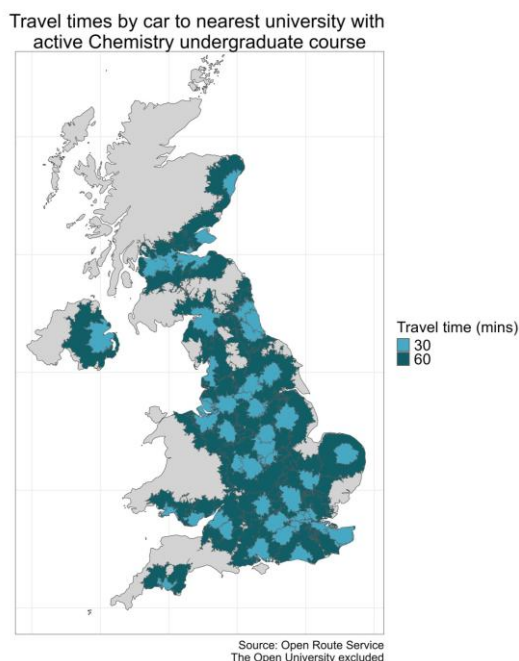
- 46.7% of survey respondents reported home PhD enrolments were below target, as were on target, for the 2025/26 academic year.
- 41.9% of survey respondents reported that international PhD enrolments were on target for the 2025/26 academic year, whereas 32.3% reported they were below target, and 25.8% reported they were exceeding target.

### **What does this mean for chemistry?**

Student recruitment is central to university financial sustainability and access to a skilled future research workforce. We are concerned that a mixed picture for student recruitment in chemistry that may vary significantly by institution could increase pressure on universities that are already making difficult decisions.

Since 2022/23, 11 universities have stopped providing chemistry undergraduate courses in the UK (of which: 9 in England, 2 Wales). Cold spots are emerging in East Yorkshire and the Humber with the closure of the University of Hull's chemistry department, and in North Wales with the closure of Bangor University's department (see Figure 1)<sup>xxii</sup>. Additional closures could further worsen the picture for access and participation.

Figure 1: This map shows, for each institution with an active chemistry undergraduate course, the 30-minute and 60-minute driving range. Grey areas indicate where there is a driving time of one hour or more.



UK Government has recognised in its Post 16-Education and Skills white paper that there are existing challenges recruiting home students to PhD level study in some disciplines<sup>xxiii</sup>. Our community reports facing difficulties recruiting home students to chemistry PhDs and this is reflected in the data.

To meet the demands of the growing chemical sciences sector and mitigate the acute shortage of technician-level skills, post-16 chemistry education must offer diverse pathways, including apprenticeships and technical qualifications, alongside academic routes. Currently, higher education provides the main route into the chemical sciences, with over 70% of the chemical sciences workforce possessing at least an undergraduate degree, compared to around 40% of the overall UK workforce<sup>xxiv</sup>.

### How can policy make a difference?

The financial challenges facing universities and departments are complex. UK Government has announced changes to fee and international student policy that will impact university finances in England. Policy action in the following areas offer opportunities to contribute to the financial sustainability of universities and chemical science provision:

- Maintain chemistry teaching's eligibility for support through the Strategic Priorities Grant (in England) and ensure this funding keeps pace with costs.
- Prioritise investment for curiosity-driven research in universities by sustaining quality-related research funding, ensuring sufficient support for applicant led research through research councils and improving cost recovery on project funded research.
- Invest effectively in research infrastructure, equipment and facilities balancing maintenance and capital investment to mitigate the potential long term negative impacts of infrastructure deterioration and loss.
- Ensure that chemistry higher education remains accessible across the UK to train our future chemical sciences workforce.
- Ensure that UK chemistry higher education including research and innovation can attract and retain the best students and staff, supported by an effective immigration system and welcoming environment.

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Our full higher education policy briefing can be found at [Shaping the future of chemistry in higher education](#).

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- <sup>i</sup> [Shaping the future of chemistry in higher education](#) accessed 19/02/2026
  - <sup>ii</sup> [Future workforce and educational pathways](#) accessed 19/02/2026
  - <sup>iii</sup> [Shaping the future of chemistry in higher education](#) accessed 19/02/2026
  - <sup>iv</sup> [Chemistry job profiles | RSC Education](#) accessed 06/03/2026
  - <sup>v</sup> Advanced manufacturing - [Impact case study : Results and submissions : REF 2021](#), [Home | Ilika](#); Clean energy - [Professor Erwin Reisner | Yusuf Hamied Department of Chemistry, NEXGENNA – Sodium-ion Batteries - The Faraday Institution](#); Life sciences-[Impact case study : Results and submissions : REF 2021](#)
  - <sup>vi</sup> [Shaping the future of chemistry in higher education](#) accessed 19/02/2026
  - <sup>vii</sup> [Shaping the future of chemistry in higher education](#) accessed 19/02/2026  
[Russell Group briefing - higher education funding.pdf](#) 19/02/2026
  - <sup>ix</sup> [Research financial sustainability: insights paper 2025 – UKRI](#) accessed 19/02/2026
  - <sup>x</sup> [Research at risk: impacts of financial constraints on UK universities](#) accessed 19/02/2026
  - <sup>xi</sup> [Financial sustainability of higher education providers in England 2025](#) accessed 19/02/2026 page 4
  - <sup>xii</sup> [Shaping the future of chemistry in higher education](#) accessed 19/02/2026
  - <sup>xiii</sup> [Future workforce and educational pathways](#) accessed 09/03/2026
  - <sup>xiv</sup> [Higher Education Student Statistics: UK, 2024/25 | HESA](#) accessed 19/02/2026
  - <sup>xv</sup> [Chemistry in UK higher education data pack](#) accessed 19/02/2026
  - <sup>xvi</sup> RSC Internal analysis: [UCAS Undergraduate end of cycle data resources 2025 | UCAS](#)
  - <sup>xvii</sup> RSC internal analysis [Subject uptake dashboard | HESA 2024/25](#) accessed 12/02/2026
  - <sup>xviii</sup> [Chemistry in UK higher education data pack](#) accessed 19/02/2026
  - <sup>xix</sup> RSC internal analysis [Subject uptake dashboard | HESA 2024/25](#) accessed 12/02/2026
  - <sup>xxi</sup> RSC internal analysis [Subject uptake dashboard | HESA 2024/25](#) accessed 12/02/2026
  - <sup>xxii</sup> [Shaping the future of chemistry in higher education](#) accessed 19/02/2026
  - <sup>xxiii</sup> [Post-16 Education and Skills White Paper 2025 page 57](#) accessed 19/02/2026
  - <sup>xxiv</sup> [Shaping the future of chemistry in higher education](#) accessed 19/02/2026