



CRANFIELD UNIVERSITY
ROYAL CHARTER NUMBER 000151
FINANCIAL STATEMENTS
for the year ended 31st July, 2021

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HIGHLIGHTS REPORT

FOR THE YEAR ENDED 31ST JULY, 2021

The global impact of COVID-19 has continued to be upmost in our minds during 2020/2021, with the health and safety of our staff, students and clients remaining our number one priority.

Over the course of the year, we have ensured our operations followed Government coronavirus guidelines as they changed and we developed our own Site Operating Procedures, communicating these to staff, students and visitors to campus.

We are extremely proud of the efforts of all our staff and students as they have adapted to new ways of working and continue to support each other to stay safe and healthy.

Students remained living on campus during lockdowns with staff across the University stepping up to provide both academic and pastoral support, with meals being supplied and wellbeing support offered. The University launched an international arrivals bursary for students travelling to the UK from overseas to study at Cranfield, covering the cost of COVID testing and accommodation during quarantine on the Cranfield campus. A walk-through coronavirus testing facility opened on campus for those with symptoms to book appointments and we hosted a drop-in NHS COVID-19 vaccination centre.

Cranfield's staff Facebook group continues to be a popular place for people to connect, share their experiences and express themselves as members of the Cranfield community. It has been shortlisted for a top communications industry award as the 'Best staff wellbeing initiative' in the regional CIPR PRide Awards 2021, with winners being announced in October 2021.

Alongside supporting the Cranfield community, we have continued to progress major research projects with national and world-leading research facilities opening on our campus:

- The Digital Aviation Research and Technology Centre (DARTeC) was officially opened by Kwasi Kwarteng, Business Secretary, and is already working to make the UK a global leader in digital aviation research. The £67 million world-leading facility is located next to Cranfield's airport and consists of a central building with digital aviation research laboratories and collaborative open plan office space where staff, students and partners work together, and a partially covered 'hangar laboratory' connected to Cranfield's 737-400 aircraft through an airport-style air bridge.
- A new forensic science 'centre of excellence' was opened at the Cranfield campus by Metropolitan Police Commissioner, Dame Cressida Dick. The facilities at Cranfield Forensic Institute (CFI) are among some of the very best in the world and investment has been targeted in the fields of crime scene investigation, digital forensic investigation and forensic materials analysis. The development of the facilities has been made possible with £3.6 million of funding from SEMLEP through the Local Growth Fund, alongside investment from Cranfield University.
- A new £3.2 million Agri-informatics facility was opened by George Eustice, Secretary of State for Environment, Food and Rural Affairs. Cranfield and partners will use the facility to create innovative informatics to support novel business, management and policy approaches in the agricultural sector. It will be shared with Agri-EPI Centre, one of the UK's four Agri-Tech Centres, focusing on agri-tech research and innovation to accelerate the development and adoption of precision data agriculture and engineering technologies that boost sustainable productivity.
- The Water Science Building – which will locally be known as The George Solt Building after the first Director of Water Sciences at Cranfield – was opened as a new leading national water science facility. Funded by government through UKCRIC (the UK Collaboratorium for Research on Infrastructure and Cities) and Cranfield University, the facility has been at the heart of Cranfield's contribution to the national COVID-19 wastewater testing programme. The facility

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features dedicated laboratories to support the development of advanced sensors and point-of-use treatment technologies as well as a Breakthrough Innovation Hub.

- The first phase of a new series of halls of residence, Baroness Young Hall, was opened on the Cranfield campus on time and within budget, providing 415 new premier single en-suite rooms for student accommodation. The halls have been designed and built by Watkins Jones and were funded from the private bond.

The year 2020/2021 saw a number of highlights in the University's development including:

- The signing of an option agreement with Marshall of Cambridge for the potential relocation of Marshall Aerospace and Defence Group (MADG) to Cranfield Airport. The agreement followed extensive talks between Cranfield and Marshall, following the announcement in May 2019 of Cranfield as one of the preferred sites for the relocation of MADG from its current site at Cambridge Airport.
- Cranfield University was granted a Gold Employer Recognition award by the Ministry of Defence. The Employer Recognition Scheme (ERS) was launched in 2014 to recognise and reward UK employers that support veterans, military spouses and cadet instructors, as well as reservists.
- Cranfield University became a founding member of the UK-Singapore Universities Alliance for Entrepreneurship and Innovation (UKSAEI). The 16-strong university alliance is the first alliance of its kind between the two countries and will accelerate collaborations in entrepreneurship and innovation.
- The green economy in China was boosted with the opening of the Jiangsu University Cranfield Tech Futures Graduate Institute (JSU-CU Cranfield Institute), a specialist postgraduate venture in China to train future leaders. The partnership between Cranfield and Jiangsu University in China, builds on 20 years of international academic collaboration and will offer Masters' and PhD programmes in agricultural, environmental, mechanical engineering and in engineering management.
- The arrival of a new Saab 340B flying classroom and laboratory aircraft for Cranfield's National Flying Laboratory Centre (NFLC) after a fundraising campaign with charitable donations and contributions from alumni, industry and the universities whose students fly in the aircraft. The NFLC brings together academics and technical specialists to deliver experiential learning for aerospace engineering students from over 20 UK universities.
- The ongoing development of MK:U, a proposed new technical university in Milton Keynes led by Cranfield in partnership with Milton Keynes Council. MK:U started piloting its first Level 6 Degree Apprenticeship courses in September 2021 after forming a strategic partnership with Grant Thornton UK LLP to design and deliver the courses, which will be: Chartered Manager; Data Scientist; Cyber Security; Digital and Technology Solutions. MK:U will be launching an Innovation Hub in 2022, including a small business scale-up programme and a high-technology makerspace alongside a UK-leading Advanced Communications Laboratory.
- Cranfield University's Centre for Creative Competitive Design (C4D) celebrated its ten-year anniversary. The internationally recognised centre is an award-winning centre of excellence for creative design, strategy and leadership.

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- A new 1.5 MWth pilot plant is being built at Cranfield to test an innovative hydrogen production technology that substantially reduces greenhouse gas emissions. The HyPER project (Bulk Hydrogen Production by Sorbent Enhanced Steam Reforming) is an international collaboration led by Cranfield University with £7.4 million funding from the Department for Business, Energy and Industrial Strategy's (BEIS) £505 million Energy Innovation Programme. The plant is set to examine the potential for low-carbon hydrogen to be the clean fuel of the future.
- Cranfield became one of the first signatories to a newly launched Knowledge Exchange Concordat. The development of the Concordat has been led by Universities UK and GuildHE, in partnership with Research England, the National Centre for Universities and Businesses and PraxisAURIL as well as other funders and stakeholders. It aims to enhance knowledge exchange within universities, highlight existing good processes and act as a catalyst for collaboration between universities and employers.
- UTM (Unified Traffic Management) technology provider Altitude Angel announced Cranfield University's global research airport would be the first aerodrome to deploy its next-generation airspace management solution – GuardianUTM Enterprise – into service. GuardianUTM Enterprise has been developed to support regional and local airports and airfields and will provide Cranfield with a combined view of the airspace in the vicinity of its FRZ (flight restricted zone), enabling the airport to enhance and provide UTM Services for drone companies and drone operators.
- Work has continued on the rollout of sensors for the Cranfield Urban Observatory, part of the UK's largest urban research programme, looking at how our cities could be managed and developed in the future for human wellbeing. At the heart of the Observatory is a £1 million state-of-the-art, campus-wide sensor network which can monitor factors such as air and noise pollution, ecosystem dynamics and resource flows.
- Cranfield University launched an online version of its Business Growth Programme, the UK's longest running programme of its kind, to help owner-managers take their business to the next level. Focused on creating practical actions for businesses, the programme gives owner-managers individual support from expert counsellors and peer-to-peer advice with small group mentoring.
- A new partnership between Cranfield School of Management and The Talent Enterprise, headquartered in Dubai, will allow learners to benefit from leadership development and executive education based on scientific analysis of behaviour. The collaboration will bring together the two organisations' strengths in delivering C-suite-level learning and development and in blending contemporary psychometric tools and assessment solutions with the latest advances in artificial intelligence and data science to offer analysis of people's behaviour.
- Cranfield School of Management's MBA programme was named as one of the best in the UK by The Economist's WhichMBA rankings. The rankings also revealed that Cranfield's alumni network is the joint highest ranked in the world for its breadth and first in the UK for the effectiveness of the network.
- Cranfield School of Management was named as one of the UK's top ten business schools in the Financial Times European Business Schools 2020 rankings, which also listed Cranfield as the highest ranked business school in the UK to offer an Executive MBA via the apprenticeship levy.

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- Cranfield University's Defence and Security Programme won prestigious dual-accreditation status with ILM, a global leader in leadership and management and skills. Graduates of the programme are now eligible for a professional postgraduate qualification in Leadership and Management along with their academic degree.

One of the University's greatest strengths is its people, its staff and its students, and 2020/2021 continued to see outside recognition of their expertise. Below are just some of the recognitions in the last year:

- Cranfield achieved national award success with two engineers being named as winners in the 2021 Top 50 Women in Engineering (WE50) and two others reaching the final 100 of the annual awards linked to International Women in Engineering Day (INWED). Professor Jane Rickson, Professor of Soil Erosion and Conservation, and Dr Natalia Falagán, Lecturer in Food Science and Technology, were selected as Top 50 winners and Dr Irene Moulitsas, Senior Lecturer in Scientific Computing, and Eva Peláez Álvarez, PhD researcher in the Enhanced Composites and Structures Centre, were among the 100 highly commended finalists. To coincide with INWED this year, Cranfield also launched an engineering heroes activity, inviting children aged 4-14 to take part and join hero squads focused on climate change, future transport, sustainability and international alliances highlighting the work of Cranfield's industry partners. Entries received from the activity were organised into an online engineering heroes exhibition.
- Jane Hubble, Head of Technical Services in the School of Water, Energy and the Environment, was shortlisted as a finalist for Outstanding Technician of the Year in the Times Higher Education Awards 2020 and was highly commended in the final as a close runner-up. Jane led a £3 million project to transform Cranfield's environmental laboratory facilities into a new large shared environmental analytical facility, used by 250 MSc, PhD and postdoctoral students each year.
- Professor Helen Atkinson, Pro-Vice-Chancellor of the School of Aerospace, Transport Systems and Manufacturing was recognised in the Queen's Birthday Honours 2021 with a damehood for services to engineering and education. Professor Dame Atkinson was also recognised as one of just 20 people identified by WISE's 1 of the Million campaign as a role model working to change the gender balance in STEM.
- Professor Simon Pollard, Pro-Vice-Chancellor International and Recruitment, was awarded an OBE in the Queen's Birthday Honours list 2020 for services to environmental risk management.
- Director of Aerospace, Professor Iain Gray, continued to work together with industry and environmental experts as a member of the Government's Jet Zero Council and welcomed the positive progress that the Council is making towards a more sustainable aerospace and aviation industry.
- Dr Simon Harwood, Director of Defence and Security, spoke to the House of Lords Risk Assessment and Risk Planning Committee, calling for a radical shake-up in how the UK deals with major crises on the scale of the current pandemic.
- Professor Richard Wilding OBE, Professor of Supply Chain Strategy, commented widely in the media on the logistical challenges of the COVID-19 vaccination programme.
- Professor Lynette J Ryals OBE was appointed as a non-executive Director of East West Railway Company. The East West Rail project will create a new direct connection between Oxford and Cambridge.

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- Dr Jacqueline Hannam, Senior Research Fellow in Pedology, was elected as the President of the British Society of Soil Science. Dr Hannam specialises in soil data, digital soil mapping and soil health and leads the LandIS team at Cranfield who are responsible for the national soil data for England and Wales.
- The Rolls-Royce and Cranfield Future Systems Simulator housed in Cranfield University's Aerospace Integrated Research Centre (AIRC) won an iF DESIGN AWARD. The internationally acknowledged iF DESIGN AWARD identifies outstanding design, its relevance for business and everyday life, and awards one of the most important seals of quality in the world.
- Cranfield and the National Beyond visual line of sight Experimentation Corridor (NBEC) consortium – which includes Aveillant, Blue Bear Systems Research, Thales and Vodafone – won the Airspace Management award within the Operations group of the inaugural Airwards for research work in developing technology and safe operating procedures to enable drones to fly beyond visual line of sight in non-segregated airspace.
- Clive Temple, Motorsport MSc Programme Director and Senior Lecturer in the Advanced Vehicle Engineering Centre at Cranfield University, became the first recipient of the Adrian Reynard Medal for Ingenuity.
- Professor Jane Rickson, Professor of Soil Erosion and Conservation, received the Andrew Medal award from the Society of Chemical Industry for her work in the area of 'neglected science'.
- Dr Angel Medina-Vaya, was awarded the esteemed Berkeley Award from the British Mycological Society for his outstanding contribution to work on climate change and mycotoxins.
- Jonathan Searle, Senior Lecturer and Head of the Modelling and Simulation Group in the Centre for Simulation and Analytics, was presented with the Lifetime Achievement Award by the annual Defence Simulation Education and Training event. Jonathan received the recognition for his outstanding contribution to military simulation, education and training over his 40-year career in the sector.
- Dr Irene Carra was appointed to the UK committee of the International Water Association. Dr Carra, Lecturer in Chemical Processes within the Cranfield Water Science Institute, joined Cranfield in 2014 and researches advanced treatment for the removal of pollutants from water sources.
- Dr Abbas Fotouhi, Lecturer in Advanced Vehicle Engineering, was awarded one of the new Industry Fellowships from the Faraday Institution, aimed at strengthening ties between battery researchers working in industry and academia.
- Two students from Cranfield won prestigious International Society of Air Safety Investigators Rudolf Kapustin Memorial Scholarships in the same year for the first time. Ao Sun and Yifan Wang, both Safety and Human Factors in Aviation MSc students, were awarded the \$2,000 scholarships after submitting essays focusing on the protection of mental health for accident investigators and the use of 3D accident scene reconstructions, respectively.
- Cranfield student Rosie Crawford was shortlisted for Masters Student of the Year in the Postgrad Awards 2021. Rosie was one of seven shortlisted in the category which recognises the hard work, dedication and commitment of exemplary postgraduate students.

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- Neha Chauhan, who studied an MSc in Thermal Power at Cranfield between 2016-17, was announced as the winner of the Entrepreneurial Award at the 2021 Study UK Alumni Awards in India.

A number of key appointments and academic awards were made over the year:

- Professor Karen Holford CBE FREng was appointed as Cranfield's new Chief Executive and Vice-Chancellor following the announcement of the retirement of Professor Sir Peter Gregson. Taking up the role from 1 August 2021, Karen joins Cranfield from Cardiff University where she was Deputy Vice-Chancellor. Karen was elected as a Fellow of the Royal Academy of Engineering in 2015 and was named as one of the top 50 most influential women engineers in the UK in 2016. In 2018, she received a CBE for services to engineering and the advancement of women in engineering and, in 2019, received the Suffrage Science award in Engineering and Physical Sciences.
- Professor Chris Fogwill joined Cranfield as Pro-Vice-Chancellor and Head of the School of Water, Energy and Environment, taking up his post on 1 October 2021. Professor Fogwill currently works at Keele University where he is Head of the School of Geography, Geology and the Environment and Professor of Glaciology and Palaeoclimatology, and Director of the University's Institute for Sustainable Futures.
- Professor Leon Terry, previously Director of Environment and Agrifood at Cranfield, was appointed as the University's Pro-Vice-Chancellor for Research and Innovation, taking up the post on 1 August 2021. He will be responsible for continuing to drive excellence in Cranfield's transformational research across the University.
- Alicen Nickson was appointed as the new Director of Research and Innovation at Cranfield University. She took up her role in October 2021 and joins the University from Royal Holloway University, where she is currently Director of Research and Innovation.
- David Ford was appointed as Director of Information Technology and took up his role on 11 October 2021. David joins Cranfield from the University of Hertfordshire where he has worked in various IT roles, including most recently as Chief Information Officer, during his 11-year tenure. Prior to this, he held a senior IT position at the University of Nottingham.
- Mark Westwood was appointed as the new Head of the Centre of Aeronautics. Mark joined Cranfield from the Connected Places Catapult where he was the Chief Technology Officer and took up his post at the end of September 2021.
- Fernando Alonso, the former Head of Airbus Flight Test Organisation and later Head of Military Aircraft at Airbus joined Cranfield as a Visiting Professor. Professor Alonso will provide practical advice and support linking classroom flights to the needs of business. He will help provide advice to support research projects around aircraft electrification and zero carbon research.
- Jordan Giddings joined Cranfield as a Visiting Professor in defence and security. Professor Giddings will work at a strategic level across the University to help define future strategies towards supporting Government in national security research, development and education.
- In the run-up to the year's graduation ceremonies, Cranfield awarded honorary degrees to distinguished leaders in the world of business, government and technology: Chris Hopson, Chief Executive of NHS Providers; Dr Nneka Abulokwe OBE, technology and digital entrepreneur; Dame Carolyn Fairbairn, former Director-General of the CBI; Emma Howard Boyd CBE, Chair of the Environment Agency; Dick Elsy CBE, former Chief Executive of the High Value Manufacturing Catapult; Toto Woolf, the Team Principal, Chief Executive and co-

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owner of the Mercedes-AMG Petronas Formula One Team; Air Marshal Sue Gray OBE, Director-General of the Defence Safety Authority; Dr Nigel Whitehead CBE, former Director of External Affairs at BAE Systems; Lord Parker of Minsmere, Lord Chamberlain of Her Majesty's Household and former Director-General of MI5; Air Marshal Sir Julian Young, former Chief Engineer of the RAF.

- Seven of the brightest and best graduates in energy and power from around the world were awarded places on Cranfield University's Net Zero Scholarship programme.

Our industry-focused research continues to change the way businesses work, save lives and act as a force for good in an increasingly challenging world. Some examples of the impact Cranfield research has had in 2020/2021 include:

- We supported ZeroAvia in achieving the world's first hydrogen fuel cell powered flight of a commercial-grade aircraft. The flight took place at the company's R&D facility at the University-owned Cranfield Airport, with the Piper M-class six-seat plane completing taxi, takeoff and a full pattern circuit before landing back at the airport. The flight was watched by Aviation Minister, Robert Courts. ZeroAvia was assisted by Cranfield Aerospace Solutions in achieving certification from the Civil Aviation Authority for the aircraft.
- Cranfield University was ranked as one of the leading specialist science and technology universities in England in the Knowledge Exchange Framework (KEF) published by Research England. In its specialist grouping, Cranfield was named as within the top 10% for Working with Business; top 10% for Skills, Enterprise and Entrepreneurship; and top 30% for Intellectual Property and Commercialisation.
- Cranfield researchers are taking part in nine projects announced as winners of UK Research and Innovation's Future Flight Challenge. Cranfield is working with a range of industry partners and organisations – including airports, start-ups, regional and local authorities – on the projects as part of the challenge which aims to revolutionise aviation and drone usage to transform the way people, goods and services fly. The projects have a total award value of over £8.5 million.
- Cranfield academics played an active role in submitting evidence to the Government's 'Global Britain in a Competitive Age: the Integrated Review of Security, Defence, Development and Foreign Policy' call for evidence via one-to-ones, workshops and in written submissions.
- Hundreds of business representatives and policymakers joined Cranfield University academics at a virtual green technology showcase. Leading engineers and scientists from Cranfield provided insight into the latest environmental technologies being developed at the University. The showcase also saw the formal launch of the University's Green Technology Grand Challenge, an initiative that is bringing together a team of multi-disciplinary researchers from across the University.
- Cranfield Aerospace Solutions – the wholly owned subsidiary of Cranfield University leading the Project Fresson consortium – announced it will exploit recent advances in hydrogen fuel cell technology to develop a commercially viable, retrofit powertrain solution for the nine-passenger Britten-Norman Islander aircraft.
- Forensic archaeologists and anthropologists from Cranfield recovered the bodies of victims executed by the Franco regime at the end of the Spanish Civil War during an excavation in the Ciudad Real region of Spain. The team from CFI worked with partners from the University Complutense of Madrid and social anthropologists from Mapas de Memoria (Maps of Memory) to search for, exume and identify those executed and buried in the civil cemetery at Almagro between 1939 and 1940.

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- The new Africa Centre of Excellence for Sustainable Cooling and Cold Chain (ACES), of which Cranfield is a partner, took a major step forward in Rwanda with a £2.4 million funding boost from the Department for Environment, Food & Rural Affairs. ACES will help to get African farmers' produce to market quickly and efficiently, reducing food waste, boosting profits and creating jobs, as well as looking to improve cold-chains for vaccines and health, now recognised globally as a key challenge for COVID-19 immunisation.
- Cranfield assembled a network of the UK's leaders in landfill management, engineering and development to focus on making enhanced landfill mining a reality in the UK. Enhanced landfill mining recovers valuable raw materials, contributing to the circular economy. The network will be targeting more than 20,000 former sites across the UK.
- A digital sprint, featuring a series of hackathons, led by Cranfield and the Natural Environment Research Council, saw multiple projects awarded prizes for innovation and use of digital technology. Scientists from across the world participated in teams during three successive hackathons to develop digital environmental tools that can help track, understand and predict the effects of COVID-19 and help lead to a greener post-pandemic future.
- Cranfield is co-leading a new international project to examine the role of culture and archives in enhancing possibilities for peace and preventing conflict in communities around the world. Imagining Futures through Un/Archived Pasts is a four-year, £2 million project funded by the Arts and Humanities Research Council and will establish an interdisciplinary network to connect creators and institutions in Africa, the Middle East, North America and Europe.
- Cranfield worked with Q-Flo, Cambridge University and NHS England to record experimental airflow data from a modern NHS ambulance under different driving conditions. Collection of the data, funded by the Royal Academy of Engineering, explored the effective installation of filtration units which are able to remove virus molecules, including COVID-19 aerosols.
- Cranfield researchers partnered with Meditech Gloves, a leading manufacturer of high-quality examination and surgical gloves, to show how energy savings can be made with the development of more sustainable, biodegradable, protein-free, natural rubber gloves which biodegrade 100 times faster than synthetic rubber.
- Researchers at Cranfield are working with partners at the University of York to develop a greener way to manufacture textiles for clothing using biomass derived from crop waste. The new process uses low environmental impact solvents to dissolve cellulose from crop and household waste, such as food scraps and kitchen roll. This creates a viscous honey-like solution which can then be spun into fibres to make eco-textiles for sustainable fashion.
- Cranfield produced a report in partnership with the National Preparedness Commission and Deloitte that found most businesses were ill-prepared to deal with the pandemic and muddled though the challenges stemming from it. 'Resilience reimagined: a practical guide for organisations' presented insights from business leaders from a range of sectors and made seven recommendations for organisations on how to become more resilient.
- Cranfield is leading a research consortium examining how foundation industries can grow and develop while helping achieve the net zero 2050 environmental targets. TransFIRE (Transforming Foundation Industries Research and Innovation hub) was developed in response to the Industrial Strategy Challenge Fund call to transform the foundation industries – namely chemicals, cement, ceramics, glass, metals and paper – which produce 75% of all materials in the UK economy. TransFIRE is a consortium of 20 researchers from 12 institutions, 49 companies and 14 non-governmental organisations related to the sectors.

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- A four-year research project has been launched to help tackle the biodiversity crisis by identifying how the UK's most precious woodland and meadow habitats can be successfully restored by looking at how different plants, animals and other organisms in ecosystems work together. The £2 million project, funded by Natural Environment Research Council, aims to reverse habitat loss and the degradation of land caused by agricultural intensification, urban development, climate change and pollution.
- Research at Cranfield, in collaboration with Severn Trent and Microvi Biotech, is utilising the ability of bacteria to recover nutrients from wastewater. The recovered product has the potential to provide a sustainable, green fertiliser alternative in the food sector and for the public's use in gardens and allotments.
- The water regulator for England and Wales, Ofwat, awarded funding to a Cranfield project in the first Innovation in Water Challenge. The project will recover ammonia in wastewater and turn it into green hydrogen fuel – a first for the industry.
- Cranfield University is the only UK partner in a project with 19 research partners spread through 12 countries to develop a first-of-a-kind plant which couples concentrated solar power (CSP) and desalination techniques. The 10M€ European Union's Horizon 2020 funded research and innovation programme will last four years.
- A research project by Cranfield School of Management will seek to determine to what extent so-called 'flexible furlough' during the coronavirus pandemic has increased employer openness to part-time working. Over 18 months, academics will investigate to what degree the 'survival strategy' adopted by many businesses during COVID-19 may influence the availability of part-time work going forwards.
- Research using data from smart meters found that household water consumption changed significantly after the start of the COVID-19 lockdown, shifting from predominantly higher usage early in the morning to multiple peaks and continued demand throughout the day. The research is the first of its kind in the UK to quantify network consumption and segment households into different behavioural clusters according to significant differences in usage patterns.
- Researchers at Cranfield worked with colleagues at the Royal Horticultural Society to launch a new website aimed at saving water in the garden. The Mains to Rains website has been funded by the Higher Education Innovation Fund in support of a Knowledge Transfer Partnership between Cranfield and the RHS to promote improved water management practices in gardening.
- A Cranfield-led consortium won funding to look into the cyber security risks posed by a digitally-enabled, low-carbon transport service. The funding was awarded by the Engineering and Physical Sciences Research Council, for a new two-year project: Managing Cyber security Risks across Consumers, Organisations and Sectors.
- Experts from Cranfield are helping to protect great crested newts, one of the UK's rarest species of wildlife, by providing data that allows environmentalists to identify habitats in which the species can thrive. Data from Cranfield's Land Information System (LandIS) is feeding into a new model that promises to result in better outcomes for the newts, as well as make developers' lives easier.

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- Cranfield University, Recycling Technologies, a specialist plastic recycling technology provider and Birmingham and Surrey Universities received backing from Innovate UK's Smart 'open grant funding programme' for a £1.2 million project to enhance and improve the efficiency of chemical recycling technology in the UK.
- Researchers at Cranfield and Lancaster University are leading a new research node to assess the fundamental security principles of autonomous systems along with the security of the users and environments in which such systems are expected to operate. The Trustworthy Autonomous Systems node in Security (TAS-S) – a £3.7 million project, funded by UK Research and Innovation and industry contributions – will look into key issues surrounding security as autonomous technologies are increasingly used in a diverse range of applications.

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STRATEGIC REPORT

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Cranfield University is a research intensive, postgraduate university with a mission to create leaders in technology and management, unlocking the potential of people and organisations by partnering with business and governments to deliver transformational research, postgraduate education and professional development.

The activities of the University include teaching, research, design and development work in the themes of Aerospace, Defence and Security, Energy and Power, Environment and Agrifood, Management, Manufacturing, Transport Systems and Water. Operations are primarily carried out on campus at Cranfield in Bedfordshire and the facility at Shrivenham in Oxfordshire. The University is an exempt charity subject to the Charities Act 2011.

The financial statements comprise the consolidated results of the University and its subsidiaries. Subsidiary companies undertake activities which, for legal and commercial reasons, are more appropriately channelled through a limited company and include the development of activities emanating from Cranfield University.

Results for the year and position at year end

Operating income for the year (excluding donations and endowments) declined by 2.6% as summarised below:-

	2021	2020
	£'000	£'000
Funding Council grants	22,868	20,486
Tuition fees and education contracts	72,224	72,736
Research grants and contracts	41,769	38,370
Other income	34,161	43,930
Investment income	182	211
	<hr/>	<hr/>
	171,204	175,733
	<hr/>	<hr/>

The total comprehensive loss for the year was £9,802,000 (2020 – comprehensive loss £26,417,000) as reported on page 52. Of this comprehensive loss, £1,709,000 related to an increase in the University share of the scheme deficits in the defined benefit pension schemes. It is disappointing to report that the University's Corporate Plan surplus, which measures the underlying operating position has been assessed by management to be a deficit of £10,332,000 (2020 – deficit £4,870,000) a decline of £5,462,000 in the position for the year. This decline in operating surplus is as a result of reductions in professional development, residential income and Government Coronavirus grants following the United Kingdom going into lockdown in March 2020 as a precaution against Coronavirus. The reported management deficit was £1,468,000 better than budgeted for the year.

The University has utilised Government Coronavirus schemes that have been available. Where appropriate staff were put on furlough claiming £2,401,000 (2020 - £5,412,000) from the Job Retention Scheme which is included in other income. The University continued to top up salaries to 100% as opposed to paying staff on furlough at the 80% that was allowed under the scheme and no staff members who were placed on furlough have been made redundant. Advantage has also been taken of the CLBILS loan scheme with two of the subsidiary companies borrowing £1,550,000 during the year.

The table on page 13 shows the reconciliation between the comprehensive loss and the underlying operating position. The adjustments relate to the removal of non-operating items that fall outside of management control. Included in the underlying position is the removal of one off donations in the year and the re-introduction of deferred capital grants which spreads the one off donations over the life of the assets that they have constructed as was required under the previous Statement of Recommended Accounting Practice.

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(continued...)

Results for the year and position at year end *(continued...)*

OPERATING SURPLUS RECONCILIATION

	2021		2020	
	£'000	£'000	£'000	£'000
Group comprehensive deficit		(9,802)		(26,417)
Non 415i Adjustments				
<i>Pensions</i>				
<i>LGPS</i>				
Less actuarial (gain)/loss	(722)		31,445	
Add net interest charge on pension scheme	1,209		1,161	
Add additional deficit repayment	1,547		2,206	
		2,034		34,812
<i>USS</i>				
Add actuarial loss/(gain)	1,923		(13,049)	
Add net interest charge on pension scheme	262		668	
Less other pension adjustments	(981)		(780)	
		1,204		(13,161)
<i>Other</i>				
Less donations	(8,625)		(8,281)	
Less permanent endowments	(2,000)		0	
Add deferred capital grants	6,712		6,215	
Add staff restructuring	65		120	
Less Foreign exchange loss/(gain)	438		(16)	
Add corporation tax	210		155	
Less revaluation reserve movement	0		0	
Provision movement	0		0	
		(3,200)		(1,807)
Operating deficit		(9,764)		(6,573)
Cranfield Group Holdings Group (surplus)/deficit		(568)		1,703
Corporate plan deficit		<u>(10,332)</u>		<u>(4,870)</u>

Capital expenditure in the year amounted to £66,581,000 (2020 - £39,924,000). This continues to reflect Cranfield's success in winning and delivering a number of key infrastructure projects, including the Digital aviation research and technology centre (DARTeC) and the Cranfield Forensics facilities which were completed and became operational during the year. Both projects were significantly funded by external parties with this income included in the year.

In addition to these projects significant investment has been made into new student accommodation which will come into use in the next financial year. This development has been funded by the private bond that was taken out in March 2020.

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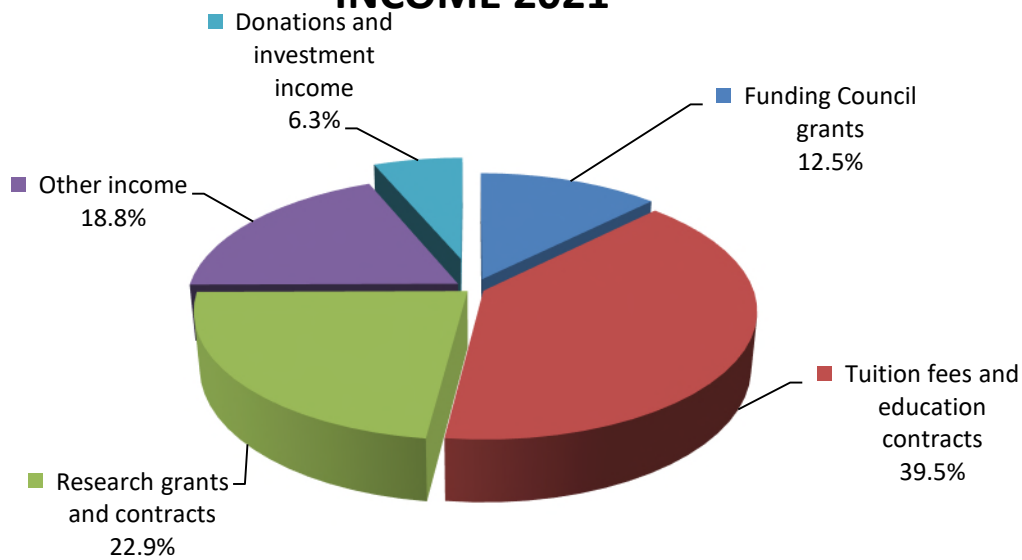
(continued...)

Results for the year and position at year end (continued...)

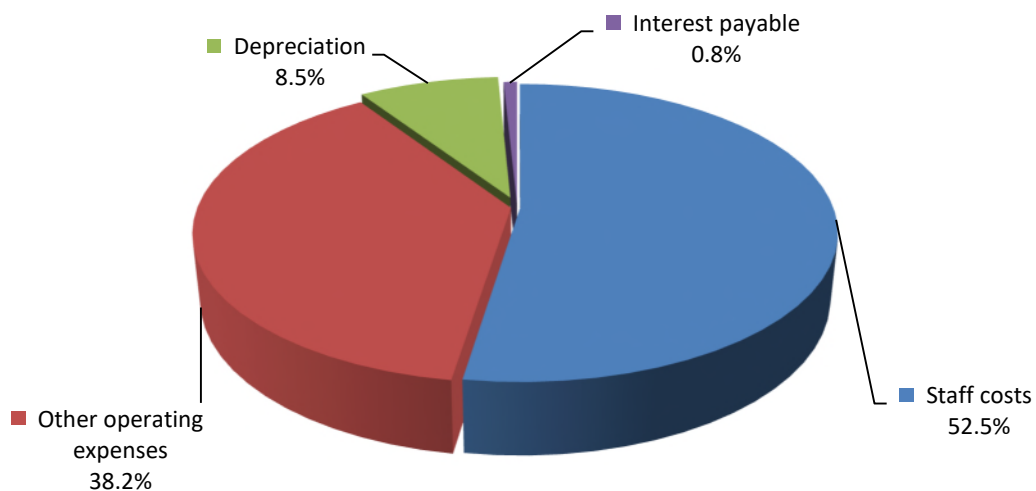
The statement of consolidated cash flow shows a decrease in cash of £61,117,000. Net cash inflows from operating activities were £8,095,000. The overall decrease in cash was mainly as a result of the £66,581,000 of capital additions during the year.

Consolidated total reserves decreased by £9,802,000 (2020 – decreased by £26,417,000) as explained in the statement of changes in reserves on page 53.

INCOME 2021



EXPENDITURE 2021



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(continued...)

Key Performance Indicators (KPI's):-

The University benchmarks its performance against key indicators that measure whether it is on track to deliver the 2021 Corporate Plan which is identified as 415i. This represents towards 400 staff being submitted in the 2020 Research Excellence Framework, being a top 10 University for the student experience, a 5% operating surplus and what is the University's impact and influence both nationally and internationally.

Goal	Measure (indicator)	2019/20 actual	2020/21 target	2020/21 actual
H&S	Maintain OHSAS18001	Maintain	Maintain	Maintain
Diversity & Inclusion	Deliver of diversity & inclusion plans (inc. Athena Swan action plan)	Specific actions	Specific actions	Specific actions
400	Research volume (Annual research income/REF heads submitted)	83	93	103
400	Ready for REF2021	367	370	367
10	Strengthen Cranfield's home student cohort	1,409	1,123	1,293
10	Advocacy (PTES feedback % prepared to recommend Cranfield)	N/A*	90.0%	90.2%
5	Income growth [£million] (Total income)	172	155	168
5	Financial performance (Operating surplus as % of total income)	(2.8%)	(8.5%)	(6.1%)
i	Industry engagement (Total income from industry [£million])	38.0	40.0	40.1
i	International impact (All fee paying EU/RoW students)	2,011	1,505	1,909

*The PTES survey was due to be run in April 2020 but due to Coronavirus situation it was cancelled for the 2019/20 academic year.

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FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

Principal risks and uncertainties

The university maintains a dynamic Major Risks Register with proactive controls and has a range of embedded measures and spread of risk ownership among the Senior Management Team. The current most important strategic risks as identified by the Major Risks Register are as follows :-

- adverse impact of external environment, including both immediate and longer term implications of Covid-19, on income growth and cost base and increasing pension deficits in both the USS and LGPS schemes that may impact on the delivery of the Corporate Plan;
- current business model and organisational size impacts adversely on the University's ability to capitalise on major growth opportunities and future investment;
- recruitment, retention, performance and well-being of staff through of period of considerable change, including Covid-19 impact;
- changing nature of education including government changes, including ability to adapt to the 'new normal';

The University mitigates these strategic risks by a range of interventions including the following:-

- as part of the Corporate Plan 415i, prepares annual operating plan, both at university and school level, and closely monitors them throughout the year. The Covid-19 situation has been closely monitored on a weekly basis at Executive level, with sub-groups set up to provide a flexible managed response to the challenges arising from the pandemic. Our rural location, together with comprehensive Covid-19 response plans, have continued to keep infection rates low, in comparison with those seen in the sector more generally;
- actively consider diversification to achieve new income streams beyond incremental growth. The MK:U development, along with the Air Park are very significant opportunities to expand both the scope and scale of the university;
- seek through our HR strategy s to recruit, retain and develop a diverse range of high quality, staff and provide appropriate reward and flexible working arrangements. Recruitment processes to senior leadership roles in the year, including for the role of Chief Executive and Vice Chancellor, went very well. Well-being programmes are an essential part of our Covid -19 arrangements as a response to the increasing pressures it has caused in all parts of the organisation;
- whilst the short-term financial impacts have been significant, particularly on income levels, the projections for the post Covid-19 'new normal' indicate a stronger financial outcome will return without significant longer-term implications. Cranfield continues to invest in its physical and IT infrastructure to ensure it is well placed to grow its influence and scale into the future.

In spring 2021 the Council held a risk workshop drawing on expert advice and plans during 2021-22 to review, and further strengthen, our risk and resilience framework as part of our emerging new five-year Corporate Plan from 2022-23.

CRANFIELD UNIVERSITY
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(continued...)

Pensions

The University implemented the provisions of FRS 102 in 2015 and therefore continues to take onto the consolidated balance sheet the actuarial valuation of the pension liability in respect of its share of the Bedfordshire County Council Pension Fund. It also has to recognise on balance sheet the obligation for its share of the University Superannuation Scheme (USS) deficit recovery plan. The USS has deficit recovery plans in place covering the period following each triennial valuation which include additional employer contributions to correct the shortfall in the scheme.

The total USS pension deficit across the sector has been calculated by the USS Actuaries. The University share of the deficit has been estimated through the use of the British Universities Finance Directors Group (BUFDG) calculator as at 31 July, 2021 and there is a net pension liability of £20,695,000 (2020 - £19,473,000) applicable to the University. Details are provided in Note 23.

The share of underlying assets and liabilities of the Local Government Pension Scheme (LGPS) is able to be identified as at 31st July, 2021 the scheme actuaries have identified that there is a net pension liability of £91,869,000 (2020 - £91,382,000) applicable to the University. Details are provided in Note 23.

Trading activities of subsidiaries

The venture companies are financially independent from the University and are administered through Cranfield Group Holdings Limited. In addition to these companies, there are other subsidiaries undertaking certain teaching, research and residential activities for the University. A full list of subsidiaries is provided in note 12.

Public Benefit report

The University is an exempt charity under the terms of the Charities Act 2011. The objects of the University are to:

- advance, disseminate and apply learning, knowledge and understanding with particular emphasis on the disciplines of the Sciences, Technology, Engineering and Management; and
- promote and encourage the transformation and application of that wisdom, knowledge and learning for the benefit of industry, the public services, and individuals and for the public benefit.

In reviewing the University's activities, Council has had due regard to the Charity Commission's guidance on the reporting of public benefit as amended in 2014. Cranfield makes a significant contribution to the majority of the specific examples of charitable activities highlighted in section 3 of the 2011 Act. These include:

- *the advancement of education;*
For example, in 2020/21, Cranfield launched an online version of its Business Growth Programme, the UK's longest running programme of its kind, to help owner-managers take their business to the next level. Focused on creating practical actions for businesses, the programme gives owner-managers individual support from expert counsellors and peer-to-peer advice with small group mentoring.
- *the prevention or relief of poverty;*
The new Africa Centre of Excellence for Sustainable Cooling and Cold Chain (ACES), of which Cranfield is a partner, took a major step forward in Rwanda with a £2.4 million funding boost from the Department for Environment, Food & Rural Affairs. ACES will help to get African farmers' produce to market quickly and efficiently, reducing food waste, boosting profits and creating jobs, as well as looking to improve cold-chains for vaccines and health, now recognised globally as a key challenge for COVID-19 immunisation.

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(continued...)

- *the advancement of health or the saving of lives;*

Cranfield worked with Q-Flo, Cambridge University and NHS England to record experimental airflow data from a modern NHS ambulance under different driving conditions. Collection of the data, funded by the Royal Academy of Engineering, explored the effective installation of filtration units which are able to remove virus molecules, including COVID-19 aerosols.

- *the advancement of citizenship or community development;*

We also take into account the social, community and environmental consequences of all our activities. The University organises, sponsors and supports a variety of public engagement events in which staff are actively encouraged to participate. In addition, many of our staff are also engaged in a wide range of public engagement and outreach activities on an individual basis. Our worldwide community is a powerful professional network with students and learners from 169 countries. We have over 30 international alumni communities across the world, including China, India, Russia, Switzerland and Brazil.

- *the advancement of the arts, culture, heritage or science;*

Cranfield is co-leading a new international project to examine the role of culture and archives in enhancing possibilities for peace and preventing conflict in communities around the world. Imagining Futures through Un/Archived Pasts is a four-year, £2 million project funded by the Arts and Humanities Research Council and will establish an interdisciplinary network to connect creators and institutions in Africa, the Middle East, North America and Europe.

- *the advancement of human rights, conflict resolution or reconciliation or the promotion of religious or racial harmony or equality and diversity;*

Forensic archaeologists and anthropologists from Cranfield recovered the bodies of victims executed by the Franco regime at the end of the Spanish Civil War during an excavation in the Ciudad Real region of Spain. The team from CFI worked with partners from the University Complutense of Madrid and social anthropologists from Mapas de Memoria (Maps of Memory) to search for, exhume and identify those executed and buried in the civil cemetery at Almagro between 1939 and 1940.

- *the advancement of environmental protection or improvement;*

A four-year research project has been launched to help tackle the biodiversity crisis by identifying how the UK's most precious woodland and meadow habitats can be successfully restored by looking at how different plants, animals and other organisms in ecosystems work together. The £2 million project, funded by Natural Environment Research Council, aims to reverse habitat loss and the degradation of land caused by agricultural intensification, urban development, climate change and pollution.

- *the promotion of the efficiency of the armed forces of the Crown, or of the efficiency of the police, fire and rescue services or ambulance services;*

For example, through Cranfield's suite of MScs, executive education programmes on forensics and research and consultancy support for law enforcement; we continue to support the Defence Academy of the UK with the Managing Defence in the Wider Security Context (MDWSC) and Strategic Leadership Programme (SLP) courses in countries around the world, enhancing the knowledge, professional understanding and analytical skills of leaders and those who work in the wider security sector to improve and transform the governance and management of defence and security systems, thereby advancing the defence and security interests of the UK.

Cranfield's mission is to create leaders through our education and research in technology and management.

Our activities are undertaken in support of the University's aims, as referenced in our Charter, and the strategic direction, as outlined in our Corporate Plan.

CRANFIELD UNIVERSITY

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(continued...)

Cranfield's Corporate Plan outlines our four strategic priorities:

- To provide a premier learning experience that enhances the capabilities of individuals and their organisations.
- To be recognised for outstanding transformational research that meets the needs of business, government and wider society.
- To grow an efficient, effective and sustainable enterprise.
- To be renowned for our impact and influence - regionally, nationally and internationally.

Cranfield awards around 2,500 degrees each year, giving our graduates a learning experience which provides them with the opportunity to join some of our distinguished alumni as leaders in their fields. Over 7,000 people come to Cranfield each year to benefit from our executive and professional development programmes.

Our alumni include Warren East, CEO of Rolls-Royce; John McFarlane, Chairman of Westpac and former Executive Chairman of Barclays; Omobola Johnson, Partner at TLCom Capital LLP and former Minister for Communication Technology, Nigeria; Dr Gareth Williams, Vice President (Head of Plant Quality), Airbus Group; Chris Hopson, Chief Executive of NHS Providers, the membership organisation for all of England's 217 ambulance, community, hospital and mental health trusts; Zak Hydari, Chief Executive of Rasmala Group, one of the largest managers of sharia-compliant funds in the world; Clifford Braimah, Managing Director of the Ghana Water Company Limited; Dr Sarah Quereshi, CEO at Aero Engine Craft, developing contrail-free aero-engines.

Throughout 2020/2021, we have continued to develop new facilities that will further enhance the delivery of our mission:

- The Digital Aviation Research and Technology Centre (DARTeC) was officially opened by Kwasi Kwarteng, Business Secretary, and is already working to make the UK a global leader in digital aviation research.
- A new forensic science 'centre of excellence' was opened at the Cranfield campus by Metropolitan Police Commissioner, Dame Cressida Dick. The facilities at Cranfield Forensic Institute (CFI) are among some of the very best in the world and investment has been targeted in the fields of crime scene investigation, digital forensic investigation and forensic materials analysis.
- A new £3.2 million Agri-informatics facility was opened by George Eustice, Secretary of State for Environment, Food and Rural Affairs. Cranfield and partners will use the facility to create innovative informatics to support novel business, management and policy approaches in the agricultural sector.
- The Water Science Building – which will locally be known as The George Solt Building after the first Director of Water Sciences at Cranfield – was opened as a new leading national water science facility. The facility features dedicated laboratories to support the development of advanced sensors and point-of-use treatment technologies as well as a Breakthrough Innovation Hub.
- The arrival of a new Saab 340B flying classroom and laboratory aircraft for Cranfield's National Flying Laboratory Centre (NFLC) after a fundraising campaign with charitable donations and contributions from alumni, industry and the universities whose students fly in the aircraft.

Work continues on the development of MK:U, a proposed new technical university in Milton Keynes led by Cranfield in partnership with Milton Keynes Council. MK:U will be piloting its first four Level 6 Degree Apprenticeship courses from September 2021 after forming a strategic partnership with Grant Thornton UK LLP to design and deliver the courses.

None of what we achieve as a University would be possible without the dedication and commitment of our staff to realising the ambitions of our institution:

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(continued...)

- Cranfield achieved national award success with two engineers being named as winners in the 2021 Top 50 Women in Engineering (WE50) and two others reaching the final 100 of the annual awards linked to International Women in Engineering Day (INWED). Professor Jane Rickson, Professor of Soil Erosion and Conservation, and Dr Natalia Falagán, Lecturer in Food Science and Technology, were selected as Top 50 winners and Dr Irene Moulitsas, Senior Lecturer in Scientific Computing, and Eva Peláez Álvarez, PhD researcher in the Enhanced Composites and Structures Centre, were among the 100 highly commended finalists.
- Jane Hubble, Head of Technical Services in the School of Water, Energy and the Environment, was shortlisted as a finalist for Outstanding Technician of the Year in the Times Higher Education Awards 2020 and was highly commended in the final as a close runner-up.
- Professor Helen Atkinson, Pro-Vice-Chancellor of the School of Aerospace, Transport Systems and Manufacturing was recognised in the Queen's Birthday Honours 2021 with a damehood for services to engineering and education.
- Director of Aerospace, Professor Iain Gray, continued to work together with industry and environmental experts as a member of the Government's Jet Zero Council.
- Dr Simon Harwood, Director of Defence and Security, spoke to the House of Lords Risk Assessment and Risk Planning Committee, calling for a radical shake-up in how the UK deals with major crises on the scale of the current pandemic.
- Cranfield University was granted a Gold Employer Recognition award by the Ministry of Defence. The Employer Recognition Scheme (ERS) was launched in 2014 to recognise and reward UK employers that support veterans, military spouses and cadet instructors, as well as reservists.

As an institution, we aim to spread knowledge and learning not just to our learners and research partners but to the wider public:

- To coincide with INWED this year, Cranfield launched an engineering heroes activity, inviting children aged 4-14 to take part and join hero squads focused on climate change, future transport, sustainability and international alliances highlighting the work of Cranfield's industry partners. Entries received from the activity were organised into an online engineering heroes exhibition.
- Explosives chemists from Cranfield took part in an outreach programme to support and inspire young people with STEM (science, technology, engineering and mathematics) projects during the school shutdown period due to the pandemic. Project Inspiration, organised by STEM Ambassador Hub West England and Graphic Science, invited volunteer STEM ambassadors to record videos talking about their STEM expertise, linked to project ideas that young people could use to follow up with their own STEM research. Dr Lisa Humphreys, Research Fellow – Formulation Chemist, and Niki Darcy, Senior Laboratory Technician of the Centre for Defence Chemistry, Cranfield Defence and Security, produced a video about formulation chemistry and worked with teachers and students on follow up projects.

Employment of disabled persons

Applications by disabled persons for employment and for admission to courses of study or research are always fully considered, bearing in mind the aptitudes of the applicant concerned. In the event of existing staff and students becoming disabled every effort is made to ensure that their employment or study with the University continues and that appropriate training and support is arranged. It is the policy of the University that the training, career development and promotion and opportunities to undertake study and research should, as far as possible, be identical for all staff and students.

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Employee involvement

Over the past year the University focused on continuous engagement with the staff community, including Unions and managers, and used this as an opportunity to remind individuals how and where to seek the help and support provided by the University. Some of the actions over the past year included:

- Meeting regularly with the recognised Trade Unions to promote engagement and discuss proposed decisions on the furlough scheme, Standard Operating Procedures etc.
- Measuring and tracking staff engagement and wellbeing through regular pulse surveys. The University also introduced a dedicated wellbeing survey/review that enabled bespoke signposting to support, based on a detailed assessment of the individual staff members responses.
- Vice Chancellor Live events with question and answer sessions for staff during which the Vice Chancellor and members of the senior management team provide topical updates on University activities and respond to live staff questions. Staff meetings (including Q and A) were also held regularly in the four schools and individual professional service units.
- Issuing regular communications, including the staff e-bulletin, and setting up a Cranfield Community Facebook group, as a way for staff to connect informally with friends and colleagues across the University. This has been really well received, with over 640 members joining and that number continues to grow. Around one third of the university's employees – across all levels of seniority – are members, and the group is very active.
- Setting up 2 new staff networks, the staff disability network and EmBrace, in addition to the Step Up Network, to promote further staff engagement in broader areas of diversity.
- Communicating guidance on returning to work on COVID-secure sites via a Standard Operating Procedure document and associated risk assessments.
- Establishing a dedicated section on the Intranet regarding Coronavirus, providing information on the various tools, systems and advice in place to support staff, such as advice for parents on managing working and family life, working remotely, the use of IT such as using Microsoft Teams to connect and collaborate with colleagues.
- Training 20 members of the HR&D team as Mental Health First Aiders and providing a number of focused sessions for staff including 'Maintaining positive mind-set during difficult times', 'Resilience & isolation', 'Working from home and being active'.

Environmental issues

The University is committed to sustainable development by integrating environmental issues into all aspects of its work and management processes. Environmental responsibilities are met through the management of the University's campuses and premises, through its dealings with client groups and trading partners, through the design and delivery of its academic, research and professional services and through its interaction with the local community.

The University has a new target for carbon emissions to achieve Net Zero Carbon by academic year 2030/31. The aim is to reduce scope 1 and 2 emissions as much as possible through energy saving and renewable energy and to also tackle the appropriate scope 3 emissions. There is also a new waste target to achieve Zero Avoidable Waste by the same date. Minimising waste to landfill and incineration and embracing the application of circular economy principles. There are further environmental targets to reduce water consumption, reduce commuting by car and increase biodiversity. More details are available in the Annual Environmental Report. A commitment has been made to improve pollution monitoring and control on site and to develop a climate adaptation strategy. The University has also signed the Universities and College SDG Accord. This will help focus on how the University's contribution to the United Nation's Sustainable Development Goals can be better communicated and developed.

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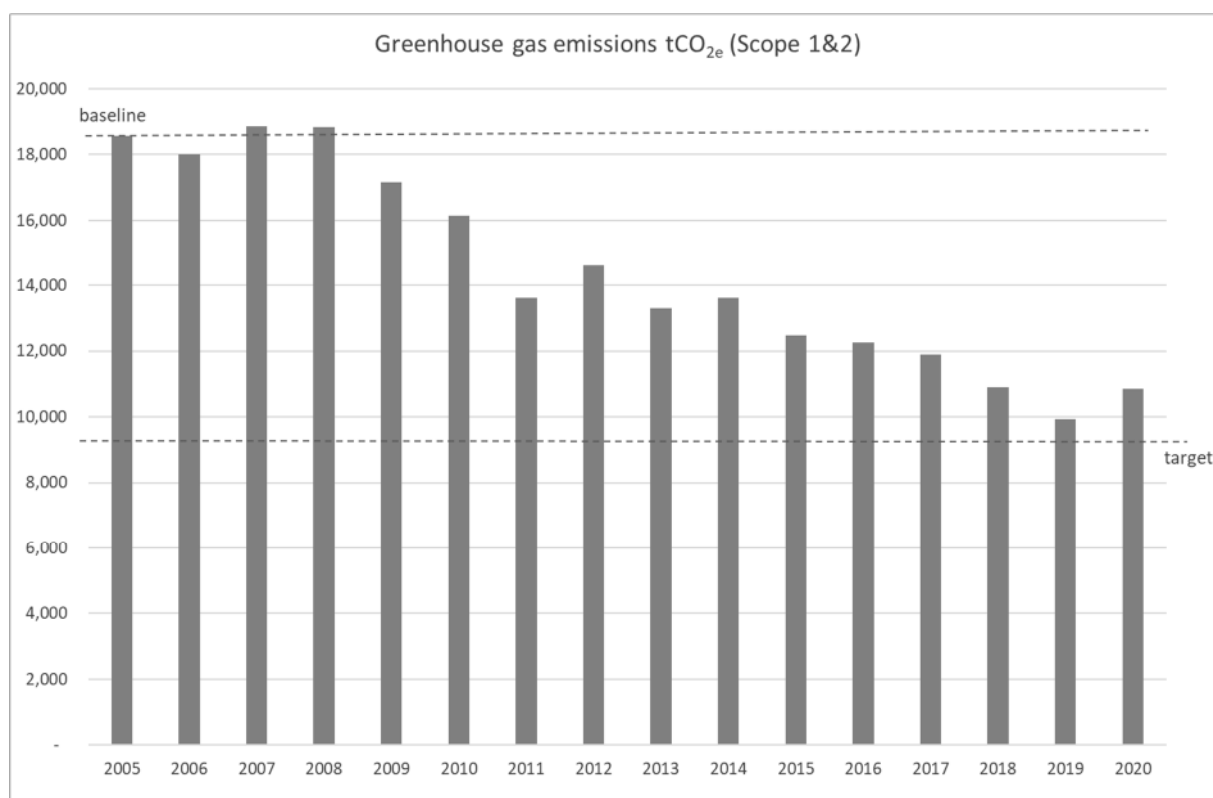
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Streamlined Energy and Carbon Reporting (SECR) and Carbon Management Plan

The University had a target to reduce its Carbon emissions by 50% by 2020/21 academic year compared with a 2005 baseline. Since the implementation of carbon management planning in 2009 Scope 1 and 2 emissions reduced steadily. Despite a surge this year due to a cold winter combined with Covid ventilation requirements they are 42% lower than the 2005 level. There is also a 37% decrease since 2009/10 which exceeds the Government's Voluntary Emissions Reduction Pledge of 30% by 2020. Our carbon footprint has been restated for previous years in accordance with Government Greenhouse Gas reporting guidelines which take account of changes in our estate and also national conversion factors.



The decrease since 2008/2009 reflects the significant investment the University has put into energy saving initiatives such as a large Combined Heat and Power unit, a new Biomass boiler, improvements to the district heating system, a solar farm and energy efficient refurbishments to the real estate. This goes alongside significant efforts from "Green Teams" within the staff and student bodies to ensure sector best practice is employed wherever possible. The University was on trend to meet its 50% target reduction in emissions. However, the Covid mitigation measures including extra ventilation of teaching spaces and the very cold temperatures this year led to an increase in gas use and emissions.

The emissions reported above are for scope 1 and 2 greenhouse gas emissions (excluding scope 3 electricity transmission and distribution emissions) include electricity, heating, process fuels and on-site vehicle fuels for the whole University estate but excluding Shrivenham Campus. Reporting years are from August to July. Other transport emissions and emissions associated with waste and water are not included at present although there are plans to include these within the footprint for future reports. Further information on the Carbon Management Plan can be found on the University website.

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For SECR reporting purposes additional scope 3 emissions from business travel involving cars and motorbikes has been included. A breakdown of the emissions is detailed below. Note the SECR total is slightly different from the carbon management plan total shown above, because business mileage has not been included in the latter.

SECR data for 2020/2021

Fuel Type	Energy Purchased kWh		tCO _{2e}				
	2020/21	2019/20	Sc 1	Sc 2	Sc 3	2020/21	2019/20
Gas	48,913,762	43,651,096	8,959			8,959	8,026
Electricity	7,596,622	6,858,755	0	1,613	143	1,756	1,737
Biomass	1,325,419	1,009,130	20			20	16
Gas Oil	456,332	484,348	113			113	124
Aviation Turbine Fuel	423,534	338,929	109			109	84
Diesel	192,925	264,323	46			46	64
Aviation Spirit	84,471	75,685	21			21	19
Petrol	20,587	27,769	5			5	6
Burning Oil	17,385	15,449	4			4	4
LPG	1,285	1,305	0			0	0
Sub-Total	59,032,322	52,726,789	9,277	1,613	143	11,033	10,080
Business Travel (rental/employee owned vehicles where fuel is purchased)	110,013	325,400			30	30	90
Total Gross tCO_{2e}			9,277	1,613	173	11,063	10,170

The Intensity Ratio is 5.98 tCO_{2e}/£100,000 turnover. In 2019/20 it was 5.45 tCO_{2e}/£100,000

Notes:

1. The methodology used follows the UK Government Environmental Reporting Guidelines. The University has an energy management system certified to ISO50001. Data from invoices is used unless this relies on estimates otherwise the University has extensive automatic meter reading and manual reading processes. Where no data is available, estimates have been used in a few very minor instances amounting to less than 0.3% of the total. These estimates are based on existing data. The reporting period is August 2020 to July 2021. Government greenhouse gas emission factors for 2021 have been used.
2. The University generates more than half of its electricity from an on-site gas fuelled CHP with an output of 1.4 MW and also a 1 MW Solar farm and other smaller roof mounted PV systems. The output of the CHP in 2020/2021 was 9,600,578 kWh consuming 26,575,466 kWh of gas, and the output of the solar farm was 910,789 kWh. Note this means the overall consumption of electricity was 18,107,989 kWh.
3. One Salix project was completed in 2020/21 at a total cost of £91,897 and forecast to give annual savings of 17 tCO_{2e}. The project was for new led lights in B039.
4. More detailed information on the progress of the University towards reducing its greenhouse gas emissions and other aspects of environmental performance can be found in the annual environmental report on the website www.cranfield.ac.uk.

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Health and Safety

The University is committed to providing a safe and healthy environment by taking effective means to manage our risks and protect people from being harmed. There is a process of continuous improvement through a programme connected to the University having OHSAS 18001 Health and Safety Management accreditation across the University in all areas of work and study. The University achieved full accreditation under OHSAS 18001 in July 2016 and has been re-accredited in 2021. Since the start of the pandemic the University has taken the opportunity to undertake an number of initiatives with respect to the mental health of staff and students.

Liquidity and borrowing

The University has seen the total of its cash and cash equivalents decrease during the year from £99.2 million at 31 July 2020 to £38.1 million at 31 July 2021 as budgeted. This is primarily as a result of a £66 million spend on capital infrastructure during the year. Correspondingly, University borrowings decreased by £9.6 million with the HSBC revolving credit facility having been repaid in August 2020.

The University will always ensure that an appropriate minimum cash level is maintained for working capital purposes.

Modern Slavery and Human Trafficking

The University is committed to improving practices to combat slavery and human trafficking and supports the UK Government's approach to implementing the UN Guiding Principles on Business and Human Rights.

In implementing this approach the University supports the Base Code of the Ethical Trading Initiative. This Base Code is an internationally recognised code of labour practice requiring that:

- Employment is freely chosen
- Freedom of association and the right to collective bargaining are respected
- Working conditions are safe and hygienic
- Child labour shall not be used
- Working hours are not excessive
- No discrimination is practiced
- Regular employment is provided
- No harsh or inhumane treatment is allowed

Payment of creditors

It is the University's policy to obtain the optimum terms for all business and, thus, there is no single policy as to the terms used. The University looks to use small and local suppliers where appropriate and looks to pay them within two weeks of invoice wherever possible. In agreements negotiated with other suppliers, the University endeavours to include and abide by specific payment terms in accordance with best commercial practice.

Trade Union Facility Time

Background

Our Trade Union Facility Time data, shown below, has been prepared in accordance with our duty under Section 13 of the Trade Union Act 2016. The data has been collated and extracted from our HR & Payroll database and covers the 12 month "relevant period", which is the 12 months from 1 April to 31 March every year, with the current period being from 1 April 2020 to 31 March 2021.

At Cranfield there are three Unions who are recognised for consultation and negotiation purposes, these being UCU, Unite and Unison.

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(continued...)

Table 1 - Relevant union officials

Total number of our employees who were relevant union officials during the relevant period?

Number of employees who were relevant union officials during the relevant period	Full-time equivalent employee number
13	11.39

Table 2 - Percentage of time spent on facility time

Number of employees who were relevant union officials employed during the relevant period spent a) 0%, b) 1%-50%, c) 51%-99% or d) 100% of their working hours on facility time?

<i>Percentage of time</i>	<i>Number of employees</i>
0%	8
1-50%	5
51%-99%	0
100%	0

Table 3 - Percentage of pay bill spent on facility time

Figures determining the percentage of the total pay bill spent on paying employees who were relevant union officials for facility time during the relevant period.

Provide the total cost of facility time	£22,776
Provide the total pay bill	£85,331,166
Provide the percentage of the total pay bill spent on facility time, calculated as: (total cost of facility time ÷ total pay bill) x 100	0.03%

Table 4 - Paid trade union activities

As a percentage of total paid facility time hours, the number of hours spent by employees who were relevant union officials during the relevant period on paid trade union activities?

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(continued...)

<i>Time spent on paid trade union activities as a percentage of total paid facility time hours calculated as: (total hours spent on paid trade union activities by relevant union officials during the relevant period ÷ total paid facility time hours) x 100</i>	100%
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Outlook for 2021/2022

Cranfield will continue to develop around its thematic offerings in Aerospace, Defence and Security, Energy and Power, Environment and Agrifood, Management, Manufacturing, Transport Systems and Water, supported by the professional service units.

There is continuing uncertainty around the financial outcome for the next year given the continuing uncertainties caused by Coronavirus and the impact this has continues to have on professional development and the Conference Centre facilities.

At this time it is expected that international students enrolling will increase by 10% from the 2019 levels but this is dependant on their ability to travel, how risky the United Kingdom is perceived to be and any future local or national lockdowns that may impact on Cranfield. Professional Development and residential income are also expected to be impacted in a similar way as a result of reduced student numbers and uncertainty in the economy impacting on industrial partners training budgets. Research income should remain strong as the existing order book should allow income levels to be at least in line with 2020/21 as long as staff are able to access labs across the campuses to enable the work to continue.

Cranfield will continue to utilise all appropriate Government Coronavirus schemes during the year. Two smaller subsidiaries have taken out CLBILS loans and will start to make repayments from August and the University will continue to utilise the Job Support Scheme where appropriate until the scheme comes to an end in September.

As part of the Councils consideration of the appropriateness of adopting the going concern basis in preparing the financial statements, a range of severe scenarios have been reviewed. The assumptions modelled are based on the estimated potential impact of Covid-19 restrictions and regulations, along with the proposed responses over the course of the next 24 months. These include a range of estimated impacts primarily based on the length of time various levels of restrictions are in place and the severity of the consequent impact of those restrictions on student numbers and research portfolio. For each income stream the University has sensitised the revenue, profit and cash flow impact of reduced trading activity. The scenarios are most sensitive to the assumptions made for student numbers. The University has not assumed any increases in student numbers for either UK or international students for the purpose of the scenario modelling. A key judgement applied is the ability of international students to be able to travel, likely time period of restrictions on the movement of people and social distancing. The severe scenarios include an assumption that 10% of international students are unable to travel to start their courses in October, this has not occurred as student numbers are higher than in 2020/21. Our Covid-19 impact deficit range of £3 million to £8 million is based on these assumptions. Under each scenario, mitigating actions are all within management control, can be initiated as they relate to discretionary spend, and do not impact the ability to meet demand. These actions include the stopping of all non-essential and non-committed unfunded capital expenditure in the next 12 to 18 months. It is believed that the risk of enforced closure is low as the University can revert to teaching students on line during periods of any local or national lockdowns. The University has implemented additional health and safety measures on each campus to reduce the risk of disruption. It has been assumed that no significant structural changes to the business will be needed in any of the scenarios modelled. As at 31 July 2021, the consolidated statement of financial position reflects a net asset position of £39.5 million and the liquidity of the Group remains strong. In all scenarios modelled the University remains within the private bond facility and bank covenants.

CRANFIELD UNIVERSITY
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(continued...)

New educational initiatives continuing in 2020/21 include the further development of MK:U that would be based in Central Milton Keynes and provide undergraduate courses in business and STEM subjects aligned to both Milton Keynes and Cranfield. At this stage MK:U will open in leased facilities in September 2021 with a pilot scheme running its first two apprenticeship undergraduate courses that has been part funded by the South East Midlands Local Enterprise Partnership and Santander. The suite of Masterships™ programmes utilising the Apprenticeship Levy continues to grow, with Masterships™ being available in all of the Schools.

With regard to capital expenditure, Cranfield has continued to be successful in winning high profile investment bids for the development of facilities and should see further energy saving facilities come on line during 2021/22.

Conclusion

The University had a successful intake of students during the year which helped to offset reductions against budget for professional development and conferencing which were impacted by further lockdowns in November 2020 and the start of 2021. Although this has been a very difficult financial period with income levels being reduced it also led to a growing community spirit within the University as staff and students continued to make great efforts to resolve issues that they encountered as they moved from working and studying on campus to working and studying at home in a very short transitional periods.

Having taken out the private bond in March 2020 the University created some financial head room to see through the difficult days of the pandemic and come out the other side with a healthy balance sheet and a greater sense of community to help build on new opportunities in a new world. The University balance sheet remains strong with total net assets excluding the pension provision of £152 million and cash and cash equivalents of £38.1 million. It should also be noted that although the University revalues the freehold land, buildings are not revalued, with many fully depreciated. University buildings are currently insured for £450 million compared to their net book value of £157 million.

The University has had further success with its infrastructure funding bids to support its Estates strategy and the Corporate Plan and is confident that, through its thematic approach to research, education and executive development, it will continue to add significant value for its students, business and government partners and for the wider public benefit.

C P Fairweather MA FCA
Chair of Finance Committee

25th November, 2021

CRANFIELD UNIVERSITY

CORPORATE GOVERNANCE

The University is committed to following best practice in all aspects of corporate governance and is in full compliance with the CUC Higher Education Code of Governance as updated in 2020. The following statement is given to enable readers of the financial statements to obtain a better understanding of the legal structure of the University and the governance procedures applied by the University's Council.

In March 2013, Her Majesty The Queen in Council approved revisions to the University's Charter and Statutes. The primary impact of these revisions on governance was to make the University Council the unambiguous governing body for the University, in line with the governance guidelines of the Higher Education Funding Council for England. Following the approval of the Charter and Statutes, Council approved a revised set of Ordinances and Senate approved new Regulations; together, the Charter, Statutes, Ordinances and regulations make up the University Laws.

Council's functions, as articulated in the Charter, are to: be ultimately responsible for the affairs of the University; determine the strategic direction of the University; ensure the effective management and control of the University's affairs, property and finances; determine the structure, staffing and overall composition of the University; appoint the Pro-Chancellor; and appoint and dismiss the Vice-Chancellor.

The principal academic and administrative officer of the University is the Chief Executive and Vice-Chancellor who has a general responsibility to the Council for maintaining and promoting the efficiency and good order of the University. Under the terms of the formal Financial Memorandum between the University and the Office for Students terms and conditions of funding, the Vice-Chancellor is the accountable officer of the University and in that capacity can be summoned to appear before the Public Accounts Committee of the House of Commons.

The matters specially reserved to the Council for decision are defined by the University Laws and by custom in line with the Financial Memorandum with the Office for Students terms and conditions of funding.

The Council has a majority of members from outside the University, (described as independent members), from whom the Chair and Deputy Chair must be drawn. Also included in its membership are staff of the University and a member nominated by the student body. The composition of the Council and the procedures for appointment of members, their tenure and removal from office, are determined by the Statutes of the University.

The Council meets at least four times a year and has four standing Committees, Finance, Nominations, Remuneration and Audit. Each of these Committees is formally constituted with terms of reference and comprises mainly independent members of the Council.

CRANFIELD UNIVERSITY

CORPORATE GOVERNANCE

(continued ...)

- **Finance Committee** - meets at least four times a year and, inter alia, recommends to the Council the University's annual revenue and capital budgets and monitors performance quarterly in relation to the approved budgets. The Committee also reviews the University's annual financial statements for reporting to the Council.

Attendance of members during the year is outlined below:

	No. Of Meetings Entitled to Attend	No. of Meetings Attended
Miss Caroline Carter	6	6
Mrs Lesley Chen Davison	6	6
Mr Colin Day	6	6
Mr Paul Fairweather	6	6
Professor Sir Peter Gregson	6	6
Dr Simon Rowlands	6	6

- **Nominations Committee** - considers nominations for vacancies in the independent membership of Council under the relevant Statute and makes recommendations to the Council for such appointments.
- **Remuneration Committee**

Terms of Reference for the Remuneration Committee

The Remuneration Committee at Cranfield, established by Council, has delegated authority to determine the Executive Reward Strategy, setting and reviewing the salaries and other emoluments, terms and conditions and where appropriate, severance payments of the Executive, to include the following members of staff:

- a. The Vice-Chancellor and Chief Executive;
- b. Members of the University Executive;
- c. Such other members of staff as decided by Council.

The Remuneration Committee also have oversight of the remuneration of all staff earning £100,000 or more.

While the primary focus of the Remuneration Committee are the internal relativities and needs of Cranfield University, comparable information on salaries and other emoluments both within the University sector and as appropriate, the wider market, are taken into account.

Remuneration Committee Membership

The membership of the Remuneration Committee as at 31 July 2021 comprise the following members of Council:

- Chair of the Remuneration Committee - Miss Caroline Carter, Dean at the **University of Law**, and former partner of Ashurst LLP.
- The Chair of the Finance Committee - Mr. Paul Fairweather - Former Partner of PricewaterhouseCoopers LLP and Business Fellow, The Honourable Society of Gray's Inn.
- Dr Jaz Saggu, Chief Operating Officer, Furness Insurance Services Ltd.
- Mr. Simon Rowlands, Founder, Africa Platform.

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The Pro-Chancellor, Mr Iain Ferguson is in attendance at the Remuneration Committee meeting but is not a member.

The Chief Executive and Vice-Chancellor is in attendance at the Remuneration Committee for determination of remuneration for their direct reports. They are not present for the discussion of their own remuneration.

The Remuneration Committee meetings are also attended by the Director of Human Resources and the Head of Reward, Policy and Compliance, in an advisory capacity, to provide relevant information and analysis.

The Remuneration Committee meet at least twice a year and any three members present will constitute a quorum.

Attendance of members between July 2020 and July 2021 is detailed below:

	No. Of Meetings (Jul 20 - Jul 21)	No. Of Meetings Entitled to Attend	No. of Meetings Attended
Miss Caroline Carter	3	3	3
Mr Paul Fairweather	3	3	3
Dr Jaz Saggu	3	3	3
Mr. Simon Rowlands	3	3	3

Key decisions taken by the Remuneration Committee between July 2020 to July 2021

In line with the Remuneration Committee's Terms of Reference and our cyclical standing agenda, three meetings were held during the year.

October 2020

The October meeting typically concentrates on the review of performance of the University and individual members of the Executive during the financial year and the resulting agreement of any remuneration changes.

At the meeting, the Remuneration Committee reviewed progress against the corporate and individual objectives for the Executive and agreed performance against the corporate scorecard. It was noted by the Committee that the University had been on course to exceed the 2019/20 stretch targets at quarter 2, however the impact of COVID and the associated lockdowns, had culminated in a difficult operating environment, which in turn had an adverse impact on the final outturns. Despite this, the Committee agreed that Cranfield was widely recognised as having responded well to the unprecedented circumstances and the final outturns were viewed as a tribute to both the staff at the University and the Executive Team in providing exceptional leadership throughout this time.

The Committee agreed that in the current climate, no bonus payments would be made, based purely on the prevailing conditions of affordability coupled with the University's use of the Government Job Retention Scheme. This was in no way reflective of the personal contribution of each member of the Executive. Three basic salary adjustments, based on noted anomalies and market comparisons were agreed.

In addition, the Remuneration Committee noted the zero 'cost of living' award for all other staff and applied the same principle for members of the Executive.

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To assist the above decision-making, the Committee received the following background documents:

- Summary salary report on the Chief Executive & Vice-Chancellor and other members of Executive, detailing basic salary and other emoluments.
- Performance and development review documentation from the Chief Executive & Vice-Chancellor on members of the Executive, detailing individual and corporate scorecards and a qualitative performance assessment against wider behavioural characteristics.
- Performance and development review documentation for the Chief Executive & Vice-Chancellor and undertaken by the Pro-Chancellor and Chair of Council.
- A detailed report providing a general overview on pay, both within the sector and wider, together with independent salary data/benchmarks relevant to the roles within the Remuneration Committee remit. The information was compiled using the Committee of University Chairs report on Vice-Chancellors pay, the Universities and Colleges Association Senior Staff Remuneration Survey and data from Korn Ferry.
- Summary report on basic salary and other emoluments for the Senior Management Team and staff earning over £100,000.

April 2021

The April Remuneration Committee meeting allows for strategy and policy decisions together with an overview of progress towards the plan for next year, alongside any other business.

The Committee were keen to focus on people matters at this meeting and the discussion ranged from an overview of the National and local 'Cost of Living' negotiations, the USS pension consultation, the University's plans for flexible/hybrid working post COVID and the key challenges and risks for staff at the University over the next 6 months. In terms of the latter topic, the Committee agreed that mental health and wellbeing and the need to provide staff with appropriate levels of support was critical.

July 2021

The July Remuneration Committee meeting typically focuses on target setting with the Committee reviewing and agreeing the strategic targets and the Executive Team's objectives for the forthcoming financial year (to include our diversity related objectives aligned to our Diversity and Inclusion Plans to include Athena Swan).

Given Professor Sir Peter Gregson's pending retirement, it was felt appropriate that for his direct reports, both the proposed scorecard for the forthcoming period and the review of previous year against the Corporate KPIs, should be presented as part of the transition with Professor Karen Holford. The figures used being based on Quarter 3 estimates. Sir Peter Gregson felt this was an opportunity to consider each member of the Executive, in order that Professor Karen Holford had insight in this matter, ahead of the Remuneration Committee in October, when this will be revisited.

At the meeting, the University also presented the recently published Gender Pay Report. The downward trajectory was discussed and it was agreed that while our demographics continue to influence our pay gap, the varied initiatives we have in place, are having a positive impact. The New Working Arrangements Framework was also discussed, which it is hoped will also support our agenda in this respect.

Exceptional circumstance meetings

A special meeting took place on 9 February 2021 to agree the salary of the new Chief Executive & Vice-Chancellor.

The Committee had agreed previously that there may be exceptional circumstances where 'out of cycle' reviews need to occur and that such reviews could be managed through paper circulation to the Committee membership. Two cases were circulated to the Committee in January and July 2021 for consideration.

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Approach to Remuneration

A copy of the Remuneration Framework, under which the Committee has operated for the past year, is available below and is designed to ensure that the University remains competitive in the market-place, aligns to our core values and can deliver the University's strategy, priorities and targets, while providing an environment where everyone can achieve their potential and contribute at their best.

Cranfield University operates outside of the National Pay Framework; however, the University maintains an overview of the national pay bargaining process. Roles at the University are evaluated using Hay Korn Ferry methodology for determining job size.

Cranfield benchmarks against Russell Group institutions and leading Business Schools.

Reward Strategy

The University's reward strategy takes into account a range of information from Cranfield, the HEI sector and wider market practice, and aligns to our core values and behaviours. It is kept under review and may be adjusted, depending on the University's strategy and circumstances, the market, the requirements of key stakeholders and the Regulator (Office for Students (OfS)).

Definition of reward

Reward is a combination of different elements. Cranfield's reward offer includes:

- A package of pay and benefits which is competitive in the market and which reflects everyone's role and contribution.
- The opportunity to carry out interesting work which makes an impact – on students, the institution, industry and society.
- Access to development and support for all our people.
- Access to career opportunities.
- A culture and community where we respect everyone and we value diversity and support wellbeing.
- The opportunity to work alongside colleagues and with an organisation that recognises and celebrates ambition and success.

Purpose

The purpose of the reward strategy is to:

- Enable the recruitment and retention of people with the talent, skills and commitment the University needs.
- Support the delivery of the University's strategy, priorities and targets, and demonstrate and underpin our core values.
- Provide an environment where everyone can achieve their full potential and contribute at their best.

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Principles

The table below summarises how we will put our principles into practice.

Principle	What we will do
1. Reward people for the work they do and how well they do it	Maintain our pay and benefits structures to match the level and type of role and provide the mechanisms for performance to be recognised and rewarded.
2. Ensure rewards are competitive	Undertake regular monitoring on external market practice – in the higher education sector and beyond – and consider internal indicators, such as recruitment, retention and staff opinion.
3. Ensure rewards reflect the nature of the work and the market for the skills concerned	Have distinct policies for different groups of roles but founded on the same principles (see below). Allow for pay differences where they are well justified by market evidence.
4. Ensure rewards are fair and equitable	Create and maintain policies and governance structures, which promote fairness and conduct and where appropriate, undertake reviews of their impact (e.g. biennial equal pay review, annual gender pay reporting and workforce audits).
5. Provide the opportunity to develop and progress	Offer programmes of training and development and provide the opportunity to discuss job and career development with line managers and HR.
6. Promote a culture which values diversity, supports wellbeing and embodies our core values	Embed our shared values within the university, to support the University's transition to becoming a modern inclusive employer and enhancing our Employee Value Proposition. Delivering on our key targets in our Diversity and Inclusion Plan, Athena Swan Action Plan and other related initiatives and providing an environment, which looks after everyone's wellbeing.
7. Celebrate and recognise success	Promote and keep under review all forms of recognition, ranging from 'thank you' to a formal salary adjustment, bonus or use of the recognition scheme, to ensure appropriateness to the role and its setting.
8. Communicate the full value of pay and benefits	When we have the supporting systems in place, provide an annual statement of the value of the pay and benefits package, in the context of the total reward offer.

Policies

In keeping with our third principle, the approach to pay and rewards will reflect the character of each job family. There are differences in: whether salaries are a spot rate or sit within a range; the markets used for benchmarking pay and reward practices; and how performance is recognised and rewarded (although all staff are subject to a performance and development review on an annual basis).

All policies take account of:

- The distinctive character of Cranfield, as a postgraduate institution, which has close links to, and partnerships with industry.
- Governance requirements, including those set out by the Office for Students and the Committee of University Chairs.
- The need to secure value for money.

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a) University Executive

Rewards for members of the University Executive are determined and reviewed by the Remuneration Committee, who have full delegated authority for the salaries and other emoluments, terms and conditions and, where appropriate, severance payments of:

- the Chief Executive & Vice-Chancellor;
- full members of the University Executive;
- and such other senior members of staff as decided by Council.

Our Executive reward reflects the need for competitive spot salaries and includes an incentive scheme, which is appropriate for jobs at this level and provides a strong link to performance. The package includes USS pension or a payment in lieu (PILP) for those who have reached their Lifetime Allowance, plus an optional USS Life Assurance cost of 2.1% of basic salary.

b) Senior managers

Rewards for senior managers are determined by the Chief Executive & Vice Chancellor & and the Executive Team. The Remuneration Committee has oversight of the remuneration of all members of the Senior Management Team and any other staff earning £100,000 per annum, or above.

The policy for this group provides for spot salaries to reflect the role, the market and the value of the individual to the University. Amounts are benchmarked mainly against other universities, with a check on other markets where appropriate. Performance can be rewarded with a non-consolidated annual bonus, linked to the achievement of agreed performance indicators aligned to the delivery of the Corporate Plan and a qualitative assessment of individual contribution and wider contribution to the Executive Team.

Senior managers are also eligible to receive the annual negotiated pay settlement with the Trade Unions (normally taking effect from 1 August).

The package includes USS pension provision or a payment in lieu (PILP) for those who have reached their Lifetime Allowance, plus an optional USS Life Assurance cost of 2.1% of basic salary.

c) Professors

Rewards for Professors are determined by the Vice Chancellor & Chief Executive and Executive Team through the annual review and the Professorial Range Review processes, within a policy agreed and assured by the Remuneration Committee. The Cranfield University Professorial Salary Review Scheme was established to provide a transparent framework for competitive performance-related remuneration of the professoriate.

Professors are recruited and retained in a distinctive national and international market, in which identifying, benchmarking and rewarding different levels of professorial contribution has become common. Cranfield's policy provides for four levels of professor, each with a standard pay range. Performance is recognised by remuneration within the level and exceptionally by change of level. Variations in market rate are handled through evidence-based market supplements.

The Professorial Pay Review, ordinarily undertaken on a triennial basis, supports the review of all professorial salaries, providing consistency of approach across the University and is informed and benchmarked against relevant peer groups within the higher education sector and beyond.

On an annual basis, the overall performance of Professors is assessed against generic academic standards tailored to individual targets established through annual Performance and Development Reviews together with the annual assessment of the individual's contribution to the School by the relevant Pro-Vice-Chancellor. There is also the opportunity for advancement via exceptional management-led recommendations for outstanding performance.

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The Professoriate are also eligible to receive the annual negotiated pay settlement with the Trade Unions (normally taking effect from 1 August).

The package includes USS pension or a payment in lieu (PILP) for those who have reached their Lifetime Allowance, plus an optional USS Life Assurance cost of 2.1% of basic salary.

d) Staff within Salary Level 1 to 7

Rewards for staff within salary levels 2 to 7 are determined through both an annual negotiated pay settlement with the Trade Unions (normally taking effect from 1 August) and a governed annual review management process (normally taking effect from October of every year). The salary structure has strong parallels with the nationally negotiated Pay Framework Agreement for university staff but recognises the distinctive nature of Cranfield.

Each salary level has related pay ranges, which are determined and reviewed taking account of practice in the sector. The salary levels have a core of increments, through which staff move, subject to satisfactory performance, on an annual basis. Once an individual reaches the top of the incremental range, performance over time can be recognised through use of a high performance zone (salary levels 2 to 7).

Exceptional performance or one off achievements can be recognised through a non-consolidated Recognition Award Scheme.

The package includes pension provision linked to the level and type of role or where appropriate a payment in lieu for those who have reached their Lifetime Allowance, plus for those in USS, an optional USS Life Assurance cost of 2.1% of basic salary.

Some staff in Level 1 are covered by the Statutory National Minimum/Living Wage requirements. The University reviews and forecasts the impact of changes in the minimum rate, to ensure all staff are properly rewarded and they are compensated for additional responsibility.

Diversity and Inclusion considerations

The University published a full gender pay report in May 2021 and the Remuneration Committee received a copy of this report, alongside a more detailed analysis at the July meeting.

At various points throughout the reporting cycle, the Remuneration Committee review the approach adopted by the University in ensuring equal pay across their areas of remit, to include the Executive, the Senior Management Team and those earning over £100k. It was agreed there were no instances where there were gender-related differences in reward for roles of the same type.

All of the Executive have diversity related objectives within their P & DR (in 2020/21) aligned to our Athena Swan Action Plans and Diversity and Inclusion Action Plans. The outputs are considered alongside the achievement of the other objectives during the Annual Review process.

Remuneration of the Chief Executive and Vice-Chancellor

Sir Peter Gregson was appointed Chief Executive and Vice-Chancellor of Cranfield University in August 2013. Since this time, he has raised the University's ambition and more latterly over the past year has navigated the University through the challenges presented by the Pandemic. Under his leadership, he has driven transformational change towards his vision of 'One University', drawing on the talents of our staff, our students and our alumni. Significant achievements include leading the University into Midlands Innovation (a grouping of the leading research-intensive universities across the Midlands), and the Queen's Anniversary Prize for Higher Education (Water and Sanitation Hygiene in 2015, Soil Science in 2017, and Flying Classrooms and Laboratories in 2019). The University has also secured university-wide health and safety accreditation to OHSAS 18001 (2016) and a Bronze Athena SWAN award/re-accreditation (2017 and 2020). New strategic partnerships with businesses include Rolls-Royce, Airbus, BAE Systems, Dstl and Grant Thornton, and those with universities include Nanyang Technological University (Singapore, 2016) and Muscat University (Oman, 2017).

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(continued ...)

Professor Sir Peter Gregson's overall remuneration reflects his significant leadership to the overall success of the University, his extensive higher education leadership experience and his outstanding performance.

The remuneration received by the Chief Executive & Vice Chancellor in 2020/21 included a base salary of £296,565. The Remuneration Committee agreed at the October meeting, in line with other members of the wider Executive, that no bonus payment or "cost of living" adjustment would be applied. This decision was based purely on the prevailing conditions of affordability coupled with the University's use of the Government Job Retention Scheme and in no way, was reflective of personal contribution.

It is noted that Professor Sir Peter Gregson voluntarily took a 20% pay cut between August 2020 and March 2021, due to the challenges faced during the year in connection to the Pandemic and the claim the University had made for furlough payments under the Government Job Retention Scheme. His actual remuneration in the year ending 31 July 2021 was £52,000 lower than the previous year.

Further details of the remuneration for the Chief Executive & Vice Chancellor are summarised in note 6 of the Financial Statement.

The Chief Executive and Vice Chancellor is in receipt of a PILP allowance on the same terms as other members of staff. This payment does not attract bonus or other benefits based on basic salary.

The Chief Executive and Vice Chancellor is required to reside in Cayley Lodge, which is regularly used for VIP business and regional engagement, though this has been severely constrained by Coronavirus this year.

Professor Sir Peter Gregson retired on 31 July 2021 after 8 years as Chief Executive & Vice-Chancellor.

Pay multiple calculation:

The Office for Students has amended its methodology for calculating pay ratios for the 2019/20 reporting year. It is now necessary to include anyone paid during the financial year, including workers engaged on an occasional basis and both leavers and their replacements, irrespective of how long they worked during the year. Cranfield confirms that the OfS calculation is being used for 2020/21. In previous years we applied this calculation similarly

Cranfield University	2021	2020	2019	2018	2017
Vice-Chancellor basic salary multiplier	7.99	7.96	7.99	7.85	7.72
Vice-Chancellor total remuneration multiplier	6.61	7.89	8.56	7.71	8.78

Severance Payments

The University's principle is to manage all departing staff fairly and equitably, taking into account the circumstances of their departure. Where restructurings occur, impact assessments are undertaken to ensure there are no biases on any protected characteristic.

Members of the Executive, as for all other staff, are entitled to be paid their contractual base salary and contractual benefits, during any notice period. In exceptional circumstances, the University has the discretion to make a lump sum payment, as pay in lieu of notice (PILON).

All Executive members (including the CEO and VC) have permanent contracts and have notice periods of 6 months.

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CORPORATE GOVERNANCE

(continued ...)

Typically, no additional enhanced payments are made to compensate members of the Executive when their employment terminates, unless the employment ends by means of redundancy. In exceptional circumstances, a settlement agreement may be put in place and the University may make payments it considers reasonable in settlement of any potential litigation.

During 2020/21, no severance payments were made to members of the Executive.

Payment of Directorships, Consultancies and Outside Work

The University recognises the benefits that outside work whether voluntary or remunerated can bring to both employees and the University.

All employees (to include the Executive) must seek written approval from the relevant Senior Line Manager (PVC, COO or CEO and VC).

For the Chief Executive and Vice Chancellor approval is sought from the Pro-Chancellor. The treatment of remuneration received from such activities is considered on a case-by-case basis as part of the approval process. It is the responsibility of those undertaking external work to ensure that it is fully declared in the Register of Interest.

- **Audit Committee** - meets on at least three occasions annually to review the work of the internal and external auditors. The Committee considers detailed audit reports, together with recommendations, for the improvement of the University's systems of internal control, governance, risk management and value for money, as well as management's responses and implementation plans.

Attendance of members during the year is outlined below:

	No. Of Meetings Entitled to Attend	No. of Meetings Attended
Mr Ian Hart	5	5
Miss Alice Hynes	5	5
Dr Maxine Mayhew	5	3
Dr Jaz Saggu	5	5
Mrs Claire Stokes	2	2

CRANFIELD UNIVERSITY

CORPORATE GOVERNANCE

(continued ...)

Most independent members of the Council do not receive any payment, apart from the reimbursement of expenses, for the work they undertake for the University. However, certain members are remunerated for specific responsibilities other than those of the Council membership.

The report of the Chair of Finance Committee is given on pages 12 to 27 and the responsibilities of the Council are outlined on page 39. The annual financial statements are presented in a format which is in accordance with applicable Accounting Standards and the 2019 Statement of Recommended Practice - Accounting for Further and Higher Education.

The Council is also responsible for the University's internal control system and for monitoring its effectiveness. Such a system is designed to manage rather than eliminate the risk of failure to achieve the University's overall objective and mission, as well as its annual strategic aims. It can only provide reasonable, but not absolute, assurance against any material misstatement or loss. The key features of the control system are:-

- **Risk management** – whilst it is neither possible nor desirable to eliminate risk from the University's activities, there is an on-going process for the recognition, assessment and management of all significant opportunities and risks. This process has been in place for the year and up to the date of approval of the annual financial statements. The process is reviewed annually by the Audit Committee on behalf of the Council. The Audit Committee reports annually to the Council on its review. Exposure and control analyses, including mitigating factors and counter measures, are prepared annually and are monitored by key performance indicators and controls. The results from these reviews inform the planning, reporting and budgetary control processes. The management of each significant risk is assigned to one or more individuals and built into personal objectives as part of the staff development and appraisal procedures, which identify training needs. Staff generally are asked to report perceived significant risks.
- **Control environment** – clear definitions of the responsibilities of, and the authority delegated to, heads of academic and administrative departments are established. There is a Financial Manual, detailing financial controls and procedures which is approved by the Council as well as other management policies. Compliance with the Financial Manual is a requirement included in contracts of employment. The approach to internal control is risk based and embedded in effective management systems.
- **Information and control systems** – the University has a comprehensive medium and short-term planning process, supplemented by detailed annual revenue, capital and cash flow budgets. There are 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. There are regular reviews of operating results involving variance reporting and updates of estimated out-turns. In relation to academic information and control systems, the University's Senate, Education Committee, Research Committee and Directors of Education and Research in the Schools oversee detailed processes to maintain and control the quality and standards of the University's academic work.
- **Monitoring system** – the effectiveness of the information and internal control systems and control environment are monitored by management review, the internal audit function and the Audit Committee, on behalf of the Council. As part of their audit responsibilities, the external auditors also provide reports to the Audit Committee on the operation of aspects of the University's internal control system.

On the basis of the above control system, procedures have been in place for the whole financial year to enable a full statement on internal control to be made for the year and up to the date of the approval of the Financial Statements.

CRANFIELD UNIVERSITY

PRIMARY RESPONSIBILITIES OF COUNCIL

The Council is the supreme governing body of the University. Its principal responsibilities are based on the Model Statement taken from the Committee of University Chairs(CUC) Higher Education Code of Governance (2020), adapted to reflect the powers and responsibilities that Council derives from the University Laws. These responsibilities are to:

- set and agree the mission, strategic vision and values of the University with the Executive;
- agree long-term academic and business plans including key performance indicators and to ensure that these meet the interests of stakeholders, especially staff, students and alumni;
- appoint, on the recommendation of a Joint Appointing Committee of Council and Senate, the Vice-Chancellor as Chief Executive of the University and to establish suitable arrangements for monitoring their performance;
- be responsible for the removal of the Vice-Chancellor for good cause in accordance with the University Laws;
- delegate authority to the Vice-Chancellor for the academic, corporate, financial, estate and human resource management of the institution, and establish and keep under regular review the policies, procedures and limits within such management functions as will be undertaken by and under the authority of the Vice-Chancellor;
- ensure the establishment and monitoring of systems of control and accountability, including financial and operational controls, risk assessment, value for money arrangements and procedures for handling internal grievances and managing conflicts of interest;
- ensure that processes are in place to monitor and evaluate the performance and effectiveness of Cranfield University against the strategy, plans and approved key performance indicators, which will, where possible and appropriate, be benchmarked against other comparable institutions;
- establish processes to monitor and evaluate the performance and effectiveness of Council;
- 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;
- safeguard the good name and values of the University;
- appoint a Secretary to Council, on the recommendation of a Joint Appointing Committee of Council and Senate, and to ensure that if the person appointed has managerial responsibilities in the University, there is an appropriate separation in the lines of responsibility;
- be the employing authority for all staff in the University and to be accountable for ensuring the establishment of a human resources strategy;
- be the principal financial and business authority of the University, to ensure that proper books of account are kept, to approve the annual budget and financial statements, and to have overall accountability for the University's assets, property and estate;
- be the University's legal authority and, as such, to ensure that systems are in place for meeting all the University's legal obligations, including those arising from contracts and other legal commitments made in the University's name. This includes accountability for health, safety and security and for equality, diversity and inclusion;

CRANFIELD UNIVERSITY

PRIMARY RESPONSIBILITIES OF THE COUNCIL

(continued ...)

- receive assurance that adequate provision has been made for the general welfare of students; make such provision as it thinks fit for the general welfare of students, in consultation with Senate;
- act as trustee for any property, legacy, endowment, bequest or gift in support of the work and welfare of the University;
- ensure that the University's Laws are followed at all times and that appropriate advice is available to enable this to happen;
- promote a culture which supports inclusivity and diversity across the institution;
- maintain and protect the principles of academic freedom and freedom of speech legislation; and
- ensure that all students and staff have opportunities to engage with the governance and management of the University.

Members of Council

The following members served throughout the period from 1st August 2020 to 25th November 2021 unless otherwise stated:

Name	Sub-Committee Membership	Position	Period
Ferguson, Mr Iain	N, HD	Pro-Chancellor & Chair of Council	
Gregson, Professor Sir Peter	F, N	Chief Executive & Vice-Chancellor	until 31 July 2021
Holford, Professor Karen	F, N, HD	Chief Executive & Vice-Chancellor	from 1 August 2021
Atkinson, Professor Helen			
Carter, Caroline	N, R	Chair of Remuneration Committee	
Chen Davison, Lesley	F, N		
Day, Colin	F, HD		
Fairweather, Paul	F, R	Chair of Finance Committee	
Hart, Ian	F		from 1 August 2020
Hill, James			
Hynes, Alice	A, N	Chair of Audit Committee	
Lu, Lucy			until 31 May 2021
Mayhew, Maxine	A, N		
Rowlands, Simon	F, R		
Saggu, Jaz	A, R		
Sparks, Emma			
Stokes, Claire	A		from 1 January 2021
Thompson, Chris			
Wainwright, James			
Watkins, Peter	A		from 19 January 2021

CRANFIELD UNIVERSITY

PRIMARY RESPONSIBILITIES OF THE COUNCIL

(continued ...)

A=Audit, F=Finance, R=Remuneration, N=Nomination, HD=Honorary Degrees

The Council is required to present audited financial statements for each financial year and for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the University and to enable it to ensure that the financial statements are prepared in accordance with the Statutes of the University, the 2019 Statement of Recommended Practice - Accounting for Further and Higher Education and other relevant Accounting Standards. In addition, within the terms and conditions of a Financial Memorandum agreed between the Higher Education Funding Council for England and the Council of Cranfield University, the Council, through its designated office holder, is required to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the University and the Group and of the surplus or deficit and cash flows for that year.

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

- suitable accounting policies are selected and applied consistently;
- judgements and estimates are made that are reasonable and prudent;
- applicable Accounting Standards have been followed, subject to any material departures disclosed and explained in the financial statements; and
- financial statements are prepared on the going concern basis unless it is inappropriate to presume that the University will continue in operation. The Council is satisfied that the University has adequate resources to continue in operation for the foreseeable future: for this reason the going concern basis continues to be adopted in the preparation of the financial statements.

The Council has taken reasonable steps to:

- ensure that funds from Research England and the Office for Students are used only for the purposes for which they have been given and in accordance with the Financial Memorandum with Research England and the Office for Students terms and conditions of funding and any other conditions which the Funding Council of 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 University and the Group and prevent and detect fraud; and
- secure the economical, efficient and effective management of the University's resources and expenditure.

Independent auditors' report to the Council of Cranfield University (the "University")

Report on the audit of the financial statements

Opinion

In our opinion, Cranfield University's group financial statements and University financial statements (the "financial statements"):

- give a true and fair view of the state of the group's and of the University's affairs as at 31 July 2021 and of the group's and of the University'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 Office for Students' Accounts Direction (OfS 2019.41).

We have audited the financial statements, included within the Financial Statements (the "Annual Report"), which comprise the consolidated and University Statements of financial position as at 31 July 2021; the consolidated and University statements of comprehensive income and expenditure, the consolidated and University statements of changes in reserves, and the statement of consolidated cash flows for the year then ended; the 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

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the group's and University's ability to continue as a going concern for a period of at least twelve months from the date on which the financial statements are authorised for issue.

In auditing the financial statements, we have concluded that the Council's use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

However, because not all future events or conditions can be predicted, this conclusion is not a guarantee as to the group and University's ability to continue as a going concern.

Our responsibilities and the responsibilities of the Council with respect to going concern are described in the relevant sections of this report.

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 Primary responsibilities of the Council of Cranfield University, 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 University'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 University 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.

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

Based on our understanding of the institution/industry, we identified that the principal risks of non-compliance with laws and regulations related to UK employment legislation and immigration laws regarding international students, and we considered the extent to which non-compliance might have a material effect on the financial statements. We also considered those laws and regulations that have a direct impact on the financial statements such as the Office for Students' Accounts Direction (OfS 2019.41). We evaluated management's incentives and opportunities for fraudulent manipulation of the financial statements (including the risk of override of controls), and determined that the principal risks were related to manipulation of financial information through the posting of journal entries, or undue bias exhibited in accounting estimates and judgements. Audit procedures performed included:

- discussions with management in relation to known or suspected instances of fraud, or non-compliance with laws and regulations;
- testing of significant estimates and judgements made by management, including the verification of the data and accuracy of the models;
- incorporating elements of unpredictability into our audit procedures;
- testing of journal entries using a risk-based approach, including entries which credit revenue offset by an unusual counter entry, as well as postings made by unexpected users; and
- review of the financial statements for disclosures required by the accounting standards and the accounts direction provided by the OfS

There are inherent limitations in the audit procedures described above. We are less likely to become aware of instances of non-compliance with laws and regulations that are not closely related to events and transactions reflected in the financial statements. Also, the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion.

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 section 5 of the Charters and Statutes of the University 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' Accounts Direction (OfS 2019.41)

In our opinion, in all material respects:

- funds from whatever source administered by the University for specific purposes have been properly applied to those purposes and, if relevant, managed in accordance with relevant legislation;
- funds provided by the Office for Students, UK Research and Innovation (including Research England) and the Education and Skills Funding Agency have been applied in accordance with the relevant terms and conditions.

Under the Office for Students' Accounts Direction, we are required to report to you, if we have anything to report in respect of the following matters:

- The University's grant and fee income, as disclosed in note 2 to the financial statements, has been materially misstated; or

We have no matters to report arising from this responsibility.

PricewaterhouseCoopers LLP
Chartered Accountants and Statutory Auditors
Milton Keynes
26 November 2021

CRANFIELD UNIVERSITY
PRINCIPAL ACCOUNTING POLICIES

1. Basis of accounting and preparation

These financial statements have been prepared in accordance with the Statement of Recommended Practice (SORP): Accounting for Further and Higher Education 2019 and in accordance with Financial Reporting Standards (FRS 102). They have also been prepared in accordance with the 'carried forward' powers and duties of previous legislation (Further and Higher Education Act 1992 and the Higher Education Act 2004) and the new powers of the Higher Education and Research Act 2018 during the transition period to 31 July 2019, the Royal Charter, the Accounts Direction issued by the Office for Students (OfS), the Terms and conditions of funding for higher education institutions issued by the OfS and the Terms and conditions of Research England Grant. The University is a public benefit entity and therefore has applied the relevant public benefit requirements of FRS 102. The financial statements are prepared in accordance with the historical cost convention (modified by the revaluation of certain assets). The following exemptions available under FRS 102 has been applied to these financial statements:

- Disclosures in respect of transactions with wholly owned subsidiaries
- University cash flow

2. Basis of consolidation

The consolidated financial statements include the financial statements of the University and all its subsidiaries prepared up to the end of the financial year. They do not include the financial statements of student associations as it is considered the University has limited financial interest and no control or significant influence over policy decisions.

3. Foreign currencies

Transactions denominated in foreign currencies are recorded at the rate of exchange ruling at the dates of the transactions. Monetary assets and liabilities in foreign currencies are translated into sterling at the rate of exchange ruling at the balance sheet date. The resulting exchange differences are reflected in the income and expenditure account for the financial year.

4. Recognition of income

Income from the sale of goods and services is credited to the 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. Other income received in relation to the utilisation of the university estate is recognised when the services or goods have been delivered.

1) Tuition fee income

Tuition fee income is stated gross of any expenditure over the period in which the students are studying. Bursaries and scholarships are accounted for gross as expenditure and not deducted from income. Fee discounts are treated as a fee bursary. Tuition fee refunds would be charged to tuition fee income.

2) Grant Funding

Grant funding including Funding Council block grant, research grants from government sources, grants (including research grants) from non government sources are recognised as income when the University is entitled to the income and performance related conditions have been met. Income received in advance of performance related conditions being met is recognised as deferred income within creditors on the balance sheet and released to income as the conditions are met.

Government grant funding has been received in the year in relation to the Coronavirus Job Retention Scheme (CJRS) and is recognised within other income in the period in which amounts become receivable.

CRANFIELD UNIVERSITY

PRINCIPAL ACCOUNTING POLICIES

(continued...)

3) Donations and endowments

Non exchange transactions without performance related conditions are donations and endowments. Donations and endowments with donor imposed restrictions are recognised in income when the University is entitled to the funds. Income is retained within the restricted reserve 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.

Donations with no restrictions are recognised in income when the University is entitled to the funds.

Investment income and appreciation of endowments is recorded in income in the year in which it arises and as either restricted or unrestricted income according to the terms applied to the individual endowment fund.

There are four main types of donations and endowments identified in reserves:

1. Restricted donations – the donor has specified that the donation must be used for a particular objective.
2. 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 University.
3. Restricted expendable endowments – the donor has specified a particular objective other than the purchase or construction of tangible fixed assets, and the University has the power to use the capital
4. 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.

4) Capital grants

Capital grants are recognised in income when the University is entitled to the funds subject to any performance related conditions being met.

5) Investment income

Investment income is credited to the Consolidated Statement of Comprehensive Income and Expenditure on a receivable basis.

5. Research and development

Expenditure on research and development is charged to the income and expenditure account in the year in which it is incurred

6. Tangible fixed assets

(1) Land and buildings

Land is stated at valuation and is formally revalued triennially, with consideration made at each period end to ensure that the carrying value of an asset at the reporting date is not materially different from its fair value. The basis of valuation is open market value for existing use, and in the case of the technology park, open market value with vacant possession. The most recent valuation was carried out as at 31st July, 2019 by Gerald Eve LLP. Freehold land is not depreciated as it is considered to have an indefinite useful life. Where land is held for resale and a conditional sale agreement is in place at the year end the land is revalued to the anticipated net proceeds and retained in fixed assets.

Freehold and leasehold buildings are stated at cost and depreciated over their expected useful lives or the life of the lease, whichever is shorter. Where there is a permanent reduction in value, provision is made in the financial statements.

CRANFIELD UNIVERSITY

PRINCIPAL ACCOUNTING POLICIES

(continued...)

Where buildings are acquired with the aid of specific grants, they are capitalised and depreciated as below.

(2) *Equipment*

Equipment, plant and machinery and fixtures and fittings costing less than £5,000 per individual item or group of related items is written off in the year of acquisition. All other equipment is capitalised at cost and depreciated over its expected useful life.

Where equipment is acquired with the aid of specific grants or gifts, it is capitalised and depreciated as above.

(3) *Depreciation*

Depreciation is calculated on the original cost of the assets at the following rates:-

Buildings	2% - 5% per annum
Equipment	20% - 33.33 % per annum
Fixtures plant and machinery	5% - 25% per annum

7. **Leases**

Leasing agreements that transfer to the University substantially all the benefits and risks of ownership are considered to be finance leases. All other leases are operating leases.

Fixed assets held under finance leases and the related lease obligations are recorded in the balance sheet at the fair value of the leased assets at the inception of the lease. The excess of lease payments over recorded lease obligations is treated as finance charges which is amortised over each lease term to give a constant rate of charge on the remaining balance of the obligations.

Rental costs under operating leases are charged to expenditure over the periods of the leases.

8. **Investments**

- (1) Non current asset investments that are classified as basic financial instruments are held on the Balance Sheet at amortised cost less impairment.
- (2) Complex financial instruments are initially measured at fair value, which is normally the transaction price. These are subsequently carried at fair value and the changes in fair value are recognised in the statement of comprehensive income and expenditure.
- (3) Investment in subsidiaries is included in the balance sheet at cost, less any provisions for impairment.

9. **Stock**

Stock is valued at the lower of cost and net realisable value on a first in, first out basis. Provision is made for obsolete or surplus material.

CRANFIELD UNIVERSITY
PRINCIPAL ACCOUNTING POLICIES
(continued...)

10. Work in progress

Work in progress is stated at cost plus attributable overheads less provisions for any known or anticipated deficits and payments on account receivable.

11. Taxation status

The University is an exempt charity within the meaning of Schedule 3 of the Charities Act 2011 and as such is listed as a charity within the meaning of Paragraph 1 of Schedule 6 to the Finance Act 2010. Accordingly, the University is potentially exempt from taxation in respect of income or capital gains received within categories covered by Sections 472–488 of the Corporation Tax Act 2010 and Section 256 of the Taxation of Chargeable are applied to exclusively charitable purposes.

Current tax, including UK corporation tax and foreign tax, is provided at amounts expected to be paid (or recovered) using the tax rates and laws that have been enacted or substantively enacted by the reporting date.

Most of the University's principal activities are exempt from Value Added Tax ('VAT'), but certain activities and other ancillary supplies and services are liable to VAT at various rates. Expenditure includes VAT charged by suppliers to the University where it is not recoverable and is likewise included in the cost of fixed assets.

Commercial trading activities undertaken by the University are operated through its subsidiary companies. This income will attract applicable VAT and the profits are liable to Corporation Tax. However, the taxable profits made by these companies are covenanted to the University and paid under Gift Aid, to the extent that the companies have distributable reserves, which negates that liability.

12. Deferred taxation

Deferred taxation is recognised as a liability or asset if transactions or events have occurred by the balance sheet date that give rise to an obligation to pay more taxation, or a right to pay less taxation, in future. An asset is not recognised to the extent that the transfer of economic benefits in future is uncertain. Deferred tax assets and liabilities recognised are not discounted.

13. Maintenance of premises

The cost of all maintenance is charged to the income and expenditure account as incurred. Provisions are made for dilapidation of leasehold property where an appropriate obligation exists.

14. Pension schemes

The two principal pension schemes of the University's employees are the Universities Superannuation Scheme (USS) and the Local Government Pension Scheme (LGPS) administered by Bedfordshire County Council. The USS scheme is a multi-employer scheme as defined by FRS 102.

Defined benefit schemes

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. Under defined benefit plans the Universities obligation is to provide the agreed benefits to current and former employees, and actuarial risk (that benefits will cost more or less than expected) and investment risk (that returns on assets set aside to fund the benefits will differ from expectations) are borne in substance by the Institution.

CRANFIELD UNIVERSITY

PRINCIPAL ACCOUNTING POLICIES

(continued...)

The net liability is recognised in the balance sheet in respect of each scheme and is the present value of the defined benefit obligation at the reporting date less the fair value of the plan assets at the reporting date.

The group should recognise a liability for its obligations under defined benefit plans net of plan assets. This net defined benefit liability is measured as the estimated amount of benefit that employees have earned in return for their service in the current and prior periods, discounted to determine its present value, less the fair value (at bid price) of plan assets. The calculation is performed by a qualified actuary using the projected unit credit method. Where the calculation results in a net asset, recognition of the asset is limited to the extent to which the Institution is able to recover the surplus either through reduced contributions in the future or through refunds from the plan.

Annually actuaries are engaged on behalf of the University to calculate the obligation for each scheme. The present value is determined by discounting the estimated future payments at a discount rate based on market yields on high quality corporate bonds denominated in sterling with terms approximating to the estimated period of the future payments. The fair value of a scheme's assets is measured in accordance with the FRS 102 fair value hierarchy and in accordance with the Universities policy for similarly held assets. This includes the use of appropriate valuation techniques.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to other comprehensive income. These amounts together with the return on plan assets, less amounts included in net interest, are disclosed as actuarial gains and losses.

The cost of the defined benefit plan, recognised in expenditure as staff costs, except where included in the cost of an asset, comprises the increase in pension benefit liability arising from employee service during the period and the cost of plan introductions, benefit changes, curtailments, and settlements. The net interest cost is calculated by applying the discount rate to the net liability. This cost is recognised in expenditure as a finance cost. Details of the schemes are included in Note 23.

15. Provisions

Provisions are recognised when the University has a present legal or constructive obligation as a result of a past event and it is probable that a transfer of economic benefit will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

16. Going concern

As highlighted in the outlook for 2021/22 on page 25, the University considers that it has sufficient financial resources and is confident that its future income streams will maintain these resources. Council believe that the University is well placed to effectively manage its business risks, despite the current uncertain economic situation.

The budgeted operating deficit for 2021/22 is based on flat income levels across all key income streams as a result of the ongoing Coronavirus pandemic. Costs will continue to be managed carefully with all discretionary spend and travel budgets on hold. The University is forecasting an operating deficit that is manageable within its existing working capital parameters and that would not breach the bond covenants, but there is uncertainty in the outcome due to Coronavirus.

Council have a reasonable expectation that the University has adequate resources to continue operating in existence for the foreseeable future. Thus, they continue to adopt the going concern basis in preparing the financial statements.

CRANFIELD UNIVERSITY

PRINCIPAL ACCOUNTING POLICIES

(continued ...)

17. Financial instruments

The Institution has elected to adopt Sections 11 and 12 of FRS 102 in respect of the recognition, measurement, and disclosure of financial instruments. Financial assets and liabilities are recognised when the Institution becomes party to the contractual provision of the instrument and they are classified according to the substance of the contractual arrangements entered into.

A financial asset and a financial liability are offset only when there is a legally enforceable right to set off the recognised amounts and an intention either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

Financial assets

Basic financial assets include trade and other receivables, cash and cash equivalents, and investments in commercial paper (i.e. deposits and bonds). These assets are initially recognised at transaction price unless the arrangement constitutes a financing transaction, where the transaction is measured at the present value of the future receipts discounted at a market rate of interest. Such assets are subsequently carried at amortised cost using the effective interest rate method. Financial assets are assessed for indicators of impairment at each reporting date. If there is objective evidence of impairment, an impairment loss is recognised in the statement of comprehensive income.

For financial assets carried at amortised cost the impairment loss is the difference between the carrying amount of the asset and the present value of the estimated future cash flows, discounted at the asset's original effective interest rate.

Other financial assets, including investments in equity instruments which are not subsidiaries, associates, or joint ventures are initially measured at fair value, which is typically the transaction price. These assets are subsequently carried at fair value and changes in fair value at the reporting date are recognised in the statement of comprehensive income. Where the investment in equity instruments are not publicly traded and where the fair value cannot be reliably measured the assets are measured at cost less impairment.

Financial assets are de-recognised when the contractual rights to the cash flows from the asset expire or are settled or substantially all of the risks and rewards of the ownership of the asset are transferred to another party.

Financial liabilities

Basic financial liabilities include trade and other payables, bank loans, and intra-group loans. These liabilities are initially recognised at transaction price unless the arrangement constitutes a financing transaction, where the debt instrument is measured at the present value of the future payments discounted at a market rate of interest. Debt instruments are subsequently carried at amortised cost using the effective interest rate method.

Trade payables are obligations to pay for goods and services that have been acquired in the ordinary course of business from suppliers. Accounts payable are classified as current liabilities if payment is due within one year or less. If not, they are presented as non-current liabilities. Trade payables are recognised initially at transaction price and subsequently measured at amortised cost using the effective interest rate method.

CRANFIELD UNIVERSITY

PRINCIPAL ACCOUNTING POLICIES

(continued ...)

18. Significant accounting estimates and judgements

In the process of applying these accounting policies, the University is required to make certain estimates, judgements and assumptions that management believe are reasonable based on the information available. These are reviewed on a regular basis by the University's senior management team. Significant estimates and material judgements used in the preparation of the financial statements are as follows:

Estimates:

Recoverability of debtors

The provision for doubtful debts is based on our estimate of the expected recoverability of those debts. Assumptions are made based on the level of debtors which have defaulted historically, coupled with current economic knowledge. The provision is based on the current situation of the customer, the age profile of the debt and the nature of the amount due.

Valuation of land

Valuations are undertaken every three years by an independent external team of chartered surveyors. This is then updated annually by senior management based on the current economic developments and other factors that may be considered to have an impact on the rental yield going forward.

Retirement benefit obligations

The University contributes to the Local Government Pension Scheme (LGPS) administered by Bedfordshire County Council which is accounted for as a defined benefit scheme. The recognised liability is based on the valuation provided by professionally qualified independent actuaries which is based on a number of assumptions. These include the future cash flows of the scheme, the discount rate used, the pensionable salary growth going forward and proposed price inflation. Further details can be found in note 23. Management reviews the assumptions made to derive the provisions recorded in the balance sheet to ensure that they are reasonable. The University also operates within the Universities Superannuation Scheme ('USS') which is accounted for as a defined contribution scheme since insufficient information is available to identify the University's share of the underlying assets and liabilities. As the University is contractually bound to make deficit recovery payments to USS, this is recognised as a liability on the balance sheet. The USS deficit recovery plan defines the deficit payment required as a percentage of future salaries until 2031. These contributions will be reassessed within each triennial valuation of the scheme. The provision is based on management's estimate of expected future salary inflation, changes in staff numbers and the prevailing rate of discount.

Provisions

Management apply judgement to arrive at the best estimate for any obligation required. The amount recognised as a provision is management's best estimate of the present value of the amount required to settle the obligation. To arrive at this amount management assess the likelihood and extent of any future settlement and make judgements based on these.

Judgements:

Revenue recognition

Revenues are subject to judgement over when and by how much revenues should be recognised in the financial statements. This includes determining when performance criteria have been met, recognising research and other funding revenues in line with expenditure once a right to the funding is deemed to have arisen, and determining the revenues associated with partially delivered courses and training where the activities have not been fully completed at the reporting date.

CRANFIELD UNIVERSITY

CONSOLIDATED AND UNIVERSITY STATEMENT OF COMPREHENSIVE INCOME AND EXPENDITURE

FOR THE YEAR ENDED 31ST JULY, 2021

		CONSOLIDATED		UNIVERSITY	
		2021	2020	2021	2020
	Notes	£'000	£'000	£'000	£'000
Income					
Tuition fees and education contracts	1	72,224	72,736	63,718	64,377
Funding Council grants	2	22,868	20,486	22,868	20,486
Research grants and contracts		41,769	38,370	37,296	34,081
Other income	3	34,161	43,930	28,110	36,712
Investment income	4	182	211	215	216
Operating income		171,204	175,733	152,207	155,872
Donations and endowments	5	11,544	8,828	11,544	8,828
Total income		182,748	184,561	163,751	164,700
Expenditure					
Staff costs					
Operating staff costs	6	98,797	98,058	85,608	84,443
Pension provision movement	23	5,064	(13,347)	4,981	(13,289)
Total staff costs		103,861	84,711	90,589	71,154
Other operating expenses		75,684	78,311	70,998	70,977
Depreciation	10	16,787	14,814	16,057	14,106
Interest and other finance costs	8	1,587	2,330	1,533	2,321
Total expenditure	7	197,919	180,166	179,177	158,558
(Deficit)/surplus before other gains and losses		(15,171)	4,395	(15,426)	6,142
Result on disposal of assets		18	-	18	-
Gain on investments		261	371	261	371
(Deficit)/surplus before tax		(14,892)	4,766	(15,147)	6,513
Taxation	9	329	244	(210)	(156)
(Deficit)/surplus for the year		(14,563)	5,010	(15,357)	6,357
Unrealised surplus on revaluation of land		-	-	-	-
Actuarial gain/(loss) in respect of pension schemes	23	4,761	(31,427)	4,761	(31,427)
Total comprehensive loss for the year		(9,802)	(26,417)	(10,596)	(25,070)
Represented by:					
Endowment comprehensive income for the year		2,914	149	2,914	149
Unrestricted comprehensive loss for the year		(12,716)	(26,566)	(13,510)	(25,219)
		(9,802)	(26,417)	(10,596)	(25,070)

The notes on pages 57 to 78 form part of these financial statements.

CRANFIELD UNIVERSITY

CONSOLIDATED AND UNIVERSITY STATEMENT OF CHANGES IN RESERVES
FOR THE YEAR ENDED 31ST JULY, 2021

Consolidated	Income and expenditure account			Revaluation reserve	Total
	Endowment	Restricted	Unrestricted		
	£'000	£'000	£'000	£'000	£'000
Balance at 1 August 2019	6,530	-	7,870	61,289	75,689
Surplus/(deficit) from the income and expenditure statement	149	-	(26,566)	-	(26,417)
Transfer between revaluation reserve and income and expenditure reserve	-	-	-	-	-
Other comprehensive income	-	-	-	-	-
Total comprehensive income/(loss) for the year	149	-	(26,566)	-	(26,417)
Balance at 31 July 2020	6,679	-	(18,696)	61,289	49,272
Surplus/(deficit) from the income and expenditure statement	2,914	-	(12,716)	-	(9,802)
Transfer between revaluation reserve and income and expenditure reserve	-	-	-	-	-
Other comprehensive income	-	-	-	-	-
Total comprehensive income/(loss) for the year	2,914	-	(12,716)	-	(9,802)
Balance at 31 July 2021	9,593	-	(31,412)	61,289	39,470

University	Income and expenditure account			Revaluation reserve	Total
	<i>Endowment</i>	<i>Restricted</i>	<i>Unrestricted</i>		
	£'000	£'000	£'000		
Balance at 1 August 2019	6,530	-	6,477	61,289	74,296
Surplus/(deficit) from the income and expenditure statement	149	-	(25,219)	-	(25,070)
Transfer between revaluation reserve and income and expenditure reserve	-	-	-	-	-
Other comprehensive income	-	-	-	-	-
Total comprehensive income/(loss) for the year	149	-	(25,219)	-	(25,070)
Balance at 31 July 2020	6,679	-	(18,742)	61,289	49,226
Surplus/(deficit) from the income and expenditure statement	2,914	-	(13,510)	-	(10,596)
Transfer between revaluation reserve and income and expenditure reserve	-	-	-	-	-
Other comprehensive income	-	-	-	-	-
Total comprehensive income/(loss) for the year	2,914	-	(13,510)	-	(10,596)
Balance at 31 July 2021	9,593	-	(32,252)	61,289	38,630

The notes on pages 57 to 78 form part of these financial statements.

CRANFIELD UNIVERSITY
STATEMENT OF FINANCIAL POSITION AT 31ST JULY, 2021

	Notes	CONSOLIDATED		UNIVERSITY	
		2021	2020	2021	2020
		£'000	£'000	£'000	£'000
Non-current assets					
Fixed assets	10	294,439	244,645	289,304	239,028
Investments	11	5,449	3,501	5,393	3,445
Investments in subsidiaries	12	-	-	5,186	5,186
		<u>299,888</u>	<u>248,146</u>	<u>299,883</u>	<u>247,659</u>
Current assets					
Stock		464	247	196	190
Trade and other receivables	13	45,985	45,468	45,334	43,331
Cash and cash equivalents	19	38,088	99,205	30,851	95,752
		<u>84,537</u>	<u>144,920</u>	<u>76,381</u>	<u>139,273</u>
Current liabilities					
Creditors: amounts falling due within one year	14	(78,569)	(78,575)	(72,284)	(72,578)
Net current assets/(liabilities)		<u>5,968</u>	<u>66,345</u>	<u>4,097</u>	<u>66,695</u>
Total assets less current liabilities		<u>305,856</u>	<u>314,491</u>	<u>303,980</u>	<u>314,354</u>
Creditors: amounts falling due after more than one year	15	(153,762)	(154,317)	(152,828)	(154,317)
Provisions					
Pension provisions	16	(112,564)	(110,855)	(112,502)	(110,811)
Other provisions	17	(60)	(47)	(20)	-
Total net assets		<u>39,470</u>	<u>49,272</u>	<u>38,630</u>	<u>49,226</u>
Financed by:-					
Restricted Reserves					
Income and expenditure reserve – endowment reserve	18	9,593	6,679	9,593	6,679
Unrestricted Reserves					
Income and expenditure reserve - unrestricted		(31,412)	(18,696)	(32,252)	(18,742)
Revaluation reserve		61,289	61,289	61,289	61,289
Total Reserves		<u>39,470</u>	<u>49,272</u>	<u>38,630</u>	<u>49,226</u>

The financial statements on pages 45 to 78 were approved by the Council on 25th November, 2021 and signed on its behalf by:-

C P FAIRWEATHER MA FCA
CHAIR OF FINANCE COMMITTEE

PROFESSOR K HOLFORD CBE FREng
CHIEF EXECUTIVE & VICE-CHANCELLOR

I SIBBALD FCA
DIRECTOR OF FINANCE

The notes on pages 57 to 78 form part of these financial statements.

CRANFIELD UNIVERSITY
STATEMENT OF CONSOLIDATED CASH FLOWS
FOR THE YEAR ENDED 31ST JULY, 2021

	Notes	2021 £'000	2020 £'000
Cash flows from operating activities			
(Deficit)/surplus for the year		(14,563)	5,010
Adjustment for non-cash items			
Depreciation	10	16,787	14,814
Gain on investments		(261)	(371)
Exchange loss/(gain)		439	(16)
Increase in stock		(217)	(9)
Increase in debtors		(517)	(4,306)
Increase in creditors		11,573	953
Increase/(decrease) in pension provision		4,998	(13,867)
Increase in other provisions		13	-
Adjustment for investing or financing activities			
Investment income	4	(182)	(216)
Interest payable	8	1,587	2,321
Result on the sale of fixed assets		(18)	-
Capital grant income	5	<u>(11,544)</u>	<u>(8,828)</u>
Net Cash inflow/(outflow) from operating activities		<u>8,095</u>	<u>(4,515)</u>
Cash flows from investing activities			
Proceeds from sale of fixed assets		18	-
Capital grants receipts		5,141	8,281
Disposal of non-current asset investments		461	645
Investment income		15	131
Payments made to acquire fixed assets		(65,611)	(34,849)
New non-current asset investments		(2,000)	-
Total cash outflow from investing activities		<u>(61,976)</u>	<u>(25,792)</u>
Cash flows from financing activities			
Interest paid		(311)	(575)
Interest element of finance lease		(10)	(10)
Endowment cash received		2,918	547
New unsecured loans		1,550	160,000
Repayments of amounts borrowed		(11,118)	(33,630)
Capital element of finance lease and service concession payments		<u>(265)</u>	<u>241</u>
Total cash (outflow)/inflow from financing activity		<u>(7,236)</u>	<u>126,573</u>
(Decrease)/increase in cash and cash equivalents in the year		<u>(61,117)</u>	<u>96,266</u>
Cash and cash equivalents at beginning of the year	19	99,205	2,939
Cash and cash equivalents at end of the year	19	38,088	99,205
Movement in cash		<u>(61,117)</u>	<u>96,266</u>

The notes on pages 57 to 78 form part of these financial statements.

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021

	CONSOLIDATED		UNIVERSITY	
	2021	2020	2021	2020
	£'000	£'000	£'000	£'000
1. Tuition fees and education contracts				
Long course fees	53,724	52,852	53,724	52,852
Professional development courses	11,167	12,554	2,708	4,132
Teaching contract	7,333	7,330	7,286	7,393
	<u>72,224</u>	<u>72,736</u>	<u>63,718</u>	<u>64,377</u>
2. Funding Council grants				
Recurrent grant	12,962	12,781	12,962	12,781
Special initiatives	9,906	7,705	9,906	7,705
	<u>22,868</u>	<u>20,486</u>	<u>22,868</u>	<u>20,486</u>
Details of grant and fee income				
Grant income from OfS	3,532	3,680	3,532	3,680
Grant income from Research England	19,336	16,806	19,336	16,806
Fee income for taught awards (exclusive of VAT)	61,057	60,182	61,010	60,245
Fee income from non-qualifying courses (exclusive of VAT)	11,167	12,554	2,708	4,132
Total grant and fee income	<u>95,092</u>	<u>93,222</u>	<u>86,586</u>	<u>84,863</u>
3. Other income				
Residences and conference centres	7,554	9,605	7,320	8,506
Rents from tenant organisations	702	917	1,422	1,623
Other	25,905	33,408	19,368	26,583
	<u>34,161</u>	<u>43,930</u>	<u>28,110</u>	<u>36,712</u>

The Coronavirus Job Retention Scheme (CJRS) grant relates to staff who have been furloughed due to Covid-19. This scheme runs until September 2021 with employers able to claim up to 80% of a furloughed employee's wages/salaries up to a maximum of £2,500 plus associated employer's costs (e.g. employer's national insurance contributions). This grant has been paid to the employer by HMRC.

The Group received £2,401,000 (2020 £5,412,000) (University: £1,668,000 2020:£4,031,000) in relation to the CJRS and there are no unfulfilled contingencies or commitments attached to this balance.

CRANFIELD UNIVERSITY
 NOTES TO THE ACCOUNTS
 FOR THE YEAR ENDED 31ST JULY, 2021
 (continued...)

	CONSOLIDATED		UNIVERSITY	
	2021	2020	2021	2020
	£'000	£'000	£'000	£'000
4. Investment income				
Investment income from endowments	168	79	201	79
Other investment income	14	132	14	137
	<u>182</u>	<u>211</u>	<u>215</u>	<u>216</u>
5. Donations and endowments				
New endowments (<i>Note 18</i>)	2,919	547	2,919	547
Donations without restrictions	8,625	8,281	8,625	8,281
	<u>11,544</u>	<u>8,828</u>	<u>11,544</u>	<u>8,828</u>

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

6. Staff				
a. Staff costs				
Wages and salaries	77,379	77,980	66,181	66,499
Social security costs	7,910	7,733	6,824	6,656
Other pension costs	13,443	12,225	12,538	11,168
	<hr/>	<hr/>	<hr/>	<hr/>
	98,732	97,938	85,543	84,323
Staff restructuring	65	120	65	120
	<hr/>	<hr/>	<hr/>	<hr/>
Operating staff costs	98,797	98,058	85,608	84,443
Pension provision movement	5,064	(13,347)	4,981	(13,289)
	<hr/>	<hr/>	<hr/>	<hr/>
Total staff costs	103,861	84,711	90,589	71,154
	<hr/>	<hr/>	<hr/>	<hr/>
Number of staff receiving payment for loss of office	13	23	13	23
	<hr/>	<hr/>	<hr/>	<hr/>
Emoluments of the Vice-Chancellor (as detailed in the Remuneration Committee report on page 35)				
Base salary	296	296	296	296
Cost of pension opt-out	41	41	41	41
Salary waived	(35)	(21)	(35)	(21)
Performance related pay	-	38	-	38
	<hr/>	<hr/>	<hr/>	<hr/>
	302	354	302	354
	<hr/>	<hr/>	<hr/>	<hr/>

In addition, the Vice-Chancellor is required to reside in Cayley Lodge, a property owned by the University, which is regularly used for VIP business and regional engagement. This non-taxable benefit is valued at £15,000 (2020 £15,000) based on the rental value opportunity cost.

The Vice-Chancellors salary and total remuneration expressed as a multiple of median salary and total remuneration of all other staff was:

Vice-Chancellor basic salary multiplier	7.99	7.96	7.99	7.96
Vice-Chancellor total remuneration multiplier	7.01	8.24	6.61	7.89
	<hr/>	<hr/>	<hr/>	<hr/>

b. The average number of employees during the year, expressed as full-time equivalents, was as follows:-	Number	Number	Number	Number
Academic	427	414	411	398
Research	290	293	217	222
Technical	150	143	119	118
Other	928	904	718	685
	<hr/>	<hr/>	<hr/>	<hr/>
	1,795	1,754	1,465	1,423
	<hr/>	<hr/>	<hr/>	<hr/>

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

6. **Staff** *(continued...)*

	CONSOLIDATED		UNIVERSITY	
	2021	2020	2021	2020
	Number	Number	Number	Number
c. Remuneration of other higher paid staff, excluding employer's pension contributions, were as follows:-				
£100,000 - £104,999	8	6	7	6
£105,000 - £109,999	6	8	5	8
£110,000 - £114,999	8	4	7	3
£115,000 - £119,999	5	4	4	4
£120,000 - £124,999	2	4	2	4
£125,000 - £129,999	2	3	2	2
£130,000 - £134,999	4	3	4	2
£135,000 - £139,999	1	1	1	1
£140,000 - £144,999	1	4	1	4
£145,000 - £149,999	1	1	1	1
£150,000 - £154,999	-	1	-	1
£155,000 - £159,999	1	-	1	-
£160,000 - £164,999	3	2	2	1
£165,000 - £169,999	1	1	1	1
£170,000 - £174,999	-	1	-	1
£175,000 - £179,999	2	-	2	-
£180,000 - £184,999	-	1	-	1
£185,000 - £189,999	-	1	-	1
£195,000 - £199,999	-	1	-	1

Key Management personnel

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the University. 2021 11 Members (2020: 11 members).

	CONSOLIDATED & UNIVERSITY	
	2021	2020
	£'000	£'000
Key management personnel compensation	1,832	2,009

Council Members

The University's council members are the trustees for charitable law purposes. Due to the nature of the University's operations and the compositions of the Council, it is inevitable that transactions will take place with organisations in which a member of the Council may have an interest. All transactions involving organisations in which a member of Council may have an interest are conducted at arm's length and in accordance with the University's Financial Regulations and usual procurement procedures.

No Council member received any payment for their role as a trustee. Mr P Fairweather has provided consultancy services in the year and was paid, including expenses, £9,750 (2020 £13,500). The total expenses paid to or on behalf of two council members was £496 (2020 £2,080 to five council members). This represents travel and subsistence expenses incurred in attending Council, Committee meetings and Charity events in their official capacity.

CRANFIELD UNIVERSITY

NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021

(continued...)

	CONSOLIDATED		UNIVERSITY	
	2021 £'000	2020 £'000	2021 £'000	2020 £'000
7. Other operating amounts charged include:-				
Equipment expensed	4,239	3,988	4,199	3,937
Operating lease rentals	260	428	260	235
Auditors' remuneration:-				
- external audit	224	182	91	109
- other services including tax	92	64	92	64
Council members' expenses	1	2	1	2
	<hr/>	<hr/>	<hr/>	<hr/>
8. Interest and other finance costs				
Loan interest	301	565	248	558
Finance leases	10	10	10	10
Exchange differences	(196)	(76)	(196)	(76)
Net charge on Pension schemes	1,472	1,831	1,471	1,829
	<hr/>	<hr/>	<hr/>	<hr/>
	1,587	2,330	1,533	2,321
	<hr/>	<hr/>	<hr/>	<hr/>
9. Taxation				
Recognised in the statement of comprehensive income:-				
Current tax expense	-	-	-	-
Overseas tax	210	156	210	156
R&D tax credits	(539)	(400)	-	-
	<hr/>	<hr/>	<hr/>	<hr/>
Total tax (credit)/expense	(329)	(244)	210	156
	<hr/>	<hr/>	<hr/>	<hr/>

The tax assessed for the year is higher than the standard rate (2020 lower than the standard rate) of corporation tax in the UK. The differences are explained below:

(Deficit)/surplus on ordinary activities before taxation	(14,892)	4,766	(15,147)	6,513
	<hr/>	<hr/>	<hr/>	<hr/>
Tax on deficit on ordinary activities before taxation multiplied by the lower rate of corporation tax in the UK of 19% (2020 – 19%)	(2,829)	906	(2,878)	1,237
Factors affecting charge:				
Tax losses	2,829	331	2,878	-
University surplus exempt from corporation tax	-	(1,237)	-	(1,237)
R&D tax credits	(539)	(400)	-	-
Overseas tax	210	156	210	156
Other permanent differences	-	-	-	-
	<hr/>	<hr/>	<hr/>	<hr/>
Corporation tax (credited)/charged in the year	(329)	(244)	210	156
	<hr/>	<hr/>	<hr/>	<hr/>

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

	Land & Buildings		Equipment	Fixtures, Plant & Machinery	Total
	Freehold	Leasehold			
10. Fixed assets					
<i>a. Consolidated</i>					
Cost/valuation					
At beginning of year	217,188	7,437	58,205	128,743	411,573
Additions	42,791	-	16,007	7,783	66,581
Disposals	-	-	(5)	(88)	(93)
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
At end of year	259,979	7,437	74,207	136,438	478,061
Consisting of valuation as at:					
31 July 2021	61,289	-	-	-	61,289
Cost	198,690	7,437	74,207	136,438	416,772
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Depreciation					
At beginning of year	34,339	5,809	46,518	80,262	166,928
Charge for year	2,116	230	6,499	7,942	16,787
Disposals	-	-	(5)	(88)	(93)
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
At end of year	36,455	6,039	53,012	88,116	183,622
Net book amount					
At end of year	223,524	1,398	21,195	48,322	294,439
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
At beginning of year	182,849	1,628	11,687	48,481	244,645
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

	Land & Buildings		Equipment	Fixtures, Plant & Machinery	Total
	Freehold	Leasehold			
	£'000	£'000			
10. Fixed assets <i>(continued ...)</i>					
<i>b. University</i>					
Cost/valuation					
At beginning of year	211,139	7,437	57,468	119,714	395,758
Additions	42,791	-	15,967	7,575	66,333
Disposals	-	-	(5)	(88)	(93)
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
At end of year	253,930	7,437	73,430	127,201	461,998
Consisting of valuation as at:					
31 July 2021	61,289	-	-	-	61,289
Cost	192,641	7,437	73,430	127,201	400,709
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Depreciation					
At beginning of year	31,614	5,809	45,893	73,414	156,730
Charge for year	1,983	230	6,455	7,389	16,057
Disposals	-	-	(5)	(88)	(93)
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
At end of year	33,597	6,039	52,343	80,715	172,694
Net book amount					
At end of year	220,333	1,398	21,087	46,486	289,304
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
At beginning of year	179,525	1,628	11,575	46,300	239,028
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

At 31 July, 2021, freehold land and buildings included £61,289,000 (2020 £61,289,000) in respect of freehold land at valuation and is not depreciated.

The net book amounts of tangible fixed assets include £118,000 (2020 - £182,000) in respect of assets held under finance leases in the consolidated and University financial statements respectively. The related depreciation charge for the year was £64,000 (2020 - £64,000). At 31st July 2021, buildings, fixtures and plant included £59,469,000 (2020 - £26,565,000) in respect of assets under construction in the consolidated financial statements. In the University assets under construction amounted to £59,469,000 (2020 - £26,565,000).

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

	CONSOLIDATED		UNIVERSITY	
	2021	2020	2021	2020
	£'000	£'000	£'000	£'000
11. Investments				
Investments at beginning of year	3,501	3,681	3,445	3,625
Additions	2,000	-	2,000	-
Gains in year	409	465	409	465
Disposals	(461)	(645)	(461)	(645)
At end of year	5,449	3,501	5,393	3,445

Investments are either in the Prodigy Student Loans scheme which enables the University to invest into bonds that will finance Cranfield students tuition and maintenance loans. These investments are valued at market value as at 31 July each year. Other investments are into the CCLA charity investment funds.

	UNIVERSITY	
	2021	2020
	£'000	£'000
12. Investment in subsidiaries		
At beginning of year	5,186	5,186
Additions	-	-
Disposals	-	-
At end of year	5,186	5,186

At 31st July, 2021 the group's principal subsidiaries, all of which were wholly owned and registered in England and Wales, comprised:-

COMPANY	NATURE OF BUSINESS
Cranfield Group Holdings Limited	Holding company
Cranfield Airport Operations Limited Cranfield Aerospace Solutions Limited	Provision of air traffic control services Aerospace research and development
Cranfield Conference Centre Limited	Provision of conference and accommodation services
Cranfield Quality Services Limited	Provision of residential support services
Cranfield Regatta Limited	Organisation of an annual sailing event
Cranfield Innovative Manufacturing Limited	Consultancy and development programmes in manufacturing
Cranfield Management Development Limited	Provision of executive development programmes
Cranfield Defence and Security Services Limited	Provision of defence and security services
MK:U Limited	Dormant company

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

	CONSOLIDATED		UNIVERSITY	
	2021	2020	2021	2020
	£'000	£'000	£'000	£'000
13. Trade and Other receivables				
Work in progress	11,331	11,923	10,321	10,134
Other trade debtors	28,203	26,618	26,683	24,754
Prepayments and accrued income	5,954	6,298	4,802	5,088
Other taxes	497	629	134	-
Amounts receivable from subsidiary undertakings	-	-	3,394	3,355
	45,985	45,468	45,334	43,331
<p>Included in amounts receivable from subsidiary undertakings is £956,000 (2020 - £1,160,000) which is recoverable after more than one year and interest is charged at 1% over the Bank of England base rate.</p>				
14. Creditors: amounts falling due within one year				
Unsecured loans	1,677	11,129	1,060	11,129
Finance lease obligations	243	265	243	265
Amounts owed to subsidiary undertakings	-	-	778	909
Trade creditors	32,489	28,936	30,501	25,792
Social security costs and other taxation payable	4,594	3,585	2,096	2,358
Accruals and deferred income	39,566	34,660	37,606	32,125
	78,569	78,575	72,284	72,578
15. Creditors: amounts falling due after more than one year				
Finance lease obligations	-	243	-	243
Unsecured loans	153,762	154,074	152,828	154,074
	153,762	154,317	152,828	154,317

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

	CONSOLIDATED		UNIVERSITY	
	2021	2020	2021	2020
	£'000	£'000	£'000	£'000
15. Creditors: amounts falling due after more than one year <i>(continued ...)</i>				
<i>Analysis of secured and unsecured loans due within one year or on demand (note 14)</i>				
	1,677	11,129	1,060	11,129
Between one and two years	1,415	1,089	798	1,089
Between two and five years	1,751	1,842	1,434	1,842
Five years or more	150,596	151,143	150,596	151,143
Due after more than one year	153,762	154,074	152,828	154,074
Total secured and unsecured loans	155,439	165,203	153,888	165,203
<i>The net finance lease obligations</i>				
Due within one year or on demand (note 14)	243	265	243	265
Between one and two years	-	243	-	243
Between two and five years	-	-	-	-
Five years or more	-	-	-	-
Due after more than one year	-	243	-	243
Total net finance lease obligations	243	508	243	508

The Group had the following loans at 31st July, 2021:-

	Interest Rate	Loan Type	Security	Final Repayment	Loan Outstanding £'000
1.	Euro base + 0.18%	Floating(Euros)	None	15th August 2027	2,986
2.	8.71%	Fixed	None	14th March 2022	262
3.	Interest Free	Salix Fixed	None	1st April 2023	641
4.	2.20%	Private Bond	None	3rd March 2030	25,000
5.	2.30%	Private Bond	None	3rd March 2035	40,000
6.	2.49%	Private Bond	None	3rd March 2040	40,000
7.	2.60%	Private Bond	None	3rd March 2045	30,000
8.	2.67%	Private Bond	None	3rd March 2050	15,000
9.	Base + 2.08%	CLBILS Loan	None	20 th November 2023	750
10.	Base + 2.08%	CLBILS Loan	None	28 th August 2023	800
					155,439

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

16. **Pension provisions**

Consolidated	Obligation to fund deficit on USS pension £'000	Defined Benefit Obligations (Note 23) £'000	Total Pensions Provisions £'000
At 1 August 2020	19,473	91,382	110,855
Utilised in year	(984)	5,248	4,264
Increase/(decrease) in provision	2,206	(4,761)	(2,555)
At 31 July 2021	20,695	91,869	112,564

University	Obligation to fund deficit on USS pension £'000	Defined Benefit Obligations (Note 23) £'000	Total Pensions Provisions £'000
At 1 August 2020	19,429	91,382	110,811
Utilised in year	(981)	5,248	4,267
Increase/(decrease) in provisions	2,185	(4,761)	(2,576)
At 31 July 2021	20,633	91,869	112,502

Pension enhancement

The assumptions for calculating the provision for pension enhancements on termination under FRS 102 are as follows:

	Consolidated
Discount rate	1.60
Inflation	3.85

USS deficit

The obligation to fund the past deficit on the University's Superannuation Scheme (USS) arises from the contractual obligation with the pension scheme for total payments relating to benefits arising from past performance. Management have assessed future employees within the USS scheme and salary payment over the period of the contracted obligation in assessing the value of this provision.

CRANFIELD UNIVERSITY
 NOTES TO THE ACCOUNTS
 FOR THE YEAR ENDED 31ST JULY, 2021
 (continued...)

	Staff restructuring	Other	Total
	£'000	£'000	£'000
17. Other provisions			
<i>a. Consolidated</i>			
At beginning of year	-	47	47
Utilised	-	-	-
Released	-	(7)	(7)
Charged to income and expenditure account	-	20	20
	<hr/>	<hr/>	<hr/>
At end of year	-	60	60
	<hr/>	<hr/>	<hr/>
<i>b. University</i>			
At beginning of year	-	-	-
Utilised	-	-	-
Released	-	-	-
Charged to income and expenditure account	-	20	20
	<hr/>	<hr/>	<hr/>
At end of year	-	20	20
	<hr/>	<hr/>	<hr/>

Other relates to a warranty provision in place over a five year period.

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

18. Income and expenditure
reserve - endowment reserves

	Expendable endowments	Permanent endowments	2021 Total	2020 Total
	£'000	£'000	£'000	£'000
Balances at 1 August 2020				
Capital	6,532	-	6,532	6,421
Accumulated income	147	-	147	109
	<hr/>	<hr/>	<hr/>	<hr/>
	6,679	-	6,679	6,530
New endowments	919	2,000	2,919	547
Investment income	113	28	141	79
Expenditure	(399)	(8)	(407)	(451)
Increase/(decrease) in market value of investments	24	237	261	(26)
	<hr/>	<hr/>	<hr/>	<hr/>
Total endowment comprehensive income for the year	657	2,257	2,914	149
	<hr/>	<hr/>	<hr/>	<hr/>
At 31 July 2021	7,336	2,257	9,593	6,679
	<hr/>	<hr/>	<hr/>	<hr/>
Represented by:				
Capital	7,255	2,000	9,255	6,532
Accumulated income	81	257	338	147
	<hr/>	<hr/>	<hr/>	<hr/>
	7,336	2,257	9,593	6,679
	<hr/>	<hr/>	<hr/>	<hr/>
Analysis by type of purpose:				
Lectureships	805	2,257	3,062	782
Scholarships and bursaries	897	-	897	956
Research support	2,013	-	2,013	597
Prize funds	161	-	161	166
General	3,460	-	3,460	4,178
	<hr/>	<hr/>	<hr/>	<hr/>
	7,336	2,257	9,593	6,679
	<hr/>	<hr/>	<hr/>	<hr/>
Analysis by asset				
Fixed assets	339	-	339	339
Current and non-current asset investments	2,469	2,237	4,706	2,554
Cash & cash equivalents	4,528	20	4,548	3,786
	<hr/>	<hr/>	<hr/>	<hr/>
	7,336	2,257	9,593	6,679
	<hr/>	<hr/>	<hr/>	<hr/>

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

19. Cash and cash equivalents

	At 1st August 2020 £'000	Cash Flows £'000	31st July 2021 £'000
Consolidated			
Cash and cash equivalents	99,205	(61,117)	38,088
	<u>99,205</u>	<u>(61,117)</u>	<u>38,088</u>

20. Consolidated reconciliation of net debt

	2021 £'000	2020 £'000
Net debt 1 August	(66,506)	(36,237)
Movement in cash and cash equivalents	(61,117)	96,266
New finance lease liabilities	-	(241)
New unsecured loans	(1,550)	(160,000)
Repayments of finance leases	265	-
Repayments of unsecured loans	11,118	32,747
Repayment of secured loans	-	883
Changes in market value and exchange rates	196	76
Net debt 31 July	<u>(117,594)</u>	<u>(66,506)</u>
Change in net debt	<u>(51,088)</u>	<u>(30,269)</u>

Analysis of net debt:	2021 £'000	2020 £'000
Cash and cash equivalents	38,088	99,205
Borrowings: amounts falling due within one year		
Unsecured loans	1,677	11,129
Obligations under finance leases	243	265
	<u>1,920</u>	<u>11,394</u>
Borrowings: amounts falling due after more than one year		
Obligations under finance lease	-	243
Unsecured loans	153,762	154,074
	<u>153,762</u>	<u>154,317</u>
Net debt	<u>117,594</u>	<u>66,506</u>

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

	CONSOLIDATED		UNIVERSITY	
	2021	2020	2021	2020
	£'000	£'000	£'000	£'000
21. Lease obligations				
Non-cancellable operating lease rentals are payable as follows:				
Land and buildings				
Within one year	285	235	285	235
Between two and five years	110	33	110	33
In more than five years	-	-	-	-
	<hr/>	<hr/>	<hr/>	<hr/>
	395	268	395	268
	<hr/>	<hr/>	<hr/>	<hr/>
Other				
Within one year	11	68	-	-
Between two and five years	-	85	-	-
In more than five years	-	-	-	-
	<hr/>	<hr/>	<hr/>	<hr/>
	11	153	-	-
	<hr/>	<hr/>	<hr/>	<hr/>

During the year £235,000 was recognised as an expense in the profit and loss account in respect of operating leases (2020 £240,000).

22. Capital and other commitments

a. Commitments contracted but not provided in the financial statements	17,496	42,250	17,496	42,250
	<hr/>	<hr/>	<hr/>	<hr/>
b. Commitments authorised but not Contracted for	1,224	55,174	1,224	55,174
	<hr/>	<hr/>	<hr/>	<hr/>

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

23. Pensions

The two pension schemes for the University's staff are the Universities Superannuation Scheme (USS) and the Local Government Pension Scheme (LGPS) administered by Bedfordshire County Council. The assets of the USS are held in a separate trustee-administered fund and a Pension Fund Investment Advisory Panel is responsible for the investment arrangements of the assets of the LGPS. Both schemes are defined benefit schemes, which are externally funded, valued every three years by actuaries using the projected unit method and are contracted out of the State Earnings Related Pensions Scheme. In the intervening years, the actuaries review the progress of the schemes.

Between October 2011 and March 2016 USS provided two schemes, the first for existing members of staff at 30th September 2011 who were existing members of USS, this scheme had benefits based on final pensionable salary for academic and related employees of all universities in the United Kingdom and some other employers, the second for new entrants (other than in some specific, limited circumstances) were provided on a career re-valued benefit basis. From 1 April 2016 one revised career re-valued benefit scheme has been introduced for all academic and related employees.

LGPS provides similar benefits for other staff of the University, based on their final salary.

Pension costs are assessed, in accordance with the advice of the actuary, based on the latest actuarial valuation of the schemes and are accounted for on the basis of charging the cost of providing pensions over the period during which the University benefits from the employees' services.

USS

The institution participates in Universities Superannuation Scheme. The assets of the scheme are held in a separate trustee-administered fund. Because of the mutual nature of the scheme, the assets are not attributed to individual institutions and a scheme-wide contribution rate is set. The institution is therefore exposed to actuarial risks associated with other institutions' employees and is unable to identify its share of the underlying assets and liabilities of the scheme on a consistent and reasonable basis. As required by Section 28 of FRS 102 "Employee benefits", the institution therefore accounts for the scheme as if it were a defined contribution scheme. As a result, the amount charged to the profit and loss account represents the contributions payable to the scheme. Since the institution has entered into an agreement (the Recovery Plan) that determines how each employer within the scheme will fund the overall deficit, the institution recognises a liability for the contributions payable that arise from the agreement (to the extent that they relate to the deficit) with related expenses being recognised through the profit and loss account.

FRS 102 makes the distinction between a group plan and a multi-employer scheme. A group plan consists of a collection of entities under common control typically with a sponsoring employer. A multi-employer scheme is a scheme for entities not under common control and represents (typically) an industry-wide scheme such as Universities Superannuation Scheme. The accounting for a multi-employer scheme where the employer has entered into an agreement with the scheme that determines how the employer will fund a deficit results in the recognition of a liability for the contributions payable that arise from the agreement (to the extent that they relate to the deficit) and the resulting expense in profit or loss in accordance with section 28 of FRS 102. The directors are satisfied that Universities Superannuation Scheme meets the definition of a multi-employer scheme and has therefore recognised the discounted fair value of the contractual contributions under the recovery plan in existence at the date of approving these financial statements.

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

23. **Pensions** *(continued...)*

The latest available complete actuarial valuation of the Retirement Income Builder is at 31 March 2018 (the valuation date), which was carried out using the projected unit method. A valuation as at 31 March 2020 is underway but not yet complete.

Since the institution cannot identify its share of USS Retirement Income Builder (defined benefit) assets and liabilities, the following disclosures reflect those relevant for those assets and liabilities as a whole.

The 2018 valuation was the fifth valuation for the scheme under the scheme-specific funding regime introduced by the Pensions Act 2004, which requires schemes to adopt a statutory funding objective, which is to have sufficient and appropriate assets to cover their technical provisions. At the valuation date, the value of the assets of the scheme was £63.7 billion and the value of the scheme's technical provisions was £67.3 billion indicating a shortfall of £3.6 billion and a funding ratio of 95%.

The key financial assumptions used in the 2018 valuation are described below. More detail is set out in the Statement of Funding Principles.

Pension increases (CPI)	Term dependent rates in line with the difference between the Fixed Interest and Index Linked yield curves, less 1.3% p.a.
Discount rate (forward rates)	Years 1-10: CPI + 0.14% reducing linearly to CPI – 0.73% Years 11-20: CPI + 2.52% reducing linearly to CPI + 1.55% by year 21 Years 21 +: CPI + 1.55%

The main demographic assumption used relates to the mortality assumptions. These assumptions are based on analysis of the scheme's experience carried out as part of the 2018 actuarial valuation. The mortality assumptions used in these figures are as follows:

	2018 valuation
Mortality base table	Pre-retirement: 71% of AMC00 (duration 0) for males and 112% of AFC00 (duration 0) for females Post retirement: 97.6% of SAPS S1NMA "light" for males and 102.7% of RFV00 for females
Future improvements to mortality	CMI_2017 with a smoothing parameter of 8.5 and a long term improvement rate of 1.8% pa for males and 1.6% pa for females

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

23. **Pensions** *(continued...)*

The current life expectancies on retirement at age 65 are:

	2018 valuation	2017 valuation
Males currently aged 65 (years)	24.4	24.6
Females currently aged 65 (years)	25.9	26.1
Males currently aged 45 (years)	26.3	26.6
Females currently aged 45 (years)	27.7	27.9

A new deficit recovery plan was put in place as part of the 2018 valuation, which requires payment of 2% of salaries over the period 1 October 2019 to 30 September 2021 at which point the rate will increase to 2.5%. The 2021 deficit recovery liability reflects this plan. The liability figures have been produced using the following assumptions:

	2021	2020
Discount rate	1.60%	1.35%
Pensionable salary growth	2.85%	4.20%

		CONSOLIDATED	
		2021	2020
		£'000	£'000
USS pension provision			
At beginning of the year	16	19,473	32,688
Interest payable		262	670
Contributions paid against deficit		(983)	(782)
Charged/(credited) in the year		1,943	(13,103)
At end of the year		20,695	19,473

LGPS

The rate of the University's employer's contributions for LGPS is determined by the actuaries and is presently 19.6% of pensionable salaries. Employee rates for LGPS are statutorily prescribed. Variations from regular cost are spread over the expected average remaining working lifetime of members of the scheme after making allowances for future withdrawals.

The figures disclosed below estimated by the actuary as at 31st July, 2021 have been derived by suitable approximation methods from the full actuarial valuation as at 31st March, 2019. Surpluses or deficits that arise may impact on the University's future contribution commitment.

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

23. **Pensions** *(continued...)*

The major assumptions used by the actuary as at 31st July, 2021 are as follows:-

	2021	2020	2019
	%	%	%
Salary scale increases per annum	3.85	3.25	2.70
Pension increases per annum	2.85	2.25	2.40
Discount rate per annum	1.60	1.35	2.05
Members opting for enhanced commutation pre 2008 service	50.00	50.00	50.00
Members opting for enhanced commutation post 2008 service	50.00	50.00	75.00

The assumed life expectations on retirement at age 65 are:-

	2021	2020	2019
Retiring today			
Males	21.9	22.2	20.7
Females	24.3	24.3	23.2
Retiring in 20 years			
Males	22.8	23.4	21.7
Females	26.0	26.1	24.7

The estimated University share of the assets in the scheme were:-

	2021	2020	2019
	£'000	£'000	£'000
Equities	76,292	66,495	66,673
Property	10,170	9,265	9,416
Bonds	20,378	15,757	15,203
Cash	2,404	5,877	4,377
	<hr/>	<hr/>	<hr/>
	109,244	97,394	95,669

There is no provision for unitising the assets of a Fund under LGPS. The asset of the scheme, as a whole, is allocated to participating bodies on a consistent and reasonable basis.

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

23. Pensions (continued ...)

The University's share of the underlying assets and liabilities are as follows:-

	2021 £'000	2020 £'000
Market value of assets	109,244	97,394
Present value of liabilities	(201,113)	(188,776)
Deficit in the scheme – net pension liability recorded within pension provisions (note 16)	(91,869)	(91,382)
Current service cost	5,831	4,319
Loss due to curtailments	-	16
Past service cost	1,884	-
Total operating charge	7,715	4,335
Analysis of the amount charged to interest payable		
Interest on pension scheme liabilities	2,523	3,126
Interest on pension scheme assets	(1,314)	(1,965)
Net charge to other finance costs	1,209	1,161
Total income and expenditure account charge	8,924	5,496
Analysis of other comprehensive income		
Gain/(loss) on assets	10,749	(551)
Change in demographic assumptions	2,155	(5,642)
Change in financial assumptions	(11,764)	(21,122)
Experience gain/(loss) on liabilities	3,621	(4,112)
Gain/(loss) on liabilities	-	-
Total other comprehensive income before deduction for tax	4,761	(31,427)
Cumulative actuarial loss recognised as other comprehensive income for LGPS Scheme		
Cumulative actuarial losses recognised at the start of the year	41,713	10,286
Cumulative actuarial losses recognised at the end of the year	36,952	41,713
Analysis of movement in deficit during the year:		
Deficit in scheme at beginning of the year	(91,382)	(58,776)
Movement in year:		
Current service cost	(5,723)	(4,239)
Contributions	3,676	4,317
Administration expenses	(108)	(80)
Past service cost	(1,884)	-
Curtailment cost	-	(16)
Other finance charge	(1,209)	(1,161)
Actuarial gain/(loss)	4,761	(31,427)
Deficit in scheme at end of the year	(91,869)	(91,382)

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

23. **Pensions** *(continued ...)*

	2021	2020
	£'000	£'000
Analysis of movements in the present value of the scheme liabilities:-		
Present value at beginning of year	188,776	154,445
Current service cost (net of member contributions)	5,723	4,239
Interest cost	2,523	3,126
Contributions by members (including notional contributions)	690	646
Actuarial losses	5,988	30,876
Past service costs	1,884	-
Losses on curtailments	-	16
Actual benefits paid	(4,471)	(4,572)
	201,113	188,776
Analysis of movement in the fair value of the scheme assets:-		
Fair value at beginning of year	97,394	95,669
Interest on plan assets	1,314	1,965
Contributions by members	690	646
Contributions by the employer	3,676	4,317
Actuarial gains/(losses)	10,749	(551)
Actual benefits paid	(4,471)	(4,572)
Administration expenses	(108)	(80)
	109,244	97,394

Estimated contributions for LGPS in the Financial year 2022 is £3,739,000 (Financial Year 2021 £2,008,000).

In addition to the main schemes described above, some of the subsidiaries operate their own immaterial pension schemes, details of which can be found in the individual company financial statements.

	£'000	£'000
24. Access funds		
Funding Council grants in year	-	-
Disbursed to students in year	-	-
	9	9

Funding Council grants are available solely for students: the University acts only as paying agent. The grants and related disbursements are therefore excluded from the income and expenditure account.

CRANFIELD UNIVERSITY
NOTES TO THE ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2021
(continued...)

25. Related party transactions

The following exemptions available under FRS 102 have been applied to these financial statements:

- Disclosures in respect of transactions with wholly owned subsidiaries

	CONSOLIDATED		UNIVERSITY	
	2021	2020	2021	2020
	£'000	£'000	£'000	£'000
26. Financial instruments				
Financial assets at fair value through the comprehensive income account	5,449	3,038	5,393	3,038
Financial assets that are debt instruments measured at amortised cost:				
Cash and cash equivalents	38,088	99,205	30,851	95,752
Other investments measured at amortised costs	0	463	0	407
Trade debtors	28,203	26,618	30,077	28,109
Other debtors	6,451	6,927	4,936	5,088
	78,191	136,251	71,257	132,394
Financial liabilities measured at amortised cost:				
Secured loans	-	-	-	-
Unsecured loans	(155,439)	(165,203)	(153,888)	(165,203)
Finance leases	(243)	(508)	(243)	(508)
Trade creditors	(32,489)	(28,888)	(31,288)	(26,701)
Accruals	(16,204)	(16,989)	(15,355)	(16,073)
	(204,375)	(211,588)	(200,774)	(208,485)