



The
University
Of
Sheffield.

Estates &
Facilities
Management.

Estates Strategy 2010–2015.

January 2011



Contents



Above:

Soundhouse in foreground looking over to **Jessop Victorian Building**

Left:

Aerial shot of campus

Cover photo:

Firth Court

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1 Foreword by the Registrar & Secretary

The University of Sheffield's estate is a key resource that needs to be well planned, managed and continually improved in order to support the achievement of our academic priorities in teaching and learning, research and knowledge exchange. Providing a high quality learning and research environment fit for purpose for a world leading Research University in the 21st century is an essential component of the University's Strategic Plan to 2015; one which aims to give students an outstanding educational and social experience, and staff the facilities they need to work creatively and effectively.

The University's estate comprises 340,000m² of buildings and infrastructure across an area of 40 hectares, set mainly in the area west of Sheffield's central business district. The University also has a significant presence on the Advanced Manufacturing Park in Rotherham where substantial capital investment has taken place over the last five years, with further investments planned, to house world-leading research and knowledge transfer in advanced manufacturing.

The challenges facing the University are many and varied. Over the next five years the University will continue to grow its activities. Expansion is occurring differentially in response to strong demand from students, industry, sponsors and other organisations with whom we are developing partnerships. It is very likely that governmental funding support to universities for capital and infrastructure will be heavily constrained over the planning period to 2015. In this context, the University's response set out here in the Estates Strategy is to establish clear priorities in line with its academic objectives, obtain best value from a wide range of investment sources, continue to press downwards on our operating costs, and keep our plans within the bounds of what is affordable and realistic.

In particular the Estates Strategy includes a focus on:

- Improvements to the general estate condition in order that the physical environment, buildings, services and public realm can continue to support world class teaching and research.
- An absolute reduction in the University's carbon footprint in order to meet the institution's Corporate and Social Responsibility agenda as well as our legal obligations associated with the Climate Change Act 2008.

- Improvements to our use of the estate resource so that we maximize the efficiency of the estate and reduce our operating costs.
- Provision for targeted growth in student numbers and research activity through a combination of investment and improvement in our efficiency.

Since the start of the new century, the University of Sheffield has completed a number of signature, iconic and innovative spaces that have attracted international attention, buildings such as Jessop West for Arts and Humanities and the Information Commons. Recently major renovation and refurbishment of landmark buildings in the city such as the Western Bank Library and the Arts Tower have similarly received widespread acclaim for the quality of the restoration work and the sympathetic treatment of our urban heritage. Building on these successes, our aim is to enhance our remaining estate and the city landscape with investment in a mixture of appropriate new development and refurbishment of legacy buildings.

The Estates Strategy is designed to set out clearly and concisely the key issues we will address over the next five years as part of our longer term development of the estate in order that the University can continue to build on its success. The Estates Strategy will be used to inform our investment appraisals and ongoing development. I should like to thank all those colleagues on the University Executive Board and the professionals working within Estates and Facilities Management and other services for their commitment and energy in drawing up and implementing a strategy that I am confident will meet the needs of the whole University community and its partners in the coming months and years ahead.



Dr Philip K Harvey
Registrar & Secretary

January 2011

2 Executive Summary

2.1 Vision

This Estates Strategy sets out the vision for the University estate through to 2015. It builds upon the previous strategy from 2007 and the development framework of 2003. The time span of the strategy is designed to address the challenges facing the University and its estate over the next five years. The strategy also considers the next tranche of government funding for capital investment which covers the period to 2014, should this allocation be realised. The strategy is designed to support the academic planning horizon to 2015.

2.2 Academic Strategy

The University's academic strategy continues to focus on quality and growth. Home undergraduate students' numbers have been constrained by government caps, however the University has been successful in attracting increases in post graduate taught and post graduate research students. The University is pursuing growth in overseas undergraduate students, particularly in the faculties of Engineering and Science, where demand continues to grow. (see appendix IV tables 1 and 2).

2.3 Carbon Management

The future direction of the estate is strongly influenced by the growing and urgent need to reduce our impact on the environment and in particular to reduce our CO₂ emissions in response to climate change. This strategy is intended to focus the emphasis on efficient use of the University estate, with investment to refurbish existing accommodation representing a key tenet of investment. This approach will deliver improvement in space utilisation, environmental performance and will reduce CO₂ emissions wherever possible.

2.4 Condition

The condition of the estate has improved significantly over the last two years. A total of 56 per cent of the occupied non-residential space is now in good or excellent condition (category A/B). The emphasis on refurbishment of existing accommodation rather than new build will continue this trend. The University aims to have at least 65 per cent of occupied non residential space in good or excellent condition by 2015, with ongoing investment to address all areas of poor quality estate over a longer period.

2.5 Efficient and Effective Estate

The achievement of expansion in student numbers will place changing and increasing demands on the physical estate which will require new ways of working to deliver increasingly efficient use of space. In particular, the number and capacity of teaching spaces to support large cohort teaching to undergraduate students is being explored alongside changes to the delivery of the teaching timetable.



3 The Faculties

- 3.1 A major feature of the strategy is the refurbishment of the St George's campus for the Faculty of **Engineering**. The Engineering estate based in the central campus has not received significant new investment for many years and the condition is generally below the University average.

Work is under way to produce a comprehensive development framework for the Engineering Faculty. This framework will review and quantify the space requirements and propose a phased development in line with the Faculty's academic strategy.

Indications are that phase one of this development framework will recommend a new building on the Newcastle Street/Broad Lane corner of the St George's Complex and phase two a major refurbishment of the Mining Block, with further expansion at Jessop East necessary to support Faculty growth.

Expansion of Engineering at the Advanced Manufacturing Research Centre continues. Government funding to support a Nuclear Advanced Manufacturing Research Centre, which will carry out research to support development of UK's Civil Nuclear Power Industry is committed and the project started on site in September 2010.

- 3.2 The Faculty of **Social Sciences** faces two major issues. The Faculty has the most geographically dispersed portfolio of buildings. In addition, growth in the Management School, which has increased in size and reputation in recent years, is now constrained by accommodation pressures. The Faculty is exploring options to relocate the Management School, which is intended to move to the Crookesmoor site. This option will provide the Faculty with the space it requires and release the current Management School building for the consolidation of a number of other departments.

- 3.3 The estates portfolio of the Faculty of **Science** is generally very good in terms of condition and functional suitability. The Faculty has identified an opportunity to reduce its overall space requirement via the relocation of the department of Psychology. This project is currently at the feasibility/option appraisal stage.

- 3.4 The estates portfolio of the Faculty of **Medicine, Dentistry and Health** is the highest quality of all the faculties, with more than 95 per cent in condition A/B and more than 80 per cent receiving high functional suitability rating of 1–2. To retain its position as a leading provider of medical training, the Faculty has developed detailed plans to invest in a Clinical Skills Training facility at the Northern General Hospital. To facilitate this, plans are being prepared to relocate Nursing, which is based at the Northern General Hospital, to a central location close to the Royal Hallamshire Hospital.

- 3.5 The Faculty of **Arts and Humanities** has received significant investment during a previous SRIF funding round, with the development and occupation of Jessop West, resulting in an estate of high quality and good functional suitability. Opportunities to improve access to the number of seminar rooms available for small group work are being reviewed.

Left:

Crookesmoor Building

Redevelopment potential for the Management School





4 Learning and Teaching Support

- 4.1 In Learning and Teaching there are three main development areas for the physical estate. In certain subject areas, there is a need to break down large lecture groups into smaller units to enhance student centred learning activities resulting in an increased demand for small seminar space. Options for the creation/reconfiguration of seminar space are currently being explored.
- 4.2 Teaching changes in Science and Engineering resulting from a planned increase in cohort sizes has presented challenges to deliver large group teaching in available lecture theatres. A review of the utilisation of large lecture spaces is under way to ensure their efficient use and to consider the potential need to develop more of these facilities.
- 4.3 Usage of existing large lecture theatres is currently high although utilisation figures vary. Options under consideration to meet this increased demand include extending the length of the teaching day, as well as new build of medium size teaching accommodation to free up larger spaces. In addition consideration is being given to optimising the use of technology to record lectures for broadcast at different times or simultaneously in different locations.
- 4.4 The University currently offers a range of personalised assistance services to students requiring extra support in Maths, Statistics and English Language. A business case to co-locate these departments within a single location is being developed. The development of a single centre, to provide learning support and skills development through a single access point for students with multiple additional needs.
- 4.5 The huge success of the Information Commons development to provide space for informal and blended learning means that the building is frequently at capacity during particular times of the week. There is a specific business need to support students to add a third phase providing between 300 and 400 additional study spaces.

Left:

Information Commons

Above:

Lecture Theatre B25, School of Clinical Dentistry

5 Professional Services

- 5.1 The **Professional Services** departments currently occupy a range of properties across a number of different locations. The University has recently approved a plan to consolidate Professional Services/support activities into the Arts Tower. This development allows significant space reductions. The partial change of use of the Arts Tower will address operational difficulties associated with high student footfall. Various street properties will be available for release back to freeholders, reducing the size of the estate and associated revenue costs. Some residual properties are being considered for refurbishment/disposal.
- 5.2 Consolidation of Professional Services in the Arts Tower will release space in New Spring House which will permit further centralisation for the Academic Services at this central location.
- 5.3 Following the redevelopment of the Ranmoor and Endcliffe residential sites in partnership with Catalyst Higher Education (Sheffield) plc, the quality of residential accommodation offered to students has improved markedly. More than 75 per cent of the accommodation is now en-suite in line with current demands. Investment is now required in the remainder of the retained property portfolio which is generally in relatively poor condition. Demand for residential accommodation remains high and investment will help ensure student needs continue to be met and protect and improve revenues.
- 5.4 The development of a social and commercial hub centred on the existing Students' Union building and University House has commenced and focused our plans relating to this aspect of enhancing the student experience. Phase one completed during summer 2010 has improved the links between the two buildings and opened up significant new social space. Further work is progressing to redefine and reinvigorate the role of University House and the Octagon.
- 5.5 The current commercial offer across the University consists of a range of operations in a number of central and outlying locations, with quality and access central to success. The commercial offer will be reviewed/redeveloped at sites which are currently proving commercially challenging to maintain.
- 5.6 The University continues to support development around the three main areas of St George's, Western Bank and the Royal Hallamshire Hospital. Opportunities to infill development areas along the core via the Information Commons and Jessop West developments have been exploited, with further opportunities available in the future. This is consistent with the development framework of 2003 and will continue to enhance the central campus hub.
- 5.7 Less successful has been the development of a single identity for the public realm. There is now a pressing need for investment to address this issue and create a greater sense of campus identity. The area between the Students' Union and the Arts Tower, known as the Concourse is a key public space. Future development plans for the campus will include the upgrading of the public realm within this area as a priority. It is anticipated that the project plan to redevelop University House will incorporate plans for the Concourse, unless this can be progressed in advance.
- Two significant development sites have been retained. Jessop East is being considered as a development option for part of the Engineering development framework together with generic teaching facilities. The area bounded by Favell Road/Hounsfield Road and Upper Hanover Street could provide enhancement to the central campus site when the various poor quality University buildings in this area are removed. This area is referred to as the Favell/Hounsfield Quarter. Together with the Concourse and Jessop West, a high quality public realm could be created between these areas linked through the 'central spine' of the campus. Developing the Favell/Hounsfield Quarter would transform the campus creating a coherent high quality pedestrian link at the heart of the campus.



6 Infrastructure and Environment

- 6.1 Across the University there is a continuing need to invest in the underlying infrastructure of the estate. The key investment areas are: building maintenance to protect and preserve the existing building fabric; further investment to replace the high voltage infrastructure to ensure the system is robust and continues to match demand; and additional investment in building control systems to control energy consumption and costs.
- 6.2 A review of the estates infrastructure has been undertaken and areas for continued investment include: meeting statutory requirements (which will be ongoing), mechanical and electrical plant and equipment as well as business continuity risk investments.

7 Capital Project Pipeline

- 7.1 The purpose of this Estates Strategy is in part to inform the development of a capital programme starting in April 2011. The plan is being developed to dovetail with the strategic aims of the University as set out in the University's Strategic Plan to 2015. The proposals are being developed within detailed business cases.
- 7.2 Details of the final value of the next tranche of government funding covering the period 2011–2014 are expected early in 2011. The option to borrow funds commercially to supplement any funding gap remains and it is anticipated that this option will be explored at the appropriate time.

Above:

Substation, Alfred Denny Building

Internal workings of the Alfred Denny Substation on the University Concourse

8 Carbon Strategy and Space Utilisation

- 8.1 The University is fully committed to reducing carbon emissions and has developed a Carbon Management Plan in conjunction with the Carbon Trust. Targets for carbon emissions reduction have changed substantially since the Plan was developed and include the enactment of the Climate Change Act 2008 and the carbon targets set by HEFCE in 2010.
- 8.2 The target is to reduce our Scope 1 and 2 emissions (locally produced carbon such as heating/fuel and electricity generation) by 34 per cent from 2005 levels by 2020: the intermediate milestones are as follows:

	tCO ₂
2005 baseline	33,871
2008–9 actual	42,000
2012 milestone (-20 per cent on 2005)	27,000
2017 milestone (-35 per cent on 2005)	22,000
2020 target (-48 per cent on 2005)	17,600

- 8.3 Progress from 2012 onwards will depend on further investment, behaviour change initiatives and reductions in the space envelope. The University is also actively investigating various energy-generation options including biomass Combined Heat and Power and wind generation (increasing the 500kW capacity already installed to 1.8MW).

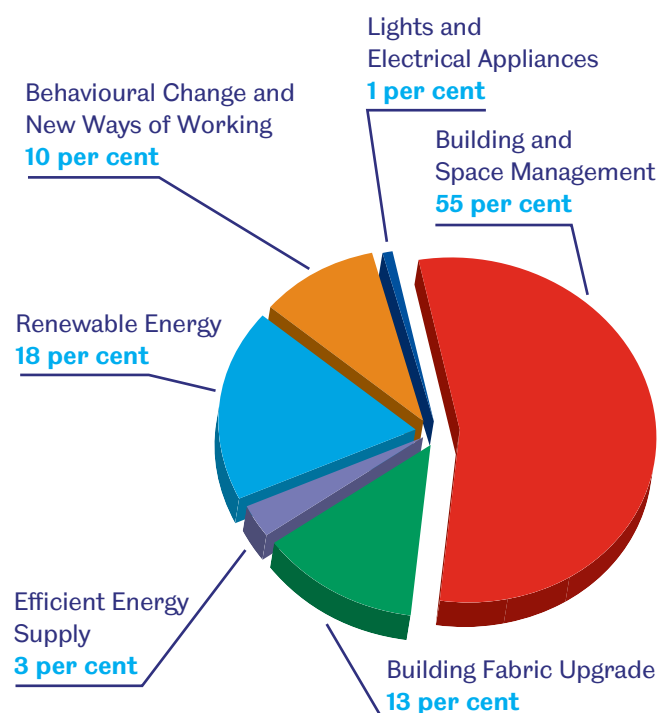
8.4 Carbon and Space Management

There is a strong correlation between carbon emissions and effective space management. HEFCE have undertaken a wide ranging study of the carbon emissions within the Higher Education Sector and the activities which can be deployed in order to reduce carbon. It is important to understand the relationship between the various moderating factors and in particular the importance of managing space.

The table below shows that 55 per cent of carbon emissions are associated with buildings and space management. Effective use of space is an essential component of the University's carbon management strategy as well as ensuring estate investment is correctly targeted.

Table 1: Abatement potential of interventions for the HE sector to reduce scope 1 and 2 emissions

HE Sector Totals



Reference: HEFCE Consultation on a carbon reduction target and strategy for higher education in England 2009/27

This Estates Strategy clearly identifies building fabric upgrades as a key objective. As a consequence this improvement to the estate represents an opportunity to reduce our carbon footprint. In addition greater improvements can and will be achieved in the next five years to increase the amount of renewable energy available at the University. Investing in renewable technologies has the opportunity of reducing carbon by approximately 18 per cent as indicated by the HEFCE analysis. The University has made good progress with the introduction of two wind turbines. However more can be achieved.

Finally, behavioural change and new ways of working are identified as providing a potential for up to 10 per cent carbon reduction. In order to achieve this, the Energy and Environment Team within Estates and Facilities Management (EFM) will undertake a range of activities to engage staff, students and visitors to support the aims and objectives within the University's corporate and social responsibility strategy and carbon reduction targets.

Work to translate the potential interventions to reduce carbon is under way. A revised Carbon Management Plan will be developed, informed by the Estates Strategy, Property Strategy, Energy Strategy and investments in renewable energy.

Right:

Sheffield Solar Farm



9 Property Strategy

Changes will occur as a necessary response to the reconfiguration and rationalisation of the University estate. A detailed property strategy will be developed to support the reconfiguration of the estate, and in response to the developments as these are progressed through the business planning cycle.

Three main development sites are available for the University to utilise, forming a development ribbon. From East to West these comprise:

- Jessop East
- Favell/Hounsfield Quarter
- Durham Road

The potential to create a uniform public realm along the central spine of the campus will bring many benefits. The poor quality buildings within the Favell/Hounsfield Quarter will be removed. A large development site will be created providing an opportunity for outdoor social space as well as further building development.

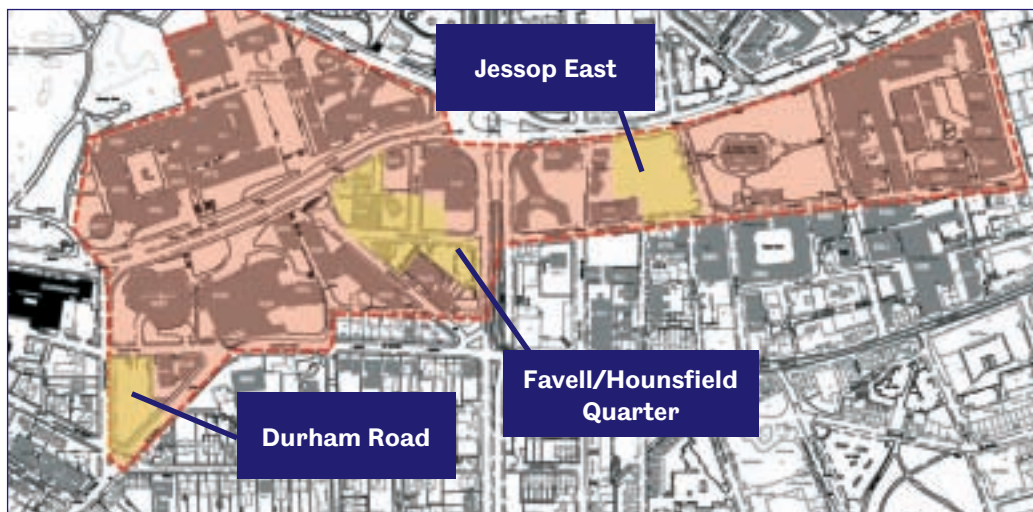
The opportunity to harmonise the public realm from Bolsover Street to the North of the Arts Tower, through the central Concourse, through Favell/Hounsfield Quarter to Upper Hanover Street, will deliver a significant improvement to the campus.

The Property Strategy will be informed by the Faculty Estates Strategies. There are however a number of principles which the strategy will adopt.

- Leased properties can be released back to freeholders.
- Reconfiguration of services into functionally suitable accommodation.
- Disposal of smaller accommodation either by sale or demolition if this facilitates more strategic development to take place.
- Overall reduction in footprint whilst simultaneously improving effectiveness and efficiency of the built environment.

In 2003 the Estates Development Framework determined the need to concentrate activity within the central campus. Much of this consolidation has occurred, with disposal of outlying properties. The University is currently developing a master plan to communicate and deliver this Estates Strategy, which will include detailed proposals regarding the property portfolio. The principles of the master plan will build upon the development opportunities described earlier.

Development Site Opportunities



Area within dotted line
"Central Spine"

10 Condition and Functional Suitability

10.1 The 2007/08 TRAC group survey undertaken by HEFCE highlighted the following data for the University of Sheffield peer group.

10.2

	25% quartile	Median	The University of Sheffield
% of GIA (gross internal area) in condition A and B	85%	78%	44%
% of GIA with good functional suitability (grades 1 and 2)	90%	79%	79%

10.3 In a response to HEFCE in March 2010, the University articulated the current capital programme which would improve the proportion of buildings in condition A/B from 44 per cent to 60 per cent by 2010/11 (56 per cent by 2009/10). The University further committed to a target performance of a minimum 65 per cent in condition A/B by 2016.

10.4 In terms of functional suitability, the University currently has an estate of good suitability. The University further committed to HEFCE an improvement to 85 per cent by 2016.



Above: Research lab, SITraN

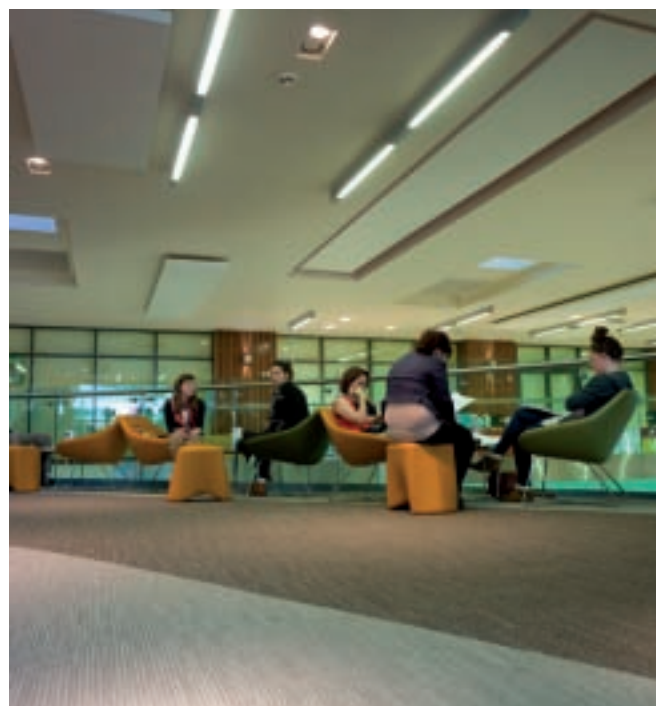
11 Space Utilisation

11.1 The 2008/09 TRAC group survey undertaken by HEFCE identified Gross Internal Area (GIA) per full time equivalent (FTE) as a key metric for the purposes of institution comparison. The University of Sheffield compares well to its Russell Group peers. Across all Institutions Sheffield outturns at or around the mean average, although some Institutions significantly out perform others within the sector.

The University Executive Board is committed to further improvement in space utilisation and efficiency.

11.2

	Mean Average	Median	The University of Sheffield
GIA per FTE Russell Group	19.57	17.84	16.7
All Universities	17.7	17.84	16.7



Above: Students' Union

12 Travel and Access

A key tenet of the University's development is our ability to ensure that we maintain a sustainable travel plan for staff, students and visitors. The University continues to develop its estate and the need to ensure that travel and access is fully considered is an essential part of our future development. The integrated Transport Policy approved in 2005 remains current, and in particular, the University's promotion of sustainable travel. Continued investment in facilities and revenue support mechanisms will be maintained in order that sustainable travel can continue to be promoted.

Business cases will fully consider travel and access issues. It is essential to ensure that where delivery of business activities requires car access this will be fully considered and balanced against the University's promotion of more sustainable means of travel.



13 Key Performance Indicators

13.1 The following Estates and Infrastructure KPIs have been defined as part of a wider set of KPIs for the whole University.

13.2

	Actual 2008/9	Target 2014/15
Percentage of buildings in category A and B (gross internal area non-residential)	56%	65%
Ratio of maintenance capital expenditure to insurance replacement value (IRV)	3.7%	4.5%
Carbon Emissions (tonnes)	42,000 MtCO ₂	24,000 MtCO ₂

The Key Performance Indicators above highlight some of the challenges facing the University. Whilst progress has been made, improving the condition of the University estate is essential.

The Faculty Estate Strategies support this process of renewal with substantial elements of investment focused on refurbishment.

The need to reduce carbon emissions in real terms will be challenging. Developing our Environmental Controls project, together with a University Energy Strategy and refreshed Carbon Management Plan will direct our efforts and resources to achieving these goals.

Left:

Bicycle park, SITraN

Right:

Jessop West

14 Faculty Estate Strategies

14.1 The Faculty Estate Strategies were developed during 2010.

15 Faculty of Arts and Humanities

The Faculty of Arts and Humanities encompasses the departments of Archaeology, Biblical Studies, History, Philosophy, Music, the School of English Literature, Language and Linguistics and the SoMLaL (School of Modern Languages and Linguistics).

2009 saw major changes to the Faculty's estate with six of seven departments moving to new or refurbished accommodation, with only Archaeology remaining in its previous location. The Faculty is now located predominantly within the Jessop area and is the prime tenant of the flagship Jessop West Development.

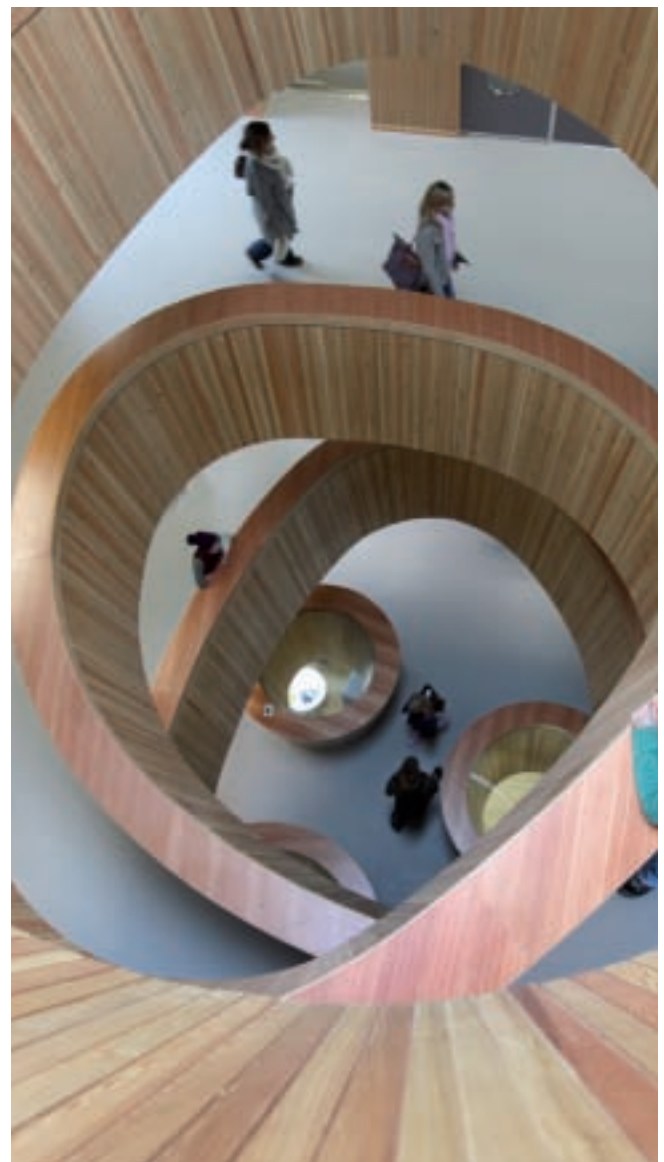
15.1 Assessment of the current estate

Key Metrics	Current	Planned
Space	12,000m ²	No changes planned
Functional suitability	95%	Maintain
Condition	90% A or B	Maintain

15.2 Developments

1. Drama is an area which has expanded recently and a new single honours degree will require additional workshop space from September 2011. Potential solutions include:
 - a. Consideration of greater integration of management of the theatre workshop.
 - b. Greater use of the drama studio site.
2. It is planned to consolidate and grow postgraduate and research support in the Humanities Research Institute (HRI) and in Northgate House for the department of Archaeology.

3. Improvements of laboratory facilities within the existing Archaeology footprint are planned.
4. The development of the HRI's facilities to support increased research and PG teaching in the digital humanities will continue to be a priority.
5. Reduce the footprint at Portobello by moving staff in the Modern Languages Teaching Centre into Jessop West, in line with the recommendations of the MLTC (Modern Languages Teaching Centre) review.





16 Faculty of Engineering

The Faculty of Engineering encompasses the departments of: Automatic Control and Systems Engineering, Civil and Structural Engineering, Chemical and Biological Engineering, Computer Science, Electronic and Electrical Engineering, Materials Science and Engineering, Mechanical Engineering.

The Faculty of Engineering intends to maintain its standing as one of the leading engineering faculties in the UK and amongst the best in the world. It plans to work across the full spectrum from fundamental science to professional practice. It foresees that, in order to achieve this vision, it will need to focus effort on assisting all of its departments to grow and enhance their positions as leaders in their disciplines. It will continue to support existing research strengths (but also invest in aerospace, energy and the life sciences) and maximise benefits from knowledge transfer opportunities. It will further prepare engineering students for professional practice – and in doing so assist students to engage in multidisciplinary teams and study beyond their home department.

16.1 Assessment of the current estate

The Faculty of Engineering occupies some of the poorest quality estate in the University. Plans have been developed to expand and build on the success of the Faculty which have major implications for the estate.

Key Metrics	Current	Planned
Space	60,000m ²	Significant increase required
Functional suitability	70% suitable	+90%
Condition	28% A or B	+65%

16.2 Developments

1. The longer term needs are being considered via the Engineering Estates Development Framework project which covers needs over five to 15 years.
2. Increase in the number of PGT students will create a need for larger 100+ block bookable lecture rooms.
3. The planned increases in PGR and in PGT will necessitate additional research space. Projections suggest additional needs in the region of 1,800m².
4. Teaching growing numbers of students with greater efficiency requires the provision of an IT suite capable of accommodating up to 150 students. Internal space reconfiguration is planned to achieve this, although some twin location teaching will remain.
5. As part of greater teaching efficiency, three large teaching labs are needed to enable teaching of core subjects to students from multiple departments. Plans are under development for a fluid mechanics laboratory, materials laboratory and controls teaching laboratory.
6. As cohort sizes increase, there will be greater demand on lecture theatres capable of seating up to 375 students.

Left:

AMRC Factory of the Future





Main:

Jessop West Café

Clockwise from top left:

Plant room, School of Clinical Dentistry

Auditorium, Richard Roberts Building

Social/Study space, Students' Union

Substation, University Concourse

Samuel Fox House

Information Commons

ICOSS Building



17 Faculty of Medicine, Dentistry and Health

The Faculty of Medicine, Dentistry and Health is made up of nine departments over 15 sites. Predominately located within the vicinity of the Royal Hallamshire Hospital, the other main site is at the Northern General Hospital.

The Faculty has recently opened the Sheffield Institute for Translational Neuroscience (SITraN) facility, the funding for which has been supported mostly by third party donations. The facility is the first of its kind in the world to bring together the University's knowledge and resources in the fight against neurodegenerative diseases such as Motor Neurone Disease.

17.1 Assessment of the current estate

Key Metrics	Current	Planned
Space	46,800m ²	Small expansion associated with the development of a Faculty office
Functional suitability	95% suitable	Maintain current suitability
Condition	95% A or B	Maintain condition

Left:
Main computer centre, SITraN

Right:
School of Clinical Dentistry

17.2 Developments

The projects plans;

1. Human Communication Science to relocate from Northumberland Road to Clarkehouse Road.
2. Faculty office to relocate from the Medical School to Clarkehouse Road.
3. Medical Student Centre to be established at the Royal Hallamshire site within the current Medicine footprint to deliver enhanced teaching and support facilities.
4. Development of a Clinical Skills Training Facility, Northern General Hospital.
5. School of Nursing to relocate to the central campus close to the Royal Hallamshire.
6. Transfer research staff to SITraN Facility.
7. The School for Health and Related Research relocation closer to healthcare facilities and to support Research and PGR/T expansion.
8. Seminar and teaching spaces are required to deliver against academic growth plans.



18 Faculty of Science

The Faculty encompasses; Animal and Plant Sciences, School of Mathematics and Statistics (SoMaS), Biomedical Science, Chemistry, Molecular Biology and Biotechnology, Physics and Astronomy and Psychology. Strategically, the Faculty plans to build on its position as a UK leader within higher education.

The Faculty has received significant levels of investment during the past five years. Through the Science Research Infrastructure Fund (SRIF) and Capital Investment Fund (CIF), the Faculty received significant government funding to renew and replace teaching and research facilities including the basic sciences facility on the Western Bank site, the Arthur Willis Centre and the refurbished Chemistry teaching lab.

18.1 Assessment of the current estate

Good functionality assessments are evident but condition improvements are required.

Key Metrics	Current	Planned
Space	40,037m ²	Smaller footprint due to consolidation of Psychology
Functional suitability	88% suitable	Maintain and improve current suitability
Condition	46% A or B	+65%

18.2 Developments

1. The Faculty is currently working to develop a large (130+) central computer room in order to teach large number of students efficiently.
2. Across research generally, the provision of laboratory and office space is satisfactory. Outdated research facilities within the Psychology department need to be replaced.
3. The Faculty is developing a new research strategy to create a Bio informatics Unit to consolidate departmental strength and grow mathematical biology, this will be achieved through reconfiguration of the existing footprint.
4. Relocate Psychology to the Bio Incubator building with some research facilities relocating to the Alfred Denny Building.



Right:

E39 teaching lab, Hadfield Building

19 Faculty of Social Sciences

The Faculty of Social Sciences encompasses a wide range of disciplines all with a strong commitment to high quality learning and teaching, and high quality research and knowledge exchange.

The Faculty encompasses the departments of: Architecture, East Asian Studies, Economics, Education, Geography, Information School, Law, Journalism, Landscape, Management School, Politics, Sociological Studies, Town and Regional Planning.

Strategically, the Faculty is seeking to build on its improving position in the front rank of UK Social Science. A key facet of the Estates Strategy linked to this aspiration is to develop a world class Management School through investment in staff and a new facility at Crookesmoor.

The Faculty has received investment in the last five years, including major investment in the form of the Arts Tower refurbishment for the School of Architecture and the Department of Landscape and some minor investment via Faculty funds.

19.1 Assessment of the current estate

Key Metrics	Current	Planned
Space	32,000m ²	Growth associated with the Management School of 500m ²
Functional suitability	80% suitable	Target improvement to 85% with Management School move
Condition	43% A or B	Target 57% plus, based on Architecture move and Management School investment

19.2 Developments

The Faculty is currently located across 19 separate buildings. Reduction in the number of buildings used would improve the quality of accommodation enhance the student experience and maximise space utilisation while allowing for income growth via additional student numbers and other activities. The Management School move to Crookesmoor will allow for some limited expansion in Mappin Street and thus further income growth in Economics, in addition to the co-location of East Asian Studies and part of Journalism.

The project plans:

1. Increased and better quality space for PGT, PGR and research associate provision in the Town and Regional Planning Building.
2. Development of a Graduate suite in Politics.
3. Refurbishment of the Bartolomé Lodge in Law is planned, in order to provide an advice centre for the public.
4. Potential refurbishment of the Mappin Building with support from overseas investment.
5. Development of the Crookesmoor Building for the Management School.

20 Learning Infrastructure

The 2007–12 Learning and Teaching Strategy articulated the over-arching need to produce graduates who demonstrate impact, excellence and distinctiveness in their chosen field. With a focus on The Sheffield Graduate, the plan highlighted a set of themes in order to focus Learning and Teaching activities.

The requirement to produce graduates with transferable skills who will successfully fit into the wider world frequently necessitates pedagogic changes. Across a number of faculties there is an identified need to break down large lecture groups into smaller units, providing enhanced student centred learning activities, more collaborative learning sessions and more inquiry based learning (blended learning).

Faculties have recognised the need to increase the efficiency of teaching at undergraduate level. Efficiency gain whilst maintaining quality is expected to result in an increase in the average size of lecture groups. There will be a concomitant increase in demand for/access to large lecture spaces which are technologically advanced.

Conversely small group seminar work is currently constrained by existing space configurations. Additionally, expansion to the Management School will create demand for higher quality space for executive education.



20.1 Assessment of the current estate

Space can be categorised by type and management as in table 1 below;

	Teaching	Self Learning
Faculty	<ul style="list-style-type: none"> Specialised lecture theatres Specialised seminar space Specialised laboratories and studios Specialised IT suites 	<ul style="list-style-type: none"> Faculty/Department open access spaces for students (eg for group work)
University	<ul style="list-style-type: none"> Pool lecture theatres Pool seminar space Pool IT suites <p><i>Specialist support services</i></p> <ul style="list-style-type: none"> Dyslexia support service English Language Teaching Centre Maths and Statistics help Modern Languages Teaching Centre 	<p><i>Individual learning space</i></p> <ul style="list-style-type: none"> Information Commons Western Bank Library St George's The Edge / The Ridge The Source Health Sciences Libraries LeTS

The need to change the management and organisation of teaching spaces will be determined by the utilisation and effectiveness of these facilities throughout the estate. A detailed analysis of space utilisation is core to informing the development plan.

The estate associated with self learning includes the Information Commons and other Library sites, (column 2 – table 1 above), and extends to over 24,000m². More than 85 per cent of the estate is in condition A/B. More than 70 per cent of the estate is classed as functionally suitable.

Right: Ideas Space, Hadfield building

The pool teaching estate, (column 1 – table 1) includes lectures theatres, seminar rooms and computer rooms. The estate extends to over 18,000m². Currently only 44 per cent of the estate is in condition A/B. Significant improvement of these facilities will need to be delivered.

20.2 Current and future requirements of the estate

It is acknowledged across the University that Faculty managed space leads to inefficiencies which will be harder to maintain in the changing financial environment.

Throughout 2010/11, faculties have continued to relinquish management of easily accessible generic teaching space to the central University pool. More than 90 per cent of generic teaching space is now under pool management. The remaining 10 per cent of space is either small-scale or in areas of restricted access.

See Appendix 1d.

Faculties retain management of specialised laboratory space and studios. **See Appendix 1c.** Work to analyse opportunities to share specialist space has started.

A Common Timetabling Project Board has been established to improve space utilisation. A pilot project with the Faculties of Engineering and Arts and Humanities has been launched, further work is required to deliver the planned success that should ensue from the introduction of centralised space planning. The aim is to continue a phased roll out with the remaining faculties in 2010/11 and 2011/12.

As illustrated by the data at Appendix 1a – 1c, the occupancy of large lecture theatres was high at more than 73 per cent during semester one 2009/10. The Faculty of Engineering and the Faculty of Science have requested improved access to this type of space. Work is ongoing to analyse utilisation, which is affected by an underprovision of the medium sized spaces.

20.3 The options to improve utilisation include:

- Ensure utilisation rates are high with the correct group sizes booked in appropriate spaces.
- Increase flexibility of current space.
- Split group lecturing to smaller groups.
- Live and concurrent satellite lecturing via video link to additional lecture theatre.
- Extend the length of the teaching day.
- Respond to unmet demand with new build facilities.

It is recognised that, in some subjects, changes in pedagogy, with a trend towards smaller group learning, has put significant pressure on small to medium sized seminar rooms and spaces. Large computer facilities as well as expansion of WiFi across the campus are a key element to delivering self managed learning spaces, and are actively being pursued.

The University currently offers personalised assistance to students requiring extra support in Maths, Statistics and English Language via:

- MaSh (Maths and Statistics help)
- ELTC (English Language Teaching Centre)
- Dyslexia support service

There is a desire to co-locate these departments within a single 'learning hub' location. This facility will be developed within an area of high student footfall to facilitate access and ease of attendance.

The completion of the Information Commons development provides world class space for student learning. This development has been hugely successful and was followed by a partial refurbishment of the Western Bank Library. The success of the Information Commons is such that the facilities are at capacity during peak periods and proposals to add a third phase providing between 300 and 400 additional spaces are being progressed.

21 Professional Services

Professional Services comprises public and student facing sections of Academic Services, Student Services, Library, Development and Alumni Relations, and External Relations alongside the supporting departments of Finance, CiCS, HR and Estates and Facilities Management.

The 2010/11 Professional Services plan articulates the continued process of alignment of the Professional Services to the University strategy. In 2010/11 the Professional Services are focused on:

- International development.
- Growing income.
- Enhancing the University's reputation.
- Delivering efficiencies.
- Progressing the new ways of working agenda.

21.1 Assessment of the current estate

The Professional Services departments currently occupy almost 70,000m² (GIA) of space across a large number of buildings. These buildings vary from the large and functional New Spring House and Brunswick Street buildings to significant numbers of small scale Victorian properties which are expensive to maintain and which offer poor functionality.

	Public/student facing	Other University Activities
1-2 Functional Suitability	<ul style="list-style-type: none"> • Careers Service • CiCS • ACS – propertywithUS 	<ul style="list-style-type: none"> • Careers Service • Estates and Facilities Management • Finance • Human Resources • External Relations • Registrar and Secretary's office • Vice Chancellor's office
3 Functional Suitability	<ul style="list-style-type: none"> • Student Services 	<ul style="list-style-type: none"> • Academic Services • Campus Services • CiCS • Student Services

21.2 Current and future requirements of the estate

A large amount of leased space is being released to freeholders as a consequence of rationalisation of the Professional Services departments.

There is a need to bring the majority of Professional Services departments together in one geographical area to facilitate the following:

- Standardisation of service quality.
- Modern working conditions in open plan areas to improve communications.
- Economies of scale via the sharing facilities.
- Release of leased properties and disposals where necessary.

Specific proposals which are being developed through the business planning cycle include:

- Reduction of and consolidation of the Student Services' Accommodation department.
- Consolidation of Professional Services departments in floors 2–8 of the newly refurbished Arts Tower.
- Brunswick Street site for use by CiCS.
- Release of rented accommodation on Glossop Road which currently houses CiCS.
- Enhancement of student facing services into University House and the Students' Union.
- Review of the Octagon Centre to support Learning and Teaching as a priority.

Above right:
Students' Union

Right:
Arts Tower



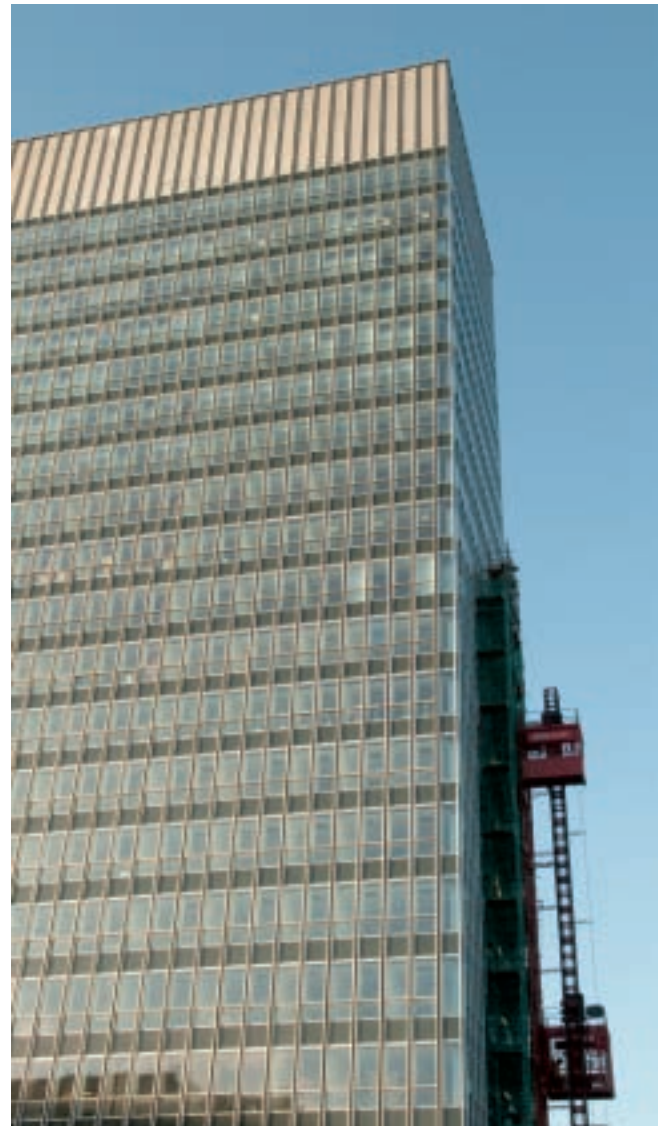
21.3 Assessment of the future estate

Key Metrics	Current	Planned
Space	70,000m ²	Reduction of minimum 10 per cent associated with space efficiencies from the Arts Tower relocation
Functional suitability	80% suitable	Significant improvements with Arts Tower relocation
Condition	44% A or B	Target greater than 65%

21.4 Capital Investment 2011–2015

Phase two of the Arts Tower has been approved and work is under way. Other projects being developed include:

- Redevelopment of Brunswick Street for CiCS.
- Reconfiguration of New Spring House for Academic Services.



22 Residential, Commercial and Infrastructure

The University has 6,300 beds available for students in an accommodation portfolio of diverse ownership and bed type. There are more than 21,000 full time students. Following the redevelopment at Endcliffe and Ranmoor more than 75 per cent of accommodation is now en suite which is in line with current demands. A 97 per cent minimum occupancy rate is planned.

22.1 Assessment of the current estate

Key Metrics	Current	Planned
Space	58,000m ² Retained space 6,000m ² is vacant	Disposal of vacant space
Functional suitability	Greater than 95% suitable	Maintain and improve
Condition	22% A or B of the University owned estate	Target greater than 65%

22.2 Current and future requirements of the estate

The redevelopment of the Ranmoor and Endcliffe site has consolidated the University's residential offer to first year undergraduates. This estate is predominantly (greater than 95 per cent) first year student occupation.

The University properties known as Delta cater for a small proportion of the second and third year undergraduates. Within the city centre Opal (Private Sector Provider) contract is popular with international students. Significant investment will be required to improve the condition of the Delta estate to meet and maintain the existing demand and protect revenues.

A separate business case is being developed which will be self financing within the property portfolio for student accommodation.

22.3 Social/commercial strategic context

The term 'Social/Commercial' is used in this report to cover the following areas;

- Catering/Retail
- Conferencing
- Ceremonial
- Performance
- Sport
- Public Realm
- Students' Union

The 2010/11 Professional Services plan articulates the continued process of review of this aspect of University activities. Phase one of the review conducted by the Russell Partnership, which undertook a general analysis of the strengths and weaknesses in this area, is now complete.

Phase two of the review will focus on;

- The working relationship between the Students' Union and Residences and Commercial Services
- The use of University House and the Octagon Centre to improve utilisation and refocus these areas on academic support and delivery
- The University's strategy for commercial conference activity.

22.4 Assessment of the existing estate

Key Metrics	Current	Planned
Space	30,000m ²	Ongoing review
Functional suitability	greater than 95% suitable	Maintain and improve
Condition	47% A or B	Target greater than 65% with improvements associated with University House



22.5 Current and future requirements of the estate

Commercial offer

The current commercial offer consists of a range of operations, both food and liquor, located within the central campus, outlying Faculty sites and residences located at The Edge and The Ridge. In 2010, significant cost improvements were achieved but the services were delivered at a loss. Work is ongoing to address these issues with estates implications to be identified.

The commercial offer in University House is currently inconsistent and difficult to access. The recently completed £5m Students' Union development has significantly improved the links between the Students' Union and University House. In Estate terms, a workstream exists to establish a clear role, purpose and function for University House.

Conferencing

With the redevelopment of Halifax Hall, and the purpose built conference facilities at The Edge and The Ridge, the University has the opportunity of becoming a leading day conference provider in the Yorkshire region.

Above:

S10health Fitness Centre

Performance

The key arenas for public performance at the University are:

- Firth Court (Hall)
- Octagon Centre
- University Drama Studio
- St George's (Mappin Hall)

Use of the Octagon is subject to the space utilisation review to ensure it contributes to the University's core academic mission.

Sport

The sporting offer at the University is managed by U Sport which has operated as a separate trading entity since 2002. U Sport generates income, but is unable to cover the full costs of operating the facilities. The existing strategy for U Sport is being reviewed both against the University objectives and the external market.

Public realm

Opportunities to address the public realm along the central spine via the Information Commons and Jessop West have been exploited. More must be done so that the quality of the built environment is reflected in public spaces.

There is now a pressing requirement for a coherent plan to:

- Create a sense of arrival at key entry points to the campus.



- Create a sense of identity along the length of the campus by developing a public realm which reflects the values and high quality facilities of the University.
- Develop public space to create a stronger central focus to the University.
- Address the poor quality of public realm within the University Concourse.

Students' Union

The Students' Union operates with leased facilities within the Graves building and the Link building. The recent partial refurbishment of this building has significantly improved service provision in these areas.

Capital investment 2011–2015

The plans for capital investment are progressing through a 'pipeline' process. This process has a number of governance gateways. Each of the proposals have been described earlier, in particular Faculty directed investments.

Infrastructure strategic context

Significant investment is required to maintain and enhance the existing infrastructure within the built environment. The emphasis is on improving functionality, efficiency and business continuity resilience and effectiveness of the estate. The drive to become more efficient will contribute significantly to our environmental agenda.

Maintenance

The relatively poor condition of the University estate was acknowledged in the 2006 Estate Strategy review. The 2007 University Estate Strategy recognised that strategic direction in estate investment had to change to one of sustainability and improved performance in existing facilities.

The 2008–11 CIF capital programme which, emerged from the 2007 Strategy, is heavily biased in favour of refurbishment works. From an overall budget envelope of £79m, 85 per cent was invested in refurbishment and energy saving projects. This investment was additional to the continuing annual repairs and maintenance investment by the University in its non-residential estate.

The current infrastructure plan anticipates that by April 2011, the proportion of buildings in condition A and B will increase from the current 44 per cent (based upon 2007/8 EMS data) to 54 per cent.

In terms of future developments, a full review of the non-residential estate capital and maintenance requirements for the period 2010/11 to 2015/16 highlights 'pipeline plans' which prioritises works to bring the percentage of our estate in condition A and B to a minimum of 65 per cent by 2015.

Above: **Endcliffe Village**



Utilities

A significant number of High Voltage (HV) upgrades have been undertaken by the University during the last five years. These include:

- Alfred Denny – replacement substation
- North Campus – replacement substation

HV upgrades to St George's and North Campus are also proposed. It is clear that significant further investment in the University electrical infrastructure is required. Approximately 20 per cent of the installed base is reaching the end of its economic life; the possibility of failures is increasingly likely.

Environmental control systems

These systems were reviewed in 2008. As a consequence it was identified that significant investment was required to:

- Increase the reliability and efficiency of some plant and equipment
- Reduce the number of failures and breakdowns of equipment
- Install improved control systems in order to monitor and more effectively control energy consumption and costs.

Investment of £5m has been made but further work is required to complete the works.

Investment in energy generation

The University will only be able to achieve its long term carbon reduction target by using electricity with a lower carbon value. The University is therefore actively investigating various generation options including biomass CHP/tri-generation and wind generation (increasing the 500kW capacity already installed to 1.8MW). To inform the options the development of a comprehensive University Energy Strategy is under way.

Statutory risk management

The legislative environment for the University estate continues to become more challenging, consequently continued investment to manage statutory risks is required. Detailed assurance management reviews are progressing to support these investment streams on a risk and business continuity basis.

Mechanical and electrical engineering plant and equipment

Much of this equipment assessed within the general building condition surveys is referred to earlier. This infrastructure presents business continuity risks which are being addressed as part of the over-arching investment strategy of refurbishment developed within the strategy.

Above: Students' Union



23 Contacts for further information

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Above:

**Plant room, Information
Commons**

Appendices I–II.

Appendix I: Learning Infrastructure Data Tables

Appendix 1a: Space utilisation data actual bookings academic year 2009–10 (includes non teaching bookings)

Pool			%	%
Pool Lecture Theatres	GIA (m ²)	Total	Semester 1	Semester 2
300+		4	73	65
150–300		14	66	62
<150		43	67	66
	6,889	61		
Pool Seminar Space				
Large 40		16	74	74
Medium 20–40		57	68	66
Small <20		29	64	69
	4,361	102		
Pool IT suites				
Perak (Science) (50–100)		1	48	48
Engineering (70–125)		1	50	50
Other		16	34	29
	2,986	18		

Appendix 1b: Space requests July 2010 re academic year 2010-11

Pool			
Pool Lecture Theatres	Hours required	Hours available (40 hrs/week)	%
300+	28	160	18
150–300	272	560	49
<150	1,319	1,720	78
Unspecified	733		
Total	2,352	2,440	
Pool Seminar Space			
Large 40	139	640	21
Medium 20–40	829	2,280	36
Small <20	2,106	1,160	181
Unspecified	631		
Total	3,705	4,080	91
Pool IT suites			
Perak (Science) (50–100)		Not available	
Engineering (70–125)		Not available	
Other		Not available	

Appendix 1c: Space usage – room survey (Monday 19 October – Friday 25 October 2009)

Pool	Weekly Hours Booked (%)	Weekly Hours Used (%)	Seat (%)
Pool Lecture Theatres			
300+	80	52	28
150–300	71	61	29
<150	72	59	25
Pool Seminar Space			
Large 40	81	64	22
Medium 20–40	74	57	27
Small <20	72	44	30
Pool IT suites			
Perak (Science) (50–100)	Not available		
Engineering (70–125)	Not available		
Other	Not available		

Appendix 1d: Pool space v departmental space

Department	Department Seats	%	Pool Seats	%	Total
Computer	746	49	777	51	1,523
Conference	150	8	1,800	92	1,950
Exhibition	180	20	730	80	910
Laboratory (T&R)	8	100	0	0	8
Laboratory (T)	2,402	100	0	0	2,402
Lecture Theatres	318	4	7,689	96	8,007
Meeting Rooms	428	67	33	33	643
Seminar Rooms	1,453	34	2,825	66	4,278
Social Space	50	49	51	41	101
Studio	227	100	0	0	227
Work room	370	79	100	21	470

Appendix II: Total Estate

1. The University currently occupies 440,267m² of space by gross internal area (GIA). This includes the residential portfolio of the University. Excluding the residential portfolio the footprint occupied is 381,327m² (GIA). Gross internal area refers to the complete footprint of all the building and includes walls, staircases and plant room. GIA is typically used when referring to building condition.
2. There are two subsets of GIA; net usable area (NUA) and net internal area (NIA). GIA is typically 6 per cent higher than NIA in order to incorporate both internal and external walls. The difference between NUA and NIA is due to the inclusion of circulation space, plant rooms and other public space in the latter. The University records 293,000m² of NUA but over 415,000m² of NIA.
3. The condition of the total estate as at March 2010 and including residential property is 47 per cent A/B with a functional suitability of 84 per cent 2–1. Excluding the residential estate the condition of the estate rises to 56 per cent A/B. Appendix III provides further breakdown of the key data items. Continued investment at levels experienced over the recent past should enable a continued improvement in condition with a target of 65 per cent by 2015.
4. Data relating to the total estate is detailed in Appendix III. Appendix IV highlights the data by the following subsets:

Faculties

Faculty of Arts and Humanities
 Faculty of Engineering
 Faculty of Medicine, Dentistry and Health
 Faculty of Science
 Faculty of Social Sciences

Support Services

Learning Infrastructure
 Professional Services
 Social/Commercial

 Residential
 Other
 Vacant
 Disposals

5. Appendix IV details the key data of space, condition and function by subset (Faculty/ Professional Services/other). A schedule exists for each subset and details key data for each of the five largest buildings and in total for that subset.
6. It is to be noted that property occupied by the Professional Services departments has been analysed separately from the property occupied by the departments associated with the learning experience, referred to as Learning Infrastructure. The most significant components of learning infrastructure are the libraries and the student support services.
7. Appendix V summarises the issues arising with the University estate, and lists the options available for their resolution.



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