

Imperial College
London

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ANNUAL REPORT
AND ACCOUNTS

2018-19

OUR STRATEGY

FOUNDATIONS

- We will continue to specialise in science, engineering, medicine and business. This is the foundation on which we build our future.
- We will maintain world class core academic disciplines. All research and education must be underpinned by a deep understanding of the fundamentals.
- We will encourage multidisciplinary research. Only by bringing together expertise from different disciplines can we solve today's global challenges.
- We will embed our educational experience in a vibrant, research-led, entrepreneurial environment. By learning alongside researchers who are experts in their fields our students gain the practical, entrepreneurial and intellectual skills to tackle societal problems.

PEOPLE

- We will build a supportive, inclusive and highly motivated staff community across all disciplines, functions and activities. This will help us to attract and retain the talented and diverse staff we need to achieve our mission.
- We will enrich the student experience. Providing a broad range of activities, services and support for our students beyond their studies helps them to develop wider talents and to be successful.
- We will build strong relationships with our alumni and friends. This lifelong exchange of ideas and support benefits all of us.

PARTNERS

- We will strengthen collaboration with business, academia, and non-profit, healthcare and government institutions across the globe. No university can achieve excellence or realise the full benefits of its work by itself.
- We will inform decision makers to influence policy. Our excellence, breadth of knowledge, connections and London location allow us to bring together and inform key decision makers in governments and industries for the benefit of society.
- We will share the wonder and importance of what we do. Collaboration with the public, schools and our local communities fosters a shared passion for and understanding of our work.

ENABLERS

- We will strengthen and diversify our revenues. Delivering our mission requires investment in our staff, students and facilities.
- We will provide professional support, consistent processes and appropriate technology for all of our staff and students. The pursuit of excellence in research and education requires excellence in all that we do.
- We will act courageously and innovatively when pursuing new opportunities. We need to take academic and financial risks to sustain excellence in research and education.

On the cover: Dianna Nguyen, Specialist Chemical Technician in the Department of Chemistry. Dianna was featured in the Women at Imperial portraits project as part of Women@Imperial Week 2019. The portraits are displayed across the College to showcase female role models and recognise their contributions to life at Imperial.

Imperial College London's mission is to achieve enduring excellence in research and education in science, engineering, medicine and business for the benefit of society.

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Visitors in the Greener Futures Zone at the Great Exhibition Road Festival, a three-day celebration of science and the arts hosted by more than 20 institutions on and around Exhibition Road.



IMPERIAL
IN 2018-19

PRESIDENT'S FOREWORD



**PROFESSOR
ALICE P. GAST**

PRESIDENT OF
IMPERIAL COLLEGE
LONDON

Imperial College London continues to be a beacon of excellence in these uncertain times. Our students and staff advance knowledge and translate research into solutions. Our commitment to excellence and passion for discovery is palpable. We are a strong and vibrant institution with a rich heritage and everlasting values.

Our mission is “to achieve enduring excellence in research and education in science, engineering, medicine and business for the benefit of society.” We face a number of challenges from Brexit, the viability of the Universities Superannuation Scheme (USS) pension scheme, and a shifting landscape for research and higher education. Delivering our mission in this context requires strong Foundations, great People, respected Partners and key Enablers.

Our future is built on our **Foundations** in engineering, science, medicine and business. This year we opened the first major academic building on our new White City Campus, the Molecular Sciences Research Hub, which provides state-of-the-art facilities for the design and creation of new medicines, materials, energy sources and catalysts. Its stature as a laboratory is only surpassed by the ground-breaking research going on inside.

We seek exceptional **People**. We appointed one of Britain’s foremost business leaders, John Allan CBE, as our new Chair of Council. He will succeed Sir Philip Dillely whose contributions as Chair and as a member of Council will leave a lasting impression on Imperial. We welcomed Imperial’s second Provost, Professor Ian Walmsley FRS. Ian is an alumnus of Imperial and was previously Pro-Vice-Chancellor (Research and Innovation) and Hooke Professor of Experimental Physics at the University of Oxford. Under his leadership the College has developed a new Academic Strategy. Michael Murphy, our new Vice-President (Advancement) will help us continue to build a professional and sustainable fundraising programme. Colleagues were recognised for their excellence as academics and leaders in the

Honours Lists and through Fellowships from the Learned Societies. Imperial researchers were the recipients of nine prestigious European Research Council Grants.

We collaborate with **Partners** who share our commitment to excellence across borders. We launched an important partnership with the Technical University of Munich in Germany. These links bring excellent collaborators together for the benefit of our students and our research. We also launched new collaborations with corporations throughout the world, and academic organisations in Africa, as described in these pages and on our website. We are, and will remain, a very internationally focused university.

Our philanthropic supporters, both alumni and friends, are our **Enablers**. In the coming months, we will open the Sir Michael Uren Biomedical Engineering Research Hub as the second major academic building in White City. Bringing together top engineers, medics, scientists and inventors, this multidisciplinary hub will redefine medical practices and technologies for decades to come.

We recently launched the Abdul Latif Jameel Institute of Disease and Emergency Analytics (J-IDEA), which brings our world class epidemiology work to bear on problems of both infectious and chronic diseases and humanitarian crises. Our partnership with Community Jameel is essential and is making a difference. You can read more about our generous philanthropists in the Annual Fundraising report.

More details of our progress this year can be found on the College website and we list but a few highlights in the pages that follow. As the financial commentary and the risk review later in this report show, these are very challenging times, yet as summary of our progress this year shows: Imperial endures and indeed thrives.

Professor Alice P. Gast
President of Imperial College London



PhD student Polina Jacoutot working in the Ultrafast Optoelectronics Group facility in the Molecular Sciences Research Hub at the White City Campus. The Group develops state-of-the-art spectroscopy methods and apply them to understand the behaviour of molecular and nanoscale systems.

IMPERIAL'S BENEFIT TO SOCIETY

We add value and deliver public benefit on a local, national and global scale. We do this by educating some of the world's brightest students, creating a climate where researchers and staff can thrive, and building deep and lasting ties with our community and partners.

Imperial's objects, mission and strategy

When Imperial College London was established in 1907, its Royal Charter defined its objects, or guiding principles. These are to provide the highest specialised instruction and the most advanced training, education, research and scholarship in science, technology and medicine, especially in their application to industry; and in pursuit of these objects to act in co-operation with other bodies. These objects continue to underpin the College's mission.

The College's Strategy guides Imperial's work towards achieving its mission. The foundations of the College's work are defined as its specialisation in science, engineering, medicine and business; its world class core academic disciplines; its emphasis on multidisciplinary research; and its vibrant, research-led, entrepreneurial environment.

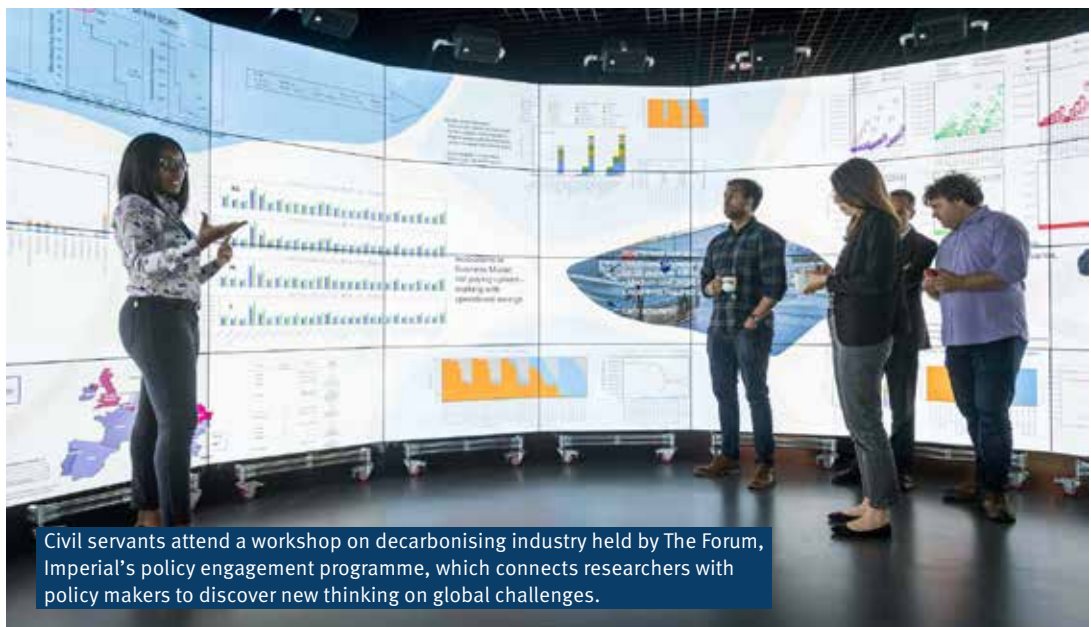
In its focus on Imperial people, the College commits to building a supportive, inclusive and highly motivated staff community; enriching the student experience; and building strong relationships with our alumni and friends.

About public benefit

As an exempt charity under the laws of England and Wales, by virtue of the Exempt Charities Order 1962 and the Third Schedule to the Charities Act 2011, each of Imperial's purposes must be for the public benefit. The Office for Students regulates universities as charities on behalf of the Charity Commission. The Council, as the College's Trustee, sets and reviews its objects and activities, with due regard to the Charity Commission's guidance on the reporting of public benefit, particularly in relation to the advancement of education and fee charging.

Partners are critical to achieving our goals, and we commit to strengthening collaborations across the globe; working with industry to translate our innovative ideas into real-world benefits; informing decision-makers to influence policy; and sharing the wonder and importance of what we do with the public, schools and our local communities.

The enablers that underpin our success are the strengthening and diversification of our revenue; professional support, consistent processes and appropriate technology for staff and students; and a commitment to acting courageously and innovatively when pursuing new opportunities.



Civil servants attend a workshop on decarbonising industry held by The Forum, Imperial's policy engagement programme, which connects researchers with policy makers to discover new thinking on global challenges.

Foundations

Maintain world class core academic disciplines

The strength of our disciplines relies on the individuals within them. In the last year we saw six academic staff and eleven alumni receiving national honours including:

- Professor Gerry Thomas, who specialises in molecular pathology and has advised on the risks of radiation from both Chernobyl and Fukushima, received an OBE for her services to science and public health;
- Alumnus Dr Henrietta Bowden-Jones was awarded an OBE for services to addiction and research. She is the founder and director of the National Problem Gambling Clinic, the first and only NHS multidisciplinary treatment centre for problem gamblers;
- Professor Erko Autio from the Business School was elected a Fellow of the British Academy for his research in the areas of entrepreneurial and innovation ecosystems, international entrepreneurship and high-tech startups;
- Professor Geoff Maitland CBE was honoured for services to chemical engineering following a distinguished career where he drove connections between industry and academia;
- Physicist Dr Jess Wade was awarded a British Empire Medal for services to gender diversity in science. Dr Wade, who studies polymer-based Light Emitting Diodes, has led a series of public engagement initiatives to promote women in STEM.

Encourage multidisciplinary research

We continue to invest in multidisciplinary research. In 2019 we officially opened our state-of-the-art Molecular Sciences Research Hub at White City, housing more than 800 scientists, clinicians, engineers and business partners under one roof. In 2020, we will open the Sir Michael Uren Biomedical Engineering Research Hub, also at White City, where our medics, scientists and engineers will pioneer new innovations in medicine. Our faculties continue to deliver ground-breaking research.

- Professor Tom Pike's team from the Department of Electrical and Electronic Engineering designed and fabricated the silicon sensors for the NASA probe, Mars InSight, which has been detecting tremors below the surface of Mars since November 2018.
- Professor Andrea Crisanti from the Department of Life Sciences and the College Malaria Network led a team to specifically target malaria-carrying mosquitoes using 'gene drive' technology to reduce the population of malaria-carrying mosquitoes and stop transmission of the disease. This work is a good example of the multidisciplinary research in our 'Networks of Excellence'.
- Dr Aldo Faisal from the Departments of Computing and Bioengineering, and Professor Anthony Gordon from the Department of Surgery

and Cancer, created an artificial intelligence (AI) system to help treat patients with sepsis – a complication of an infection that kills around 44,000 people in the UK every year. The AI system 'learnt' the best treatment strategy for a patient and 98% of the time the AI system matched or bettered the human doctors' decision.

Embed our educational experience in a vibrant, research-led, entrepreneurial environment

Following the launch of our Learning and Teaching Strategy, we are embarking on an institution-wide transformation of the way we teach our students. We aim to use interactive teaching to encourage students to go beyond the retention of information through the investigation and development of concepts. All of our undergraduate programmes have now been reviewed. Examples include:

- The School of Medicine students are testing Augmented Reality (AR) headsets. The pioneering trial involving clinical medical students, the College's Digital Learning Hub, and Leiden University Medical Center, is exploring whether AR technology could be introduced into medical student examinations;
- The Department of Chemical Engineering is using Virtual Reality (VR) technology for teaching fluid dynamics. The VR programme enables students to experience fluid dynamics with real-time feedback through touch and sound;
- In a School of Public Health initiative, BSc Global Health students worked with members of White City community groups to understand local health inequalities and develop strategies to reduce the disparities in people's health and wellbeing.

Student feedback for these developments has been positive, and we are expanding the offer.

People

Build a supportive, inclusive and highly motivated staff community

This has been a difficult year for our staff as well as staff across the sector. Many express concerns about the UK leaving the EU and the valuation of the USS pension scheme. We have focused on communicating effectively as we understand the situation with respect to Brexit, changes in government policy, and pensions. We provide transparency in our data and decision making and we have been heartened by the constructive engagement and debate across the university. While there is still great uncertainty over Brexit and the impact of a new USS pension valuation, we will keep the dialogue open, and we will work with our community to alleviate their concerns.

- This year the College won a national award from Universities HR in recognition of the collective work of Imperial staff in improving engagement and support for our community. We were

commended on several initiatives including our Staff Supporters scheme, our Harassment Support contacts, our Mental Health First Aiders and our Dyslexia Champions.

- Colleagues across the College have engaged with our innovative Active Bystanders programme to call out poor behaviour. The training empowers the community to challenge all inappropriate or unacceptable behaviours. This has been one of our most popular initiatives and staff and students have embraced the approach of a collective responsibility to create and nurture a safe, supportive environment, free from bullying and harassment.

Enrich the student experience

In a demanding, research intensive university it is important to never lose sight of the student experience. This becomes even more important as numbers grow and space comes at ever more of a premium.

- We continue to invest in providing world class classrooms and laboratories for our students, examples include refurbishment of lecture theatres in Physics and Earth Sciences, as well as upgrading over 60 teaching rooms across our campuses.
- Digital technology is providing new ways of conveying information and sharing knowledge. Our collaborations with online education platforms Coursera and EdX have enabled us to provide a wide range of opportunities, from short sample courses to full Master's degrees, including the Faculty of Medicine's first fully-online degree programme, the Global Master of Public Health.

Build strong relationships with our alumni and friends

The Imperial alumni community is actively engaged with the life of the College through participation in events, volunteering their time as mentors and through their generous support.

- This past year, over seven thousand alumni registered for one of our nearly two hundred events. *Imperial Magazine* is sent to 123,000 alumni and another 2,600 friends and donors.
- Philanthropic support continues to grow for the College, with over £60 million given to Imperial over the year for critically important research, scholarships and facilities.

Partners

Strengthen collaborations across the globe

Our international collaborations have never been more important, we remain a global university.

- Imperial and the Massachusetts Institute of Technology created a new seed fund, partnering

with institutions in Africa. The first projects will work on infectious disease, high-energy physics and eco-friendly refrigerants.

- Imperial and Tsinghua University launched a new energy research centre to tackle common challenges faced by the UK and China in providing secure, low-carbon power systems.

This year, Imperial will build upon these bilateral partnerships through a grant funded by Research England to establish data clusters with three of the world's top institutions. The project, funded by Research England, will see Imperial partner with France's National Centre for Scientific Research (CNRS) in mathematical sciences, Germany's Technical University of Munich (TUM) in Computing, AI and robotics, and Singapore's Nanyang Technological University (NTU) in technology and healthcare.

Work with industry to translate our innovative ideas into real-world benefits

We continue to earn our place as the most innovative university in the UK according to Reuters. In March 2019, the College took over the technology transfer activities stemming from our research, replacing the external arrangements previously in place with Touchstone Innovations, giving us more direct control over the impact our research has on society.

- The College's White City Campus allows staff, students, alumni and commercial partners to convert research ideas into breakthrough products and services. The Imperial Incubator at the I-HUB provides offices, laboratory space and support for early-stage companies, such as Polymateria, an Imperial startup making biodegradable plastic.
- Our graduates continue to develop successful startups like Vivo Surgical in Singapore, founded and led by alumnus Kevin Koh, to develop innovative devices for surgical technology; and Aerobotics, co-founded by alumnus Benji Meltzer, to detect early tree pests and disease on farms based in South Africa.

Inform decision makers to influence policy

During this period of political uncertainty the College has had a strong voice in important debates and discussions taking place in the UK and in the EU. Our advocacy has focused on mitigating the impacts of Brexit on our community as well as influencing the future research and higher education landscape. This includes providing a dedicated Imperial and the EU website and regular updates for staff and students on key developments.

- Decision-makers in Westminster and Brussels were appraised of College priorities through evidence submitted to Parliamentary inquiries, visits from senior civil servants, MPs and Cabinet Ministers.
- The College played a key role in advocating for immigration reform through timely media interventions and close policy engagement with

UKRI and the Royal Society. The government recently announced intentions for a new science immigration fast-track route and a new post-study work visa.

- The College launched a new policy engagement programme, The Forum to connect researchers with policy makers to discover new thinking on global challenges. The launch was supported by the government Chief Scientific Adviser, Sir Patrick Vallance, and brought together representatives from academia, Whitehall and industry.

Share the wonder and importance of what we do

The College involves and engages school teachers and pupils, local community groups and residents, patients and the public more widely, through discussions and dialogue, festivals and data collection. Efforts to widen participation in education programmes helps attract the most capable students, and creates a more diverse community that represents society. It means being an anchor within local areas, providing the support that people need to improve their own skills and to engage with a scientific world.

- The College agreed a new five-year programme for widening participation with the Office for Students. This includes expanding the College's successful outreach programme, STEM Potential, to areas outside of London.
- The Great Exhibition Road Festival is our flagship public event, a three-day celebration of the arts and sciences in South Kensington that attracts around 60,000 visitors. In 2019, we expanded the annual Imperial Festival and involved over 20 local institutions, including the Victoria and Albert Museum, Royal Albert Hall, Natural History Museum and Science Museum.

Enablers

Strengthen and diversify our revenues

While Imperial's revenues continue to grow, and we are now comfortably above a billion pounds of total income, the pressures on our cashflow from operations are also growing as discussed in more detail in both the Managing Risks section and the Financial Review.

In this context, revenue diversification has never been more important. As the accounts show, fundraising continues to go from strength to strength and is now an important resource.

We also continue to build businesses that take advantage of our know-how, brand and London location, for instance:

- ThinkSpace is a 100% College-owned business, which supports knowledge-intensive companies and the commercialisation of scientific research by providing a home for businesses from around the globe to work directly alongside Imperial's world leading academics;
- ScaleSpace is a joint venture between Imperial College and Blenheim Chalcot based at our campus in White City. There, we seek to provide

dedicated support to technology companies that are moving from startup to scale up;

- TWIG is a company which leverages an online science teaching platform to provide free resources to primary schools in the UK and to serve as a potential commercial opportunity elsewhere. Imperial provides expert review of the science content under licence and is also a major shareholder.

Provide professional support, consistent processes and appropriate technology for all of our staff and students

We are several years into an ambitious programme to reduce our non-academic cost base whilst simultaneously improving service levels. As the discussion in the Finance Review shows this has been a challenging time.

- The Student Information Management Programme (SIMP) aims to improve student information systems and processes for staff and students across the student lifecycle. We have now delivered a new student admissions system and are in the midst of migrating to a new student records system.
- We have been working to better understand and track our use of teaching space, which is an increasingly valuable resource as our student numbers grow. We have identified large variations in the usage and quality of our space and are now moving on to using the data to improve decision making.

Act courageously and innovatively when pursuing new opportunities

We continue to invest our own funds into new and exciting ideas. For instance, the Excellence Fund for Frontier Research supports blue skies research that often works across traditional disciplinary boundaries. This year's awards went to the following projects:

- Dr Ben Almquist, Dr Christopher Rowlands and Dr Andrei Kozlov from the Department of Bioengineering are collaborating at the intersection of nanofabrication, biophotonics, neuroscience and synthetic biology. Their potentially transformative project seeks to engineer the biotic-abiotic interface between nanoscale devices and complex biological systems.
- Dr Minh-Son Pham of the Department of Materials is developing a meta-crystal approach to develop advanced materials that are lightweight and mechanically robust, with the potential to advance future low carbon technologies.
- Dr Karen Polizzi and Dr Cleo Kontoravdi from the Department of Chemical Engineering, and Dr Christopher Rowlands from the Department of Bioengineering, are collaborating on the integration of living analytics into bioprocessing.

MANAGING RISKS

The Office for Students, our regulator, identifies risk as “the threat or possibility that an action or event will adversely or beneficially affect an organisation’s ability to achieve its objectives.” Our risk management framework supports identification of risks across the College, promoting the use of risk as a decision-support tool for Imperial. In developing our College risk profile, we consider both top-down and bottom-up threat and opportunity risks alongside external factors and influences.

Our College risks are ranked based on a combination of likelihood over a three to five year rolling period and their potential impact on the delivery of the strategic objectives of the College; those with the highest ranking are included in the College Risk Register. Controls are identified for all of our College risks and we regularly review mitigation strategies in line with changes in our operating environment.

The College risk profile is formally reviewed annually by the President’s Board, the Audit and Risk Committee and the Council. Our Internal Auditors conduct an annual audit of risk management to provide additional assurance.

Key points to emerge from our 2019 College risk review were:

- Our most significant risks are ‘financial sustainability’ and ‘operational transformation and change’;
- A new risk relating to ‘NHS partnerships’ was introduced;
- Cyber risk was incorporated into our business disruption risk;
- Our 2018 top-rated risks on ‘staff recruitment and retention’ and ‘space and infrastructure’ remain on the risk register but have reduced in severity due to efforts to improve the risk control environment over the last 12 months.

Current risk management activity is focused on departmental risk engagement, process and policy development, risk deep-dives by the risk management team in specific areas for increased assurance, and business continuity planning for Brexit, pensions and climate change scenarios. The risk deep-dives are being used to create practical opportunities for discussion on risk and help to develop and embed our risk culture across the College.

The following table summarises the latest version of the College Risk Register:

RISK	RISK MANAGEMENT APPROACH
<p>FINANCIAL SUSTAINABILITY Significant changes to the higher education operating context threaten long-term growth, our reputation for excellence and future financial sustainability.</p>	<p>The Council has established a Finance Task Force, comprising certain non-executive members of Council and senior College leaders, which will meet during 2019–20 to identify the actions needed to boost the level of cash generated from operating activities in order to offset rising cost pressures from, for example, pensions. We continue to lobby relevant external bodies so that they are aware of the impact that changes in the operating environment might have (e.g. tuition fee rates, pension contributions).</p>
<p>OPERATIONAL TRANSFORMATION AND CHANGE Our transformation programme does not deliver the scale of change or cost efficiencies required to improve the effectiveness and efficiency of our operating model.</p>	<p>A review of the College’s operating model for its support services is underway, with the twin aims of improving satisfaction and reducing cost. It seeks to do this by eliminating duplicated effort and tackling inefficient processes. A clarification of decision rights and thorough lessons-learned reviews are helping ensure that the delays experienced to date in delivering the major projects within the programme can be avoided going forwards.</p>
<p>STAFF RECRUITMENT, RETENTION AND WELLBEING Inability to attract and retain staff due to pay and benefits provision, the high cost of living in London, dissatisfaction associated with pensions, and uncertainty related to Brexit.</p>	<p>Pay and benefits are benchmarked annually. As a result of the last review the introduction of a revised academic pay scale for 2018–19 saw salaries raised at the lower levels. We actively engage with UUK and USS to support efforts to find a sustainable solution to the pension issue. We conduct biennial staff surveys and all departments are required to prepare action plans in response to emerging issues. The College updates its website with the latest information on Brexit that is relevant for our staff and sends regular briefings to ensure staff feel as informed as is possible in the current situation. The College is adding to its stock of key worker accommodation, though demand will continue to far outstrip supply.</p>
<p>INFRASTRUCTURE AND CAPITAL PLAN Failure to optimise investment in our existing and planned infrastructure and property portfolio means we are not able to meet staff and student expectations of a world-class academic institution.</p>	<p>Our Estates Strategy Group meets regularly to prioritise investment in our estate recognising the key trade-offs between faculties, between research and education, and between growing the future and protecting the present. The completion of the Academic Strategy will help with the making of these trade-offs. However, the key constraint remains the amount of capital available to invest in the estate, hence the importance of the work of the Finance Task Force.</p>
<p>RESEARCH Our research quality and/or impact does not at least maintain its current level or fails to keep pace with our peer group.</p>	<p>Research quality is maintained by our continued focus on excellence in hiring academic staff and by having a supportive environment that includes investments in President’s PhD studentships, Imperial College Research Fellows and Frontier Research Awards that fund new areas with high potential.</p> <p>Research impact is enhanced by having strong relationships with a wide range of corporate partners, by encouraging entrepreneurship in our staff and students, and by having a comprehensive innovation ecosystem that supports all stages of the impact lifecycle.</p> <p>Research volume and quality will be included within the scope of a new series of rolling reviews of departments (three to four per year) that the Provost and Vice-Provost (Research and Enterprise) are starting in 2019–20.</p>

RISK	RISK MANAGEMENT APPROACH
<p>INCOME DIVERSIFICATION Failure to grow income from our commercial and related ventures activities and from fundraising leaves insufficient financial resource available to deliver our capital and core activity growth ambitions.</p>	<p>The income from fundraising has grown substantially over the last five years as we have invested in building a professional Advancement team. The focus now is on further increasing the productivity of this team to best practice levels. This continues to be an ever-increasing source of investment funds.</p> <p>In our more directly commercial businesses, we have a clear demarcation between those that rely on leveraging our property portfolio and our position as a world class university in London, and those that take advantage of our brand, know-how and IP. The former is more capital intensive and in the short-term is about using debt to create self-sufficient revenue generating assets. The risk mitigation here is around ensuring rigorous due-diligence and oversight of each investment.</p> <p>The latter is less capital intensive but holds the risks associated with starting up or investing in new businesses. Here, the focus is clearly on understanding the business risk and whether it justifies the investment, and making sure we have sufficient protection of our brand, IP and know-how.</p>
<p>LEGAL, REGULATORY AND COMPLIANCE Failure to follow College policies and procedures, or to develop College policies and processes adequately, could lead to failure to comply with legal and regulatory requirements.</p>	<p>A new regulatory oversight process was implemented in early 2019 to provide us with increased assurance that the College is complying with all requirements.</p>
<p>STUDENT EXPERIENCE AND EDUCATION Failure to innovate and improve the quality of our education and support student experience and wellbeing threatens both our ability to support and recruit the best students, and our reputation for excellence, impacting our competitive position and ability to meet our regulatory requirements.</p>	<p>The Learning and Teaching Strategy promotes innovation in education across the College, so that we offer all our students a world leading, rigorous, evidence-based, inclusive education. Student wellbeing is a critical part of the student experience and we provide a full range of support services to equip our students to manage the demands of College life.</p>
<p>BREXIT Continued uncertainty related to Brexit and political challenges, linked to global activities and partnerships, impacts research and industry funding, staff retention and student recruitment.</p>	<p>We continue to advocate for the UK to remain in a research union with Europe. We are supporting and building our bilateral collaborations in Europe and are building additional partnerships across the world. We lobby the UK government on the value in investment in international collaborations. Our website is updated regularly to help our community keep informed on the implications of Brexit for them. Our internal Brexit Response Group has been developing contingency plans for potential disruptions to the movement of goods and people following Brexit.</p>
<p>STUDENT RECRUITMENT Failure to balance the numbers of international students across a range of countries leads to a sudden drop in recruitment if there are visa or similar issues with a particular country and promotes a bicultural rather than multicultural experience for our students.</p>	<p>We have committed funding to explore various approaches to marketing in countries from where we feel the College has potential to grow its intake.</p>
<p>BUSINESS INTERRUPTION AND CYBER A serious incident or event could cause physical and/or reputational damage to the College in addition to severely impacting continuity of our critical operations.</p>	<p>A generic business continuity plan with defined roles and responsibilities is in place and this is tested annually against different scenarios. We support a level of data security control, training and awareness in line with ISO standards and Cyber Essentials, a UK government information assurance scheme.</p>

RISK	RISK MANAGEMENT APPROACH
<p>WIDENING PARTICIPATION Failure to meet the targets in the Access and Participation Plan we are required to have in place by our regulator (the Office for Students) puts us in breach of one of our ongoing conditions of registration.</p>	<p>We have recently launched a new five-year programme, agreed with the Office for Students for Access and Participation, with the aim of widening participation through a new series of outreach activities, and more targeted deployment of existing initiatives, for students from disadvantaged groups. Progress against this is monitored by a specific working group within the College which reports to the President’s and Provost’s Boards. Additional resource is being dedicated to evaluating the impact of our programme.</p>
<p>NHS PARTNERSHIPS Continuing pressure on NHS budgets, staffing and organisational changes leads to substantial weakening in the capability of College’s NHS Partner Trusts with consequent serious impact on the capability of the Faculty of Medicine.</p>	<p>We have a good understanding of our overlaps and interdependencies with the NHS (estates, health and safety, HR). The Academic Health Science Centre is the vehicle for the Faculty of Medicine’s engagement with closest NHS partners and is underpinned by a commitment to a common agenda. The regular meetings at various levels within this structure provide visibility of any emerging issues in the partners, giving us more time to prepare a response. Independently, our decisions around our estate and staff appointments are informed by this risk.</p>
<p>TRANSLATION AND IMPACT Failure to provide the technology transfer mechanisms to manage and exploit the College’s intellectual property or facilitate academics and students to engage sufficiently in entrepreneurial activities leading to reduction in the impact of the College’s research.</p>	<p>A new technology transfer mechanism and support structure has been in place since March 2019, insourcing this activity and bringing together all aspects of intellectual property management in one team. This gives us greater control over development of projects and finding suitable funding.</p>

PRINCIPLES OF REMUNERATION

Imperial’s pay and benefits package is a critical factor in our ability to attract and retain an outstanding and diverse staff community. We are committed to offering all staff a pay and benefits package that is equitable, fair and appropriately reflects the College’s standing as a world leading university.

Rates of pay

The College regularly benchmarks rates of pay against external comparators. A working group led by the Dean of the Faculty of Engineering is currently reviewing academic international pay and employment terms. The College aims to pay mid to upper quartile rates of pay for all its staff against appropriate external comparators wherever possible within financial constraints.

Annual cost of living pay review

The College’s annual cost of living pay review for all staff on local pay bargaining terms and conditions is jointly negotiated with the College Trades Unions (the University and College Union (UCU), Unite and Unison). The review considers all elements of reward that impact on staff costs. The College sets the award, taking into account affordability as the principal requirement, assessed against staff demands based on inflationary pressures, feedback from the annual pay and benefit consultation exercise and a review of recruitment and retention information.

On 1 August 2018 the College implemented a pay increase of 3%, subject to a £1,000 minimum and £3,000 maximum increase. The College also reduced the working hours from a 37.5 to a 37-hour week without a commensurate reduction of the annual salary of staff employed on the level 1 grade. This resulted in an improved hourly rate for staff on the lowest level of £10.70 per hour (a total increase as a result of this year’s pay award to 7.5%). This was the third consecutive year that the College adopted a tapered approach to provide an increased benefit for lower and middle grades. This pay offer was accepted by the recognised Joint Trades Unions. The contractor minimum rate for those employed primarily on College activities was also set at £10.60 per hour, which was 3.9% above the London Living Wage at that time.

Finally, the College invested an additional £1.5 million into research grades and £1 million into academic grades for new salary scales that were introduced on 1 August 2018 (for academic staff) and 1 April 2019 (for research staff). The main changes were a new 29 point salary structure in

place of the current 47 point pay spine, an increase in the minimum starting salary for all academic and research grades, and accelerated salary progression.

Remuneration Committee

The Committee meets at least twice a year, to review and approve the remuneration of the President and the Provost, their senior staff direct reports and members of the Provost’s and President’s Boards. It also reviews the College’s overall reward strategy to ensure that its remuneration practices are being managed in a fair and equitable way. The Committee is chaired by the Chair of the Council except for matters relating to the President’s salary; these are chaired by the Deputy Chair of the Council. It comprises external members of the Council. The Provost and President are invited to participate in discussions on specified agenda items, including recommendations relating to the salary reviews of their direct reports, but they are not members of the Committee and are not present for discussion of their own salary. The terms of reference of the Committee can be found in the governance section of this report.

At the July 2018 meeting the Committee reviewed the latest information on the revised guidance from the Committee of University Chairs and the Office for Students to ensure the revisions to the Terms of Reference agreed at Council in February 2018 were compliant. Two changes were implemented: one that the Deputy Chair of Council would chair the Remuneration Committee when the President’s remuneration is under consideration, and the implementation of the retention of external income policy.

The Committee met in November 2018 to receive information on the College’s remuneration strategy, pay and pension benefits, and also to review and approve the salary and emoluments for the President and the staff members of Council. The Committee reviewed the salary information for the members of Council reporting to the Provost and President. Staff members of Council received the 2018 pay award applied to all staff, so the review was to consider whether any additional adjustments to pay were appropriate. There was one

recommendation for a further adjustment to pay for a staff member of Council based on the exceptional contribution of the individual and the external market benchmark.

The Remuneration Committee also undertakes a senior staff pay review, using the College-published Pay Relativity criteria, comparing the salaries of all staff earning more than £100,000 with benchmark data from the University Council for Education Administration (UCEA) Senior Staff Remuneration Survey and the Russell Group Salary Surveys for Non-Academic Management, Professors and Readers.

The Remuneration Committee's review of the President's salary considered: comparable data on pay and benefits from UK higher education institutions; the THE World University rankings; the President's remuneration as a multiple of the median pay for all other employees; the President's progress in meeting her performance objectives; and the Committee of University Chairs Survey benchmark. The President declined any increase in pay. Further details of the President's remuneration are included in Note 7 to the Financial Statements.

Income derived from external activities

On 1 August 2018, the Remuneration Committee agreed the new College Retention of Income from External Interests policy that will be reviewed annually, or as external regulations require. The policy encourages the closest possible liaison between staff and industry, professional bodies, commerce, charities and government departments, including via personal directorships, partnerships, consultancies (including private clinical practice), trusteeships, trade engagements, membership of official committees and intellectual property licensing and involvement in spinout companies. The policy allows staff, subject to prior approval, to be engaged in general paid and unpaid activities. Members of the College must request approval for external activity. They must disclose the number of days that will be committed to the activity, and senior officers of the College must also disclose any personal remuneration that will be received from the activity. In reviewing requests, the College considers whether the activity could compromise

the full performance of the College member's duties and how the activity could serve the interest of the College and the College member.

The College recognises that staff engaging in external activities such as directorships is integral to the delivery of its mission, enhances collaboration with partners and creates opportunities to influence and inform policy. In keeping with the College policy on external activities, the President was granted permission to serve on the Board of Trustees for KAUST University, the Singapore Academic Research Council and the Board of Directors of Chevron Corporation, as agreed upon in her acceptance of the offer to serve as Imperial College London President. In 2017, the President was selected to join the newly-created UK Research and Innovation (UKRI) Board and has continued to serve on this board. These memberships benefit the College by fostering international collaboration, enhancing its global reputation and strengthening ties with industry.

The President's annual compensation from Chevron, which is deferred until retirement from the board, was \$375,000 in the year ended 31 December 2018, comprising \$225,000 in shares of Chevron stock and \$150,000 cash. She donates the entirety of her remuneration from UKRI (£9,180 per year plus £459 per day for additional service) to the College. She receives \$10,000 a year for her work with the Singapore Academic Research Council to cover incidental expenses. Her position with KAUST is not remunerated.

The gender pay gap

In 2018–19, the College published details of its gender pay gap. This shows that the gap between the median hourly pay of men and women at Imperial is 7.6%. In comparison to the College's 2017 gender pay gap, there has been a small shift, with a higher proportion of women represented in the upper-middle and upper quartiles.

This gender pay gap is not the same as equal pay; Imperial pays men and women the same for work of equal value.

The main reason for Imperial's gender pay gap is that the College has more men than women in its senior roles. The lower three quartiles have nearly a 50–50 split between men and women, but the top quartile is 69.3% men and 30.7% women.

The College's median gender pay gap is lower than the 2018 national average for all employers, the higher education sector as a whole and other research-intensive universities in the Russell Group. The College is committed to addressing the imbalance by introducing some new projects to complement existing initiatives, including a College-wide mentoring scheme which can help career development and address barriers, and the Career Moves Guide to create greater transparency about progression for Professional, Technical and Operational staff. The College is also forming a working group which will take a deeper look at the data to gain insight into what this shows about gender, ethnicity and intersectional pay gaps.

Pensions

The College offers three pension schemes to staff and casual workers: the Universities Superannuation Scheme (USS), the Superannuation Arrangements of the University of London (SAUL) and the NHS Pension Scheme. Each scheme has different eligibility criteria, which are related to job roles and pay grades.

USS is a national scheme for universities, research and educational bodies, and it is open at Imperial to all staff in academic or comparable posts. It is a hybrid scheme, partly defined benefit and partly defined contribution. Members currently earn a defined benefit pension on salary up to £58,590 per annum, and contributions on salary above this level are invested into the defined contribution section. Members currently pay 8.8% of salary and the College pays 19.5% of pensionable pay into the scheme each year for each member; however, this increased from 1 October 2019, to 9.6% and 21.1% respectively. A further valuation will take place in 2020.

In March 2018, Universities UK (UUK) and the UCU put benefit reform discussions on hold while a Joint Expert Panel (JEP) examined the 2017 valuation and agreed key principles to underpin a future joint approach. In September 2018, the JEP issued their first report undertaking a retrospective review of the 2017 valuation and exploring the scope of possible adjustments to the methodology which would allow the valuation to be concluded. The initial reaction to the report from UUK and UCU was positive. The College requested that USS gave full consideration to the outputs of the JEP work prior to making any changes to contributions in 2019 and beyond. USS concluded that it is legally required to complete and submit the 2017 valuation to The Pensions Regulator along with the phased increase to contributions covering the period 1 April 2019 to 1 April 2020. They also agreed to perform an additional actuarial valuation at 31 March 2018 and would undertake to incorporate some, not all, of the recommendations from the JEP. This 2018 valuation, which was finalised in September 2019, increases the aggregate combined contribution from members and employers to 30.7% with effect from 1 October 2019, replacing the higher rate arrived at after the 2017 valuation.

SAUL is open to colleges and other institutions with links to the University of London. It is a defined benefit career average revalued earnings scheme whereby a member's pension is based on their pensionable pay right across their career. The College currently contributes 16% of pensionable pay into the scheme year for each member. The scheme is also valued every three years. The last valuation carried out was as at 31 March 2017, which showed a small surplus.

Staff who have pension rights in the NHS Pension Scheme on taking up a post within the College may remain members of the scheme. The scheme rules preclude the College from offering the scheme to anyone who would be joining the scheme as a new member. It is a nationally administered scheme that covers NHS employers, General Practices and other bodies, allowed under the direction of the Secretary of State in England and Wales. It is a defined benefit scheme into which the College currently contributes 14.38% of pensionable pay each year; the rate was due to increase from 1 April 2019 by 6.3%. However, the College, in common with most other medical schools, will only be required to pay an additional 1.8% of pensionable pay for the period to 31 March 2020.

MEng student Lois Liow working on a model of a prosthetic hand in the REDS Lab in the Dyson School of Design Engineering.





Students Kevin Pan (Biotechnology) and Reiss Jones (Biological Sciences) from team Multus Media working on their entry for the 2019 Faculty of Natural Sciences Make-a-Difference competition.



FINANCIAL REVIEW

FINANCE FOREWORD



**MR MUIR
SANDERSON**
CHIEF FINANCIAL
OFFICER

Imperial remains in a sound financial position. Undergraduate and postgraduate applications continue to rise. Our volume of research activity increases steadily. Philanthropic donations have reached their highest ever levels. We remain a world class university according to the rankings and our peers. We have many reasons to be confident and proud.

However, it is also clear that as our cost base is increasing more rapidly than our income, we need to take urgent and decisive action to reverse this position. We therefore also have reasons to be nervous.

On the cash side, the £78 million of cash from operations that we generated in 2018–19 was our lowest since 2009–10 and some way below our target of £100 million (circa 10% of income) which we regard as the minimum level of annual investment in an estate of our size needed to maintain a world class university. Furthermore, the £78 million figure includes the cash from both our revenue-generating assets used to service and repay our debt and from our endowment which we need to grow for the long-term. After stripping these out along with the operational cash which is restricted to specific purposes (mainly research grants), then we are left with around £30 million of unrestricted cash from the core academic mission that is available for discretionary purpose. Our fundraising and success in attracting government capital grants has allowed us to close most of the gap between internally generated funds and our cash target this year but both these sources are intrinsically volatile.

The deficit of £39 million we are reporting for 2018–19 is a reduction of £120 million from last year's reported surplus of £80 million. This is nearly all driven by the accounting for the pension provision. Whilst it is tempting to dismiss this as a non-cash item, it is a clear reminder of the importance and difficulty of generating sufficient funds to attract and retain world class talent and in particular the urgent need to agree a pensions solution that is fair, attractive and sustainable.

None of these challenges are new and, as discussed in previous annual reports, we are several years into an ambitious programme to reduce our non-academic cost base whilst simultaneously improving service levels. This programme has been challenging and results have been slower to arrive and harder to deliver than we expected. We have had to tackle the ambiguity of university decision rights, the complexity of a highly customised legacy IT infrastructure, the needs of disparate stakeholders and the reality that a university is not a corporation.

However, slowly change is starting to arrive as some of our large programmes begin to deliver, for instance, replacing our student records system. There is now an agreed and clear distinction between those programmes that are close to the heart of the academic mission where consensus building is essential and those where a more standardised approach needs to be taken. Improved clarity around decision rights and accountabilities should help us move forward at greater speed.

This need to improve cash generation has also forced us to tackle the difficult issue of rate of growth. Historically, Imperial has always tended to increase its cashflow and profitability by growing its income. However, we are now at the point where further substantial growth in our existing estate is likely to have a detrimental impact on student experience, an area where our National Student Survey scores show we are already far from perfect.

We are fortunate to have room to expand at White City but at our current level of cashflow it will be some time before we can fund this growth. This inevitably forces us to focus more on cost rather than revenue and to prioritise and make choices. Never easy in a decentralised, academic institution.

Crucially, there is shared ownership of the challenges. A new Finance Task Force, including the Deans of the Faculties and some Council members as well as the Chief Financial Officer and the Provost, has been established to oversee progress and ensure that we deliver the benefits we need. They will be reporting back to the College's Executive and Council on a regular basis.

The next twelve months will be important as we tackle these challenges in an external world that is likely to be even more volatile than this year. We have much to do and I look forward to updating you on progress in next year's report.

Mr Muir Sanderson
Chief Financial Officer

FIVE-YEAR CONSOLIDATED SUMMARY OF KEY STATISTICS

	2019 £m	2018 £m	2017 £m	2016 £m	2015 £m
Income and expenditure					
Tuition fees and education contracts	313	296	265	244	223
Funding Council grants	157	150	143	154	159
Research grants and contracts	368	364	361	351	436
Other income	152	151	152	177	136
Investment income	7	8	8	9	9
Donations and endowments	76	64	62	33	36
Total income	1,073	1,033	991	968	999
Staff costs	537	502	483	462	441
Pension provisions	117	(4)	(2)	24	29
Other operating expenses	376	358	344	331	310
Depreciation	79	68	65	69	62
Interest and other finance costs	20	20	19	15	14
Total expenditure	1,129	944	909	901	856
Surplus/(deficit) before other gains and share of results of JVs and associates	(56)	89	82	67	143
Gain/(loss) on investments and disposals of non-current assets	19	(6)	26	17	21
Gain on disposal of interest in associates	-	16	5	4	-
Share of results in joint ventures and associates	(2)	(19)	6	(10)	(4)
Taxation	-	-	-	-	(13)
Surplus/(deficit) for the year	(39)	80	119	78	147
Balance sheet					
Non-current assets/endowment assets	2,258	2,188	2,078	1,840	1,707
Net current assets/(liabilities)	49	54	105	(28)	14
Long term creditors and provisions	(732)	(629)	(649)	(397)	(385)
Net assets	1,575	1,613	1,534	1,415	1,336
Capital expenditure					
Externally funded	34	52	50	29	74
Internally funded	145	135	160	157	162
Total in-year fixed asset additions	179	187	210	186	236
Liquidity					
Cash, cash equivalents and current asset investments	293	311	345	193	239
Loans	(456)	(465)	(471)	(207)	(212)
Finance leases	(89)	(90)	(90)	(91)	(92)
Net funds	(252)	(244)	(216)	(105)	(65)
Cash flow from operating activities	78	112	111	96	89
Student numbers (headcount)					
Full-time students – undergraduates (UG)	10,054	9,767	9,583	9,320	9,054
Full-time students – postgraduates (PG)	7,514	7,287	6,709	6,414	6,236
Part-time students (PG only)	1,603	1,361	1,274	1,148	1,057
Total	19,171	18,415	17,566	16,882	16,347
Number of full-time equivalent staff	7,868	7,608	7,600	7,626	7,516
Staff costs as a percentage of expenditure	58%	53%	53%	54%	55%
Staff costs as a percentage of expenditure excluding pension provision	53%	53%	53%	53%	53%

FINANCIAL REVIEW

1. Summary

Imperial's financial results in 2018–19 are dominated by a £118.6 million increase in the provision for our contribution to the USS pension deficit recovery plan. This follows the finalisation of the 2017 valuation during the financial year. This non-cash charge has turned what would have been a net comprehensive income surplus of £79.2 million into a deficit of £39.4 million. The 2018 USS valuation was finalised in September 2019 and will result in around £75.4 million of this increase being reversed in 2019–20. The extreme volatility is due to the College being required to account for the value of pension deficit funding it is committed to in the period that the new schedules of contributions are signed.

Our cash generation from operations fell to £78.4 million, £33.5 million down on the prior year. Although tuition fee income and funding for research overheads both increased, these were outstripped by the growth in internally funded operating costs. In part this reflects decisions we have made to invest in, for example, the quality

of the teaching and learning experience for our students; for example over 60 new staff were recruited last year to help review our curricula and update our teaching approaches. However, it also reflects the growing cost of employment, with the College agreeing a pay settlement for 2018–19 that was above the national pay level and the rising cost of pensions, see the Principles of Remuneration section.

The level of cash has not materially changed during the year. It was expected to decrease as investment into our capital programme continued (£178.8 million) however, unplanned assets sales meant this did not happen. We expect our cash balance to reduce in the next couple of years as we complete the current phase of our capital programme.

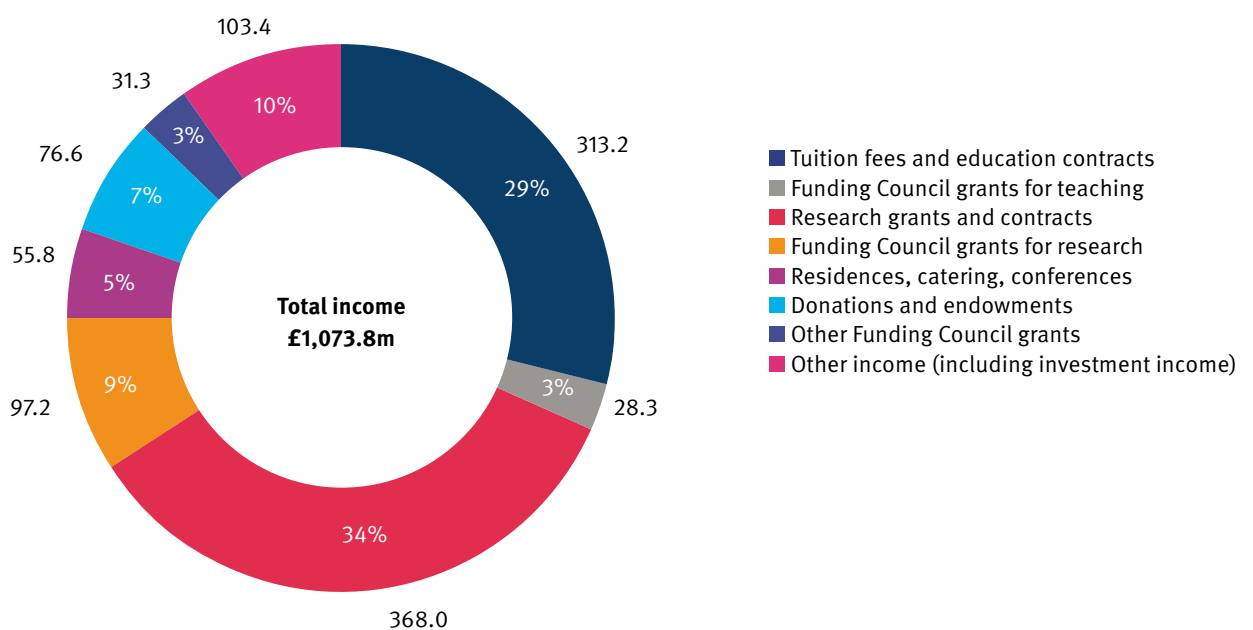


The Queen's Lawn at the South Kensington Campus.

2. Income

The College's total income in 2018–19 was £1,073.8 million, up 3.9% on 2017–18. Over the last five years, income has grown an annualised 3.4% (excluding the one-off research and development credit of £60.7 million in 2014–15). This compares to an annualised inflation of 1.5% (CPI) over the same period. The largest increase in absolute terms has been in tuition fees and education contracts, rising by £89.8 million since 2014–15. This is an average increase of 8.8% per annum on the back of student numbers rising by an annualised 4.1%. Over the five-year period the largest increase in income in percentage terms has been from donations and endowments with annualised growth of 20.9%, which is helping us meet our strategic objective to strengthen and diversify our revenues. This income source tends to be more volatile with year-on-year movements generally reflecting the value of large capital donations recognised in those years.

2018–19 Income by source (£ million)



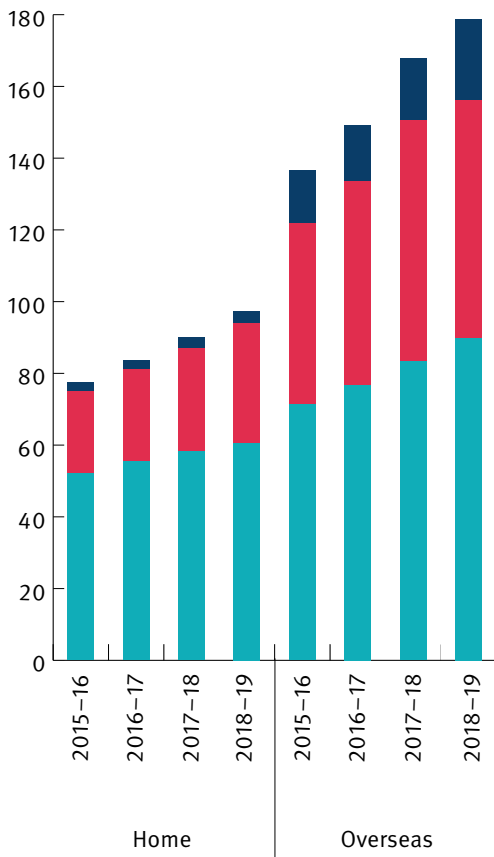
Income from education

Income from tuition fees and education contracts grew by £17.3 million (5.8%) in 2018–19 to £313.2 million. Our student population has increased to 19,171, with postgraduate student numbers increasing by 5.4% and undergraduates by 2.9%. There has been a particularly high increase in part-time postgraduate students, increasing 17.8% in the year. Overseas tuition fee income has grown more than our UK and other EU fee income. Driving factors behind this are higher growth in overseas students and the UK and other EU undergraduate fee being capped at £9,250 for 2017–18 and 2018–19.

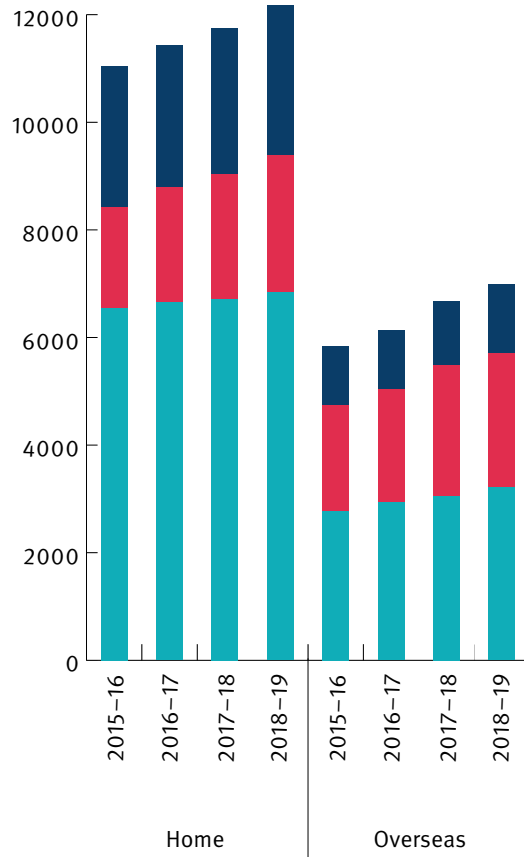
The College has continued to see growth in applications at both undergraduate and postgraduate level. EU applications were up 5.6% from 2017–18 (undergraduate 3.6%; postgraduate 7.2%), despite the ongoing political uncertainty around Brexit.

Around a third of the College’s students are from outside the UK and the rest of the EU. This percentage has remained stable over the past few years but is dominated by a relatively small number of countries. We have recruited a new Head of Student Recruitment Strategy tasked with reducing this concentration risk.

Growth in tuition fee income (£ million)

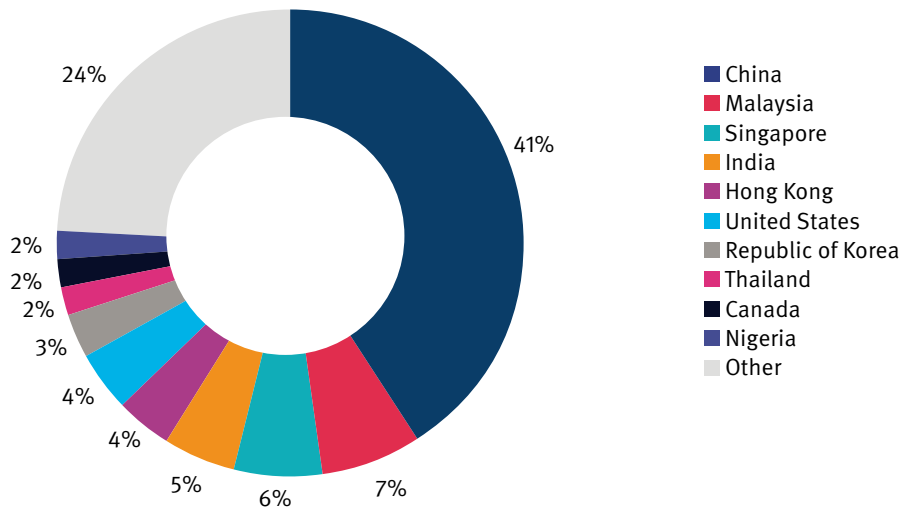


Growth in student headcount

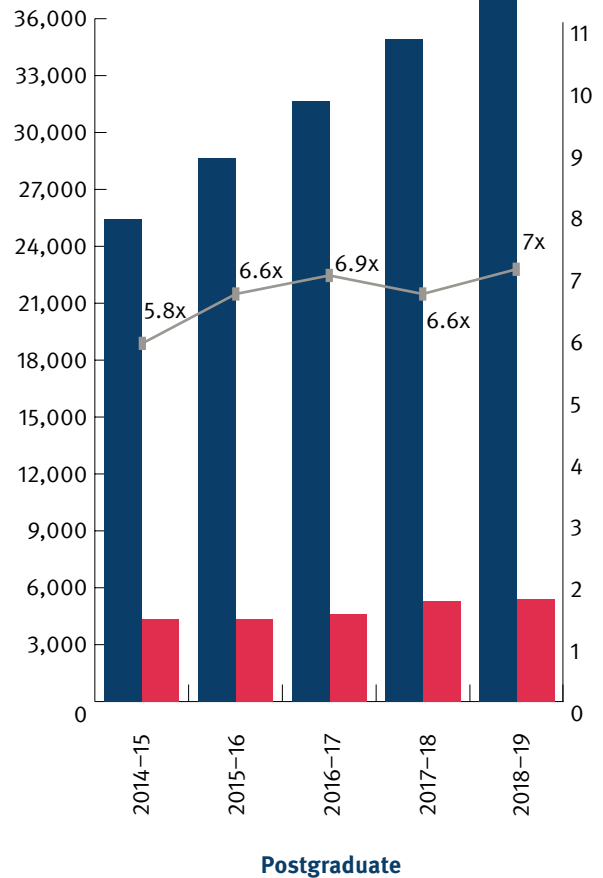
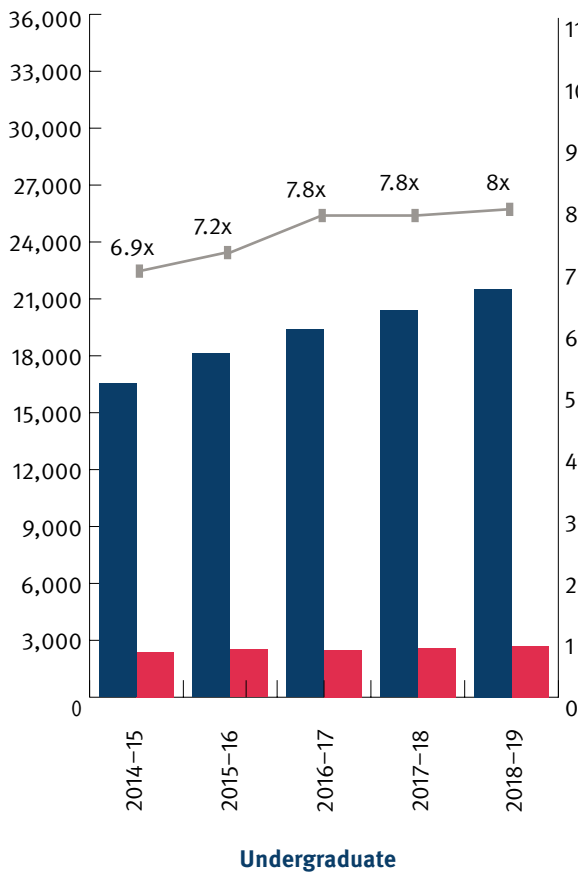


■ Undergraduate (UG) ■ Postgraduate taught (PGT) ■ Postgraduate Research

Student headcount by non-EU nationality 2018–19



Ratio of applications to enrolled student numbers



■ Total Applications ■ Enrolled ◆ Applications to enrolled

Income from Funding Council grants

Grants from our Funding Councils (Office for Students, UK Research and Innovation) increased by £6.3 million (4.2%) in 2018–19 to £156.8 million. The teaching grant was broadly unchanged but there was additional money for research. The latter includes funding for research degree programmes, a new strategic priorities fund supporting multidisciplinary programmes and funding from the Connecting Capability Fund which supports university collaboration in research commercialisation. We also received the final tranche of £10.8 million of the £20 million capital grant towards the Sir Michael Uren Biomedical Engineering Research Hub, meaning capital grant income increased by £2.2 million year-on-year.

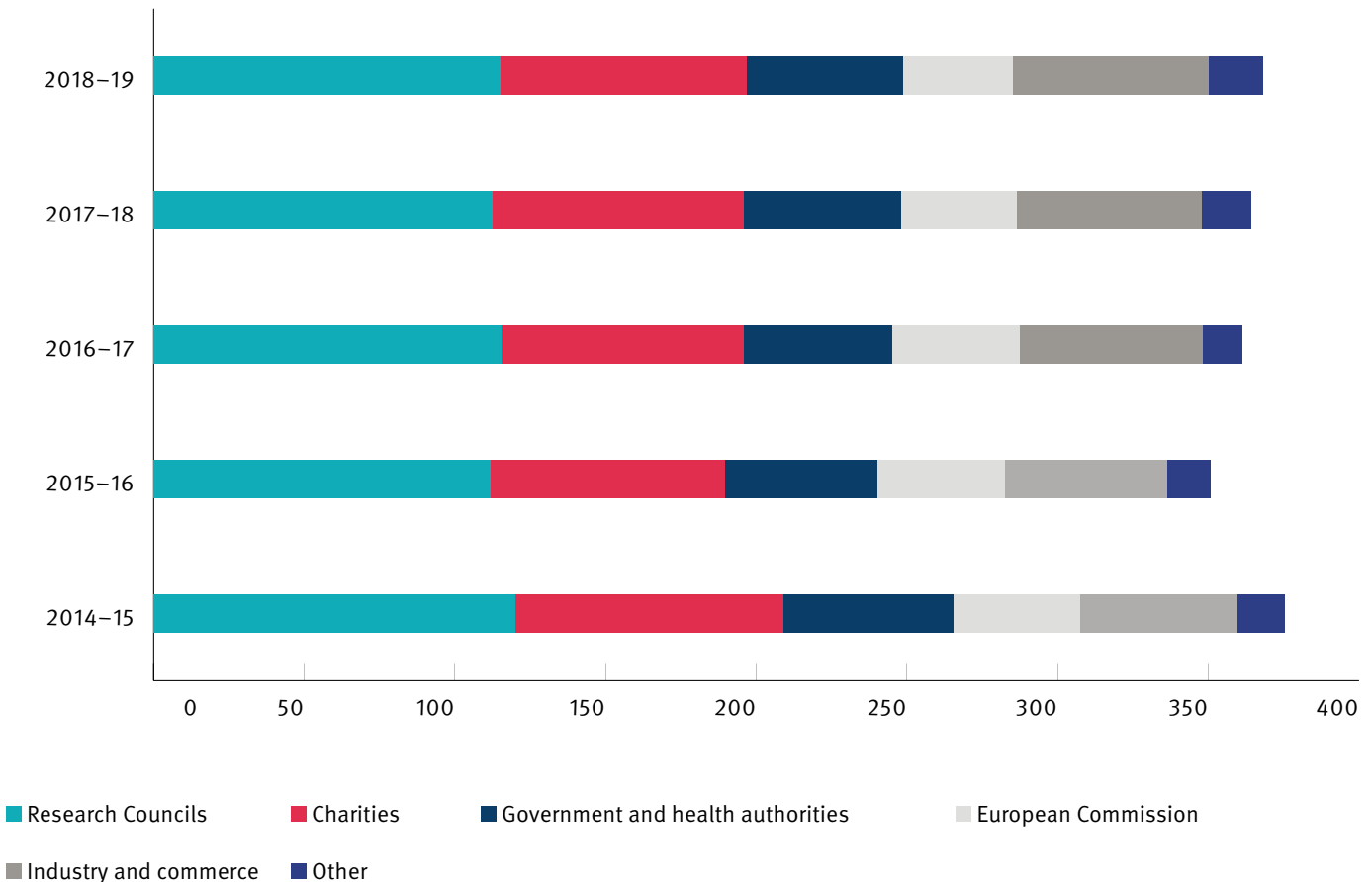
Income from research

Research grant and contract income in 2018–19 increased by £3.8 million compared to the prior year to £368.0 million. This includes capital funding, which can be volatile; stripping this out, underlying growth was 2.2%.

In 2018–19 the College won £344 million to fund research projects, lower than last year’s record high (£428 million) but in line with the two years prior to that. There is always a lag between the award of funding and the mobilisation of the research project, with the awards won in a given year spent over the life of the project (typically three to five years) and the income in the accounts matched to this in most cases. The fact that the average value of awards won over the past two years is higher than current year reported income of £368 million provides some reassurance that research volume should continue to grow.

The source of research funding is important for financial sustainability, with many funders not covering the full cost of research projects. Industry funders typically contribute the most and research grants and contracts income from this source has

Sources of research grant income (£ million)



grown 24% in the past five years in line with our strategy. The value of new awards from industry increased by £10.0 million in 2018–19 and industry awards represented 21% of total new awards, up from 14% in 2014–15. Again, because of the time it takes to mobilise projects, this increase will only start to be reflected in the income booked from industry in future years.

Donations, Endowments and Other income

The record income recognised in the accounts from donations and endowments in 2018–19 comprises £23.8 million of research donations, £14.9 million for new endowments and £27.4 million of donations for capital projects. The largest donation recognised in the year was £23.0 million from Community Jameel to support the fundraising campaign for the School of Public Health. Launched in June 2018, this ambitious £100 million campaign aims to fund a new hub for health and wellbeing research at the College’s White City Campus, supporting work in: World Health; Food and Nutrition; Community Health and Policy; and Children’s Health and Wellbeing. Half of the total aspired to has been raised so far.

Other income rose by £1.2 million to £152.1 million, with small movements across several of our income streams.

3. Expenditure

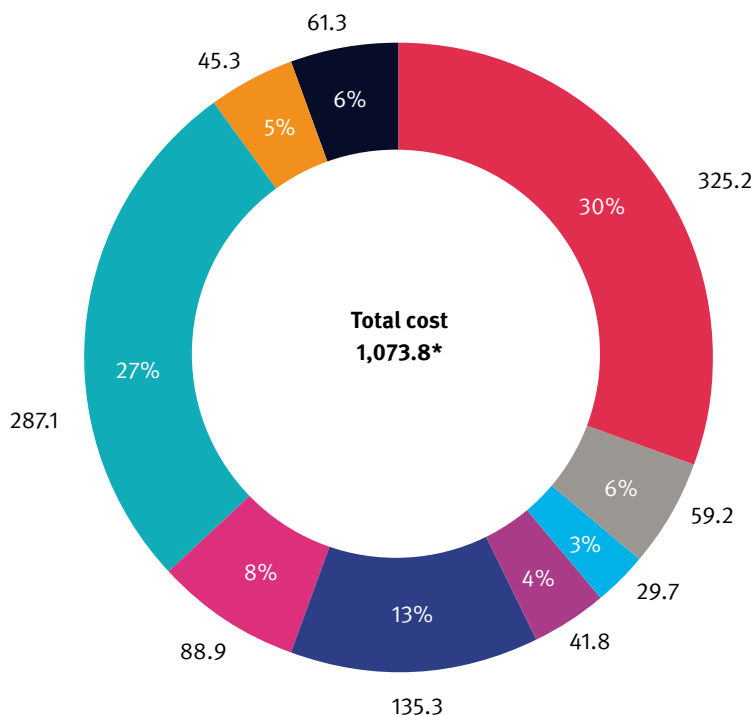
Our total expenditure in 2018–19 was £1,129.6 million. This includes an increase of £118.6 million in the USS pension provision which is discussed further in the Expenditure on staff section below. The underlying growth in expenditure, excluding the pension provision, is 6.8% (£64.2 million).

Expenditure on staff

Staff costs, including the pension provision, make up 58% of our total expenditure this year. This drops to 53% if the increase in the pension provision is removed and brings the ratio of staff costs to total expenditure into line with the last five years.

The USS pension scheme is currently in deficit. The scheme rules require members to contribute to a deficit recovery plan to help bridge this gap. The accounting standards require members to recognise the total remaining cost of this commitment as a provision in their accounts each year-end. Year-on-

Total cost by category (£ million)



Academic departments

Academic department delivery and support of student teaching and learning, research-led teaching and research projects. Including academic and support staff salary costs and resources.

IT, library and academic services

Includes IT expenditure in academic departments, library and e-learning resources provided by the College.

Student support

Includes counselling services, careers advice, external examiner fees and health services.

Scholarships and bursaries

Estate

Cost of maintaining and running College buildings, student teaching spaces, research laboratories, student support premises and sports buildings.

Running the university

Cost of running the College and central functions like admissions, finance, human resources, public relations and administrative systems.

Direct research expenditure

Residences, catering, conferences

Surplus for reinvestment

Reinvested to enhance teaching, research, facilities and the student experience.

*Excluding the pension provision, including surplus delivered to fund future commitments and the capital programme

year underlying staff costs, excluding the pension provision increase, have increased by £34.3 million (6.8%) to £536.7 million. This was due in equal measure to both salary and headcount increases.

In terms of salary cost, the pay award the College implemented in 2018–19 was again higher than the 2% national award. We also made targeted increases to the starting salaries of all academic and research grades. Further details on salaries are contained in the Principles of Remuneration section.

We had an additional 260 full-time equivalent (FTE) members of staff (3.4% increase) at the end of July 2019 compared to July 2018. In contrast, numbers had stayed broadly flat in the previous three years. The total comprises both internally and externally funded staff. The latter dropped by 40 FTEs year-on-year meaning there was a net increase in the number of staff funded directly by the College of 300 FTEs. This means the percentage of our staff costs funded by external sources dropped from 41% to 38% in 2018–19. This places greater strain on our resources and will be monitored carefully going forwards.

Some of the growth in FTEs has been targeted at specific new initiatives. For example, 60 of the 300 FTEs were hired to help deliver our ambitious Learning and Teaching strategy. The decision to repatriate the technology transfer office from a third party (IP Group) has added a further 24 FTEs to the College's internally funded payroll, but we believe this will improve our control over the translation of our work and enable our academics to access with a wider range of investors. However, we are alert to the risk of incremental growth in internally-funded staff numbers, especially as the majority of the increases are not in academic staff, which is why we are addressing the efficiency of our support processes as a matter of urgency.

Expenditure on non-staff costs

Our other operating expenses increased by £18.8 million (5.3%) to £376.4 million.

Our Chemistry department moved into the recently opened Molecular Sciences Research Hub in White City this year, providing additional space and flexible infrastructure to realise the potential for major advances in chemical and molecular sciences. Increasing the space we occupy, especially at a time when our utility costs are rising anyway, has naturally added to our running costs and overall our premises-related expenditure grew £7.1 million this year.

We spent an additional £3.5 million supporting students through bursaries and scholarships, some of which was funded by research grants and contracts. This represented a 7.1% increase compared to last year and underlines our commitment to supporting students from all socio-economic backgrounds.

The other significant increase was in ICT (£3.6 million), which is attributed to several major projects including upgrading our connection to the Joint Academic Network to give us the fastest internet connection of any UK institution and relocating further activity to the data centre in Slough to improve IT resilience and release space on our South Kensington Campus.

Depreciation increased by £11.1 million, with over half of this increase attributed to the opening of the Molecular Sciences Research Hub mentioned above. The other significant contributor to the increase is the building housing the Dyson School of Design Engineering which opened in May 2018, as this was the first full financial year it was in operation.

Interest and other finance costs have remained similar to prior years as no new debt was secured this year and 96% of our debt is on fixed interest rates.

4. Cash movement

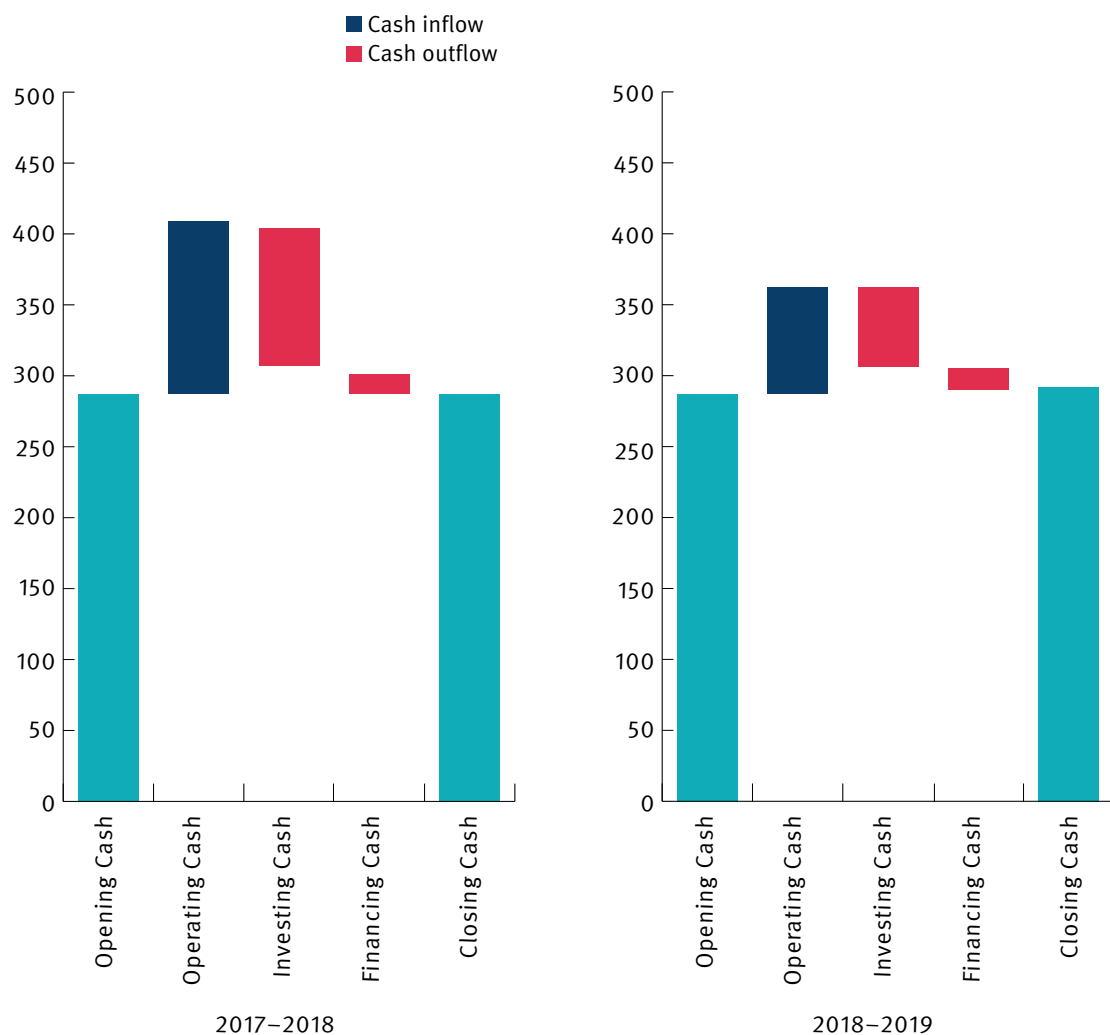
	2018–19 (£m)	2017–18 (£m)
Cash and cash equivalents at beginning of the year	287.0	286.8
Cash inflow from operating activities	78.4	111.9
Financing activities	(15.2)	(14.2)
Investing activities	(59.3)	(97.3)
Exchange gains/(losses) on cash and cash equivalents	1.4	(0.2)
Cash and cash equivalents at end of the year	292.3	287.0

Cash from operating activities fell by £33.5 million to £78.4 million. This reflects the growth in spend, particularly staff costs, outstripping the growth in income. Favourable working capital movements have helped mitigate what would have been a higher reduction by contributing £15 million overall, with the net amount of pre-funding we receive from research partners increasing by £18 million.

Although we broadly maintained the level of investment in our infrastructure, our net investing activities were lower by £38 million this year.

This was partly due to the property sales that are detailed in the other gains and losses section below and also a result of the disposal of £38 million in investments managed by our external fund managers. The cash outflow from financing activities was slightly higher in 2018–19 than the prior year as we started repayments on a recent amortising loan. Overall though, the level of cash and cash equivalents at the end of the year was slightly higher than in the prior year despite the reduction in the level of cash from operations.

Cash movements 2017–18 and 2018–19



5. Capital programme

The College invested £178.8 million on fixed assets in 2018–19, continuing its significant investment into its infrastructure. Internally funded spend has reduced over the past five years as we complete the current phase of our capital programme, which included the major investment at White City.

Significant capital projects completed in 2018–19 included the second phase of the refurbishment of the former Post Office building at the South Kensington Campus, for use by the Dyson School of Design Engineering. The 34-storey residential tower at the White City Campus was due to be completed in January 2019. A major flood two months prior to this has pushed the project back by about a year. Despite this setback, demand has been strong for 59 key-worker apartments set aside for the Imperial academic community. The Sir Michael Uren Biomedical Engineering Research Hub is due to complete in January 2020, at a cost of £126 million, providing laboratory and office space for interdisciplinary, translational research initiatives at the interface of biomedical sciences

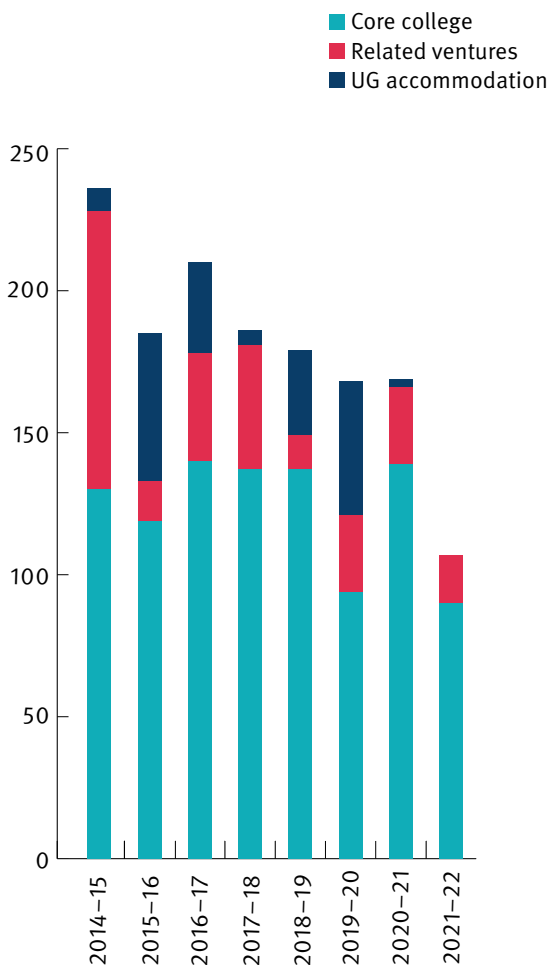
and engineering. Construction continued during 2018–19 on our latest hall of residence, which will deliver 729 student bed spaces and 85 residential apartments at North Acton. This project is due to complete in July 2020.

6. Other gains and losses

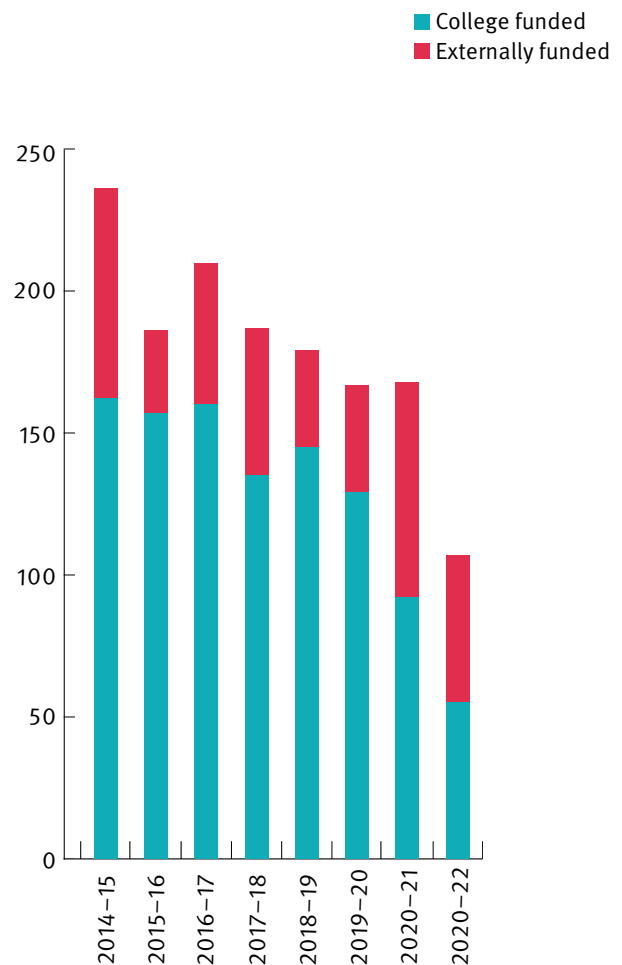
The £3.4 million gain on disposal of non-currents assets is a combination of gains from sale of properties offset against the deconsolidation of the College’s students’ union. The material movements are detailed below.

The largest gain on a property sale was £7.9 million which arose from the disposal of a commercial research building on the Babrahams Research Campus in Cambridge. The total construction cost was £13.5 million and it was sold, fully tenanted, for £20.9 million in March 2019. The Endowment’s property portfolio made gains of £2.9 million from the sale of properties. This is part of

Capital expenditure by category (£ million)



Capital expenditure by funding type (£ million)

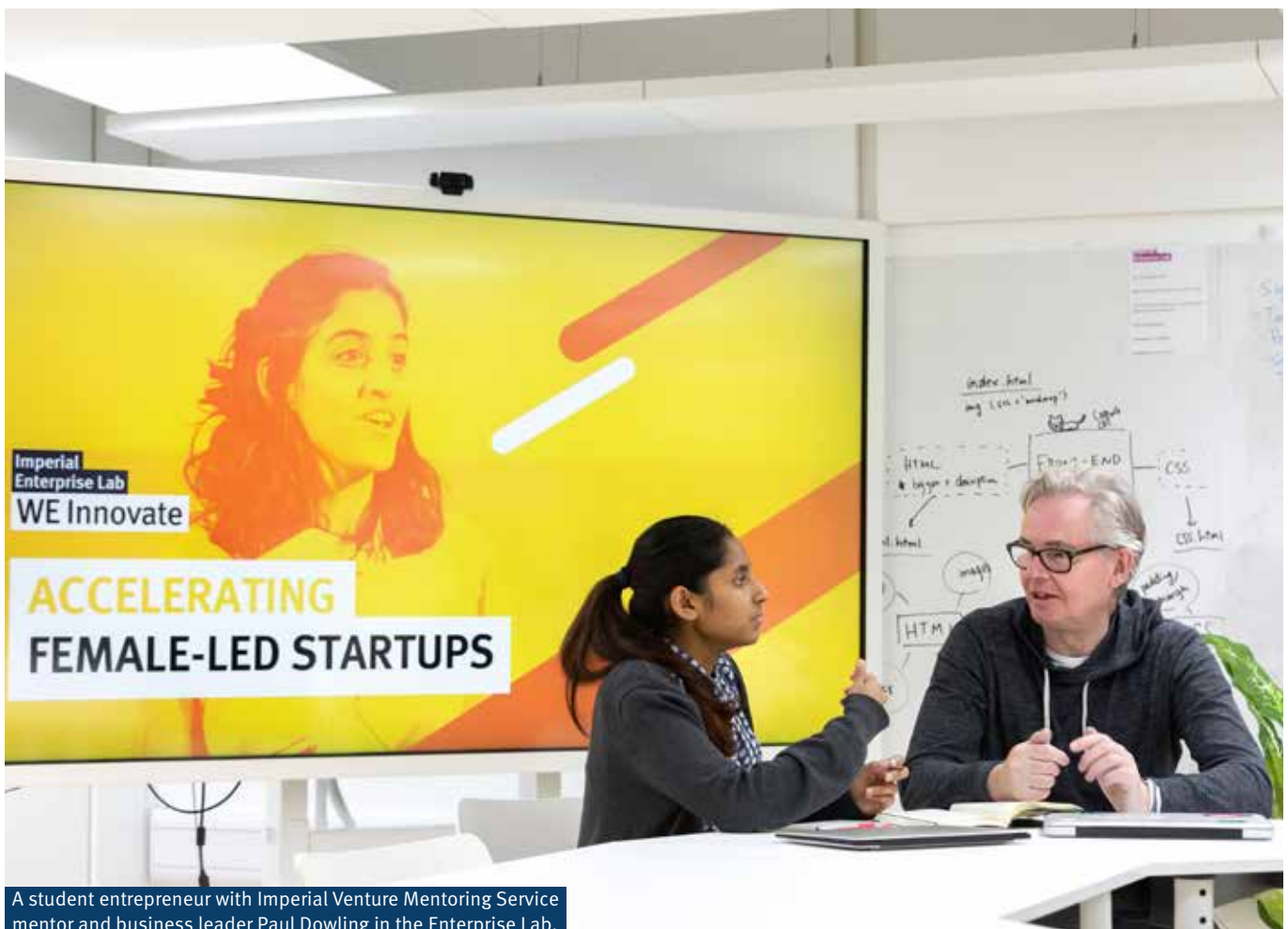


their strategy to realign the portfolio to focus on assets close to our existing estates in London.

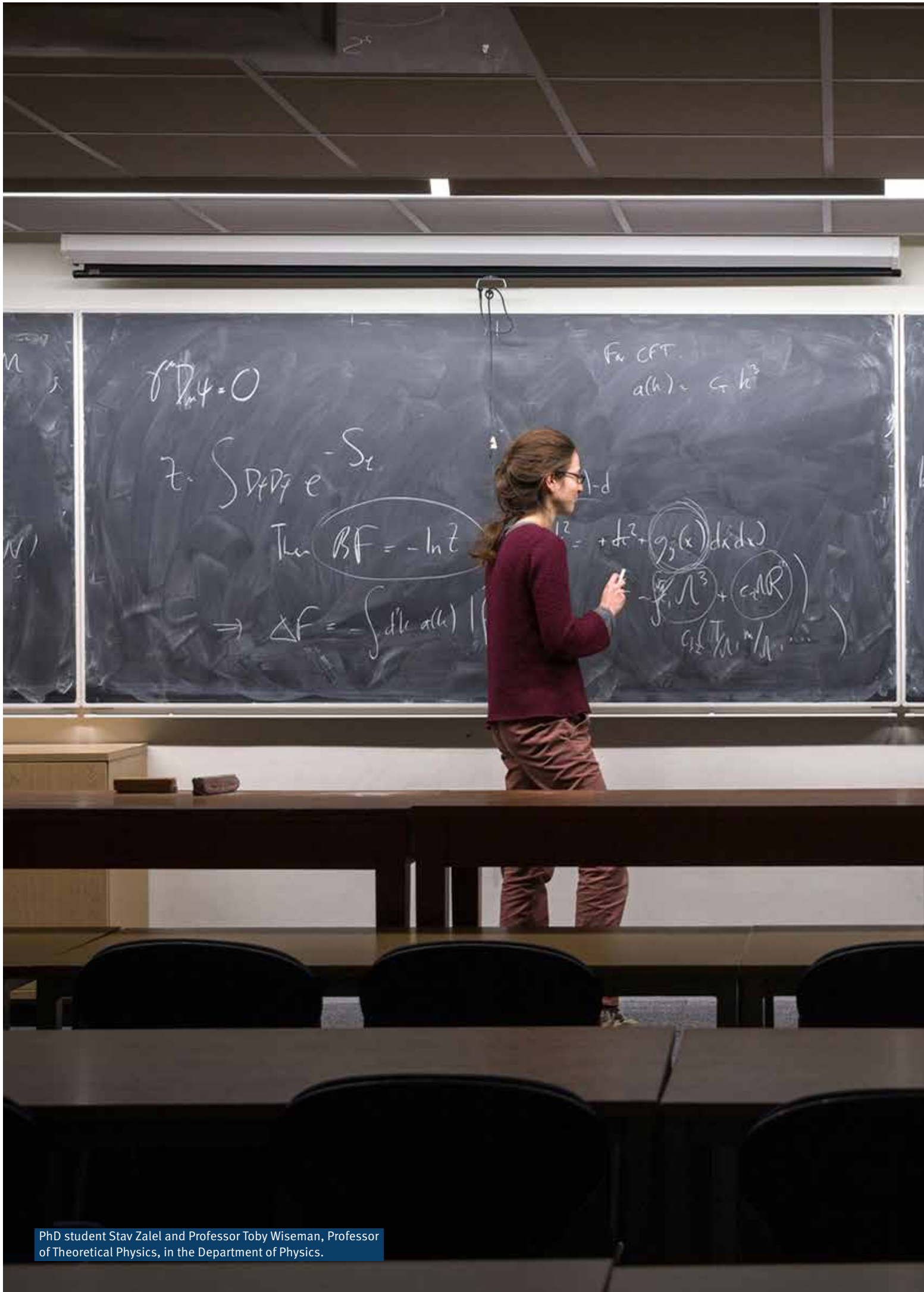
Up until 23 November 2018 the College's students' union results were consolidated. Its constitution was changed to give it more control over their day-to-day activities with the College no longer able to change the Union's bye-laws. This triggered a review which concluded that it was no longer appropriate to consolidate its results, aligning its status with the majority of students' unions within the sector. This resulted in a loss on disposal of non-current assets of £7.6 million.

The £15.5 million gain on investments is a combination of gains and losses, with the material movements highlighted. There was a gain for the Endowment's externally managed investments (£22.9 million) and a gain for one of our properties that has been reclassified as an investment property. This was triggered by a school entering into a lease to use it, and it is now held at market value instead of cost (£22.2 million gain). This was offset by a loss in the College's holding in IP Group plc, driven by a 40% share price reduction during the year (£30.4 million).

The £1.9 million deficit in associate relates to the College's share of the operational loss reported this year by TWIG, a company that leverages an online platform providing resources to primary schools.



A student entrepreneur with Imperial Venture Mentoring Service mentor and business leader Paul Dowling in the Enterprise Lab.



PhD student Stav Zalel and Professor Toby Wiseman, Professor of Theoretical Physics, in the Department of Physics.

CORPORATE GOVERNANCE

$$L = \int dx \operatorname{tr} (F^2 + (D\phi)^2 + [\phi, \phi]^2 + \dots)$$

Large N
decoupling

$$G$$

Students working in a newly refurbished lecture theatre in the Royal School of Mines. The refurbishment is part of a long term project to improve teaching and learning spaces across the College.



OUR GOVERNANCE STRUCTURE

The College's President has ultimate responsibility for Imperial College London's strategic direction, functions and activities. She is supported in this by the Provost, who has direct responsibility for the delivery of the College's core mission in education and research. Three separate bodies – the Council, the Court and the Senate – each oversee different elements of the College's activities.

Principles

The College is committed to exhibiting best practice in all aspects of corporate governance. It endeavours to conduct its business in accordance with the seven Principles identified by the Committee on Standards in Public Life (selflessness, integrity, objectivity, accountability, openness, honesty and leadership), and with the guidance to universities from the Committee of University Chairmen in its Higher Education Code of Governance, which was published in 2014 and revised in June 2018.

Legal Status

The College is an independent corporation whose legal status derives from a Royal Charter granted under Letters Patent in 1907. Its objects, powers and framework of governance are set out in its Charter and Statutes, which were granted by Her Majesty The Queen in 1998. On 4 April 2007 a Supplemental Charter and Statutes were granted by Her Majesty. This Supplemental Charter, which came into force on the date of the College's Centenary, 8 July 2007, established the College as a university with the name and style of "The Imperial College of Science, Technology and Medicine".

Governance and Internal Control

The Charter and Statutes require the College to have three separate bodies, each with clearly defined functions and responsibilities, to oversee and manage its activities as follows:

The **Council** is 'the governing and executive body of the College', and is responsible for the finance, property, investments and general business of the College, and for setting its general strategic direction. There are up to 23 members of the Council, the majority of whom are external members, including the Chair and Deputy Chair. Also included in its membership are representatives

of the staff of the College and of the student body. None of the external members receive any payment, apart from the reimbursement of expenses, for the work they do for the College. The Council meets at least four times a year.

The **Court** brings together alumni and neighbourhood organisations as key stakeholders, to help the College further the implementation of its strategy. Alumni members are drawn widely from amongst those who are actively engaged with the College and College activities. Local organisation members come from those organisations with a close link to College life. Its membership also includes representatives from the Council and from the College's senior management. The Court has 34 members in total. In addition to its active engagement in the evolving implementation of the College Strategy, changes to the College's Charter require the approval of the Court before they can be submitted to the Privy Council. The Court normally meets once a year.

The **Senate** is the academic authority of the College and draws its membership entirely from the staff and students of the College. Its role is to direct and regulate the teaching work of the College.

The principal academic and administrative officer of the College is the President who has responsibility to the Council for maintaining and promoting the efficiency and good order of the College. Under the terms of the Office for Students' Regulatory Framework for Higher Education in England, the President is the designated 'accountable officer' as Head of the Institution.

In that capacity she can be summoned to appear before the Public Accounts Committee of the House of Commons. The financial management of the College is prescribed in the Financial Ordinance approved by the Council and conducted in accordance with the terms of registration with the Office for Students, as set out in the Regulatory Framework for Higher Education in England.

The President has ultimate responsibility for all of the College's functions and activities, but gives greater emphasis to Imperial's external relationships, development and fundraising. The President is supported in this by the Provost, who has direct responsibility for the delivery of the College's core mission: education, research and translation. The Provost reports directly to the President and together they have responsibility for the strategic direction of the College.

As chief executive of the College, the President exercises considerable influence upon the development of institutional strategy, the identification and planning of new developments, and the shaping of the institutional ethos. She is supported in this by a President's Board whose primary function is to plan for and address issues of

broad, strategic, and College-wide significance.

The Provost is responsible for the delivery of the College's academic mission, overseeing the quality, capacity and efficacy of research, education and innovation and engagement. This includes the overarching academic strategy and its implementation; the College policies supporting recruitment, development and retention of academic and research staff appointed by the Faculties; attracting students, ensuring their experience is commensurate with the College's stature; and supporting their life and wellbeing across the learning environment. He also has responsibility for delegated budgets and their financial control. He is advised by Provost's Board, which sets out and monitors key performance and risk indicators, prioritises and oversees initiatives to improve the delivery of the academic mission, as well as reviewing policies and protocols that support the institutional culture.

The Council is responsible for the College's system of internal control and for reviewing its effectiveness. Its approach is risk-based and includes an evaluation of the likelihood and impact of risks becoming a reality and also ensures that risk assessment and internal control procedures are embedded in the College's ongoing operations. The reviews included in the College's risk-based Strategic Audit Plan cover business, operational and compliance issues as well as financial risk. Such a system of internal control is designed to manage rather than eliminate the risk of failure to achieve business objectives and can only provide reasonable, and not absolute, assurance against material misstatement or loss.

The Council's view is that there is an ongoing process for identifying, evaluating and managing the College's significant risks that has been in place for the year ended 31 July 2019 and up to the date of approval of the Annual Report and Accounts, that it is regularly reviewed by the Council and that it accords with the internal control guidance for directors in the Combined Code as deemed appropriate for higher education. KPMG, as the College's internal auditors, judged that significant assurance could be taken on the overall adequacy and effectiveness of the College's framework of governance, risk management and control for the period 1 August 2018 to 31 July 2019 with only minor improvements needed. The Council consider there were no significant internal control weaknesses requiring disclosure.

The Council has six committees, to which it delegates part of its authority: the Audit and Risk Committee, the Endowment Board, the Finance Committee, the Imperial White City Syndicate, the Nominations Committee and the Remuneration Committee. These are formally constituted as committees of the Council with written terms of reference and specified membership, including a

significant proportion of external members. With the exception of the Endowment Board (which is chaired by an external member with considerable investment expertise), all are chaired by external members of the Council. The decisions of these committees are reported formally to the Council.

The **Audit and Risk Committee** meets four times a year with the College's internal and external auditors in attendance. It considers detailed reports together with recommendations for the improvement of the College's systems of internal control and management's responses and implementation plans. It also receives and considers reports from the Office for Students as they affect the College's business and monitors adherence to regulatory requirements. It reviews the College's Risk Register each year, and will also devote time to the in-depth consideration of the College's long-term strategic risks. The Committee reports directly to the Council and has the authority to call for any information from the College officers, from internal and external auditors and from others whom it considers necessary to consult in order to discharge its responsibilities effectively. Whilst senior officers attend meetings of the Committee, they are not members of it. At least once a year the Committee meets separately with the internal and external auditors on their own for independent discussions. The Audit and Risk Committee receives regular reports from Internal Audit, as well as commissioning reports from senior management. Its role in this area is confined to a high level review of the arrangements for internal control, value for money, risk management and the arrangements for the management and quality assurance of data submitted to formal funding bodies at the College. The emphasis is on obtaining the relevant degree of assurance and not merely reporting by exception.

The **Endowment Board** manages those College assets that are not essential to the core academic mission of the College and that can therefore be managed with a pure investment focus. Its Terms of Reference include an obligation to maintain a diversified portfolio of investments, to have regard to the suitability of the investments within this portfolio and to manage the investments in a way that is appropriate to achieve the Investment Objective set by the Council. The Investment Objective necessitates growth in value of the non-core assets in line with a margin above inflation whilst also providing a regular distribution for the core academic mission of the College. Within these restrictions, the Endowment Board is authorised to make such investments as it sees fit.

The **Finance Committee** is responsible for providing the Council with a strategic overview of the College's finances, with a focus on the longer-term financial plan and the actions taken to achieve it. It also monitors financial risks related

to liquidity, debt, resource allocation and financial contingencies, and reviews various financial measures at each meeting. The Finance Committee is also responsible for approving capital projects with a value of between £10 million and £30 million. Its membership includes one member with cross membership of the Audit and Risk Committee.

The **Imperial White City Syndicate's** primary role is to advise Council on recommendations made to it by the President's Board regarding all aspects of the development of the Imperial White City Campus: masterplanning, commercial strategy, and financial strategy. It also provides advice and guidance to the President's Board on the execution of Council decisions.

The **Nominations Committee** considers nominations for membership of the Court and Council and for the latter's Committees.

The **Remuneration Committee** reviews and approves the remuneration of the President and the Provost, their senior staff direct reports and members of the Provost's and President's Boards. The list of post holders within the remit of the Remuneration Committee as at 31 July 2019 was:

- Professor Neil Alford, Associate Provost (Academic Planning)
- Mr Luke Blair, Vice-President (Communications and Public Affairs)
- Professor Nigel Brandon, Dean, Faculty of Engineering
- Professor Simone Buitendijk, Vice-Provost (Education)
- Professor Maggie Dallman, Associate Provost (Academic Partnerships)
- Professor Alice P. Gast, President
- Dr Simon Hepworth, Director of Enterprise
- Professor Nick Jennings, Vice-Provost (Research and Enterprise)
- Mrs Louise Lindsay, Director of Human Resources and Organisational Change
- Mr Michael T. Murphy, Vice-President (Advancement) (*from 17 June 2019*)
- Mr John Neilson, College Secretary
- Mr Muir Sanderson, Chief Financial Officer
- Professor Francisco Veloso, Dean, Imperial College Business School
- Professor Ian Walmsley, Provost
- Professor Jonathan Weber, Dean, Faculty of Medicine
- Professor Tom Welton, Dean, Faculty of Natural Sciences

It also reviews the College's overall reward strategy to ensure that its remuneration practices are being managed in a fair and equitable way. The Remuneration Committee is normally chaired by the Chair of the Council, except for proceedings addressing the President's remuneration, which are chaired by the Deputy Chair of the Council. The Committee's terms of reference are:

- To review and approve the application of the College's pay relativity criteria for the President and the Provost, their senior staff direct reports and members of the Provost's and President's Boards;
- To agree, in advance, remuneration packages outside the norm and to consider and decide any severance payments proposed for the staff specified above;
- To review the application of the College's reward strategy on an annual basis to ensure that remuneration practices are being managed in a fair and equitable way. This review is to be informed by the following supporting data:
 - Details of the across the board local pay award and any variation to benefits for all staff;
 - Summary information on the application of discretionary pay adjustments for all staff;
 - The annual equal pay audit;
 - The annual gender pay audit (and other specific protected pay audits as published);
 - Pay ratios and relevant comparator information;
 - Information on numbers of staff earning a total salary of more than £100,000, with trend data on average increases for the previous five years compared to average increases for all staff over five years; and
 - Detail of the individuals earning over £150,000 and the justification for any variation to pay (above the College across-the-board increase) reported on an individual basis and with reference to the College's pay relativity criteria applied to all staff.

The College maintains a Register of Interests of members of the Council and of Senior Officers which may be consulted by arrangement with the Clerk to the Court and Council. The College Secretary is the Clerk to the Court and Council. Any enquiries about the constitution and governance of the College should be addressed to him.

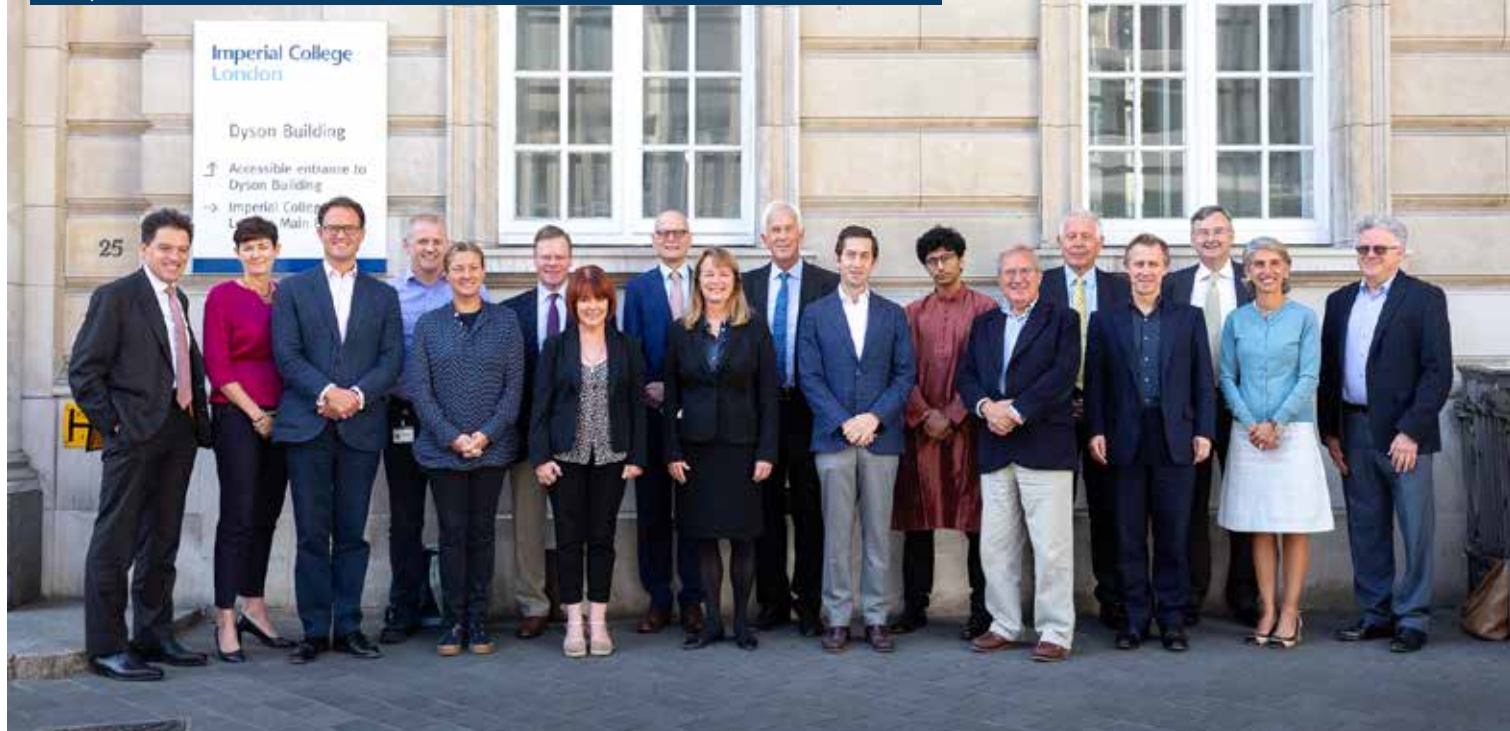
RESPONSIBILITIES OF THE COUNCIL

The Council has adopted the Higher Education Code of Governance published by the Committee of University Chairmen, and accordingly has approved the following Statement of Primary Responsibilities:

1. To approve the mission and strategic vision of the College, its long-term academic and business plans and key performance indicators, and to ensure that these meet the interests of the College's stakeholders.
2. To safeguard the good name and values of the College.
3. To appoint the President as the College's chief executive, and to put in place suitable arrangements for monitoring his/her performance.
4. To appoint other executive members of the Council as specified in the Statutes.
5. To delegate authority to the President, as chief executive, as advised by the President's Board, for the academic, corporate, financial, estate and human resource management of the College. And to establish and keep under regular review the policies, procedures and limits within such management functions as shall be undertaken by and under the authority of the President.
6. To assess risk to the College and to position its management and mitigation.
7. To ensure the establishment and monitoring of systems of control and accountability, including financial and operational controls, risk assessment, and procedures for handling internal grievances and for managing conflicts of interest.
8. To ensure that processes are in place for regular monitoring and evaluation of the performance and effectiveness of the College against its approved plans and key performance indicators, and that where possible and appropriate, these are benchmarked against other comparable institutions.
9. To conduct its business in accordance with best practice in higher education corporate governance and with the principles of public life drawn up by the Committee on Standards in Public Life.
10. To be the principal financial and business authority of the College, to ensure that proper books of account are kept, to approve the annual budget and financial statements, and to have overall responsibility for the College's assets, property and estate.
11. To be the College's legal authority and, as such, to ensure that systems are in place for meeting all the College's legal obligations, including those arising from contracts and other legal commitments made in the College's name.
12. In accordance with the College's Charter and Statutes, to act as trustee for any property, legacy, endowment, bequest or gift in support of the work and welfare of the College.
13. To ensure that the College's Charter and Statutes are adhered to at all times, with appropriate advice available to enable this to happen.
14. To be the employing authority for all staff in the institution and to be responsible for establishing the College's human resources strategy.
15. To establish processes to monitor and evaluate the performance and effectiveness of the Council itself.
16. To appoint a Clerk to the Council and ensure that, if the person appointed has managerial responsibilities in the institution, there is an appropriate separation in the lines of accountability.

In accordance with the College's Charter and Statutes, the Council is responsible for the efficient management and good conduct of all aspects of the affairs of the College (including its finances and property). It is required to present audited financial statements for each financial year. As such it is responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the College and enable it to ensure that the financial statements are prepared in accordance with the Charter of Incorporation, the Statement of Recommended Practice (SORP) on Accounting in Higher Education Institutions and other relevant accounting standards. In addition, and in accordance with the Office for Students' Regulatory Framework for Higher Education in England, the Council is required to ensure that the College complies with the Office for Students' conditions of registration, and with its accounts direction.

Members of Imperial College London's 2018-19 Council, who attended the September 2019 meeting. Back row, from left: Mr Muir Sanderson; Dame Alison Nimmo; Professor Tom Welton; Mr Iain Conn; Professor Ian Walmsley; Sir Philip Dille; Mr Abhijay Sood; Sir Jonathan Michael; Mr John Neilson. Front row, from left: Mr Toby Courtauld; Ms Sara Murray; Professor Terry Tetley; Professor Alice Gast; Professor Francisco Veloso; Professor Jonathan Weber; Mr Chris Williams; Dr Mahnaz Safa; Professor Jeremy Sanders.



In causing the financial statements to be prepared, the Council has ensured that:

- suitable accounting policies are selected and applied consistently;
- judgements and estimates are made that are reasonable and prudent;
- the SORP, applicable accounting standards, and the Office for Students' accounts direction has been followed, subject to any material departures being disclosed and explained in the financial statements;
- the College has adequate resources to continue in operation for the foreseeable future and for this reason the financial statements are prepared on a going concern basis.

The Council has taken reasonable steps to:

- ensure that funds from the Office for Students are used only for the purposes for which they have been given and in accordance with any other conditions which the Office for Students may from time to time prescribe;
- ensure that there are appropriate financial and management controls in place to safeguard public funds and funds from other sources;
- safeguard the assets of the College and prevent and detect fraud;
- secure the economical, efficient and effective management of the College's resources and expenditure.

The key elements of the College's system of internal control, which is designed to discharge the responsibilities set out above, include the following:

- clear definitions of the authority delegated to Deans of faculties and heads of academic and

administrative departments and divisions as set out in the College's approved Levels of Authority;

- approval by Council each year of a College budget and a five year rolling College plan which, whilst driven from the academic standpoint, are based on detailed financial projections of all College budget centres;
- a comprehensive monthly review of the financial performance of all budget centres and update of forecast outturns with regular financial reports to the President and senior College staff, to the President's Board and to the Finance Committee;
- clearly defined and formalised requirements for approval and control of expenditure, with investment decisions involving capital or revenue expenditure being subject to formal detailed appraisal and review according to approval levels set by the Council;
- a comprehensive Financial Ordinance, detailing financial controls and procedures, approved by the Audit and Risk Committee and the Council;
- Independent internal auditors, whose risk-based Strategic Audit Plan of work (based upon the College's Risk Register) is approved by, and conclusions subsequently reviewed by, the Audit and Risk Committee.

The Audit and Risk Committee, on behalf of the Council, regularly reviews the effectiveness of the internal controls in the College and its subsidiaries. Any system of internal control can, however, only provide reasonable, but not absolute, assurance against material misstatement or loss.

COUNCIL AND COUNCIL COMMITTEES

The members of the Council are the charity trustees of the College and are listed for the period from 1 August 2018 to 22 November 2019, the date that the Annual Report and Accounts have been approved.

The Council

Chair:

Sir Philip Dilley

Co-opted External Members:

Mr C.D. Brinsmead
Mr I.C. Conn
(to 30 September 2019)
Mr T. Courtauld
Mr J. Cullen (Deputy Chair)
Sir Jonathan Michael
Ms S.E. Murray
Dame Alison Nimmo
Dr M. Safa
Professor J.K.M. Sanders
Mr C.G. Williams

Ex-Officio:

President: Professor A. P. Gast
Provost: Professor W.J. Stirling
(to 31 August 2018)
Professor I.A. Walmsley
(from 1 September 2018)
Chief Financial Officer:
Mr M. Sanderson

Senior Staff Representatives:

Professor N. Brandon
Professor F. Veloso
Professor J.N. Weber
Professor T. Welton

Elected Staff Member:

Professor S. Eisenbach
(to 31 August 2019)
Professor T.D. Tetley
(from 1 September 2019)

President, Imperial College

Union:

Mr A. Sood *(from 1 August 2019)*
Mr R. Tomkies *(to 31 July 2018)*

Clerk to the Court and Council:

Mr J.S. Neilson

Audit and Risk Committee

Audit and Risk

Committee Chair:

Mr J. Cullen

Membership:

Sir Jonathan Michael
(from 1 January 2019)
Professor J.K.M. Sanders
Mr C. Williams

Secretary:

Mr J.B. Hancock
(to 31 July 2018)
Mrs R. Knight
(from 1 August 2019)

Endowment Board

Chair:

Mr N. Moakes

Membership:

Professor D.K.H. Begg
Professor A.P. Gast
Ms A. Rudebeck
Mr M. Sanderson
Mr F. Varoqui
Mr C. Williams

Secretary:

Ms J. Soulieux

Finance Committee

Chair:

Mr C.D. Brinsmead

Membership:

Professor A.P. Gast
Ms A. Rudebeck
Dr M. Safa
Mr M. Sanderson
Mr C. Williams

Secretary:

Mr T. Galer

Imperial White City Syndicate

Chair:

Dame Alison Nimmo

Membership:

Professor N. Alford
Sir John Armitt
Mr T. Courtauld
Professor A.P. Gast
Ms S.E. Murray
Mr M. Sanderson
Professor W.J. Stirling
(to 31 August 2018)

Secretary:

Mr J.B. Hancock
(to 31 July 2018)
Mr D. West
(from 1 August 2019)

Nominations Committee

Chair:

Sir Philip Dilley

Membership:

Mr C. Brinsmead
(from 1 January 2019)
Mr J. Cullen
Professor A.P. Gast
Dr M. Safa
Mr M. Sanderson
Professor W.J. Stirling
(to 31 August 2018)
Professor I.A. Walmsley
(from 1 September 2018)

Secretary:

Mr J.S. Neilson

Remuneration Committee

Chair:

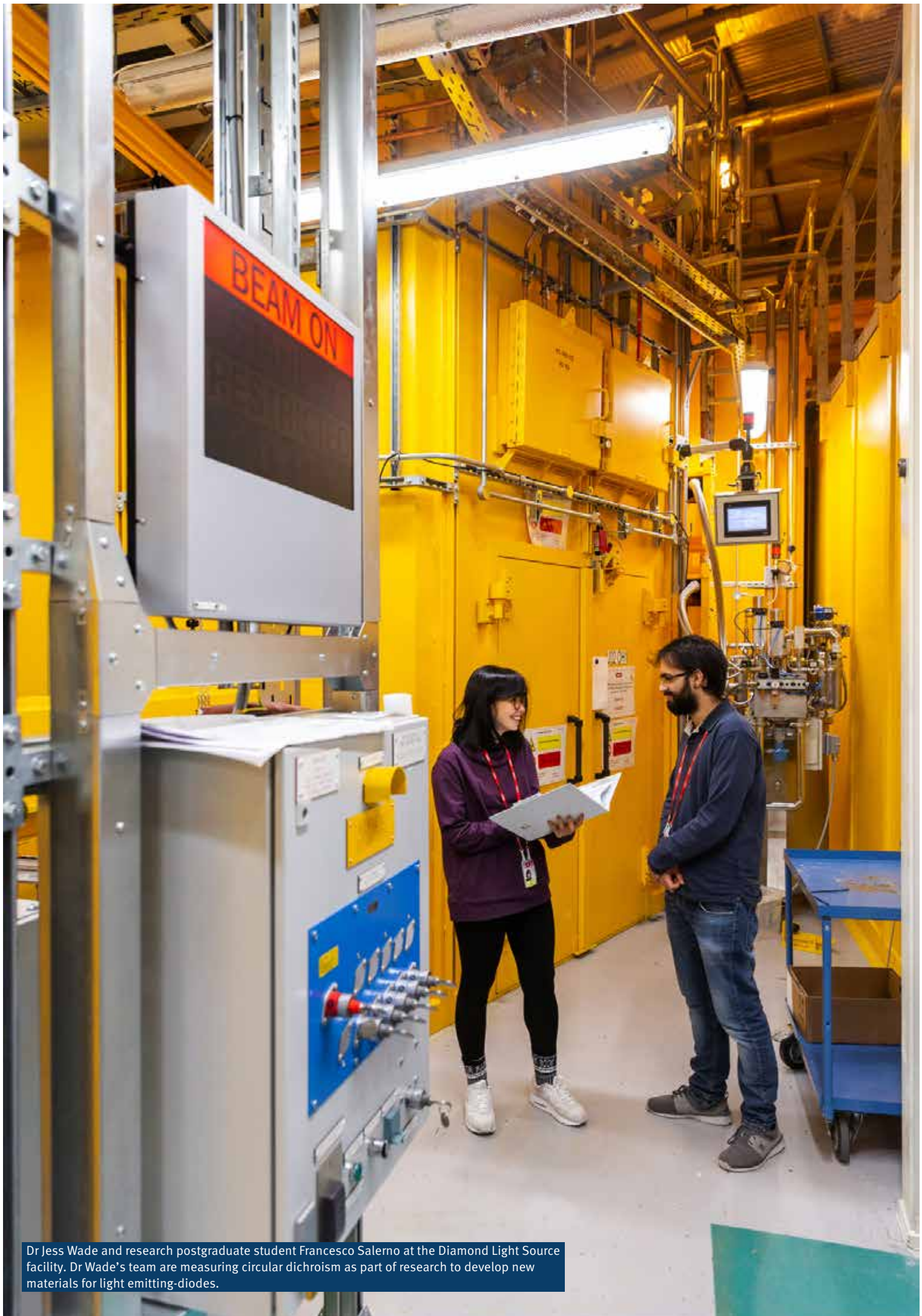
Sir Philip Dilley

Membership:

Mr C.D. Brinsmead
Mr J. Cullen
Dr M. Safa

Secretary:

Mrs L. Lindsay



Dr Jess Wade and research postgraduate student Francesco Salerno at the Diamond Light Source facility. Dr Wade's team are measuring circular dichroism as part of research to develop new materials for light emitting-diodes.



Undergraduate student Ellie Westhead working with Dr Jonathan Jeffers. Dr Jeffers is part of the Biomechanics Research Group, which uses engineering techniques to solve orthopaedic problems and develop new orthopaedic devices



FINANCIAL STATEMENTS 2018–19

Independent auditors' report

Year ended 31 July 2019

Independent auditors' report to the Council of Imperial College of Science, Technology and Medicine ("Imperial College London" or the "College")

Report on the audit of the financial statements

Opinion

In our opinion, Imperial College London's group financial statements and College financial statements (the "financial statements"):

- give a true and fair view of the state of the group's and of the College's affairs as at 31 July 2019, and of the group's and of the College's income and expenditure, gains and losses and changes in reserves, and of the group's cash flows for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, comprising FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland", and applicable law); and
- have been properly prepared in accordance with the requirements of the Statement of Recommended Practice – Accounting for Further and Higher Education and the requirements of the relevant Office for Students' Accounts Direction*.

We have audited the financial statements, included within the Annual Report and Accounts (the "Annual Report"), which comprise the statement of financial position as at 31 July 2019; the statement of comprehensive income and expenditure, the statement of changes in reserves, and the consolidated statement of cash flows for the year then ended; the statement of principal accounting policies; and the notes to the financial statements.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities under ISAs (UK) are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We remained independent of the group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, which includes the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

Conclusions relating to going concern

ISAs (UK) require us to report to you when:

- the Council's use of the going concern basis of accounting in the preparation of the financial statements is not appropriate; or
- the Council has not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the group's and the College's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the financial statements are authorised for issue.

We have nothing to report in respect of the above matters.

However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the group and College's ability to continue as a going concern. For example, the terms on which the United Kingdom may withdraw from the European Union are not clear, and it is difficult to evaluate all of the potential implications on the group's and College's activities, students, suppliers and the wider economy.

Reporting on other information

The other information comprises all of the information in the Annual Report other than the financial statements and our auditors' report thereon. The Council is responsible for the other information. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the financial statements or a material misstatement

of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report based on these responsibilities.

Responsibilities for the financial statements and the audit

Responsibilities of the Council for the financial statements

As explained more fully in the Responsibilities of the Council set out on pages 38 and 39, the Council is responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view. The Council is also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Council is responsible for assessing the group and College's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the Council either intends to liquidate the group and the College or to cease operations, or has no realistic alternative but to do so.

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditors' report.

Use of this report

This report, including the opinions, has been prepared for and only for the Council as a body in accordance with in accordance with Statute 11 of the Charters and Statutes of the College and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

Other required reporting

Opinions on other matters prescribed in the Office for Students' and Research England's Audit Code of Practice issued under the Further and Higher Education Act 1992 and the Office for Students' Accounts Direction issued under the Higher Education and Research Act 2017

In our opinion, in all material respects:

- funds from whatever source administered by the institution for specific purposes have been properly applied to those purposes and, if relevant, managed in accordance with relevant legislation; and
- funds provided by the OfS and Research England have been applied in accordance with the relevant terms and conditions, and any other terms and conditions attached to them.

PricewaterhouseCoopers LLP

Chartered Accountants and Statutory Auditors
London
22 November 2019

*The relevant Office for Students' Accounts Direction consists of the Accounts Direction issued on 19 June 2018 (OfS 2018.26) (the "2018 Accounts Direction"), except for paragraph 15d of the 2018 Accounts Direction for which the entity has instead early adopted, as permitted, paragraph 12d of the Accounts Direction issued on 25 October 2019 (OfS 2019.41).

Statement of comprehensive income and expenditure

Year ended 31 July 2019

	Notes	Consolidated		College	
		Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Income					
Tuition fees and education contracts	1	313.2	295.9	313.2	295.9
Funding Council grants	2	156.8	150.5	156.8	150.5
Research grants and contracts	3	368.0	364.2	368.0	364.2
Other income	4	152.1	150.9	142.6	142.2
Investment income	5	7.1	7.8	7.0	7.9
Donations and endowments	6	76.6	63.7	76.5	66.3
Total income		1,073.8	1,033.0	1,064.1	1,027.0
Expenditure					
Staff costs	7, 9	536.7	502.4	532.1	495.6
Pension provisions	7	117.2	(4.1)	117.2	(4.1)
Other operating expenses	9	376.4	357.6	366.5	347.7
Depreciation	9, 10	78.9	67.8	76.9	66.3
Interest and other finance costs	8, 9	20.4	20.4	20.5	20.5
Total expenditure		1,129.6	944.1	1,113.2	926.0
Surplus/(deficit) before other gains/(losses) and share of operating results of joint ventures and associates		(55.8)	88.9	(49.1)	101.0
Gain/(loss) on disposal of non-current assets		3.4	(0.6)	2.9	(0.6)
Gain/(loss) on investments	11	15.5	(6.0)	15.5	(6.0)
Gain/(loss) on disposal of interest in associates	13	-	16.3	-	71.3
Share of operating deficit in joint ventures		(0.6)	-	-	-
Share of operating surplus/(deficit) in associates		(1.9)	(18.6)	-	-
Surplus/(deficit) before tax		(39.4)	80.0	(30.7)	165.7
Taxation		-	(0.3)	-	(0.3)
Surplus/(deficit) for the year		(39.4)	79.7	(30.7)	165.4
Total comprehensive income/(expenditure) for the year		(39.4)	79.7	(30.7)	165.4
Represented by:					
Endowment comprehensive income for the year		21.0	15.4	21.0	15.4
Restricted comprehensive income for the year		29.0	11.9	35.0	13.9
Unrestricted comprehensive income for the year		(89.4)	52.4	(86.7)	136.1
		(39.4)	79.7	(30.7)	165.4

All items of income and expenditure relate to continuing activities. There are no additional items recognised in other comprehensive income.

Statement of financial position

Year ended 31 July 2019

	Notes	Consolidated		College	
		Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Non-current assets					
Fixed assets	10	1,712.2	1,630.1	1,713.0	1,611.0
Investments	11	536.8	555.8	590.9	603.7
Investments in joint ventures	12	2.3	-	-	-
Investments in associates	13	6.3	2.5	9.2	3.5
		2,257.6	2,188.4	2,313.1	2,218.2
Current assets					
Stock		0.2	0.4	0.2	0.2
Trade and other receivables	15	286.1	220.0	288.0	222.5
Investments	16	0.6	24.4	0.6	24.4
Cash and cash equivalents		292.3	287.0	260.6	264.3
		579.2	531.8	549.4	511.4
Creditors: amounts falling due within one year	17	(530.6)	(478.0)	(532.9)	(472.8)
Net current assets/(liabilities)		48.6	53.8	16.5	38.6
Total assets less current liabilities					
		2,306.2	2,242.2	2,329.6	2,256.8
Creditors: amounts falling due after more than one year	18	(547.0)	(557.0)	(547.0)	(557.0)
Provisions					
Pension provisions	19	(179.8)	(64.9)	(179.8)	(64.8)
Other provisions	19	(5.3)	(6.8)	(5.3)	(6.8)
Total net assets		1,574.1	1,613.5	1,597.5	1,628.2
Restricted Reserves					
Endowment income and expenditure reserve	20	178.1	157.1	178.1	157.1
Restricted income and expenditure reserve	21	101.3	72.3	107.4	72.4
Unrestricted Reserves					
Unrestricted income and expenditure reserve		1,294.7	1,384.1	1,312.0	1,398.7
Total Reserves		1,574.1	1,613.5	1,597.5	1,628.2

The financial statements were approved by the Council on 22 November 2019 and were signed on its behalf on that date by:

Sir Philip Dilley, Chair of Council

Professor Alice Gast, President

Mr Muir Sanderson, Chief Financial Officer

Statement of changes in reserves

Year ended 31 July 2019

	Income and expenditure account			Total
	Endowment £m	Restricted £m	Unrestricted £m	£m
Consolidated				
Balance at 1 August 2017	141.7	60.4	1,331.7	1,533.8
Surplus/(deficit) from the income and expenditure statement	15.4	55.2	9.1	79.7
Release of restricted funds spent in year	-	(43.3)	43.3	-
Total comprehensive income for the year ended 31 July 2018	15.4	11.9	52.4	79.7
Balance at 31 July 2018	157.1	72.3	1,384.1	1,613.5
Surplus/(deficit) from the income and expenditure statement	21.0	59.5	(119.9)	(39.4)
Release of restricted funds spent in year	-	(30.5)	30.5	-
Total comprehensive income/(expenditure) for the year 31 July 2019	21.0	29.0	(89.4)	(39.4)
Balance at 31 July 2019	178.1	101.3	1,294.7	1,574.1
College				
Balance at 1 August 2017	141.7	58.5	1,262.6	1,462.8
Surplus/(deficit) from the income and expenditure statement	15.4	57.2	92.8	165.4
Release of restricted funds spent in year	-	(43.3)	43.3	-
Total comprehensive income for the year ended 31 July 2018	15.4	13.9	136.1	165.4
Balance at 31 July 2018	157.1	72.4	1,398.7	1,628.2
Surplus/(deficit) from the income and expenditure statement	21.0	65.5	(117.2)	(30.7)
Release of restricted funds spent in year	-	(30.5)	30.5	-
Total comprehensive income/(expenditure) for the year 31 July 2019	21.0	35.0	(86.7)	(30.7)
Balance at 31 July 2019	178.1	107.4	1,312.0	1,597.5

Consolidated statement of cash flows

Year ended 31 July 2019

	Note	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Cash flow from operating activities			
Surplus/(deficit) for the year		(39.4)	79.7
Adjustment for non-cash items			
Depreciation	10	78.9	67.8
(Gain)/loss on investments	11	(15.5)	6.0
(Gain) on disposal/deemed disposal of interest in an associate		-	(16.3)
Decrease/(increase) in stock		0.3	-
Decrease/(increase) in debtors		(50.2)	26.2
Increase/(decrease) in creditors		65.1	(13.5)
Increase/(decrease) in pension provisions		113.6	(10.4)
Increase/(decrease) in other provisions		(1.6)	(2.0)
Share of operating (surplus)/deficit in joint venture		0.6	-
Share of operating (surplus)/deficit in associate		1.9	18.6
Unrealised foreign currency (gains)/losses		(1.4)	0.2
Other non-cash items		(2.0)	1.4
Taxation		-	0.3
Adjustment for investing or financing activities			
Investment income	5	(7.1)	(7.8)
Interest payable	8	20.4	20.4
Endowment income		(14.9)	(10.9)
Loss/(profit) on the sale of non-current assets		(3.4)	0.6
Capital grant income		(66.9)	(48.4)
		78.4	111.9
Cash flow from investing activities			
Capital grants receipts		46.5	47.9
Proceeds from sales of investment property		8.8	13.6
Disposal of other non-current assets		75.3	11.4
Investment income		2.6	4.5
Payments made to acquire fixed assets		(191.4)	(185.5)
Payments to acquire joint venture share capital		(3.0)	-
New non-current investments		(21.9)	(22.9)
Movement in current asset investments		23.8	33.7
		(59.3)	(97.3)
Cash flow from financing activities			
Interest paid		(14.3)	(14.0)
Interest element of finance lease payments		(4.8)	(4.8)
New endowments		13.7	11.1
Repayments of amounts borrowed		(9.0)	(5.8)
Capital element of finance lease payments		(0.8)	(0.7)
		(15.2)	(14.2)
Increase/(decrease) in cash and cash equivalents in the year		3.9	0.4
Cash and cash equivalents at beginning of the year		287.0	286.8
(Decrease)/increase in cash and cash equivalents in the year		3.9	0.4
Exchange gains/(losses) on cash and cash equivalents		1.4	(0.2)
Cash and cash equivalents at end of the year		292.3	287.0

Statement of principal accounting policies

1. Basis of preparation

These financial statements have been prepared in accordance with the Statement of Recommended Practice (SORP): Accounting for Further and Higher Education (2015), United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, comprising FRS 102 “The Financial Reporting Standard applicable in the UK and Republic of Ireland”, and applicable law), and the OfS Accounts Direction. The OfS Accounts Direction applied is the Accounts Direction issued on 19 June 2018 (OfS 2018.26) (the “2018 Accounts Direction”), except that the College and Consolidated financial statements have taken the option to disclose pay multiples in accordance with paragraph 12d of the new OfS accounts direction issued on 25 October 2019 (OfS 2019.41) rather than applying paragraph 15d of the 2018 Accounts Direction. This means that the pay multiples disclosed in Note 7 have only considered staff included in real-time reporting to HMRC as opposed to including all such staff and agency staff.

The College is a public benefit entity and therefore has applied the relevant public benefit requirements of the United Kingdom Generally Accepted Accounting Practice. The financial statements are prepared under the historical cost convention (modified by the revaluation of endowment and listed non-current asset investments and investment properties). The accounting policies have been applied consistently year on year.

The College’s and consolidated forecasts and projections, taking account of reasonably possible changes in performance, show that the College should be able to operate within the level of its current facilities. Council have a reasonable expectation that the College has adequate resources to continue in operational existence for the foreseeable future. The College therefore continues to adopt the going concern basis in preparing its financial statements.

2. Basis of consolidation

The consolidated financial statements include the College and all its subsidiaries for the financial year to 31 July. The results of subsidiaries acquired or disposed of during the period are included in the consolidated statement of income and expenditure from the date of acquisition, or up to the date of disposal. Intragroup transactions are eliminated on consolidation. In preparing its own financial statements, the College has applied the exemptions

available under FRS 102 to disclose neither a cash flow statement, nor related party transactions with wholly owned subsidiaries. Similarly, an exemption has been taken from disclosing details of the College’s financial instruments as the consolidated position is presented in these financial statements.

Associated companies and joint ventures are accounted for using the equity method in the consolidated financial statements. Associated companies are those in which the College has a significant, but not dominant, influence over their commercial and financial policy decisions. Joint ventures represent entities over which the College has joint control with a third party.

3. Income recognition

Income from the sale of goods or services is credited to the consolidated statement of comprehensive income and expenditure when the goods or services are supplied to the external customers or the terms of the contract have been satisfied.

Tuition fee income is stated gross of any expenditure which is not a discount and credited to the consolidated statement of comprehensive income and expenditure over the period in which students are studying. Where the amount of the tuition fee is reduced, income receivable is shown net of the discount. Bursaries and scholarships are accounted for gross as expenditure and not deducted from income.

Government grants are credited to the consolidated statement of comprehensive income and expenditure when the College is entitled to the income and any performance related conditions have been met. Where multiple performance conditions exist, the amount of income recognised reflects the income due for performance conditions met.

Income from research grants and contracts is credited to the consolidated statement of comprehensive income and expenditure when the College is entitled to the income and any performance related conditions have been met. Income received before performance-related conditions have been met is deferred on the statement of financial position and released to the consolidated statement of comprehensive income and expenditure in line with such conditions being met.

Funds the College receives and disburses as paying agent on behalf of a funding body are excluded from the consolidated statement of comprehensive income and expenditure where the

College is exposed to minimal risk or enjoys minimal economic benefit related to the transaction.

Donations and endowments (a form of charitable trust retained for the benefit of the College) with donor-imposed restrictions are credited to the consolidated statement of comprehensive income and expenditure when the College is entitled to the income. This income is retained within the restricted reserve, with additional disclosures provided within the notes to the accounts, until such time that it is utilised in line with such restrictions at which point the income is released to general reserves through a reserve transfer. There are four main types of donations and endowments identified within reserves:

1. Restricted donations – the donor has specified that the donation must be used for a particular objective.
2. Restricted permanent endowments – the donor has specified that the fund is to be permanently invested to generate an income stream to be applied to a particular objective.
3. Unrestricted permanent endowments – the donor has specified that the fund is to be permanently invested to generate an income stream for the general benefit of the College.
4. Expendable endowments – the donor has specified a particular objective and the College has the power to use the capital.

Donations with no restrictions are recognised in the consolidated statement of comprehensive income and expenditure when the College is entitled to the income.

All investment income from deposits and endowments is recorded in income in the period in which it is earned and as either restricted or unrestricted income according to the terms of the restriction applied to the individual endowment fund. Investment income from endowments not expended in accordance with the restrictions of the endowment is held within the temporarily or permanently restricted reserve as appropriate until such time that it is utilised in line with such restrictions.

4. Pension schemes

The College participates in three active pension schemes, the Universities Superannuation Scheme (USS), the Superannuation Arrangements of the University of London (SAUL) and the NHS Pension Scheme. The College also participates in the legacy Federated Pension Scheme 1634 (FPS) on behalf of retired members.

The USS, SAUL and NHS schemes are multi-employer schemes, two being defined benefit and one hybrid. Given the mutual nature of the schemes, it is not possible to identify the College's share of the underlying assets and liabilities. Consequently, the College cannot apply defined benefit accounting and, according to section 28 FRS 102, the schemes are accounted for as defined contribution schemes. The FPS scheme is a defined benefit scheme and accounted for as such. Each scheme is valued every three years, apart from the NHS scheme which is valued every four years, by professionally qualified independent actuaries.

The College has entered into an agreement with regards to the USS scheme that determines how each employer within the scheme will fund the overall deficit of the scheme. The College recognises a liability for the contributions payable that arise from the agreement (to the extent that they relate to the deficit) and therefore an expense is recognised in the consolidated statement of comprehensive income and expenditure.

5. Short-term employment benefits

Short-term employment benefits such as salaries and compensated absences are recognised as an expense in the year in which the employees render service to the College. Any unused benefits, such as holiday entitlements earned not taken at the reporting date, are recognised as a liability by the College at the undiscounted additional amount the College would expect to pay as a result. Termination benefits are recognised as an expense in the consolidated statement of comprehensive income and expenditure when incurred.

6. Foreign currencies

Transactions denominated in foreign currencies are translated to the respective functional currencies of Group entities at the rate of exchange ruling at the dates of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated to the functional currency at the foreign exchange rate at the reporting date. The resulting exchange differences are recognised in the consolidated statement of comprehensive income and expenditure.

Statement of principal accounting policies *(continued)*

7. Finance leases

Leases which transfer substantially all of the risks and rewards of ownership of the leased asset are classified as finance leases. Leased assets acquired under finance leases, together with the related lease liability, are recorded in the consolidated statement of financial position at the inception of the lease at the lower of their fair value and the present value of the minimum lease payments.

Minimum lease payments are apportioned between the finance charge and the reduction of the outstanding liability. The finance charge is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

Assets leased from the College under finance leases are removed from the consolidated statement of financial position and replaced with a receivable at an amount equal to the present value of the sum of the minimum lease payments due and any residual value at the end of the lease term.

8. Operating leases

Leases which do not transfer substantially all of the risks and rewards of ownership of the leased asset are classified as operating leases. Operating lease costs and income are recognised in the consolidated statement of comprehensive income and expenditure on a straight line basis over the relevant lease term. Any lease premiums or incentives are spread over the minimum lease term.

9. Land and buildings

Initially, purchased land and purchased or constructed buildings are stated at cost. Subsequently, freehold land is not depreciated as it is considered to have an indefinite useful life. Leasehold land is depreciated over the life of the lease. Buildings, including service plant, are depreciated over their expected useful lives as follows:

Building works	50 years
Service plant	20 years
Building infrastructure	20 years
IT infrastructure	10 years

Costs incurred in relation to buildings after their initial acquisition or construction are capitalised only to the extent that they increase the expected future benefits beyond the previously assessed standard of performance. The cost of such works are

depreciated over 20 years.

Assets under construction are capitalised at cost and not depreciated.

10. Fixtures, fittings and equipment

Fixtures, fittings and equipment assets, including computers and software are capitalised. Costs capitalised include those that are required to bring the assets to the location and condition necessary for them to operate in the manner intended.

Capitalised equipment is stated at cost and, once in service, depreciated over their useful economic lives as follows:

Fixture, fittings and infrastructure	20 years
Equipment and IT	5 years

Equipment acquired for specific research projects is depreciated over its expected useful economic life which ordinarily equates to the remaining life of the project (generally three years up to a maximum of five years).

Where fixtures, fittings and equipment are acquired with the aid of specific grants they are capitalised and depreciated as above. The related grant is recognised in income on entitlement.

11. Reserves

The reserves reflect the accumulated net comprehensive income of the College. This accumulated net comprehensive income is classified as either restricted or unrestricted depending on whether restrictions were placed on how it was to be spent. Income with such restrictions remains in the restricted reserves until it is spent in line with the restriction, at which point it is transferred to the unrestricted reserve via a reserve transfer.

Endowment funds are a form of charitable trust retained for the benefit of the College. Where the donor prohibits the conversion of the capital into income, these funds are held in a permanent restricted reserve. Otherwise these are held temporarily in restricted reserves.

12. Investment properties

Investment properties are those land and building assets which are held for either their rental income, capital appreciation or both. Investment properties are initially recognised at cost in the statement of financial position and subsequently at their fair

value on the basis of an independent valuation at each statement of financial position date. Changes in the fair value of investment properties are recognised within the consolidated statement of comprehensive income and expenditure.

Property held primarily for the provision of social benefit is not classified as investment property, in accordance with the FRS 102.

13. Financial Instruments

A financial instrument is a contract that gives rise to a financial asset in one entity and a financial liability or equity instrument in another. Financial assets and financial liabilities are recognised when the College becomes a party to the contractual provisions of the instrument. All financial instruments are basic financial instruments other than the derivatives held.

The non-current investment assets held by the College are not expected to realise their value within the next twelve months from the date of the consolidated statement of financial position. These assets, together with their corresponding treatments, are as follows:

- Endowment funds assets comprise those endowments which have been placed with external fund managers for investment over the long-term. These assets are included in the consolidated statement of financial position at their market value;
- Listed non-current investments comprise unfettered funds which have been placed with external fund managers for investment over the long-term and other shares in listed companies. These assets are included in the consolidated statement of financial position at their market value;
- Investments in Shares not listed on a recognised stock exchange are recognised in the consolidated statement of financial position at their cost less any provision for impairment in their value; and
- Other non-current investments comprise non-current investments that do not fall into any of the above categories. These are held at amortised cost.

The current investment assets held by the College are deposits with banks and building societies with maturity between three and twelve months at the date of the consolidated statement of financial position. These are held at their cost less any provision for impairment in their value.

Cash includes cash in hand, deposits repayable on demand and overdrafts. Deposits are repayable

on demand if they are available within 24 hours without penalty. Cash equivalents are highly liquid investments due within three months, that are readily convertible to known amounts of cash and that are subject to insignificant risk of changes in value.

Unsecured loans are liabilities with fixed or determinable payments that are not secured against specific assets. These are held at amortised cost. They are apportioned between 'Creditors: amounts falling due within one year' and 'Creditors: amounts falling due after more than one year'.

Derivatives are contracts whose value is dependent on the value of an underlying asset, such as a commodity or currency. The College has not taken up the option to apply hedge accounting to its derivatives and, instead, recognises the fair value of the outstanding derivatives in the consolidated statement of financial position.

Trade receivables and trade payables are recognised at their transaction price in the statements of consolidated financial position and subsequently measured at amortised cost. A provision for bad debts is estimated on the basis that as debts become older, a higher percentage become irrecoverable.

Investments in joint ventures, associated companies and subsidiaries are recognised at cost less any provision for impairment in the College's individual statement of financial position.

Amortised cost is a method used to measure the value of certain financial assets and liabilities after they have been initially recognised. The amortised cost of a financial instrument is the net of the amount the instrument was initially recognised at, less any repayment of the principal, plus or minus the cumulative amortisation of any difference between the amount at initial recognition and the maturity amount, minus – in the case of financial assets – any reduction for impairment or uncollectability.

Any changes in market value, fair value or resulting from impairment are recognised immediately in the consolidated statement of comprehensive income and expenditure.

Statement of principal accounting policies *(continued)*

14. Taxation status

The College is an exempt charity within the meaning of Schedule 3 of the Charities Act 2011 and as such is a charity within the meaning of Para 1 of Schedule 6 to the Finance Act 2010. Accordingly, the College is potentially exempt from taxation in respect of income or capital gains received within categories covered by Sections 478-488 of the Corporation Taxes Act 2010 (CTA 2010) (formerly enacted in Section 505 of the Income and Corporation Taxes Act 1988 (ICTA)) or Section 256 of the Taxation of Chargeable Gains Act 1992 to the extent that such income or gains are applied to exclusively charitable purposes. The College receives no similar exemption in respect of Value Added Tax (VAT).

The College's subsidiary companies are subject to corporation tax and VAT in the same way as any commercial organisation. The charge for taxation is based on the profit or loss for the year after charging the cost of any Gift Aid payment payable to the College. The charge for taxation also takes into account taxation deferred because of timing differences between the treatment of certain items for taxation and accounting purposes.

15. Heritage assets

Heritage assets are tangible and intangible assets with historic, artistic, scientific, technological, geophysical or environmental qualities that are held and maintained principally for their contribution to knowledge and culture. Assets are held at cost where this is known or can be obtained from historic records, less accumulated impairment losses.

Heritage assets are not depreciated as their long economic life and high residual value mean that any depreciation would not be material.

16. Provisions and contingent liabilities

Provisions are liabilities of either uncertain timing or amount.

Provisions are recognised in the consolidated statement of financial position when:

- (a) the College has a present obligation (legal or constructive) as a result of a past event;
- (b) it is probable that an outflow of economic benefits will be required to settle the obligation; and
- (c) a reliable estimate can be made of the amount of the obligation.

The amount recognised as a provision is determined by discounting the expected future cash

flows at a pre-tax rate that reflects risks specific to the liability.

A contingent liability arises from a past event that gives the College a possible obligation whose existence will only be confirmed by the occurrence or non-occurrence of uncertain future events not wholly within the control of the College. Contingent liabilities also arise in circumstances where a provision would otherwise be made but either it is not probable that an outflow of resources will be required or the amount of the obligation cannot be measured reliably. Contingent liabilities are not recognised in the consolidated statement of financial position as a liability, however disclosure is made unless the possibility of an outflow of resources is remote.

17. Accounting judgements and estimates

The preparation of financial statements requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements, are below:

Critical accounting judgements

On 17 October 2017, IP Group plc ("IP Group") completed its acquisition of 100% of the ordinary shares in Touchstone Innovations plc ("Innovations"), which the College held as an associate up to 31 July 2017 (Note 13). As a result, the College now holds a 5.2% share in IP Group. Given the lapse in time between the date of the last audited financial statements of Innovations, being 31 July 2017, and the date of the acquisition by IP Group, judgement has been required in determining the appropriate fair value of Innovations' net assets upon acquisition. The IP Group audited financial statements as at 31 December 2017 indicated a decline in the net asset value of Innovations on acquisition. Management judge that IP Group's valuation of Innovation's net assets as at 17 October 2017 is the most appropriate basis for valuation on the date of acquisition. Management judged that this fall in value should be accounted for as an operating loss of the associate. Upon completion of the transaction, the College owned 5.2% of the IP Group and so reclassified this holding from an associate to a listed non-current investment, to be held at fair value with reference to the investment's

published share price (Note 11). The investment was therefore revalued through the gain/(loss) on investments line of the consolidated statement of comprehensive income and expenditure.

On 28 February 2019, the College and Imperial Innovations Limited (“Innovations”), a wholly-owned subsidiary of IP Group, agreed to the early termination of a Technology Pipeline Agreement, under which the College granted Innovations first refusal to generate income from College intellectual property. Innovations agreed to transfer the staff from its technology transfer office and its portfolio of inactive intellectual property (which is not yet capable of being commercialised) to the College, together with £1.5 million in cash. Management have considered the substance of the transaction and concluded that the assets and activities transferred to the College are not integrated in a way that will produce goods and services that will generate income. The transaction is accounted for as the transfer of a group of assets rather than a business combination. The College transferred no consideration for the inactive intellectual property, which has been assigned nil fair value on transfer. Therefore, no assets have been recognised and the £1.5 million cash receipt has been recognised in income on receipt in the year ended 31 July 2019. Immediately on receipt, the College assigned the portfolio of inactive intellectual property to Imperial College White City Incubator Limited, a wholly-owned subsidiary of the College, to manage on its behalf. The subsidiary was renamed Imperial College Innovations Limited to reflect the increase in its activities.

On 23 November 2018, the Council approved a new constitution for Imperial College Union (“the Union”). This removed the Council as a party required to approve any changes to the Union’s Bye-Laws. Management judge that this removes the College’s substantive control over the Union and that it would no longer be appropriate to consolidate the Union following the approval of the new constitution.

Key sources of estimation uncertainty

Investment property – The valuation of the College’s investment property portfolio is inherently subjective due to, among other factors, the individual nature of each property, its location and the expected future rental revenues from that particular property. As a result, the valuations the College places on its investment property portfolio are subject to a degree of uncertainty and are made

on the basis of assumptions which may not prove to be accurate, particularly in periods of volatility or low transaction flow in the property market. The investment property valuation contains a number of assumptions upon which the College’s independent professional valuer has based its valuation of the portfolio. The assumptions on which the property valuation reports have been based include, but are not limited to, matters such as the tenure and tenancy details for the properties, ground conditions at the properties, the structural condition of the properties, prevailing market yields and comparable market transactions. These assumptions are market standard and accord with the Royal Institution of Chartered Surveyors (RICS) Valuation – Professional Standards UK 2014 (revised April 2015).

USS pensions provision – A provision is recognised in the financial statements for future contributions payable to the USS pension scheme that relate to the deficit in the scheme and arise from the agreement with scheme employers as to how the deficit is funded. The carrying amount of this liability on 31 July 2019 is £179.8 million (see Note 19). Assumptions used in the calculation represent a source of material uncertainty. The assumptions and an analysis of the sensitivity of the provision to changes in these assumptions is also included in Note 19.

Annual holiday accrual – An accrual is recognised in the financial statements for holiday leave that has been accrued for by employees but not yet taken as at 31 July 2019. The carrying amount of this liability is £9.2 million and this is calculated based on extrapolating the leave records of a sample of the staff population.

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For the year ended 31 July 2019

1. Tuition fees and education contracts

	Registered student numbers		Consolidated		College	
	31 December 2018	31 December 2017	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Full-time home and EU students						
Undergraduate	6,839	6,710	60.5	58.3	60.5	58.3
Postgraduate	4,098	3,965	28.2	26.8	28.2	26.8
Full-time international students						
Undergraduate	3,215	3,057	89.9	83.3	89.9	83.3
Postgraduate	3,416	3,322	84.1	80.1	84.1	80.1
Part-time home and EU students	1,246	1,068	8.7	5.3	8.7	5.3
Part-time international students	357	293	4.6	4.6	4.6	4.6
Research Training Support Grants			28.5	29.2	28.5	29.2
Short course fees			8.7	8.3	8.7	8.3
			313.2	295.9	313.2	295.9

Fee income is shown net of discounts and fees remitted.

Research training support grants include £4.8 million (2018: £5.0 million) of tuition fees paid in respect of full-time home and European Union students. The remainder represents grants made by Research Councils and other bodies in support of training research students.

Total numbers of full-time and part-time students are 19,171 in 2019 and 18,415 in 2018 (excluding those on research training support grants and short courses).

2. Funding Council grants

	Consolidated		College	
	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Recurrent – teaching	28.3	28.5	28.3	28.5
Recurrent – research	97.2	94.0	97.2	94.0
Capital grants	25.6	23.4	25.6	23.4
Higher Education Innovation Fund	4.4	4.1	4.4	4.1
Other	1.3	0.5	1.3	0.5
	156.8	150.5	156.8	150.5

Funding Council grants have been received from HEFCE until 31 March 2018, and from the OfS and UKRI from 1 April 2018 to 31 July 2019.

3. Research grants and contracts

	Consolidated		College	
	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Research Councils	114.9	112.3	114.9	112.3
Charities	82.0	83.5	82.0	83.5
Government (UK and EU) and health authorities	51.7	52.0	51.7	52.0
European Commission	36.6	38.6	36.6	38.6
Industry and commerce	64.7	61.4	64.7	61.4
Other	18.1	16.4	18.1	16.4
	368.0	364.2	368.0	364.2

Research grants and contracts income includes £12.8million (2018: £16.5million) in respect of capital funding.

Other research grants and contracts include a grant from the Big Lottery Fund (BLF). The total amount of funding awarded for projects ongoing in 2019 was £4.2 million (2018: £4.2 million) to fund a UK-wide expansion of an interdisciplinary study of the natural environment. Of this total awarded, £4.2 million (2018: £4.0 million) has been spent to date and £0.2 million (2018: £0.9 million) has been recognised in the year.

UK Government grants and contracts include a grant from the Department for International Development (DFID) to fund key strategic issues around agricultural transformation, growth, and food and nutrition security. The total amount of funding awarded for this project in 2018 was £1.2 million, with £0.5 million spent to date and £0.4 million recognised in the year.

4. Other income

	Consolidated		College	
	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Residences, catering and conferences	55.8	58.4	55.1	56.1
Consultancies and scientific services	18.8	17.8	4.3	3.4
Health and hospital authorities	23.8	24.8	23.8	24.8
Rents receivable from commercial property	14.6	13.5	9.1	9.8
Other revenue grants	6.3	5.3	6.7	5.5
Other departmental income	12.9	13.5	20.6	23.3
Other income	19.9	17.6	23.0	19.3
	152.1	150.9	142.6	142.2

5. Investment income

	Consolidated		College	
	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Interest and investment income on endowments	2.1	2.2	2.1	2.2
Other investment income	2.9	4.2	2.9	4.3
Interest on cash, cash equivalents and current investments	2.1	1.4	2.0	1.4
	7.1	7.8	7.0	7.9

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For the year ended 31 July 2019

6. Donations and endowments

	Consolidated		College	
	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
New endowments	14.9	10.9	14.9	10.9
Donations with performance related conditions	2.4	1.5	2.4	1.5
Research donations	23.8	21.8	23.8	21.8
Capital donations	27.4	8.4	27.4	8.4
Other donations with restrictions	4.2	9.6	4.2	9.6
Unrestricted donations	3.9	11.5	3.8	14.1
	76.6	63.7	76.5	66.3

7. Staff costs

	Note	Consolidated		College	
		Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Staff costs					
Salaries		429.1	405.4	424.4	398.7
Social security costs		46.8	44.2	46.8	44.1
Other pension costs	28	58.0	50.9	58.1	50.9
Restructuring costs		2.8	1.9	2.8	1.9
		536.7	502.4	532.1	495.6
Pension provisions					
USS	19	117.2	(4.2)	117.2	(4.2)
SAUL	19	-	0.1	-	0.1
		117.2	(4.1)	117.2	(4.1)
		653.9	498.3	649.3	491.5

	Full-time equivalent (FTE)		Headcount	
	31 July 2019	31 July 2018	31 July 2019	31 July 2018
Staff numbers by major category				
Academic and research	3,687	3,666	3,989	3,994
Professional services	3,040	2,879	3,293	3,153
Technical services	492	485	510	510
Operational services	397	376	491	495
Learning and teaching	252	202	301	250
	7,868	7,608	8,584	8,402

The FTE number is based on the headcount but adjusted to include only the pro rata element of part-time staff. The numbers include staff employed by the subsidiary companies.

	Year ended 31 July 2019 £'000	Year ended 31 July 2018 £'000
Remuneration of the President		
Basic salary	357.6	357.6
Salary sacrifice arrangements	-	(19.1)
Payments in lieu of pension contributions	46.5	15.5
Pension contributions to USS	7.5	64.5
Taxable benefits	24.5	14.2
Total remuneration excluding non-taxable benefits	436.1	432.7
Non-taxable benefits	118.0	143.1
Total	554.1	575.8

Up to March 2018 the President contributed to the USS pension scheme through the College's standard method of salary sacrifice, PensionSMART. Under PensionSMART, the member of staff does not make any direct payments to the pension scheme and their basic salary (and other elements of pensionable income) is reduced by the percentage they are eligible to contribute. The College contributed both the employer and employee percentage (26% in total) directly to the scheme. From April 2018 the President has elected to cease the accrual of further pension benefits in USS but maintains life assurance and incapacity coverage in the scheme. In order to maintain the same overall remuneration, the President's salary has been increased to compensate for the reduction in employer pension contributions. This is at no additional cost to the College.

Taxable benefits in kind comprise utilities, cleaning, maintenance and furnishings in respect of the President's official residence. Non-taxable benefits represent additional costs the College incurred as a landlord of £2,979 (2018: £23,062) maintaining the property; this amount varies year-by-year based on the level of repairs required. The estimated market rent of the official residence, being the opportunity cost to the College of providing the accommodation, is £115,000 (2018: £120,000) and is also a non-taxable benefit. The accommodation is necessary for the performance of President's duties and is used regularly for the College's official functions. The reduction is due to an increased business use of the accommodation. It is the College's view that the representative occupier exemption means that no taxable benefit in kind arises under the Income Tax (Earnings and Pensions) Act 2003 on the provision of accommodation to the President.

The College is committed to offering all staff, including the President, a pay and benefits package that is equitable, fair and appropriately reflects the College's standing. Imperial is one of the world's top ten academic institutions, competing and collaborating globally whilst also operating in the increasingly challenging and competitive higher education environment in the UK. The President is the College's senior executive with ultimate responsibility for the performance, reputation and success of the organisation. They need to have prior senior leadership roles in similar world class organisations, a strong academic record and extensive experience in fundraising. Candidates of this calibre can only be found by looking internationally and by offering a commensurate salary. This salary is regularly benchmarked to ensure it remains appropriate (see further details in the Principles of Remuneration section of the report).

The President continues Imperial's strong trajectory with considerable influence in the policy arena, growing support from philanthropists and enhancing Imperial's ability to attract talent. This includes ensuring Imperial maintains a strategic focus, balancing the development of the White City Campus with investments in education, research and other parts of the Estate. This year Imperial is seeing the fruits of the masterplans for the two main campuses and is providing first class facilities with the opening of the Molecular Sciences Research Hub this year and the completion of the Sir Michael Uren Biomedical Engineering Research Hub.

	Includes casual staff		Excludes casual staff	
	Year ended 31 July 2019	Year ended 31 July 2018	Year ended 31 July 2019	Year ended 31 July 2018
President's remuneration as multiple of the median pay for all other employees (on a FTE basis)				
Multiple based on basic salary	9.43	9.47	8.28	8.56
Multiple based on total remuneration excl. non-taxable benefits	10.41	10.81	8.67	9.03
Multiple based on total remuneration	13.23	14.17	11.01	12.02

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For the year ended 31 July 2019

7. Staff costs (continued)

Compensation for loss of office

Payments in respect of loss of office comprise termination payments paid directly to individuals in respect of loss of office, plus contributions made towards legal expenses. All compensation in respect of loss of office has been internally funded by the College.

	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Compensation payable recorded within staff costs	1.6	1.8

Payments for compensation for loss of office were payable to 272 employees in 2019 (2018: 290). Of this, a total £119,156 (2018: £54,230) was paid in severance payments to staff who earned in excess of £100,000 per annum (five in 2019, one in 2018).

Key management personnel

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the College and the Group. Staff costs include compensation paid to key management personnel.

Key management personnel comprises members of the President's Board and the Provost's Board. The decrease in compensation in 2018–19 reflects changes in the composition of the Boards and with combined membership as at 31 July 2019 standing at 19 FTE (2018: 21 FTE).

	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Group and College key management personnel compensation	5.6	6.1

Trade Union (Facility Time Publication Requirements) Regulations

Facility Time is the provision of paid or unpaid time off from an employee's normal role to undertake Trade Union duties and activities as a Trade Union representative. There is a statutory entitlement to reasonable paid time off for undertaking Trade Union duties.

The number of College employees who were Trade Union officials during the period 1 April 2018 to 31 March 2019 was 19 (2018: 15); these were all full-time College employees. The percentage of time spent by them on Facility Time fell in the 1–50% band. The cost of this activity amounts to £138,291 (2018: £134,000) representing 0.03% (2018: 0.03%) of the total pay bill in the relevant period. Of the total paid Facility Time, the proportion of hours spent on paid Trade Union activities was 9.8% (2018: 9.8%).

	Year ended 31 July 2019 FTE	Year ended 31 July 2018 FTE
Remuneration of higher paid staff:		
£100,000–£104,999	95.2	79.6
£105,000–£109,999	43.5	37.4
£110,000–£114,999	33.7	25.5
£115,000–£119,999	19.0	22.4
£120,000–£124,999	21.5	21.6
£125,000–£129,999	19.3	17.3
£130,000–£134,999	13.4	11.0
£135,000–£139,999	14.5	13.2
£140,000–£144,999	11.8	7.3
£145,000–£149,999	10.3	5.3
£150,000–£154,999	5.6	8.0
£155,000–£159,999	8.6	9.4
£160,000–£164,999	8.7	5.2
£165,000–£169,999	3.3	2.8
£170,000–£174,999	2.1	2.1
£175,000–£179,999	3.1	3.2
£180,000–£184,999	5.4	6.2
£185,000–£189,999	2.1	4.0
£190,000–£194,999	9.0	3.7
£195,000–£199,999	2.7	-
£200,000–£204,999	-	0.1
£205,000–£209,999	-	0.3
£210,000–£214,999	-	1.0
£215,000–£219,999	1.0	1.0
£220,000–£224,999	1.0	0.2
£225,000–£229,999	2.3	2.4
£230,000–£234,999	1.0	3.0
£235,000–£239,999	2.0	-
£240,000–£244,999	1.9	0.1
£245,000–£249,999	0.2	1.1
£250,000–£254,999	1.0	0.1
£260,000–£264,999	0.2	0.2
£265,000–£269,999	1.0	-
£270,000–£274,999	1.9	1.0
£280,000–£284,999	-	1.0
£285,000–£289,999	1.0	-
£300,000–£304,999	1.0	1.0
£305,000–£309,999	0.1	1.0
£310,000–£314,999	1.0	-
£315,000–£319,999	-	2.0
£320,000–£324,999	-	0.7
£350,000–£354,999	-	1.0
£355,000–£359,999	2.0	1.0
£405,000–£409,999	-	1.0
£410,000–£414,999	1.0	-
£430,000–£434,999	-	1.0
	352.4	305.4

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For the year ended 31 July 2019

7. Staff costs (continued)

Remuneration of higher paid staff is the full-time equivalent basic annual salary prior to any adjustment for salary sacrifice. The number of staff are calculated on a full-time equivalent basis. Staff who joined or left part-way through a year but who would have received salary in these bands in a full year are not included. Where a proportion of the salary is reimbursed by the NHS, only the portion paid by the College is disclosed.

8. Interest and other finance costs

	Consolidated		College	
	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Loan interest	14.2	14.0	14.3	14.1
Finance lease interest	4.8	4.8	4.8	4.8
Other financing costs	1.4	1.6	1.4	1.6
	20.4	20.4	20.5	20.5

9. Analysis of total expenditure by activity

	Staff costs £m	Depreciation £m	Other operating expenses £m	Interest £m	Consolidated	College
					Total £m	Total £m
2019						
Academic departments	250.1	2.2	72.7	0.2	325.2	325.5
Research grants and contracts	163.2	11.9	112.0	-	287.1	287.3
Academic services	32.5	0.4	26.3	-	59.2	58.5
Bursaries and scholarships	-	-	41.8	-	41.8	41.7
Administration and central services	53.1	0.1	27.2	-	80.4	80.0
Premises	16.0	53.8	65.5	-	135.3	126.3
Residences, catering and conferences	8.9	10.5	21.1	4.8	45.3	44.7
Other expenditure	130.1	-	9.8	15.4	155.3	149.2
Total	653.9	78.9	376.4	20.4	1,129.6	1,113.2
2018						
Academic departments	231.6	2.7	70.0	0.2	304.5	304.9
Research grants and contracts	158.4	10.9	112.6	-	281.9	282.2
Academic services	28.6	0.4	21.5	-	50.5	50.6
Bursaries and scholarships	-	-	39.1	-	39.1	39.2
Administration and central services	45.8	0.2	25.2	-	71.2	67.4
Premises	15.6	42.9	63.1	-	121.6	113.2
Residences, catering and conferences	9.8	10.7	22.8	4.8	48.1	46.1
Other expenditure	8.5	-	3.3	15.4	27.2	22.4
Total	498.3	67.8	357.6	20.4	944.1	926.0
					Year ended 31 July 2019 £'000	Year ended 31 July 2018 £'000
Other operating expenses include:						
External auditors remuneration in respect of audit services					215.4	220.9
External auditors remuneration in respect of non-audit services					40.7	42.0

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For the year ended 31 July 2019

10. Fixed assets

Consolidated	Freehold land and buildings £m	Leasehold land and buildings £m	Fixtures, fittings and equipment £m	Assets in the course of construction £m	Total £m
Cost					
At 1 August 2018	1,078.2	805.8	302.6	193.7	2,380.3
Additions	2.0	16.9	9.6	150.3	178.8
Transfer from/(to) investment property	(0.6)	-	-	(0.2)	(0.8)
Transfers between classes	(29.7)	43.9	4.5	(18.7)	-
Disposals	-	(20.3)	(4.0)	-	(24.3)
At 31 July 2019	1,049.9	846.3	312.7	325.1	2,534.0
Accumulated depreciation					
At 1 August 2018	198.4	308.6	243.2	-	750.2
Charge for the period	27.2	30.2	21.5	-	78.9
Transfer from/(to) investment property	(0.2)	-	-	-	(0.2)
Disposals	-	(3.5)	(3.6)	-	(7.1)
At 31 July 2019	225.4	335.3	261.1	-	821.8
Net book value					
At 31 July 2019	824.5	511.0	51.6	325.1	1,712.2
At 31 July 2018	879.8	497.2	59.4	193.7	1,630.1
College					
Cost					
At 1 August 2018	1,074.4	777.9	299.9	197.6	2,349.8
Additions	1.9	15.9	9.6	152.1	179.5
Transfer from/(to) investment property	(0.6)	-	-	(0.2)	(0.8)
Transfers between classes	(29.7)	43.9	4.5	(18.7)	-
Disposals	-	-	(1.2)	-	(1.2)
At 31 July 2019	1,046.0	837.7	312.8	330.8	2,527.3
Accumulated depreciation					
At 1 August 2018	196.7	301.0	241.1	-	738.8
Charge for the period	25.6	29.9	21.4	-	76.9
Transfer from/(to) investment property	(0.2)	-	-	-	(0.2)
Disposals	-	-	(1.2)	-	(1.2)
At 31 July 2019	222.1	330.9	261.3	-	814.3
Net book value					
At 31 July 2019	823.9	506.8	51.5	330.8	1,713.0
At 31 July 2018	877.7	476.9	58.8	197.6	1,611.0

At 31 July 2019, freehold land and buildings included £218.3 million (2018: £218.3 million) in respect of freehold land which is not depreciated.

Griffon Studios, the 566 postgraduate student apartment block, is held under a 45 year finance lease following its sale to and leaseback from Legal and General Pensions Ltd in 2012. Included in land and buildings under finance leases is also the land belonging to the Trustees of the Charitable Funds for the Charing Cross, Hammersmith and Queen Charlotte's Hospitals. The Trustees have leased the land to Imperial College London on a 125 year lease which is held at a value of £1.7 million.

10. Fixed assets (continued)

Consolidated and College leasehold land and buildings include assets held under finance leases as follows:

	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Cost	95.6	95.6
Accumulated depreciation	(14.1)	(12.0)
Charge for year	(2.1)	(2.1)
Net book value	79.4	81.5

Included at cost within land and buildings for the College and Group as at 31 July 2019 is a heritage asset, being the nineteenth century-built Queen's Tower. It has negligible carrying value and is currently insured at a value of £15.0 million (2018: £13.2 million). The College owns other works of art, with negligible cost when acquired, which are not included above as the cost of obtaining the valuations would outweigh the benefits of including them.

11. Non-current investments

Consolidated	Subsidiary companies £m	Investment property £m	Other £m	Total £m
At 1 August 2018	-	148.6	407.2	555.8
Additions	-	-	26.3	26.3
Transfer from/(to) fixed assets	-	0.6	-	0.6
Disposals	-	(5.8)	(54.7)	(60.5)
(Loss)/gain on market movements	-	22.3	(6.8)	15.5
Impairment	-	-	(0.9)	(0.9)
At 31 July 2019	-	165.7	371.1	536.8
College				
At 1 August 2018	48.1	148.6	407.0	603.7
Additions	6.0	-	26.3	32.3
Transfer from/(to) fixed assets	-	0.6	-	0.6
Disposals	-	(5.8)	(54.5)	(60.3)
(Loss)/gain on market movements	-	22.3	(6.8)	15.5
Impairment	-	-	(0.9)	(0.9)
At 31 July 2019	54.1	165.7	371.1	590.9

	Consolidated		College	
	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Other consists of:				
Listed non-current investments	183.1	238.4	183.1	238.4
Endowment funds assets	145.0	125.1	145.0	125.1
Shares not listed on a recognised stock exchange	39.1	40.0	39.1	40.0
Other non-current investments	3.9	3.7	3.9	3.5
	371.1	407.2	371.1	407.0

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For the year ended 31 July 2019

12. Investments in joint ventures

Imperial College Thinkspace Limited has a £3 million (49.9%) investment in Scale Space LLP, a joint venture partnership with Accelerate Property Feeder Ltd (a subsidiary of Blenheim Chalcot LTF Limited), with up to a further £6.7 million committed. The joint venture is constructing business innovation space at our White City Campus. The College has also provided a £6 million arm's length loan funding to the joint venture, with up to a further £23 million committed. Scale Space LLP is accounted for on the equity basis with the College's share of net assets of £2.3 million as at 31 July 2019 and a share of losses relating to ongoing operations of £0.6 million.

13. Investments in associates

Associates are consolidated using the equity method.

At the beginning of the year the College had a 23% share in Twig Rights Limited, the holding company of a trading entity which creates digital educational resources. On 31 August 2018 the College exercised its right to convert £5.7 million of convertible loans to equity, increasing College's share to 39%. The carrying amount of this associate at 31 July 2019 was £6.3 million (31 July 2018: £2.5 million), with a £1.9 million share of the loss for the year ended 31 July 2019 recognised in the statement of comprehensive income and expenditure (2018: £1.5 million loss) relating solely to ongoing operations. The cost recognised for the College at 31 July 2019 was £9.2 million (31 July 2018: £3.5 million). In 2018–19 the College entered into two new loan agreements to provide the company with £0.8 million, which now represents the total amounts loaned to the company.

The College's investment in IP Group plc is held at market value as a non-current investment with a value of £37.6 million as at 31 July 2019. A drop in market value of £30.4 million was recorded in the year. On 17 October 2017, IP Group plc acquired Touchstone Innovations plc which had been an associate of the College and was equity accounted up to that date, with the Group recording a £17.1 million share of the loss in 2017–18. At the same time the carrying value of Innovations was derecognised and a deemed gain on disposal of £16.6 million recognised. The College reported a deemed gain on sale of £72.5 million.

14. Subsidiary undertakings

As at 31 July the subsidiary companies, all of which are registered in England and are wholly-owned by the College, were as follows:

Company	Principal activity	Holding %
Burlington Danes Construction Ltd	Construction and property services	100
IC Consultants Ltd	Consultancy and scientific services	100
Imperial Activities Ltd	Commercial property services	100
Imperial College Developments Ltd	Development of building projects	100
Imperial College London Ltd	Dormant	100
Imperial College Projects Ltd	Provision of scientific services	100
Imperial College ThinkSpace Ltd	Provision of facilities to spinout companies	100
Imperial MBA Ltd	Dormant	100
Imperial College Innovations (formerly Imperial College White City Incubator Ltd)	Commercialising and supporting spinout companies	100
Private Patient Healthcare Ltd	Private patient healthcare services	100
Wye Foundation Trust	Charitable Trust	100

Imperial College Union is an unincorporated charitable association that was fully consolidated by the College until 23 November 2018 at which point its constitution changed and it was no longer deemed appropriate to consolidate.

15. Trade and other receivables

	Consolidated		College	
	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Research grants and contracts – receivables	21.8	23.6	21.8	23.6
Research grants and contracts – work in progress	64.1	63.4	64.1	63.4
Other trade receivables	118.2	76.1	114.0	71.5
Prepayments and accrued income	75.1	48.4	72.3	44.4
Derivatives	-	3.4	-	3.4
Amounts due from subsidiary companies	-	-	8.9	11.1
Amounts due from associate companies and joint ventures	6.9	5.1	6.9	5.1
	286.1	220.0	288.0	222.5
Amounts due after more than one year included above	36.7	14.1	38.2	15.6

The derivatives relate to forward contracts for gas and electricity entered into to mitigate the effect of adverse market energy prices. These are held at fair value using quoted market energy rates as at the year-end. There were no such forward contracts as at 31 July 2019 (the fair value of these contracts at 31 July 2018 was £3.4 million).

Included within Other trade receivables are invoices totalling £91.5 million (£55.8 million in 2018) in respect of tuition fees for courses starting in the next financial year with the income deferred on the balance sheet until the start of the course.

16. Current investments

	Consolidated		College	
	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Deposits	0.6	24.4	0.6	24.4

Deposits included here are those held with banks and building societies with more than three months' maturity at the balance sheet date.

At 31 July 2019 the weighted average interest rate of these fixed rate deposits was 0.83% per annum. The fair value of these deposits was not materially different from their book value.

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For the year ended 31 July 2019

17. Creditors : amounts falling due within one year

	Consolidated		College	
	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Bank overdraft	-	-	18.0	3.1
Unsecured loans	9.0	9.0	9.0	9.0
Obligations under finance leases	0.8	0.8	0.8	0.8
Deferred lease premiums	0.3	0.3	0.3	0.3
Research payments received on account	226.1	209.7	226.1	209.7
Trade payables	30.6	23.8	19.5	22.1
Social security and other taxation payable	12.5	11.5	13.2	11.5
Accruals, deferred income and other creditors	251.3	222.9	238.4	210.6
Amounts due to subsidiary companies	-	-	7.5	5.7
Amounts due to associate companies and joint ventures	-	-	0.1	-
	530.6	478.0	532.9	472.8

Deferred income

Included within accruals and deferred income are the following items of income which have been deferred:

	Consolidated		College	
	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Income with performance related conditions	30.9	17.0	30.9	17.0
Other income	139.0	117.1	134.3	113.1
	169.9	134.1	165.2	130.1

Included within other income are deferred tuition fees totalling £106.7 million (£80.5 million in 2018) in respect of courses starting in the next financial year.

18. Creditors : amounts falling due after more than one year

	Consolidated		College	
	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m	Year ended 31 July 2019 £m	Year ended 31 July 2018 £m
Obligations under finance lease	88.5	89.3	88.5	89.3
Deferred lease premiums	11.4	11.7	11.4	11.7
Unsecured loans	447.1	456.0	447.1	456.0
	547.0	557.0	547.0	557.0

The maturity profile of the carrying amount of the Group's liabilities at 31 July was as follows:

	Lease premiums £m	Bank loans £m	Finance leases £m	2019 £m	2018 £m
Due within one year or on demand (Note 17)	0.3	9.0	0.8	10.1	10.1
In more than one year but no more than two years	0.3	12.1	0.8	13.2	10.1
In more than two years but no more than five years	1.0	26.8	2.8	30.6	36.3
In more than five years	10.1	408.2	84.9	503.2	510.6
Total unsecured loans and finance lease obligations	11.7	456.1	89.3	557.1	567.1
Less than one year	(0.3)	(9.0)	(0.8)	(10.1)	(10.1)
Due after more than one year	11.4	447.1	88.5	547.0	557.0

The bank loans comprise the following unsecured sterling borrowing facilities:

	Outstanding amount drawn £m	Original amount £m	Interest rate %	Date drawn	Term Years
Lender					
Private Placement	50.0	50.0	5.39	Mar-03	30
EIB	3.9	23.2	floating	Dec-05	15
Private Placement	50.0	50.0	4.84	Jul-06	50
EIB	15.4	50.0	floating	May-08	15
EIB	66.8	70.0	2.87	Dec-14	25
EIB	70.0	70.0	2.50	Nov-16	25
Private Placement	30.0	30.0	2.47	Jan-17	33
Private Placement	71.0	71.0	2.47	Jan-17	35
Private Placement	99.0	99.0	2.44	Jan-17	40
	456.1	513.2			

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For the year ended 31 July 2019

19. Provisions for liabilities

	Obligation to fund deficit on USS pension £m	Total pensions provisions £m	Corporate £m	Decommissioning of Engineering facility £m	Total other £m
Consolidated					
At 1 August 2018	64.9	64.9	1.1	5.7	6.8
Utilised in period	(3.7)	(3.7)	-	(2.7)	(2.7)
Movement in period	118.6	118.6	0.1	1.2	1.3
Unused amounts reversed in period	-	-	(0.1)	-	(0.1)
At 31 July 2019	179.8	179.8	1.1	4.2	5.3
College					
At 1 August 2018	64.8	64.8	1.1	5.7	6.8
Utilised in period	(3.6)	(3.6)	-	(2.7)	(2.7)
Movement in period	118.6	118.6	0.1	1.2	1.3
Unused amounts reversed in year	-	-	(0.1)	-	(0.1)
At 31 July 2019	179.8	179.8	1.1	4.2	5.3

USS deficit

The obligation to fund the past deficit on the USS pension scheme arises from the contractual obligation with the pension scheme for total payments relating to benefits arising from past performance. The USS implemented a revised Schedule of Contributions in January 2019 following the finalisation of the 2017 valuation which was effective as at 31 July 2019 pending the 2018 valuation being finalised. Management has re-assessed future employee membership within the USS scheme and salary increases over the period of the contracted obligation in assessing the value of this liability. These, along with a change in discount rate applied, have resulted in an increase of £118.6 million in the year. The movement in the year is driven by a £117.2 million change in expected contributions relating to the revised schedule of contributions as well as a finance charge of £1.4 million, relating to the unwind of the provision. Key assumptions are set out below. On 12 September 2019 the 2018 valuation was finalised along with a revised Schedule of Contributions resulting in a non-adjusting event after the reporting period that will result in a reduction to the provision of £75.4 million, holding all assumptions constant.

The major assumptions used to calculate the obligation are:

	2019	2018
Discount rate	1.58%	2.16%
Salary growth	2.79%–3.12%	2.95%–3.22%
USS membership growth	2.95% long term rate Nil	3.1% long term rate 0.5%–1.7%

The methodology for the USS membership growth assumption looks at both historic College USS membership trends and expected future growth of USS eligible staff. Current membership has dropped in recent years driven by more members leaving than joining the scheme due to early-retirement, tax considerations and increases in members' contributions. Acknowledging the recent decline in the College's USS members alongside expected future growth of eligible USS staff and the ambiguity around external factors (tax and contributions rates), the College has decided to assume a year-on-year growth of 0% for the duration of the deficit recovery period.

Sensitivity analysis

As set out in the accounting policies, there are some critical judgements made in estimating the obligation to fund the USS deficit. The sensitivity of the principal assumptions used to measure the USS deficit provision are set out below:

<u>Change in assumptions at 31 July 2019</u>	<u>Approximate impact</u>
0.5% pa decrease in discount rate	+£7.8m
0.5% pa increase in salary inflation in each year of the deficit recovery period (15 years)	+£7.6m
0.5% pa increase in salary inflation year one only	+£0.9m
0.5% increase in staff FTEs each year of the deficit recovery period (15 years)	+£7.8m
0.5% increase in staff FTEs in year one of the deficit recovery period only	+£0.9m
1% increase in deficit contributions from April 2020	+£35.3m
One year increase in deficit recovery period	+£14.0m

Other

The decommissioning provision is expected to be utilised over the next two to three years and the College does not expect that the amount required to complete the decommissioning will vary materially from its expectations. The Corporate provision relates to potential liabilities relating to overseas employees as well as a number of restructuring programmes which are currently underway within the College with the aim of reducing costs.

20. Endowment reserves

Consolidated and College restricted net assets relating to endowments are as follows:

					<u>2019</u>	<u>2018</u>
	Restricted permanent endowments £m	Unrestricted permanent endowments £m	Total permanent endowments £m	Expendable endowments £m	Total endowments £m	Total endowments £m
Balances at 1 August						
Capital	89.1	13.2	102.3	77.7	180.0	161.0
Accumulated income	(2.8)	(0.1)	(2.9)	(20.0)	(22.9)	(19.3)
	86.3	13.1	99.4	57.7	157.1	141.7
New endowments	10.3	-	10.3	4.6	14.9	10.9
Investment income	1.3	0.2	1.5	0.6	2.1	2.2
Expenditure	(2.7)	(0.2)	(2.9)	(3.6)	(6.5)	(5.8)
	(1.4)	-	(1.4)	(3.0)	(4.4)	(3.6)
Increase in market value of investments	6.6	0.7	7.3	3.2	10.5	8.1
At 31 July	101.8	13.8	115.6	62.5	178.1	157.1
Represented by:						
Capital	106.0	13.9	119.9	85.5	205.4	180.0
Accumulated income	(4.2)	(0.1)	(4.3)	(23.0)	(27.3)	(22.9)
	101.8	13.8	115.6	62.5	178.1	157.1

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For the year ended 31 July 2019

20. Endowment reserves (continued)

	2019	2018
	Total £m	Total £m
Analysis by asset		
Non-current investments	145.0	125.1
Accrued income	7.5	5.4
Current liabilities	(0.4)	(0.2)
Cash and cash equivalents	26.0	26.8
	178.1	157.1

Included within endowments are a number of permanent funds with a deficit of accumulated income as at 31 July 2019. Within unrestricted permanent endowments there are four funds with a combined deficit balance of £0.2 million (2018: four funds with a deficit totalling £0.2 million). Within restricted permanent endowments there are 80 individual funds with a total combined deficit of £7.2 million (2018: 76 funds with a total combined deficit of £6.1 million). The College monitors funds in a deficit position and takes corrective action to ensure that these funds return to surplus in the medium term.

21. Restricted reserves

Reserves with restrictions are as follows:

				2019	2018
	Capital £m	Research £m	Other £m	Total £m	Total £m
Consolidated					
Balances at 1 August	10.1	27.5	34.7	72.3	60.4
New Funding Council grants	25.6	-	-	25.6	23.4
New income/donations	27.4	25.4	5.9	58.7	55.6
Investment income	-	-	0.1	0.1	-
Expenditure	(35.9)	(11.8)	(7.7)	(55.4)	(67.1)
	17.1	13.6	(1.7)	29.0	11.9
At 31 July	27.2	41.1	33.0	101.3	72.3

				2019	2018
	Capital £m	Research £m	Other £m	Total £m	Total £m
College					
Balances at 1 August	7.5	27.5	37.4	72.4	58.5
New Funding Council grants	25.6	-	-	25.6	23.4
New income/donations	27.4	25.4	7.9	60.7	54.8
Investment income	-	-	0.1	0.1	-
Expenditure	(33.3)	(11.8)	(6.3)	(51.4)	(64.3)
	19.7	13.6	1.7	35.0	13.9
At 31 July	27.2	41.1	39.1	107.4	72.4

22. Capital and other commitments

Provision has not been made for the following capital commitments at 31 July:

	Consolidated		College	
	2019 £m	2018 £m	2019 £m	2018 £m
Capital commitments for major building projects contracted for at 31 July	119.0	168.6	114.3	168.0

23. Contingent liabilities

The College is subject to a number of overage clauses and other matters for which the outcomes are uncertain and the likelihood of occurrence is considered remote, or are deemed commercially sensitive.

24. Lease payables

Total rentals payable under operating leases:	2019	2018
	£m	£m
Future minimum lease payments due:		
Not later than one year	6.1	6.0
Later than one year and not later than five years	24.2	23.0
Later than five years	127.2	131.6
Total lease payments due	157.5	160.6

Lease payments recognised as an expense in the year totalled £6.0 million (2018: £6.5 million).

25. Lease receivables

Total rentals receivable under operating leases:	2019	2018
	£m	£m
Future minimum lease payments due:		
Not later than one year	9.5	11.8
Later than one year and not later than five years	32.5	38.7
Later than five years	63.0	66.0
Total lease payments due	105.0	116.5

Lease receivables include a new contract for a lease of four properties at the South Kensington Campus over a 40 year period. Receivables are only included for 20 years since the tenant has the option to terminate the lease at this point.

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26. Related party transactions

The College maintains a Register of Interests of all Governors, academic and professional services staff. Policies incorporated within the College's Financial Ordinances require an individual to declare an interest and withdraw from any commercial discussions should a conflict of interest potentially arise. Written assurances have been obtained from Governors and senior officers of the College in respect of themselves and their close family that for the year to 31 July 2019, they have not unduly influenced any transaction between the College and a related party, as defined by FRS 102.

Commercial relationships with companies or other organisations that might be regarded as related parties have been reviewed. Transactions of a similar nature are aggregated unless, in the opinion of the College, separate disclosure is necessary to understand the effect of the transactions on the financial statements. The College has taken advantage of the exemption given by FRS 102, Related Party Disclosures, from disclosing transactions with its wholly owned subsidiaries. During the year, the College purchased goods and services amounting to £3.6 million and invoiced receivables amounting to £38.0 million from related parties. At the year end £0.5 million was outstanding and included in debtors. Purchases of £1.1 million and invoiced receivables of £0.5 million relate to the transactions with companies in which the key management personnel declared interest. Invoiced receivables include £33.9 million from the Wellcome Trust where Mr Nick Moakes, Chair of Endowment Board, is a Managing Partner of Investments and Chief Investment Officer. The Wellcome Trust has detailed guidelines and controls which require that Governors withdraw from any discussion or decision making on the award of grants where there may be a conflict of interest.

A number of College employees hold positions in the Imperial College Healthcare NHS Trust. In common with many universities, senior members of the College sit on Research Councils, other NHS Trust boards and other grant awarding bodies which have their own internal procedures to avoid potential conflicts of interest. Louise Lindsay, Director of Human Resources and Organisational Change, has been a director of the SAUL pension scheme since January 2015. Transactions with these entities are not included in the aggregate numbers above, but are included in notes 3, 4 and 28.

The College has close relationships with a number of West London NHS Trusts with whom the College shares sites and facilities. College staff work closely with those Trusts particularly in the clinical service areas.

No trustee has received any remuneration or waived payments from the College during the year in respect of their services as a trustee (2018: Nil).

The total expenses paid to or on behalf of three trustees were £3,984 (2018: £10,531 to three trustees). This represents travel and subsistence expenses incurred in attending Council, Committee meetings and charity events in their official capacity.

27. Connected charitable institutions

A number of charitable institutions are administered by, or on behalf of, the College and have been established for its general or special purposes. As a result, under paragraph 28 of Schedule 3 to the Charities Act 2011, these connected institutions are exempt from registration with the Charity Commission. The College has no connected charities with income of £100,000 and above to disclose. Aggregate figures for connected charities with income below this threshold are disclosed below.

Funds where individual income for the year was under £100,000	Opening reserves £'000	Income and donations £'000	Expenditure and outgoing resources £'000	Capital growth/ diminution £'000	Closing reserves £'000
Consolidated					
Prize Funds (two funds)	373	5	(10)	25	393
Research support (two funds)	2,210	32	(13)	165	2,394
Student support (one fund)	3,393	53	(13)	231	3,664
	5,976	90	(36)	421	6,451

28. Pension schemes

The College participates in four separate, independently managed occupational pension schemes. Each is valued triennially by professionally qualified and independent actuaries, except the NHS Scheme which is valued quadrennially. The Universities Superannuation Scheme (USS), the Superannuation Arrangements of the University of London (SAUL) and NHS pension schemes are multi-employer schemes and it is not possible to identify the College's share of the underlying assets and liabilities of the schemes on a consistent and reasonable basis. Hence, as required by Section 28 of FRS 102, contributions to the schemes are accounted for as if they were defined contribution schemes. This means the amounts charged to the statement of comprehensive income and expenditure represent the contributions payable to the schemes in respect of the accounting period. For both USS and SAUL, in the event of the insolvency of any of the participating employers, the amount of any pension funding shortfall (which cannot otherwise be recovered) in respect of that employer may be spread across the remaining participant employers and reflected in the next actuarial valuation. The College also participates in the Federated Pension Scheme 1634 (FPS).

Imperial Consultants Ltd, a subsidiary of the College, formally joined the SAUL pension scheme in September 2016 and ended its participation in the SAUL Scheme on 31st October 2018 due to the transfer of staff from the company to the parent, Imperial College London.

USS

Staff paid on academic and academic-related scales (who are otherwise eligible), can acquire pension rights through USS, which is a national scheme administered centrally for UK universities. With effect from 1 October 2016, the scheme changed from a defined benefit only pension scheme to a hybrid pension scheme, providing defined benefits (for all members) as well as defined contribution benefits, above a threshold amount of salary. The assets of the scheme are held in a separate fund administered by the Trustee.

The total cost for the College for the year ended 31 July 2019 was £42.0 million (2018: £39.0 million). Since the institution cannot identify its share of scheme assets and liabilities, the following disclosures reflect those relevant for the scheme as a whole. The latest available complete actuarial valuation of the Retirement Income Builder section of the Scheme was at 31 March 2017 ("the valuation date"), which was carried out using the projected unit method. As at the year end a valuation as at 31 March 2018 was underway but not yet complete. At the valuation date, the value of the assets of the scheme was £60.0 billion and the value of the scheme's technical provisions was £67.5 billion, indicating a shortfall of £7.5 billion. The assets were therefore sufficient to cover 89% of the benefits which had accrued to members, after allowing for expected future increases in earnings.

A new deficit recovery plan was put in place as part of the 2017 valuation and is set out in the new Schedule of Contributions dated 28 January 2019. This requires payment of 5% of salaries over the period 1 April 2020 to 30 June 2034. In accordance with the requirements of FRS 102 and the SORP, the College has made a provision for this contractual commitment to fund the past deficit. In the prior year, the deficit payments were 2.1% of salaries up to March 2031.

The 2018 actuarial valuation was finalised after the year end which indicated a shortfall of £3.6 billion. Since the year end, following the completion of the 2018 actuarial valuation, a new deficit recovery plan has been agreed. This amends the existing deficit recovery plan as set out in the 2017 valuation Schedule of Contributions. This new plan requires deficit payments of 2% of salaries from 1 October 2019 to 30 September 2021 and then payments of 6% of salaries from 1 October 2021 to 31 March 2028. As at 31 July 2019, and assuming all other assumptions used to calculate the provision remain unchanged, this would have resulted in a revised provision of £104.5 million, a decrease of £75.4 million from the current year end provision.

The defined benefit liability to be recognised by the College in respect of the deficit contributions due to USS is £179.8 million as at 31 July 2019 (£64.9 million as at 31 July 2018). Management has assessed future employee membership within the USS scheme and salary increases over the period of the contracted obligation in assessing the value of this liability (Note 19).

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For the year ended 31 July 2019

28. Pension schemes (continued)

The defined benefit liability numbers for the scheme have been produced using the following assumptions:

	31 March 2019	31 March 2018
Discount rate	2.4%	2.6%
Price inflation (CPI)	2.1%	2.0%
Life expectancy:		
Males (females) currently aged 65 (years)	24.6 (26.1)	24.5 (26.0)
Males (females) currently aged 45 (years)	26.6 (27.9)	26.5 (27.8)
	31 March 2019	31 March 2018
Existing scheme's benefits:		
Scheme assets	£67.4bn	£63.6bn
FRS 102 liabilities	£79.2bn	£72.0bn
FRS 102 deficit	£11.8bn	£8.4bn
FRS 102 funding level	85%	88%

Note that the FRS 102 funding level is based on accounting rules. This is not the driver for the benefit and contribution decisions for the scheme.

SAUL

The College participates in SAUL, which is an independently-managed pension scheme for the non-academic staff of over 50 colleges and institutions with links to higher education in London. Pension benefits accrued within SAUL currently build up on a Career Average Revalued Earnings ("CARE") basis. The last actuarial valuation was carried out with an effective date of 31 March 2017. Informal reviews of SAUL's position, reflecting changes in market conditions, cash flow information and new accrual of benefits, are carried out between formal valuations.

The funding principles were agreed by the Trustee and employers in June 2018 and are due to be reviewed at SAUL's next formal valuation in 2020. At the 31 March 2017 valuation SAUL was fully funded on its Technical Provisions basis so no deficit contributions were required. The Trustee and the employers have agreed that the ongoing employer's contributions will continue at a rate of 16% of CARE Salaries.

The defined benefit liability of £1.6 million as at 31 July 2017 was recognised by the College in respect of the deficit contributions due to SAUL. The deficit period was agreed to expire on 31 March 2018 and therefore the provision was fully unwound in 2017–18.

NHS

Staff who have pension rights in the NHS Pension Scheme, on taking up a post within the College, may remain in membership of that scheme which is the nationally administered scheme for the NHS. The NHS Pension Scheme is an unfunded defined benefit scheme that covers NHS employers, General Practices and other bodies, allowed under the direction of the Secretary of State in England and Wales.

The Scheme is subject to a full valuation every four years. The last published actuarial valuation undertaken for the NHS Pension Scheme was completed for the year ending 31 March 2016. A valuation of the scheme liability is carried out annually by the scheme actuary (currently the Government Actuary's Department) as at the end of the reporting period. Actuarial assessments are undertaken in intervening years between formal valuations using updated membership and financial data and are accepted as providing suitably robust figures for financial reporting purposes. The Scheme Regulations allow contribution rates to be set by the Secretary of State for Health, with consent of HM Treasury, and consideration of the advice of the Scheme Actuary and appropriate employee and employer representatives as deemed appropriate.

Current employer contributions are set at 14.38%, with member contributions ranging between 5.0% and 14.5% depending on salary. The results of the latest actuarial valuation completed as at 31 March 2016 set the employer contribution rate payable from April 2019. The Department of Health and Social Care (DHSC) has recently laid Scheme Regulations confirming that the employer contribution rate will increase to 20.6% of pensionable pay from this date. Under transitional arrangements, the College will be required to pay additional 1.8% contributions for period from April 2019 in 2019–20, with the remaining 4.4% being settled by DHSC and the NHS making central payments directly to the scheme. There are provisions in the Public Service Pension Act 2013 to adjust member benefits or contribution rates if the cost of the Scheme changes by more than 2% of pay. Subject to this ‘employer cost cap’ assessment, any required revisions to member benefits or contribution rates will be determined by the Secretary of State for Health after consultation with the relevant stakeholders.

The 2016 funding valuation was also expected to test the cost of the Scheme relative to the employer cost cap set following the 2012 valuation. Following a judgement from the Court of Appeal in December 2018, the government announced a pause to that part of the valuation process pending conclusion of the continuing legal process.

FPS defined benefit scheme

FPS is the scheme of St Mary’s Hospital Medical School, operated for non-academic staff prior to 1 August 1988 when it was closed to new entrants. Two thirds of the membership elected to transfer into SAUL at that time and there are now no contributing members. A full actuarial valuation was carried out as at 31 March 2016 by a qualified independent actuary.

The liabilities set out in this note have been calculated based on the results of the full Scheme Funding Assessment as at 31 March 2016. The present value of the defined benefit obligation was measured using the projected unit credit method. Imperial College London has agreed a funding plan with the Trustee body following the 31 March 2016 funding assessment, whereby it was expected that no contributions would be required for the five year period commencing 15 May 2017. The disclosures set out below are based on calculations carried out as at 31 July 2019 by an independent qualified actuary.

The results of the calculations and the assumptions adopted are shown below:

	2019	2018
	£m	£m
Changes in the present value of the defined benefit obligation		
Opening defined benefit obligation	(4.4)	(4.5)
Interest cost on obligation	(0.1)	(0.1)
Administration costs	(0.2)	(0.2)
Remeasurement gains and (losses) – Actuarial gains and (losses)	(0.1)	0.1
Benefits paid including expenses	0.4	0.3
Closing defined benefit obligation	(4.4)	(4.4)
	2019	2018
	£m	£m
Changes in the fair value of scheme assets		
Opening fair value of assets	6.6	6.9
Interest income	0.2	0.2
Remeasurement gains and (losses) – Return on scheme assets excluding interest income	0.4	(0.1)
Benefits paid including expenses	(0.4)	(0.4)
Closing fair value of scheme assets	6.8	6.6

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28. Pension schemes (continued)

	2019	2018
	£m	£m
Total expense recognised in Income and Expenditure		
Administration expenses	0.2	0.2

Major categories of scheme assets as a percentage of total scheme assets	2019	2018
Gilts	66.0%	64.6%
Corporate bonds	16.5%	15.6%
Insured annuity contracts	0.8%	0.9%
Cash	16.7%	18.9%
Total	100.0%	100.0%

The pension scheme has not invested in any of Imperial College London's own financial instruments, nor in properties or other assets used by Imperial College London. The assets are all quoted in an active market with the exception of the insured annuity contracts.

Reconciliation of the present value of scheme liabilities and fair value of assets to the asset recognised in the Balance Sheet	2019	2018
	£m	£m
Fair value of assets	6.8	6.6
Value of liabilities	(4.4)	(4.4)
Funded status	2.4	2.2
Unrecognised pension asset	2.4	2.2

Total amounts recognised in Other Comprehensive Income	2019	2018
	£m	£m
Actual return on scheme assets – gains and (losses)	0.6	0.1
less: amounts included in net interest on the net defined benefit liability	(0.2)	(0.2)
Remeasurement gains and (losses) – Return on scheme assets excluding interest income	0.4	(0.1)
Remeasurement gains and (losses) – Actuarial gains and (losses)	(0.1)	0.1
Surplus restriction	(0.3)	-
Other Comprehensive Income gains/(losses)	-	-

Assumptions	2019	2018
Discount rate	2.1%	2.7%
Aggregate long-term expected rate of return on assets (net of expenses)	2.1%	2.7%
Retail Prices Index (RPI) Inflation	3.1%	3.2%
Consumer Prices Index (CPI) Inflation	2.1%	2.2%
Future statutory revaluation of pensions in deferment	2.1%	2.2%
Pensions in payment, increasing by CPI capped at 5% p.a.	2.1%	2.2%
Post retirement mortality assumption	90% of S2PxA	90% of S2PxA

The standard S2PxA mortality tables have been adjusted to reflect the expected future experience of Scheme members. It has been assumed that mortality is a percentage (90%) lighter than the rates from the standard table and will result in assumed life expectancies for members of the Scheme being longer than if the standard table had been used with no adjustment.

28. Pension schemes (continued)

Scheme contributions

		2019	2018
	Note	£m	£m
The pension costs for the College and its subsidiaries under FRS 102 were:			
Contributions to USS		42.0	39.0
Contributions to SAUL		15.4	14.1
Contributions to NHS		4.3	4.1
Total contributions payable		61.7	57.2
Contributions towards USS deficit	19	(3.7)	(4.6)
Contributions towards SAUL deficit	19	-	(1.7)
Total contributions recognised in staff costs		58.0	50.9

29. Financial instruments

The consolidated Group has the following financial instruments:

		2019	2018
	Note	£m	£m
Financial assets measured at fair value through income and expenditure			
Listed non-current investments	11	183.1	238.4
Endowment funds assets	11	145.0	125.1
Derivatives	15	-	3.4
		328.1	366.9
Financial assets measured at amortised cost			
Other non-current investments	11	3.9	3.7
Other trade receivables	15	118.2	76.1
Research grants and contracts – receivables	15	21.8	23.6
Research grants and contracts – work in progress	15	64.1	63.4
Accrued income		62.2	41.4
Amounts due from associate companies	15	6.9	5.1
Current investments	16	0.6	24.4
Cash and cash equivalents		292.3	287.0
		570.0	524.7

29. Financial instruments (continued)

		2019	2018
Financial assets measured at cost less impairment	Note	£m	£m
Shares not listed on a recognised stock exchange	11	39.1	40.0
		39.1	40.0
Financial liabilities measured at amortised cost			
Unsecured loans	17, 18	(456.1)	(465.0)
Obligations under finance leases	17, 18	(89.3)	(90.1)
Trade payables	17	(30.6)	(23.8)
Accruals and other creditors		(81.4)	(88.8)
		(657.4)	(667.7)

30. Events after the reporting period

As set out in Note 19 in respect of the USS pension scheme, a new Schedule of Contributions based on the 2018 actuarial valuation has been agreed. This results in a decrease of £75.4 million in the provision for the Obligation to fund the deficit on the USS pension which would instead be £104.5 million. This adjustment will be reflected in the College's Financial Statements for the year ended 31 July 2020.

On the 22 October 2019 the College agreed to transfer the assets and liabilities associated with the Schistosomiasis Control Initiative (SCI) to the SCI Foundation, an independent charitable entity newly set up to carry out this work.

