

2.7

# QUEEN MARY, UNIVERSITY OF LONDON ESTATESSTRATEGY 2011-2020

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### Introduction

The period since the last Estates Strategy in 2006 has seen many changes in the international and national environment affecting higher education. The quality of the environment for teaching, learning and research is more important than ever and therefore the importance of investing in providing buildings and infrastructure of the highest quality remains a key priority for the College.

The College's estate continues to play a key role in helping it to achieve excellence in all its activities. Over the last fifteen years the College has made particularly significant investment in new buildings and in updating and improving its accommodation to match its academic success in research and teaching and its enhanced reputation. These investments have been necessitated, and made possible, by an increase in the student population from 8,200 in 1995 to over 15,000 by 2011, and in financial turnover from £116 million in 1995 to £300 million in 2011. The College aspires to provide the highest quality student experience and the Estate plays a significant role in achieving that ambition.

This Estates Strategy is the College's fourth such strategy and builds on the achievements made in the first (1995–2001), second (2002–2006) and third (2006–2015). It covers the period 2011-2020 and embodies the principles and priorities set within the College Strategic Plan (CSP) 2010-2015. The current document represents a planned revision of the third strategy, many elements of which were completed between 2006 and 2010. The Estates Strategy is designed to extend beyond the horizon of the CSP to allow for the longer planning and implementation period in the estates area.

It sets out how the College will respond to rapidly evolving academic, infrastructure and sustainability requirements. From this Estates Strategy more detailed action plans will be developed.



# The implementation of the Strategy will build on some of the award-winning developments over the last fifteen years to ensure the College's estate is fit for our research activities as well as providing the excellent facilities that are essential for student and staff recruitment and retention. This is reflected in the following eight strategic aims for the estate:

- To provide space that combines first class functional design with a distinctive and ambitious style.
- To promote and encourage the efficient and effective use of space by the College and, as appropriate, to realise its commercial potential.
- To develop and maintain an estate and infrastructure that is compliant with relevant legislation and financially and environmentally sustainable.
- To develop and implement the College's Carbon Management Implementation Plan.

- To provide a safe, secure and accessible environment on all College campuses.
- To complete agreed schemes and define a timetable for the implementation of other development proposals identified in the Estates Strategy for the period 2011-2020.
- To capture accurate and reliable information about the College's estate and develop robust processes to enable sustainable decision-making.
- To adopt an integrated approach to providing estates services to deliver them efficiently and effectively.

In realising these aims, the College will continue to work with partner organisations including the Westfield Trust, the St Bartholomew's Hospital Medical College Trust, the Wingate Foundation, the Barts and the London Charity, the NHS, Mayor's Office, local planning authorities, private sector student residential providers, and the Higher Education Funding Council for England. We are particularly grateful to these partners for their generous support and encouragement.

The vision for the estate developed here matches our achievements and ambitions for the College as a major national and international university institution. It is expected that the recent investment of over £250 million in our campuses over the last fifteen years will be matched by a similar scale of development in the period covered by this strategy. Given the fast rate of change in the UK higher education sector, this Strategy will be reviewed in 2015/16.

These recent developments have transformed our campuses and helped to make Queen Mary one of the leading centres for higher education in the capital. There is still much to do and it is our hope and intention that the next ten years will see developments at least as challenging and exciting as in the recent past.

Professor Philip Ogden, Senior Vice-Principal Simon Neale, Director of Estates June 2011

# College Strategic Plan 2010-2015

### The College Strategic Plan, published in 2010, sets out ambitious targets for the further growth of the College in both size and reputation.

The development of the estate, on all three major campuses, plays a vital role in the strategy and the plans set out here have been refined with the Vice Principals and Executive Deans of the three faculties –

Humanities & Social Sciences, Science & Engineering and Medicine & Dentistry – and with the Chief Administrative Officer with respect to the provision of professional support services. Plans for capital investment for our expanding research and teaching are co-ordinated via the annual Planning & Accountability Reviews.

#### The specific Key Performance Indicators and targets relating to the estate contained in the College Strategic Plan are:

Enabling Aims: KPI	Target
EA1.9 Reducing the carbon footprint of Queen Mary operations	- to have achieved 30 per cent of the 2020 carbon reduction plan by 2015
EA2.1 Achievement of annual operating surpluses to allow (i) maintenance of the quality of the existing estate and infrastructure, and (ii) investment in new academic initiatives, major refurbishments or new building	<ul> <li>by 2015, generate a minimum of £16m cash per annum from operations for investment purposes</li> </ul>
EA2.6 Continued development of the Queen Mary estate	<ul> <li>levels of accommodation in need of category C and D repair reduced to below 10 per cent by 2015</li> <li>new developments consistent with the achievement of Strategic Aims</li> </ul>



### Description and History of the Estate

### History and Achievements

The College's estate expanded very significantly following the merger with Westfield College in 1989 and with the Medical College of St. Bartholomew's Hospital and the Royal London Hospital Medical College in 1995. The current Queen Mary estate embraces a wide variety of buildings from the nineteenth-century listed Queens' Building at Mile End and Library at Whitechapel to ambitious new buildings such as the Blizard Institute at Whitechapel or the Westfield Student Village and the new Humanities Building (ArtsTwo) at Mile End.

A number of significant changes to the estate followed these mergers. The early 1990s saw the development on the Mile End campus of a new Arts Building, an extension to the Library, a new Catering Building and further canal-side student residences. The College then developed its first formal Estates Strategy for the period 1995–2001 and its second for 2002–2006. These strategies have been further assisted by a number of Master Plans, for example by Feilden and Mawson in 1985, by McCormack Jamieson Pritchard in 1995, and Feilden Clegg Bradley in 2003, on which much development on the Mile End Campus has been based.



The Blizard Institute of Cell and Molecular Science



Westfield Student Village



The Whitechapel Library



The Lock-keeper's Cottage Graduate Centre



# The First Strategy 1995-2001





The overriding objective of the first Estates Strategy was to rationalise and improve the estate at the Mile End Campus. The student population during this period grew from 6,400 FTEs before merger with the medical schools to c. 8,200 in 1995, rising further to 9,500 FTEs by 2002, with proportionate increases in academic and support staff.

The Strategy was designed to rationalise space through the consolidation of academic and central services accommodation. Achievements up to 2001 included:

- The consolidation of administrative functions within the Queens' Building, releasing academic space in Laws and Mathematics.
- The consolidation of space occupied by the Computer Science and Engineering departments.
- The provision of a new Health Centre together with additional Student Union and indoor recreational facilities.
- The consolidation of playing-field provision on one site at Chislehurst, Kent.
- The introduction and provision of an Information Communications Technology (ICT) network.
- Completion of a further phase of 170 new student rooms on the Mile End Campus (Ifor Evans House and Lindop House).

# The Second Strategy 2002-2006





The objectives of the second Estates Strategy<sup>1</sup>, developed for the period 2002 to 2006, were to address fully the estate-related implications following the merger with the medical colleges, as well as further developments on the Mile End Campus.

The second Strategy was set within a context of further expansion, with the student population rising from around 9,500 FTEs to 13,200 by December 2006, with approximately 2,800 staff.

During the period 2002-2006 achievements included:

- Construction of the Joseph Priestley Building at the Mile End Campus for the School of Biological and Chemical Sciences.
- Development of the Blizard Building at the Whitechapel Campus for the School of Medicine and Dentistry.
- Refurbishment and extension of the Wingate Building (generously donated by the Wingate Foundation) for the School of Medicine and Dentistry at the Whitechapel Campus.
- Development of the Westfield Student Village at the Mile End Campus, providing 1,176 study bedrooms, and associated sale of the former residential site at South Woodford, providing a substantially increased stock of accommodation.
- Purchase and refurbishment of the Lock-keeper's Cottage at the Mile End Campus for the Graduate School in Humanities and Social Sciences.

- Refurbishment of the Old Medical College Building at the Whitechapel Campus for teaching and administration in the School of Medicine and Dentistry.
- Refurbishment of the John Vane Science Centre at the Charterhouse Square Campus, for research laboratories for the School of Medicine and Dentistry.
- Refurbishment of the Octagon at Mile End, for formal College occasions.
- Extensive investment in modernising and updating buildings across the campuses, for example the Francis Bancroft Building at the Mile End Campus.
- Improved disabled access around the College campuses.
- Installation of a controlled-access security installation across all Campuses.
- Acquisition of the freehold interest in the western portion of the Mile End campus from the St Luke's Parochial Trust.

# The Third Strategy 2006-2015





The College is at the mid-point in the Estates Strategy 2006-2015 and the first five years of the third Strategy have seen the completion of a number of major developments. These were, in particular, a response to the continued growth in the College's student population, from 13,200 in 2006 to 14,700 in 2010. The College has also capitalised on its success in the 2008 UK Research Assessment Exercise and HEFCE Capital Investment Framework (CIF 1) funding rounds which has enabled it to accelerate and expand the programme of capital projects.

#### The major achievements were:

- provision of a further 250 study bedrooms in Feilden House as part of the Westfield Student Village, including catering and Students' Union facilities
- the Health & Fitness Centre in the Students' Union
- providing leased accommodation for the Centre for Commercial Law Studies in Lincoln's Inn Fields
- the new Humanities Building (ArtsTwo) at Mile End
- the Innovation Centre at Whitechapel
- improvements to the main College Library at Mile End
- the Heart Centre at Charterhouse Square
- refurbishment and extension of the Robin Brooke Centre, West Smithfield
- refurbishment of Dawson Hall Phase I
- acquisition and refurbishment of the Yvonne Carter Building, Whitechapel
- Iaboratory and teaching room refurbishments on all campuses
- new foyer and entrance for the School of Mathematical Sciences
- recladding of the Fogg Building for the School of Biological & Chemical Sciences

In all of these projects, the College has continued to employ architectural and design advice of the highest quality. As well as funding of £76m from College capital, these projects benefited greatly from the Capital Investment Fund of the Higher Education Funding Council for England from which the College received £22.2m for research and £12.8m for teaching for the period 2008-2011; and support from its partners and benefactors, for example, the Trustees of the St Bartholomew's Hospital Medical College Trust and the Barts Foundation for Research Ltd for the Heart Centre.

Over the last fifteen years, the College has invested circa £250m in improving its estate. It has introduced some new and distinctive developments. An article<sup>2</sup> in the Independent in 2006 stated that Queen Mary "…has quietly amassed some of the best new academic architecture in Britain." The College has increased the amount of research, learning and teaching space significantly to meet demands for student growth, provide fit-for-purpose teaching and research facilities, overcome obsolescence, and provide improved student accommodation. It has received a number of exemplary awards for its innovative, contemporary yet functional approach to development. These include: the Civic Trust Award 2006: two RIBA regional awards 2006; the Barbara Miller Award 2006; and the ODPM Housing Award 2005. The College reached the final shortlist of four for the RIBA/Arts Council Client of the Year in 2006 "for using good architects to enrich a disparate campus of buildings, in particular for the awardwinning Institute of Cell and Molecular Science [the Blizard Building] and the Lock-Keeper's Graduate Centre"<sup>3</sup> and won the RIBA London Client of the Year Award in 2008 for "its consistent commitment to high quality design". In the 2011 Green Gown Awards the College received the Sustainable Construction and Refurbishment Award for the re-cladding of the G.E. Fogg Building.

In 2009 Queen Mary was shortlisted for University of the Year in the Time Higher Awards, and received the award for the Most Improved Student Experience. The improvement in the Estate was a contributing factor in both nominations.

## The Third Strategy 2006-2015 (cont)

The following table identifies the major development projects as presented and costed in the Estates Strategy 2006-15 together with progress against them.

A.	Projects under way	Estimated Costs £m	Status	
1	Health and Fitness Centre (Mile End)	4.3	Completed	
2	Relocation of the Centre for Commercial Law Studies to Lincoln's Inn Fields	2.5	Completed	
3	New Humanities Building (Mile End)	20.1	Completed	
4	Innovation Centre (Whitechapel)	27.5	Completed, phased fit out	
5	The Heart Centre (Charterhouse Square)	11.8	Completed	
В.	Projects on all Campuses			
6.	Refurbishment and improvements on all campuses on an ongoing basis (including external and internal spaces)	20.2	Major works completed in Garrod; Robin Brook; John Vane Science Centre; Dawson Hall; Francis Bancroft Building; Arts and Laws; Mathematics foyer; some external works	
C.	Projects under Consideration at the Mile End Campus			
7.	Library Extension	14.9	See note below4	
8.	Refurbishment of Engineering, G O Jones and Fogg Buildings	14.2	See note below5	
9.	The Peoples' Palace including the Great Hall	3.8	Started on site Summer 2011 for completion by April 2012	
10.	The Queens' Building – Student Services Centre	1.9	C/F to 2010-2020 Strategy	
11.	The Anniversary Project	42.0	C/F to 2010-2020 Strategy	
12.	Future Student Residences	4.5	C/F to 2010-2020 Strategy	
D.	Projects under Consideration at Whitechapel and Charterhouse Square			
13.	Institute of Health Sciences Education – ARC – (Whitechapel)	6.9	Completed March 2011 as the Yvonne Carter Building	
14.	Sir John Vane Science Centre (Charterhouse Sq)	2.8	Completed	
15.	Intensification of Research Facilities (Charterhouse Sq)	TBC	C/F to 2010-2020 Strategy	
	TOTAL	177.4		

<sup>4</sup> Project 7 (Mile End Library extension) has been superseded by a new strategy: a phased programme of work to improve the space available to students and modernise the infrastructure is underway. Two phases have been completed by 2010 at a cost of £6m.

<sup>5</sup> Project 8: works to re-clad the Fogg Building completed March 2011. A phased refurbishment of the GO Jones Building is underway. A number of smaller projects have been undertaken in the Engineering Building and a feasibility study developed for the building; further phases of work will be developed in the light of the revised Estates Strategy. Feasibility studies for the refurbishment of Mathematical Sciences and G.O.Jones (Physics) have been completed.



During the first phase of the Third Strategy, the College also dealt with the following:

- discoveries of asbestos in buildings that were previously surveyed and identified as being substantially clean has led to changes in the strategy and significant cost increases to some of the projects planned. In particular, work has been necessary in the Geography and G.O.Jones Buildings. The College established a new framework for asbestos consultancy and removal contractors in 2010 to tackle the residual problems. The College policy is to remove where at all practicable.
- The completion of Fire Risk Assessments for all properties belonging to the College raised a number of issues that have had to be dealt with and a project to address these has been working through the buildings on all campuses. Initially £2.5m was made available for this purpose and an additional £975k for upgrades to fire alarm systems. It is likely that before this work is completed additional funding will have been allocated.

To improve governance of the large programme of capital works and facilitate delivery, a Project Board was set up in 2010 which meets on a monthly basis to review all projects on the capital programme, and reports directly to the Finance & Investment Committee.



The HIVE



Interior of the new Maths foyer

# The Estate Today





The College estate comprises 228,000 sqm of accommodation (including residences) across three main academic campuses in London, whose general locations are shown below :

- The Mile End Campus: where the majority of activity in Science & Engineering and Humanities & Social Sciences and the professional services functions of the College are located (1)
- The Whitechapel Campus: for the School of Medicine & Dentistry (SMD), adjacent to the Royal London Hospital, including some space leased from the Hospital Trust (2)
- The Charterhouse Square and West Smithfield Campus: for the School of Medicine & Dentistry including the Robin Brook Centre and other leased property adjacent to and within St Bartholomew's Hospital (3 and 4)
- The residential estate provides 2,112 bed spaces across the three main campuses including a small amount of off campus accommodation. At least 1000 new bed spaces are to be developed close to the Mile End Campus by private sector developers and the

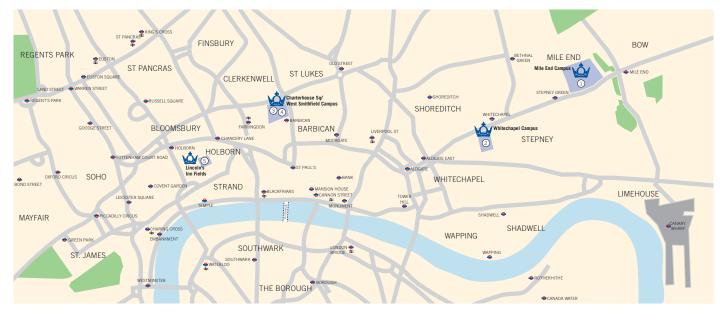
College will be developing relationships with the external providers whilst ensuring that its own residential estate continues to provide a high quality experience for students at an affordable cost.

### The College also has major academic activities in the following locations:

- Also in London, at Lincoln's Inn Fields, for the Centre for Commercial Law Studies (CCLS) (5)
- Sports and recreation facilities at Chislehurst, in the London Borough of Bromley
- In France, at the University of London Institute in Paris (ULIP), where Queen Mary, with its consortium partners of the University of London and Royal Holloway, is developing the Institute

for undergraduate and postgraduate teaching in French and other disciplines

- In China, where the Department of Electronic Engineering has a joint programme with the Beijing University of Posts and Telecommunications (BUPT)
- Southend and Barkentine in east London: Dental outreach clinics
- River Laboratories in Dorset (Freshwater Biological Centre)



### The Estate Today (cont)

### Mile End Campus



#### 1 Main reception/enquiries **Campus services** and facilities

#### 5 Bookshop

- 18 Mucci (Francis Bancroft Building)
- 5 Student Centre: The Hub 10 East Gate
- 33 People's Palace,
- Great Hall
- 1 Security Lodge
- 3 St Benet's Chaplaincy
- 1 The Octagon
- 36 Village Shop
- 43 Restaurant. The Curve (Richard Feilden House)

#### **College** administration:

- Queens' Building College administration: 1 Queens' Building (Principal's Office. Human Resources. Corporate Affairs, Finance) 1 Admissions Office
- Cashier 1

- 1 Computer Services
  - 1 International Office 41 Residences Office
    - 1 Student Administration
    - 11 Student and Campus
    - Services 11 Estates

#### Learning resources

- 21 Audio Visual Services
- 27 Informatics Teaching Laboratory (ITL)
- 6 Library

#### Main lecture theatres

- 19 Drapers' Lecture Theatre (Geography Building) 18 Mason Lecture Theatre
- (Francis Bancroft Building)
- 33 Skeel Lecture Theatre (People's Palace)

#### Schools, departments and research centres

11 Arts Research Centre

- 24 Biological and Chemical Sciences (Fogg Building)
- 18 Business Management (Francis Bancroft Building)
- 16 Biological and Chemical Sciences (Joseph Priestley Building)
- 25 Computer Science 8 Law
- 1 Economics
- 32 Engineering Annexe, IRC in Biomedical Materials
- 31 Engineering and Materials 31 Electronic Engineering
- 9 ArtsOne
- 42 Graduate Centre for Humanities and Social Science (Lockkeeper's Cottage)
- 19 Geography
- 30 Mathematical Sciences
- Physics (G.O. Jones 2 Building)
- 44 ArtsTwo

#### **Student residences** and Student Village

- 41 Residences Office
- 28 Albert Stern House
- 14 Chapman House 14 Chesney House
- 12 Hatton House
- 29 Ifor Evans Place
- 4 Lindop House
- 14 Lodge House
- 13 Maynard House
- 14 Selincourt House 15 Varey House

#### Westfield Student Village

- 36 Beaumont Court
- 40 Creed Court
- 41 France House 38 Lynden Court
- 37 Maurice Court
- 39 Pooley House
- 43 Richard Feilden House

Stocks Court is located in Globe Road near the corner of Mile End Road next to Stepney Green Tube Station.

#### Student support

- 19 Advice and Counselling 18 Disability and Dislexia Service
- 19 Health Centre
- 22 Nursery
- 26 Students' Union/QMotion
- 43 Students' Union offices: The Blomeley Centre

20



### Whitechapel Campus



#### **Campus services and facilities**

- 1 Royal London Hospital
- 11 Security Lodge
- 2 Outpatients Department
- 1a Audio Visual Services

#### **Barts and the London Trust Facilities**

- 20 Academic Psychology
- 4 Children's Unit
- 8 Fielden House
- 6 Gwynne House
- 18 James Hora Home/Horace Evans House
- 19 Postgraduate Centre
- 20 Smokers Clinic
- 20 Tobacco Dependence Research Centre

#### **College administration: Garrod Building**

- 3 Admissions
- 3 Registry
- 3 Vice-Principal's (Health) Office

#### Learning resources

7 Library 7 Museum (back entrance)

#### **Lecture Theatres**

- 1a Bearsted Lecture Theatre (beneath A&E)
- 1a John Ellis Lecture Theatre (beneath A&E)
- 17 Michael Mason Room (ARC building)

10a Perrin Lecture Theatre (Blizard Institute) 24 Old Pre-Clinical Building

### Schools, departments and research centres

- 17 The Yvonne Carter Building
- 10 Centre of the Cell9 Centre for Health Sciences
- (Abernethy building)27 Centre for Human Science and Medical Ethics
- 25 Centre for Professionals Complementary to Dentistry
- 26 Child Health (38 New Road)
- 22 Clinical Physics
- 9 Clinical Research Centre (Abernethy building)
- 3 Education Directorate (Old Medical School)
- 22 ICT Directory
- 10 Institute of Cell and Molecular Science (Blizard Institute)
- 9 Mycobacteria Research Unit (Abernethy building)
- 23 Neurology (John Harrison House)
- 14 Pathology and Pharmacy
- 28 Research and Development (Rutland House)
- 20 School of Nursing and Midwifery
- 29 Institute of Dentistry

#### **Student residences**

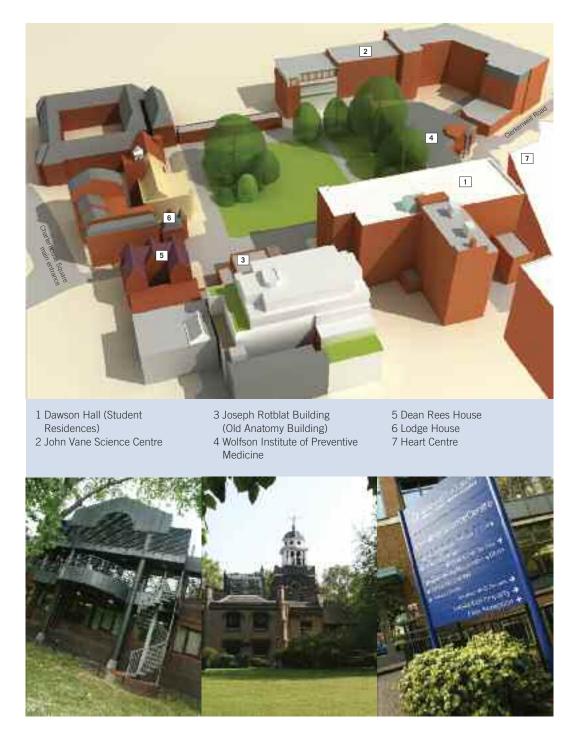
- 13 Floyer House
- 15 Laird Hall

#### **Student support**

5 Barts and The London Student Association

## The Estate Today (cont)

### Charterhouse Square Campus





# **Infrastructure Needs**





HEFCE provides HEIs with four classifications of condition for guidance as follows: **A** As new

- **B** Sound, operationally safe, with only minor defects
- **C** Operational and safe, but major repair or replacement needed in short to medium term (typically within three years)
- D Inoperable, or serious risk of major failure or breakdown.

A survey by NIFES consulting in 2006 identified a requirement for College to invest £39m to bring the condition of the Estate up to HEFCE condition B. In the period since the last strategy the College has invested £76m of its own capital into new and refurbished facilities and equipment and £32m of HEFCE CIF funding. £2m pa has been specifically targeted to address backlog maintenance items that were not being addressed through other programmes of refurbishment work or through new facilities.

The College estate has been re-surveyed by NIFES in 2011 identifying that approximately 13% of the non residential estate is in HEFCE conditions "C" and "D". The investment in the estate required to eliminate the backlog and raise the condition of the whole estate to HEFCE condition "B" by 2015 is £46M and a further £58m is required to maintain the estate at condition B until 2020 (allowing for plant replacement cycles and further deterioration in fabric).

The College is planning to generate £17m pa, through its own resources, to invest in capital through the Estates Strategy, IT

Ranked condition by campus

Strategy and faculty programmes for investment in equipment. This is in addition to any investment in new facilities that can be funded through loans, grants or partnerships and supported by a business case. A programme has been developed which will address at least £39m of the backlog by 2015 and enable the College to meet KPI 2.6 in the College Strategic Plan.

The charts below summarise the condition of the College's accommodation and infrastructure in 2011, in terms of amount and value.<sup>6</sup>

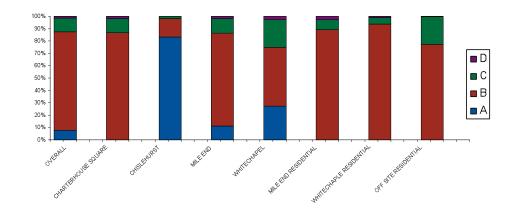


A 7.80%

B 79.53%

C 11.36%

D 1.31%



<sup>6</sup> Excluding embedded space and underground services infrastructure. The non-residential data are based on the 2011 NIFES condition survey. For the first time the residential estate has been included in the NIFES survey.

### Infrastructure Needs (cont)

The table below provides data on the College's estate on the three main campuses, which underpins all of the College's research, learning and teaching activities.

#### Estate information (2011)

Description	Non Residential	Residential
Size of the estate		
Academic/ Non residential (m <sup>2</sup> GIA) <sup>7</sup>	173,816	
'Embedded' space (m² GIA) <sup>8</sup>	6,310	
Residences (m <sup>2</sup> )		54,228
Student Bed Units (Number)		2,308
Playing Fields (hectares)	13	
Age Profile (percentage of GIA)		
Pre-1940	22	4.7
1940 –1959	1.5	8.8
1960 - 1979	33.5	10.3
1980 +	43.0	76.2
Ownership		
Freehold (percentage) <sup>9</sup>	74.4	88.4
Space allocation NIA m <sup>2</sup>		
Teaching	34,834	
Research	42,302	
Support space (Teaching, Research and Administration)	25,577	
Residential		36,479
Insured Reinstatement Cost (2011) Total Estate (£)	861,565,670	





The Heart Centre

<sup>7</sup> GIA (Gross Internal Area); NIA (Net Internal Area).

 <sup>8</sup> Embedded space is space the College occupies for purposes of teaching and research within the clinical environment of our major hospital partners.

 9 The College holds leasehold properties on all its main sites. Of the leasehold property, four-fifths is held on leases of more than 25 years.





Exterior of the new Maths foyer



Interior of the Octagon



The Lock-keeper's Cottage Graduate Centre



University of London Institute in Paris

# **Responding to Change**





### External Strategic Issues and Drivers

### The Higher Education Context

The period since the last Estates Strategy in 2006 has seen many changes in the international and national environment affecting higher education. The quality of the learning environment, and therefore the importance of investing in providing buildings of a high quality and a robust infrastructure, place ever more importance on the higher education estate as part of the competitive marketing advantage for the College. The College, recognising the importance of the estate in supporting the learning experience of students, and the important research undertaken through the academic schools, has approved further investment of £97.8m for 2011-15 to continue the process of renewing infrastructure, refurbishing facilities and continuing to invest in high quality developments in the estate.

The College estate plays a significant role in attracting and retaining both staff and students. Students will in the future be contributing a greater proportion of the College revenues as student loans and fees replace central government support. Students, and their parents, are rightly demanding higher standards in all areas, not least the environment within which they study and reside. Student league tables also demonstrate the importance now placed by students on the environmental credentials of higher education institutions. The estate developments have been a significant factor in raising the profile of the research activities of the College and as a major attractor for high calibre academics and researchers.

The cumulative effect of all universities investing in their facilities is to raise continually the standard of the built estate across the sector. Inevitably, in a time when the general climate points to financial restraint, capital investment will be scrutinised heavily and the College will need to be able to demonstrate through benchmarking that it is achieving value for money, especially in the areas of space utilisation and achieving sustainable wholelife costs.

The consequence of the change in the funding regime in Higher Education in the United Kingdom will be to transfer the emphasis of funding largely from the public to the private purse. The amount of public capital funding available over time is anticipated to reduce from recent levels, making the ability to generate capital through routine College activities essential for future development. To this end the College has prudently budgeted to generate at least £170m of capital between 2011 and 2020 excluding grants, loan funding, and fundraising.

Under the latest government Capital Investment Framework (CIF 2)<sup>10</sup> to support investment in the higher education estate, there is a greater linkage between requirements to achieve carbon reduction, estate planning, core business, and proper integrated management across HEIs.





# Responding to Change: A Vision for the Estate to 2020

### Carbon Reduction

The College is committed to promoting carbon reduction through improvements to and better use of the College estate.

The UK Climate Change Act (2008) sets legally binding targets to reduce greenhouse gas emissions by at least 80% by 2050 and at least 43% by 2020 from 1990 levels. In order to meet its international obligations on climate change, the United Kingdom Government has sought to ensure that universities play their part and has set a carbon target to deliver a 34% reduction in carbon emissions on 2005 levels across the sector by 2020. This target is being implemented through HEFCE and compliance with the target has been linked to the capital funding grant under CIF2 of which the College has been awarded £11.6m.

The College has adopted its own Carbon Management and Implementation Plan (CMIP)<sup>11</sup> which sets out a plan to achieve the UK Government targets by 2020 for Scope 1 and 2 carbon emissions. The CMIP was developed with the support of a series of studies and reports from Ove Arup and Partners Ltd and was approved for implementation by the Council of the College on the 26 April 2011. The College is also legally required to reduce its carbon emissions by the Carbon Reduction Commitment Energy Efficiency Scheme 3 (CRC EES) and the EU Energy Performance of Buildings Directive 4.

The Queen Mary CMIP proposes investment of approximately £13m in specific carbon reduction measures over the period to 2020. It is intended to deliver the most cost effective measures in the period to 2015, for example those with a payback period of up to eight years and all measures that would need to be delivered as part of holistic refurbishment projects (to avoid trying to retrofit measures at a later time).

College space will be managed more intensively as part of the carbon reduction process.

#### **Carbon Emissions Baseline and Target**

In order to meet the carbon reduction target (which is on the basis of absolute carbon reductions), the College must reduce its emissions by 34% from the 2005/06 baseline by 2020. As can be seen above this challenge is compounded by a growth in the estate, and therefore unchecked carbon emissions would reach a peak in 2012/13 which will necessitate achieving a 41% carbon reduction from the projected peak level of emissions.

The estate is being used more efficiently and as can be seen in the table (below) emissions per head have fallen since 2005/06 as increases in student numbers have largely been accommodated in existing buildings:

	2005/6 Baseline	2008/9	BAU Scenario 2012/13 (i.e. no interventions as outlined in the Plan)	2020 Target
Total (tCO2/yr)	24,255	25,714	27,000	16,009
% change from 2005/6		+6%	+11%	-34%
% change from 2012/13			+5%	-41%

#### Relative Emissions 2005/6 to 2008/9

	2005/06 adjusted	2008/9	
Carbon Emissions Per Head	1850	1580	kgCO2 per staff and student FTE
Carbon Emissions Per £ Income	0.127	0.097	kgCO2 per £ of income

<sup>11</sup> Queen Mary Carbon Management and Implementation Plan approved by College Council on 26 April 2011



The Queen Mary CMIP has set itself the ambitious target of delivering the majority of the carbon reduction required to meet the Climate Change Act targets by 2015. The carbon reduction will be approached by:

- Identifying and maximising opportunities for carbon reduction through businessas usual works (e.g. lifecycle plant replacement, refurbishments and construction of new facilities).
- Identifying a broad range of specific carbon reduction projects across ICT, buildings and infrastructure. These will be assessed for cost and benefits and where relevant, include an assessment of indirect benefits.
- Implementation of carbon reduction measures in order of the best value derived through savings.
- Implemented projects will be evaluated for the success of benefits delivered.
- Review and reassessment of the CMIP on an annual basis.

The measures proposed in the CMIP are divided between enabling works and systems interventions. Enabling works (e.g. programmes of engagement, establishing data sets, undertaking feasibility studies and installing sub metering) essentially provide the platform on which all other measures can be developed and will be undertaken early in the programme. Following on from the programme of enabling interventions a variety of systems interventions (e.g. replacement/ optimisation of plant, refurbishment projects, implementing renewable energy solutions and creation of a CHP energy centre) will be introduced across the estate to reduce carbon emissions.

The College wants to ensure that it is at the leading edge of carbon management in the sector and in addition to achieving full statutory compliance it aims to improve the College's energy efficiency and use of resources by integrating sustainability with College strategies, policies and operational procedures. By successfully implementing all of the Phase 1 interventions, the College will achieve a substantial amount of the 2020 target by 2015. The nature of carbon reduction measures requires an ambitious approach as the benefits that can be derived through behavioural change can be harder to predict accurately. This will ensure that the College is ahead of the requirements set by HEFCE and will put it in a strong position to achieve further carbon and operational cost savings during the remainder of the life of this strategy.

The Queen Mary CMIP seeks to embed good practice within the organisation by encouraging and supporting all sectors of the College to take ownership and responsibility for projects and initiatives to reduce carbon emissions. It will also contribute to improved results in the People & Planet Green League survey and student surveys.







Joseph Priestley Building

# **Residential Strategy**

The College's residential estate has 2,308 bed spaces accommodated in 19 halls of residence across the three main campuses with a small amount of off campus accommodation. Much of the residential accommodation is in very good condition having been constructed in the last fifteen years.

The majority of the College's directly managed accommodation (83%) is at the Mile End campus, this is let to students at affordable rents. There are also up to 1,000 bed spaces being provided on sites adjacent to the Mile End Campus by private providers.

Further provision of between 80 and 125 bed spaces is being planned as part of the Graduate Centre development on the Mile End Campus. The College is also considering disposal of some of the smaller off site properties which will require modernising and investment to remain in use as student accommodation and due to their scale and locations are less efficient to manage. It is anticipated that sale proceeds from these properties would be reinvested in further on campus student accommodation (see project 17 Appendix One).

A strategic review is in progress examining the quality of the accommodation and the demand for bed spaces. The review will identify the development needs beyond the Graduate Centre and the opportunities for working collaboratively with the external providers that are constructing student accommodation. At present there is an imbalance between the demand for student residential accommodation and the amount that is available.







Westfield Student Village



### Realising the Vision for 2020

As indicated above, the Estates Strategy is an essential enabler for the College to meet the targets set in the Strategic Plan 2010-2015 for raising the level of achievement within the College, expanding postgraduate student numbers, and for achieving a top ten position within the rankings for research intensive universities in the UK. The College Strategic Plan identifies specific KPIs in respect of carbon reduction, the condition of the estate and its continued development.

The estate is however a key enabler for the achievement of many of the KPIs set in the Plan, for example:

- SA 2.2 "Improvement in student satisfaction"
- SA 2.4 "Expansion in the numbers of students from outside the EU admitted to study at Queen Mary, notably at postgraduate level"
- SA1.10 "Size and quality of graduate research programme"

In response to the need to develop facilities to accommodate the expansion sought in the College Strategic Plan, new and refurbished facilities will be developed in particular to accommodate an expansion in postgraduate taught and research programmes.

The Estates Strategy recognises that in the future less capital will be available for new buildings and that indeed a greater level of efficiency needs to be achieved amongst the use of existing buildings to ensure that resources are used efficiently and to achieve the maximum level of carbon reduction possible from the use of the estate.

The primary purpose of the College is the creation and dissemination of knowledge and the estates role in enabling this is the key aim of the Estates Strategy. The College continually seeks to improve its understanding of the buildings it needs to develop or refurbish, partly to accommodate the growth in student numbers proposed in the College Strategic Plan; and partly to gain an understanding of the potential capacity of the campuses for further expansion. The Mile End Campus has potential for further development on the site of the Old Chemistry Building (the Anniversary Project Site) and on the area of car park behind Richard Feilden House, as well as potential for expansion of one of the existing buildings e.g. ArtsOne or G.O. Jones. On the Whitechapel Campus further development opportunities will be governed by the ability to acquire one of the sites being vacated through the development of the new Royal London Hospital (e.g. the Outpatients, Dental School, or Front block), or through sensitive development of the Blizard Mews. Charterhouse Square can now realise development opportunities only through redevelopment of one of the existing buildings e.g. Dawson Hall, Joseph Rotblat or an extension of the Wolfson Institute.

The College will seek to maintain and develop the estate through an Estates Directorate that is efficient and can deliver excellent service. The overarching aim of this Strategy is to provide excellent facilities for research, teaching and learning, and efficient administration, delivered in a professional and integrated way. It is designed to guide the development of new buildings; to mitigate the maintenance backlog; to provide excellent service levels for faculties and to increase the utilisation of space to provide effective and efficient environments.



# Realising the Vision for 2020 (cont)

### Future Requirements

There are four main strategic challenges facing the College and its estate which help to clarify the aims and objectives set out in the following section.

- 1. Firstly, the need to provide appropriate and flexible facilities for the conduct of research to support the College's core aim of Knowledge Creation and its ambition to be positioned in the top ten research intensive higher education institutions in the United Kingdom.
- 2. Secondly, the importance of being able to enhance teaching, learning and the overall student experience. With the introduction of higher tuition fees, it is increasingly important to provide the student population with the best experience through their time in higher education, including an increasingly competitive international market. The College estate must therefore be flexible and adaptable.
- 3. Thirdly, infrastructure, including information technology, must be well maintained and fit for purpose
- 4. And fourthly, the College must address the issue of the environmental performance and sustainability of its estate, within the framework of legislation and regulatory compliance.

### Supporting Knowledge Creation

- Apply best international practice in developing research facilities.
- Provide leading-edge laboratories in medicine, dentistry, science and engineering, drama and film.
- Provide appropriate estates infrastructure for library services and information technology in support of research.
- Provide appropriate spaces for postgraduate research students as part of the College's development of its Graduate School.
- Support full economic costing of research activities to ensure the recovery of appropriate costs for research space and activities.

### Supporting Knowledge Dissemination and the Student Experience

- Monitor carefully, and plan appropriately for, the impact of rising student numbers, absorbing fully the consequences of recent growth, and future planned growth, of both undergraduate and postgraduate populations.
- Ensure that spaces for learning and teaching are of the highest quality, with state-of-the-art IT and audio-visual facilities; and ensure that teaching laboratories comply with best practice and legislation on health and safety.
- Develop spaces to support group learning and collaborative working between students to respond to the increase in emphasis on learning outcomes through teamwork.
- Facilitate development of innovation in teaching and learning by the provision of appropriate spaces.
- Develop and implement systems and policies to ensure the most efficient and effective use of all teaching rooms.
- Facilitate the development of an integrated approach to the provision of student services (including the Students' Union, residences and leisure facilities) by providing appropriate and imaginative spaces.
- Improve the external environmental quality of the campuses to enhance the student experience as amongst the best in London.



### Addressing Infrastructure Needs and Backlog Maintenance

- Develop a Masterplan identifying the infrastructure needs, refurbishment plans for the estate and carbon reduction plans in a unified manner.
- Reduce further the maintenance backlog and improve the functional operation of the estate through a carefully-planned long-term programme over the life of this Strategy.
- Develop risk management and resilience around the estate, developing an action plan and rolling programme specifically to reduce risk.
- Provide resilient and reliable services, including backup power supplies and robust emergency planning, main power sources, water supplies, cable networks, ducting and data centres.
- Promote and enhance the aesthetic quality of the estate alongside functional improvements.
- Ensure that the Estates Directorate is fully equipped with the tools to manage a modern College estate in the most efficient manner, committing to a programme of systems upgrades, culture change and new methods of delivery.
- Promote new approaches to the delivery of maintenance services and increase substantially the levels of cyclical planned maintenance as opposed to reactive.

### Environmental Sustainability

- Implement the College's Carbon Management Implementation Plan, including reducing carbon emissions and energy consumption.
- Develop the College's Environmental and Sustainability Strategy and ensure that education programmes deliver culture change across the College community.
- Introduce a 'whole-lifecycle' approach to sustainable development when making investment decisions about the estate.
- Understand and apply where relevant detailed good practice by absorbing current research<sup>12</sup> and push the envelope of good sustainable practice to raise the College standing and rankings within the Green League, Eco Campus and other recognised schemes.
- Explore and implement wholesale recycling.
- Facilitate the implementation of a Green Transport Strategy.
- Work with appropriate agencies; the supply chain, the London Borough of Tower Hamlets, and the Office of the London Mayor in developing and implementing these goals.





<sup>12</sup> For example, the Energy Consortium (Education) 2006, 'Guidance Document. Project Manager's Guide to Energy and Water Efficiency Measures, University Buildings' (Birmingham); the reports from HEFCE's, 'UK HE Space Management Project'; and guidance from the Building Research Establishment Ltd's Environmental Assessment Method (BREEAM).

# Aims and Objectives 2011-2020

The College has identified eight main aims for its estate, with supporting objectives designed to provide a robust basis for operational planning and implementation. They include the following:

- 1. To provide space that combines first class functional design with a distinctive and ambitious style.
- For its new buildings, to commission architects and designers of international standing; and in its programme of modernising and updating existing buildings, to employ design principles of the highest quality.
- To develop and maintain its buildings in ways that are commensurate with its changing requirements, and which address issues of long-term maintenance.
- To improve the external environment, signage and landscape quality of its campuses.
- To work with appropriate agencies to develop buildings which enhance the environment of east London and give pride to local communities.
- To provide facilities and spaces that support the ambition of the College Strategic Plan 2010-2015 and allow for the growth of research power, support postgraduate expansion, and improvements in the student experience.

### Recent Building Projects and their Architects

• <b>IT Building</b> McCormac, Jamieson, Pritchard	Lock-Keepers     Graduate Centre     Surface Architects
<ul> <li>Canalside Student Residences McCormac,</li> </ul>	New Humanities     Building     Wilkinson Eyre
Jamieson, Pritchard • Westfield Student Village Feilden, Clegg, Bradley	<ul> <li>Octagon Refurbishment Molyneux Kerr</li> <li>Mathematics Foyer Wilkinson Eyre</li> </ul>
<ul> <li>Priestley Building Sheppard Robson</li> <li>Blizard Building Will Alsop</li> </ul>	Fogg Building Recladding Fraser Brown MacKenna

- 2. To promote and encourage the efficient and effective use of space and, as appropriate, to realise its commercial potential.
- To encourage and support developments aimed at maximising the flexibility and efficient and effective use of all accommodation.

- To continue to identify and evaluate opportunities to acquire and dispose of accommodation.
- To realise the full development potential of the estate, bearing in mind the need to balance the maximisation of use and the quality of the buildings and their environment.
- To take into account opportunities to contribute to, and benefit from, the development of London and the Thames Gateway, including the 2012 Olympic Games.
- To introduce robust space metrics and monitor departmental performance in space use.
- 3. To develop and maintain an estate and infrastructure that is compliant with relevant legislation, and financially and environmentally sustainable.
- To ensure financial efficiency and effectiveness in the delivery of capital and operational investment.
- To develop, fund and implement plans to address backlog maintenance.
- To ensure that the operation and maintenance of the estate allow for the maximum potential and life of assets to be achieved.

#### 4. To develop and implement the College's Carbon Management Implementation Plan

- To mitigate the College's carbon footprint and improve its energy efficiency through effective planning of waste management and recycling; 'green' transport initiatives; materials and equipment use; and energy use.
- To achieve a carbon reduction target of 34% from a baseline set in 2005/06 by 2020.
- To demonstrate greater efficiency in energy usage through consistent improvement in carbon emissions per head.

#### 5. To provide a safe, secure and accessible environment on all College campuses.

To provide a safe and secure environment for students and staff living and working on our campuses, including appropriate management and control of the perimeters of our campuses, as a key part of our security strategy.

- To provide physical and technological access to its facilities for staff and students.
- 6. To complete agreed schemes and to define a timetable for the implementation of other development proposals identified in this Estates Strategy for the period 2011-2020.
- To ensure that the development and management of the estate takes account of criteria laid down by HEFCE, the UK research councils and other funding bodies.
- To be proactive in consultation and development of proposals for its estate in conjunction with third party organisations including planning authorities, the NHS and relevant charitable bodies.
- 7. To capture accurate and reliable information about the College's estate and develop robust processes to enable sustainable decision-making.
- To work with academic and central service departments to understand the use, condition and required standards of space, technologies, equipment and infrastructure.
- To collaborate with other Estates and Facilities Departments, professional and statutory bodies, regionally and nationally, to provide appropriate bench-marking data and to share knowledge.
- To introduce reliable, consistent and transparent processes to assist in the evaluation of estate investment decisions in order to ensure financial sustainability for all development.

#### 8. To adopt an integrated approach to providing estates services in order to deliver them efficiently and effectively.

- To implement effective operational policies to ensure co-ordination of Estates Services.
- To provide staff training and development appropriate to the delivery of the Strategy.
- To explore opportunities to improve operational efficiency through shared services with other institutions.



# Realising the Vision to 2020: Implementation and Financing

### Implementation

Taking into consideration the future requirements outlined above, the College has identified a number of projects for development and implementation during the life of this Estates Strategy.

These are outlined in the table below with more information available in Annex One – Development Projects: detailed objectives. The projects are divided into those to which College is already committed, with defined budgets and timetables for completion; and further projects planned or under consideration on the three main campuses, and associated sites.

Twenty six main projects or programmes are identified in the table opposite. The vision emphasises optimisation of the existing estate and complementing it, where appropriate, with new development.

#### Notes to the Table:

- Significant asbestos removal to be undertaken in 1960s buildings
- All projects must achieve carbon reduction targets and address long-term maintenance backlog
- Decant accommodation is limited and therefore a phased approach is likely for major refurbishment projects
- The table includes projects funded through College generated capital, CIF 2, new areas of activity supported with loan funding, grant or partner funding, and endowments.

#### Proposed development projects 2011-2020 and estimated costs

A	Projects under way	Estimated Costs £m		
1	Restoration of Peoples' Palace and Great Hall	5.1		
2	Landscaping of Arts Quarter (final phase) and improvements to the Arts Building			
3	Demolition of Old Chemistry			
4	Student Centre – The Hub	5.0		
5	Modernising fire precautions (all campuses) – Phase 1	3.45		
В	Projects on all Campuses			
6	Enhanced long term maintenance regime to ensure that Estate backlog condition targets set in College Strategic Plan are achieved in areas not already covered by projects listed here			
7	Carbon reduction programme to achieve 2020 target	13.0		
8	Completion of work across all campuses to achieve full accessibility	ТВС		
9	Rationalisation and improvement of College sports facilities	ТВС		
C	Projects under Consideration at the Mile End Campus			
10	Anniversary Site – Graduate Centre with academic and residential accommodation, including landscaping of Old Chemistry site and area from Bancroft Road to Geography Square; and review of future of IRC Building			
11	Library Refurbishment – Phase 3			
12	Refurbishment of Engineering phases 3 and 4			
13	Refurbishment of Mathematics Phase 2			
14	Refurbishment of Physics (G.O.Jones)	12.0		
15	Queens' Building – refurbishment of public areas and student facing facilities			
16	Reconfiguration of the Francis Bancroft Building to allow further expansion of the School of Business & Management	0.8		
17	Future Student Residences	TBC		
D	Projects under Consideration at Whitechapel and Charterhouse Square			
18	Completion of fit-out of the Innovation Centre including SMD & other users	17.0		
19	Extension and refurbishment of Joseph Rotblat and Old Anatomy	ТВС		
20	Refurbishment/redevelopment of Dawson Hall and Floyer House Phase 2			
21	Student Association Building Refurbishment (Whitechapel)			
22	Neuron Pod and Blizard Mews Development			
23	Joint Project with Barts and Royal London NHS Trust to provide a Graduate Centre at Whitechapel and create a Medical Learning Campus	ТВС		
24	Relocation of the Dental Institute in association with the Barts and London NHS Trust	ТВС		
E	Projects on other campuses			
25	Updating and rationalising of research support facilities	ТВС		
26	CCLS (Centre for Commercial Law Studies) expansion into new space at Lincoln's Inn Fields	1.5		



# Realising the Vision to 2020: Implementation and Financing

### Financing

Over the last fifteen years, the College has invested circa £250m in its estate (see Table). This Estates Strategy estimates a capital budget requirement for the next ten years to be at least £240m at today's prices.

The implications associated with the above options have been built into the financial strategy where projects have been given approval to proceed. The College will explore all options for funding, in line with HEFCE guidelines, and will identify and allocate funds from a variety of sources, including internal resources and HEFCE capital funding. In addition, the College will continue to work closely with the St Bartholomew's Hospital Medical College Trust and to explore the availability of capital grants from other charities, including the Wingate Foundation, the Wolfson Foundation, the Wellcome Trust and Cancer Research UK. The College will also explore potential funding opportunities from other third party organisations and market sources.

### Sources of Finance for Estates Developments 1995 – 2010

	£ Million
College Capital, including sale of assets	38.2
HEFCE: Medical School Development	35.6
SRIF	14.0
Project Capital for Teaching and Learning / Other	33.2
CIF 1	70.5
Borrowings	48.5
St Bartholomew's Hospital Medical College Trust	10.0
TOTAL	250.0



Courtyard of Ifor Evans House





The Francios Bancroft Walkway







The Senior Common Room



Centre for Commercial Law Studies, Lincoln's Inn Fields

# Appendix One

### Development Projects: detailed objectives

The Estates Strategy 2011-2020 establishes a new set of priorities to support the objectives set out in the College Strategic Plan. Below is a brief description of the major development projects, which have been identified by the Masterplanning Steering Group and the faculties through the Planning and Accountability Review process.

#### i. Restoration of the Peoples' Palace and Great Hall (Mile End Campus)

An opportunity exists to refurbish the Great Hall, dating from 1936, in particular the lighting and fabric.

The rejuvenation of the Great Hall will result in an optimised and fit-for-purpose auditorium and facility for College events, functions and graduation ceremonies.

Located near the Octagon (itself refurbished in 2006), it will provide prestigious facilities at the Mile End campus, suitable for external lettings as well as College use.

As part of the Peoples' Palace, the Great Hall has the potential to become again a major public performance space, at the highest artistic and technical level, linked closely to the College's academic strengths and with a significantly enhanced level of accessibility for our local communities.

#### ii. Landscaping of Arts Quarter – Final Phase (Mile End Campus)

This final phase of landscaping is scheduled for completion in autumn 2011. It realises the vision for the Arts Quarter developed in 2004 – including the Lock-Keepers Graduate Centre; the new Humanities Building (ArtsTwo) completed in 2011; and refurbishment of ArtsOne and the Laws Building.

#### iii. Demolition of Old Chemistry (Mile End Campus)

The demolition of the Old Chemistry Building is on site as this Strategy is being written and is scheduled for completion by the autumn of 2011.

#### iv. Student Centre (Mile End Campus) – The Hub

To improve the type and range of nonteaching engagement with students, the former Catering Building is being redeveloped to include a Multi-Faith Centre, flexible spaces for student facilities, a refurbished and extended bookshop and flexible work spaces.

#### v. Modernising Fire Precautions (All Campuses)

In response to changes in the management of buildings and the introduction of a routine of Fire Risk Assessments, following the introduction of the Fire Safety Regulatory Reform Oder 2005 a programme was introduced to upgrade and modernise the fire precautions across the College estate. So far £3.45m has been committed for this purpose.

#### vi. Long Term Maintenance (All Campuses)

The 2006 Estate Strategy was informed by the 2006 NIFE survey which identified the investment needed to clear the backlog maintenance and raise the level of the College's estate to HEFCE condition level B as being £39m. Since 2007, funding of £2m pa has been provided through the LTM programme (£8m committed to date).

The 2011 re-survey by NIFES included full inspection of buildings and plant, checking of documentation and provision of an asset register. The survey identified the needs for the next ten years including the necessary work to raise the estate to a level of HEFCE condition level B and then to maintain the estate at that level until 2020.

The investment required to eliminate the backlog and ensure statutory compliance by the end of 2015 is £46m with a further £58m required to maintain at level B until 2021 making a total of £104m over 10 years (without omissions and allowing for VAT and fees). These costs include for all buildings but exclude any work for IT and data cabling and security e.g. CCTV as they are covered

by the IT and security budgets. The prices and estimates are based on current prices (Q1 2011) and will be reviewed annually and indexed using the industry standard cost index published by the RICS (BCIS).

#### The figure includes:

- £42m for the backlog maintenance to be carried out in years 1-4 to bring all areas to Category B completing by 2015 if fully funded.
- £4m to complete outstanding works for statutory compliance identified in the survey in years 1-3.
- £8m of the total relates to work in residences that will need to be completed in the first four years of the programme.
- £58m to maintain at Category B for years 5-10 until 2020 when this programme will be completed.
- However from this total can be deducted the cost of the Engineering, Physics, IRC, Maths Building which will be subject to separate investment. The sum to be deducted would be £34m leaving a residual financial commitment of £78m over ten years.

At the time of compiling the Estates Strategy the Phase 1 capital allocations planned to 2015 will address £39m of the identified LTM requirements in that period of which £22m will be delivered through other refurbishment projects e.g. those in the John Vane Science Centre, Physics, Maths and Engineering; with the remaining £17m delivered through specific LTM allocations. Phase 2 allocations will be finalised prior to 2014 and implementation will be spread over the life of the Estates Strategy and planned in the most costeffective and efficient manner.

#### vii. Carbon Reduction Projects To Achieve 2020 Target (All Campuses)

The Carbon Management and Implementation Plan supersedes the former environmental sustainability programme and has been described in the sections elsewhere in this Strategy.



#### viii. Accessibility Projects

The College will continue to develop projects to enhance the accessibility of facilities for mobility, visual and hearing impaired. All new developments will comply fully with the Equalities Act 2010 and the standards within existing buildings will continue to be raised through this programme.

#### ix. Developing Enhanced Sports Facilities

A full review of all College Sports facilities is being undertaken and development of sports facilities closer to the main campus operations is being planned.

#### x. Graduate Centre on the Anniversary Site (Mile End Campus)

Feasibility studies are being undertaken for "The Anniversary Project" to be developed on the site of the Old Chemistry Building and adjacent land. A number of options have been explored and the College has prioritised the provision of a Graduate Centre through the Planning and Accountability Review process. This could include highquality facilities for postgraduate teaching; postgraduate student and staff residential accommodation and conference facilities. The development is expected to provide additional capacity to accommodate new programmes of study and different types of space for learning and teaching. Indoor and outdoor sports facilities and an external performance and meeting space may also be included.

The project will consider the long term improvement of the approach to the campus from the Bancroft Road and also improving the linkage between the western and eastern parts of the Mile End Campus.

The future of the IRC Building and Post Room will also be reviewed as part of this scheme.

#### xi. Library Refurbishment – Phase 3 (Mile End Campus)

Further development of the main college library to provide state of the art facilities and building on phases 1 and 2, already achieved.

#### Long Term Maintenance and Infrastructure Programme 2011-2020

	Mile End	Maths, Physics, Engineering	Charterhouse	Chislehurst	Whitechapel	Residential	total
Total	31,836,534	24,505,876	16,606,404	835,200	9,586,911	20,365,997	103,736,922

#### xii. Refurbishment of Engineering (Mile End Campus)

Phased proposals will be developed for the complete refurbishment of the 1960s and 1970s buildings housing the School of Engineering & Materials Science; and Electronic Engineering & Computer Science. This project is expected to address a significant area of the maintenance backlog on the Mile End Campus and to fully address the carbon reduction requirements for this building. Redeveloping the layouts will provide new research and learning space, facilitating the development of new programmes of study and encouraging the growth of industrial and academic collaborative research.

#### xiii. Refurbishment of Mathematics (Mile End Campus)

A full feasibility study of the building has been commissioned and a refurbishment of heating and other services and improvements to fabric will contribute to both the utility and sustainability of the building.

#### xiv. Refurbishment of Physics (G.O. Jones) (Mile End Campus)

A feasibility study has been undertaken to look at the priorities, programming and sequencing of works within the G.O.Jones Building. The most significant asbestos issue outstanding at Mile End will be addressed by the project, together with addressing carbon reduction and backlog maintenance.

#### xv. The Queens' Building – Public Areas and Student Facing Services (Mile End Campus)

An opportunity exists to improve access to, and integration of, student services in a reconfigured area on the ground floor of the Queens' Building and to enhance the access to and use of the Octagon. The reconfigured accommodation will be centralised to provide direct access to a dedicated support service for students. The centralised student facilities would be intended to act as a clear point of entry for students, providing 'front of house' facilities.

#### xvi. Reconfiguration of the Francis Bancroft Building

To allow further expansion of the School of Business & Management.

#### xvii. Student Residences

Re-examination of the provision at all campuses to ensure that the accommodation provided by the College is of the very highest standard.

The College will review the future residences requirement in order to meet potential future student growth, optimise its conference and events facilities, and ensure that all accommodation provided remains of the highest standards.

In addition to the opportunities that may exist with "The Anniversary Project" on the Mile End Campus, an option exists to develop a Phase 4 of the Westfield Student Village. Such a proposal could include a three- or four- storey building for up to 100 additional study bedrooms, situated above the staff car park.

Further residences are expected to cement the College's competitive advantage, much improved by the development of the Westfield Student Village between 2004 and 2007, providing additional 'on campus' residential accommodation in a safe and secure environment, which could be offered to all first-year undergraduate students.

# Appendix One (cont)

Additional accommodation would optimise the remaining development potential to the east of the Mile End Campus, which is designated for residential accommodation.

Opportunities with be explored with thirdparty providers with respect to the developments being constructed adjacent to our campuses.

#### xviii. Completion of the fit-out of the Innovation Centre including SMD and other users

Provide appropriate fit-out of the completed building for external tenants, for the School of Medicine & Dentistry and for other users.

Due to the global financial crisis the Innovation Centre has been slow to find tenants. In order to accelerate the useful occupation of the building the College is undertaking the fit out of the remaining floors so they are in a ready to use condition. It is possible that some of the building will now be made available for College use.

#### xix. Joseph Rotblat Building (Charterhouse Square)

Two major development footprints are available at Charterhouse Square: Dawson Hall and the Rotblat Building. The Rotblat Building is low rise and badly organised in terms of space utilisation, and represents poor usage of a relatively large site. Initial outline plans provided by the College indicate that it would be possible to create some 6,000 square metres of space on the existing footprint in a five storey building. The new build would include a basement which would provide around 2000 square metres of new research support facilities, and in the process free up the entire basement of the eastern part of the John Vane Science Centre, creating another 4000 square metres of mixed laboratory and office space. The existing teaching space in the Rotblat could be matched, and indeed increased, by redevelopment of the ground floor of Dawson Hall in the old bar area; adding considerable extra value to the scheme, until such time as Dawson Hall itself might be redeveloped.

This development would complement the new William Harvey Heart Centre and provide an opportunity for developing new partnerships; now especially important in consolidating the campus relative to the new UK Centre for Medical Research and Innovation (UKCMRI) development at St Pancras.

#### xx. Dawson Hall (Charterhouse Square) and Floyer House (Whitechapel)

In the longer term, the development of Dawson Hall would represent a logical and important Phase II development for Charterhouse Square Campus. Redevelopment of the site would complement the Rotblat project, and offer scope for a major addition to the research and education facilities on the campus. It would also deliver a new build to replace facilities which will require increasing demands on long-term maintenance budgets over the coming years. Dawson Hall and Floyer House (Whitechapel) are part of the older stock of residential property on the College estate and require investment to replace ageing infrastructure.

A redevelopment of Dawson Hall and Floyer House would need to tie into the College's overarching plans for the development of student residences (see project xvii).

## xxi. Student Association Building (Whitechapel)

In recent years, a number of small developments have added to the value and utility of the Barts and the London Student Association (BLSA) Building at Whitechapel; these have included: the redevelopment of the common room area on the first floor (The Recovery Room), a fit-out of the Student Association offices, the development of an IT suite, and the introduction of a small dance studio and new space for clubs and societies. The main area left for redevelopment is that currently occupied by the Griffin Bar on the ground floor.

Plans are being developed for a redesign and renovation of this area to create a

modern, attractive and flexible facility that would be open during lunchtimes and evenings. This development will provide a considerable boost to the student experience of the BLSA, and reflect the College's commitment to provide excellent student facilities on all its campuses.

#### xxii. Neuron Pod and Blizard Mews Development (Whitechapel)

The College has recently established a Centre for Public Engagement (CPE), which will involve academic staff drawn from across all three faculties of the College. The physical location for many of the activities of the Centre will be in a new, purpose-built facility on the mews of the Blizard Building in Whitechapel (the Blizard Mews Pavilion), adjacent to the existing facility of the Centre of the Cell.

The brief for the entire Pavilion is for a multi-functional space which includes a new Centre for Public Engagement; educational break-out space for the Centre of the Cell; an exhibition and conference space and enhanced catering facilities.

The proposal consists of three phases, the first of which would build on the remarkable success of the Centre of the Cell and provide new break-out space in a second 'pod' (Neuron), to be located in the Mews. The second phase would deliver an exhibition pod providing space for additional public engagement activities of the College, whilst the third phase would be to construct a roof to enclose the Mews space and create a flexible, unified and covered space.

## xxiii. Joint Project with Barts and the London NHS Trust (Whitechapel)

As a result of BLT's New Hospitals Programme at Whitechapel, two sites will become available, either for joint development with the Trust or for purchase and redevelopment by the College, from 2014. The first site is currently occupied by the Dental Hospital Building on New Road, whilst the second is located on the corner of New Road and Whitechapel Road. A

# Appendix Two

third site, currently occupied by BLT's Outpatients Department, may become available in the future, dependent upon the final scope of the New Hospitals project. These sites represent an important opportunity for the College to secure additional building space on a crowded campus, either in partnership with BLT or alone. There would be the potential to develop significant new space for research and/or undergraduate and postgraduate education, with the inclusion of a graduate education centre as a high priority.

## xxiv. Relocation of the Dental Institute in association with Barts & the London NHS Trust

As part of the New Hospitals Programme underway at Barts and the London NHS Trust, the Dental Institute, currently located in poor-grade embedded space within the Trust's Dental Hospital on New Road, will move into fully redeveloped embedded space within the Alexandra Wing. This project will commence in 2011, with the Institute scheduled to move into the new accommodation in 2014. The arrangements for occupation will be governed by the College's existing Embedded Space Agreement with the Trust.

## xxv. Updating and Rationalising Research Support Facilities

Across the three main campuses there are a number of facilities that support research activities. These need to be reviewed and either updated as appropriate or rationalised, concentrating expensive activities to avoid unnecessary duplication of facilities.

## xxvi. CCLS Expansion into New Space at Lincoln's Inn Fields

The relocation of the Centre for Commercial Law Studies under the third Estates Strategy has proved a resounding success and an opportunity now exists to acquire and refurbish additional floors. This will assist the expansion of postgraduate education in law and finance.

# Abbreviations used in this document

ARC	Arthritis Research Campaign
BAU	Business as Usual
BCIS	Building Cost Information Service
BLSA	Barts and the London Student Association
BLT	Barts and the London NHS Trust
BREEAM	Building Research Establishment Limited; Environmental Assessment Method
BUPT	Beijing University of Posts and Telecommunications
CCLS	Centre for Commercial Law Studies
CCTV	Closed Circuit Television
C/F	Carried forward
CHP	Combined Heat and Power
CIF	Capital Investment Fund
CMIP	Carbon Management & Implementation Plan
CPE	Centre for Public Engagement
CRC EES	Carbon Reduction Commitment, Energy Efficiency Scheme

- CSP College Strategic Plan
- GIA Gross Internal Area

HEFCE	Higher Education Funding Council for England
HEIs	Higher Education Institutions
ICT	Information and Communications Technology
IRC	Interdisciplinary Research Centre in Materials
IT	Information Technology
KPIs	Key Performance Indicators
NHS	National Health Service
NIA	Net Internal Area
NIFES	National Industrial Fuel Efficiency Service Limited
ODPM	Office of the Deputy Prime Minister
RIBA	Royal Institute of British Architects
RICS	Royal Institute of Chartered Surveyors
SMD	School of Medicine and Dentistry
SRIF	Science Research Investment Fund
UK	United Kingdom
UKCMRI	UK Centre for Medical Research and Innovation
ULIP	University of London Institute in Paris



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#### Pub7905

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