



Vision to reality
21st century patient care at Cambridge University Hospitals



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Introduction

Located on the edge of a city whose reputation for discovery and learning is world-wide, Cambridge University Hospitals (CUH) and its partners on the site are at the heart of opportunity as world leaders in 21st century biomedical research and its translation into better treatments for better patient care.

Anyone who visits CUH will know that it is part of a huge campus. It shares this space with the University of Cambridge – CUH is the University's main teaching hospital – together with research organisations engaged in discovery science – including the Medical Research Council's (MRC) Laboratory of Molecular Biology – home to 14 Nobel laureates – and Cancer Research UK opened in February 2007 by HM the Queen.

The Trust through its hospitals, Addenbrooke's and the Rosie, provides local health services, is a leading centre for specialist care and is one of the foremost university teaching hospitals in the country. Its vision for the future, which first began taking shape in the late 1990s, now sees the Trust and its partners as part of a biomedical campus of global significance.

A combination of factors has driven this vision for 21st century care at CUH. This vision has evolved in collaboration with academic, health and research partners under the influence of advances in science and medicine and the demands of patient care, but also within the context of patient services design, population changes, city planning and infrastructure development.

Timeline 1950s – 2010

1950s

Addenbrooke's begins the move from Trumpington Street to Hills Road site

1998

Regional planning guidance changes

1999

Publication of the first *2020 Vision* advocating the extension of the hospital site into Green Belt land

Oct 2003

The County Council's Structure Plan published, incorporating the case for the *2020 Vision* into an emerging wider vision for the development of the southern city fringe

March 2004

First multi-storey car park opens with 1,255 spaces for staff



The *2020 Vision* saw the development of the campus as... an international centre for patient care, biomedical research and healthcare education.



Ambition for campus development – the *2020 Vision*

Relocated to Hills Road in the 1950s, by the 1990s it became clear that the hospital needed to think again about campus development. A combination of an increasing local population, changing demographics and evolving healthcare meant that the buildings could no longer sustain the service for which they had been built.

The presence on the hospital campus of the MRC and the University Clinical School showed the potential for collaborative relationships and this together with a change in approach by local planning authorities meant the time was right to look at developing the campus in a much more ambitious way.

The result of this was the strategy called the *2020 Vision*. A product of the Trust's partnership with the MRC and the University, the *Vision* takes the **need** and an **opportunity** for site development and combines it with the **drive** for improving patient care.

Patient care needs the best – the best in standards, expertise, staff and facilities. It also needs the vision to see the potential in partnerships and how this can benefit not just the individual patient but the long-term development of research and care for the future.

New treatments benefit patient care faster if there is a co-existence of teaching, research and clinical care in one location; clinicians seeing patients in clinics and wards, whilst also teaching at the University and conducting research in one of the other institutions on campus. It's this relationship which fosters 'translational' research – turning basic science in the laboratory into new drugs and new therapies for patient care.

The *2020 Vision* saw the development of the campus as much more than a physical expansion: it envisaged the development of the Cambridge Biomedical Campus (CBC) – an international centre for patient care, biomedical research and healthcare education.



June 2004

2020 Vision at Addenbrooke's published taking the *2020 Vision* from planning to implementation

June 2004

The Trust becomes Cambridge University Hospitals NHS Foundation Trust – with greater freedom for decision-making and the ability to borrow money

June 2006

The Emergency Assessment Unit (EAU) opens – centralising and re-designing emergency care

Oct 2006

City Council adopts new Local Plan and releases Green Belt for development

Oct 2006

Joint outline planning application for the Cambridge Biomedical Campus by CUH

and its development partners Countryside Properties, Liberty Property Trust and the Pemberton Trustees

Dec 2006

Designation as one of the government's first National Institute for Health Research (NIHR) comprehensive biomedical research centres. The Cambridge Biomedical Research Centre is a collaborative relationship between the Trust and the University of Cambridge



2020 extension – with to the left, land for long-term development options

The Cambridge Biomedical Campus will be home to one of the largest and most internationally competitive concentrations of healthcare-related talent and enterprise in Europe.

The context for the *Vision* – working together with partners and city planners

The Cambridge sub-region is an area of exceptional economic dynamism – one of the most attractive places to live and work in the UK. One of the government's national growth areas, it is estimated that around 47,000 new homes will be built in the area up to 2016 and around 70,000 new jobs will be created in the period up to 2021. This rate of growth is around four times the national average, this and the increasing age of the population will have a significant impact on the demand for healthcare services generally and hospital services in particular.

Up to the late 1990s planning policy had resisted releasing Green Belt land for development, but economic growth needed to be matched with physical growth.

The *2020 Vision* set out the need to develop the hospital site and this strategy began to chime with Cambridge

City Council's need for additional – and affordable – housing, especially in the south of the city. In the summer of 2006 the Council adopted a new *Local Plan* giving support to the *2020 Vision* as part of the bigger picture of integrated planning for sustainable development, but also crucially releasing land from the Green Belt. This envisaged the campus doubling in size from 70 to 140 acres to become the Cambridge Biomedical Campus.

Realising the *Vision*: the Cambridge Biomedical Campus (CBC)

The Cambridge Biomedical Campus will be home to one of the largest and most internationally competitive concentrations of healthcare-related talent and enterprise in Europe.

The *2020 Vision* had driven the case for development with the city planners and hospital partners; the CBC is the physical realisation of the *Vision*. Development is already evident on site with new hospital buildings and new research

organisations across the existing campus: CRUK's Cambridge Research Institute was officially opened in February 2007; the Addenbrooke's Treatment Centre in October 2007, and the Institute of Metabolic Science (IMS) in July 2008. Building is now also underway on the MRC's new Laboratory of Molecular Biology with completion due by 2012.

With the release of the additional 70 acres, space will now also be available to create hospital facilities to match the demands of the 21st century population and to provide new space for new research investment from international companies. While there has been a continuous programme to update and extend existing patient care services, the future expanded campus will have room for extensive new hospital facilities to meet the needs of an increasing population. The future expanded campus will have room for extensive new hospital facilities, including the proposed Children's Hospital and the relocated Papworth Hospital which provides specialist cardiothoracic services.

Feb 2007

HM the Queen opens Cancer Research UK's Cambridge Research Institute

Nov 2007

Outline planning permission for the *2020 Vision* approved subject to completion of a Section 106 Agreement – the agreement with local authorities to contribute to various off-site infrastructure schemes to help to mitigate the impact of the development



2007

Work begins on the Addenbrooke's access road. The road will make it easier for patients and staff to get to the hospital and help cater for traffic generated by other developments in the area

April 2008

Second multi-storey car park opens with 770 spaces for visitors and patients

Space will be available to create hospital facilities to match the demands of the 21st century population... including the proposed Children's Hospital and the relocated Papworth Hospital.



The first clinical development will be a new wing for the Rosie to take care of the increasing numbers of babies born there each year.

There will be around 40 acres for biomedical and research development for commercial and non-commercial organisations. Situated in an environment which is already rich with clinical and research activities and home to organisations of international reputation, companies locating to the CBC will have unparalleled commercial opportunities in an environment which aspires to be the best biomedical campus in Europe. Housing two leading hospitals which are centres for research and teaching, the campus already has education facilities, but these will need to be increased and improved to match the training needs of a growing workforce under the *2020 Vision*. The Learning and Leisure Forum will provide these facilities along with conference services. This will enhance the relationship between all the clinical and research partners on the campus, directly benefitting the quality of patient care.

More on-site accommodation is also being built for staff, with transport connections to the campus via a new guided busway and a new access road to the M11 – both due for completion in 2010.

Proposed developments at CUH

- Rosie Hospital Extension
- Children's Hospital
- Comprehensive Cancer Centre
- Emergency Department
- Critical care
- Theatres capacity
- Neurosciences Centre
- Infectious diseases facilities

Current organisations on the campus

- Cambridgeshire and Peterborough NHS Foundation Trust
- Cambridge University Hospitals NHS Foundation Trust (Addenbrooke's Hospital and Rosie Hospital)
- GlaxoSmithKline Clinical Unit Cambridge
- University of Cambridge School of Clinical Medicine
- Cancer Research UK Cambridge Research Institute (CRUK)
- Medical Research Council (MRC)
- National Blood and Transplant Service
- Papworth NHS Foundation Trust (coming soon)

July 2008

Official opening of the Institute of Metabolic Science (IMS), pictured right – a partnership between the University, the Trust and the MRC – the IMS is dedicated to research, education, prevention and clinical care in the areas of diabetes, obesity and related metabolic and endocrine diseases

Oct 2008

The official opening of the Addenbrooke's Treatment Centre (ATC), housing research



and clinical facilities for genetics and diabetes, plus theatres and wards for short-stay and emergency surgery plus endoscopy and sterile services facilities

March 2009

Cambridge University Health Partners (CUHP) designated as an Academic Health Science Centre (AHSC). CUHP is a partnership between the University of Cambridge, Cambridge University Hospitals NHS Foundation Trust, Cambridgeshire and

KEY

- 1 Addenbrooke's Hills Road Entrance
- 2 Addenbrooke's Access Road
- 3 Cambridgeshire Guided Busway Route
- 4 Main Entrance
- 5 Rosie Hospital
- 6 Existing Hospital buildings to be refurbished / redeveloped
- 7 Addenbrooke's Treatment Centre
- 8 Papworth Hospital
- 9 Learning and Leisure Forum
- 10 New Medical Research Council / LMB Building
- 11 Cancer Research UK
- 12 Research and Development Quarter



© Allies and Morrison and Devereux Architects

Cambridge Biomedical
Campus Masterplan

Masterplanning – the physical framework for development

The CBC will in effect be a 'medical city' – home to academic, commercial and healthcare facilities with over 17,000 people working on the campus in the future. With such a range of diverse organisations which are either in place or planned for the future, there needs to be a framework for development which integrates each of the developments into a masterplan which gives coherence and identity to the campus.

The CBC masterplan for development – developed with leading international architects, Allies and Morrison and Devereux Architects – gives a strong urban structure for the campus, underpinning its relationship with the Cambridge city centre. Occupying almost the same area as the University does in the city, the CBC will echo the layout of the city streets and the colleges with their courts. It will have an architectural framework which ties it into the city centre rather than setting it apart as is currently the case.

The masterplan sets out a logical pattern of streets and spaces subdividing the campus into a series of plots or spaces for building development, setting the framework for sustainable development now and for the future. There will be a hierarchy of streets and pedestrian routes, beginning with highly populated streets and public spaces lined with buildings through entrance courtyards, semi-private spaces which adjoin but which are not part of public routes, to gardens and functional areas belonging to specific buildings.

Peterborough NHS Foundation Trust and Papworth Hospital NHS Foundation Trust. Chosen from amongst the leading university medical centres in the country, CUHP brings its member organisations closer, working together to foster research and develop clinical practice to the benefit of patient care and population health

May/June 2009

Building starts on the MRC's new Laboratory of Molecular Biology, pictured right.

• The LMB is a world-class, multidisciplinary laboratory and one of the birthplaces of modern molecular biology

Early 2010

• Completion anticipated for Addenbrooke's Access Road and the Cambridge Guided Busway – to provide better access to the campus



The physical reality of the CBC is gaining momentum and the skyline has changed particularly over the last five years as new buildings have appeared around the campus.



Working together – the synergy between the NHS, education and research

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Mirroring this physical development in the built environment, the NHS has continued its programme of service reform begun in 2000 with the publication of the *NHS Plan*. At the same time the synergy between the NHS, education and research continues to present new opportunities and working relationships between organisations to benefit patient care, population health and research. These relationships interact and strengthen the profile and reputation of the CBC as an international biomedical campus.

Developing research partnerships on campus – the Cambridge Comprehensive Biomedical Research Centre

At the **end of 2006**, the Trust working with the University became one of the government's National Institute for Health Research (NIHR) comprehensive biomedical research centres. One of only five centres in the country, and one of only two outside London, this designation emphasised the development and recognition of the CBC as an environment which can support the translation of basic science into better patient care. Under the BRC umbrella, clinicians from the Trust work alongside scientists and academics in the laboratory on the prevention, diagnosis

and treatment of ill health, with work focused on ten health priorities: cancer; cardiovascular disease; obesity, diabetes and metabolic disorders; imaging; infection and immunity; genetics; musculoskeletal disorders; neurosciences; transplantation; and women's health.

CUH – the benefits of being an NHS Foundation Trust

In 2004 as part of the *NHS Plan* reforms, Addenbrooke's became one of the first NHS Foundation Trusts in the country. With more control over the budget, the ability to borrow – within certain limits – and the involvement of a Trust membership, CUH has responded more quickly to patients' needs and been able to invest in more rapid service developments such as the Emergency Assessment Unit.

Extending partnerships on the campus and beyond – becoming an AHSC

Working in partnership and not in isolation is the key to future developments in patient care.

In **March 2009** the University of Cambridge, Cambridge University Hospitals NHS Foundation Trust, Cambridgeshire and Peterborough NHS Foundation Trust and Papworth Hospital NHS Foundation Trust together formed an alliance as one of the government's new Academic Health Science Centres (AHSCs). The partnership, known as Cambridge University Health Partners (CUHP), already shares links in clinical care, education and research. Formalising these links into a working partnership with common objectives will accelerate

the translation of science and research into improved disease prevention, diagnosis and treatment.

CUHP represents one of the richest pools of clinical and scientific knowledge and expertise in the country. Operating within the environment of the growing Cambridge Biomedical Campus and beyond, CUHP will compete with equivalent organisations in America, Europe and the rest of the world in biomedical innovation and excellence

Addenbrooke's Charitable Trust (ACT) is running a major fundraising campaign

To help turn the vision for development into reality, the Addenbrooke's Charitable Trust (ACT) is running a major fundraising campaign, the *2020 Vision Campaign*, to secure new investment from philanthropic sources. Through to the year 2020 ACT will roll out dedicated fundraising campaigns for major projects such as, the Rosie Hospital Extension, the Children's Hospital, the Neurosciences Centre, the Emergency Department and the Cancer Centre.

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