The University celebrates its tenth anniversary

Above left, centre and right: ‘Town and gown’ mark ten years of university status with a procession in the High Street.

Right, top to bottom: Sidney Rich addresses the tenth anniversary dinner.

Lord Robens, the Lord Lieutenant of Surrey, HRH The Duke of Kent and Professor Anthony Kelly pictured at the tenth anniversary dinner.

The Vice-Chancellor, Professor Anthony Kelly, in conversation with Chancellor-elect, HRH The Duke of Kent, at the tenth anniversary dinner.

Far right: The Chancellor, HRH The Duke of Kent, confers the award of Doctor of the University upon Sir George Edwards in 1979.
In October 1975 the University of Surrey welcomed its second Vice-Chancellor, Professor Anthony Kelly. Tony Kelly brought very different qualities to the post from those of Peter Leggett, his predecessor, as was intended. More than any other person, Peter Leggett had created the University, transferring it from Battersea to the new campus at Guildford and introducing new subjects outside the original scientific and engineering base. However, institutions mature slowly and, now that the excitement of the pioneering years had waned, the University remained rather apprehensive about its new status. Tony Kelly recalls being surprised at the University’s lack of self-esteem:

*I realised that the University did not feel itself as established as it should have been, nor as confident, despite the good work being done in many departments. On the whole the old Polytechnic culture still prevailed, with many staff concentrating purely on teaching, and not being engaged in research.*

Peter Beardsley, now the University’s Academic Registrar, supports this judgement: ‘Many staff had a strong belief in professional and vocational education, and a strong attachment to teaching and to their subjects and departments.’

Tony Kelly’s brief was to expand the University’s research activities and thereby to enhance its academic status and reputation. His rather unconventional career made him especially well placed to tackle this task at a University that prided itself on its links with the ‘real world’ of industry and commerce. A distinguished materials scientist – he had been elected a Fellow of the Royal Society in 1973 at the young age of forty-four – he had taught in the USA, Germany and Cambridge before joining the National Physical Laboratory, the UK’s oldest and largest civil scientific research establishment, where he became Deputy Director. At the time of his appointment as Vice-Chancellor, he was seconded to the Research and Development Department of ICI, where he was studying industrial management.
These were difficult years for expansion, and indeed for any form of strategic planning. Inflation was high, and the government's economic difficulties led to reductions in the number of university places it was prepared to fund. During Tony Kelly’s first year in post (1975/76), the University Grants Committee (UGC) suggested that the University should plan for some 4,000 full-time undergraduates by the year 1981/82 – a one-third increase – while two years later the UGC proposed 3,500 full-time undergraduates. However, the actual total during the late 1970s remained static at around 2,900. More important, perhaps, the UGC retained a stranglehold over university finances. As Tony Kelly recalls,

*There was very little room for initiative. When I arrived, research income was just over £500,000, a relatively insignificant sum in relation to the University's overall budget. There was hardly any freedom to manoeuvre - you had to go to the UGC for everything you wanted to do. In fact the UGC told you what to do, even though they wrapped it up politely in that nice way the English have.*

The late 1970s were years of deliberate consolidation in which resources were concentrated, as the 1977/78 Annual Report put it, ‘on the many things we do very well indeed in scholarship and research’. During its visit two years earlier, the UGC had found numerous aspects of the University to praise. These included the industrial/professional year, the University’s ‘evident commitment to industrial alignment’ and also to further education, and the ‘close identification’ the students felt with the University.

Notable developments at this time included the start of the University’s first degree course in nursing studies, which formed part of a gradual expansion of the University’s teaching in the biological sciences; the extension of the Department of Electronic and Electrical Engineering’s ion implantation service to become a national facility; and an honours degree in engineering, which combined the study of engineering with business and industrial management.

In 1978 a new Institute of Industrial and Environmental Health and Safety (later renamed the Robens Institute in honour of the University’s first Chancellor) was formed to develop the University’s special interests in these fields. The Institute’s remit included research, training and public education; it was strengthened by merging with the University’s Wolfson Bioanalytical Centre. Funding for the Institute came from the University’s Tenth Anniversary Appeal, which, in contrast with the original Foundation Appeal, was directed largely at academic development. By 1979 some £1.25 million had been raised. Guildford Borough Council and Surrey County Council again made generous donations, and Lord Robens led approaches to companies and charitable foundations.

On campus, Guildford Court, the sixth residential court, was completed in late 1975. Now the University could accommodate 1,887 students on campus, about three-quarters of the total number studying on site. Five years later the Quiet Centre was opened; funded by an anonymous benefactor, it was designed to provide any member of the University with a space for contemplation and reflection.

Social and sporting life flourished, stimulated by new sabbatical posts for Union Sports and Arts Secretaries. In 1975/76 there were 109 student societies, compared with
only 61 seven years before. The International Week and the Free Arts Festival remained popular events in the annual calendar, and in 1981 the Charter Ball was held once again, after a four-year break: ‘the social event of the year’, claimed the Annual Report of the Students’ Union.

A survey in 1975 revealed that a full two-thirds of Surrey students took part in sporting activities at the University. This impressive total was the result of concerted efforts to present a broad programme of activities – fitness classes, dance workshops, courses in a wide range of sports – designed to promote physical well-being. Hundreds of students joined in the informal Sunday afternoon competitions between the courts of residence. The University’s sports facilities, partly funded by gifts made by Philip Henman, a former High Sheriff of Surrey, during the original Foundation Appeal, were also used intensively by local schools. In 1980/81, for example, 340 ‘certificates of competence’ were awarded to local schoolchildren, and over 40 pupils gained national governing body awards. Individual University sports clubs (there were 42 in 1980/81) catered for the more talented students. That year 29 teams entered University Athletic Union championships; the women finished in 13th place overall, the men in 17th, from over 40 universities. In addition hockey, riding, flying and cross-country teams all performed well in university championships, and several sports clubs enjoyed overseas tours.

An expanding range of arts activities continued to attract local people to the campus and to contribute to student life. Workshops in painting and pottery enabled students and staff alike to develop their creative side. There were regular exhibitions, lunchtime and evening theatre, concerts, lectures and poetry readings. The first Literary Week, in 1981, which brought celebrated writers and critics to Guildford, proved an immediate success.

This was also an unusually political period in campus life. In March 1977 students occupied part of Senate House for two weeks in protest at the Government’s large and sudden increase in tuition fees, due to take effect the following autumn. Although most UK students were not affected (since their fees were paid by local authorities), self-financing students and overseas students were, and feelings ran high in universities throughout Britain. At Surrey, the University had already agreed to provide financial help during the first year of the increase, and the Vice-Chancellor wrote to the Prime Minister on behalf of Senate to protest at the increase. Wider political issues, such as disarmament and unemployment, also made an impact in union debates and political societies.

Lord Robens, the University’s first Chancellor, relinquished his office on 15 January 1977. He had made a substantial contribution to shaping the University, and in particular to its emphasis on scientific and technological expertise in combination with an understanding of human relations. Tony Kelly wrote that Lord Robens took ‘a deep interest in all aspects of the University, spanning people, buildings and activities’. Lord Robens’ successor was His Royal Highness The Duke of Kent, whose Installation Ceremony took place in the Cathedral on 26 January. The Duke had already visited the University, and there was a clear convergence between the University’s close links with industry and his special interest in promoting British exports. Sir George Edwards continued to serve as Pro-Chancellor until his retirement in 1979; the industrialist Sir Monty Finniston was appointed as second Pro-Chancellor in 1977.
My Time at Surrey...

Alison Pring

German and French with Urban and Regional Studies, 1979–1983

I grew up in a village and attended the local school. I wanted to study the subjects I enjoyed at a modern, campus-based university. My A-levels were a little disappointing, but Surrey still took me. Surrey gave me a chance, brought me life-long friends, and pointed me towards a career in the Foreign and Commonwealth Office.

I remember the first day vividly. My parents drove me up. One case and a couple of bags – these days it’s a whole furniture van. Mum insisted on buying me a Danish pastry ring to share with all my new friends. I was so happy to be able to escape my brother’s obsession with Elvis Costello, only to discover that my new downstairs neighbour was Elvis’s next biggest fan. Home from home!

Surrey was a huge but safe, exciting, cosmopolitan ‘city’. I had a cheque book and felt like a millionaire. The fourth-year LIS students seemed so grown-up and sophisticated. Some lecturers seemed eccentric, others became objects of desire! I never felt homesick and I don’t actually remember feeling unhappy. I suppose I missed sofas and Sunday roast, but that was about it.

The highlights? LIS revues, fancy dress parties and free discos. Other lasting memories: keep-fit (aerobics hadn’t yet been ‘invented’), my first ski trip, PR for University Radio Surrey, Stammtisch (language conversation evenings), ballroom dancing (I’m now a salsa addict) and the occasional silver service lunch.

LIS placements in Lyon, Vienna, Hamburg proved great training for my FCO postings: Belgium, Venezuela, Russia and now Switzerland, where German and French are essential tools of the trade. My urban and regional studies have come in handy too.

I remember feeling sorry for non-LIS friends whose degree results really did depend on their final exams. We were already about 50 per cent done when we sat our last papers. Our final few weeks at Surrey were dedicated to sun-bathing, sport and parties. Then it was graduation and out into the real world.

There are several LIS graduates in the FCO. I’ve worked directly with two of them and indirectly with another, and I’ve come across other Surrey-ites in my travels. I’ve been back to Surrey a couple of times. It’s bigger now, more sophisticated and business-oriented, but it’s basically still the same place.

Surrey was exactly right for me. If I had the chance, I’d definitely do it all over again.

Alison Pring is currently Deputy Director, Trade and Investment, at the British Embassy in Berne.
Cuts

By the early 1980s universities had lived through several years of cuts in central government funding. Although funding restrictions had started during the 1974–79 Labour Government, the Conservative election victory in 1979 worsened the climate for universities. Mrs Thatcher appeared hostile to the academic world. In his biography One of Us, the political commentator Hugo Young wrote of the Prime Minister that ‘her way of talking rarely offered the reassurance that she had any deep sympathy with what universities thought they were about.’ The economic climate was increasingly unfavourable; inflation, unemployment and the exchange rate were all rising sharply in what was Britain’s worst-ever post-war slump. In his budget in March 1981 Geoffrey Howe, the Chancellor of the Exchequer, took decisive action, cutting public expenditure by £3.5 billion and increasing direct and indirect taxation.

It was self-evident that universities would not escape the economic squeeze. But what happened was much worse than expected. As Tony Kelly recalls: ‘The cuts the UGC imposed were far more extensive and far more damaging than any of us had foreseen – and far greater than the UGC had led us to believe would be the case.’ The UGC issued its ‘guidance’ in July 1981. The annual recurrent grant (which represented the University’s principal source of funding) for 1981/82 (i.e. for the academic year about to begin) was to fall by 13 per cent, and to fall further to an overall decrease of 25 per cent by 1983/84. Numbers of undergraduates were to fall by 14 per cent (from 2,880 to 2,470) by 1983/84; the humanities and social sciences were to lose most (a reduction from 860 to 620 – 28 per cent), while numbers in science and engineering would decline from 2,020 to 1,850 (8 per cent). The extent of the cuts was made still worse by their immediacy; forward financial planning was impossible - they would start to take effect in just three months.

The shock was huge, and was felt as much at a personal as at a professional level. Even twenty years later the pain surfaces quickly. Tony Kelly felt ‘deeply hurt’; David Pollard recalls that ‘the optimism that was still present in the University evaporated’; Ken Stephens describes the cuts as a ‘real blow - a traumatic event’. There was genuine anger as well, for it soon became clear that the UGC had been highly selective in its cuts and that the former Colleges of Advanced Technology were to suffer far more than the traditional universities. This made the blow even more bitter. The ex-CATs felt that their orientation towards the world of work and wealth creation should have set them apart from the ‘ivory-tower’ institutions so disliked by Mrs Thatcher.

The UGC’s guidance took the form of two letters: a general one to all vice-chancellors, and a second to each individual vice-chancellor with specific recommendations for that institution. The general letter stated that, across the university system as a whole, ‘the reduction in student numbers by 1983/84 is expected to be in the range 3 to 5%... As to the unit of resource [the basis for the annual recurrent grant]... the Committee envisages a worsening of about 10%.’ The extent of the damage to the University of Surrey only became clear in the second letter, which set out the precise reductions in student numbers quoted above. According to Peter Beardsley,
The letter from the University Grants Committee ‘recommending’ cuts in courses and student numbers at the University.

SURREY.

3. The Committee's advice on particular subject areas is as follows:

ARTS

The Committee recommends a significant decrease in student numbers in Arts and Social Studies. It invites the University to consider discontinuing Philosophy.

SCIENCE

The Committee recommends that intakes to Nursing and Nutrition should be maintained at their present levels. It recommends a decrease in the number of students specialising in the Mathematical Sciences and a significant decrease in numbers in Biological Sciences.

4. The Committee would wish to discuss with the University the future provision of Arts-based subjects and of courses in Human Biology.

Yours sincerely,

Edward Parkes

Edward Parkes.
Understanding the Real World

Student life in the 1970s
It appeared that the UGC had made a rather facile judgement about the quality of the University’s intake. We added a good deal of value – we accepted students with relatively modest ‘A’ levels who, when they left Guildford, were highly employable. We had thought that this was what the UGC and the government wanted – and so the cuts were a massive blow to our self-confidence.

Michael Shattock, historian of higher education, supports this view in his book *The UGC and the Management of British Universities*. The former CATs, he wrote, 

...[suffered] more severely from the cuts than any other group of universities... The... allocations of grants to universities showed that the UGC had been highly selective in its approach... [which] overall... varied from 42 per cent to 2 per cent between institutions.

Despite the scale of the cuts, Surrey was not the worst affected of the former CATs – Aston, Bradford and Salford (all in areas of much greater unemployment than Guildford) each had their grant reduced by more than 30 per cent over three years. However, the University was hit hard by the UGC’s requirement for a ‘significant decrease’ in student numbers in arts and social sciences in order to fulfil the national strategy of expanding the sciences at the expense of the humanities and social sciences. These relatively new disciplines at Surrey still had comparatively small numbers of students, and so suffered correspondingly more. There was also considerable resentment that the UGC had failed to take into account that these subjects had been developed at Surrey with a business and professional focus, and that more established universities, where the curriculum followed a more traditional, theoretical approach, were to suffer far less.

There was no choice but to implement the cuts. The UGC did agree that the University could spread the reduction in student numbers over four rather than three years because of the industrial/professional year, but it refused to make any other concessions. Tony Kelly, accompanied by senior colleagues, visited the UGC in November 1981 to argue that the reductions in student numbers were ‘unreasonable even by the criteria of the UGC’s general letter of 1 July’; their trip to London was fruitless. Tony Kelly also tried to persuade fellow vice-chancellors to join some form of combined protest, but this initiative came to nothing.

To begin with, there was some hope that ‘equal misery for all’ would be enough to implement the cuts – in other words, all departments would suffer equally in an attempt to preserve courses and save jobs. Influential figures such as Jerry Leonard, the University’s Treasurer, and Sir Richard Meyjes, a former director of Shell International who was one year into his six-year stint as Chairman of Council, strongly opposed the idea, and it soon became clear that this solution would not work. The cuts required were too extensive, and in any case the UGC had made a series of more or less mandatory recommendations relating to specific subject areas. These included inviting the University to ‘consider discontinuing Philosophy’ and recommending a ‘significant decrease in [student] numbers in Biological Sciences’. The UGC also stated that it ‘would wish to discuss with the University the future provision of... courses in Human Biology’. Perhaps most important of all, ‘equal misery for all’ would damage the University’s
strongest and most successful subject areas – the very ones it needed in order to strengthen and maintain its academic reputation.

The main work of implementing the cuts was done by the Academic Policy Group, and in particular by its Chairman, Professor Otto Pick (no relation to the author), who had recently been appointed Pro-Vice Chancellor (see page 63). He was ably supported by Leonard Kail, also relatively new in his post as University Secretary, and by Jerry Leonard and Sir Richard Meyjes, who in turn obtained the strong backing of Council. Tony Kelly deliberately stood back: ‘Otto Pick persuaded me that there had to be a senior figure in the University whose role was to listen, and to be a sort of long stop.’

Otto Pick was already liked and respected throughout the University, and his reputation grew during what was a long and painful process for everyone. Hard decisions had to be made; many people lost their jobs, although there were no compulsory redundancies; courses and departments were closed; and spending restrictions were imposed across the University. But, with the benefit of hindsight, the general view is that people were treated equitably: in the words of physicist Alf Adams, ‘I don’t remember anyone from the Physics Department having a really bad time, or being unfairly treated.’ This was largely the result of Otto Pick’s collaborative and sensitive approach and his determination to find the best solutions for the University as a whole. He also took care to keep in close contact with the Students’ Union and as far as possible to limit any adverse impact on its facilities and on students generally.

The University was compelled to close three departments: Philosophy, Human Biology, and Home Economics. The first two closures were in line with the UGC’s recommendations. Nursing students from Human Biology were transferred to Biochemistry, again following the UGC’s recommendation that ‘intakes to Nursing and Nutrition should be maintained at their present levels.’ The third closure, Home Economics, aroused the greatest controversy. The Department had a high reputation, and its students had no difficulty getting good jobs; the undergraduate course was the only one of its kind in the UK. The difficulty the University faced was to achieve the required reductions in student numbers in arts and social sciences. Every other possible alternative would have had an even more far-reaching and damaging impact on the University. The decision was debated over several months, and it created considerable, and understandable, ill-feeling.

General Studies – an important part of the original ethos of Battersea and Surrey – were also sacrificed, in that they were no longer to be a compulsory part of undergraduate studies. The ‘elective studies’ offered as a replacement did not survive beyond the early 1990s, as undergraduates became increasingly reluctant to spend time on courses not linked to their specialist subjects and their employment prospects. (Interestingly Patrick Dowling, the present Vice-Chancellor, sees a case for re-introducing some form of general studies in the longer term, if universities are to fulfil their obligation to equip students for life.) In addition thirteen courses were closed, many of them pioneering combined honours courses such as metallurgy and materials technology, chemistry or chemical physics with French, German and regional studies: all these had
been designed to enhance scientific or technological studies with an understanding of the language, economy and society of the UK’s principal European trading partners.

Closures aside, every area of the University’s activity faced severe spending restrictions and considerable restructuring. In all, 289 jobs were lost across the academic, administrative and support areas, fortunately without any compulsory redundancies, partly as a result of the decision to use the University’s slender reserves to ease the difficulties; some staff took early retirement, others moved to new roles within the University. The experience of the Department of Metallurgy and Materials Technology, as reported in the University’s Annual Report for 1981/82, illustrates the extent of the changes:

"Despite the undoubted high technology record of the Department, we have been presented with the need for restructuring following a major reduction in academic staff (1 in 4) and support staff (1 in 3). Staff changes are being met by a mixture of voluntary early retirement, natural wastage and transfer of personnel to contract positions, or placements in other areas of work in the University. The Department has therefore been spared any personal bitterness, and can continue to look forward with its corporate spirit intact."

This last sentence is crucial. A major setback always tests an organisation. Despite inevitable friction and personal and professional disappointment, the University’s staff showed enormous loyalty and understanding. Otto Pick should have the last word:

"Given the gravity of the situation and the prospect of unmitigated personal and/or institutional adversity, most people behaved extraordinarily well. I was surprised at the time and am still very pleasantly surprised in retrospect."

The Research Park

Even while the University was confronting the biggest crisis of its short life, plans were being made for a new venture that would transform both its finances and its academic standing. It is no exaggeration to say that the Surrey Research Park has been the single most important factor in the development of the University from the mid-1980s onwards. It has also been a significant factor in Guildford’s development as the south-east region’s economic and technological capital.

The Surrey Research Park became a gleam in Tony Kelly’s eye – a small gleam initially, but one that soon acquired increasing luminosity – as early as 1977, when he made a short visit to Switzerland. He returned there two years later:

"I was granted study leave to spend much of the long summer vacation working in the research laboratories of Atlas Copco, a high-technology company that designed and manufactured compressed-air and mining equipment. The labs stood in an attractive park. There were researchers from all over the world, which brought a real international culture to the place. I remember thinking, Guildford is a pleasant place too, where people enjoy living, and it has good communications. And we, the University, have land to spare. So why don’t we build a university research park?"
The Surrey Research Park
The concept – a dedicated zone where industry could carry out scientific and technological research, development and design activities in association with the University’s academic experts – was a novel one. Cambridge had established its Science Park in the late 1960s, but that was the only parallel operation in the UK: all the more reason to seize the opportunity in Guildford. Developments in information technology also made the time right. Low-cost computing was now beginning to free scientists and engineers from the need to access large amounts of capital for mainframe computing. Research and development were no longer the exclusive preserve of large companies; innovation was within the reach of smaller companies, often the brainchild of one inventive mind.

In the University the idea was driven forward by Tony Kelly, Leonard Kail, Jerry Leonard and John Humphries, a property lawyer who subsequently became Vice-Chairman of Council and the leading member of its Research Park Sub-Committee; his diplomacy and legal expertise proved crucial. The fifth significant figure was Eric Twyford, Chief Executive of Guildford Borough Council until his retirement in 1984. John Humphries describes him as a ‘tower of strength’:

He had already realised how important the University was to the town, and did not take long to be convinced of the potential benefits of the Research Park in terms of bringing additional money and additional jobs to the town. He also realised that Guildford’s future prosperity would depend on high-tech companies rather than manufacturing – what nowadays we would call the knowledge-based industries.

The long-term benefits for the University also promised to be considerable. The companies based on the Research Park would play a pivotal role in commercialising new scientific and technological ideas and applications developed by academics on campus. In addition, the Research Park would provide the University with an independent source of funds, not subject to the vagaries of government expenditure policies, and which could be used to develop scholarship as the University itself thought fit. As well as working in an attractive and well-managed environment, the big advantage for the tenant companies was easy access to the University’s collective knowledge and expertise.

The Borough Council was quite properly very cautious. The site identified for the Research Park, on the University’s land at Manor Farm, was valuable green space. There was concern that the Research Park should remain research-based and that manufacturing should not find its way onto it, and also that the University should not be able to relinquish control of the Park. Discussions began in May 1980, and outline planning permission was granted in 1983, subject to a restriction limiting use to ‘research, development and design activities, in any science, including social sciences, that is complementary to the activities of the University of Surrey’.

Malcolm Parry, who moved from his academic post in the Home Economics Department to become the Research Park’s Director in 1982, was charged with turning the idea into reality. He identified three main user categories: science-based and information technology start-up and spin-out companies (i.e. small, specialist parts of larger companies) carrying out research, development and design engineering; medium-sized
Left: Leonard Kail (centre left), Professor Anthony Kelly (centre right), Malcolm Parry (behind Professor Kelly) and staff celebrate the signing of the contract which brought BOC to the Research Park.

Above: The Associated Examining Board (now AQA) Building on the campus.

Far left: Tony Kelly takes a helicopter to visit the Cambridge Research Park.

Left: The Research Park restaurant.
companies and larger research facilities of multi-site companies; and the specialist research headquarters and laboratories of larger companies based either abroad or elsewhere in the UK. He also assessed the influence that the personal computer would have on science and technology businesses. Computer-based technology would be used; very little demand for specialist laboratories was predicted. The Research Park was therefore planned in three zones, with buildings suitable for small and medium-sized companies and for large headquarters and research facilities. An 'Incubator Centre' (now the Surrey Technology Centre, known as the Anthony Kelly Development) was also planned; small companies could start here and then graduate to larger units.

This plan has been implemented without significant change. But before work could start, there remained one important hurdle: finance. The University had paid for the initial development work from the Foundation Fund, but that source could never provide enough to underpin what would be a major development. The solution arrived quite unexpectedly. The Associated Examining Board (now the Assessment and Qualifications Alliance, AQA) wanted to relocate to the University campus; there was a natural synergy with the University’s activities, and the Board was also eager to make use of the University’s library and conference facilities. The University sold a long leasehold interest in a small area of Stag Hill, sufficient for a single building, for £1.23 million, and used the proceeds to install and develop the initial roads and service infrastructure for the Research Park. In addition Trust House Forte leased University land to construct a hotel next to the A3.

These developments underway, all that remained was to find the all-important initial tenants. Malcolm Parry recalls what happened:

The University reviewed its research strengths, and decided that its expertise in chemical and process engineering, and also in computing, would be most likely to attract companies to relocate to the Research Park. We had brochures printed, and embarked on a focused marketing campaign. I did a good deal of cold-calling to start with, but that wasn’t a problem. I never doubted that Surrey’s buoyant economy, its proximity to London and the two major airports, and the links with the University would prove attractive. Another important factor was the environment of the Research Park itself. Right from the start we were determined to make it an exceptionally pleasant place to work.

Persistence was rewarded. BOC (formerly British Oxygen) took a prominent site near the entrance (now the Priestley Building, named after Joseph Priestley, who identified oxygen) for its UK headquarters and technical centre. Ultimately some 250 senior technical, scientific, engineering and executive staff worked there, directing all the company’s research and development operations. Securing this anchor tenant was crucial in attracting other companies. It also enabled the University to fund the first phase of speculative buildings, known as Chancellor Court; all five units were let ‘off plans’, i.e. before the buildings were complete.

The first tenants arrived in 1985. The following year, when The Surrey Technology Centre business incubator opened, there were sixteen companies on the Park (five of which
had evolved from within the University), involved in computing, electronics, biotechnology, chemicals and process engineering. The course was now set for expansion. As each new development was occupied, the rental income was used to fund further construction and the development of new facilities at the University. By 1989 sixty-five companies were based on the Research Park, and expansion has been consistent throughout the 1990s.

The satellite revolution

In 1970 a young student named Martin Sweeting joined the University to study electronics. His arrival was something of an accident:

> I had already accepted a place at UMIST [University of Manchester Institute of Science and Technology]. But one day I went to visit a friend who lived near Guildford, and we wandered on to the new campus just to see what it looked like. I was already fascinated by communications technology, and had started to build my own radio equipment several years earlier. The Apollo moon landings the previous year focused my interest on space. So naturally we headed for the Electronic Engineering Department. Here, quite by chance, we got talking to Professor Lovering, the Head of Department, and when he discovered my interest in radio he persuaded me to switch to Surrey.

The rest, as they say, is history - both for Martin Sweeting himself and for the University. As a student, Martin spent a lot of time with colleagues building up the University’s amateur radio society. During his final year he started to track American and Russian weather satellites and the OSCAR series of amateur radio satellites using inexpensive, often home-built, equipment. Next he built a simple satellite command station for a series of amateur radio satellites. From these insignificant and barely noticed beginnings developed more than a quarter of a century’s pioneering work on small satellites. Today Professor Sir Martin Sweeting FRS (he was elected a Fellow of the Royal Society in 2000 and received a knighthood in the 2002 New Year’s Honours List) is one of the world’s leading experts in small satellite technology; the Surrey Space Centre has established itself as the international centre of excellence in academic research, teaching and commercial applications for small satellites; and Surrey Satellite Technology Ltd (SSTL), the University company formed to develop the small satellite programme, is at the leading edge of the design, manufacture and operation of commercial small satellite missions.

The launch of the world’s first satellite in 1957 inaugurated the ‘space race’, and for many years space was the preserve of the wealthiest nations and international agencies. The satellites themselves, with their increasingly complex and costly technology, took many years to progress from concept to orbit. By the 1970s and 1980s, conventional large-scale technology was failing to keep up with the staggering advances in low-power microelectronics that were largely stimulated by the increasingly sophisticated demands of consumer and industrial markets. These advances, together with diminishing budgets for space research and operations, opened the way to an entirely new breed of small-scale satellites pioneered at the University of Surrey.
**Below:** Martin Sweeting (front row, second from left) in his student days.

**Bottom left:** UoSAT-1, the University’s first satellite, launched in 1981.

**Right:** S80/T microsatellite built for the French Space Agency.

**Bottom right:** The first mission control centre, with Martin Sweeting on the right.
The emergence of integrated circuits and elementary microprocessors convinced Martin Sweeting that a very small, yet relatively sophisticated satellite could be constructed at a fraction of the cost of conventional satellites. His initial proposals met considerable, albeit tolerant, scepticism. Ken Stephens, Acting Head of the Department at the time, remembers:

Here was this enthusiastic young man wanting to build a satellite. In those days satellites seemed remote from anything we could do at the University. But Martin was convincing, and I gave him six months to see if he could find the money.

He succeeded in just three months – to the tune of some £220,000, almost half of which was in kind. The University provided a small laboratory. A clean room was built during a single weekend from DIY materials: a filtered domestic kitchen fan, for instance, kept the polythene roof under pressure and the dust out of the planned satellite. Other people who provided encouragement in the early days were Anthony Kelly, who agreed to the project on behalf of the University, and Quinn Davis, Reader in Electrical Engineering, who supervised Martin Sweeting’s PhD.

In January 1979 a team of five Surrey students and half a dozen academics and technicians started to design the first satellite, UoSAT-1, working very much on a spare-time basis. They had only the vaguest inkling of just how important UoSAT-1 would prove. That year’s Annual Report described the satellite as ‘of predominantly amateur interest… It is hoped that the project will stimulate great interest in space technology amongst students and schoolchildren.’ UoSAT-1 was launched in October 1981, piggybacking free of charge on a larger NASA mission, and it stayed in operation, on a 550 km polar low Earth orbit, for eight years. Operating it was demanding: to begin with someone slept each night under the consoles, waking every few hours to send commands to the spacecraft. There was great interest and enthusiasm throughout the University at the time of the launch. Sylvia Tyler, who worked in the Public Relations Department, has vivid memories:

Lots of people went over to the Lecture Theatre Block where there was a sound link from the command station in the Electrical Engineering Department. Martin Sweeting was over in the USA at the launch, and he gave us a commentary. The countdown was really exciting. We could hear 10, 9, 8 and so on very clearly.

In 1984 NASA offered the University a second launch, and in just six months UoSAT-2 was designed, built and tested; it cost £450,000. Still operational eighteen years later, UoSAT-2 was the first satellite to provide modern digital store-and-forward (i.e. email) communications with the use of on-board microprocessors and memories.

By the mid-1980s the UoSAT-1 and -2 microsatellite missions had achieved two things. They had proved that a small university team could design, build, test, launch and operate a viable microsatellite cheaply and efficiently, and they had demonstrated that microsatellites can carry out a wide range of missions in space as effectively as their larger and more costly counterparts.
Understanding the Real World

Campus in the 1980s

Above: Battersea Court.

Right: The Geodesic Dome built in 1984 to mark the third International Space Structures Conference.

Below: The Varsity Centre on the University’s playing fields.

Top: The Quiet Centre, funded by an anonymous donor and inaugurated in 1980.

Above: Cutting the first turf for the BBC Radio Surrey building (now Southern Counties Radio).

Below: An architect’s visualisation of the Performing Arts Building, opened in March 1988.
However, there was no obvious way of funding future developments – government money would certainly not be forthcoming. The answer was a wholly-owned University company: an unusual venture for the time. SSTL was formed in 1985 to exploit the growing commercial demand for small-scale satellites and associated technology, such as ground-station and orbital operations and subsystems for other satellite missions. With the launch of UoSAT-5 in 1991 came the first of SSTL’s commercial customers, including CNES (the French Space Agency) and SatelLife for the HealthNet programme, which takes medical information to where it is most needed: developing countries with no reliable, accessible computer networks. At the same time SSTL launched technology-transfer and training programmes for emerging nations across the world. (SSTL built the UoSAT-5 HealthNet transponder for SatelLife, a non-profit organisation founded by Dr Bernard Lown, who won the 1985 Nobel Peace Prize. HealthNet on UoSAT-5 was the first step towards a non-profit global electronic mail network for health professionals. Initially, five African medical schools in Zimbabwe, Kenya, Zambia, Tanzania and Uganda used the HealthNet transponder to exchange electronic mail and receive up-to-date literature.)

The experience of the first two missions enabled the fast-growing satellite teams to develop an innovative modular design for a multi-mission microsatellite platform, which remains in use today. Instead of a skeleton, the SSTL modular microsatellite has a series of identical module boxes stacked one on top of the other. These form a body on which solar panels and instruments can be mounted. Each model box houses the various microsatellite subsystems. Payloads are housed either in similar modules or on top of the platform alongside antennae and sensors. Another SSTL innovation, developed in the mid-1980s, is a compact, low-cost mission-control groundstation to operate the satellites in orbit. These groundstations are based on PCs and are highly automated, interacting autonomously with the satellites in orbit in order to reduce manpower requirements and increase reliability. The SSTL Mission Control Centre at Surrey operates twelve satellites in low Earth orbit with a single operator, and the company has installed nine groundstations for customers around the world.

On campus

After a gap of some years, builders were once again at work during the mid- and late 1980s. The construction projects, though much-needed and in some cases long-awaited, were relatively small-scale; not for another ten years would there be a building programme as substantial as that of the late 1960s and early 1970s. Developments included the Leggett Building, which consisted of lecture theatres and seminar rooms; the Performing Arts Technology Studios, which included studios-cum-performance space, recording, control and editing rooms, and practice rooms; a local radio station; an extension to the Students’ Union building; and the Wolfson Centre for Cytotechnology, renamed the Wolfson Centre for Cell Science in 1998. (This facility is now used by the School of Biomedical and Life Sciences to study microbial and human cells grown in culture as a means of producing antibiotics and replacing animals in toxicology tests.)

Perhaps the biggest change on campus was in the landscaping. Before the University arrived, Stag Hill was an open stretch of meadowland, almost treeless except around the
perimeter, and so, in the early years, before the first plantings of trees and shrubs had matured, the campus environment could feel rather barren and unwelcoming; the dull yellow of the brickwork did not help. Gradually things softened, partly through the passage of time, partly because of the deliberate policy of Terry Bennett, Head Groundsman from the mid-1970s to the mid-1980s, and his successor Nigel Hodge, now Horticulture and Landscape Manager. Nigel Hodge explains:

We established planting around each academic block and residential court to create a sequence of attractive and varied identities - a sort of backyard. Wherever you look there is some softness in the landscape. We have also tried to use as many evergreens and winter-flowering plants as possible so as to provide colour and visual interest throughout the year. We are quite restricted in what we can grow. The soil is a heavy clay, which is not easy to cultivate, and means we can’t use peat-loving plants such as rhododendrons, camellias and azaleas. Nor can we grow plants that like sandy conditions.

Extensive planting also has the important practical advantage of reducing the amount of mowing required – the many steep banks throughout the site are difficult to mow at the best of times, and almost impossible in winter.

The bigger spaces around the campus are also distinctively planted to make focal points – the amphitheatre, for example, and, perhaps most notable of all, the informal, gently sloping parkland between Senate House and the Duke of Kent Building. (Terry’s Pond, just in front of Senate House, commemorates Terry Bennett’s work over many years. Originally a steep-sided dew pond that silted up every autumn, it was dug out as a pond in the late 1970s. Horticulture students from Merrist Wood College at Worplesdon designed the water cascade to the lake below.)
The landscaping is a unifying and much-loved feature of the University. If the sun comes out, even on an early spring day, staff and students alike emerge to soak it up at lunchtime. Seats encourage earnest discussion, or perhaps just pleasant chat. One year a goose settled on the lower lake, and a companion was soon purchased to prevent it feeling lonely; more recently swans have arrived.

The campus is above all remarkable for its large collection of trees. These are the result of the inspiration of one man, Gordon Hartman, with the active support of the University’s grounds staff. Gordon Hartman taught biochemistry at Battersea and at the University from 1965 until his retirement in 2001. Trees were (and remain) his spare-time passion:

I thought the grounds had considerable potential for a good collection of trees which everyone, whether staff, students or just passers-by, would enjoy and also learn from. The idea soon took off. I started the University Tree Club, which both staff and students could join, and which arranged lectures and visits. We achieved a wide range of trees through Saturday morning planting sessions, with trees paid for by individuals and groups. We developed a structured plan which aimed to provide a wide range of species, concentrating particularly on trees - such as alder, ash and walnuts - suited to the London clay of the site. I was always on the look-out for interesting and unusual trees and, when one became available at a nursery, I would try to find an association with one of my colleagues and persuade them to buy it for the University. In the early days especially I was given a lot of advice and some rare trees by Alan Mitchell, the well-known silviculturalist who lived at Farnham and became a good friend.

The first planting was the eucalyptus grove (initially less than a metre high) on the mound north of Senate House, close to car park 4. This commemorated the transfer of biochemistry from the College’s Falcon Road Annexe near Clapham Junction to the new AY building in summer 1970. Biochemistry staff all contributed: the total cost was £8. Subsequently trees have been planted to mark births, marriages, graduations, retirements and, more sadly, the deaths of both staff and students. Peter Leggett’s retirement was marked by Paulownia tomentosa (the foxglove tree) and Tony Kelly’s by Catalpa x erubescens ‘purpurea’ (the hybrid Indian bean tree).

**Revival**

Horizons lifted from the mid-1980s onwards. The cuts had compelled the University to take a cool look at its strong points and its weak points, and to become much more focused in its approach. From his vantage-point on Council, as a lay outsider very committed to the University, Sir Richard Meyjes could see that ‘the cuts, unpleasant though they were at the time, pushed us into doing remarkable things.’ The satellite programme was enjoying some remarkable early successes, and the Research Park was attracting its first tenants. While neither had yet made a significant impact on the University’s financial position, they did provide some of the all-important visible signs of progress.
The 1981 cuts had also demonstrated that universities could no longer rely on government as a source of automatic funding. Far from being a one-off event, reductions in government spending on higher education continued year after year. In 1986/87, for instance, the University’s exchequer grant rose by just 0.7 per cent, a significant cut in real terms, forcing the University (like most others) to operate on a deficit budget. To make things yet more difficult, less was being provided for the University to educate more students. After several years of stagnation, the Government started to make more university places available in the mid-1980s; at Surrey the number of full-time students (undergraduates and postgraduates) grew by some 150 to 200 each year until the early 1990s.

Tony Kelly had a clear vision of how to avoid this impasse. ‘I had to turn the University around, and the funding situation after 1981 meant that I was able in effect to say to the University, your salvation is in your own hands.’ That salvation would come through turning Surrey into a research-led university:

I was determined to get as many 5-ratings as possible when the Research Assessment Exercise was introduced [in the late 1980s]. People like to think of themselves as top-quality, and they will want to come to an institution where a lot of high-quality work is going on. Gradually the atmosphere really changed, and very much for the better. This was why the Research Park was so important, not just for the money it eventually put back into the University, but for the research culture it helped to develop.

Peter Goldfarb, who joined the Biochemistry Department in 1985, and from 1991 to 1995 chaired the University’s Academic Assembly (the forum for communication and discussion among academic staff), remembers the real impetus that Tony Kelly gave.

He was the main driver in bringing the University into the top league of research universities. Surrey had been something of a quiet backwater, and without him we would have found ourselves in real difficulties and way down the research league, like Aston, Salford and Bradford. He encouraged the formation of research groups to develop real expertise in a particular area. While Professor Kelly could appear to be a rather self-contained person, it helped enormously that he was seen around the campus a great deal, and also that, although Vice-Chancellor, he led by example and kept up his own research.
Student life in the 1980s
My Time at Surrey...

Tim Walton

Hotel and Catering Management, 1988–1992

Going to Surrey was never a difficult decision for me to make. For a variety of reasons, the hotel industry has always appealed to me, and the University is a world leader in the field of hospitality and tourism studies. Add to this a strong family connection with the Department (my mother studied at Battersea Polytechnic and has worked at the University ever since), and Surrey was naturally my first choice.

I have some great memories from the four years between the fun and frivolity of Freshers’ Week 1988 and the emotional farewells of the Graduation Ball in 1992, from the first day of the first year and the first awkward introductions to my new housemates in Guildford Court to the champagne-fuelled elation of the post-finals celebrations.

I have lasting memories of evenings whiled away in the Students’ Union with its beer-drenched floors, queues ten-deep at the bar and drunken end-of-term flailings on the dancefloor – memories of summer barbecues and inebriated antics down by the lake, lunchtimes in the Hall Bar, and skipping lectures to do nothing in particular on hot summer afternoons. Other enduring memories include the Hotel and Catering Charity Dinner Dance of 1992 (definitely the best ever..., and so it should be, since I was on the organising committee), late nights in the coffee bar, and trips to the infamous Ram in Godalming.

Strange perhaps, but very few of my recollections revolve around the academic side of life on campus. It goes without saying that the course was excellent and held in high regard throughout the tourism and hospitality industries. Furthermore, with one of the best graduate employment rates in the country, the University’s high ranking remains, in my opinion, unquestioned.

However, it was neither the coursework nor the year out working in the industry that ultimately mattered the most to me. Instead, most of my memories involve the friends that I made and the good times we enjoyed together. Although I am certain that the time I spent at Surrey has stood me in good stead as far as my career has been concerned, it is for other reasons that I will always have good memories of the time I spent in Guildford.

Tim Walton is Vice-President of Development with Le Méridien Hotels and Resorts.

Tim Walton today.
Dance became part of the University's academic offering during the 1980s.
One significant innovation during the 1980s was the arrival of Dance on campus. Music had had a distinguished history at the University and at Battersea, but for a long time it was the sole representative of the performing arts. Dance just escaped being a victim of the 1981 cuts. Professor June Layson had only recently been appointed Director of Dance and Drama when the UGC’s letter arrived; later she became Britain’s first Professor of Dance. Funding from non-governmental sources, principally the Calouste Gulbenkian Foundation, enabled the plans for Dance to go ahead, although Drama was put on indefinite hold. In January 1982 the National Resource Centre for Dance was launched to provide an information centre and to develop an archive collection. Soon afterwards undergraduate and postgraduate courses started: Surrey became the first UK university to offer a single honours degree in dance, but without UGC funding – the first students had to pay substantial fees.

Research groups and teams proved an important key to the University’s success. By bringing together academics with complementary specialist knowledge and research interests, expertise and a track record in research could be developed. Often such groups were interdisciplinary - many of the most interesting and fast-moving developments in industry, medicine, economics, social policy and so on were happening at the fringes of traditional subject boundaries. Even before 1981 a cross-disciplinary Biotechnology Unit had been formed to develop the University’s research and teaching in this area. In summer 1982 the Surrey Energy Economics Centre was established to capitalise on the strengths of the Economics Department, the only one in the UK specialising in energy economics. During the 1980s the Physics Department established one of the best high-pressure laboratories in Europe and the largest Nuclear Theory Group in the UK. Important research groups specialising in criminal justice and in the sociology of health and illness were also formed. The pattern was set for the rest of the decade, and indeed for the 1990s and the present day as well.

The new policy soon proved productive. The 1984/85 Annual Report highlighted five major contracts for research projects won that year. These were for research into the behaviour of semiconductor crystals under pressure, led by Alf Adams of the Physics Department; the purchase of a new spectrometer for the Department of Materials Science and Engineering’s Surface and Interface Reactions Group, so that the Group could be designated a regional centre for electron spectroscopy; a research programme by the Ergonomics Research Unit of the Robens Institute to develop new ways of examining the physical stress people experience while carrying out repetitive work; research by another team from the Robens Institute to examine the effects of air-conditioning on health; and a major social research project by the Department of Psychology on the safe management and disposal of radioactive waste. These five projects between them brought in grants worth more than £1.1 million. During the same year there were well over 100 smaller grants worth about £2 million.
Income from research grew rapidly: from £2.6 million in 1981/82 to £5.9 million in 1985/86 and £10.8 million in 1989/90. Writing in the Annual Report for 1985/86, Tony Kelly proudly pointed out that ‘Surrey now receives a lower proportion of its recurrent income from exchequer grants (52.6%) than any other UK university. The record speaks for itself.’

Perhaps even more important, the quality of the University’s research received increasing recognition. In the UGC’s first research review in 1986, two Departments – Electronic and Electrical Engineering and Sociology – were rated as outstanding, and a further three – Chemical and Process Engineering, Materials Science and Engineering, and Physics – were rated well above average. Three years later, the first formal ’Research Assessment Exercise’ put the University into a creditable middle ranking among larger and wealthier institutions. The Statistics Group achieved the highest rating possible, and those in Chemical, Civil, Electronic and Electrical Engineering, Metallurgy and Materials, Toxicology, Physics, Psychology, and Sociology were very close to this. The University had begun its ascent, slow at first but gradually increasing in speed, of the research rating ladder.
Left: Sir George Edwards pictured with HRH The Duke of Kent after the University Library was named in his honour.

Left: The University’s Science and Technology bus, which provided in-service training for teachers.

Above: The Duchess of York visits the Robens Institute.