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VICE-CHANCELLOR'S INTRODUCTION



At the time I am writing I have been in post for a full calendar year and am enjoying it as much as I did on the first day. It has been a successful year for the University, with strong progress in our core areas of teaching and learning, research and enterprise.

The high standards of teaching and learning have been recognised nationally and endorsed by awards. Of particular note was the joint success of Chemistry student Kate Barrow who was named as the 2003 Science, Engineering and Technology Student of the Year while her tutor Dr Andy Russell was given the Best Lecturer Award.

The quality of our teaching is reflected in the fact that a high proportion of our graduates soon find employment, achieving above-average salaries. The employability of our students has been enhanced by an innovative web-based careers management skills programme integral to our undergraduate degrees. It has now been bought by over fifty British institutions and this year its website won a national award.

We are in contact with more than 65,000 alumni – over 1,800 recent graduates attended a reunion here this year. A new development function is being established with the aim of involving alumni more closely in the future of the University.

The University is hugely attractive to students with a seven per cent increase in applications year-on-year, as opposed to a national three per cent average. A record 24,000 people attended the Open Days in June and September in 2003.

This year also saw the award of £13m from the Government's Science Research Investment Fund to strengthen science and technology research. The campus Enterprise Hub opened for business and Reading joined four other universities: Brunel, Royal Holloway, Surrey and Sussex to launch a £4m investment fund,

the Cascade Fund, to support academics seeking to commercialise the outcomes of their research. The University's Knowledge Transfer Partnership, with forty-one programmes, is one of the most successful in the country.

We are leading the newly founded Berkshire Aim Higher: Partnerships for Progression plus our own Widening Participation activities, which include highly successful Summer Schools. The University has been involved in developing collaborative links with local further education colleges and has established The University of Reading Associate College Network.

The year has seen increasing contribution from staff and students to volunteer projects in the local community. Our Community Projects Co-ordinator matched one hundred student and staff volunteers with twenty-two different voluntary sector organisations. Student volunteers also spend two or three hours of their spare time each week helping pupils in twenty-seven local primary and secondary schools.

Currently, the University is investing over £45m in its infrastructure over the next five years, to improve our facilities to support our excellent teaching, research and enterprise activities. This includes the refurbishment of the Bob Kayley Theatre at Bulmershe Court, the new home for the Museum of English Rural Life, and a new centre for social sciences and arts and humanities post-graduates in Old Whiteknights House.

I would like to thank academic, clerical, technical and all support staff for making my first year so enjoyable and more importantly, contributing to the continued success of the University.

A handwritten signature in black ink, appearing to read 'Gordon Marshall', written in a cursive style.

Professor Gordon Marshall

ICRC ESTABLISHED

WEB WEATHER

SEEING THROUGH THE FOG

CARBOHYDRATE SYNTHESIS

TELLING BONES

STARCH CANCER LINK

research





ICRC ESTABLISHED

Teams of specialists from the School of Construction Management and Engineering target research to meet industrial demand

The Innovative Construction Research Centre (icrc) was established in January 2002 with a grant of £2.5m from the Engineering and Physical Sciences Research Council (epsrc). The award confirmed the School of Construction Management and Engineering as an international centre of excellence for construction research.

The icrc is one of fourteen Innovative Manufacturing Research Centres (imrcs) set up to support UK manufacturing and is specifically dedicated to serving the research needs of the UK construction sector, with a particular emphasis on competitiveness, productivity and performance.

The Centre possesses a wide portfolio of research conducted in close collaboration with industry. It is currently working with more than sixty industrial partners, including clients, contractors, consultants, suppliers, industry bodies, trade associations and professional institutions.

Equivalent resources from industry match the £2.5m award from epsrc.

The construction sector is the third largest industrial sector in the UK economy with an annual output exceeding £80 billion. A competitive construction sector is vital to the national economy and society at large. Construction comprises a significant component of fixed capital investment across all industry sectors.

Government targets for improvements in housing, health, education and infrastructure are all dependent on the performance of the construction sector. Whilst research support for other more high-tech sectors may be fashionable, construction is too large and important to ignore. Any marginal improvement in performance would significantly benefit all industrial sectors and the economy at large. The challenge for icrc is to target its research so that it makes a difference.

Projects recently completed include 'Sharing knowledge between aerospace and construction', comprising a comparative study of managerial practices in the two sectors.



This experiment allows anyone to run a climate model from their computer, helping to improve long-term global forecasts

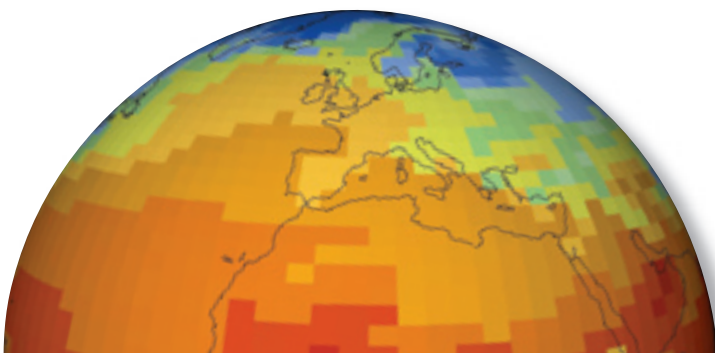
WEB WEATHER

Climate change and our response to it are issues of global importance, affecting food production, water resources, ecosystems, energy demand, insurance costs and much else. There is a broad scientific consensus that the earth is likely to warm over the coming century, but estimates of how much vary hugely. The *climateprediction.net* experiment was launched in September to allow a state-of-the-art climate prediction model to be run on home, school or work computers by any one who wishes to help improve scientific forecasts of twenty-first century climate. It is hoped that it will eventually be run by millions of ordinary computers worldwide.

This collaboration between the University's Meteorology Department, the University of Oxford, the Met Office, the Open University, the cclrc Rutherford Appleton Laboratory, and Tessella Support Services plc will use the combined power of participants' personal computers to generate the world's most comprehensive probability-based forecast of twenty-first century climate.

Dr Ellie Highwood from the Meteorology Department said: 'There are many slightly different ways of representing important climate processes in computer models. This project will, for the first time, allow us to test many of these different versions and in doing so to tell you what the climate probably will and probably won't do. It's really exciting that the participants will each be running their own unique version of the model and will be able to see its climate evolving for themselves. In fifty years time we'll know which one of them was right!'

The climate model runs as a background process on ordinary desktop computers and will not affect other computing tasks. Simulations of present climate and past changes will be used to test different model versions and the most realistic will be used to predict the climate of the twenty-first century. Participants can watch the climate of their unique model evolve using exciting visualisation packages that come with the model.





SEEING THROUGH THE FOG

Development of these powerful cameras should make the flow of air traffic less susceptible to adverse weather conditions

Every year fog and adverse weather conditions ground planes and bring airports to a standstill because poor visibility makes flying and the movement of aeroplanes and vehicles on the tarmac too dangerous. The development of the infra-red camera has allowed pilots and air traffic controllers to see far better through mist and fog than they could with the human eye, but it cannot penetrate fog, clouds and light drizzle.

Researchers in the University's Applied Optics Centre in the Department of Physics have been funded by the nasa Glenn Research Centre to build a super-camera that works not with infra-red but with passive millimetre waves (pmmw) which will produce much clearer pictures in adverse weather conditions.

The camera operates in the millimetre-wave portion of the electromagnetic spectrum to 'see' through clothing, dense fog, walls and other opaque materials, creating visual images of objects, people, runways, obstacles and the horizon. As millimetre-wave technology can penetrate fabrics and other materials, it is also suitable for concealed weapons detection.

'One advantage of the pmmw imager is its ability to see through severe weather conditions. Currently, most air traffic control systems and surveillance cameras use infra-red waves, which are significantly weakened in poor weather. Another advantage of the pmmw imager is that objects are not subject to external radiation in order to obtain an image. This technology makes it possible to detect objects without being detected, which is why it's called passive,' explained Professor Lettington.

The University of Reading is unique in having the wide spectrum of knowledge needed to carry out research in this field and this pioneering technology has potential applications in security and aviation safety. It may provide new ways of handling airport security and assist aircraft and space shuttle take-off and landing.

PhD students Naomi Alexander and Anas Wabby, led by Dr Denis Dunn and Emeritus Professor Alan Lettington, spent eighteen months building the camera that has now been sent to Johnson C. Smith University, North Carolina as a model for further research.



Pioneering research which could lead to more efficient disease treatment and new vaccinations

CARBOHYDRATE SYNTHESIS

Dr Helen Osborn in the School of Chemistry is currently developing new methods for preparing disease-associated carbohydrates. All cells are coated with carbohydrates, but disease cells display different carbohydrates to healthy cells. For example, tumour cells show specific cancer-associated carbohydrates. Dr Osborn believes that synthesis of these carbohydrates will provide new methods for disease treatment, possibly via vaccination strategies, or by discovering new carbohydrate analogues that can disrupt interactions between the diseased cells and their receptors.

Carbohydrates have extremely large and complicated structures and preparing them in a laboratory is complex and laborious. Synthetic methods that only allow access to the naturally occurring isomer of the target are required. Most syntheses are multi-step processes that rely on access to intermediates with specific protecting groups – these allow

the position and orientation of the bonds between the carbohydrate units to be controlled. Dr Osborn's research team has developed new chemical and enzymatic methods for preparing these building blocks and these methods requiring fewer synthetic and purification steps than traditional strategies.

A number of analogues of cancer-associated carbohydrates have been prepared using this methodology and their ability to inhibit tumour migration via metastasis is currently being investigated.

A series of anti-infective agents with a potential for treating infections caused by E.coli has also been prepared, in collaboration with Drs Hayes and Rastall in the Schools of Chemistry and Food Bioscience respectively. Collaborations with Dr Barclay, from ams, are also in place to prepare specific carbohydrates that can be used to probe the specificity of different strains of the influenza virus.

TELLING BONES

Archaeologist Dr Stuart Black was called in to help detectives investigating the murder of a man whose body was found burning in a field in Upton, near Peterborough.

Dr Black, Lecturer in Environmental Radioactivity in the School of Human and Environmental Sciences had previously helped carry out groundbreaking forensic work on the torso of a young boy which was found in the Thames in September 2001.

Using isotope analysis on samples taken from bones which showed traces of a particular pre-Cambrian rock from West Africa, Dr Black, with scientists at Royal Holloway, University of London, was able to establish that the boy came from a corridor of Nigeria, which stretches 100 miles by 50 miles. It was the first time this technique was carried out in Britain.

By studying the Upton victim's teeth, femur and skin, Dr Black has been able to establish some of the victim's ancestry, recent whereabouts and where he spent the majority of the last four weeks before his murder.

Dr Black said: 'Dental samples indicate he most likely grew up in the Ukraine. Isotope levels from the femur indicate that the victim has been a resident in the UK for the last three to six years prior to his death and further tests indicate he was contaminated with by-products from the nuclear industry, sourced from the east coast of Britain.'

Levels of isotopes recorded on the victim's hair and skin also indicate that the victim had not been resident in the UK for up to four weeks prior to his death and the ratios recorded suggest he may have been in North Germany or Holland.



STARCH CANCER LINK

A previously unknown link between the production of acrylamide, a suspect carcinogen and the frying, baking and toasting of carbohydrate-rich foods was discovered by Professor Don Mottram, of the School of Food Biosciences and Professor Bronek Wedicha of the University of Leeds.

Reporting in the October 2002 issue of *Nature*, the food scientists showed that this substance is formed as a result of the chemical reaction between sugars and the amino acid asparagine in particular. These are natural components of all plant-based foods, and the reaction of sugars with amino acids is also

responsible for the colour and flavour of cooked food, a process known as the Maillard reaction. Acrylamide formation occurs even at moderate temperatures above 100°C. As acrylamide formation is an unavoidable process, Professor Mottram and his team are continuing their research to determine how the levels of acrylamide in food can be minimised by the control of the cooking process or the selection of raw materials. A group of international food industry companies are now sponsoring a further collaborative research project in this area involving the universities of Reading, Leeds and Nottingham.



**CORAL'S STORMY FUTURE
END OF THE GARDEN?
ALL FOR BANANAS
THE EARTH SIMULATOR
RURAL YOUTH LIVELIHOODS**

international

The vulnerability of the delicate ecosystems of coral reefs to the activities of both humans and nature has been highlighted by two research projects undertaken by Professor James Crabbe and his team from the School of Animal and Microbial Sciences. Separate investigations on coral colonies in Indonesia and in Jamaica have revealed two different threats to their future development.

In Indonesia, working with Operation Wallacea, the team has been looking at how human activity through fishing and mining are damaging the coral reefs of Indonesia. Digital image analysis of corals from a number of reefs indicates slower-than-average growth rates. The scientists think that more sediment is being washed on to the reefs, cutting out light and limiting growth. This research has implications for the future preservation of these important ecosystems, and could help Indonesia to develop education programmes and management policies.

In Jamaica it was already known that hurricanes and storms can wipe out

whole areas of delicate branching corals and the marine life that they support. But Professor Crabbe, working with Earthwatch Institute, has now found that such storms have far-reaching effects on stouter, non-branching corals as well, by hampering the settling-out of coral larvae that start, or recruit, new colonies, thus endangering future generations of coral and local biodiversity.

Using a mathematical model of coral colony growth to calculate the recruitment dates of 438 non-branching corals from eleven species, the team was surprised to find a significant negative correlation between storm severity recorded over the last sixty years and recruitment of non-branching coral. In years with severe storms, recruitment dropped. These findings, which have now been extended to well over 1,000 individual corals, contradict earlier studies which suggest that in 1980 Hurricane Allen created favourable conditions for coral recruitment by clearing the reef surface.

CORAL'S STORMY FUTURE

Professor James Crabbe and his team have revealed two major threats to the world's delicate coral reefs



As climate change affects our domestic gardens, indigenous plant species may have to make way for more tropical varieties

END OF THE GARDEN?

A major study into the practical impacts of climate change on gardens in the UK was published by Richard Bisgrove and Paul Hadley of the School of Plant Sciences in November. *Gardening in the global greenhouse: the impacts of climate change on UK gardens* was commissioned by the National Trust and the Royal Horticultural Society in partnership with the Department for Environment, Food and Rural Affairs (defra), Anglian Water, English Heritage, the Forestry Commission, Notcutts Nurseries, the Royal Botanic Gardens, Kew and the UK Climate Impacts Programme. It revealed that climate change will affect millions of domestic gardens in the UK and could ultimately threaten the traditional character and possibly long term survival of some historic and public gardens and parks and their plant collections.

Within the next fifty to eighty years, the quintessential 'English country garden' and the great British lawn

could become increasingly difficult and costly to maintain and some traditional garden features may have to be replaced by new ones, more suited to changing conditions. Domestic gardeners are in a position to adapt to climate change and exploit opportunities as it affects growing conditions in UK gardens. For the heritage sector, the greatest challenge will be the long-term care of historic layouts, plant collections and planting effects, originally developed in climatic conditions that will no longer exist.

The study has been commissioned at a time when the vulnerability of gardens to the vagaries of the weather is becoming increasingly apparent. The impact of climate change is likely to lead to reduced frosts, earlier spring, and higher average temperatures all year round. Increased winter rainfall, however, may lead to more floods, while hotter, drier summers will mean greater risk of drought.





Dr Simon Gowen of the School of Agriculture, Policy and Development is working on trials of a new variety of banana

ALL FOR BANANAS



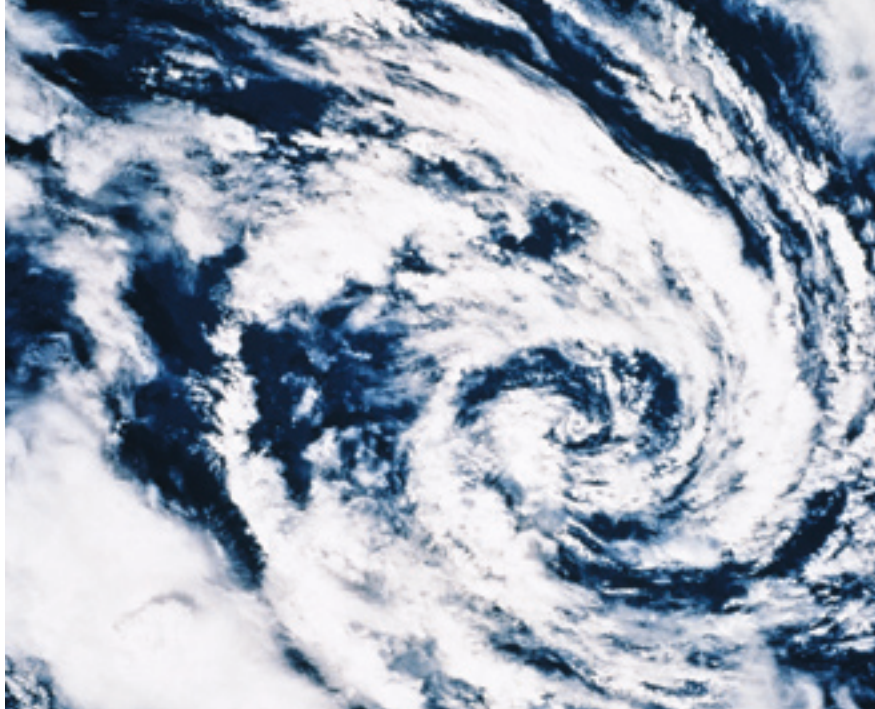
The world's favourite fruit, the banana, a basic staple food for hundreds of millions of people, is under severe threat from disease that could mean the fruit disappears forever in ten years time. This is the message that the media around the world have recently been declaring.

Dr Simon Gowen disagrees that the banana will become extinct, but he says that we are unlikely to be eating today's most common cloned variety. The Cavendish, virtually the only variety western supermarkets stock, took over from Gros Michel as the major export variety in the 1960s, after the latter was decimated by Panama disease.

A new form of this disease, 'race 4', is now threatening the Cavendish. There are more resistant varieties, but there is currently no demand as supermarkets do not buy them. In some central American countries the Cavendish is also under threat from another fungal disease, Black Sigatoka, but is protected by up to forty sprayings of fungicide a year. This is not

only expensive, but presents a serious threat to workers and the environment. Panama disease, however, can not be controlled with fungicides. If this takes hold, the Cavendish may disappear all together.

Through research funded by the dfid Crop Protection Programme, Dr Gowen and his colleagues are working on trials in Uganda of a new variety of banana. Currently known as fhia 17 it is resistant to Sigatoka and Panama disease. He believes that if people understood that the fruit they are currently buying is heavily pesticide dependent and is undermining the economy and health of its producers, they would be happy to try different varieties. Dr Gowen hopes that the mistake of becoming dependent on one variety can be avoided and consumers will be allowed to choose from the wide range of bananas that are already grown in a more sustainable way in non-exporting countries.



Reading meteorologists are using the world's largest supercomputer for meteorological research

THE EARTH SIMULATOR

Japan's Earth Simulator, number one in the top 500 list of supercomputers, is the world's biggest and fastest supercomputer, providing opportunities to understand the complex interactions that describe the climate system today and will determine how human behaviour will affect the climate in the coming decades.

Dr Mat Collins at the Hadley Centre and nerc scientists Professor Julia Slingo and Dr Lois Steenman Clark at the University's Centre for Global Atmospheric Modelling have been granted access to the machine through collaboration agreements with the Earth Simulator Centre and the University of Tokyo. This is one of only three international collaborations established by the Director General of the Earth Simulator Centre, Dr Tetsuya Sato, and reflects

the high international standing of UK climate modelling and research.

The Earth Simulator is ten times more powerful than anything currently available to scientists in the UK. Using the Earth Simulator will allow them to run mathematical models of the earth system at unprecedented resolutions. This will give new insights into the processes that determine climate variability, such as El Niño, interactions between the Gulf Stream and Atlantic weather systems. It will also enable the meteorologists to provide more detailed assessments of the regional impacts of climate change, such as the increase in extreme events. As a first step, cgam and Hadley Centre scientists have successfully run the Hadley Centre climate prediction model at a resolution high enough to show frontal rain bands and tropical cyclones.



RURAL YOUTH LIVELIHOODS

East Africa's disenfranchised youth can help improve the management of natural resources

Kevin Waldie of the International and Rural Development Department is involved in a research project focused on exploring the positive social and economic contributions that young people make to their community and country.

The underlying hypothesis of the project is that young people are the major stakeholders of improvement in natural resource management (nrm). For youth to become proactive in investing in sustainable nrm, however, it is essential that they have adequate opportunities to build their livelihoods on their own terms.

Such opportunities are presently limited by a lack of information and understanding of how young people living in rural areas of Uganda and Kenya access and make use of local natural resource endowments to shape their livelihood

strategies. The Rural Youth Livelihoods Project aims to gain a clearer understanding of the livelihood strategies of rural youth, review current policies, institutions and processes that influence the lives of young people in rural areas and establish and disseminate models of good practice of supporting young people's needs.

It is hoped that the project will provide policy-makers, development practitioners and academics with a clearer understanding of the present and potential role of nrm in the lives and livelihood strategies of rural youth.

The research project, which began in April 2002 and will run to March 2005, is funded by the UK Department for International Development (dfid) through the Natural Resources Systems Programme.



**£4M CASCADE FUND
BLOOD CLOTTING CONTROL
CARBON ECONOMY
INFORMATION TECHNOLOGY**

enterprise



£4M CASCADE FUND

The University of Reading joined four other universities to launch a £4m investment fund, the Cascade Fund, to support academics seeking to commercialise the outcomes of their research. The Fund, which is shared between Brunel, Reading, Royal Holloway, Surrey and Sussex universities, will stimulate entrepreneurial activity and provide financial and business assistance to academics working

in those institutions on commercially viable projects. Academics applying to the Fund can expect a rigorous assessment of their technology by the Fund Manager, Generics Asset Management Ltd. Dr Phillip Carter, Fund Manager for Generics said, 'The Cascade Fund is very selective and will only invest in those projects with genuine commercial potential and those which are likely to yield a significant return on the investment.'

BLOOD CLOTTING CONTROL

The first award made by the Cascade Fund was to scientist Dr Jonathan Gibbins from the School of Animal and Microbial Sciences, whose research has recently led to the discovery of new mechanisms that control blood clotting. It is possible that these discoveries may lead to the identification of new drugs or drug targets effective in the prevention of thrombosis (uncontrolled blood clotting).

Thrombosis is a major killer in the UK: according to the Office for National Statistics in 2000 over 175,000 people died as a result of the condition, more than of cancer. Whilst it can cause major health problems, blood clotting is an essential process, controlling bleeding and repairing injuries. The process is

controlled by the reaction of blood cells called platelets, which aggregate at the site of an injury and form a clot, to stop the bleeding. However, clots sometimes form when there is no injury and these can block major blood vessels and stop the supply of blood to vital organs such as the brain and heart.

The investment made by the Cascade Fund will enable Dr Gibbins to conduct a market research exercise to establish whether the exploitation of his discoveries in a drug development programme would be a viable prospect. Dr Gibbins commented, 'Cascade is enabling us to explore the potential of our discoveries. It would be very exciting to see our basic cell biology research transferred into therapeutics.'





Reading scientists are leading efforts to tear the UK economy away from carbon dependency towards environmentally friendly alternatives

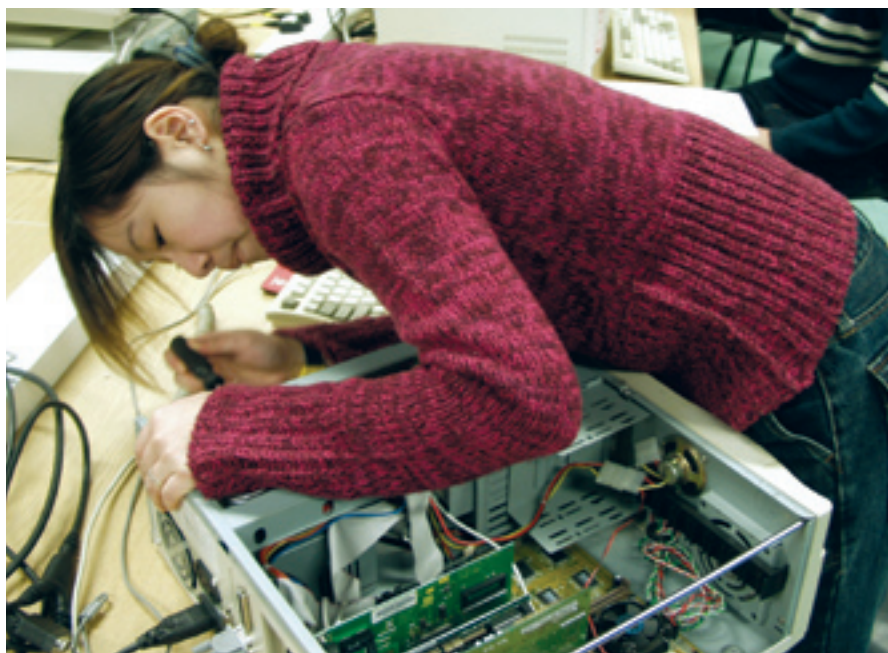
CARBON ECONOMY

Carbon is one of the fundamental building blocks of life and life is one of the fundamental building blocks of the global carbon cycle. Over geological history, this fine balance has produced a small carbon surplus which has been deposited into the earth's crust. Paradoxically, since the Industrial Revolution, humanity has become critically dependent on carbon. Ubiquitous in our environment, we harness carbon's strength in our materials, and rely on its energy for our fuels. We are now disturbing life's fine balance with the carbon cycle by very rapidly releasing historical deposits of carbon back into the atmosphere in the form of carbon dioxide through driving, and through energy use in the home and in the workplace. This carbon dioxide is one of the greenhouse gases and it is the main gas causing global warming and associated climate change.

Pressure is now increasing at international, national and local levels to reduce carbon dioxide emissions, making the management of carbon an increasingly important issue. Dr David Shipworth of the School of Construction Management

and Engineering is helping lead research in the study of carbon management. His work is forming part of an initiative to promote carbon management in UK organisations in efforts to move towards a low carbon economy. He provides national policy advice and develops complex models for assessing carbon emissions in different sectors and throughout the life-cycles of individual products. Dr Shipworth says forthcoming legislation will require more and more businesses to develop carbon management systems.

'While carbon management is currently seen as being primarily a technical issue it is increasingly apparent that effective solutions for reducing carbon outputs lie in overcoming the organisational and economic barriers that currently dissuade companies and individuals from implementing simple, cost-effective solutions in this area. Forthcoming EU legislation will require more and more UK companies to audit and manage their carbon emissions, while simultaneously creating business opportunities to trade in carbon on the UK, EU and eventually global carbon markets.'



A new Reading degree programme is designed to meet growing demand for practical computer skills in the commercial and business sectors

INFORMATION TECHNOLOGY

The new Information Technology degree in the School of Systems Engineering meets both a national and a local need for the development of degree courses in the area of information technology.

The course is informed and refreshed by the University's applied research and links with industry and there are now over thirty students taking both the Part 1 and Part 2 courses.

The new practical-based Information Technology degree programme is complementary to the existing theory-based Computer Science degree courses. One of the second-year students Paul Sebborn said: 'The course sets you up with a really good base if you want to start your own business. It's all about the role of it in business.'

The course contents for the Information Technology degree are themed,

covering areas such as Commercial Off The Shelf Software (cots), programming and design, software engineering, it support (Infrastructure) and e-business. The emphasis is on students developing the diverse range of practical skills needed to succeed in a commercial environment.

Many of the staff teaching on the course have extensive industrial experience and combine their teaching duties with consultancy work, a 'hands-on' approach from which the students gain real benefit. An appreciation of links with industry develop their understandings by putting theory into practice.

The course has its own laboratory where students can do all their practical work, ranging from producing an e-business solution to fixing broken hardware.

teaching & learning

**THE POWER OF SEJANUS
SUMMER SCHOOL
PARTNERS IN LAW
TEACHING EXCELLENCE
STUDENT OF THE YEAR**



MMII·XII·IV·AD·VII



**An event of major theatrical and academic importance:
Ben Jonson's play is staged for the first time since
the seventeenth century**

THE POWER OF SEJANUS

Brian Woolland, of the School of Arts and Communication Design, directed a theatrical production of Ben Jonson's *Sejanus* as part of a major research project, for which he received a Research Leave Award from the Arts and Humanities Research Board (ahrb).

Although *Sejanus* has not been performed professionally since the seventeenth century, there has been a considerable revival of critical interest in it in recent years. This production at Reading was therefore of major theatrical significance.

One of Brian Woolland's intentions in staging this revival was to examine the play's contemporary relevance. The production made extensive use of video and a specially commissioned musical score. Although rarely performed, the play is profoundly relevant and surprisingly modern in its concerns about state surveillance and corruption and its analysis of the workings of power and complicity.

The Bulmershe Production (which has been established as a major strand of research in the Department of Film, Theatre and Television) makes a significant, though indirect, contribution to teaching. The cast and technical crew are all students, the work on the production feeding into their own critical work on theatre and to their practice as directors of both theatre and video.

A video record of the production was made and has subsequently been edited on to dvd. This has now been made available for teaching purposes to other universities where Renaissance Theatre is taught. The production has also been used as a case study by Practice As Research In Performance (parip), a five-year ahrb funded project based at the University of Bristol. parip's objectives are to investigate creative and academic issues raised by performance practice as research.

SUMMER SCHOOL

In July, sixty state school pupils from all over the south east enjoyed a hefce funded Summer School organised, by the University's Widening Participation Office. Residential Higher Education Summer Schools have proved a highly effective means of encouraging University applications from young people whose backgrounds have little tradition of participation in Higher Education.

The six-day school was designed to give pupils an insight into life and study at university. Around twenty-five academic departments provided workshops, lectures, visits and practical activities to demonstrate the vast range of course opportunities. A team of undergraduate mentors assisted participants in the week's activities, provided first-hand

knowledge of higher education and led a programme of evening events to illustrate the benefits of the social side of campus life. The importance of developing skills valued by employers was emphasised through personal development workshops, team building exercises, presentation skills workshops and careers information sessions.

The Widening Participation Office has secured funding for three Higher Education Summer Schools in 2004. In addition to the general Summer School for pupils who have just completed gcse, the University will host a National Specialist Summer School for Fine Art and Typography & Graphic Communication, and a Regional Science Summer School for A-level pupils.

PARTNERS IN LAW

The University has entered into a collaborative arrangement to deliver a LLB programme in Law with Taylor's College, Malaysia, from October 2004. Taylor's College is a private education institution located in Subang Jaya, about twenty-five miles from Kuala Lumpur. The College has several thousand students taking a wide range of courses, with over 400 students from outside Malaysia.

The first two years of the LLB will be delivered in Malaysia and students will then transfer to Reading for the final year of their programme. Students studying on the LLB programme at Taylor's College are to be treated as Reading students studying in Malaysia and

arrangements for them will mirror those for their counterparts at Reading.

Taylor's College expect up to fifty students to register on the programme. Regular visits will be made by Reading staff to the College to ensure teaching quality standards and it is expected that Taylor's College staff will visit Reading for staff development purposes. Teaching materials developed by the School of Law will be available to Taylor's College students via Blackboard.

The Taylor's College collaboration may prove a model for future programmes of this type involving the School of Law and other disciplines around the University.



TEACHING EXCELLENCE



The first winner of the new award for teaching excellence was Dr Emily Finch in the School of Law. The award panel were very impressed with what Emily had achieved in the relatively short time she has been a lecturer at Reading. It was clear from the nominations Emily received and the case she submitted, that her ability to influence and inspire her students was particularly strong.

The Award for Teaching Excellence is conferred for teaching of any kind, undergraduate, postgraduate, part-time, online or distance. There are two runners-up awards, to be used to develop the individual's own teaching practice or that within their School.

The two runners up at Reading were Dr Graham Holloway (School of Animal and Microbial Science) and Mr Alan Rowley (School of Business).

Emily received a £6,000 grant to develop her work on the Practical Legal Studies module she teaches which focuses on developing key skill areas relating to the legal profession. Graham and Alan each received a £3,000 grant. Graham plans to develop the Wildlife Management and Conservation MSc of which he is Director with a web-based journal, while Alan's prize money went towards developing online self-learning toolkits and 'mini-modules' for urban design and property development.

STUDENT OF THE YEAR



Chemistry student Kate Barrow has been named the 2003 Science, Engineering and Technology Student of the Year for her work on synthesizing an anti-leukaemia drug.

Her tutor, Dr Andrew Russell, was given the Best Lecturer Award, recognizing the vital role staff play in motivating students. Kate also spent a year working with Astra Zeneca, a world leading pharmaceutical company.

This project was looking at producing part of a potent anti-leukaemic natural compound synthetically. Kate made impressive advances with this and the compound could ultimately be used commercially. In addition, two of the compounds made during the project may have future uses in pharmaceutical

laboratories during the production of other drugs.

Kate, who attended the event with her parents, said: 'I wasn't expecting this. I would like to thank everyone at The University of Reading who has helped me get this far.'

Dr Russell described Kate as 'a truly remarkable student'. He went on to say 'Inspirational events such as this can make the world of science and technology sexy and dispel the notion that chemistry is all about pollution, engineering about oily rags and physics about funny people that can't co-operate with others! The brilliant students here tonight would be an inspiration to any academic.'



news

ICT research director

Professor David Robey Head of the School of Modern Languages, was appointed Director (half-time) of an important new programme for ict in Arts and Humanities Research launched by the Arts and Humanities Research Board (ahrb). As Programme Director, he will lead the ahrb's effort to encourage, support and enhance the use of ict across a wide range of arts and humanities research.

Leverhulme prize

Dr David Marshall Reader in the Department of Meteorology, was awarded the £50,000 Philip Leverhulme Prize for 2002 in recognition of outstanding research in oceanography.

Dr Marshall is a leader in the field in the UK and his work is recognised on an international level. 'My research is directed towards understanding the large-scale circulation of the oceans and the role of the oceans in climate. The prize will give me the freedom to develop some innovative approaches to my research.'

Winning ideas

The newly established Certificate in Further Professional Studies in Higher Education Project Prize was awarded to **Dr Eleanor Highwood** in the Department of Meteorology, for her feasibility study project entitled 'Academic tutorials for BSc Meteorology undergraduates'. Eleanor received £1,000 to use for her further professional development.

The Certificate programme is the University's development programme for new lecturers and the prize is awarded annually for the project entry considered most likely to influence teaching and learning within the School.



Professor David Robey



Dr David Marshall



Dr Eleanor Highwood



Professor David Beever



Dr Parveen Yaqoob

Dairy science

Professor David Beever Director of the Centre for Dairy Research (cedar), was presented with the prestigious Roche National Livestock Nutrition Award for the outstanding contribution he has made to dairy science, particularly in the areas of ruminant nutrition, milk secretion and environmental pollution.

The award also recognises the immense support and encouragement he has provided to young researchers throughout his career. Professor Beever is the author of over 450 research publications and has been a leading figure in building cedar to a unit of international status.

Nutrition award

Dr Parveen Yaqoob of the School of Food Biosciences has been awarded the prestigious Silver Medal of the UK Nutrition Society. She presented her Silver Medal Lecture at the Nutrition Society's Summer Meeting at King's College, London in July, attended by nutrition scientists from across the world.

Dr Yaqoob's research examines the influence of dietary fats in health and disease, looking particularly at the anti-inflammatory effects of fish oils and the way in which they can help those with inflammatory diseases, such as arthritis and heart disease.

Cost engineering

Professor Ranko Bon and **Dr Will Hughes** of Construction Management and Engineering received awards from the Association for the Advancement of Cost Engineering - International Section for outstanding contributions to the field of construction management research through their work as editors of the international journal, *Construction Management and Economics*, the leading journal in the field.

Dr Hughes was also elected a Fellow of the rsa (Royal Society for the Encouragement of the Arts, Manufactures and Commerce).



Dr Will Hughes and Professor Ranko Bon

Honorary degrees

Professor Anthony Kelly (DSc)

Professor Kelly was the Vice Chancellor of the University of Surrey from 1975 until 1994.

Mr Tim Smit (DSc)

Chief Executive Officer and co-founder with John Nelson of the Eden Project.

Sir Dominic Cadbury (DSc)

Chairman of the Wellcome Trust since 2000.

Mr Paul Orchard-Isle (LLD)

An independent property adviser, Mr Orchard-Isle was President of the University Council from 1994 until his retirement in July 2003.

Dame Rosalyn Higgins (LLD)

Judge of the International Court of Justice since 1995.

Mr William Alexander (DSc)

Chief Executive of Thames Water plc since 1997.

War victims?

In the only joint Anglo-German venture of its kind, the University's Centre for East German Studies and the GesamtEuropäisches Studienwerk, Vlotho, held their 5th joint international conference this year. It focused on the highly controversial question: should Germans regard themselves as victims of the Second World War, as well as perpetrators?

The controversy was started by Günter Grass with his novel, *Im Krebsgang*, about the sinking of a refugee ship off Danzig in 1944 and a book by the historian Jörg Friedrich about the allied bombing campaign against

German cities at the end of the war. Psychologists from London and Phoenix, Arizona, who have specialised in the study of traumas caused by the experience of being expelled from one's homeland, and the president of the organisation in Germany representing women who were raped during the expellations, were among those who took part.

There were some very strong differences of opinion expressed, particularly between different generations of Germans, but the concluding session made it clear that this was a very fruitful conference.



English historical texts

It is unusual to have a major academic book series, published by a commercial publisher, affiliated to a particular institution. That is what has always been the case with the series *Early Modern Literature in History*. The general editor is Professor Cedric Brown, Dean and Director of Research in the Faculty of Arts and Humanities and the publisher is Palgrave/Macmillan. The series is published in association with Reading's Renaissance Texts Research Centre which is based mainly in the School of English and American Literature.

In the last fifteen months six new titles have appeared: Sarah M. Dunnigan, *Eros and poetry at the courts of Mary Queen of Scots and James VI*; Anthony Miller, *Roman triumphs and Early Modern English culture*; Sasha Roberts, *Reading Shakespeare's poems in Early Modern England*; Mark Thornton Burnett, *Constructing monsters in Shakespearean drama and Early Modern culture*; Elizabeth Heale, *Autobiography and authorship in Renaissance verse: chronicles of the self*; James Daybell (editor), *Early modern women's letter writing, 1450-1700*.

British television drama

The 'Cultures of British Television Drama, 1960-82' research project is funded by the ahrb and runs from 2002 to 2005. It involves analytical study using the resources of the bbc Written Archive in Caversham and other British television archives. Work is being done on programmes, the institutions behind British tv drama and the professional context in which drama was made.

The project links three universities: Dr Jonathan Bignell leads the project at Reading and works with a postdoctoral researcher, Dr Helen Wheatley, who studies popular genres of tv drama. Stephen Lacey at Manchester Metropolitan University supervises PhD research on regional identities in tv drama. Professor John Ellis at Royal

Holloway, University of London supervises PhD research on the professional culture of tv institutions.

The project is based in the Centre for Television Drama Studies, established at Reading in 2000. Its Director is Dr Jonathan Bignell, in the Department of Film, Theatre & Television. The Centre coordinates research projects on Television Drama, seeks funding and disseminates research. It develops links between academics, acts as a base for postgraduate research and facilitates dialogue with archives, other resource holders and practitioners. An extensive publication and conference programme is running throughout the 2002-05 period.

Hellenic studies

Greek consular leaders and the Greek Orthodox Archbishop of Thyateira and Great Britain were among those celebrating the launch of a unique new multi-disciplinary Greek research centre at the University of Reading.

The Centre for Hellenic Studies was officially launched at the University in February with a reception in the Ure Museum of Classical Archaeology, supported by the Greek Embassy.

The Centre, unique in Britain, brings together specialists from seven different Schools and Departments within the University: Archaeology, Classics, Economics, Linguistics, Modern Languages, Philosophy and Sociology. The result is teaching and research in a rich range of subjects including language, literature, history, archaeology, philosophy, religion and art. Its chronological range spans from Prehistoric times to the present.



A bug's life



This year the University hosted the International Entomology Symposium on Insect Evolutionary Ecology. Speakers from all over the world joined the UK's most eminent entomologists to discuss topics such as sexually transmitted infections in ladybird beetles, mating fights between male fig wasps and sperm competition in butterflies. Drs Mark Fellowes, Graham Holloway and Amanda Callaghan from the School of Animal and Microbial Sciences were the main convenors of the symposium.



Students from The University of Reading have discovered an impressive 199 different species of spider within a ten kilometre radius of the University campus as part of their Biology of Spiders course taught by Dr Steve Hopkin. Dr Hopkin's course is unique in British universities and very popular with undergraduates who, in addition to attending lectures on spider ecology, anatomy and behaviour, are trained to prepare collections of spiders to add to the Natural History Museum collection.



Livestock movement

A team from Veterinary Epidemiology and Economics Research Unit (veeru) led by Dr Tony Willsmore carried out a study to inform government legislation on livestock movement restrictions.

As a result, in July the government announced that the six-day livestock movements regime which had been in place in response to the foot-and-mouth outbreak would become permanent the following month.

The decision was based on the findings of the cost benefit analysis of

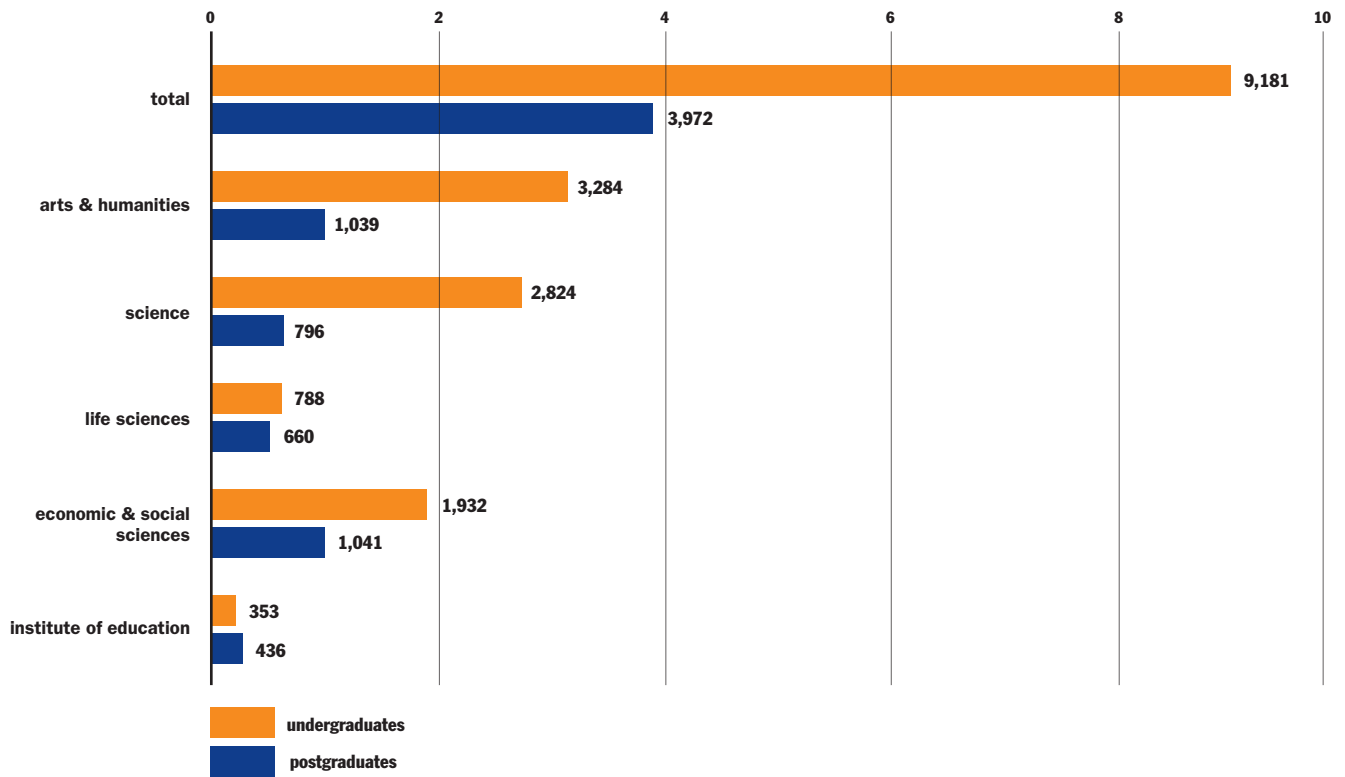
animal movement standstills. The studies were commissioned in response to the recommendations made in July 2002 by the Lessons Learned and Royal Society Inquiries and have been carried out for defra by Risk Solutions and veeru.

Dr Willsmore lectures on MSc courses in Veterinary Epidemiology and Livestock Economics and supervises PhD studies in the epidemiology of livestock diseases, their economic effects and the design of programmes for their control.

facts & figures



student numbers 02–03



research grants and contracts

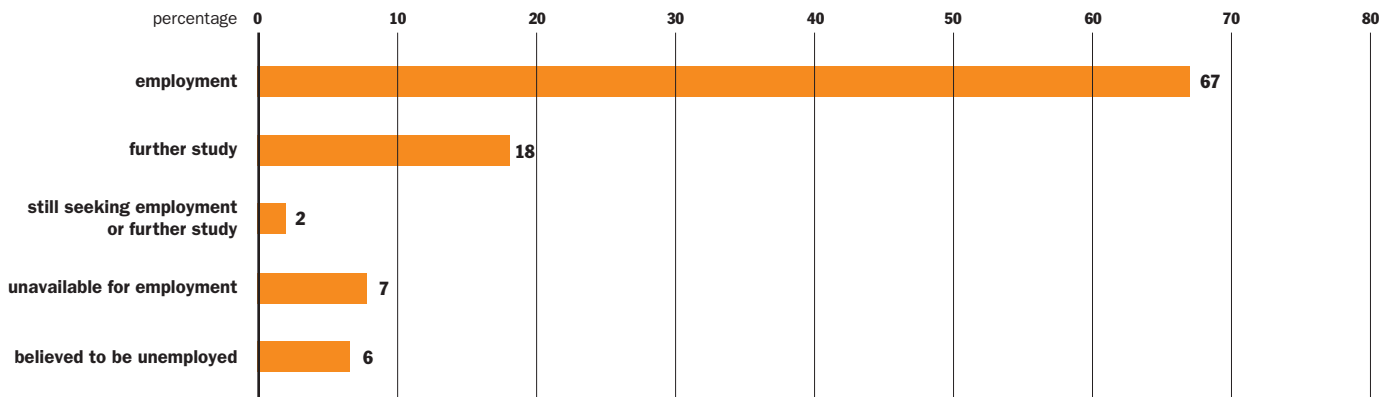
from research councils, industry, EU, and other sponsors



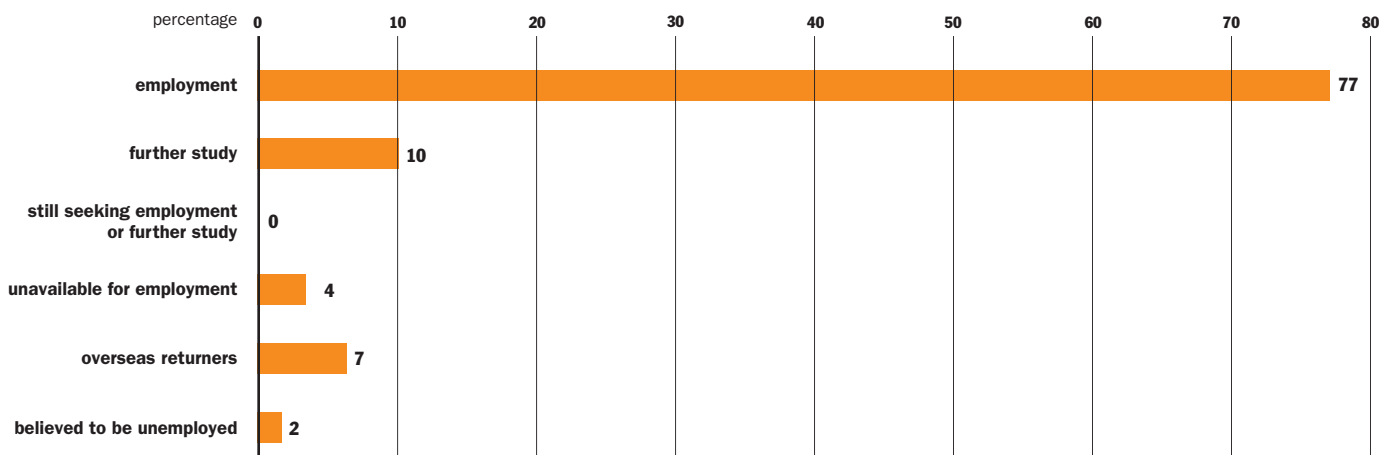
careers information

first destination of 2002 graduates at 3 January 2003

first degree



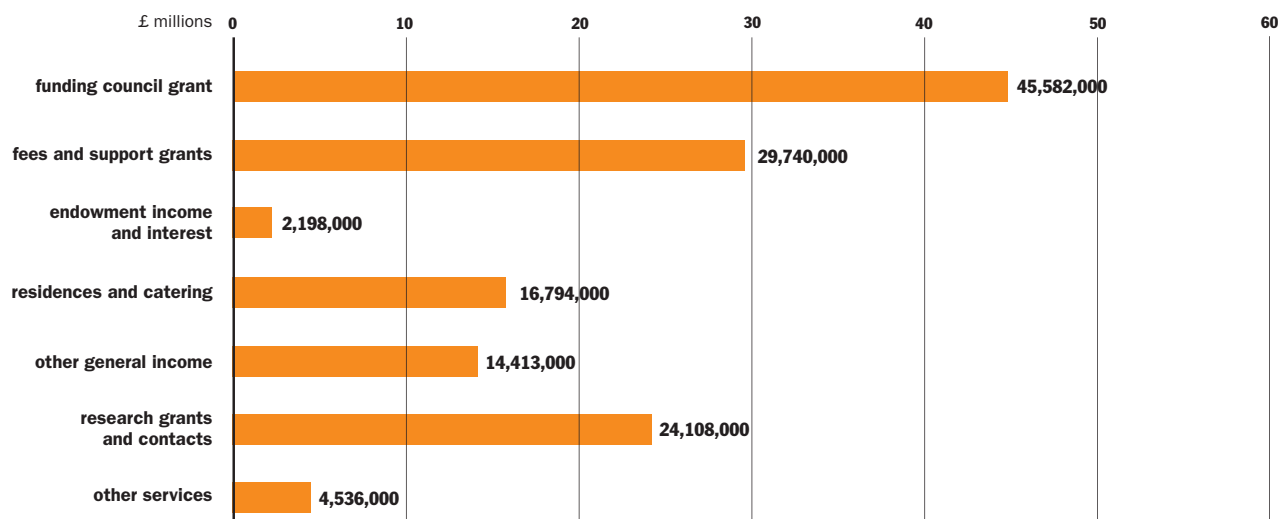
higher degree



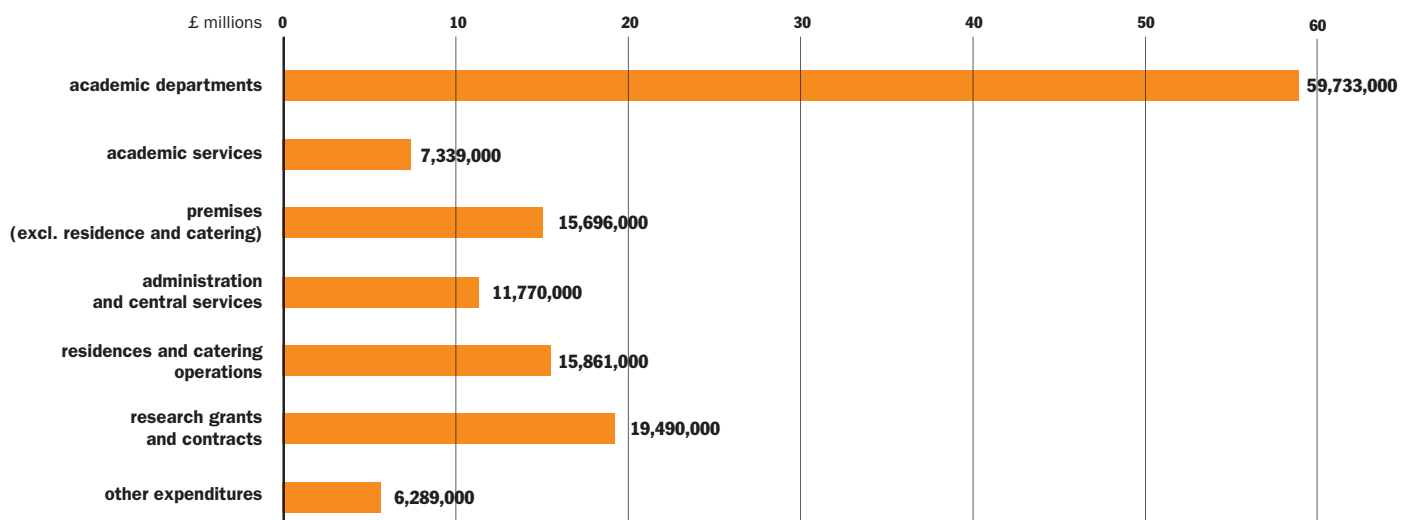
financial summary

from the consolidated financial statements
for the year ended 31 July 2003

income total: £137,371,000



expenditure total: £136,178,000



Visitor

Her Majesty the Queen

Officers of the University as at 2002–03

Chancellor

The Right Hon the Lord Carrington,
KG, GCMG, CH, MC, PC

Vice-Chancellor

Professor R.G. Marshall, BA, Stirling;
DPhil, Oxford; CBE, FBA

President of the Council

P.D. Orchard-Lisle, CBE, TD, DL; MA; FRICS

Vice-President of the Council

G.P. Botting, BSc, PhD

Treasurer

D. Luffrum, CPFA

Pro-Vice-Chancellors

Professor T.A. Downes, BA, BCL, Oxford
Professor M.G. Fulford, BA, PhD, Southampton;
FBA, FSA
Professor P.J. Gregory, BSc, Reading;
PhD, Nottingham; CBiol, FIBiol

Deans of the Faculties

Arts and Humanities

Professor C.C. Brown, BA, PhD, Reading

Economic and Social Sciences

Professor D.C. Berry, BSc, CNAA; DPhil, Oxford;
CPsychol, AFBPsS

Life Sciences

Professor, R.L. Robson, BA, York; PhD, Wales

Science

Professor D.A. Rice, BSc, Hull; PhD, DSc, Exeter;
CChem; FSRC

Registrar and Tutorial Secretary

D.C.R Frampton, MA, St Andrews; FRSA

Director of Information Services

A.E. Haworth, MA, Oxford; Diploma in
Computer Science, Cambridge; FBCS, FRSA

Director of Finance

D.C.L. Savage, BA, London; FCCA

Director of Facilities Management

P.A. Hackett, BArch, Dublin; RIBA

Auditors

KPMG LLP