

THE TIMES  
**HIGHER**  
EDUCATION SUPPLEMENT

# Estates Management

MARCH 30 2007

**Recycling  
proficiency**  
Green Gown Award winners



# Exploit your property potential

**The physical environment of an institution is crucial to the learning experience. Paul Watson surveys efforts to adapt facilities to student aspirations and to the 21st century**

Universities have been a remarkably successful business model for the past 500 years and have adapted to change with a few short, sharp shocks. An integral part of their success has come from their physical identity. Now change is the order of the day again. The UK higher education student population has risen by more than a third in the past decade, from 1.7 million to 2.3 million. This has put pressure on the estate, and projections anticipate 300,000 more students over five years. We are now in one of the short, sharp shock phases.

Staff numbers and the university estate

as a whole have not kept pace. The overall size of the estate is estimated to have grown by less than 10 per cent in the past decade, while full-time staff numbers have fallen slightly. This has lowered staff-to-student ratios and changed teaching and learning practices.

There are also implications for the estate in the pedagogical changes that have affected learning and teaching, such as:

- The changed nature of tutorials
- Teaching large classes
- Reduced contact time
- Growth of IT and self-directed learning
- Changed demands on students through "earning and learning"

- Diversity of subjects and modularisation
- The growth of further education
- Role of student residence in learning.

The physical environment has always been an important factor in the learning process, although it is difficult to pin down its precise effect. *The Times Good University Guide* notes that five of its top ten universities have the highest library and facilities expenditure levels. Research into student attitudes to selecting a university, conducted by the Sheffield Hallam Facilities Management Centre, found that high-quality environments had an effect.

A more telling example comes from the further education sector, which is about a third of the way through a £4.5 billion capital replacement programme. The first projects are coming on stream. There has been a rise in the number of applications of between 50 per cent and 80 per cent, and also evidence of higher learning outcomes and more staff satisfaction from teaching.

There have been major improvements to the quality of the university estate in the past few years. Spending has risen over five years and fewer buildings are classified as being in poor condition or worse. Even so, almost a third of the estate is still regarded as being in this category. And there is a £4 billion maintenance backlog problem of buildings not adequate for purpose. The cost of rectifying these has risen by 41 per cent since 2000. While the proportion of poor-quality buildings has fallen, the cost of improving them has risen.

## A scrub-up for the iconic artefacts of a

**The revolutionary campuses of the Sixties are showing their age and many are booked in for a facelift, says Becky McCall**

IN THE SAME WAY that the miniskirt and the Beatles came to symbolise the fashions of the Sixties, so reinforced concrete and glass campuses came to stand for a new era in education. These iconic institutions reflected a new wave of freethinking and intellectual rigour. But the concrete monoliths are approaching their 50th year and the cracks are showing. Vice-chancellors and architects

face the choice between demolition and rebuilding and extensive renovation.

Quite a few are staying with their unique buildings but freshening them up. Essex University has spent £1 million a year over the past seven years, while Lancaster University has allocated £27 million over five years. Andrew Nightingale, director of estate management at Essex, says: "Instead of demolishing, we've decided to work on maintaining the good and reinventing the use of the space."

Many see these Sixties constructions as weird and wonderful artefacts of bygone times. Nicholas Hare of Nicholas Hare Architects LLP, London,

former architectural consultant to Essex, says the decade was a time of unparalleled convergence between the visions of vice-chancellors and architects. Today, partnerships between academe and industry mean premises have to reflect the standards of the commercial world.

Mark Swindlehurst is director of estate management at Lancaster. He says: "We recently renovated the management school with a large open-plan, adaptable floor space. There's also a pedestrian walkway with a coffee shop and hub area to discuss ideas."

Turn up at the University of East Anglia in Norwich and you could be forgiven for believing

**'Instead of demolishing, we've decided to maintain the good and reinvent the use of the space'**

The pressure on estate budgets also comes from the growth in student numbers, which has led to a push to cut unit costs, principally to release funds for priorities such as pay and equipment. But this approach assumes the current university estate is suited to the needs of teaching, learning and research. We also know that space use across the sector is about 20 per cent. Many institutions may be struggling to maintain accommodation that is not only unsuitable, but unneeded.

We are aware of one institution that plans to review all accommodation on its principal campus. The move was prompted by its health and safety liability, assessed at tens of millions of pounds. Management is reluctant to commit funds to replace fire alarms, remove asbestos and renew cladding when the completed environment will still be a compromise between today's and tomorrow's needs.

The preference is for a much more radical campus renewal programme, which will require significantly more capital but will result in accommodation better tailored to the institution's needs.

Against this background, the much discussed concept of the "affordable estate" needs to be better understood. Such facilities should offer high-quality

teaching, learning and research environments, contribute to the student experience and be capable of being maintained at an appropriate cost in terms of the institution's recurrent funding.

But defining "affordable" requires estimates of future revenues and costs and of expenditure allocated to maintaining the estate. This means having a detailed picture of space needs today and in future, including considerations such as:

- The growing emphasis on the environment and sustainability
- The need for flexible and adaptable space
- Efficient and effective use of space
- Financial viability.

Getting this right involves understanding factors such as staff and student numbers, contact hours, management practices, estate size and configuration, and growth plans. While the full implications can be difficult to estimate, doing so can offer insight and project benefits to institutions.

History suggests that much of the sector may regard change with healthy suspicion. But there are indications that more radical reviews of the estate are under way and is generating significant long-term rewards. ●

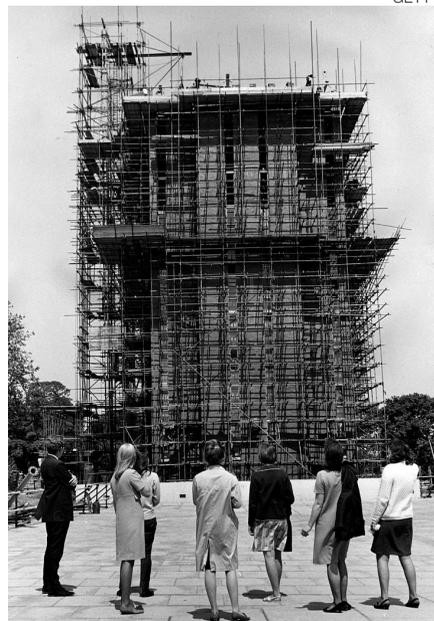
**Paul Watson is a partner of the property advisers GVA Grimley.**

**'Institutions may be struggling to maintain accommodation that is not only unsuitable, but unneeded'**

## bygone era

you were in a time warp. Rick Mather Architects rose to the challenge of extending the campus without sacrificing its 1960s aspect. Rick Mather says: "We drew up a masterplan that respected the original concept of a concrete ship floating in a sea of green. But we brought the pedestrian circulation down to ground level." One of the major successes of the UEA project is the student residences, which have such highly efficient energy retention that they do not require central heating.

Rick Mather Architects are also building a design academy for Liverpool John Moores University, adjacent to the Roman Catholic Cathedral. The challenge is to build in a style complementary to this 1960s icon while satisfying the functional demands of the present. ●



► **Transfixed in '66: students on the construction site at Essex University**

## CONTENTS

- PROPERTY POTENTIAL**  
The state of the estate . . . . . 2
- A SCRUB-UP FOR ICONS**  
Sixties structures are being revamped . 2
- IT'S JUST LIKE A JIGSAW**  
The daily dilemmas of Essex's estate management director . . . . . 4
- PICK THE RIGHT SOLUTIONS**  
Higher education sets the environmental agenda . . . . . 5
- SIGN UP FOR SPACE EXPLORATION**  
A new assessment model for building needs . . . . . 6
- URBAN ATTRACTIONS**  
Campuses are key players in sustainable regeneration . . . . . 6
- ECO-WARRIORS BATTLE TO CLEAN UP THE ACT**  
The winners of this year's Green Gown Awards . . . . . 8
- CUT THE GAS, SHED MORE LIGHT**  
Awards showcase best practice . . . . 10
- EN SUITE AND SOUR**  
Private property portfolios are not to everyone's taste . . . . . 12
- STUDENTS FILL THE PLACES, WE FOCUS ON THE SPACES**  
Estate managers must balance competing demands . . . . . 12
- GO FOR WOW FACTOR, BUT...**  
Budgets, builders and blueprints prey on the mind of an estates director . . 14
- CARBON DATING AGENCY**  
A consortium offers help in reducing a campus's carbon footprint . . . . . 14


**ESTATES**


**A DAY IN THE LIFE**

# It's just like a jigsaw

The tasks for Essex's estate management director Andrew Nightingale involve slotting together ideas on funding, erecting a wind turbine and tackling the planning committee

**FEBRUARY 2007**
**8.30am**

I usually drive to work, although I try to do the half-hour walk one day a week. First job is Outlook on, spam off. The first meeting is with the security manager to review any overnight incidents at any of our campuses. It's the usual mix of welfare and security issues. The Colchester campus is very safe, but our new campus in Southend Town Centre may provide some challenges.

Any spare time today will be spent drafting a paper outlining our capital investment strategy and progressing the acquisition of a new building for the East 15 Acting School in Loughton. I've identified 30 issues the strategy will need to address, ranging from underinvestment

in maintenance (yes, I know all estates directors say that, but it's true) to reducing the university's carbon footprint.

**10am**

The accommodation group meets to consider the allocation of space for the next academic year. It's like a gigantic jigsaw, moving the pieces around and making them fit. Very rewarding when it works, but frustrating when you realise a piece went missing from the box years ago.

**1pm**

Lunch at my desk, time to clear a few dreaded e-mails and catch up with three of the deputy directors: maintenance, capital and development, and purchasing. We work well as a team and there's a good rapport between us, making meetings fun

as well as productive. Discussion centres on the feasibility project for a wind turbine on campus. Some years ago we proposed it as a spoof in the university newsletter. How things have changed.

**2.30pm**

The afternoon involves a review of a recently completed capital project, with the builder, the project manager, the client and me, the estate management project officer. An uninhibited discussion ensues, from which we all learn a lot. Had the job gone wrong, we would have been too concerned with protecting our contractual position to have such a constructive discussion.

**5pm**

I pick up Liz, my wife, then drive to Loughton to address the planning

PICTURES: JOEL CHANT



► **Nightingale (left and bottom), and with colleagues Maz Brook (top and above) and Greg Dumbrell**



committee considering an application for two temporary buildings on our campus there. The officers recommend approval. The committee disagrees on a 7-5 vote. I restrain Liz from telling them what she thinks of democracy in action. In the car we agree that addressing a committee where the majority party is the BNP is not easy. We adjourn to the Loch Fyne restaurant, enjoy a splendid meal and drive home.

**11.30pm**

The day finally finishes. Some you win, some you lose. ●

**Andrew Nightingale is director of estate management, Essex University, and past chair of the Association of University Directors of Estates.**

## Pick the right solutions from a forest of ideas

**An instinct for innovation will enable higher education to lead the environmental agenda. David Eastwood explains**

HIGHER EDUCATION HAS been at the heart of identifying the causes and the extent of global climate change. But universities and colleges seeking to reduce the environmental impact of their estate often face high construction costs, the uncertainties of embracing novel technologies, constraints on listed buildings and a not always sympathetic town planning system.

Yet the tide is turning. Buildings that were once revolutionary are becoming commonplace, and management practice in areas such as transport and waste is adapting quickly.

The creation of knowledge and the exploration of new ways of doing things are at the very heart of our higher education system. The sector's willingness to take the long-term view is spelt out clearly in the values and mission of many institutions. But the contribution of our universities and colleges goes well beyond formal education. Through cultural leadership and economic influence, they shape thinking and practice in cities, regions and beyond.

The Higher Education Funding Council for England's 2005 vision statement for sustainability states: "Within the next ten years, the higher education sector in this country will be recognised as a major contributor to society's efforts to achieve sustainability — through the skills and knowledge that its graduates learn and put into practice, and through its own strategies and operations."

A strong moral imperative — the desire for a just society and for reducing the impact of climate change on nations less able to respond than our own — provides a compelling basis for action.

And, while curricula issues are rightly a matter for individual institutions, we are

likely to see growing demand from students and employers for courses that address the financial, social and environmental aspects of sustainable development. There is also little doubt that research and knowledge-transfer funds will flow to institutions able to offer solutions to pressing technological and social questions.

Finally, there are cost and efficiency benefits from a long-term and sustainable approach. These are nowhere more evident than in estates and facilities management. Rising energy prices and carbon trading will accelerate these advantages. But "green" buildings are only a part of the picture. The full benefits will come from adopting a strategic and sustainable approach to physical infrastructure. Efficient use of assets — space management, lifecycle costing and

JASON BYE



► **Eastwood: the key is partnership**

the evaluation of projects and practice — is a key contributor to sustainability. The estate is a tangible opportunity to show that what universities and colleges do in practice matches what they say. This gives the Green Gown Awards added impact.

For Hefce's part, we will continue to encourage institutions to pursue strategies for sustainable development, but we will avoid an overly centralised approach that would run the risk of stifling the initiative so evident among the Green Gown Award entries. Here, as so often, partnership working is the key to success. ●

**David Eastwood is chief executive of the Higher Education Funding Council for England.**

# Sign up for a stint of space exploration

**A new model for assessing a university's building needs takes into account not only its academic profile but also staff and students' activities,** says David Chiddick

**A**ffordability is a critical issue across higher education. Estates costs are often said to be the second-largest outgoing for institutions after salaries, and they are rising. Energy costs have almost doubled in recent years. Even excluding residences, the higher education estate has a floor area of more than 20 million square metres. Its

insurance replacement value is reported at more than £43 billion. Poorly used buildings are a drain on resources that could be better invested elsewhere.

The UK Higher Education Space Management Group (SMG) was set up to provide advice on effective space management. Its focus is on helping institutions ensure that they have the appropriate type and amount of space, and that it is affordable and sustainable. The Space Management Project, which is funded by all the UK funding councils, is led by consultants Kilner Planning and supported by Bernard Dromgoole of the Higher Education Funding Council for England. It was established to develop the necessary tools and guidelines for institutions.

Managing a university's space more effectively can enhance the quality of both the student and the staff experience and can be positive for recruitment and retention. There is an intrinsic link between

## Prime developers of urban attractions

**Nottingham's Jubilee Campus is notable not just for its design but also for its role in regeneration,** as Matthew Baker reports

BACK IN THE 1960s, T. Dan Smith, the maverick leader of Newcastle City Council, generated some incredibly ambitious regeneration plans to make Newcastle the "Brasilia of the North".

Using town-planning powers to buy a series of prime sites, he trumpeted the idea of making education the base of regeneration. In an era in which universities were generally inward looking and guilty of an anti-urban bias, the plan was by all accounts extraordinary.

So was Smith, who was later convicted of corruption charges. Nevertheless, his ideas are being reclaimed by a new generation of regeneration experts. John Goddard, deputy vice-chancellor and professor of regional development studies at Newcastle University, thinks Smith was ahead of his time. He claims that Smith's ideas were the forerunner

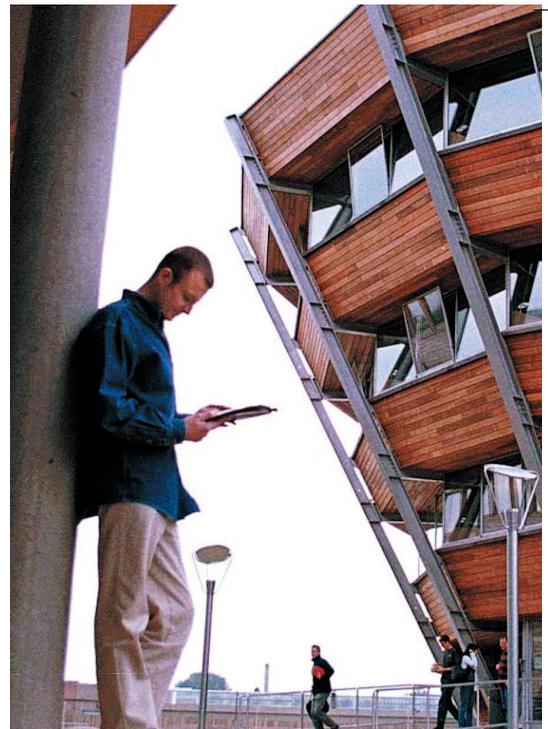
of today's estate development boom.

"Everyone is realising that estate development is vital to making cities attractive to highly mobile professional people. Universities are asking the question: 'How do our estates extend to the public realm?'," he says.

There are generous grants available. Essex University's new campus at Southend, which is due to be unveiled this year, has had some £25 million in grants. Its purpose-built or redeveloped buildings offer educational facilities as well as a business development centre, incubation units for start-ups, GP and dental surgeries, shops, student accommodation and a cultural hub. The redevelopment is intended to reverse a severe brain drain and retain the brightest graduates to put Southend on the map.

The strength of these developments, many argue, is in their long-term vision. Where developers have often hidden behind the language of regeneration to make a quick buck, universities can build a sustainable future for their communities.

"Universities are in a unique position because we have long-term commitment to estates, we're not developers," agrees Chris Jagger, director of estate development for Nottingham University. One such widely



acclaimed project is the Nottingham Jubilee Campus, which opened in 1999. At a cost of £50 million, the site reclaimed eight hectares of redundant industrial land to house a number of university schools.

an estate that is fit for purpose and a viable higher education institution.

The SMG has developed guidance and tools to help institutions assess their space needs, promote effective use of space, and ensure that space efficiency is taken seriously in building design. It has calculated the cost of space that is fit for purpose and adequately maintained. It has also looked at how future changes in the sector might affect needs, and what can be learnt from the experience of other sectors and from higher education overseas.

The SMG has developed a method to calculate a university's indicative space needs, in terms of the type of space required as well as the amount. This method shares much of the approach that underpinned earlier space standards developed by the old

**'There is an intrinsic link between an estate that is fit for purpose and a viable higher education institution'**

University Grants Committee and the former Polytechnic and Colleges Funding Council, but it is careful to recognise diversity in the sector. The SMG method assists institutions to estimate space needs on the basis of their own particular profile of academic activity and methods of delivery, rather than a set of standard assumptions about academic disciplines. The method also allows for diversity of

practice across the sector in a way the earlier norms did not. It can also be used to evaluate the space implications of changes in student and staff numbers, or of developments in pedagogy. Without such an assessment, it is difficult for any institution to know whether it has broadly the right amount and type of space. Benchmarks will help an institution decide if it has more space than it needs.

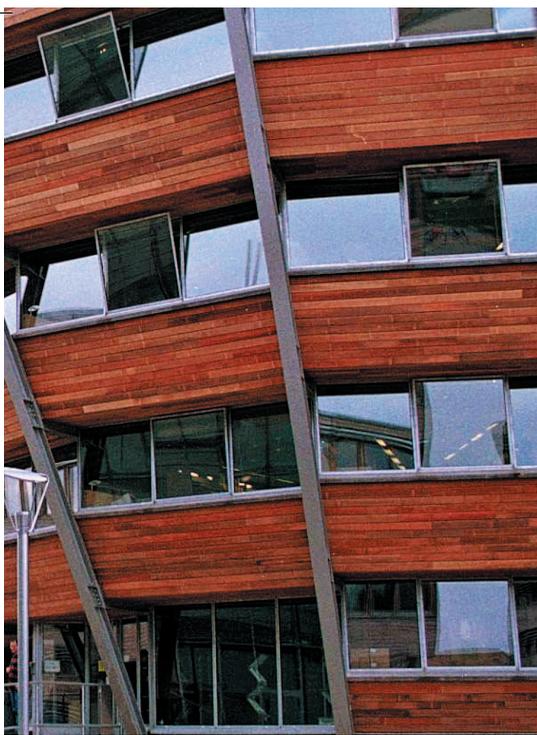
The SMG's model for

assessing the annualised cost of supporting an estate is regularly upgraded and renewed. It can be downloaded and used to get a measure of whether there is a gap between what needs to be spent on estates and what is actually being spent. It will help institutions to assess what size of estate is affordable and sustainable, in both environmental and financial terms.

A key theme of the SMG's work is that space management is not an isolated task. It is as much about people as buildings and, to be at its most effective, it needs to be closely integrated with academic and financial planning. So we have aimed to develop strategic-level space management measures alongside practical guidelines and interactive tools that institutions can use to tailor to their own circumstances. ●

**David Chiddick is chairman of the UK Higher Education Space Management Group. The SMG guides are available at [www.smg.ac.uk](http://www.smg.ac.uk)**

## that foster sustainable community life



MIKE SEWELL

Hailed as one of the top five sustainable projects in the country, the campus design is seen as a milestone in green architecture. It includes roofs carpeted with alpine plants to maintain steady temperatures, and a

### ► New angles on innovation: Nottingham's Jubilee Campus

series of lakes that provide cooling for the buildings in the summer.

The project is a past winner of the Royal Institute of British Architects Sustainability Award, beating the Eden Project. It is also, according to Jagger, an example of what universities should be doing, "pushing boundaries, demonstrating new technologies and creating innovation through knowledge transfer".

The same logic has informed projects such as the development of health and social care facilities at London South Bank University to train workers required for the growth of primary care trusts, and Oxford University's Bregboke Science Park, which translates cutting-edge research into commercial opportunities.

"What we've tried to do, at the start of a very ambitious 15-year estates development programme," explains Peter Holiday, project director of South Bank's strategic development plan, "is to engage with local community groups to tease out what everyone's aspirations are."

Goddard says universities following such a strategy are borrowing from a model that began in medicine. "Medical schools have

always integrated research, teaching and clinical practice. With businesses wanting to be in closer proximity to academia, we're seeing a model where research, clinical practice and commercialisation sit cheek by jowl with sciences, engineering, arts and humanities, and other areas," he says.

But this relationship, he adds, runs the risk of tempting universities to stretch beyond their means. "And who bears the cost if it goes wrong? They can't assume the Government will always bail them out."

Michael Brown, vice-chancellor of Liverpool John Moores University, has similar views. In a city dubbed the "capital of cranes", he says the university made a contribution long before it became fashionable. "Five years ago, most of the cranes were public sector, now they're private sector." But if you overstretch, he says, it's simply bad business.

Some universities are likely to throw caution to the winds as estates development becomes more important. "Universities are no longer seen just as places where people teach and do research," Brown adds. "They have a huge impact on how we live. And agencies are more interested in partnership and working with us than ever before." ●

## GREEN GOWN AWARDS

# Eco-warriors battle to clean up the act

**This year's winners had new spins on fuel efficiency, bicycle recycling, environmentally friendly building renovations and course content. Martin Ince reports**

The Green Gown Awards are designed to acknowledge achievement in areas where higher education meets the environment. Of the seven categories, two recognise the vital need to green the curriculum itself, with one award for degrees and a second for vocational courses. Two more emphasise universities as users of space and resources in their own right. These awards are for top performance in the use of water and power, and for sustainable construction. Another award is for student-led initiatives, and a further recognises continuous improvement in achievement, while the seventh is specifically for colleges rather than universities.

The colleges winner this year is the Pershore Group of Colleges. It is a land-based college with the interest in sustainability that one might expect of an institution with its own farm and nursery. A variety of initiatives over several years has allowed it to reduce fuel use, cut chemical use on its land and enhance biodiversity, and save money. There have been benefits for staff, students and the local community in Pershore, Gloucestershire.

Staff awareness of the issues has been enhanced by training, for which external funding has been obtained. All students learn about sustainability, and the college is involved in a European Union Leonardo project to develop sustainable land use education across Europe.

Although much progress has been made, the college has more plans, including a

50 per cent cut in carbon output by 2020. The judges found that the Pershore programme could be applied to the whole of the college sector. They were especially impressed with its community connections and its link to local businesses.

The Continuous Improvement category was won by Leeds University for a series of initiatives that have been taking effect since 2002, although the university began using combined heat and power and recycling its paper in the 1990s. Transport, waste, carbon emissions and other main concerns have been identified and tackled over time.

Some areas have been marked by steady progress — for example, a doubling in paper recycling and a growing emphasis on buying recycled goods. Major projects include specific consideration of the environmental impact of any new or significantly refurbished building. The university is heavily involved in environmental research, and its School of Geography was the UK's first carbon-neutral university department.

Leeds regards its commitment to fair trade as an integral part of its sustainability. It became a Fairtrade University in 2005.

The judges praised the university for its "articulate strategic approach" and the way it has involved both staff and external organisations in its plans.

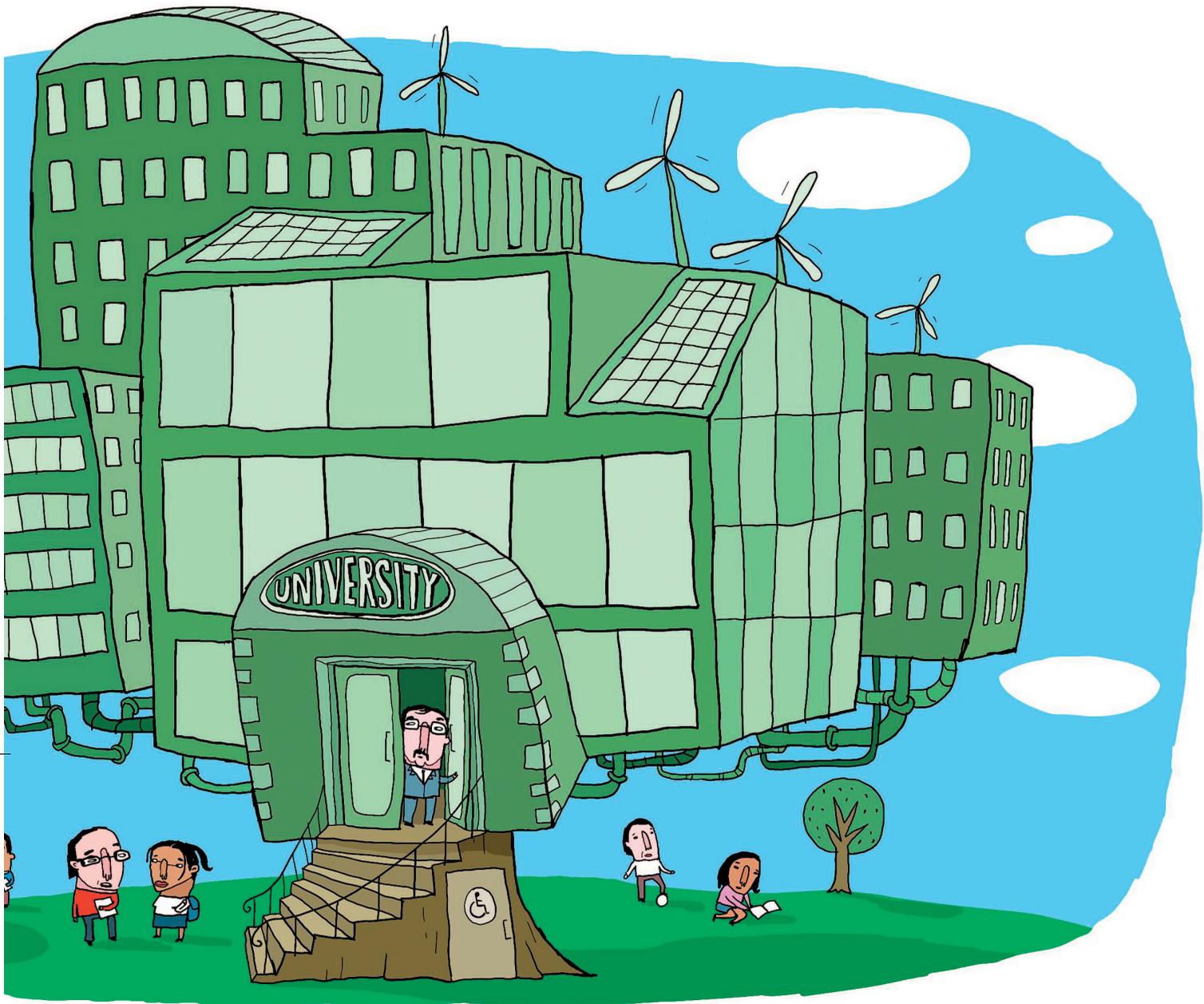
York University Student Union had the winning student initiative. Its Bike Auction is an innovative approach to greening transport and keeping scrap metal out of landfill. York has many keen cyclists, but



some students leave the university without taking their bikes with them. In the past, security staff removed unwanted machines, which were consigned for scrap or to landfill. Now the orphan bikes are tagged for removal but handed to the student union, not the rubbish collectors. And the bikes — 80 in 2006 — are auctioned to students at the start of the academic year.

The money raised is used to fund ethics and environment work by the union and elsewhere. Some of the cash has paid for bikes to keep doctors in Africa mobile so they can visit more villages and treat more people.

According to the judges, Bike Auction "encapsulates everything student initiatives can achieve, is inexpensive and highly



JOHN HOLCROFT

replicable across other universities and colleges”.

At the other end of the technology scale is the top conservator of water and power, Southampton University. The main aim of its Highfield district heating and combined heat and power scheme is to reduce the university’s carbon footprint by using more efficient equipment. Other priorities are to reduce the whole-life cost of the operation, expand capacity and lower the temperature and pressure at which it operates for heating. This allows heat loss in the system to be cut and in turn reduces the size and cost of the pumping equipment it needs.

The programme involved replacing and refurbishing valves, pumps, heat exchangers and other equipment, the

**‘The orphan bikes are tagged for removal but handed to the student union, not the rubbish collectors. The bikes are then auctioned to students at the start of the next academic year’**

installation of new generators and the connection to the system of buildings that previously had their own, less efficient, plant. The judges point to the very detailed and practical engineering of this scheme, with its clearly defined benefits.

The Most Sustainable Construction project award went to King’s College London. The building on its Strand campus in central London was built just after the college was founded in 1829. It is Grade I-listed and, while it needed

extensive refurbishment, this had to be taken into account.

King’s decided to adopt a sustainable approach to the task. The newly restored building makes maximum use of natural light and solar heat. The windows can be opened, reducing the need for air conditioning. Perhaps most intriguingly, King’s claims that the relationship between circulation spaces and staircases has been restored — encouraging people to take the stairs instead of the lift. The building will

●●● **ESTATES**

reduce electricity by 830,000 units a year, saving 383 tonnes of carbon dioxide — and £77,000. The restoration involved extensive demolition, and there was a target of recycling 80 per cent of the resulting material. As much as possible was reused, and the contractors had a range of environmental goals to hit. The judges praised the whole project for “simply doing all the right things”.

Of the two awards for course content, the top vocational innovator is Sheffield Hallam University, with its Landlords for Excellence programme. This course for private landlords is run by the university’s facilities directorate alongside Development and Society, an academic school of the university. It helps landlords reduce the blight and mess associated with much private rented accommodation, including student housing. As well as green issues, it teaches them about substance abuse, fire safety and marketing. For the university, there have been several benefits including a better relationship with the local community. It has also built links between the university and bodies such as the city council, the police and organisations representing the local black community.

The judges felt Landlords for Excellence was an innovative approach to a significant environmental and social issue that engages a hard-to-reach group effectively.

The winner for course content is Bristol University. Its Sustainable Development: Teaching against the Grain course unit was first presented in 2005-06. It was intended to take an interdisciplinary approach to a subject that was not strong at Bristol. The content of the course, which any student can take, ranges from energy generation to congestion charging, and tackles approaches from the scientific to the legal.

The benefits of offering the unit are hard to quantify. The academics involved have gained a sense of involvement in green issues on the campus and now feel less isolated. The students — drawn from 14 departments in the first year alone — have learnt things that will allow them to be greener in their student and their later life. And the university is now preaching what it practises.

The unit is described by the judges as an exciting innovation for a university that can seem more traditional than most. It has also opened the door to more interdisciplinary teaching in Bristol. ●

**Martin Ince is contributing editor, *The Times Higher*.**

# Cut the gas — shed more

**The 2006-07 awards are marked by impressive efforts to reduce waste and recycle more, underpinned by cash constraints and the need to cut energy use.**

**Peter James explains**

THIS YEAR’S GREEN Gown Awards show how commitment, energy and innovation enable universities and colleges to respond positively to environmental and social challenges. They show too that universities such as Leeds (winner in the Continuous Improvement category) and Southampton (winner in the Energy and Water Efficiency category, and the only institution to win or be commended in every year of the awards) are developing an impressive capacity to do this in a sustained way.

The awards also illustrate challenges for a sustainable estates strategy. King’s

JULIAN ANDERSON



► **Social inclusion: King’s College London’s new open dining space makes use of natural light and solar heat and aims to reduce heating bills**

# light on a low-carbon culture instead

College London, winner in the Sustainable Construction category, proves there can be environmentally positive refurbishment. Financial pressures and slowing expansion in the sector will place greater focus on making the most of the existing estate through better use of space and refurbishment. Minimising newbuild is generally good for the environment as well as the balance sheet.

Sheffield Hallam University, a winner in one of the curriculum categories for its work in educating private landlords on sustainability, highlights a neglected area:

residences. As a new report from Higher Education Environmental Performance Improvement reveals, there is potential for improvement here, but it can be hard to achieve. Divided responsibility between estates and residence managers for running university-owned accommodation often impedes action by either.

Several of this year's winners have been participants in the Carbon Trust's Carbon Management programme and are well placed to respond to new regulations on reducing emissions and increasing energy efficiency. By 2008, it is likely that most

institutions will have to make a formal energy performance commitment and display an Energy Performance Certificate in many buildings of more than 1,000 square metres.

The business case for more sustainable buildings is becoming more compelling. Energy prices may fluctuate, but most experts expect them to rise. There is mounting evidence that some of the key environmental features of such buildings — for example, optimal use of natural light and higher indoor air quality through use of toxin-free materials — contribute to better work performance and cut sickness. The Royal Academy of Engineering estimates that the lifetime costs of a building are about 200 times the initial design and construction costs, with operational costs five times greater. The long-term benefits from even a 1 per cent to 2 per cent improvement in productivity, or a 5 per cent to 10 per cent change in energy performance, can be positive, even if additional capital outlay is needed.

A Heepi report on "high-performance" buildings suggests many of these benefits can be achieved with no, or minimal, additional capital costs. It also shows that the real comparison is often not with "cheaper" buildings that generally perform well but with "low-performance" buildings that don't work for users and guzzle more utilities than stipulated in their design specification, making them costly to run — either because building use was not properly considered or because the equipment installed is bigger than needed. Poor controls that are over-complicated or badly installed also affect running costs.

These and many other problems can be avoided. Universities must set clear objectives, ensure these are implemented through the entire building process and allow time for an integrated design process to get key features right first time. It isn't easy, but the evidence from the best performers shows it can be done. ●

**Peter James is professor of environmental management at Bradford University and co-director of the Heepi project, which works with sector partners to organise the Green Gown Awards. For more details, visit [www.heepi.org.uk](http://www.heepi.org.uk)**

## Green Gown Awards 2006-07

### The winners

#### Colleges

##### Winner

Pershore Group of Colleges

##### Highly Commended

Trinity and All Saints College

#### Energy & Water Efficiency

##### Winner

Southampton University

##### Highly Commended

Bristol University

#### Continuous Improvement

##### Winner

Leeds University

##### Highly Commended

Cambridge University  
University of East Anglia  
Edinburgh University  
Oxford Brookes University

#### Student Initiatives

##### Winner

York University Student Union

##### Highly Commended

Loughborough University and  
Loughborough Student Union  
Kingston University  
North Devon College Student Green Group

#### Course Content (Degrees)

##### Winner

Bristol University

##### Highly Commended

Gloucestershire University  
Plymouth University  
Queen's University Belfast

#### Sustainable Construction

##### Winner

King's College London

##### Highly Commended

Dundee University

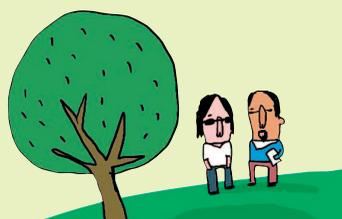
#### Course Content (Vocational)

##### Winner

Sheffield Hallam University

##### Highly Commended

Swansea Institute of Higher Education



# En suite and sour

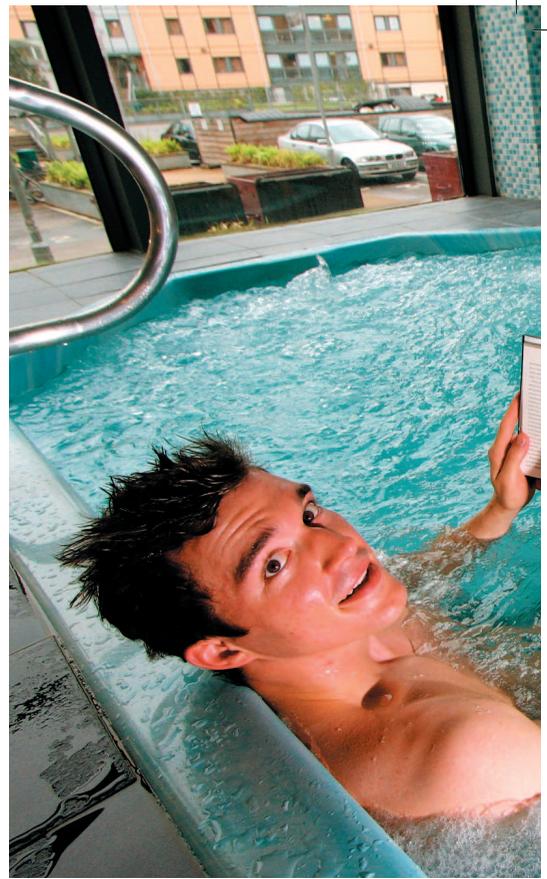
**Hotel-style digs with price tags to match offer students comfort and universities income, so why isn't everyone keen on such schemes? wonders Alison Utley**

**D**ishwashers, leather sofas, broadband, flat-screen televisions with Sky TV packages. Students arriving on campus today stand a good chance of being treated to digs more akin to rooms offered by an international hotel chain than the fag-strewn living quarters and mouldy bathrooms that greeted previous generations of undergraduates.

And student hospitality, as it is now known, is big business. Major construction chains are permanent features on many campuses, and complicated buyback or leaseback arrangements with banks — regarded a few years ago as high-risk strategies — are increasingly common.

Universities are starting to make their valuable property portfolios work for them. Very often bed spaces on campus are no longer owned by the institutions that house them. And, universities argue, releasing the money involved gives them more to spend on developing their estates. But is this in the interests of students or are prices, already on the up, set to rocket further, as the National Union of Students fears?

The NUS says that average university and private-sector hall rents are now 83 per cent of the weekly student loan budget. "With increasing rents under privatisation, fewer people from poor families can afford to go to university — in direct conflict with the Government's objective of improving access to higher education," it says. The focus on



profit has also led to worries about loss of social, pastoral and democratic structures within residences.

But universities argue that deals with the private sector enable them to build better facilities that can only benefit students. A refinancing deal at Lincoln University, for example, recently released £30 million. It took the university some 18 months to negotiate the deal to unlock the money. Part of the cash has been used to finance a development programme over the next five

## Students fill the places and we focus

**People expect a campus to have modern amenities and be sustainable. The estate manager must balance such demands, says Peter Kerr**

A UNIVERSITY IS often recognised by its estate, and many use it as part of their branding. But the reality of the 21st-century university building is very different from its popular stereotype.

While students may be attracted at first by the thought of eccentric academics and buildings to match, they have been brought up and educated in modern homes and schools with the

latest IT equipment. They demand the same quality of facilities of their university. It is no longer enough to depend on reputation to recruit students. Young people need an environment in which they can develop their skills.

The provision of facilities for students is a service industry. The demands of students, who now pay for their education, has meant growth in the creation of immersive environments, social learning spaces, learning clusters and group teaching and learning spaces.

Estate directors are attuned to these priorities. It is not simply the demands of investing in new or improved facilities for students that they face. The 2005 Estate Management Statistics show the sector managing 24.9 million square metres of gross space with a total annual estimated property cost of £1.55 billion. Some

universities are responsible for botanic gardens or have iconic listed buildings. Many face deteriorating 1960s buildings.

Universities are finding innovative ways to fund maintenance and improvement of the estate, such as rationalising facilities or pooling them with other universities or outside partners, and capitalising the income stream from student residences, investing the funds in the maintenance of academic buildings and the creation of new and improved facilities for students.

For estates directors, things have changed, too, on the environmental agenda. Their inevitable association with the management of car parking has progressed to the issues of sustainability and renewables. Universities are aware of the need to reduce their carbon footprint — students and staff form a very effective pressure group. But it is often students and



COLIN MCPHERSON

years at the university's main Brayford Pool campus.

Such deals are complex. Other efforts to follow this route have stalled, according to Ben Ball, manager of residential services at Lincoln. "The links between the university and the housing provider need to be very carefully worked out so that both parties' interests are looked after," he says. "We are confident we got that right, and it is key to making sure students get the best possible service while keeping costs under control."

Students living in the village and staff working for the residences will be largely unaware of the changes, says Stephen Avery, director of finance and resources at Lincoln. "The deal is an extremely good one for the university in that it secures the maintenance of the halls of residence and maintains a shared interest by the university in the charitable vehicle, while unlocking finance essential to realise the full potential of this university."

The university's Brayford Student Village

ESTATES ●●●●●

► **Water feature: students enjoy the the facilities offered at Manchester**

was transferred to a new charitable company called Lincoln Student Solutions Limited (LSL). The company is jointly owned by the university, Sanctuary Housing Association and the Bank of Scotland.

The contract is expected to run for 35 years. In return for transferring the residences to LSL, the university will forgo the rents for the premises but will receive an upfront premium of £30 million. At the end of the period, the residences will return to the university.

Ball says the funds will be used to reduce Lincoln's exposure to loans, enabling it to commit to new building projects such as a student centre being created in a former railway engine shed. An added bonus, he says, would be a £1 million environmental improvement scheme.

But Manchester University remains to be convinced by leaseback schemes. It says it has the largest number of places in university-owned accommodation in the UK, with more than 9,000 in halls of residence. Helen McGlasham, head of the accommodation office, says that although some halls were leased from the private sector, all were managed by the university.

"We feel this is the only way we can continue to provide students with a first-class service," she says. ●

## on the spaces to make things happen

staff who do not want the inconvenience of reduced or more effective energy use. Students have far more electrical equipment in their rooms than they had 15 years ago. Similarly, their expectation is

matched by a cultural shift from reliance on the car.

Renewables are a requirement of building regulations, but the town planners may object to the installation of wind

measures in place that eliminate the need for firefighters to enter a building, but they also require staff to ensure that buildings are empty in an emergency.

Managing a university estate is a fascinating job that demands a variety of skills and abilities. The common factor is the desire to create a safe, attractive, sustainable and stimulating environment in which students learn and academics teach and research. Some years ago, it was suggested that estate management was not a core function of a university. But the physical environment in which learning is undertaken is so fundamental to the process that this suggestion no longer holds true. ●

**'Renewables are a requirement of building regulations, but the town planners may object to the installation of wind turbines'**

of a 24-hour-a-day society with access to all buildings, which must be heated and lit, and an extended day for eating and drinking. It has been estimated that carbon dioxide emissions for the sector equate to 1 tonne per full-time student a year.

The tension between sustainability and the service and comfort society demands is apparent. An acknowledgement that there are too many vehicles on the roads is not

turbines or other renewable energy devices that are too visible. The modern estate management operation is faced with a plethora of legislation, which too often has contradictory aims. Many universities installed automatic doors to comply with the Disability Discrimination Act, but their use means a marked increase in energy bills because of heat loss. Fire risk assessments under the Regulatory Reform Act require

**Peter Kerr is director of estates and building services, Heriot-Watt University.**

## ▶ TWO DAYS IN THE LIFE

# Go for that wow factor...

...but does good design have to break the bank? wonders UCE estates director Graham Rhodes, as he battles with budgets, builders and casts an eye over a blueprint or two

### FEBRUARY 12, 2007

#### 9am–11am

It's a mid-year budget review with the vice-chancellor next week. He is looking for efficiency savings and a three-year strategic plan. So it's brainstorming with my finance manager and assistant directors. One option is to tough it out and claim that no savings are possible, but that does not seem a good career move.

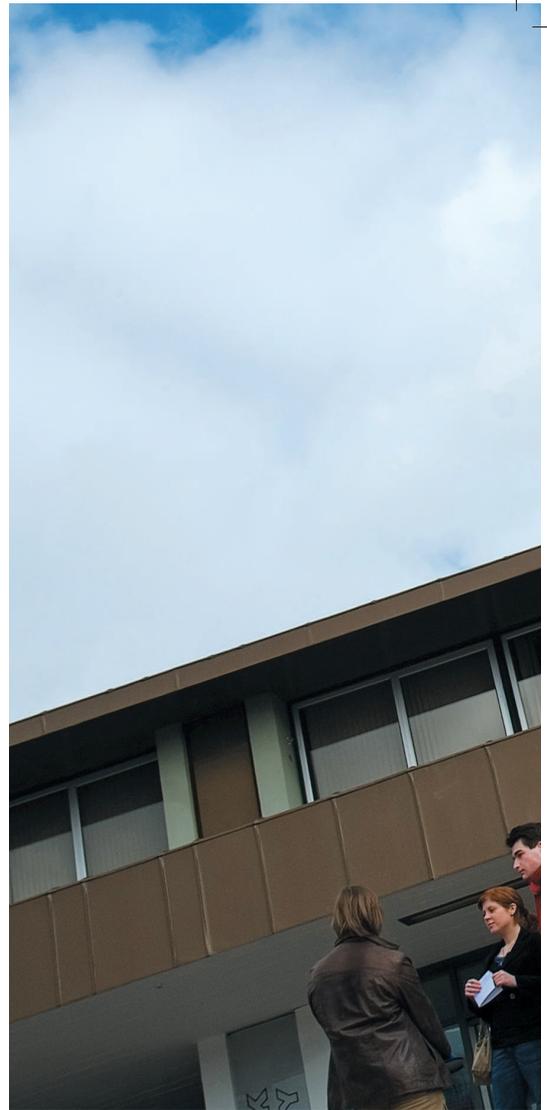
After discussion, I make some hard decisions and can go into the meeting offering a 2.5 per cent revenue saving. There are glum faces as some pet projects and purchases go on the back burner. But the three-year strategic plan was a real team effort and contains 13 points. I just hope the vice-chancellor is convinced.

#### 2pm–3pm

Meeting with our lawyers to confirm that the building contract can deal with the poor performance of the contractor on a major project. The contractor has led us a merry dance, promising to deal with a list of defects but failing miserably. It turns out we can have the main contractor off site while another completes the job. This is when you appreciate your lawyer, even if that short meeting probably cost £500.

#### 5.30pm–7pm

We are keen to establish a new campus in the city centre, but we need the support of the council and the regional development agency to secure land. The pro vice-chancellor and I attend an evening meeting at the council offices to convince that them



we are perfectly placed to bring life to the Eastside urban regeneration area. The meeting goes better than expected.

### FEBRUARY 13, 2007

#### 10am–11am

I receive two impressive A3 documents, feasibility studies on refurbishment

## Find a partner: join a carbon dating

**Universities keen to cut their carbon footprint can join a consortium that will help them to minimise their energy costs.**

**Andrew Fields explains**

THE GOVERNMENT'S 2006 climate change programme put the spotlight on universities in the battle to combat greenhouse emissions and reduce consumption. Each year the sector uses 5.2 billion kWh of energy at a cost of more than £200 million, and the programme identified universities as

critical in the process of achieving the national goal of reducing carbon dioxide emissions by 20 per cent below 1990 levels by 2010 and by 60 per cent by 2050.

University managers are increasingly aware that they need to take account of energy issues: the 2005 instability in crude oil and gas markets saw to that. They are also quick to take up renewable energy sources. Many universities and colleges purchase a proportion of their electricity requirements from renewables.

The Energy Consortium (TEC) is a not-for-profit organisation with 160 universities and colleges in membership. It was founded at the end of 1989 in response to the privatisation of the energy markets with the aim of helping members cope with the

increasing challenges of the energy market, assisting with low-cost energy procurement and ensuring that activities are compliant with public sector and European Union procurement needs. It was initially supported by member subscriptions, but in 1999 an additional income stream from commissions paid by suppliers who won tenders from universities was adopted. The consortium converted to not-for-profit company status in 2002.

The process is based on managing tenders for individual member universities. Kevin Doyle, TEC chief executive, says: "We go through EU tendering processes and operate within a supplier framework agreement."

TEC has commissioned energy market



ROY KILCULLEN

projects. The brief specified minimal costs. The architect's design ticked all the right boxes, the images and perspectives looked fantastic — but the price! Architects always tell you that good design does not need to break the bank, then offer you one that does. But I am going to stick my neck out

and support it. It's worth it to get the wow factor these buildings desperately need.

#### 11.30am–12.30pm

The regional meeting of the Association of University Directors of Estates is at the end of March, and it's my turn to host. These experts will be eyeing up our buildings,

## ESTATES ●●●●●

making mental notes of the chips on the woodwork, the dripping tap and the loose paving slab. And I need to entertain them.

The last meeting was at Oxford and we did a tour of the Bodleian Library. How do you compete with that? I am panicking, and my PA senses I need help. Within two hours, Mina has sorted it. Even I'm looking forward to it — a tour of the Eastside, the city's biggest physical regeneration project, then lunch and the business meeting in university's Technology Innovation Centre at Millennium Point, an iconic Nicholas Grimshaw building. I shall feel no shame in the illustrious company of my colleagues from Warwick, Birmingham and Oxford.

#### 2.30pm–4.30 pm

A first meeting of a Bicycle Users Group, or BUG, then a meeting of the Smoking Policy Group. So, support for the healthy lot and then the unhealthy lot. The BUG meeting is chaired by my assistant director, a keen cyclist.

Next I join the director of human resources and the health and safety officer to consider how we deal with smokers. We have a total ban on smoking in buildings, but the huddle of staff in doorways has raised complaints from nearby offices and from visitors. There is no quick fix. We recommend a dual approach: to provide smoking shelters and a "quit smoking" support programme. We also propose a 5m no-smoking zone around doorways. ●

**Graham Rhodes is director of estates, University of Central England.**

## agency that makes a difference

analysts Utylix to assist it to put each member's requirements out to tender.

Doyle says: "Most contracts in the sector are currently fixed price and fixed term. However, TEC is developing new forms of contract that will offer alternative methods of dealing in the energy markets." The consortium is in the process of rolling out the idea to the sector. TEC will advise on day-to-day purchases or when to take steps to head off the effects of a rising market.

Renewable energy sources and sustainable development are no longer at the opposite end of the spectrum from energy efficiency and careful cost control: the magnitude of climate change has converged with soaring energy costs and doubts over continuity of supply.

The consensus among senior managers in the sector seems to be that green alternatives are more costly than conventional methods of supply. Carbon trading has until now been required for only a small number of the largest universities. But that is set to change. The first phase of the EU Emission Trading Scheme runs from 2005 to 2007. It set a threshold of sites with boilers of 20MWth input capacity and requires monitoring of all gas and oil use — and the trading of emissions allowances.

Some 40 universities fell into the scope of the scheme: 32, with 34 sites, joined a group brought together by TEC. In 2005-06, the group exceeded the emissions limit by 2.3 per cent, 16 per cent less

than the average. But consultations have just ended on a more rigorous regime for carbon trading. Two options were included in the process: voluntary reporting and benchmarking of energy performance, and an energy performance commitment.

Informed opinion suggests that as the voluntary scheme would be difficult to administer, the energy performance commitment is more likely to proceed from 2009. Its 3,000MW a year electricity consumption threshold would, if proposals are implemented, capture most universities and many colleges. Once the threshold is reached, all electricity, gas and oil will have to be monitored. ●

[www.tec.bham.ac.uk](http://www.tec.bham.ac.uk)



# STRATEGIC ESTATE SOLUTIONS



GVA Grimley has over 20 years experience in providing advice to Higher Education institutions during which time we have advised over two thirds of the sector. We are committed to providing strategic sustainable advice, and our service offer includes the following:

- Estates Strategy
- Space Needs Assessment
- Student Residential Operation/Procurement/Disposal/Acquisition
- Capital Projects
- Development Management
- Investment Advice
- Sustainability Advice
- Town Planning

Paul Watson, Partner  
London 020 7911 2290  
paul.watson@gvagrimley.co.uk

0870 900 89 90  
[www.gvagrimley.co.uk](http://www.gvagrimley.co.uk)