

3Ts Hospital Redevelopment Programme

Full Business Case

Commercial Case: The Building



February 2016

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Introduction

Purpose

1. The purpose of the Commercial Case is to:
 - describe the goods, services and buildings/premises to be procured;
 - demonstrate that planning and design meet national guidance and best practice (eg. clinical planning and adjacency reviews, consumerism issues);
 - demonstrate that the option selected at Outline Business Case stage will result in a viable procurement and competitive, well-structured deal, in accordance with European Union (EU) and World Trade Organisation (WTO) rules and the current regulations for the public sector procurements; and
 - identify any relevant Legal & Commercial Issues (eg. arising from Full Planning Consent).

Health Planning

Introduction

2. Healthcare planning aims to ensure that opportunities to enhance patient experience, clinical outcomes and other healthcare benefits are fully realised in the planning, design, commissioning and ongoing operation of the facilities. This has been achieved in planning 3Ts through a range of measures:-
 - **Healthcare Planners**
Specialist healthcare planners Sweett Group were commissioned to develop the initial operational briefs and schedules of accommodation and continue to provide support to the programme as required. (Specialist advisors are listed in Management Case).
 - **Clinician Engagement**
An active programme of engagement with Trust clinicians/frontline staff:
 - throughout the planning and design process, which has involved over 90 meetings and more than 200 staff;
 - at key decision-making stages, eg. in the initial scoping of the scheme and subsequent selection of the preferred option; and
 - in the ongoing governance of the programme, eg. through the appointment of a Clinical Chief and Deputy Chief for 3Ts.
 - **Design Programme**
A structured planning, design and change management process, with formalised operational briefs, statements of critical clinical adjacencies (appended) and a register of key clinical planning assumptions (appended). This has ensured that planning is systematic, comprehensive and auditable, and also provided touchstones against which the overall design solution has been assessed and to inform the final Post-Project Evaluation.
 - **Patient & Stakeholder Engagement**
The patient and wider external stakeholder engagement programme (described in the Strategic Case) has included workshops with patients/patient representatives to discuss the best and worst features of a number of 'flagship rooms' (eg. inpatient rooms, wards, patient and public bathrooms and toilets, waiting areas – details appended) and the 3Ts Patient & Public Design Panel, to provides ongoing advice to the design development.

- **Knowledge Management¹**
Analysis of key themes arising from existing Trust data (eg. Trust Risk Log (Datix), complaints and commendations, *Patient Voice* survey, national patient surveys, Patient Experience Panel, and more recently the Friends & Family Test) to inform healthcare planning priorities for 3Ts.
- **In-House Planning Team**
Investment in an in-house Programme Office team (incl. Clinical Planning Manager and Change Consultants) to liaise between Trust clinical staff and external specialist advisors (including the architects) and ensure that planning systematically draws on evidence-based models of care and opportunities for innovation and whole-system thinking.
- **Learning from Other Sites**
Members of the Programme Office team has have to date undertaken 41 visits to other redevelopment sites nationally and internationally (see table below) to ensure that learning, and in particular the experience of the most recent schemes, is incorporated in the planning and design for 3Ts. The key lessons learnt have been distilled (presentation appended).

1 The Gartner Group defines Knowledge management (KM) as 'a business process that formalises the management and use of an enterprise's intellectual assets. KM promotes a collaborative and integrative approach to the creation, capture, organisation, access and use of information assets, including the tacit, uncaptured knowledge of people.'

Site Visits 2007-2014

Year	Hospital	Visit Type
2007	Queens Hospital, Romford	Neurosciences
	St George's, Tooting	Neurosciences
2008	Walton Centre, Liverpool	Neurosciences
	Royal Liverpool & Broadgreen	Model of Care, Business Case
	Hillingdon	Single Room Pilot
2009	Stoke Mandeville, Aylesbury	Modular Buildings Visit
	North Middlesex	Construction Stage
	Central Manchester/Manchester Children's	Construction Stage
	Newcastle	Oncology
	UCLH	Education and Simulation Centre
	John Radcliffe, Oxford	Neurosciences
	Karolinska, Stockholm	Major Trauma
	QMH Portsmouth	General, quality benchmark
2010	Queen Elizabeth, Birmingham	IT (patient self-registration)
	Chelsea & Westminster	Arts & Interior Design strategies, quality benchmark
	Kentish Town Health Centre	Arts & Interior Design strategies, quality benchmark
	Paris Field Trip (MARU)	Comparative Healthcare Estates Study
	St James Institute of Oncology, Leeds	Oncology & Radiotherapy
	Central Manchester/Manchester Children's	Tour of new hospital (benchmark comparison)
	Hillingdon	Single Bed Ward Pilot Visit
	Pembury	Construction Visit
	Gatwick Multi-Faith Centre	Chaplain visit for benchmark comparison
	Queen Elizabeth, Birmingham	Tour of new hospital (benchmark comparison)
	Station Plaza, Hastings	Tour of new facility (benchmark comparison)
	St Thomas', London	IT ('Smart' cabinets)
	North Middlesex	Tour of new hospital (benchmark comparison)
2011	Netherlands Field Trip (MARU)	Comparative Healthcare Estates Study
	Barts & The London	Oncology & Radiotherapy
	Sunderland & RVI	Critical Care
2012	Royal London	Tour of new hospital (benchmark comparison)
	Pembury with CHt/LOR	M&E Design, Modular wiring, pre-wired boards
	Pembury	General Site Visit
	Salford Royal	General Site Visit, quality benchmark, models of care
2013	Spire, Hove	Design quality benchmark comparison
	Pembury	Self-Check-in
	Manchester Children's Hospital	Self-Check-in
	Crick Institute	General, quality benchmark
	UCLH Cancer Centre & Patient Hotel	Oncology Visit
2014	Southmead, Bristol	Commissioning Visit
	Bristol Royal Infirmary, Bristol	Construction methodology, helideck
	Southmead, Bristol	'Newly Opened' Visit

3. Healthcare planning also encompasses non-clinical facilities and services (examples set out in the figure below). In order to prioritise clinical/patient-facing accommodation, a rigorous process of internal challenge has been undertaken to ensure that non-clinical facilities included within the scope of the redevelopment demonstrably deliver benefit/amenity for patients and visitors, including through the efficient operation of the hospital.

Examples of 'Non Clinical' Health Planning Considerations

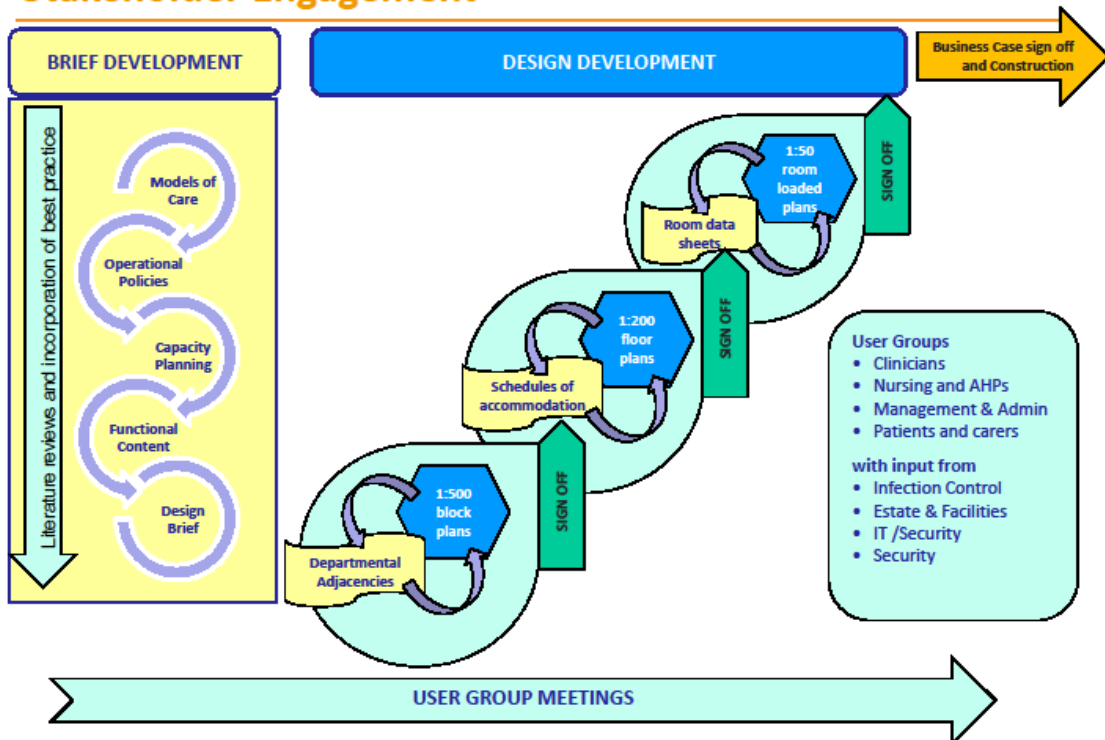


Health Planning Process

4. The healthcare planning process is summarised in the flowchart below. (The detailed space planning process is appended).
5. The final design of the redevelopment results from the interplay of internal healthcare planning processes and external architectural and other local planning considerations, including stakeholder engagement. The shape/external design of the 3Ts buildings has undergone significant change, with more than 12 substantive iterations between 2009 and 2012, when Full Planning Consent was achieved.

Design Development Process

Developing the Brief and Stakeholder Engagement



Design Principles

Quality & Safety

6. *'The quality of patient care should come before all other considerations in the leadership and conduct of the NHS, and patient safety is the keystone dimension of quality... The pursuit of continually improving safety should permeate every action and level in the NHS.'* (Berwick Report, 2013²).
7. In the last two years there have been at least eight significant reports and policy reviews advocating a step change in the safety and quality of patient care in the NHS. The 2014 NHS England 'Sign up to Safety' campaign, for example, aims to halve avoidable harm in the NHS over the next three years and save 6,000 lives as a result. The five pledges and Trust actions are listed in the table below.
8. The Trust Safety & Quality Strategy has adopted the six dimensions of quality described by the Institute of Medicine³ and Institute for Healthcare Improvement:
 - Safe – avoiding injuries to patients from the care that is intended to help them;
 - Effective – proving services based on scientific knowledge to all who could benefit, and refraining from providing services to those not likely to benefit;
 - Patient-centred – proving care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions;
 - Timely – reducing waits and sometimes harmful delays for both those who receive and those who give care;
 - Efficient – avoiding waste, including waste of equipment, supplies, ideas and energy; and
 - Equitable – proving care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location and socioeconomic status.

² National Advisory Group on the Safety of Patients in England (2013) *Improving the Safety of Patients in England: a Promise to Learn – a Commitment to Act*

³ Institute of Medicine, National Academy of Sciences (2001) *Crossing the Quality Chasm: A New Health System for the 21st Century*

Sign Up to Safety: National Pledges & Trust Responses

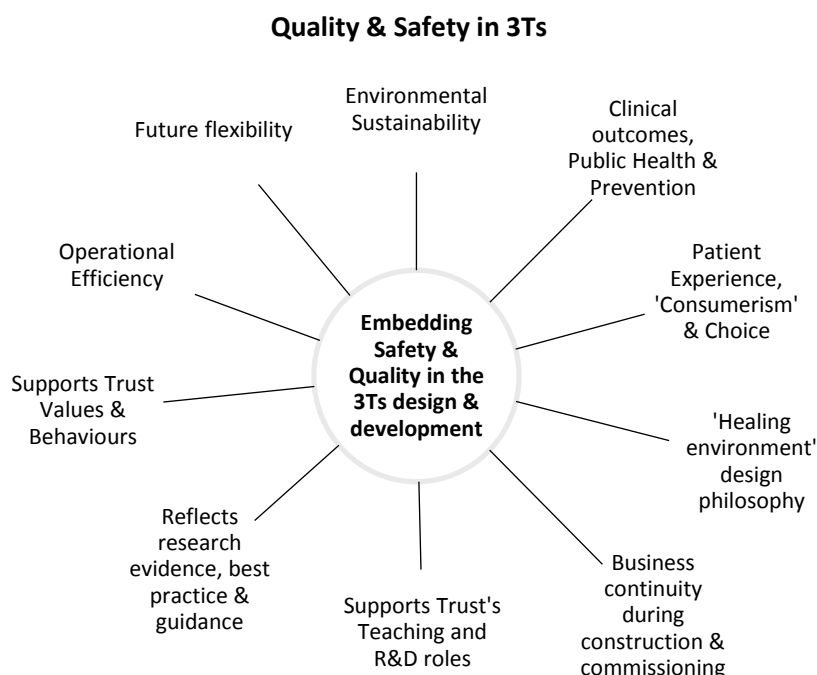
Pledge	Trust Action	Evidence in 3Ts
<p>1. Put Safety First – commit to reduce avoidable harm in the NHS by half and make public the goals and plans developed locally</p>	<ul style="list-style-type: none"> • Publish a comprehensive patient focused Safety and Quality Strategy which underpins all of the Trust’s activities. This will be displayed prominently on our internal and external websites. • Maintain and improve our large and significant reduction in patient falls and apply similar improvement strategies to reduce injury from pressure damage and medication errors. • Develop a learning and reporting culture amongst staff through our ‘Values and Behaviours’ Programme. In addition we will ensure staff reporting incidents receive feedback on their incidents and the lessons are shared across the organisation. • Continue to reduce Hospital-Acquired Infection through active feedback to ward areas and root cause analysis. • Focus on safety culture in operating theatres to ensure safer surgery. 	<ul style="list-style-type: none"> • Alignment with Trust Quality & Safety priorities, incl. patient falls, Healthcare-Acquired Infections, optimal design of operating theatres. (The inventory of specific Q&S-related planning and design decisions in 3Ts is included below).
<p>2. Continually Learn – make organisations more resilient to risks by acting on the feedback from patients and by constantly measuring and monitoring how safe the services are.</p>	<ul style="list-style-type: none"> • Actively seek feedback from patients not only on clinical care but also on handling of complaints and serious incident investigation and use this information to drive improvement. • Develop a network of Safety & Quality leads across the Trust with a specific focus on sharing and embedding learning from patient feedback, incidents and complaints. • Develop a human factors and simulation faculty who will deliver regular training in Human Factors for all clinical staff and use real incidents as the basis of training scenarios. • Develop our ‘Towards a safer hospital’ projects. These projects take the experience of frontline 	<ul style="list-style-type: none"> • Recruitment to a 3Ts Programme Office, incl. Change Consultants, has ensured that learning is factored into the planning, design and approach for 3Ts. As set out in the Commercial Case, this includes learning from: <ul style="list-style-type: none"> - research evidence; - identified best practice; - visits to other redevelopment sites nationally and internationally; - available knowledge within the Trust (eg. Risk Register); - engagement of clinicians and wider stakeholders; and - ongoing discussions with the Trust Quality & Safety team and local chapter of the Institute for Healthcare Improvement.

Pledge	Trust Action	Evidence in 3Ts
	<p>staff and patient feedback and use it to develop improvement projects led by frontline staff and supported by experts and senior leaders.</p> <ul style="list-style-type: none"> • Listen to staff and patients who raise concerns through our Patient Safety Ombudsman and to develop an Advisory Panel including Board Members who ensure actions arising from concerns are completed. • Develop our Medical Examiner system to allow independent review of every death using an adapted 'Global Trigger Tool'. • Look for new and innovative ways of involving service users in improving our services. • Ensure each department has a robust strategy to regularly audit performance to ensure they are delivering care in line with current best practice. 	
<p>3. Honesty – be transparent with people about progress to tackle patient safety issues, and support staff to be candid with patients and their families if something goes wrong.</p>	<ul style="list-style-type: none"> • Continue to notify and discuss all serious incidents with patients and relatives affected and to provide a copy of the investigation report. • Include all Serious Incident Notifications and lessons learnt from SIs in the monthly 'Team Brief'. • Publicly display key safety data including staffing levels on all wards and keep this data regularly refreshed. • Train staff in incident investigation and include specific sessions on being open with patients who have been harmed by an incident. • Build on our strong, clinically-led incident review process to ensure patients and staff receive feedback on the progress of incident investigation. 	<ul style="list-style-type: none"> • The 3Ts programme's approach to eliciting, logging, considering and responding to feedback is set out in the Strategic Case (Consultation & Engagement) and below.
<p>4. Collaborate – take a leading role in</p>	<ul style="list-style-type: none"> • Actively engage with our local Patient Safety 	<ul style="list-style-type: none"> • The 3Ts investment will strengthen the Trust's role within its

Pledge	Trust Action	Evidence in 3Ts
<p>supporting local collaborative learning so that improvements are made across all of the local services that patients use.</p>	<p>Collaborative to share learning and expertise across the region.</p> <ul style="list-style-type: none"> • Continue to develop our work on frailty, falls, pressure damage and dementia to create pathways across service providers that improve patient experience and reduce hospital admission. • Improve our discharge process to ensure safe transfer of care back to community. 	<p>Strategic Clinical and Operational Delivery Networks, as the teaching hospital for the region, and in its Research & Development capability (aligned with a variety of research networks).</p> <ul style="list-style-type: none"> • Planning and design for 3Ts has also focused on key Safety & Quality priorities, including falls and dementia (eg. in the Design Brief). • The 3Ts programme’s approach to engagement and co-development of plans with stakeholders is described in the Strategic Case (Strategic Context).
<p>5. Support – help people understand why things go wrong and how to put them right. Give staff the time and support to improve and celebrate the progress.</p>	<ul style="list-style-type: none"> • Build on our experience of ‘Staff Stories’ (using Schwarz Rounds methodology) as a forum for staff to share experiences and give support. • Continue to share anonymised patient stories through the Patients First newsletter, highlighting how things have gone wrong for patients, what we have learnt from incidents and what we are doing to prevent further patient harm. • Increase the number of staff receiving After Action Review training, a debriefing tool which allows a rapid objective review of an incident. • Further improve our Innovation Forum by allocating small sums of money to selected projects in addition to providing senior expert support. • Eliminate discrimination on the grounds of race or other protected characteristics and ensure equal support for all staff involved in serious incidents. 	<ul style="list-style-type: none"> • Learning requires some infrastructure (eg. teaching/meeting rooms or reasonably-sized offices co-located with the clinical area for Schwartz Rounds or After Action Reviews, or access to IT for individual learning). Lack of facilities currently creates tangible, practical difficulties. These facilities will be provided through the 3Ts investment.

Quality & Safety in 3Ts

9. Safety and quality is a critical driver for the 3Ts investment. The 3Ts Programme Office and Trust Chief of Safety recently audited decisions in the 3Ts planning and design process that had been made with specific patient safety and quality considerations in mind (appended). Key themes are identified below.



Design Choice	Quality & Safety Impact
Scope	
<ul style="list-style-type: none"> Replacing out of date facilities – Barry/Jubilee/HWP Improve the quality of accommodation, materials, surfaces and design, focused on making things easier to clean 	<ul style="list-style-type: none"> Prevention and reduction in Healthcare Acquired Infections⁴
<ul style="list-style-type: none"> Enable a fully functioning Major Trauma Centre with Neurosurgery at RSCH and Helideck 	<ul style="list-style-type: none"> Reduced mortality for major trauma patients⁵ Improved outcomes for patients admitted to A&E wards/reduced admissions (radiated benefit of MT workforce in A&E improving front door assessment/diagnosis out of hours)
<ul style="list-style-type: none"> Increased capacity for specialist and tertiary Services: <ul style="list-style-type: none"> - Critical Care - Cancer - Neurosurgery & Neurology⁶ - HIV/Infectious Diseases⁷ 	<ul style="list-style-type: none"> Reduction in outliers to improve clinical effectiveness Access to IP facilities for patients having 7 day radiotherapy treatment currently travelling⁸

⁴ NHS Estates (2013) HBN 00-09: *Infection control in the built environment*

⁵ NCEPOD (2007) *Trauma: Who cares: A report of the National Confidential Enquiry into Patient Outcome and Death*

⁶ Association of British Neurologists, (2007) *Critical Care for Neurology Patients*.

⁷ British HIV Association (2007) *Standards for HIV Clinical Care*.

⁸ DOH (2012) *Radiotherapy Services In England*, DOH (2011) *Improving Outcomes: A Strategy for Cancer*

Design Choice	Quality & Safety Impact
<ul style="list-style-type: none"> Enhance capacity and capability to become an Experimental Medicine Centre by co-locating BSMS & CIRU and bringing together services to enable focussed participation in research 	<ul style="list-style-type: none"> Improve patient safety⁹ Enable innovation
<ul style="list-style-type: none"> Enable implementation of Ed & learning Strategy by providing Simulation Suite, surgical skills lab, meeting and teaching suite, new facilities, improved IT 	<ul style="list-style-type: none"> Improve patient safety Achieve academic excellence Improve efficiency and enable innovation¹⁰
<ul style="list-style-type: none"> Neurosurgery – Increase in theatre capacity to achieve separation of elective /emergency flows 	<ul style="list-style-type: none"> Reduction in cancelled operations Efficiency benefits reduced waiting times and therefore improved clinical outcomes
<ul style="list-style-type: none"> Reduction in patient moves across site (eg head injury patients between RSCH/HWP) 	<ul style="list-style-type: none"> Reduces clinical risk Reduction in length of stay
<ul style="list-style-type: none"> Increase in size of discharge lounge 	<ul style="list-style-type: none"> Improved patient flow/efficiency
<ul style="list-style-type: none"> Reduced lift and external journeys around the site for patients accessing in-patient facilities 	<ul style="list-style-type: none"> Improved patient experience
<ul style="list-style-type: none"> Reduce patient moves/transfers between and within sites 	<ul style="list-style-type: none"> Reduce clinical risk Improved patient experience
<ul style="list-style-type: none"> 3Ts Development likely to attract high calibre staff¹¹ 	<ul style="list-style-type: none"> Improved clinical effectiveness
1:500	
<ul style="list-style-type: none"> Co-located Neurology with Stroke (Acute Brain injury centre) with rehab facilities 	<ul style="list-style-type: none"> Improved outcomes for stroke patients¹² Enabled research and innovation
<ul style="list-style-type: none"> Co-location of HIV and infectious diseases out-patient and in-patient services (staff expertise, emergency preparedness, bigger single facility) 	<ul style="list-style-type: none"> Develop staff expertise¹³ Facilitate emergency preparedness Enable research and innovation
<ul style="list-style-type: none"> Other Clinical Adjacencies: <ul style="list-style-type: none"> Critical Care link bridge to trauma ward Haematology & Oncology ward 	<ul style="list-style-type: none"> Increase efficiency Fostering innovation
<ul style="list-style-type: none"> Separation of in-patient and out-patient imaging facilities 	<ul style="list-style-type: none"> Increase privacy & dignity¹⁴ Increase efficiency for both types of patients particularly in-patients

⁹ Hanney,S et al. (2013), *Health Services and Delivery Research: Engagement in research: an innovative three-stage review of the benefits for health-care performance*

¹⁰ Department of Health (2012) *World Class Education and Training, for World Class Healthcare: Introducing Health Education England*

¹¹ PricewaterhouseCoopers LLP (2004) *The role of hospital design in the recruitment, retention and performance of NHS nurses in England, Report*

¹² Department of Health (2007) *National Stroke Strategy*

¹³ Department of Health (2001) *Better Prevention, Better Services, Better Sexual Health: the National Strategy for Sexual Health & HIV*

Design Choice	Quality & Safety Impact
1:200	
<ul style="list-style-type: none"> Increase in proportion of single rooms to 65% 	<ul style="list-style-type: none"> Prevention and reduction in HAIs⁴ Reduction in falls, leading to a reduction in length of stay Improved sleep which aids recovery Increased patient choice, privacy & dignity^{15,16} Increase in efficiency through flexibility and higher bed utilisation
<ul style="list-style-type: none"> Larger ward templates 	<ul style="list-style-type: none"> Potential for workforce redesign leading to impact on clinical effectiveness¹⁷
<ul style="list-style-type: none"> Improved ward layout – addressing CQC requirements re space between beds 	<ul style="list-style-type: none"> Prevention and reduction in Health Acquired Infections⁴ Increase in near to bed treatments
<ul style="list-style-type: none"> More ensuite bathroom facilities 	<ul style="list-style-type: none"> Prevention and reduction in Health Acquired Infections⁴ Improve privacy & dignity¹⁸
<ul style="list-style-type: none"> Bariatric ward facilities 	<ul style="list-style-type: none"> Improved care for heavier patients Staff safety
<ul style="list-style-type: none"> Ward layout reflects productive ward principles¹⁹ 	<ul style="list-style-type: none"> Research evidence suggests reduces risk of human factors errors Reduced length of stay and readmissions
<ul style="list-style-type: none"> Touchdown points 	<ul style="list-style-type: none"> Increase in productive nursing time with patients
<ul style="list-style-type: none"> Separate commode wash within dirty utility area 	<ul style="list-style-type: none"> Prevention and reduction in Health Acquired Infections
<ul style="list-style-type: none"> Basement wash/store 	<ul style="list-style-type: none"> Prevention and reduction in Health Acquired Infections
<ul style="list-style-type: none"> Pass through changing areas 	<ul style="list-style-type: none"> Patient Centredness and improve Privacy and Dignity
<ul style="list-style-type: none"> CT in ICU 	<ul style="list-style-type: none"> Minimise risk of moving ventilated patients
<ul style="list-style-type: none"> Fracture clinic – X-ray access from waiting room 	<ul style="list-style-type: none"> Patient-centred Improved Efficiency

¹⁴ Design Council (2012) *Design for patient dignity: making the hospital experience better by helping patients feel less vulnerable and more dignified*

¹⁵ Maben J. Nursing Management (2009) *Splendid isolation? The pros and cons of single rooms for the NHS.*

¹⁶ Hillingdon Hospital NHS Trust (2014) *Research & Development: Bevan Ward*

¹⁷ Department of Health (2010) *Liberating the NHS: Developing the Healthcare Workforce*

¹⁸ The NHS Institute for Innovation and Improvement (2013) *The Delivering Same-Sex Accommodation programme*

¹⁹ NHS Institute for Innovation and Improvement (2008) *Productive Ward: Project Leaders Guide*

Design Choice	Quality & Safety Impact
<ul style="list-style-type: none"> Separating patient/FM flows 	<ul style="list-style-type: none"> Prevention and reduction in Health Acquired Infections Minimise risk of injury
1:50	
<ul style="list-style-type: none"> Same-handed in-patient room design 	<ul style="list-style-type: none"> Reduce human factor errors
<ul style="list-style-type: none"> Continuous handrails from bedroom to ensuite bathroom to enable safe transfer 	<ul style="list-style-type: none"> Reduction in patient falls
<ul style="list-style-type: none"> Visibility of bedhead in single rooms from ward 	<ul style="list-style-type: none"> Reduction in patient falls Allows observation for deterioration
<ul style="list-style-type: none"> All wards include design features for elderly patients: <ul style="list-style-type: none"> Contrasting colours between floor and walls Choice of flooring materials Avoiding glare 	<ul style="list-style-type: none"> Reduction in patient falls²⁰ Assist with way-finding and minimise confusion²¹
<ul style="list-style-type: none"> Consideration to be given to lighting (low level / automatic at 1:50 design stage) 	<ul style="list-style-type: none"> Reduction in patient falls
<ul style="list-style-type: none"> CIS wards include pressure controlled rooms 	<ul style="list-style-type: none"> Prevention and Reduction of HIAs
<ul style="list-style-type: none"> Antimicrobial surfaces – to be considered at 1:50 design, in context of evidence and cost 	<ul style="list-style-type: none"> HAIs
<ul style="list-style-type: none"> Drainage and air con systems 	<ul style="list-style-type: none"> Water safety plan⁴
<ul style="list-style-type: none"> Smart cabinets in wards & theatres for storage of high costs consumables and drugs to aid stock management and ability to track devices and drugs to individual patients. Secure POD lockers at bedside. 	<ul style="list-style-type: none"> Medication safety²²
<ul style="list-style-type: none"> Specific design features for patients with dementia in dedicated area eg clocks and signage, memory boxes, doors 	<ul style="list-style-type: none"> Reduce anxiety²³ Improve clinical outcomes Reduce length of stay
<ul style="list-style-type: none"> Specific security features, including: <ul style="list-style-type: none"> secure entry systems to all wards; infrastructure to support RFID if Trust decides to use; alarm systems / design to minimise risk of hanging. 	<ul style="list-style-type: none"> Patient-centred care for vulnerable patients
<ul style="list-style-type: none"> Therapeutic Landscape, eg. <ul style="list-style-type: none"> all bed spaces located on exterior walls to maximise natural light – majority have sea views 	<ul style="list-style-type: none"> Patient-centred care

²⁰ The National Patient Safety Agency (2007) *Slips, trips and falls in hospital; The third report from the Patient Safety Observatory*

²¹ Alzheimer’s Society (2009) *Counting the cost: Caring for people with dementia on hospital wards*

²² Department of Health (2001) *Building a Safer NHS for Patients: Improving Medication Safety*

²³ Dementia Services Development Centre (2010) *Helpful hints for dementia design at home. University of Stirling*

Design Choice	Quality & Safety Impact
<ul style="list-style-type: none"> Arts strategy 	<ul style="list-style-type: none"> Patient-centred care

10. The 3Ts Programme Office team has also drawn on the expertise of the local chapter of the Institute for Healthcare Improvement²⁴, which was established within the Trust in March 2014 to create ‘one large, collaborative educational community to facilitate multidisciplinary discourse and education in patient safety, quality improvement, health care innovation, management, and leadership.’

Choice Architecture

11. ‘Choice architecture’ seeks to affect outcomes through the manner in which a person/organisation or system ‘presents’ the choice to the decision-maker. This concept exists in a number of fields and is similar to heresthetics (coined by political scientist William H. Riker in the 1960s to describe the process of changing outcomes without changing individuals’ underlying preferences, for example by changing the order in which decisions are made).
12. Choice architecture has been popularised through publications such as *Nudge: Improving Decisions about Health, Wealth and Happiness*²⁵ and the work of the Behavioural Insights Team, established in 2010 within the Cabinet Office to apply insights from academic research in behavioural economics and psychology to public policy and services.
13. In applying choice architecture considerations to the design of 3Ts to enhance health outcomes, the team has drawn on work by Dr Dan Lockton and colleagues on *Design with Intent*²⁶. This toolkit (appended) provides an evidence-based collection of design patterns (‘lenses’) that can be applied ‘across product, service, interaction or architectural design to promote socially and environmentally beneficial behaviour change.’
14. The team has worked with Dr Lockton to explore the application of this toolkit specifically to a healthcare setting (appended). It has also discussed with Brighton & Hove Public Health how the design could be tailored to promote public health goals (eg. healthy eating, exercise) and quality and safety goals (eg. effective team working). These ideas will be explored further at 1:50 room design stage.

Design Standardisation

15. The benefits of standardising room sizing and design for future flexibility are described in more detail below. Standardisation can also benefit patient safety: ‘[a] growing body of literature shows that when patterns of care are widely divergent, clinical outcomes suffer and safety may be compromised. As a result, safety-conscious organisations have sought to minimise variability in routine procedures, documentation, treatments and tasks.’²⁷
16. In line with the Trust Education & Learning Strategy, Safety & Quality Strategy and Health Education Kent, Surrey & Sussex priorities, healthcare planning for 3Ts has also considered Human Factors²⁸ issues throughout the design process, ie. ‘using what we know about people to design safe, effective and efficient systems’²⁹. Examples include:

²⁴ Mehra, A., MD (2014) Brighton, UK IHI Open School Chapter Launches with Interprofessional Collaboration — and a little Competition

²⁵ Thaler R, Sunstein S (2008) *Nudge: Improving Decisions about Health, Wealth, and Happiness*

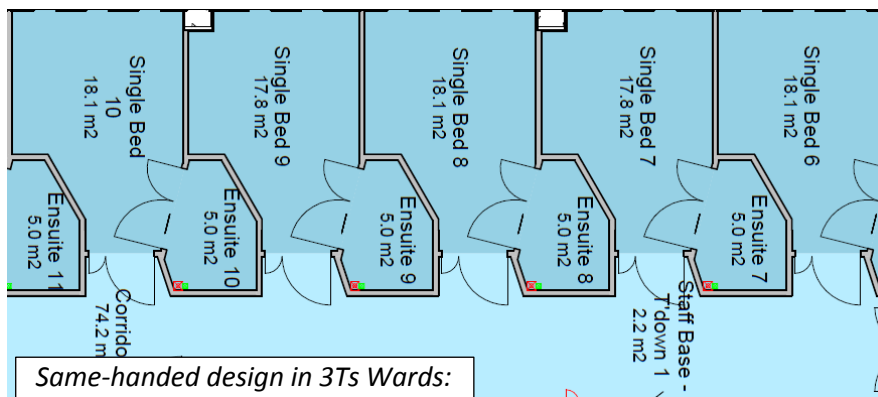
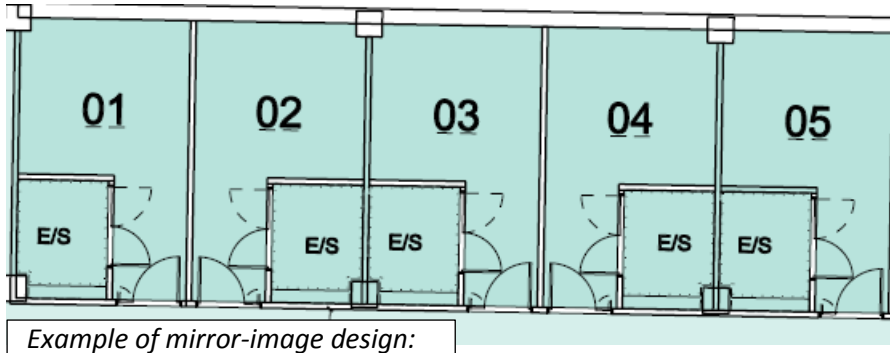
²⁶ http://www.danlockton.com/dwi/Main_Page

²⁷ Beaumont K, Russell J (2012) Standardising for reliability: the contribution of tools and checklists. *Nursing Standard*. 26, 34, 35-39.

²⁸ Defined as ‘environmental, organisational and job factors, and human and individual characteristics, that influence behaviour at work...’ Health & Safety Executive

²⁹ Clinical Human Factors Group (2011) *Towards a Working Definition of Human Factors in Healthcare*

- ‘same handed’ design for inpatient rooms (ie. where rooms are identically oriented rather than the standard mirror image design);
- standardised placement of critical support facilities and equipment (eg. resuscitation trolley);
- standardised store room layout and location of key consumables in clinical storage (eg. anaesthetic rooms).



Future Flexibility

Introduction

17. *Innovation, Health & Wealth*³⁰ describes the constant supply of new medicines, devices and technologies, and that ‘most technology innovations will have service implications.’ ‘All buildings are predictions – all predictions are wrong’, writes Stewart Brand in *How Buildings Learn*³¹. Although designing in future flexibility is therefore an important consideration in healthcare planning, there is little empirical data on what constitutes truly flexible hospital design, and building in redundancy in anticipation of future requirements has both financial and value-for-money considerations.
18. ‘Loose fit’ has gained recent prominence as a principle of environmentally-responsible architecture but was coined in the 1960s by British architect John Weeks to describe his ‘duffle coat’ theory of space planning:
 - standardised design wherever possible, to provide (using the duffle coat metaphor) a ‘snug’ rather than ‘tailored-made’ fit for the intended uses; and
 - reducing the range of room sizes, albeit by compromising functions very slightly (some functions would take place in areas slightly too small, while others would have a little too much space), to increase the interchangeability of functions between rooms and longer-term efficiency of the design.

³⁰ Department of Health (2011) *Innovation, Health & Wealth: Accelerating Adoption and Diffusion in the NHS*

³¹ Brand, S (2014) *How Buildings Learn: What Happens After They're Built*

19. This contrasts with ‘austerity’ space planning, which creates a ‘tailored skin’ around a particular room function. This approach delivers the short-term efficiency of avoiding waste in construction and the continuing operation of the facility (eg. supply of water and energy), but is costly, time-consuming and/or impractical to adapt to changing uses over the longer term. The Royal Institute of British Architects (RIBA) therefore promotes a ‘Long Life, Loose Fit, Low Energy’ philosophy, while recognising that as long as the building envelope remains a ‘loose fit’ against the structure, it need not compromise a degree of architectural iconicity.

Flexibility in 3Ts Planning

20. In planning the 3Ts redevelopment, the Trust identified four key ‘flexibility principles’, set out in the 3Ts Future Flexibility Policy (appended):

Aspect	Principle	Achieved in Design?
Site master planning	<ul style="list-style-type: none"> The design must allow for the potential future removal of the Thomas Kemp Tower (now 40 years old). 	<ul style="list-style-type: none"> Yes, incorporated within the design. There will be programme issues affecting the Major Trauma centre as the helipad would need to be relocated. The position of the A&E trauma centre would need to be relocated in the temporary situation
	<ul style="list-style-type: none"> The new facilities must therefore not be dependent upon systems and services that are currently in the Thomas Kemp Tower, and any bridge links should be capable of removal. 	<ul style="list-style-type: none"> Yes, 3Ts is an independent project and link bridges can be removed in future.
Structure	<ul style="list-style-type: none"> The structural grid should be as widely spaced as possible without compromising structural integrity, enabling future modification of internal spaces with relative ease (rather than have to retain intrusive columns when smaller spaces are merged). 	<ul style="list-style-type: none"> Yes, generic grids are 8.1m x 9.5m
	<ul style="list-style-type: none"> Floors designated for imaging equipment services should be able to accommodate the future addition of heavier equipment, eg. 5 Tesla MRI. 	<ul style="list-style-type: none"> Yes, part of the Imaging floors have been designated for MRI scanners. There is the ability to add extra MRIs, but in specially designated areas only.
M&E Services	<ul style="list-style-type: none"> The distribution of M&E should allow for services to be replaced with minimum disruption to other services within the building or loss of business continuity. 	<ul style="list-style-type: none"> Yes, modular services are planned, and all service runs are easily accessible for replacement.
	<ul style="list-style-type: none"> Spacing of M&E services should also provide for future expansion of the M&E service network (eg. additional power, mechanical ventilation) with minimal impact on business continuity, or the quality of the design/patient environment. 	<ul style="list-style-type: none"> Yes, the building is designed to have future expansion and adaptability in risers and the plant rooms. This is detailed in LOR-CO-SW-RP-0012-Flexibility Report (appended).
Layout & Interior Design	<ul style="list-style-type: none"> Room sizes/shapes should be standardised as far as possible, and irregularly-shaped/sized rooms must be avoided. 	<ul style="list-style-type: none"> Yes. Wherever identified as having common functions, standard repeatable rooms have been established. Standardisation gives scope for adaptation of space for different purposes in future if required (e.g. inclusion of notes storage)
	<ul style="list-style-type: none"> Where possible, room sizes should be in multiples (so that rooms can be combined into larger usable spaces or sub-divided and 	<ul style="list-style-type: none"> Yes, throughout the production of the SoA similar room designations have been standardised and services have been

Aspect	Principle	Achieved in Design?
	maintain standard room sizing).	designed to allow for easy modularisation.
	<ul style="list-style-type: none"> Any 'spare' space created through the design should be identified separately and not used to meet the brief. 	<ul style="list-style-type: none"> There is one small area between Stage 1 and Stage 2 which has been integrated for construction issues. This will be useful as a potential IT hub room or other engineering infrastructure in the future.

21. Planning for future flexibility in 3Ts has also drawn on the US *Hospital for the Future*³² recommendations, which identify key areas where flexibility could be incorporated in building design. The table below summarises these and the Trust response.

Hospital for the Future: Design Recommendations

Recommendation	Trust Commentary (2010)	Status (2014)
Pre-wired vertical expansion easier if top floor shelled to minimise disruption when 'building up'.	<ul style="list-style-type: none"> Unlikely, given the constraints on site development for heritage and planning considerations, that a shell floor on the top of either Stage will be achievable. 	<ul style="list-style-type: none"> 2010 assessment correct: not considered achievable.
Pre-wired horizontal expansion easier if 'building spine' concept incorporated with central ancillary and utility system (cheaper and less disruptive than vertical option but available land needed).	<ul style="list-style-type: none"> In principle this should be adopted, especially if car parking is underground and development space to the east of the Stage 1 building becomes available. 	<ul style="list-style-type: none"> The hospital is on a tight urban sight, with limited horizontal capability, therefore this is not deemed optimal.
Interstitial floors of 2-3m built between regular floors to house mechanical, electrical and plumbing system.	<ul style="list-style-type: none"> Would be desirable if the whole hospital could be rebuilt on this basis. Adoption of this principle throughout the development likely increase overall building height, which would be difficult to achieve for heritage considerations. 	<ul style="list-style-type: none"> 2010 assessment correct: not considered achievable.
Medical gas in headwalls, larger rooms and outboard toilets to allow room to flex from general inpatient accommodation to ITU.	<ul style="list-style-type: none"> Not required throughout the building. If Critical Care becomes part of the 3Ts scope, this could be considered for the immediately adjacent floor. 	<ul style="list-style-type: none"> This level of redundancy has not been provided within the design solution.
Allow large equipment to be installed through external walls via knock-out panels.	<ul style="list-style-type: none"> Wherever possible and practical. 	<ul style="list-style-type: none"> The Equipment Interface document (Appendix 4.2.7) captures how this will be achieved.
Provide support for future diagnostic and treatment equipment in upper floors.	<ul style="list-style-type: none"> Investigate implications up to floor 7 in Stage 1. 	<ul style="list-style-type: none"> Stage 1 Level 7 (ITU) now includes CT scanner.
Perimeter layout of stairs, lifts and technical, electrical and plumbing systems; minimal use of load bearing structure in	<ul style="list-style-type: none"> Wherever possible. 	<ul style="list-style-type: none"> This has been provided throughout the building and you will note the cores are at the perimeter of the building, ensuring maximum

³² The Advisory Board Company (2007) *Hospital for the Future: Lessons for Inpatient Facility Planning and Strategy*

Recommendation	Trust Commentary (2010)	Status (2014)
core inpatient areas to allow for easier reconfiguration.		reconfiguration. Additionally there is no cross bracing as the cores provide lateral support.
Specialise ITUs sparingly.	<ul style="list-style-type: none"> Some specialisation (eg. neuro-Critical Care) would be required, but co-location of Critical Care facilities would provide operational flexibility, and should be designed to achieve this. 	<ul style="list-style-type: none"> ITU now co-located on Level 7. Stage E design will seek to standardise 1:50 design across all 55 Critical Care beds to ensure maximum flexibility in future configuration (Neuro/General ITU).

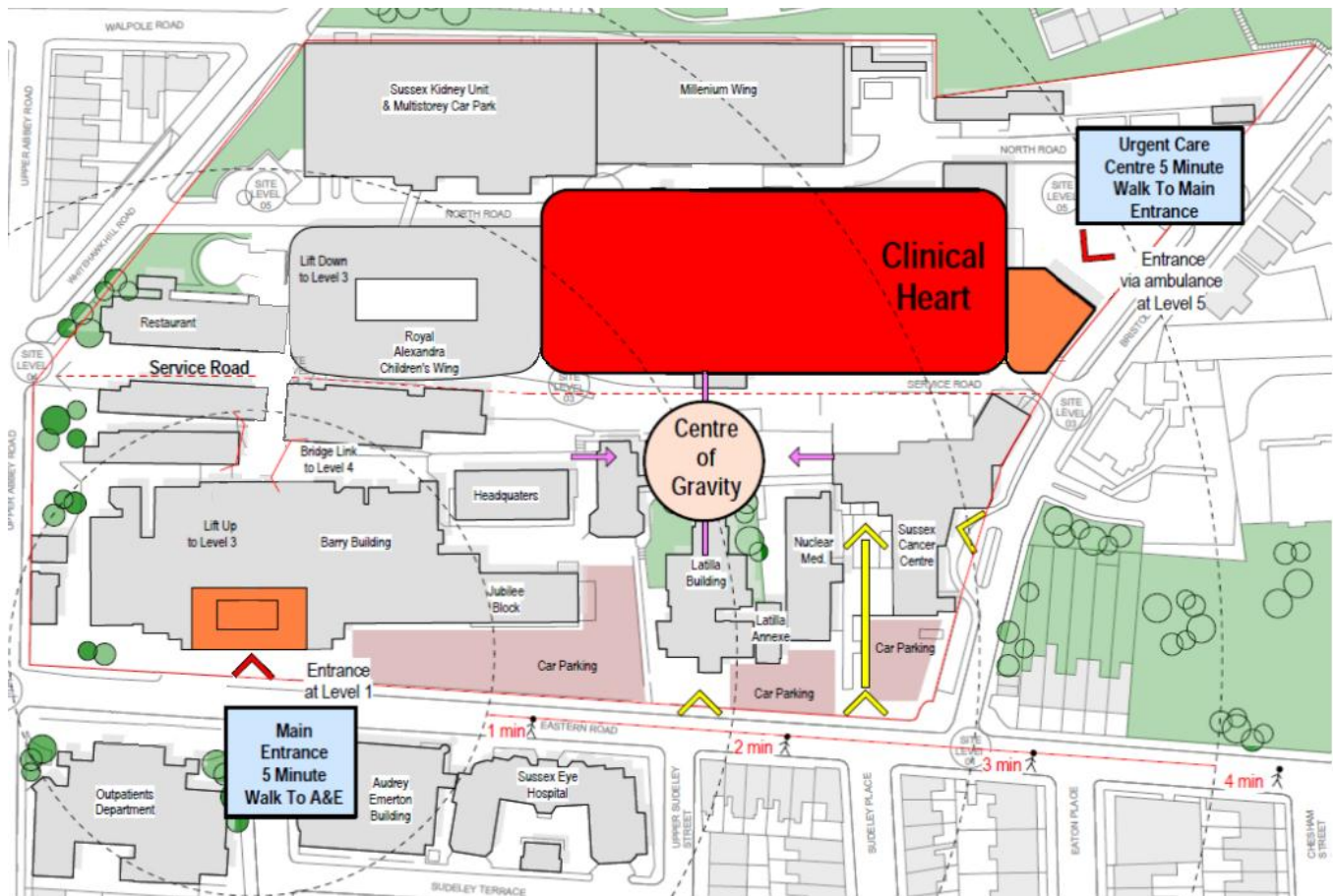
Site Context

Clinical Adjacencies

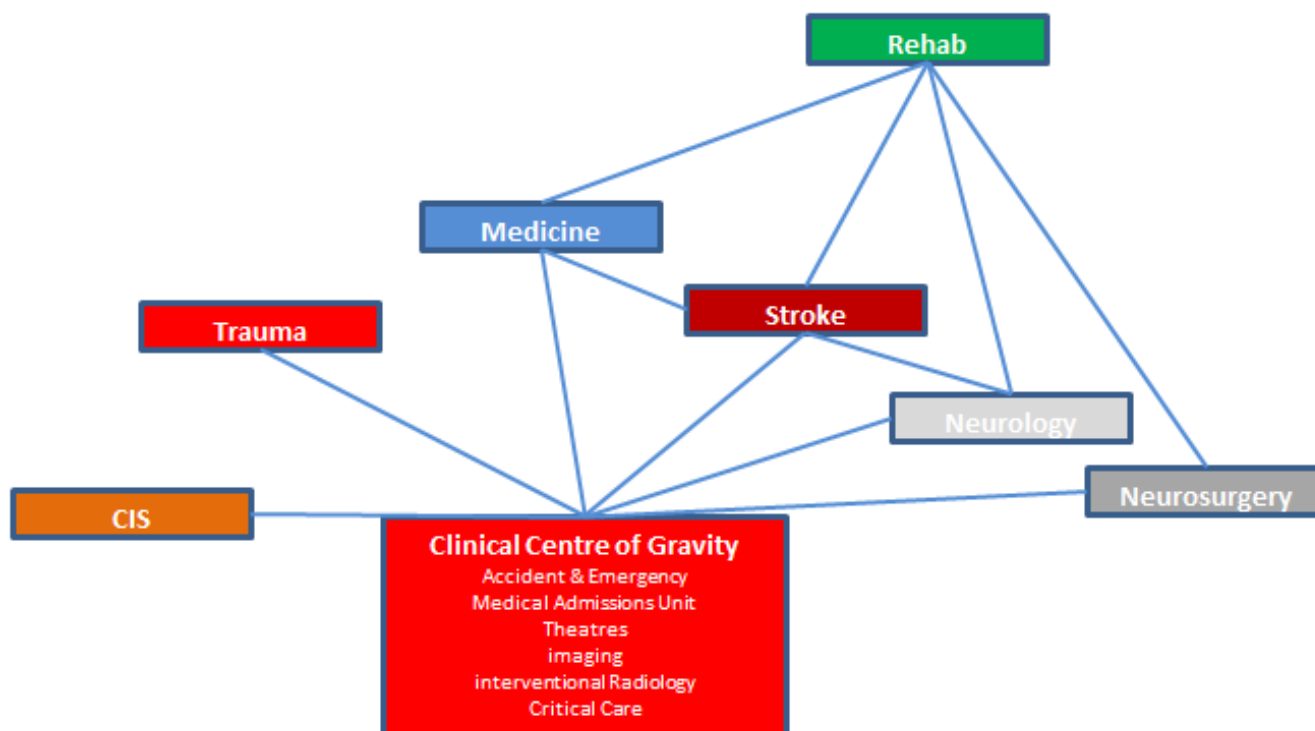
22. Optimising adjacencies to achieve the best quality and safety outcomes from the 3Ts investment has included consideration of:
- clinical and non-clinical service models;
 - adjacencies between the 3Ts building and retained estate;
 - adjacencies between clinical services within the 3Ts building; and
 - improving patient/visitor access to the rest of the Royal Sussex County Hospital site (these key communication routes have also informed planning for non-clinical adjacencies, eg. retail and patient amenity).
23. Clinical and non-clinical adjacency reviews have been undertaken:
- throughout the planning and design process (eg. development and agreement of an Operational Brief for each service area, including critical adjacencies; and user group sign-off of all drawings, referencing critical adjacencies); and
 - in periodic programme 'stocktakes', which have ensured that the design *overall* continues to meet the investment objectives and wider vision.

Relationship with Retained Estate

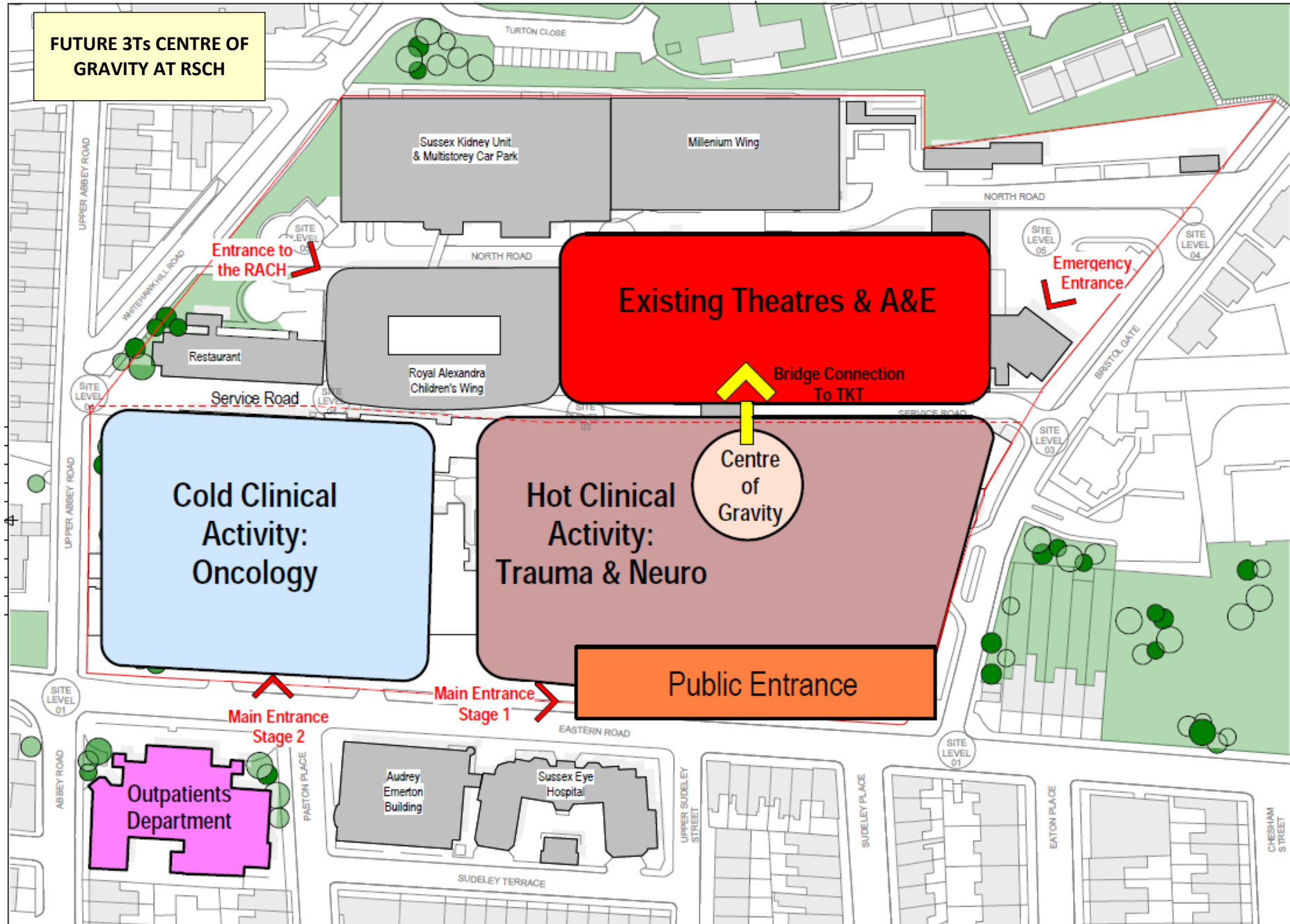
24. As illustrated below, the clinical 'heart' of the Royal Sussex County Hospital is the Emergency Department, main operating theatres and the High Dependency Unit on Level 5 of the Brighton Pathology/Millennium Building, with public and ambulance access via Bristol Gate to the East of the site.



25. The recent Care Quality Commission inspection found that the Emergency Department ‘does not have enough physical space to deal with the number of patients that attend’, which presents significant challenges in maintaining patient privacy and dignity, providing staff with appropriate environments in which to care for patients, and progressing towards Major Emergency Centre designation.
26. Healthcare planning for the redevelopment has taken into consideration the strength of clinical connection between facilities in the 3Ts scope and clinical heart of the site (clinical centre of gravity). These clinical connections are illustrated below:



27. The redevelopment provides a unique opportunity to create a more clinically coherent site plan by:
- extending the Level 5 'acute floor' into the 3Ts building, via a wide bridge. This has enabled the acute facilities within the 3Ts scope (neurosurgery theatres, major trauma theatre, Interventional Radiology Suite etc.) to be co-located with each other and with the existing Emergency Department and main theatre complex. Although the Emergency Department is not within the scope of 3Ts, by transferring a number of services currently in temporary accommodation on Level 5 into the 3Ts building, adjacent space is freed up for future Emergency Department and theatre expansion – a significant radiated benefit of the 3Ts investment;
 - providing a helideck on the Thomas Kemp Tower for the Air Ambulance and HM Coastguard Search & Rescue services, with rapid access to the Level 5 acute floor via an external, dedicated trauma lift. (The Air Ambulance currently lands in East Brighton Park, with secondary transfer by road ambulance to the Royal Sussex County Hospital site); and
 - locating ambulatory care and outpatient services closer to the site main entrance on Eastern Road. This will significantly improve patient access, help decompress the cramped centre of the site, create a calmer zone for non-acute patients, and wherever separate, acute and non-acute patient flows.



Critical Adjacencies within 3Ts

28. Physical co-location of services enables:
 - improved patient pathways resulting in reduced patient travel/transfer
 - effective clinical teamworking;
 - innovative models of care (eg. the merger of the HIV and Infectious Diseases facilities to create an integrated Clinical Infection Service)
 - operational efficiencies (eg. co-location of wards to enable larger ward templates, and efficiencies in particular in requirements for senior/supervisory staff); and
 - enhanced opportunities for teaching and research.

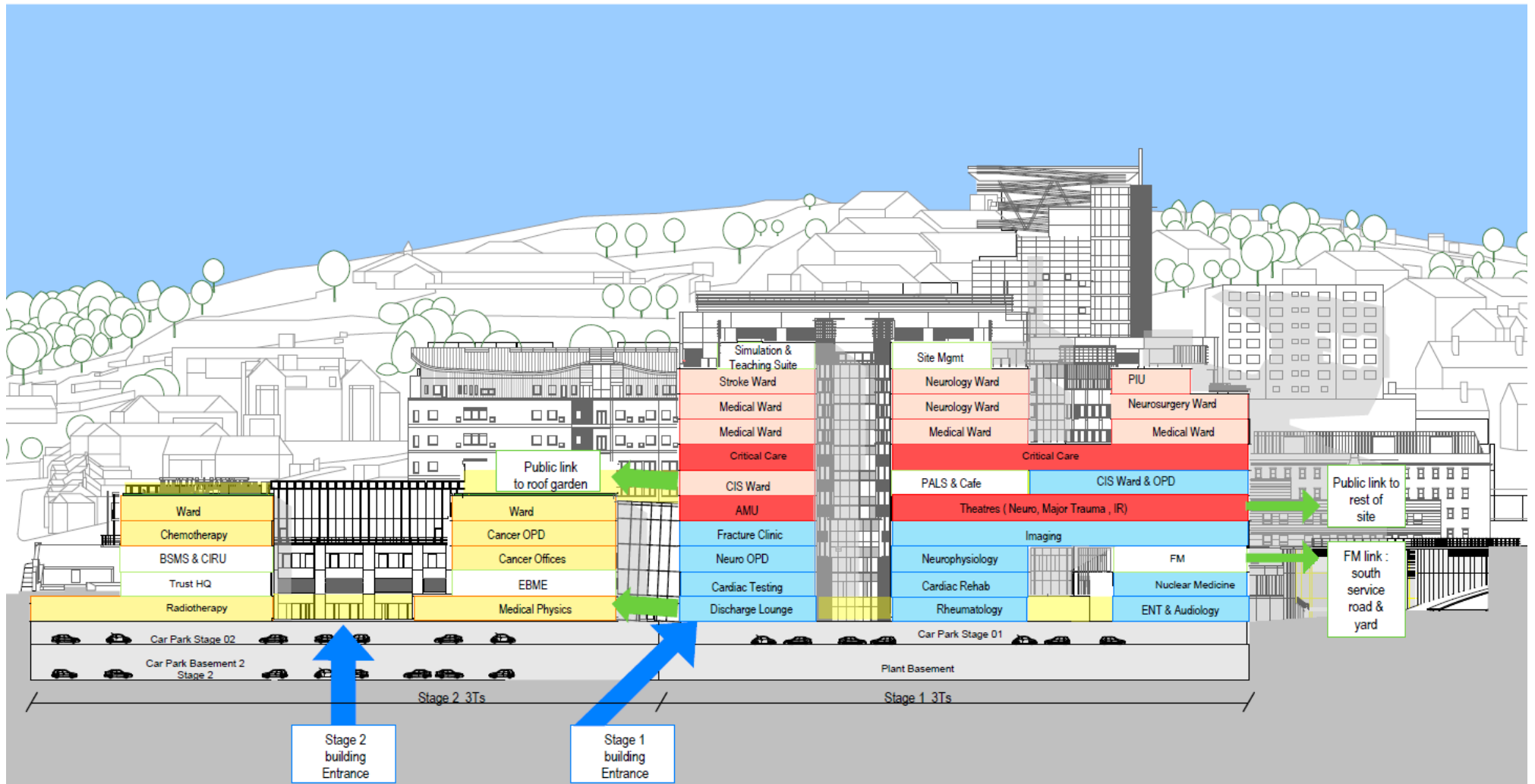
29. A variety of factors has led to the massing of the Stage 1 building as 11 levels and the Stage 2 Building as five levels (plus two basement levels):
 - the number of facilities to be accommodated within the available site footprint (using HBN space planning guidance, replacing the Barry Building accommodation alone would require 5 times as much floor area as current, excluding parking);
 - the imperative that the oldest and least fit-for-purpose accommodation be replaced in the Stage 1 building (2019/20) rather than wait until Stage 2 (2022/23); and
 - the decision, in discussion in particular with local residents and Brighton & Hove City Council planners, that the development should be massed predominantly on the eastern half of the development site, which provides a Stage 2 development on the western side of the site that broadly matches the proportions as the current Barry Building.

30. As a result, clinical planning has exploited opportunities for vertical adjacencies (via a bank of patient/bed and visitor lists running up the 'spines' of the 3Ts Stage 1 and Stage 2 buildings) as well as horizontal adjacencies.

31. Four key clinical zones are identified in the massing (see Clinical Accommodation Zones within the 3Ts Redevelopment graphic below). The lower floors of the Stage 1 podium include high footfall Ambulatory Care departments. Stage 1 Levels 5 and 7 link into existing acute accommodation relating to A&E, Theatres and Critical Care. Inpatient wards are located in the upper floors of Stage 1, to maximise views for patients. The Stage 2 building is predominantly the re-provided Sussex Cancer Centre.

32. These zones are also informed by and reflect the configuration of the retained estate, with horizontal linkages on key floors (see Clinical Accommodation Zones Across RSCH Campus and Associated Linkages below).

Clinical Accommodation Zones within the 3Ts Redevelopment



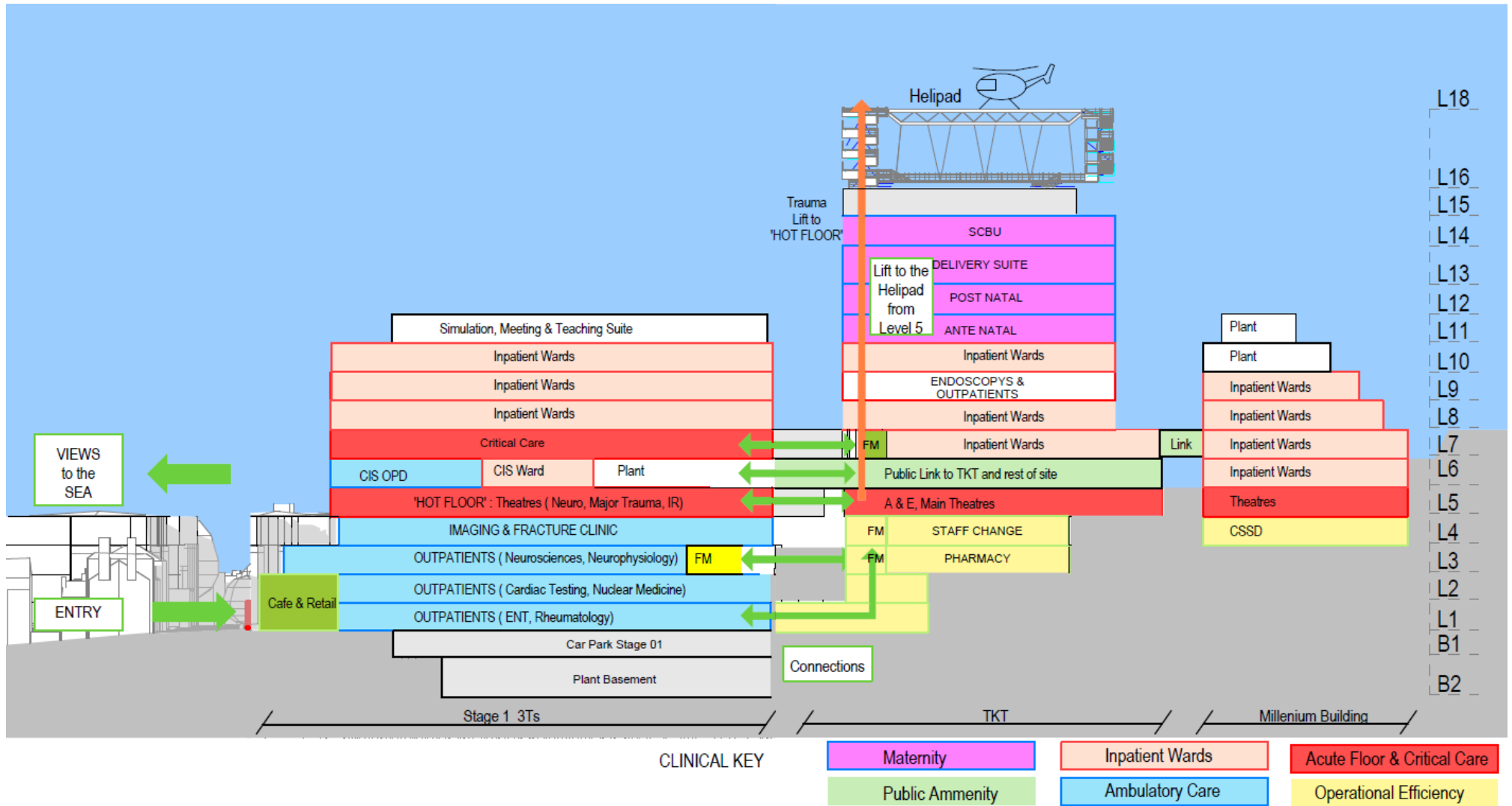
Stage 2 Levels 1, 4 & 5: Sussex Cancer Centre

Stage 1 Levels 8 – 10: Inpatient Wards

Stage 1 Levels 5 and 7: Acute Floor (Theatres, AMU) and Critical Care

Stage 1 Levels 1 - 4 : Ambulatory Care (Outpatients & Diagnostics)

Clinical Accommodation Zones Across RSCH Campus and Associated Linkages



33. Key examples of adjacency planning are listed in the table below (full assumptions log and associated site-slice diagrams are appended). The benefits this realises are set out in the Benefits Realisation statement.

Critical Clinical Adjacencies within the 3Ts Redevelopment

Service	Key Co-locations	Clinical Benefits
Elderly Care	<ul style="list-style-type: none"> The eight separate elderly care and specialty medicine wards in the Barry Building/Jubilee Wing will be co-located in 3Ts in two, larger ward templates across two floors. 	<ul style="list-style-type: none"> Current wards are small (avg. 12 beds per ward) and inefficient to staff. As set out in the case for change, this also necessitates frequent patient moves to ensure single-sex accommodation and locate patients in the optimal specialty locations.
Clinical Infection Unit	<ul style="list-style-type: none"> The Clinical Infection Unit will co-locate inpatient and outpatient facilities for patients with Infectious Diseases, HIV and some respiratory patients (eg. those with suspected TB). Facilities will include 24 single rooms (incl. eight pressure-controlled rooms) and a pressure-controlled assessment/treatment area. 	<ul style="list-style-type: none"> This innovative model of care will support the further development of staff expertise in managing patients with infection, and opportunities for research and teaching. The unit has also been designed to be isolated ('locked down') in extremis, eg. in the event of a pandemic.
Regional Centre for Neurosciences	<ul style="list-style-type: none"> One of the advantages of the current single story Hurstwood Park Building is that it provides easy horizontal adjacency between neurosurgery theatres, specialist neuro-Imaging and neuro-Critical Care. This is maintained in 3Ts via vertical adjacency. 	<ul style="list-style-type: none"> Critical clinical adjacencies for the neurosciences service are maintained, and in addition the design enables co-location between neurosciences facilities and other services (eg. major trauma theatres).
Acute Brain Injury Centre	<ul style="list-style-type: none"> The Stroke Unit will be immediately adjacent to the neurology ward, therapies (incl. inpatient gym) and access to an external 'therapeutic garden' space for rehabilitation activities. There is an effective vertical adjacency with the Emergency Department, neurosurgery wards and theatres, neuro-imaging and main Imaging, and medical and elderly wards. 	<ul style="list-style-type: none"> This co-location enables services that are currently physically separate to establish an innovative model of care: the Acute Brain Injury Centre. This supports the planning currently underway to centralise Trust stroke services on the Royal Sussex County Hospital site and establish of a Hyperacute Stroke Unit for the whole Trust catchment.
Sussex Cancer Centre	<ul style="list-style-type: none"> Cancer inpatient wards, chemotherapy and radiotherapy units, and outpatient clinics will all be co-located in the Sussex Cancer Centre (3Ts Stage 2). 	<ul style="list-style-type: none"> Cancer services are currently fragmented across the Royal Sussex County Hospital site. This is operationally inefficient and limits opportunities for teaching and research. Patient transfers from the inpatient cancer ward in the Barry Building to the Sussex Cancer Centre/radiotherapy service currently require two porters and an external transfer across a car park and main public access route into the site.

Patient/Visitor Access

34. The main entrance for the Royal Sussex County Hospital site is from Eastern Road through the Barry Building in the South West corner of the site. The series of terraces towards the north of the site, lack of internal connections between buildings, poor lift access, changes in levels and significant differences in the ages and configurations of buildings make wayfinding complex, convoluted and often physically challenging for many patients and visitors (of whom 33% are over 75 years old).
35. Poor access was raised more frequently than any other issue in the comments submitted as part of the application for Full Planning Consent; the baseline assessment of Trust patient experience, which was undertaken as part of the benefits realisation process; and within previous Disability Access Audits.
36. Ensuring good access within the 3Ts buildings and improving access through 3Ts to the retained estate has therefore been a significant focus of the final design solution. To ensure that designs are optimal in practice as well as meeting statutory access requirements, the Programme Office:
- commissioned Fieldhouse Accessibility & Communication Services (disability and accessibility consultants) and the Fed. Centre for Independent Living ('the Fed') to review the emerging designs to ensure that they reflect best practice and are accessible from a user perspective;
 - ran a disability access workshop with members of the Fed to review in particular the design/layout of toilets, reception areas and provision for use of mobility scooters within the redevelopment;
 - met with members of Blind Veterans UK and the local branch of the RNIB to discuss the scheme and designs; and
 - established the Patient & Public Design Panel, which includes patients and members of the public with multi-sensory loss, to review various aspects of the redevelopment from a user perspective.
37. The output from this specialist engagement programme was the Statement of Minimum Standards for Disability Access & Facilities in 3Ts (appended). This has recently been updated to include a range of other design recommendations to improve access for patients with particular needs, eg.
- Brighton & Hove *Total Communication Standards*³³, developed by the City Council, Learning Disability Partnership Board and Sussex Partnership NHS Foundation Trust; RNIB guidance, *Accessing Care: the Physical Environment*³⁴;
 - 3Ts independent Equality Impact Assessment (2011); and 2013 report by the Brighton & Hove City Council Trans Equality Scrutiny Panel³⁵;
 - dementia-friendly design principles, including the Dementia Services Development Centre (DSDC) Virtual Hospital project³⁶; The King's Fund dementia-friendly environmental assessment tool³⁷; and Thomas Pocklington Trust good practice guidance³⁸;
 - Royal College of Psychiatrists Quality Mark for the Elder-Friendly Hospital Wards programme³⁹;
 - Design Council project to reduce violence in Emergency Departments⁴⁰; and
 - National Institute for Health & Clinical Excellence (NICE) guidance on workplace health: physical activity and the environment⁴¹, smoking cessation⁴², mental wellbeing⁴³.

³³ Sussex Partnership NHS Trust (undated) Total Communication Standards

³⁴ RNIB (2014) *Accessing Care: the Physical Environment*

³⁵ Brighton & Hove City Council (2013) *Report of the Overview and Scrutiny Committee: Trans Equality Scrutiny Panel*

³⁶ Dementia Services Development Centre (2012) Virtual Hospital

³⁷ The King's Fund (2013) *Is Your Ward Dementia-Friendly? Enhancing the Healing Environment (EHE) Environmental Assessment Tool*

³⁸ Thomas Pocklington Trust (2014) Research Findings No. 42: Good practice in the design of homes and living spaces for people with dementia and sight loss

³⁹ Royal College of Psychiatrists (2014) Quality Mark for the Elder-Friendly Hospital Wards programme

⁴⁰ Design Council / CABE / Department of Health (2011) *Reducing Violence and Aggression in A&E through a Better Patient Experience*

⁴¹ National Institute for Health & Care Excellence (2008) *Physical Activity and the Environment*

⁴² National Institute for Health & Care Excellence (2007) *Workplace Interventions to Promote Smoking Cessation*

⁴³ National Institute for Health & Care Excellence (2009) *Promoting Mental Wellbeing at Work*

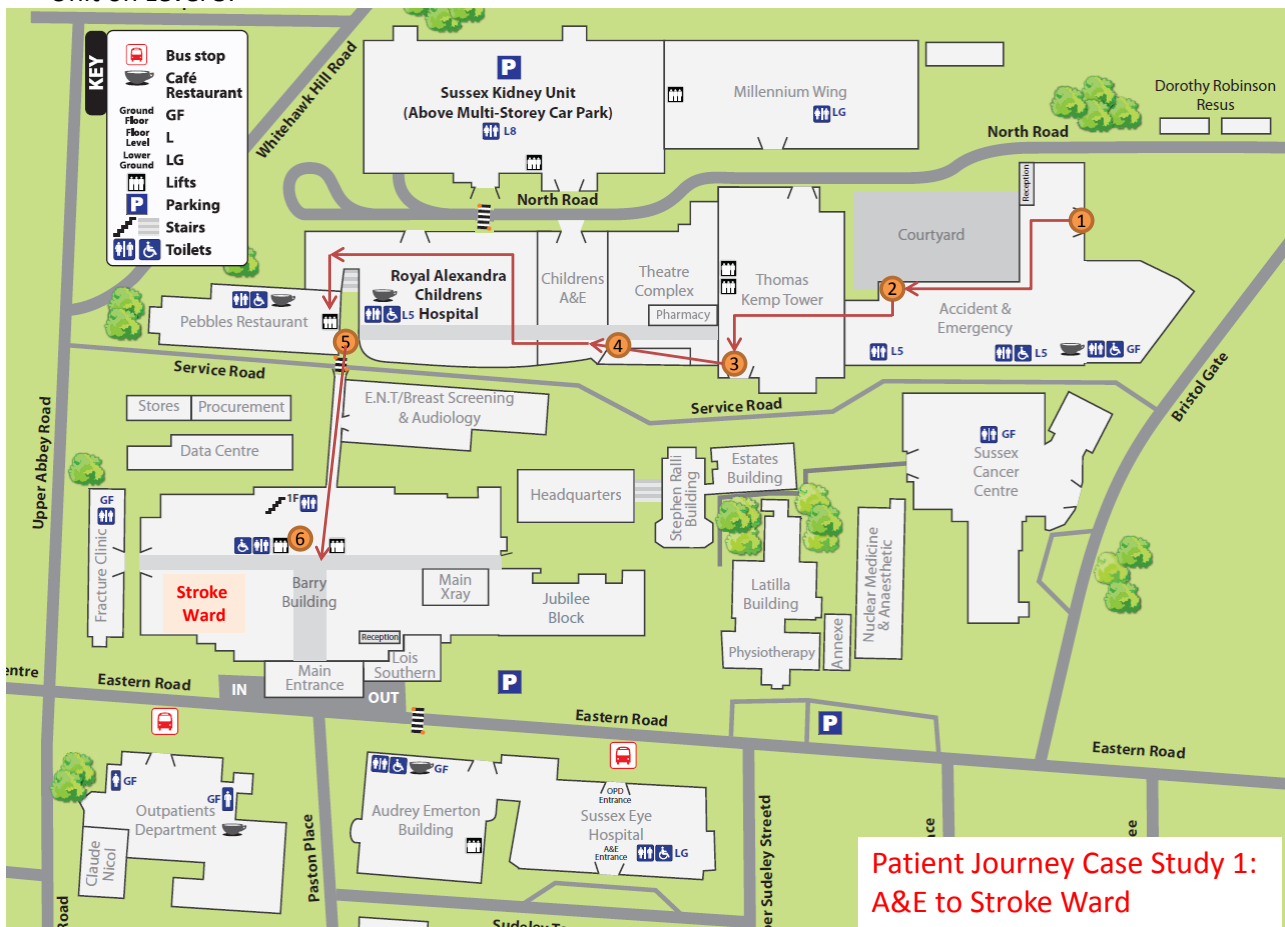
38. An access audit (appended) was conducted in 2012 to assess whether the design had achieved the programme’s aims. The perspective from the Access Audit Workshop incorporated the Social Model of Disability⁴⁴ whereby the potential of the building to facilitate or impede full inclusion in its activities is considered key. The audit concluded that 3Ts demonstrated best practice both within the main scheme and decant for the consideration given to access for people with mobility problems, sensory impairment and dementia (based on consultation with these groups).
39. As illustrated above, the massing of the Stage 1 as an 11 storey building that abuts the retained estate provides a unique opportunity to significantly improve patient/visitor access to the rest of the campus. ‘Before and After’ case studies are described below. Until 3Ts Stage 1 is complete in 2019/20, access to the Royal Sussex County Hospital site will remain a significant patient experience issue.

Case Studies

Example 1: an elderly patient admitted to the Stroke Unit through the Emergency Department

Current:

- Patient presents at the Emergency Department (1).
- Assessment, imaging and treatment in the Emergency Department (2).
- Patient is transferred via trolley to the Stroke Unit in the Barry Building: through Emergency Department majors; past Level 5 kitchen and CT waiting area; left at main theatres to reach the Thomas Kemp Tower bed lift (3); down to Level 3, past the pharmacy delivery area; along the underground link corridor toward the western edge of the campus (4); up in the public lift from to Level 4 and exit outside (5); across the South Service Road; down the public access ramp to the lifts in the Barry building (6); and up to the Stroke Unit on Level 3.



44 <https://www.gov.uk/government/policies/creating-a-fairer-and-more-equal-society/supporting-pages/the-social-model-of-disability>

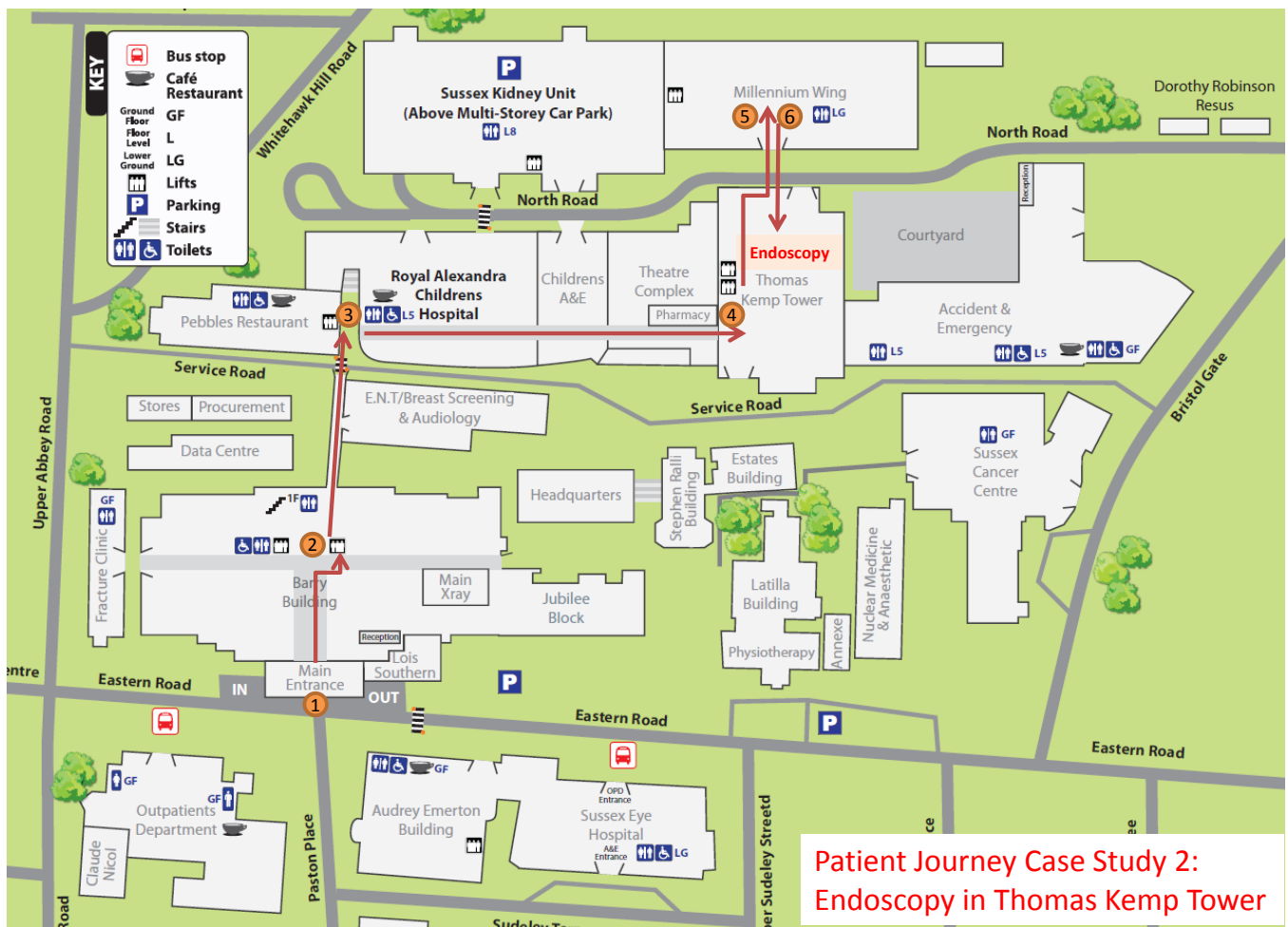
Future:

- A patient presents to ED TKT level 5 via ambulance with suspected stroke.
- Following assessment and Imaging in the ED they are transferred onto a trolley and referred to the Stroke Unit.
- They are wheeled out of A&E along the patient access corridor towards the L5 link bridge. They cross the bridge and turn left into the dedicated patient bed lifts, then up from L5 to L10 and exit the lift directly opposite the stroke unit.

Example 2: a patient attending the endoscopy unit in the Thomas Kemp Tower

Current:

- Patient enters the Barry Building at the Eastern Road main entrance (1); up a steep slope to reach the Barry Building lifts (2); up to Level 2 and exit; continues up another ramp; exit the Barry Building and cross the South Service Road (3); second lift journey to Level 3; then exit and continue along the Level 3 link corridor; down the slope past the pharmacy delivery area; through two sets of double doors to the Thomas Kemp Tower public lifts (4); up to L6 and exit; link bridge and cross into the TKT passing the TKT lifts and turn left. They exit the double doors passing the courtyard on their right. Cross over the road and enter the Millennium Wing (5); take lifts L6 to L9 and exit; turn right and cross link bridge to Endoscopy Department in TKT.



Patient Journey Case Study 2: Endoscopy in Thomas Kemp Tower

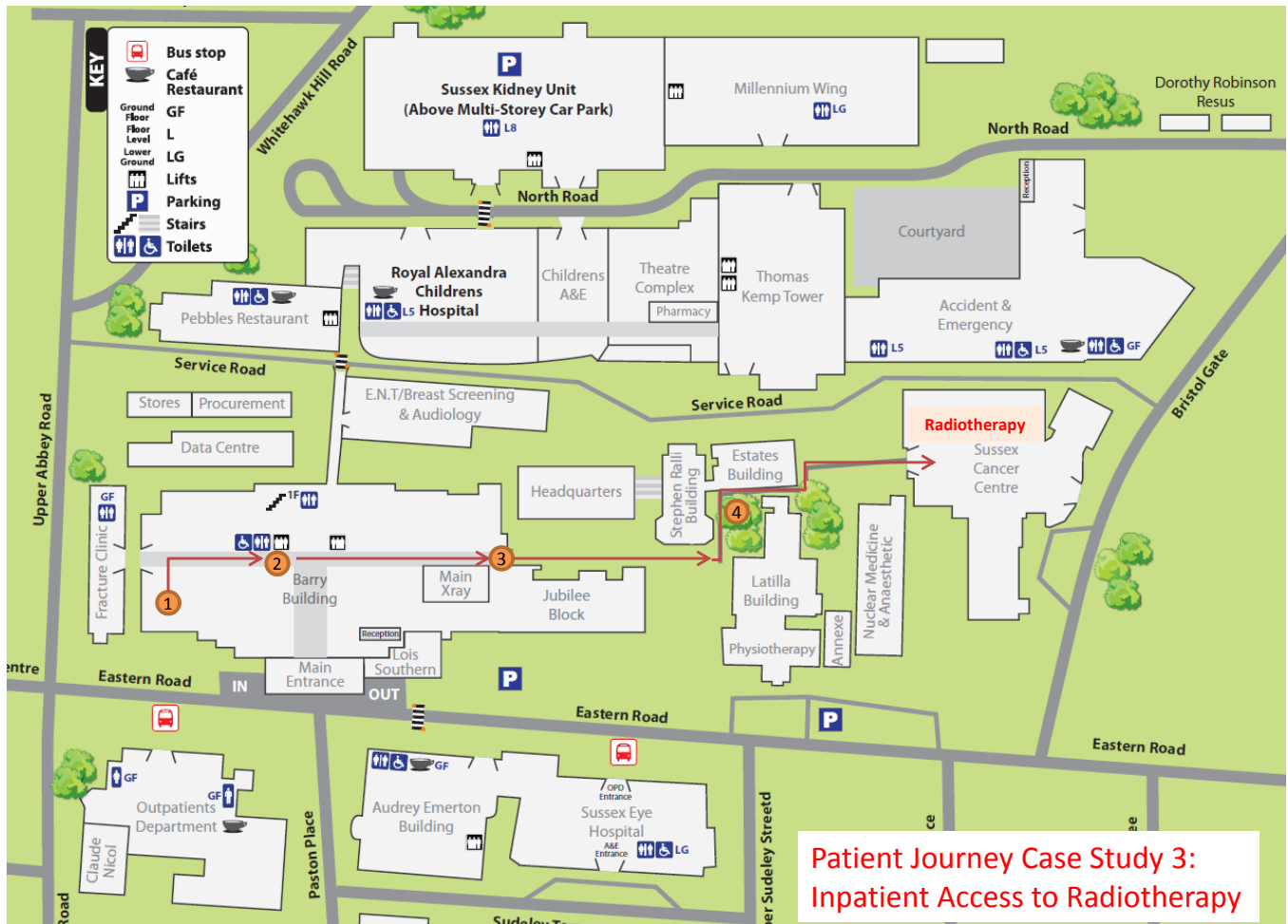
Future:

- The patient enters the Stage 1 Building Main Entrance from Eastern Road.
- They go straight to the public lifts and up to L6 to the link corridor to Thomas Kemp Tower.
- They walk through the TKT, exit and cross over the North Road and enter the Millennium Wing. Take the lifts or stairs from L6 to L9 and exit; turn right and cross link bridge to Endoscopy Department TKT.

Example 3: a patient with cancer transferring from Bristol ward to radiotherapy in the Sussex Cancer Centre

Current:

- Patient exits (1) Bristol Ward (Level-3 Barry Building) and takes the lift to the ground floor (2) exiting on to the main public thoroughfare; through two sets of double doors to exit the building (3); across an external car park (alongside members of the public); around the back of the Stephen Ralli building (4); up a steep slope to enter the back of the Sussex Cancer Centre.



Future:

- The patient exits the Ward (Stage 1 building Level 8) onto a dedicated patient corridor.
- They take the patient bed lift from L8 to L1 and exit the lifts turning right. They travel along the patient communication corridor enter the Radiotherapy Department. They are checked in at the inpatient bed wait area without encountering members of the public.

Non-Clinical Accommodation and Adjacencies

40. Non-clinical accommodation, which includes both clinical support facilities and patient amenity, represents 12% of the total gross internal floor area (GIFA). These facilities include:

- **Public Amenity**- provision of facilities to meet the non-clinical needs of patients and visitors, eg. car parks, cafés, retail, toilets (including a PAMIS⁴⁵ rooms), multi-faith facility;
- **Teaching & Research**- eg. research laboratories (in partnership with BSMS) and Clinical Research Facility, a Simulation Suite, and Meeting & Teaching facilities;
- **Facilities Management** – including workshops/stores for efficient materials and waste management, Electrical & Biomedical Engineering, service yard for deliveries;
- **Staff Amenity**- eg. changing rooms, lockers, toilets, staff rest areas.

41. Planning for non-clinical services has sought to improve both patient experience and operational efficiency and effectiveness. Planning has been underpinned by a number of critical co-location/adjacency principles, shown in the figure below:

Patient/Visitor Experience

- Wherever possible, location of patient amenities (eg. The Sanctuary multi-faith facility, Patient Advice & Liaison Service (PALS) office, patient library) along the main communication routes (principally the Main Entrance in Stage 1 Level 1 to the rest of the site via Stage 1 Level 6) to raise the profile of these services and provide easy access.
- Internal transfer routes for patients across the RSCH campus (rather than having to go externally to move between buildings, as is currently the case).
- Separation of Facilities Management ('back of house') and patient/visitor communication routes, so eg. patients requiring bed or trolley transfers do not have to share the same lifts or main corridors as ambulatory patients/visitors or goods deliveries, as is currently the case. This aims to significantly improve current limitations in patient privacy and dignity, and reinforce infection prevention and control.

Operational Efficiency & Effectiveness

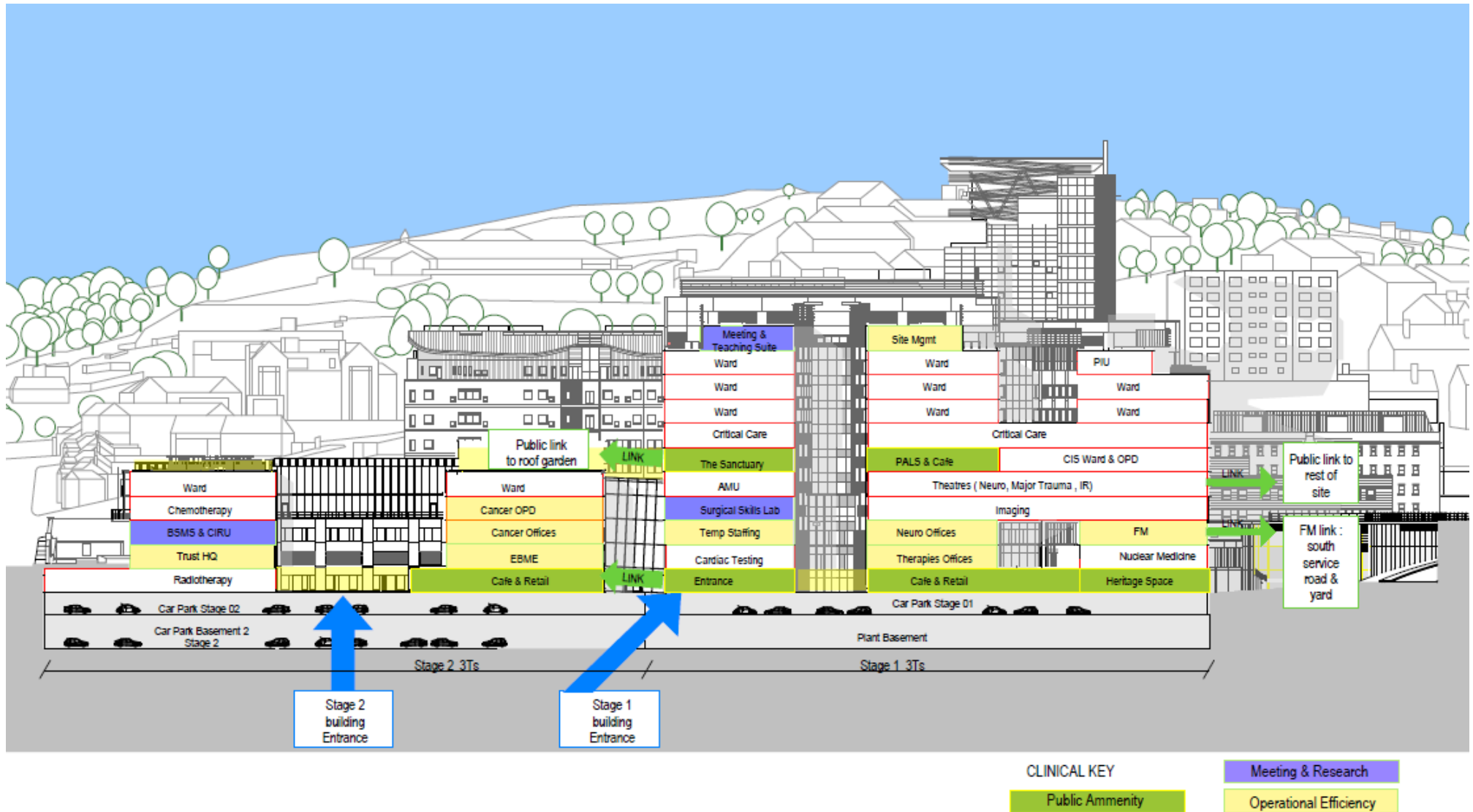
- Close co-location of support facilities with the clinical areas they support – this also benefits clinical outcomes.
- Separation of Facilities Management from patient/visitor communication routes.
- Adjacency between Facilities Management accommodation and the principal access route for goods in/out (via the South Service Road and Service Yard, Stage 1 Level 3).

Patient/Visitor Experience

42. Healthcare planning for 3Ts has also sought to ensure that design of non-clinical facilities enhances both patient/visitor and staff experience through use of evidence-based design features such as access to natural light, views of nature/green spaces, noise attenuation. The Staff Welfare Policy is appended.

⁴⁵ A 'Changing Places' or PAMIS facility is a full-sized adult changing room, equipped with hoists and changing bed to enable people with Profound & Multiple Learning Difficulties (PMLD) to use a public toilet with dignity and privacy. The charity PAMIS was established in 1992 to provide support for people PMLD, their family and carers and interested professionals. It identifies that the lack of suitable changing facilities in toilets for people with disabilities 'is one of the most restrictive practical problems preventing families from going out... Families are reduced to changing their daughters or sons on toilet floors. This is undignified, unhygienic and involves heavy lifting by the carers with the potential to cause serious damage to their backs.'

Non-Clinical Adjacencies



Case Study 1: Stage 1 Welcome Space

- Provides the main focal point for patients, visitors and staff accessing the site.
- Accessed from both street level (Eastern Road) and via the underground patient/visitor car park immediately below.
- Creates a 'public face' for the hospital – inspiring and welcoming; a visual representation of the Trust's vision and underpinning Values & Behaviours.
- Glass frontage and integration into the streetscape create a more open, 'transparent' environment;
- Use of natural lighting, space and high-quality materials.
- Innovative signage/wayfinding strategy to guide patients/visitors within 3Ts and to the rest of the site (via lift cores).
- Large, accessible reception/welcome desk (designed as an artwork in its own right) for patients/visitors who require information or individual support.
- Includes café and retail areas.
- Includes a Patient Information 'One Stop Shop' (supported by the Trust's Library Services).



Case Study 2: Entrance to Sussex Cancer Centre

- The Welcome Space in Stage 2 (Sussex Cancer Centre) provides similar facilities to the Main Entrance but at smaller scale.
- Includes reception, waiting areas and patient self-registration, WCs, café and retail.



Case Study 3: Heritage Space

- Facsimile of the Grade II listed chapel from the Barry Building located adjacent to the Welcome Space.
- No longer function as an active chapel facility (replaced by multi-faith Sanctuary space).
- Provides link to the heritage of the Royal Sussex County Hospital site, incl. display of artefacts.



Case Study 4: Level 6 Public Communication Route

- Patients/visitors needing to access the rest of the RSCH site will do so via a single lift journey to Level 6, which provides the key communication route to the Trust’s retained estate.
- This transfer level therefore includes key patient/visitor amenities, including The Sanctuary (multi-faith space), PALS offices, main café, public WCs and Infant Feeding Room.
- Patients/visitors and staff can also access the Stage 2 Roof Garden from here.



The Sanctuary



Level 6 Café and Terrace

Case Study 5: Separation of ‘Back of House’

- There has been a deliberate separation of FM communication routes from the main public circulation routes.
- Ensures safe and effective flows through all areas of the hospital (eg. Infection Prevention & Control).
- Avoids cross-traffic between patient/visitors and operational services.
- No external transfers now required.



Key Quality & Safety Considerations

Consumerism

43. The Department of Health Consumerism Checklist includes a range of specific requirements for healthcare buildings, including:
- design that provides acceptable levels of privacy and dignity at all times, eg. gender-specific day rooms, single sex washing and toilet facilities, elimination of mixed-sex accommodation;
 - Patient control of personal ambient environmental temperatures; task lighting at bed head conducive to reading and close work
 - high-specification fabric and finishes to reduce lifecycle costs;
 - natural light and ventilation, zero discomfort from solar gain;
 - dedicated storage space to support high standards of housekeeping and user safety, including for waste awaiting periodic removal; and
 - inpatient bed room configurations of >50% single en-suite and >5 bed bays with separate en-suite WC and shower facilities with 3.6m bed centres.
44. The completed checklist is appended. Key issues are discussed below.

Infection Prevention & Control

45. 'Good infection prevention and control (IP&C) are essential to ensure that people who use health and social care services receive safe and effective care. Effective prevention and control of infection must be part of everyday practice and be applied consistently by everyone.' (Department of Health, 2010⁴⁶).
46. The Health & Social Care Act 2008 Regulations⁴⁷ require the Trust to ensure that patients/service users, staff and others are, so far as reasonably practicable, protected against identifiable risks of acquiring infection, and have in operation effective systems for preventing, detecting and controlling the spread of healthcare-associated infection (HCAIs). This is therefore reflected in the Care Quality Commission *Essential Standards of Quality & Safety*⁴⁸.
47. Health Building Note guidance⁴⁹ states: 'Research and investigation have consistently confirmed that the healthcare environment can be a reservoir for organisms with the potential for infecting patients. For HCAIs to be reduced, it is imperative that infection prevention and control (IP&C) measures are "designed in" at the very outset of the planning and design stages of a healthcare facility and that input continues up to, into and beyond the final building stage.'

'Designing In' Infection Prevention & Control

48. The Barry Building, which is the oldest accommodation due to be replaced by the 3Ts investment, opened exactly 100 years before Alexander Fleming discovered Penicillin. As set out in the case for change, and as identified in the recent Care Quality Commission inspection, in spite of refurbishment and best efforts by staff and the Trust's specialist Infection Prevention & Control team, maintaining high standards of infection prevention and control remains a significant daily challenge in this environment.
49. The Trust IP&C team have been closely involved in the planning and design of the redevelopment. In addition to compliance with modern standards (eg. sinks and taps, quality and design of finishes), this has resulted in the inclusion of number of innovative features such as:
- separate commode cleaning rooms on each ward; and
 - central bed wash and wheelchair cleaning areas.

⁴⁶ Department of Health (2010) *The Health & Social Care Act 2008: Code of Practice on the Prevention and Control of Infections and Related Guidance*

⁴⁷ Regulation 12 of the Health & Social Care Act 2008 (Regulated Activities) Regulations 2010

⁴⁸ Care Quality Commission (2010) *Essential Standards of Quality & Safety*

⁴⁹ Department of Health (2013) *Health Building Note 00-90: Infection Control in the Built Environment*

50. The Infection Prevention & Control Checklist and letters of endorsement from the Trust's Lead Consultant Microbiologist and Deputy Director for IP&C are appended.

Use of Technology

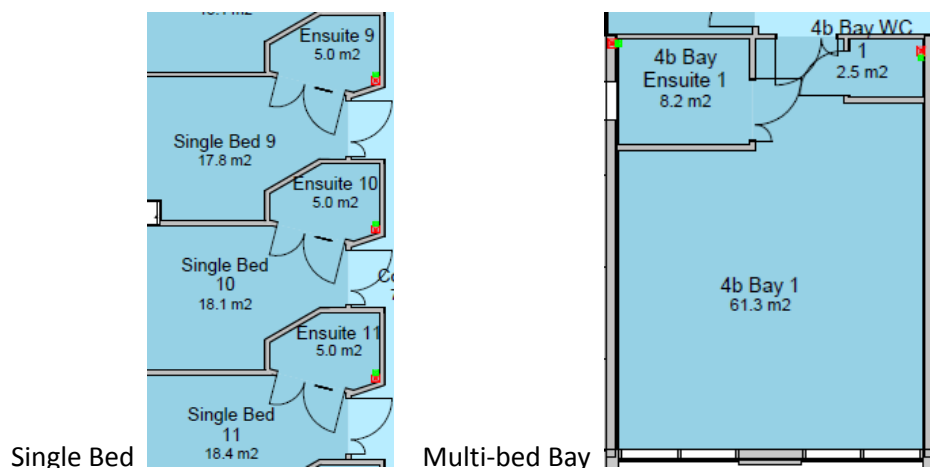
51. Planning for the 3Ts redevelopment began in 2008, the Stage 2 building is due to open in 2022/23, and the lifetime of the building is assumed to be 60 years (although the Barry Building has been in use for 186 years so far). Anticipating future technology and enabling future flexibility has therefore been an important consideration in the healthcare planning process.
52. The design assumes that certain technologies will be in place on opening the building:
- patient self-registration kiosks;
 - Electronic Patient Record, including decision support;
 - use of Radio-Frequency Identification (RFID) tagging; and
 - a robust local area wireless technology (WiFi) network for enabled clinical devices.
53. Other Information Management & Technology (IM&T) and Health Informatics (HI) considerations are discussed in more detail in the Information Management & Technology section. Planning for future flexibility is discussed above.

Patient Privacy & Dignity

54. The NHS Constitution enshrines patients' right to be treated with dignity and respect. The Health & Social Care Act 2008 Regulations⁵⁰ require the Trust to ensure, so far as reasonably practicable, the dignity, privacy and independence of service users, and this is therefore reflected in the Care Quality Commission *Essential Standards of Quality & Safety*⁵¹.
55. Maintaining patient privacy and dignity is a significant issue in the Trust's oldest clinical accommodation and is one of the principal drivers for the 3Ts redevelopment. The recent Care Quality Commission inspection report noted that the 'older buildings and some aspects of the layout of the Brighton campus presented a significant challenge in delivering care...' and found that the Trust is not currently meeting the essential standard for privacy and dignity of service users.
56. The 3Ts redevelopment will offer a step change in patient privacy and dignity, including:
- on inpatient wards, between 43% and 100% of beds (depending on the clinical needs of the particular patient group/specialty) will be in single rooms (average 65%);
 - all inpatient rooms and multi-bed bays (see drawing below) have en suite bathrooms and toilets. (This means that no patient will need to cross a corridor or pass a sleeping area used by patients of the opposite sex to access the bathroom/toilet, as is currently the case);
 - day rooms are also provided on all inpatient wards (although the experience of other redevelopment sites is that in practice patients prefer to spend more time in their own rooms so the demand for common space has fallen);
 - all multi-bed bays will meet the 3.6m bed centre standard (see Appendix 4.4.4)
 - 'pass-through' changing for Imaging patients, who will no longer have to wait for their scan with other patients whilst changed into a gown.

⁵⁰ Regulation 12 of the Health & Social Care Act 2008 (Regulated Activities) Regulations 2010

⁵¹ Care Quality Commission (2010) *Essential Standards of Quality & Safety*



Single-Sex Accommodation

57. As summarised in the table below, outpatient/ambulatory care facilities within 3Ts have also been designed to promote privacy and dignity, including single-sex accommodation.

Achieving Single-Sex Accommodation in Non-Inpatient Areas

Facility	Design	Location
Imaging Day Case & IR Recovery	<ul style="list-style-type: none"> Design meets single-sex accommodation requirements for stage 2 recovery: segregated changing and sanitary facilities, and trolley and reclining chair areas. 	Stage 1 Level 4
Medical Day Unit	<ul style="list-style-type: none"> Designed as two single-sex bays, each with six flexible care spaces (bed/chair) and en suite toilet facilities 	Stage 1 Level 9
Recovery Areas	<ul style="list-style-type: none"> Recovery Areas for neurosurgery, major trauma and Interventional Radiology theatres. Designed as two zones to enable sex-segregation if appropriate. (These areas are currently exempt from national sex-segregation requirements, but this design enables future flexibility. 	Stage 1 Level 5
Changing facilities	<ul style="list-style-type: none"> Designed for 'pass through' changing: the changing cubicle is located immediately adjacent to the examination/treatment room, so the patient can enter the examination room directly. This contrasts with 'standalone' changing: changing cubicles are remote from the examination/treatment and the patient is required change into a gown and access the examination/treatment room via a public area, often also involving a sub-wait area. 	Non-Invasive Cardiology (Stage 1 Level 2) & Imaging (Stage 1 Level 4)
Neurology PIU	<ul style="list-style-type: none"> The Neurology PIU provides 2 single sex areas each with 3 beds, separated by the staff base allowing for easy observation of both. Each area has a WC. Curtain tracking will be provided. 	Stage 1 Level 10
Chemotherapy Day Unit	<ul style="list-style-type: none"> The Chemotherapy department provides patients with a choice of same-sex 6 chair bays or single treatment rooms, depending on their preferences for privacy, dignity and social interaction during their treatment. 	Stage 2 Level 4

Inpatient Accommodation

58. Single rooms offer many healthcare benefits including; reduced cross-infection rates, reduced noise disturbance, and improved patient wellbeing and satisfaction. There is no evidence that single rooms reduce patient observation, increase staff travel distances or occurrence of slips, trips and falls.⁵² The

⁵² National Patient Safety Agency (2007) *Challenging the Negative Assumptions Associated with Single Patient Rooms*

provision of single rooms, and the use of minimum 3600mm bed centre spacing in multi-bed bays, will enable near-patient/bedside rehabilitation services in all inpatient areas.

59. Department of Health guidance⁵³ is that for newbuilds, at least 50% of inpatient beds should be provided in single rooms. In 3Ts, the average is 65% although this varies between wards (43% to 100%), based on the clinical need of the particular patient group. The optimal proportions for each area were established through a combination of approaches:

- a review of available research evidence;
- discussions with other hospital redevelopment sites;
- national guidance;
- patient and public engagement, including through the ‘flagship rooms’ workshops and 3Ts Patient & Public Design Panel; and
- discussion with the Trust’s clinicians, including the Infection Prevention & Control team.

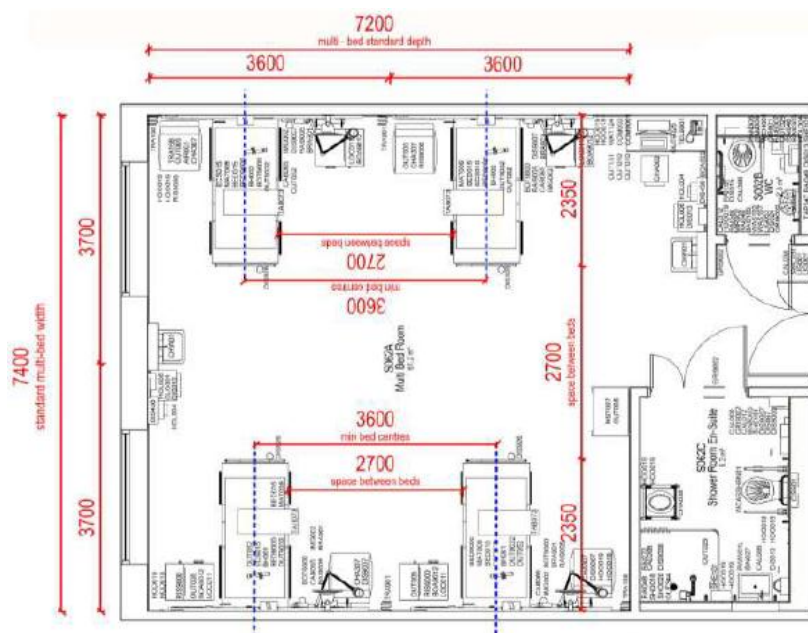
Proportion of Single Inpatient Rooms

Ward	Beds	Single Rooms	4-Bed Bays	Single Rooms	Inclusions
Neurology Ward	30	14	4	47%	• Two telemetry rooms
Neurosurgery 1	21	9	3	43%	
Neurosurgery 2	21	9	3	43%	
Medical Ward 1	79	55	6	70%	
Medical Ward 2 – Stroke	30	14	4	47%	
Medical Ward 3	28	20	2	71%	
HIV & Infectious Diseases Ward	24	24	0	100%	• Eight pressure-controlled rooms
Cancer Inpatient Ward 1	45	37	2	82%	• Four pressure-controlled rooms • Two lead-lined single rooms
Total	278	182	96	65%	

In line with Department of Health guidance, this analysis excludes Critical Care and Acute Assessment accommodation, where particular clinical considerations apply.

60. The Standard Multi-Bedrooms design in 3Ts is designed to comply with the recommended room size and layout in HBN 00-03. In all instances, each bed bay is sized to 3600mm(D) x 3700mm(W), resulting in a typical 4 bed bay size of 7200D x 7400W as illustrated below. This standard layout is always used to ensure that 3600mm bed centres can be achieved. (Bed spacing validation report is appended).

⁵³ Department of Health (2009) *Delivering Same Sex Accommodation: Building & Facilities Guidance*



Patient Falls

61. The National Institute for Health & Care Excellence (NICE) reports that c. 290,000 patient falls were reported in hospitals in England between October 2011 and September 2012, at an estimated cost to the NHS of £2.3bn. 90 patients died as a result of their falls and c. 900 patients experienced severe harm, such as hip fractures and head injuries.
62. All patients aged 65 years and older, as well as patients aged 50 and above who have dementia, stroke, vision or hearing problems and other underlying conditions, are considered to be at high risk of falling during their care. Minimising patient slips, trips and falls has therefore been a significant focus of the design process for 3Ts, particularly given the significant increase in the proportion of single inpatient rooms.
63. The evidence base for the impact of single rooms on patient falls is mixed:
 - much of the evidence within the literature and professional press advocates the use of single-bed room designs to promote patient safety, eg. close proximity to en-suite bathroom facilities reduces patient movement associated with slips, trips and falls;
 - other evidence suggests that disadvantages of single rooms include observation and inter-patient observation, increasing the risk of falls occurrences. However, this is multifactorial (eg. impact of staffing levels on observation).
64. NICE guidance⁵⁴ notes that several multifactorial studies have included adjustments to the ward environment that have plausible mechanisms for reducing falls (eg. improved lighting, changes to flooring, furniture, handholds, walking routes, lines of sight and signposting), although the impact has not been quantified. Key design features within the 3Ts design include:
 - design of sightlines, so the inpatient bed head is visible from the door;
 - a continuous handrail from bed into the en-suite bathroom; and
 - distributed nurse bases or 'touchdowns' so that staff are based near the patient, for greater observation.

⁵⁴ National Institute for Health & Care Excellence (2013) *Falls: Assessment and Prevention of Falls in Older People (Clinical Guideline 161)*



Design Quality

Design Philosophy

65. A formal statement of the 3Ts design philosophy (appended) was developed and adopted in 2009/10 to provide a unifying vision for the redevelopment that includes strategic fit, clinical functionality and patient/visitor experience. This has provided a touchstone against which to assess both individual design choices and, at key stages in the design development, the overall design.
66. Underpinning evidence for the design philosophy was drawn in particular from the King's Fund⁵⁵ and Department of Health⁵⁶ research into patient-centred care and facilities design. Much of the evidence is long-standing: in her *Notes of Hospitals*⁵⁷ (1863), Florence Nightingale recorded that 'direct sunlight, not only daylight, is necessary for speedy recovery.'
67. The Design Philosophy has been used to frame the Art, Interior Design, Landscape strategies, and the healthcare planning and design process. The goal is to ensure that in addition to replacing physical healthcare facilities to modern design standards, the redevelopment:
 - enables and encourages staff to provide compassionate, patient-centred care (to 'see the person in the patient'), in line with the Trust's values (and the subsequent '6Cs' of *Compassion in Practice*⁵⁸);
 - is not only functionally suitable but also creates a positive emotional experience for patients and visitors, recognising the psychological, social and spiritual as well as the physical aspects of care;
 - provides a 'therapeutic landscape' (ie. recognition of the social and symbolic dimensions of the care environment in patient experience, such as the placement of a desk within an outpatient Consult/Exam room to enable face-to-face conversation); and
 - creates a sense of place throughout the 3Ts building, recognising the geographical and cultural context.
68. Examples of design features in 3Ts to enhance patient/visitor experience and promote health outcomes are set out below.

Impact of Design Philosophy on Design Choices: Some Examples

Aspect	Examples of Design Features
Site Approach	<ul style="list-style-type: none"> • The external treatment, articulation and massing seeks to 'humanise' a large-scale building. • The landscape strategy will use planting and hard landscaping to promote the positive associations of nature for patients, staff and visitors and minimise the 'institutional' appearance of the hospital. • Within the limitations of security and safety, the building will be a 'permeable' space: visitors will be able to use the public spaces such as retail, exhibition and performance space, roof garden. • It will be possible to see into the hospital buildings from the approach, which aims to animate the facade and make patients and visitors feel welcome.
Arrival	<ul style="list-style-type: none"> • The scale and layout of the entrance seeks to comfort rather than confront, and use of natural materials will help create a humanised environment. • An artist will be appointed to work with the architects on the design of the 'welcome spaces'. Integration of art works helps to create warm and reassuring first impressions.

⁵⁵ King's Fund (2008) *Seeing the Person in the Patient: The Point of Care review paper*

⁵⁶ Department of Health (2005) *'Now I feel tall' What a patient-led NHS feels like*, pp6-7

⁵⁷ Nightingale, Florence (1863) *Notes of Hospitals*

⁵⁸ NHS England (2012) *Compassion in Practice: Nursing, Midwifery and Care Staff – Our Vision & Strategy*

Aspect	Examples of Design Features
Navigation	<ul style="list-style-type: none"> • The way finding design will include architectural, interior design, graphic design and integrated arts elements as well as IT and signage. • Departmental design ensures that when patients arrive, there is a clear point of greeting. Artwork or graphic design will be used to create a strong sense of identity for the department, so patients are reassured they have arrived in the right place. • The visual identity and layout of the building will provide a gradation of space from public to private. This creates spaces of different character that reflect their purpose and give visual 'cues' as to use and level of accessibility.
Reception	<ul style="list-style-type: none"> • Reception desks will be of high-quality design and construction to provide a professional, reassuring and friendly ethos. • In order to promote a sense of welcome, there will be no glass barriers between the receptionist and patient. • Visitors will easily be able to see the receptionist on arrival, whether the receptionist is seated or standing or the patient is in a wheelchair or standing.
Waiting	<ul style="list-style-type: none"> • Waiting rooms must have windows with natural light and, where possible, views of nature. There must also be a choice of shaded seating; some patients find direct sunlight uncomfortable. • Layout of seating within waiting areas will be designed carefully to avoid fixed lines and provide patients with a choice of type and layout of seating, including grouped and more private spaces. • Background music will be enabled – but seating areas will also be designed to provide 'quiet zones'.
Outpatients & Ambulatory Care	<ul style="list-style-type: none"> • The desk should not introduce a physical barrier between patient and clinician; the layout should promote open communication and eye-contact. • Using of colour, texture and varied lighting as part of the Interior Design to reduce patient anxiety. • Art works will be incorporated into diagnostic imaging and therapeutic radiology rooms (eg. illuminated ceiling panels or wall-mounted artworks) to address the feeling of isolation patients may experience in these settings.
Inpatient Accommodation	<ul style="list-style-type: none"> • The design should provide natural light and external views for all inpatients. The aspiration is that all inpatients will have a view of nature from their bedroom, whether the sea or the South Downs. • Inpatients will be able to control light and temperature levels (within acceptable limits) without having to ask for assistance. • Inpatient bed rooms should provide a high-quality interior that helps patients to feel relaxed and safe, eg. use of natural materials to create warmth and minimise the sense of institutional design.
Terraces & Gardens	<ul style="list-style-type: none"> • Echoing the city's rich tradition of public gardens, the redesign includes public gardens and outdoor spaces that will be accessible by patients, visitors, staff and the local community (civic amenity). • Inpatients (incl. day cases) will have access to dedicated therapeutic gardens and/or terraces in both Stage 1 and Stage 2 buildings. This aims to provide access and enhance recovery while maintaining privacy and dignity.

Trust Values & Behaviours

69. The Trust statement of Values & Behaviours was developed in 2013/14 as part of the Foundations for Success programme. This sets as five shared organisational goals:

- Communication – that’s respectful, personal, honest and helpful;
- Kindness & Understanding – so that we feel supported and enabled to do our jobs;
- Fairness & Transparency – in our decisions and actions;
- Working Together – to get the best outcome for patients;
- Excellence – always striving to be the best we can be.

70. As illustrated above, this ambition is therefore closely aligned with the aims of the 3Ts redevelopment and Design Philosophy.

Art Strategy

71. There is a significant evidence base for the link between the arts and health. A 2004 meta-analysis of medical literature for Arts Council England found almost 400 papers showing the beneficial impact of the arts on a wide range of health outcomes⁵⁹. More broadly, a study by Ulrich & Zimring found nearly 700 peer-reviewed research studies demonstrating the beneficial impact of the environment on health outcomes⁶⁰. For example, use of the arts and humanities in a healthcare setting has been shown to:

- induce positive physiological and psychological changes in clinical outcomes;
- reduce drug consumption;
- reduce length of stay;
- increase job satisfaction amongst staff;
- promote better doctor-patient relationships; and
- enhance health practitioners’ empathy.

72. The 3Ts Art Strategy (appended) sets out the programme’s approach to:

- public/stakeholder engagement in developing the strategy;
- ensuring delivery of public art/projects in partnership with local arts organisations; and
- the procurement, management/governance, evaluation and decommissioning aspects of the arts programme, in line with a Trust-wide strategy and arts programme.

73. The strategy was developed by external specialist consultants Willis Newson and informed by engagement with the local arts community within Brighton & Hove, staff and patients. For example, patient input has influenced colour selection, ensured art is as widely accessible as possible, and included feedback on the individual artworks, which the commissioned artists were able to incorporate in their final designs.

74. The Public Art Strategy is aligned with the 3Ts Design Philosophy and Trust Values & Behaviours, and in particular the opportunities to leverage the opportunities of a redevelopment to achieve best clinical outcomes and patient/visitor experience through good design. It recognises the role of art in the healthcare environment in:

- creating a healing environment that patients/visitors find welcoming, therapeutic, restful and, as appropriate, distracting;
- helping to create a strong identity for the Trust, and a sense of civic pride in a development that reflects the culture and identity of the local community;
- aiding patient/visitor wayfinding;
- creating excellent working environments for staff; and

⁵⁹ Dr Rosalia Lelchuk Staricoff (2004) *Arts in Health: A review of the medical literature*

⁶⁰ Ulrich, R & Zimring, C. (2004) *The role of the Physical Environment in the Hospital of the 21st Century*

- providing opportunities for working partnerships with the local arts community, and in achieving a Social Value benefit.

75. The S106 requirements included an artistic component to be provided in accordance with the Trust’s Public Art Strategy at a cost of not less than £421,000 (index linked to 2012 costs). The current budget for the Public Art Strategy is £1.05m (0.25% of total investment). This includes £40k from Trust Charitable Funds and £159k to be generated from fundraising. To achieve optimal benefit, the distribution of art throughout the building has been prioritised to reflect a number of key patient groups and facilities:

- entrances and exits;
- patients who are isolated during treatment and care (eg. undergoing radiotherapy);
- patients with longest hospital stays (eg. haematology and oncology inpatients); and
- spaces where patients receive bad news.

76. The Art Strategy has followed best practice guidance and has benefitted from early consideration and integrated planning, ie. several commissions will be integrated into the fabric of the buildings.

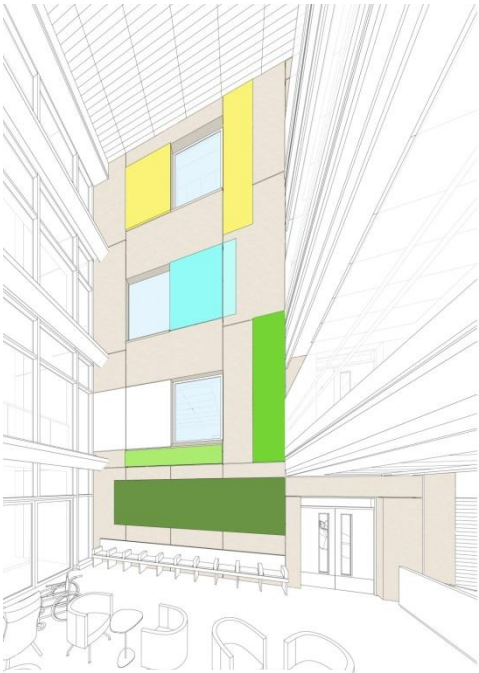
77. Images of the four integrated commissions which have been progressed pre-Guaranteed Maximum Price (GMP) are below.

Pre-GMP Integrated Arts Commissions

Area	Artist Proposal
Stage 1 & Stage 2 Welcome Spaces	Visual artist Kate Blee appointed to collaborate with BDP on integrated art works for the two entrances to the 3Ts redevelopment, including ceramic cladding to walls and supporting pillars and proposals for the main reception desk and integrated seating.
The Sanctuary (Multi-Faith facility)	Textile artist Sharon Ting appointed to collaborate with BDP on integrated art works for The Sanctuary, the multi-faith facility within the Stage 1 building. Proposals include glass panels, wall-mounted ‘prayer sculpture’, landmark art works at The Sanctuary entrance and integrated snug seating.
Roof Gardens and Terraces	Ceramicist Marion Brandis appointed to collaborate with BDP Landscape on enhancements to the hard landscaping across the various roof gardens and terraces. Proposals include glazed bench seating, photographic roundels in fencing, and colour enhancement to pergola design.
Wayfinding, Waiting Rooms and enhancements to Clinical Rooms	Local illustrators and photographers to create work to be used as wall graphics and murals to add individuality and personality to patient and clinical corridors; providing intuitive wayfinding support at major entrances and junctions. Willis Newson Applied to lead on development of art and wayfinding approach in collaboration with BDP; appointing LOCAL illustrators, designers and artists to develop wall graphics and murals. Art and wayfinding approach to link with Waiting Rooms Photographic Commission so that wayfinding themes / zones are also reflected in the selected curatorial themes for the photography commission, under the over-arching creative theme “CONNECT”



Kate Blee: Stage 1 & 2 Welcome Spaces- *hand-made ceramic tiles to clad columns and wall panels*



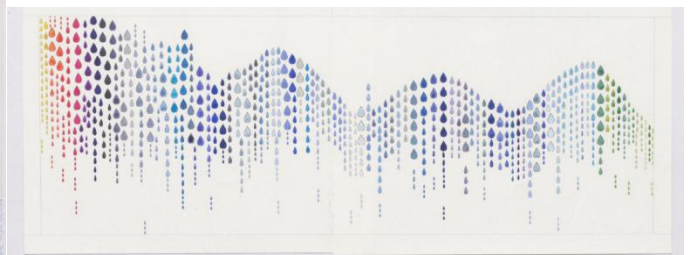
Reception Desk initial concept and developed design

Sharon Ting: The Sanctuary

Main Reception Desk/Acoustic Baffles Visual

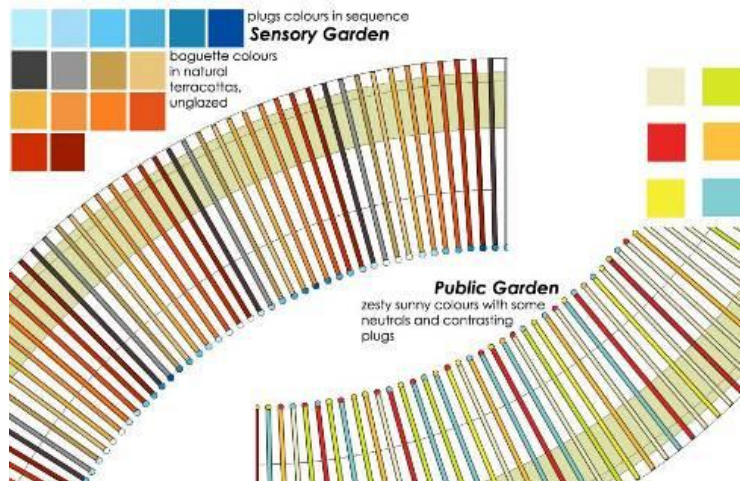
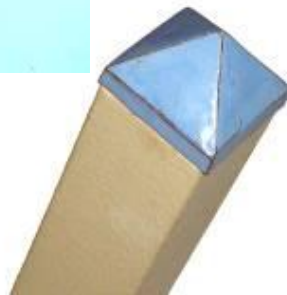
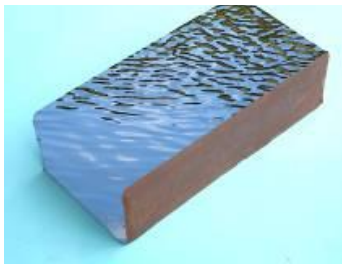


Textile pieces including landmark artwork to the entrance, glass standing panels to frame the sea view, an interactive 'prayer sculpture' and integrated alcove seating



Marion Brandis: Roof Gardens & Terraces-

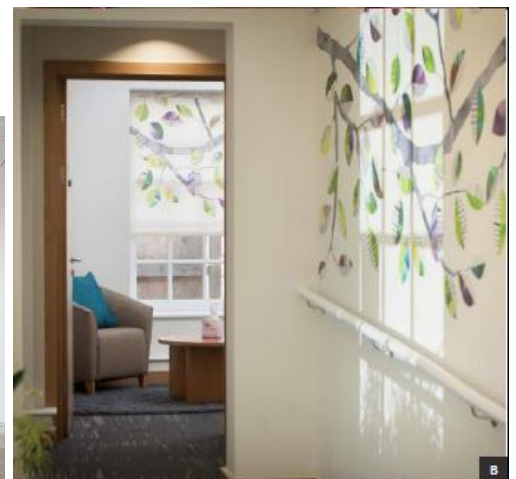
Ceramic roundels for sculpted fencing creating Brighton architecture trail; inset bricks for planters; ceramic plugs and colour specification to pergolas in roof garden; ceramic bench seating for Imaging Terrace; planters for Inpatient Therapy Garden.



Art Strategy Theme: CONNECT

The overarching creative theme “CONNECT” will bring a cohesive identity to the arts programme and help Willis Newson and the JAG to co-ordinate /curate the artworks accordingly. In particular this theme will inform the development of the Photography Waiting Room Project and Art and Wayfinding commission.

The 3Ts Public Art Programme will foster connections between the Hospital and the neighbourhoods, towns, villages and landscapes of Brighton and Sussex, between people, between communities, between hospital departments, between the past heritage and present achievements of Brighton and Sussex University Hospitals NHS Trust - in order to encourage a sense of belonging and community.



Trust-Wide Arts

78. The Trust Arts Advisory Group has fostered arts-in-health activity since the 1990s. The 3Ts redevelopment has provided an opportunity not only to address art provision in 3Ts, but also to support the development of a sustainable Trust-wide art programme as a legacy benefit.
79. The 'Onward Arts' programme will oversee the maintenance and development of the 3Ts art programme on completion of construction and commissioning. Opportunities will be forthcoming for evaluation of the 3Ts Arts Programme as part of the Post-Project Evaluation, and for research. Opportunities for dynamic art activities in the 3Ts buildings will include:
- performance space in the Stage 1 Welcome Space, to be used for a rolling programme of performances and recitals as well as exhibitions;
 - gallery space on Level 6 of the Stage 1 building (a key public communication link between the 3Ts buildings and rest of the campus, and adjacent to the public/staff café, Sanctuary and access to the Stage 2 roof garden);
 - Community Arts Workshop located within the Meeting & Teaching Suite on Level 11 of the Stage 1 building, which will provide a hub for arts activities with patients, relatives and staff.

Interior and Landscape Design

80. The 3Ts Interior Design and Landscape Design Strategies (appended) are being developed from a number of underpinning principles aligned to the 3Ts Design Philosophy:
- within a consistent palette, selection of materials, finishes and components to suit each category of space (from public to inpatient and staff-only). This approach enables investment to be targeted to achieve maximum impact on patient, visitor and staff experience;
 - consistent design language- from large scale to small details;
 - visual connectivity between external and internal spaces;
 - separate and defined routes of travel, and intuitive wayfinding;
 - interwoven Arts Strategy; and
 - sense of place linked to the community.
81. There current lack of green/outdoor space on the Royal Sussex County Hospital site stands in contrast to the strong evidence of the benefit of such spaces/views for both patient experience and outcome, and staff wellbeing and productivity. This has also been a key design consideration for the 3Ts redevelopment. It also recognises the wider community/societal and environmental benefits of green space, particularly in a city context.

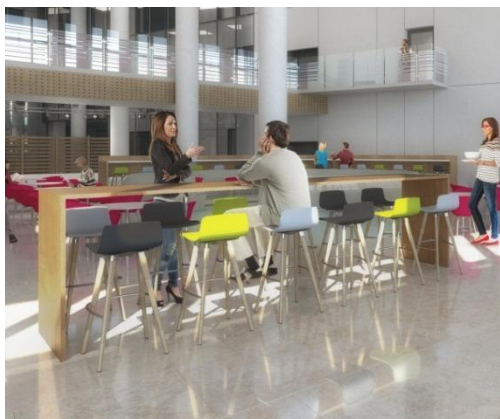


Waiting Areas

82. The patient engagement programme clearly identified the need to reconsider how patient waiting areas in healthcare settings (and waiting processes) are planned and designed. Waiting for an appointment can be particularly stressful for individuals and families, and effective design provides the opportunity to make a tangible difference to their experience.
83. Innovative approaches and design features have been identified through the ‘flagship rooms’ patient workshops, Patient & Public Design Panel discussions, and programme team visits to other healthcare facilities. Key principles are set out in the Waiting Area policy (appended), including:
- departmental entrances should be comforting and welcoming (the choice of colour and materials can help to reassure and assist patients who may be anxious or distressed)
 - there should be clear lines of sight from the department entrance, self-registration kiosk area and waiting area to the reception;
 - when registering attendance for Outpatient appointments, patients should have the choice of self-registration kiosk or face-to-face interaction with a receptionist;
 - queues should be managed through effective space planning, interior and flooring design and the layout of furniture (this guides queuing behaviour and assists in demarcating activity zones);
 - the design should assume that staff/volunteers will be available at the departmental entrance to ‘meet & greet’, and support patients in using the self check-in kiosks; and
 - waiting areas should be designed to minimise stress and anxiety (eg. access to natural light; use of art, music, plants; effective display of waiting time information and patient ‘process maps’).



84. A number of helpful ideas for improving access have arisen from the 3Ts patient and wider stakeholder engagement programme, eg. inclusion of ‘bar stool’ seating for people with mobility problems who cannot sit on lower chairs.



Wayfinding

85. The Royal Sussex County Hospital site is labyrinthine and currently presents significant physical and cognitive wayfinding challenges, including the proliferation of signage required. This is a frequent cause of complaint from patients and visitors: 23% of all patient, public and staff comments received to data as part of the 3Ts consultation and engagement process relate to the urgent need to improve access and wayfinding.
86. Wayfinding (ie. the ease with which people can navigate themselves to particular destinations on the site and through interchange facilities/zones) can be improved in part by simplifying principal communication routes. However an effective wayfinding strategy is also critical, recognising in particular the impact of stress and other cognitive impairments on patients/visitors' ability to process information such as signage.
87. The 3Ts Wayfinding Strategy (included within the Interior Design Strategy) draws on learning from other hospital developments and high-traffic, often complex public spaces such as airports and public transport. The strategy has adopted a number of core principles for wayfinding in 3Ts, including:
- progressive disclosure (ie. the selective supply of information when and where users);
 - breaking information into manageable chunks to help mental mapping;
 - locating signs based on 'desire lines'/pedestrian flows, with maximum visibility at key decision points and gateways;
 - physically connecting spaces, and removing physical and mental barriers to movement, to deliver a seamless experience in moving from one area to another;
 - where possible, providing clear sight lines to destinations (this also reduces the need for signs and minimises visual clutter);
 - creating incentives for people to walk rather than take lifts, where this is possible/clinically appropriate;
 - ensuring information on signage is concise, clear, consistent and unambiguous;
 - including major local destinations on all exit signs to assist orientation; and
 - supporting route/path and destination identification through art, interior design, lighting and landscape.
88. As a radiated benefit of the redevelopment, the wayfinding solution (incl. new naming conventions and signage) will be applied site-wide rather than restricted only to the 3Ts buildings. The strategy recognises the particular topography of the Royal Sussex County Hospital site, which slopes steeply upwards from the main entrance on Eastern Road to the Sussex Heart Centre and Sussex Kidney Unit at the northern boundary. The strategy continues to evolve in line with the design process but currently includes:
- designation of Level 6 as the principal north/south communication route for patients/visitors, with access via a single lift journey from the main entrance or basement car park levels in the 3Ts building;
 - specific commission within the Art Strategy to support wayfinding (eg. through the use of super-graphics and visual landmarks);

Design Review

89. A range of design assessment tools and advice is available to the NHS. The table below sets out the principal tools and use in the 3Ts redevelopment.

Design Reviews Undertaken on 3Ts

Tool	Description / Requirement	Domains	3Ts Programme Commentary
AEDET/Evolution (Achieving Excellence Design Evaluation Toolkit)	<ul style="list-style-type: none"> Launched in 2001 as a healthcare sector standard and best practice guide for evaluating design quality. The subsequent iteration, AEDET Evolution (2008), extended this to incorporate lessons learned from academic evaluation. 	Three domains and 10 sub-domains: <ul style="list-style-type: none"> Functionality <ul style="list-style-type: none"> Access Uses Space Build Quality <ul style="list-style-type: none"> Performance Engineering Construction Impact <ul style="list-style-type: none"> Urban & Social Integration Internal Environment Form & Materials Character & Innovation 	<ul style="list-style-type: none"> May 2009 workshop using the AEDET Evolution tool. Repeated in preparation for Outline Business Case submission in March 2011. August 2014 follow-up workshop to assess the designs at Full Business Case Stage. Although the AEDET Evolution toolkit has been superseded by DQI, AEDET Evolution was used for continuity and to enable a direct comparison with previous assessments. As the design has developed, the average AEDET score has increased from 4.8 to 5.3. The latest assessment is appended.
DQI (Design Quality Indicator)	<ul style="list-style-type: none"> Developed in 2014 to migrate the healthcare-specific focus of AEDET and update key aspects, eg. sustainability and patient safety. 		
ASPECT (A Staff and Patient Environment Calibration Tool)	<ul style="list-style-type: none"> Published in 2008. Focuses on the way the healthcare environment can impact levels of staff and patient satisfaction, and consequently on health outcomes and performance. Designed to be used as a stand-alone tool, but Department of Health guidance is that it should be used to support AEDET Evolution/DQI. 	Eight domains: <ul style="list-style-type: none"> Privacy, company & dignity; Views; Nature & outdoors Comfort & control Legibility of place Interior appearance Facilities Staff 	<ul style="list-style-type: none"> August 2014 workshop with Patient & Public Design Panel. Initial returns (appended) indicate that the redevelopment plans/designs scored very highly.
Design Review Panel	<ul style="list-style-type: none"> An external Design Review should be considered, particularly for high value/complex projects (since this could be related to Planning Permission requirements or other internal/external influences). 		<ul style="list-style-type: none"> The CABE Design Review Panel for East Sussex reviewed this scheme several times between 2008 and 2011. This resulted in changes to the design that are broadly accepted to have improved it. The conclusion of the final report (July 2011) is included below.

Design Review Panel

90. The 2011 CABE (Commission for Architecture & the Built Environment) Design Review Panel concluded as follows:

- *'This demanding brief reveals genuine desire on the part of the client to put the experience of the patient first: the stipulation that all patient rooms should have a sea view is particularly welcomed.*
- *We appreciate the client's readiness to amend the scheme in light of our previous comments. We think the resulting design is stronger for this, responding more sensitively to the Brighton context while creating an improved visitor experience.*
- *We think the proposed site diagram is sound and will significantly improve wayfinding.*
- *We also appreciate the further thought given to possible future phasing of hospital development.*
- *The revised approach to the Eastern Road frontage, coupled with new proposals for the helipad, has produced a calmer, more contextually appropriate design. However we continue to think the relationship of the 'spine block' to the Children's Hospital could be improved.*
- *The new designs for the public realm at ground and upper level are welcomed'.*

The CABE review is appended.

Sustainability

BREEAM

91. The BREEAM (Building Research Establishment Environmental Assessment Methodology), first published in 1990, is a widely used method of assessing, rating, and certifying the sustainability. The Department of Health requires schemes with a value in excess of £2m (>500m²) to achieve minimum BRE 'Excellent' rating (for newbuilds) or 'Very Good' rating (for refurbishments) against BREEAM Healthcare.
92. A BREEAM pre-assessment was completed by a registered BREEAM assessor in 2008 (appended). This scored the scheme at >73%, which exceeds the BREEAM Healthcare 'Excellent' threshold. Regular internal assessment will be undertaken throughout the final design stage to ensure continuing compliance and availability of associated evidence. On completion of Stage E design, this will be provided to the BRE for validation and design stage certification.

DH Energy & Sustainability Targets

93. The Sustainability Statement (appended), submitted in support of the Trust's application for Full Planning Consent in 2011, sets out the applicable energy targets and confirms that the scheme meets Department of Health Energy Targets of 45-50 GJ/100m³, in accordance with HTM 07-07.

Health Impact Assessment

94. The European Centre for Health Policy defines a Health Impact Assessment (HIA) as 'a combination of procedures, methods and tools by which a policy, programme or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population.'⁶¹ The HIA adopted the World Health Organisation definition of health as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.'⁶²
95. As part of the Trust's application for Full Planning Consent, an external Health Impact Assessment (appended) was commissioned on the 3Ts redevelopment in 2011.
96. The HIA involved:
 - a review of HIA assessments on other hospital developments;
 - discussion with Brighton & Hove City Council and the then Primary Care Trust;
 - interviews with key stakeholders, including patients/visitors from the Trust's local and regional catchments; and
 - the external consultants' own specialist input.
97. The initial scoping exercise identified 44 potential health issues and 36 potentially relevant population groups. Systematic evaluation was then undertaken for each health issues against each relevant population group. This identified:
 - 16 potentially important positive health outcomes (across 17 population groups); and
 - 5 potentially important negative health outcomes (across 13 population groups);
98. The HIA notes that '[t]he city context of this large development means that there are inevitably some adverse effects for certain population groups. Large construction sites can be disruptive for local residents. These may manifest as negative health outcomes. [The Trust] recognises this risk and indicate that they will take all appropriate measure to maintain communication and to reduce disruption.'
99. It concludes: '*Overall the 3Ts Programme brings net health benefits to the people of Brighton & Hove as well as the wider South East. The redevelopment at the RSCH site will improve the hospital facilities and*

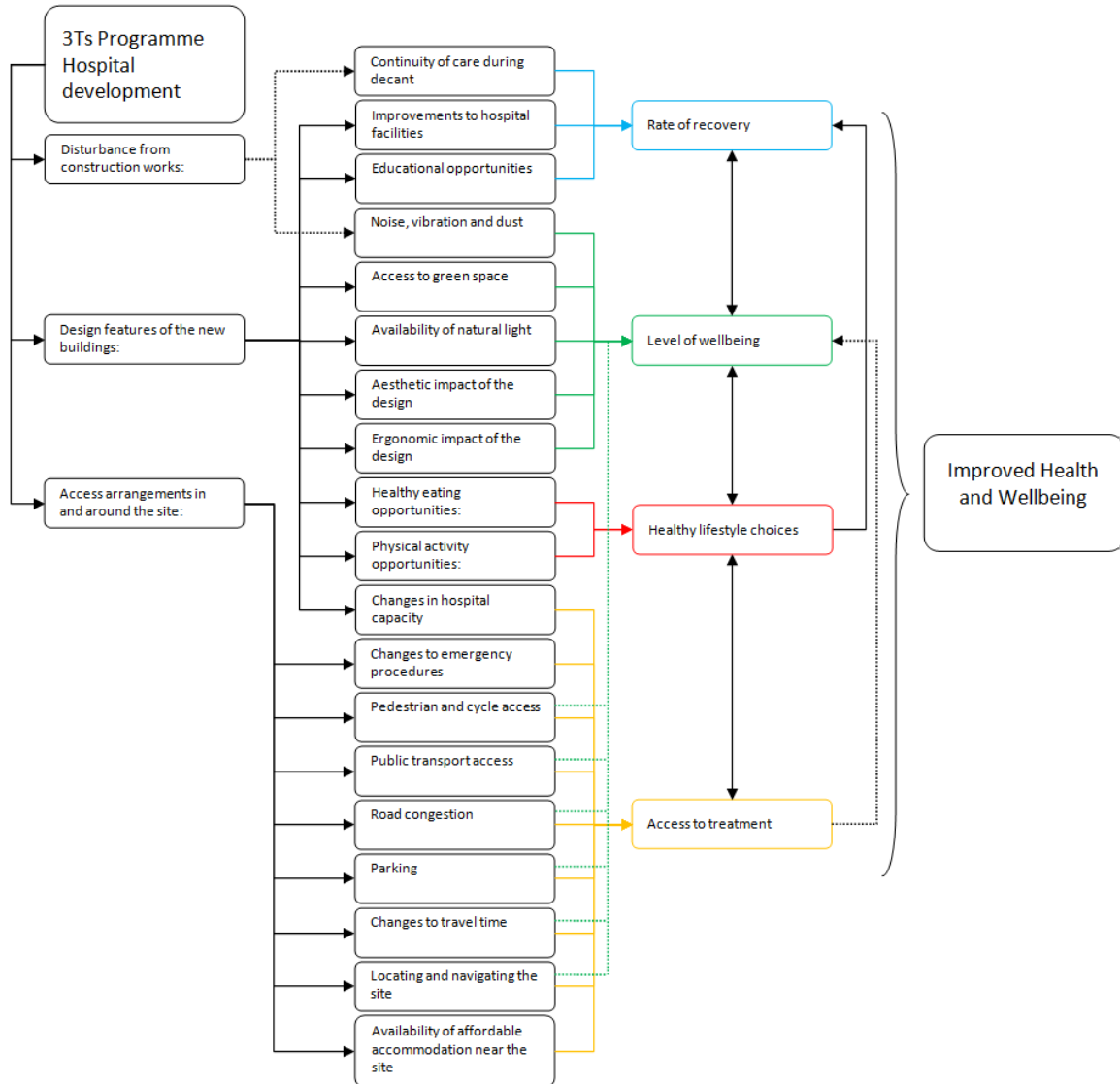
⁶¹ ECHP (1999) *Health Impact Assessment: Main concepts and suggested approach (Gothenburg Consensus Paper)*

⁶² Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946

the capacity to deliver effective and efficient services. The redevelopment will... improve the atmosphere and setting in which care is provided and will improve patient experience and the hospital staff's work environment... On the basis that this report's recommendations are adopted, the HIA supports implementation of the 3Ts Programme.'

100. The recommendations and actions arising from the HIA are summarised in the table below.

Redevelopment Programme: Key Determinants of Health & Wellbeing



Health Impact Assessment Recommendations

Recommendation	Detail	Trust Action
1. Access to green space	Ensure that, within the given design parameters, the design brief establishes the importance of views of, and access to, green spaces for patients and staff.	<ul style="list-style-type: none"> The Interior Design Strategy identifies the importance and benefits of green spaces. 3Ts includes several terraces and roof gardens. These spaces will be DDA compliant and open to staff, patients and visitors.
2. Improvements to patient environment	Ensure that the findings in Appendix 9 of the HIA Technical Appendices [2008 literature review assessing the health impacts of hospital design on patient recovery/wellbeing and staff wellbeing] are, within the given design parameters, incorporated into the detailed design.	<ul style="list-style-type: none"> The literature review/recommendations have informed the 3Ts Design Philosophy. Key recommendations (eg. noise reduction; access to sunlight, views and garden spaces; privacy, decentralising nurses' stations and supply areas; adequate storage; design standardisation; areas for 'spiritual retreat'; accessible wayfinding; use of contrasting colours; community engagement) have been factored into the design and planning processes.
3. Multi-faith centre	Ensure that the design and location of the multi-faith centre is integral to the hospital and provides a comfortable and tranquil environment that is accessible to all faiths and communities.	<ul style="list-style-type: none"> 3Ts includes 'The Sanctuary'. This is prominently located, has been designed with input from local faith communities, and will be appropriate and available to people of all faiths (or none).
4. Lighting	Ensure that within the design parameters, the design brief establishes the importance of natural lighting throughout the hospital.	<ul style="list-style-type: none"> The Design Philosophy highlights the importance of access to natural light. Almost all inpatient rooms will have a sea view (south-facing). 3D modelling is being used to ensure that light levels are sufficient.
5. Look and feel of environment	Ensure that, within the design parameters, the design brief establishes the importance of an aesthetically pleasing internal and external environment.	<ul style="list-style-type: none"> The Design Philosophy and Interior Design Strategy highlight the importance of high quality design and finishes. A Public Arts Strategy has been developed in partnership with patient groups, staff and the local arts community.
6. Access	Ensure that, within the design parameters, the design brief establishes opportunities to access the RSCH site and its environs in a way that enhances health outcomes.	<ul style="list-style-type: none"> Improving access and wayfinding within the site (both in the redevelopment and, as far as possible, in the retained estate) is a key objective. This is reflected in the Benefits Realisation plan. The Patient & Public Design Panel, Hospital Liaison Group and the Staff Panel will continue to meet throughout the design period to refine these plans.
7. Travel to site	Ensure that the design and the transport plans place a premium on achieving a modal shift amongst people travelling to the hospital, from	<ul style="list-style-type: none"> The Trust already has a Travel Plan in place, and Brighton & Hove City Council has recognised its achievements, eg. the 40x inter-site bus service is saving 12,500 car journeys by staff and 500 patient journeys per month.

Recommendation	Detail	Trust Action
	private car to walking, cycling and public transport.	<ul style="list-style-type: none"> • 3Ts will include 126 additional, covered cycle spaces. • The Council’s planning conditions include targets for further modal shift (against the 2007 baseline), including the designation of a Travel Plan Coordinator. The BSUH Travel Plan was updated in September 2014 (Appended to the Strategic Case).
8. Public transport	Engage with public transport providers to ensure that there is suitable capacity to support the modal shift away from private car use when accessing the RSCH site.	<ul style="list-style-type: none"> • Liaison with travel providers is described in detail in the Environmental Impact Assessment. • Further liaison will be required, in particular to improve public transport access to the site for patients with mobility difficulties.
9. Consultation with patients/public re alternatives to private cars	Engage with/consult hospital service users and visitors regarding multimodal/active transport options and alternatives to private cars.	<ul style="list-style-type: none"> • Based on SPG4 ratios and comparisons with other new hospitals of a similar size, the redevelopment could reasonably be allocated an additional 400 car parking spaces. • Consultation with over 300 people as part of the planning process found that that the significant majority would prefer to retain the choice to access the site by private car. This is unsurprising, given the age and health profile of hospital users (and associated mobility issues). • However the Trust will continue to promote the alternatives to private car use, including innovative partnerships with Patient Transport Services, personal journey planning. The BSUH Travel Plan was updated in 2014 as per this recommendation.
10. Air quality	<p>Ensure that the scheme design and transport plans minimise changes in local air quality associated with the RSCH activities during the operation of the hospital and reduce the risk of exceeding national air quality standards within the AQMA within which the RSCH is located.</p> <p>Monitor the effectiveness of the Travel Plan. If air quality excedances occur, appropriate abatement action should be taken through the AQMA protocols.</p>	<ul style="list-style-type: none"> • The redevelopment includes 400 fewer car parking spaces than planning guidance recommends, in recognition of the need to achieve modal shift away from private cars and the associated air pollution. • The planned increase of 320 car parking places, and the drive-through design of the underground car park, is expected to significantly reduce the impact of stationary traffic queuing for parking, which is a significant problem currently. • The Travel Plan is regularly evaluated. • The Trust’s Carbon Management Plan also aims to reduce the Trust’s carbon footprint.
11. Construction and Environmental Management Plan	Through the scheme design and CEMP, ensure that demolition and construction dust does not exceed relevant thresholds and that appropriate mitigation measures will be in place.	<ul style="list-style-type: none"> • The use of an off-site Consolidation Centre will reduce construction traffic to the site and associated dust, noise and air quality issues. • The use of off-site prefabricated construction methods will mitigate against excessive dust and noise. • The Considerate Constructor plan will also include measures such as wheel washing prior to vehicles’ leaving the site and ‘damping down’ sprays to control dust.

Recommendation	Detail	Trust Action
		<ul style="list-style-type: none"> • Fumes generated during the development will be vented from the work area or ‘bagged’. However since the works are principally external, fumes should largely be diluted. • The Trust will monitor dust levels throughout the demolition and construction phases. Frisbee dust gauges have been installed to measure current baselines. • A dedicated Community Liaison Officer will be engaged to liaise with local residents.
12. Vibration	Ensure that demolition and construction noise and vibration (including from excavation and piling activities) does not exceed relevant thresholds and that mechanisms are in place by which the Trust is informed of, and stake action regarding, construction noise.	<ul style="list-style-type: none"> • Off-site prefabricated construction methods will mitigate against excessive noise and vibration. • Where drilling is required, this will use the most up-to-date technology, eg. screw-augured rather than pneumatic pile-driving to minimise noise and vibration. • The Trust will monitor noise levels throughout the demolition and construction phases.
13. Food	Catering facilities are not part of the 3Ts programme, however this presents an important opportunity to provide healthy food options throughout the day to hospital users, including inpatients, staff, visitors, and local residents who may choose to use the hospital’s catering facilities.	<ul style="list-style-type: none"> • The Trust is committed to ensuring that food provided meets the NHS nutritional standards. • Catering concessions within 3Ts will be required to offer at least one ‘healthy option’. Local businesses will be encouraged to apply for these concessions. • Locally-sourced food will be one of the criteria against which future concessions are assessed. • The Trust will work with NHS Brighton & Hove and the Local Authority (Public Health) to investigate further opportunities to increase healthy eating options at the Trust.

Legal & Commercial Issues

Legal Advice: Continuation of P21 Agreement

101. Advice was sought regarding the legal position with reference to the ProCure 21 (P21) framework (NEC 2 contract) agreement between BSUH and Laing O’Rourke the Principal Supply Chain Partner (PSCP). The advice received in the letter begins by summarising the history of the appointment in November 2008: LOR was appointed as the PSCP to deliver the 3Ts programme up until the Full Business Case was delivered (Phase 3 of the contract). Phase 4 (construction) was then left open for a new agreement to be entered into.

102. The letter described the contract as a single call –off contract made up of different phases. In this context, phases 2-4 are part of a single call off contract which can legitimately be continued even though the P21 Framework had expired. The letter outlines the key benefits of P21 as follows:

- A Guaranteed Maximum Price (GMP)
- Open book transparency
- Improved risk management
- Opportunities for value engineering
- Recovery of VAT and free VAT advice
- Speed of delivery

103. This history of the relationship is outlined as follows:

Phase one	
Tender exercise	April 2008
LOR appointed	June 2008
Registration on P21 web site	29 th February 2008
Letters of intent	1 st July 2008 30 th July 2008 16 th October 2008
Scheme Agreement	27 th November 2008
Decant Scheme registered on P21 web site	2 nd August 2010
Phase two	
Form of Agreement	18 th December 2008
Phase three	
Form of Proposal	22 nd July 2010
Agreement to proceed to FBC	14 th March 2011

104. This agreement will continue to the next stage when the Trust enters into a phase 4 contract for the detailed design and then construction of the 3Ts development.

105. It was envisaged in the initial OJEU that this agreement would be for at least five years. The Department of Health suggested that P21 should be for a maximum of four years, but continued with this framework agreement from 2003-2010 (seven years). ProCure 21 finished in 2010 and was replaced by ProCure 21+. This will run until 2016. Section 4.2 of the guidance for P21 schemes notes that any company that fails to get onto the P21+Framework should continue on the existing framework in order to complete the scheme.⁶³

Supplementary Agreement

106. The legal agreement suggests that some of the advantages of the P21+framework could be utilised by 3Ts through the inclusion of a supplementary agreement. Potential advantages include:

⁶³ ProCure 21 Transition Guidance Note issued in January 2010 by the Department of Health.

- lower profit margins;
- improved pain/gain share arrangements;
- improved control of cash flows during construction; and
- cost savings via the supply chain.

107. The letter concludes that this supplementary agreement would not give rise to a material change which would lead to a legal challenge re the need to retender. This is because the changes introduced would not favour the contractor, but would be to the advantage of the Trust.

Conclusion

108. It summarised that the Trust is legally entitled as follows:-

- Continue with the appointment of LOR under the framework agreement known as P21 even though it had been replaced by P21+and LOR is not on this framework.
- Introduce new contractual terms at Phase 4 by way of a Supplemental Agreement and this would not amount to a material change to the original contractual arrangement (such that an OJEU complaint procurement exercise is required).
- The letter also argued that BSUH had demonstrated that its choice of procurement route complied with the provisions of the Public Contracts Regulations 2006.

Planning Consent

109. Brighton & Hove City Council unanimously awarded Full Planning Consent on 27th January 2012. This approval was confirmed following the expiry of the judicial review period on 20th June 2012. The approval expires five years from the date of the Committee meeting (27th January 2017).

110. Although Outline Planning Consent would be more normal at Outline Business Case stage, the City Council advised that the scale and complexity of the scheme, and its proximity to a number of heritage conservation areas and the South Downs National Park, would require a level of detail akin to Full Planning Consent. The Trust therefore developed the scheme to the additional level of detail.

3Ts Planning Timeline

Event	Date Complete
OBC approved by NHS South East Coast	November 2009
Submission of OBC to DH	November 2009
Refreshed OBC to NHS South East Coast and DH	May 2011
Planning Submission to B&HCC	September 2011
Statutory planning submission for main build	January 2012
NHS South East Coast Approval	March 2012
Statutory planning submission for decant temporary buildings	January 2013
Approval of Outline Business Case	May 2014

Consultation & Engagement

111. Formal consultation and engagement with stakeholders was undertaken in two phases:-

- From October 2010 – to provide details of the proposed scheme to the whole of Brighton & Hove, and obtaining feedback that could influence the design. Exhibitions were staffed by Trust staff and the PSCP’s principal specialist advisors (transport, construction, heritage, design, clinical planning, landscape, sustainability) to provide direct access for stakeholders and members of the public.

2010: Consultation Events

Date	Location	Focus
Friday 15 th October 2010	Hove Town Hall	Heritage / Preview Day
Saturday 16 th October 2010	Hove Town Hall	Opening event / Launch Day
Monday 18 th October 2010	Hove Town Hall	General Information
Tuesday 19 th October 2010	Hove Town Hall	Environment
Wednesday 20 th October 2010	Hove Town Hall	General Information
Thursday 21 st October 2010	Hove Town Hall	Transport and Full Council Meeting
Saturday 6 th November 2010	Jubilee Library, Brighton	General Information
Monday 8 th November to Wednesday 10 th November 2010	Audrey Emerton Building, RSCH	General Information

Total Attendees = 827 people

- In October 2011 – to showcase the designs in preparation for the formal planning submission the following month (November 2011). This peripatetic exhibition included poster display boards, a scale model and information video. Again, the events were staffed by representatives of the redevelopment team and by associates from key external contractors.

2011: Consultation Events

Date	Location
Saturday 8 th October – Thursday 13 th October 2011	Jubilee Square, Brighton
Saturday 15 th October – Monday 17 th October 2011	Audrey Emerton Building, RSCH
Saturday 22 nd October – Wednesday 26 th October 2011	Hove Library
Thursday 27 th October – Saturday 29 th October 2011	Audrey Emerton Building, RSCH

Total Attendees = 800 people

112. Events were publicised by the Trust through a variety of media, including:
- articles and paid advertisements in local papers (*The Argus, The Leader*)
 - flyers mailed/mail-dropped to local residents and interest groups (including the 3Ts contact database)
 - individual invitations to all Brighton & Hove City Councillors;
 - information on the Trust website; and
 - on-the-day flyers as reminders.
113. Feedback forms were provided at all engagement events. The resulting comments were collated, responded to in writing and posted on the 3Ts public-facing website. Comments were summarised and submitted as part of the Trust's Planning Application. These comments have been subsequently updated through the use of a comments tracker (appended).
114. The engagement programme has been seen as a success in informing the public/stakeholders about the hospital redevelopment and securing wider engagement in its planning and development. Martin Randall (Head of Planning & Public Protection, Brighton & Hove City Council) has described the programme as a 'gold standard'. Details of the wider Communication & Engagement programme are described in the Strategic Case.

Planning Conditions

115. The Planning Conditions and Section 106 agreed between Brighton & Hove City Council and the Trust reflect a number of strategic imperatives:
- the urban nature of the site and neighbouring estates with a high density population;
 - adjacent conservation areas;
 - the requirement for sustainable transport solutions; and
 - the importance of local history and culture.
116. The mechanism for monitoring this compliance will formally be established between Brighton & Hove City Council and the Trust. However at each stage there is an eight week period within compliance must be undertaken.
117. Planning Conditions are to be discharged in six separate phases, set out in the table below (and appended).

Planning Conditions by Phase

1) Preliminary Conditions	
Helipad	Final verified design to Local Planning Authority. The number of helicopter flights landing on the helipad hereby approved shall be limited to 64 per annum plus a tolerance of 10 %
	Samples of the design/materials to be used in construction of the external surfaces to be submitted and approved in writing by the Local Planning Authority
	Final design of external lighting of the helipad to be submitted and approved in writing by the Local Planning Authority
Substation	Plan for landscaping to be submitted to Local Planning Authority
Cycles	Details of secure and covered parking facilities to be submitted to Local Planning Authority
Heritage	Proposals for the work to demolish piers to be submitted to Local Planning Authority
	Plans for the removal and reconstruction of the piers to be submitted and approved in writing by the Local Planning Authority
	Detailed features of the Chapel to be recorded prior to any demolition
External Planting	Tree planting scheme to be submitted to Local Planning Authority
2) Stage 1	
Landscaping	Final details of external lighting to be submitted to Local Planning Authority
	Scheme for landscaping of Stage 1 site to be submitted to Local Planning Authority
	Samples of external surface materials to be submitted and approved in writing by the Local Planning Authority
	Detailed plan section scale 1:10 to be submitted and approved in writing by the Local Planning Authority
Contaminants	Details of foul water disposal and surface water drainage to be submitted to the Local Planning Authority
	Detailed scheme of remedial works and measures to be undertaken to avoid risks from contaminants and/or gases to be submitted and approved in writing by the Local Planning Authority
Infrastructure/Car Parking	Proposed water infrastructure to be submitted and approved by the Local Planning Authority
Cycles	Details of secure and covered parking facilities to be submitted to Local Planning Authority
Heritage	Bristol Gate piers to be rebuilt in location submitted to and approved by the Local Planning Authority prior to occupation of stage 1
Wayfinding	Real Time Information and one REACT facility to be submitted and approved by the Local Planning Authority, along with a Signage Strategy
Energy Centre	Evidence of emissions from the Energy Centre to be submitted to and approved by the Local Planning Authority.
Green issues & recycling	A non-clinical waste and recycling strategy to be submitted to and approved by the Local Planning Authority.
Acoustics	An acoustical survey shall be carried out post completion and occupation of the Stage 1 building to demonstrate that all plan and machinery is capable of running cumulative as per BS4142:2003

3) Stage 2	
Construction	Constructed sample panel for replacement of existing boundary wall to Upper Abbey Rd/Eastern Road to be submitted to and approved by Local Planning Authority
Heritage	Detailed features of the Chapel to be recorded prior to any demolition and a schedule of works for the removal and reconstruction of features submitted and approved in writing by the Local Planning Authority
	Proposals for the work to demolish piers to be submitted to Local Planning Authority for approval
Drainage	Final scheme detailing surface water drainage system to be submitted to the Local Planning Authority for approval
	Details of foul water disposal and surface water drainage to be submitted to the Local Planning Authority
Contaminants	Detailed scheme of remedial works and measures to be undertaken to avoid risks from contaminants and/or gases to be submitted and approved in writing by the Local Planning Authority
Infrastructure/Car Parking	Final details of water infrastructure to be submitted and approved by Local Planning Authority
4) Stage 2 (level) 1	
External Planting/lighting	Scheme for landscaping on stage 2 site to be submitted and approved by Local Planning Authority
	Samples of external surface materials to be submitted and approved in writing by the Local Planning Authority
	Final details of external lighting to be submitted to Local Planning Authority
Landscaping	Detailed plan section scale 1:10 to be submitted and approved in writing by the Local Planning Authority
Acoustics	An acoustical survey to be carried out post completion and occupation of the Stage 2 building. Report to be submitted to the Local Planning Authority
	Noise associated with plan and machinery incorporated within the development shall be controlled as per guidance.
Cycles	Details of secure and covered parking facilities to be submitted to Local Planning Authority
Wayfinding	Real Time Information and one REACT facility to be submitted and approved by the Local Planning Authority, along with a Signage Strategy
Green issues & recycling	The Stage 2 building shall not be occupied until a final rainwater recycling scheme for the irrigation of the Stage 2 roof terrace, has been submitted to and approved in writing by the Local Planning Authority.
5) Stage 3	
Wayfinding	No development at Level 1 of the Stage 2 Building shall take place until samples of the materials have been submitted to and approved in writing by the Local Planning Authority.
Contaminants	Final details of foul water disposal and surface water drainage to be submitted to the Local Planning Authority
Infrastructure/car parking	Proposed water infrastructure to be submitted and approved by the Local Planning Authority
Contaminants	Final scheme detailing surface water drainage system to be submitted to the Local Planning Authority for approval
Infrastructure/car parking	Service and delivery strategy submitted to the Local Planning Authority
Green issues & recycling	Scheme for the storage of refuse and recycling to be submitted to the Local Planning Authority

	No development shall commence at level 3 of the Stage 3 building until a scheme for landscaping of the stage 3 site has been submitted and approved by the Local Planning Authority
Landscaping	Detailed plan section scale 1:10 to be submitted and approved in writing by the Local Planning Authority to show all jointing details
External planting/lighting	Final details of external lighting to be submitted to Local Planning Authority
	No development shall commence at level 3 of the Stage 3 building until a scheme for landscaping of the stage 3 site has been submitted and approved by the Local Planning Authority
Acoustics	An acoustical survey to be carried out post completion and occupation of the Stage 3 building. Report to be submitted to the Local Planning Authority
6) Post completion	
Green issues and planting	Any trees which are planted that die within 5 years of being planted shall be replaced in the next planting season with others of similar size and species, unless the Local Planning Authority gives written consent to any variation
	Planting, seeding or turving comprised in the approved scheme of landscaping to be carried out in the first planting and seeding seasons following occupation of the building
Helipad	All lighting on the helipad shall only be in use temporarily in connection with an impending helicopter landing or departure for the minimum period required for operational or safety reasons. An exception to this will be any steady red aviation warning lighting required at night by the Civil Aviation Authority on tall buildings or structures. Following the commencement of use of the helipad, annual monitoring reports shall be submitted to the Local Planning Authority for a period of 10 years. The helipad hereby approved shall not be used for carrying out routine repairs and maintenance to helicopters including leaving engines idling.
	Helipad to be used only by Air Ambulance, HM Coastguard or Police and only used between 07.00 and 19.00 hours except in a major incident
	Number of flights to be limited to 64 per annum plus tolerance of 10%
	Lighting on helipad only to be used in conjunction with helicopter landings
	The helipad not to be used for carrying out routine repairs and maintenance to helicopters
	Annual monitoring reports to be submitted to the Local Planning Authority
	The development shall be commenced before the expiration of five years from date of permission and to be carried out in accordance the approved drawing numbers
Art	Artistic component to be provided in accordance with the Trust's Public Art Strategy at a cost of not less than £421,000 index linked to 2012 costs.
Acoustics	Noise associated with plant and machinery incorporated within the development to be controlled
Infrastructure/car parking	No vehicular movements, loading or unloading of vehicles to take place in the stage 3 service yard or on the southern service road except between 7am and 7pm
	Use of basement car parking shall for patients and visitors only
	Minimum number of 40 car parking spaces for cancer patients, 21 disabled bays and 27 motorcycle parking bays and dedicated underground drop off zone shall be marked out and permanently retained within the basement car park

Contaminants	If during development of Stage 1 site, contamination not previously identified is found to be present at the site, no further work shall be carried out until written approval is obtained from the Local Planning Authority
	If during development of Stage 2 site, contamination not previously identified is found to be present at the site, no further work shall be carried out until written approval is obtained from the Local Planning Authority
	If during development of Stage 3 site, contamination not previously identified is found to be present at the site, no further work shall be carried out until written approval is obtained from the Local Planning Authority
Heritage	Chapel to be reconstructed in the location shown on drawings hereby approved
	Chapel works hereby permitted shall be commenced before the expiration of seven years from the date of this consent
	The works of demolition of the Chapel hereby permitted shall not be begun before the commencement of Stage 1 of the development authorised by planning application BH2011/02886
	Piers works hereby permitted shall be commenced before the expiration of five years from the date of this consent
	The works of demolition of the piers hereby permitted shall not be begun before the commencement of Stage 1 of the development authorised by planning application BH2011/02886
Roof terrace	The Level 6 roof terrace of the Stage 2 building shall be made available for public use within 6 months of first occupation of the Stage 2 Building.
Compliance	All above mentioned conditions will need to be assessed as adhered to before Section 106 planning conditions can be formally discharged.

Section 106 Agreement

118. Planning obligations under Section 106 of the Town & Country Planning Act 1990 (as amended), commonly known as S106 agreements, are a mechanism which make a development proposal acceptable in planning terms, that would not otherwise be acceptable. They are focused on site specific mitigation of the impact of development. S106 agreements are often referred to as 'developer contributions' along with highway contributions and the Community Infrastructure Levy.

Section 106 Obligations	Condition	Responsibility
Schedule 1 – Highways	Trust to enter into S278 Agreements with BHCC and will be responsible for any legal fees, deposits or other financial contributions; Traffic Regulation Orders – Trust to be responsible for reasonable and proper costs of a maximum of £30,000; Any highway works within the curtilage of the Site will be scoped, designed and undertaken within the Phase 4 Contract; Any highway works outside of the curtilage and therefore off Site, Trust to fund via agreed S278 with Council Contractors	Trust (in capital costs)
Schedule 2 – Contributions	Trust responsible for sustainable transport contributions to the Council	Trust (in capital costs)
Schedule 3 – Travel Plan	BSUH to produce in accordance with national and local policy	Trust (in BSUH revenue budget)
Schedule 4 – Art	BSUH to fund as stated previously	Trust (in capital costs)
Schedule 5 – Wind Mitigation	Any Wind Mitigation works within the curtilage of the Site will be scoped, designed and undertaken within the Phase 4 Contract by LO'R; Any works outside of the curtilage and therefore off Site, Trust to agree funding contribution with the Council	LOR (within capital costs) Trust (capital cost TBC)
Schedule 6 – Employment Strategy	Employment Strategy to be submitted aimed at employing a minimum 20% of local construction workers from within Brighton & Hove City boundary (joint work with LO'R within the Phase 4 Contract).	Trust to draft with LOR but costs to be within cost plan.
Schedule 7 – Hospital Liaison Group	Trust responsibility. LO'R to support the local residents' group within the Phase 4 Contract	Trust (already supporting from 3Ts revenue budget so transitional costs)
Schedule 8 – Construction	LO'R to produce a construction management plan, details of the off site consolidation centre and the phasing of the development within the Phase 4 Contract	LO'R (within cost plan and contingency)
Schedule 9 – Peregrine Falcon	Trust responsibility for removal, re-siting and future prevention	Trust (being funded via transitional costs)
Schedule 10 – Sustainability	To be included in Trust Brief; split responsibility Trust/LO'R: Design and construction by LO'R and Operational by Trust	LO'R to design so within cost plan. BSUH to contribute revenue to maintain.

119. As above, a mechanism for monitoring this compliance will be established between Brighton and Hove City Council and the Trust.

Costs & Allowances

120. The cost of complying with the Planning Conditions has been assessed as £1.2m (excluding the Chapel relocation which is an additional £1m). This is reflected in the Cost Plan.
121. The Section 106 Agreement has two cost elements: known and as-yet unknown. Known costs include:
- Highways – £0.03m (Schedule 1);
 - contribution to Sustainable Transport – £0.55m (Schedule 2); and
 - Public Art Strategy (Schedule 4) - £0.42m.
122. The construction contingency also contains an allowance of £19.8m.

Future Engagement

123. The S106/278 Agreement will be adhered to as 3Ts moves into the phase 4 contract. The Programme Team is working with Laing O' Rourke and Brighton & Hove City Council to ensure that the planning conditions are met. A number of positive meetings have already been held to explore these in detail, and this process will continue through the course of the development. For example:
- an initial meeting has been held with the Local Employment Scheme Co-ordinator (Brighton & Hove City Council Economic Development Team) to discuss the requirement to employ 20% of people who are from the local area;
 - there have also been several meetings with the Brighton & Hove Travel Partnership regarding the modal shift from private car usage to public active modes of transport (especially for staff commuting to/from the hospital).
124. There will also be a need for ongoing consultation with B&HCC to ensure that the process of developing the site and the associated disbenefits (construction traffic, dust, noise) are minimised. The Construction Environmental Management Plan (CEMP) will be another vehicle for this engagement, together with the continuing function of the Hospital Liaison Group which is chaired by a Local Councillor.

Construction Approach

Design for Manufacture & Assembly (DfMA)

125. The Brighton 3Ts scheme design has been developed to maximise the benefits of off-site manufacturing to reduce the impact of construction activities on the site and its local environment. Design for Manufacture and Assembly (DfMA) includes off-site construction of the structural frame, shafts, repetitive finishes to ward bathrooms and the installation of the services distribution systems. Pre-fabrication of Structural Steel components and reinforcement will be fully employed.
126. This approach reduces the traffic movements to and from the site, impacts upon site waste production and improves programme and quality outputs. Further DfMA products may come to market during 3Ts timescales and bring further benefits.

DfMA – APPLICATION IN 3Ts DESIGN	
Lattice and Precast Concrete Columns	Superstructure slabs designed around lattice slabs and insitu concrete topping. Fully applied to the superstructure frame.
Pods – UK Manufactured	Standard bathroom pod – unrestricted dimensions. Detailed design to be completed to integrate pod solution with frame and services.
External wall	Non-structural single skin PCC non panelised and site installed windows multi-panel solution developed to meet stringent Planning constraints developed at April Stage D. 2 part panelised (column to column) non-structural single skin PCC panel scheme with pre-installed windows developed as part of August 14 UBO Details set out below
PCC liner walls	Lining to basement drained cavity. Developed and deliverable included in the scheme
Twin wall	Twin wall to lift shafts and shear wall. Project specific design to be developed – included in scheme
Engineering services	Modularised horizontal and vertical distribution and modular wiring systems included in programme and price
CURRENT INNOVATION IN DEVELOPMENT	
E6	Use of E6 in combination with hollow core for the structural slab solution for floors above ground bearing slab forward areas (medium duty). Currently developed as a generic solution with potential for application on B3Ts but will require design development to interface with services and Pod Bathrooms.
MEP Integrated Smartwall	Smartwall in conjunction with MEP services and other elements (e.g. lead protection). Currently developed as a 'generic solution – Not currently approved for use used in live acute healthcare environment and requires design development and testing against healthcare standards.
Standard Smartwall	Smartwall for use in repeatable areas. Currently developed as a 'generic solution – Not currently approved for use used in live acute healthcare environment and requires design development and testing against healthcare standards.
Smartwall with integrated bed head	Smartwall with integrated HTM compliant bed head module. Concept only not yet prototyped or developed.

Government Construction Strategy

127. The integration of the Government 'Soft Landings' (GSL) policy is recognised in the 3Ts scheme as follows:
- design production in a Digital Environment to include data sets that will enable the use of the digital building information in the management of the asset;
 - identifying the user requirements early to enable integration into the digital model;
 - production of Operation & Maintenance information that is manageable in a digital model;
 - developing handover and post-completion support requirements with the Trust to align operational needs to after care services;
 - integration of the Contractor's completion process with handover and acceptance of the assets by the Trust.
128. The aim of the GSL policy is to ensure:-
- Target running cost, capital cost, environment and functionality by providing a monitoring capability in the design against which the building can be measured.
 - Early warnings of problems – with embedded engineers and construction professionals who users can consult, the problems are both recognised and dealt with in a quick and professional manner with appropriate Facilities Management support.
 - Comparison of predicted performance against targets for environmental parameters with monitoring capability against which the building can be measured and the users engagement with the building strategy monitored.
 - Potential for simple operating instructions held in the digital model on a per component basis.
 - Ready access to embedded digital data about our asset through free software such as NavisWorks freedom.
 - Cost effective transfer of data from construction to operation.
 - Actual measured performance of the asset on a departmental basis and a way to monitor the efficiency of the finished asset.
 - Service provider having all required operational data to hand at dedicated points of interface.
 - Recorded performance, fine tuning of actual performance and feeding that back into the design and construction.

Building Information Modelling (BIM)

129. BIM-enabled working allows information to be shared by different project participants and also between different stages of design, construction and operation. The process tools used to ensure this collaboration standard is implemented is contained in the Project BIM Execution Plan currently being prepared between LOR and the Design Team. This document (due October 2014 to inform Stage E Design programme) will set out the BIM standards and outputs required from each participant on the project to ensure efficient delivery and coordination of all BIM information.
130. As per British Standard PAS 1192-2⁶⁴, the 3Ts design will be entirely developed in BIM to achieve BIM maturity Level 2 (a requirement for all Government projects to be delivered after 2016). At the end of the programme design stage, the BIM Model will be transferred to the Trust with sufficient data for operational building management use and linked to all relevant databases.

Schedules of Accommodation

131. Schedules of Accommodation are appended. The table below summarises the scheduled departmental floor area (per the signed-off Schedule of Accommodation, excluding circulation, plant and communication space). An area check of the Gross Internal Floor Area (GIFA), which includes circulation, plant and communication space is also appended.
132. The table includes a comparison to area figures quoted in the OBC. Overall, there is a 2787.6m² difference (5.4%) between the two totals. This is due to a move from an Autocad to BIM design environment, design development (e.g. inclusion of Stage 3 FM Service Yard), changes to the internal building shape to address clinical planning issues, which meant some departments changed floors (e.g. Therapies from L3 to L2) with some 1:500 impact.

Summary Schedule of Accommodation (Designed Area)

Stage	Level	Activity Space	OBC ⁶⁵ (m ²)	FBC ⁶⁶ (m ²)	Difference
ST1	Basement Level 01	FM Basement Level 01		29.0	-
ST1	Basement Level 02	FM Basement Level 02		161.2	-
ST1	Level 01	Discharge Lounge	365.6	368.9	0.9%
ST1	Level 01	ENT, Maxilo Facial & Audiology	1136.8	1111.4	-2.2%
ST1	Level 01	FM Level 01		302.3	-
ST1	Level 01	Main Entrance L01	1355.8	1472.3	8.6%
ST1	Level 01	Rheumatology OPD	434.3	434.9	0.1%
ST1	Level 02	Chapel (Heritage Space)	94.2	148.8	58.0%
ST1	Level 02	Non-Invasive Cardiology	1198	1194.9	-0.3%
ST1	Level 02	Nuclear Medicine	1413	1493.2	5.7%
ST1	Level 02	Therapies	358.2	555.5	55.1%
ST1	Level 03	FM Level 03	1306.7	1405.8	7.6%
ST3	Level 03	FM Stage 3		407.3	-
ST1	Level 03	Neurosciences Support & Offices	679.8	714.6	5.1%
ST1	Level 03	Neurosciences OPD	680.3	676.5	-0.6%
ST1	Level 03	Neurophysiology	444.2	478.2	7.7%
ST1	Level 03	Temporary Staffing	139.8	192.7	37.8%
ST1	Level 04	Fracture Clinic	894.9	912.9	2.0%
ST1	Level 04	Imaging Dept	3068.4	3110.5	1.4%
ST1	Level 05	Acute Floor	2492.6	2626.9	5.4%
ST1	Level 05	AMU/ Short Stay	1334	1324.6	-0.7%
ST1	Level 06	CIS OPD	623.3	633.1	1.6%
ST1	Level 06	CIS Ward	1653.6	1670.3	1.0%
ST1	Level 06	Cafe & Retail L06		242.0	-
ST1	Level 06	PALS		75.0	-
ST1	Level 06	The Sanctuary	221.8	270.0	21.7%
ST1	Level 07	Critical Care	4490.5	4469.4	-0.5%
ST1	Level 08	Medical Ward 79 Bed	3963.3	4002.6	1.0%
ST1	Level 09	MDU & Ward Support	1579.9	1579.9	0.0%
ST1	Level 09	Neuro Surgery Wards	2099.2	2140.7	2.0%
ST1	Level 10	Neuro Stroke Therapies	302.5	355.4	17.5%
ST1	Level 10	Neurology Ward	1626.6	1659.1	2.0%
ST1	Level 10	Stroke Ward	1398	1412.4	1.0%

⁶⁵ OBC figures taken from Chapter 6, Figure 6.7 Clinical Space Justification

⁶⁶ FBC figures taken from Schedule of Accommodation v9.1 rev. F03 (appended)

Stage	Level	Activity Space	OBC ⁶⁵ (m ²)	FBC ⁶⁶ (m ²)	Difference
ST1	Level 11	Clinical Site Management Office	150.9	153.8	1.9%
ST1	Level 11	Relatives Overnight Stay		71.3	-
ST1	Level 11	Doctors Mess	207.5	209.9	1.2%
ST1	Level 11	Meeting & Teaching Suite	697.1	704.5	1.1%
ST1	Level 11	Simulation Suite	377.4	380.1	0.7%
ST2	Level 01	Medical Physics	683.4	694.0	1.6%
ST2	Level 01	Oncology Entrance	277.2	368.0	32.8%
ST2	Level 01	Radiotherapy	3367.7	3284.3	-2.5%
ST2	Level 02	EBME	488.1	415.4	-14.9%
ST2	Level 02	Private Patients (shell space)	605.4	631.4	4.3%
ST2	Level 02	Trust HQ	488.1	492.1	0.8%
ST2	Level 03	BSMS	1028.7	1059.0	2.9%
ST2	Level 03	CIRU	889.6	886.7	-0.3%
ST2	Level 03	Oncology Support	890.9	889.6	-0.1%
ST2	Level 04	Aseptic Suite	176.4	177.4	0.6%
ST2	Level 04	Oncology Day Care	1119.6	1136.9	1.5%
ST2	Level 04	Oncology Outpatients	1136	1129.7	-0.6%
ST2	Level 05	Oncology Wards	2588.9	2623.6	1.3%
ST1	Level 01	Staff Change L01 ST1		43.7	-
ST1	Level 01	Staff Change L01 ST1 & 2	163.9	144.5	-11.8%
ST1	Level 01	Staff Change L01 ST2		50.5	
ST1	Level 02	Staff Change L02 ST1	87.1	87.5	0.5%
ST1	Level 03	Staff Change L03 ST1		64.8	-
ST1	Level 03	Staff Change L03 ST1 (FM)	216.2	172.2	-20.4%
ST1	Level 04	Staff Change L04 ST1	229.7	231.8	0.9%
ST1	Level 05	Staff Change L05 ST1	145.5	146.4	0.6%
ST1	Level 05	Staff Change L05 ST1 & 2		231.2	-
ST1	Level 06	Staff Change L06 ST1	60.7	66.0	8.7%
ST1	Level 09	Staff Change L09 ST1	193.1	194.9	0.9%
ST1	Level 10	Staff Change L10 ST1	107.3	97.4	-9.2%
ST2	Level 02	Staff Change L02 ST2	13.1	26.4	101.5%
ST2	Level 03	Staff Change L03 ST2	50.5	85.6	69.5%
		TOTAL DEPARTMENTAL AREA (m²)⁶⁷	51795.3	54582.9	
		Increase in scheduled area		2787.6	5.4%
		<i>Of which, area omitted from OBC SOA</i>		<i>1678.3</i>	<i>3.2%</i>
		<i>Of which, change from OBC SOA</i>		<i>1109.3</i>	<i>2.1%</i>

Derogations

133. Health Building Notes (HBNs) provide best practice guidance on the design and planning of new healthcare buildings and on the adaptation/extension of existing facilities, and provide information to support the briefing and design processes for individual projects in the NHS building programme. These align with Health Technical Memoranda (HTMs), which provide advice and guidance on the design, installation and operation of specialised building and engineering technology used in the delivery of healthcare.
134. HBNs are updated periodically by the Department of Health, in consultation with NHS and industry experts. The partial Stage E design completed to date complies with relevant HBN and HTM

⁶⁷ Figures do not include underground car park, plant and communication space.

where appropriate in line with best practice. Due to the date of some guidance documents, clinical practice and operational requirements may have evolved. Where necessary, the Trust has therefore agreed with the design team to deviate from the guidance to create an optimal design.

135. The Derogations Schedule (appended) developed by Laing O'Rourke at Outline Business Case stage remains current. Additional schedules have been developed as part of the 1:50 Standard Room design process (appended). These will be refined when room-by-room derogations are recorded as part of the full Stage E design process (ie. when all rooms are loaded and designed in their specific 1:200 location).

Firecode

136. The current design satisfied the FIRECODE Compliance requirements being a fully engineered fire solution and was being assessed by the relevant statutory authorities, as described in the Fire Strategy Report BDP-AR-SW-RP-0122 Rev F03 (appended). An Approved Inspector had been appointed and confirmed that they were assessing and approving Building Regulations compliance and FIRECODE compliance, as well as compliance of the helipad against the HBN 15-03 guidance. The Approved Inspector also acted as the interface with East Sussex Fire & Rescue Service.
137. HTM 05 FIRECODE has been revised since the current Fire Strategy Report was last issued. The new FIRECODE has upgraded a number of requirements, the principal impacts of which have been identified. The most significant changes include: the requirement for all healthcare buildings over 30m in height to have fully sprinkler suppression; maximum fire compartment sizes have been reduced; and secondary fire compartments are to have standard fire dampers upgraded to fully automated fire/smoke dampers. A fully detailed evaluation of the current Fire Strategy will be undertaken to ensure FIRECODE compliance is attained in the final Stage E design prior to contract sign.

Planning for a Resilient Healthcare Estate

138. The current design meets the requirements of HBN 00-07 where relevant to the Trust and site context. Full details for how the design has mitigated risks relating to emergency planning, resilience and response are appended.
139. The building is designed to be suitable for an exposed marine environment. The thermal mass of the building construction helps mitigate both climate control and storm-force winds. The building is on a hill and not on a flood plain, hence is very low flood risk. Limiting peak outfall to the existing public sewerage system will be attenuated through rainwater harvesting (for irrigation), roof landscaping (which also reduces urban heat island effects) and surface water attenuation tanks.
140. The 3Ts scheme does not incorporate opening windows for natural ventilation, as the coastal location is very exposed to weather elements. The building has therefore been developed with a high-performance sealed envelope and its internal environment is maintained by mechanical systems. The comfort conditioning and ventilation systems are able to cope with external summer temperatures up to 30degC. In addition, the cooling plan is specified to operate in external temperatures up to 40degC.
141. The central mechanical plant and systems are configured with "N+1" resilience for mains electricity and backup generation, chilled water and heating. The heating is provided by dual fuel boilers and CHP, which will further increase mechanical and electrical systems resilience.

Drawings

142. The following 1:500 drawings are appended:

Drawing Title	Drawing Ref	Rev	Date
Departmental GA Level B-2	BDP-AR-SW-A00-GA-B02-0001	F12	13/08/2010
Departmental GA Level B-1	BDP-AR-SW-A00-GA-B01-0001	F13	07/06/2010
Departmental GA Level 01	BDP-AR-SW-A00-GA-L01-0001	F14	07/06/2010
Departmental GA Level 02	BDP-AR-SW-A00-GA-L02-0001	F13	07/06/2010
Departmental GA Level 03	BDP-AR-SW-A00-GA-L03-0001	F13	07/06/2010
Departmental GA Level 04	BDP-AR-SW-A00-GA-L04-0001	F13	07/06/2010
Departmental GA Level 05	BDP-AR-SW-A00-GA-L05-0001	F13	07/06/2010
Departmental GA Level 06	BDP-AR-SW-A00-GA-L06-0001	F14	07/06/2010
Departmental GA Level 07	BDP-AR-SW-A00-GA-L07-0001	F12	07/06/2010
Departmental GA Level 08	BDP-AR-SW-A00-GA-L08-0001	F12	07/06/2010
Departmental GA Level 09	BDP-AR-SW-A00-GA-L09-0001	F12	07/06/2010
Departmental GA Level 10	BDP-AR-SW-A00-GA-L10-0001	F13	07/06/2010
Departmental GA Level 11	BDP-AR-SW-A00-GA-L11-0001	F13	07/06/2010
Departmental GA Level 12	BDP-AR-SW-A00-GA-L12-0001	F11	07/06/2010
Departmental GA Level 13	BDP-AR-SW-A00-GA-L13-0001	F06	18/11/2010

143. The following 1:200 drawings are appended:

Drawing Title	Drawing Ref	Rev	Date
Bed Store	BDP-AR-ST1-A00-GA-B02-0001	F05	03/02/2011
Security Kiosk	BDP-AR-ST1-A00-GA-B01-0001	F02	03/02/2011
Main Entrance & Switch Board	BDP-AR-ST1-A00-GA-L01-0002	F15	12/09/2010
Oncology - Radiotherapy, Medical Physics	BDP-AR-ST2-A00-GA-L01-0001	F17	22/07/2011
Changing Facilities Level 01	BDP-AR-SW-A00-GA-L01-0012	F05	25/11/2010
Nuclear Medicine	BDP-AR-ST1-A00-GA-L02-0002	F13	11/10/2010
Non-invasive Cardiology, Therapies	BDP-AR-ST1-A00-GA-L02-0005	F09	24/01/2011
EBME	BDP-AR-ST2-A00-GA-L02-0003	F10	12/09/2010
Trust HQ	BDP-AR-ST2-A00-GA-L02-0004	F06	11/01/2011
Changing Facilities Level 02	BDP-AR-SW-A00-GA-L02-0012	F05	25/11/2010
Facilities Management	BDP-AR-ST1-A00-GA-L03-0003	F09	05/10/2010
Neurosciences	BDP-AR-ST1-A00-GA-L03-0006	F08	28/01/2011
Temporary Staffing	BDP-AR-ST1-A00-GA-L03-0007	F03	26/05/2011
BSMS-CIRU	BDP-AR-ST2-A00-GA-L03-0005	F17	17/09/2010
Oncology and Palliative Care	BDP-AR-ST2-A00-GA-L03-0007	F06	03/09/2010
Changing Facilities Level 03	BDP-AR-SW-A00-GA-L03-0012	F05	25/11/2010
Fracture and Imaging (Cold)	BDP-AR-ST1-A00-GA-L04-0001	F15	01/10/2010
Oncology Outpatients, Oncology Day Care, Aseptic Suite	BDP-AR-ST2-A00-GA-L04-0001	F15	03/09/2010
Changing Facilities Level 04	BDP-AR-SW-A00-GA-L04-0012	F05	25/11/2010
Hot Imaging, Recovery, Neurotheatres	BDP-AR-ST1-A00-GA-L05-0001	F13	01/10/2010
AMU & Ambulatory Care	BDP-AR-ST1-A00-GA-L05-0004	F08	25/02/2011
Oncology Ward 1 + 2	BDP-AR-ST2-A00-GA-L05-0001	F14	03/09/2010
Changing Facilities Level 05	BDP-AR-SW-A00-GA-L05-0012	F07	25/11/2010
AMU, CIS Ward & CIS Out Patient Department	BDP-AR-ST1-A00-GA-L06-0001	F12	08/10/2010
Multifaith, PALS & Cafe	BDP-AR-ST1-A00-GA-L06-0002	F15	08/10/2010
Changing Facilities Level 06	BDP-AR-SW-A00-GA-L06-0012	F05	25/11/2010
Critical Care Unit	BDP-AR-ST1-A00-GA-L07-0001	F15	01/10/2010

Drawing Title	Drawing Ref	Rev	Date
Medical Ward 80 Bed	BDP-AR-ST1-A00-GA-L08-0001	F09	12/01/2011
MDU/Neurosurgery Wards, Med Ward St. Ch, ADL	BDP-AR-ST1-A00-GA-L09-0001	F09	12/01/2011
Changing Facilities Level 09	BDP-AR-SW-A00-GA-L09-0012	F05	25/11/2010
Neuro & Stroke Wards & Rehab	BDP-AR-ST1-A00-GA-L10-0001	F12	19/11/2010
Changing Facilities Level 10	BDP-AR-SW-A00-GA-L10-0012	F05	25/11/2010
Relatives Over Night Stay	BDP-AR-ST1-A00-GA-L11-0001	F06	01/10/2010
Simulation/S, Meet/Teach, Docs Mess, Mgmt Offices	BDP-AR-ST1-A00-GA-L11-0002	F10	12/09/2010

Standard 1:50 Rooms

144. At Full Business Case stage a partial Stage E design has been completed: signed-off 1:50 drawings are available for 122 standard rooms (1,710 rooms in total, 62% of all scheduled rooms), grouped into three batches: Wards, Facilities Management and Offices. Remaining rooms have been classified as either locally-repeated or unique. The Stage E design process will be following FBC submission but prior completion of the Guaranteed Maximum Price, to minimise risk to the programme.

FM Batch (56 Standard Rooms)

Ref	Rev	Date issued	Areas included	Drawing Ref	Scheduled m ²
S001	F04	25/01/2011	Day overnight room & Twin bedroom	BDP-AR-SW-AOO-LP-OO-S001	12
S007	F02	01/10/2010	Staffing Changing Room 15 places	BDP-AR-SW-AOO-LP-OO-S007	15
S013	F03	01/10/2010	Parking Bay 12 wheelchairs	BDP-AR-SW-AOO-LP-OO-S013	6
S014	F04	25/01/2011	WC Independent wheelchair (HBN-non-public areas)	BDP-AR-SW-AOO-LP-OO-S014	4.5
S015	F04	25/01/2011	WC Independent wheelchair semi-ambulant	BDP-AR-SW-AOO-LP-OO-S015	2.5
S020	F02	01/10/2010	Parking bay trolleys wheelchair	BDP-AR-SW-AOO-LP-OO-S020	6
S023	F02	01/10/2010	Switchgear cupboard	BDP-AR-SW-AOO-LP-OO-S023	2
S024	F04	25/01/2011	Store medical gas cylinders	BDP-AR-SW-AOO-LP-OO-S024	4
S025	F04	25/01/2011	Store consumables	BDP-AR-SW-AOO-LP-OO-S025	4
S026	F02	25/03/2011	WC wheelchair Doc M	BDP-AR-SW-AOO-LP-OO-S026	4.5
S028	F03	01/10/2010	Shower room ambulant staff	BDP-AR-SW-AOO-LP-OO-S028	2.5
S029	F04	25/01/2011	Rest roof 8 staff	BDP-AR-SW-AOO-LP-OO-S029	14
S031	F03	01/10/2010	Locker bay 8 staff	BDP-AR-SW-AOO-LP-OO-S031	2
S044	F04	25/01/2011	Pantry cook chill; hot trolleys up to 32 person	BDP-AR-SW-AOO-LP-OO-S044	20
S045	F04	25/01/2011	Nappy change	BDP-AR-SW-AOO-LP-OO-S045	4
S054	F04	25/01/2011	Linen bay exchange trolley	BDP-AR-SW-AOO-LP-OO-S054	3
S061	F04	25/01/2011	Store medical equipment & supplies	BDP-AR-SW-AOO-LP-OO-S061	14
S063	F04	25/01/2011	Store equipment	BDP-AR-SW-AOO-LP-OO-S063	12
S064	F04	25/01/2011	Store medical equipment	BDP-AR-SW-AOO-LP-OO-S064	10
S065	F04	25/01/2011	Store equipment	BDP-AR-SW-AOO-LP-OO-S065	10
S068	F04	25/01/2011	Disposal hold	BDP-AR-SW-AOO-LP-OO-S068	6
S069	F04	25/01/2011	Disposal hold	BDP-AR-SW-AOO-LP-OO-S069	10
S078	F04	25/01/2011	Cleaners room	BDP-AR-SW-AOO-LP-OO-S078	9
S084	F04	25/01/2011	Beverage/snack prep room	BDP-AR-SW-AOO-LP-OO-S084	8
S086	F04	25/01/2011	Beverage/snack prep bay	BDP-AR-SW-AOO-LP-OO-S086	4
S087	F04	25/01/2011	Beverage/snack prep bay	BDP-AR-SW-AOO-LP-OO-S087	4
S095	F04	25/01/2011	Rest room 5 staff	BDP-AR-SW-AOO-LP-OO-S095	10

Ref	Rev	Date issued	Areas included	Drawing Ref	Scheduled m ²
S098	F04	25/01/2011	Rest room 12 staff	BDP-AR-SW-AOO-LP-OO-S098	20
S099	F04	25/01/2011	Rest room 20 & 25 staff	BDP-AR-SW-AOO-LP-OO-S099	30
S102	F02	01/10/2010	Staff changing room 40 places	BDP-AR-SW-AOO-LP-OO-S102	35
S103	F04	25/01/2011	Staff changing room 40 places	BDP-AR-SW-AOO-LP-OO-S103	30
S107	F04	25/01/2011	Infant feeding room	BDP-AR-SW-AOO-LP-OO-S107	8
S131	F04	25/01/2011	Staff sanitary facility wc/shower	BDP-AR-SW-AOO-LP-OO-S131	10
S133	F04	25/01/2011	Day overnight room – single (relatives)	BDP-AR-SW-AOO-LP-OO-S133	11
S134	F04	25/01/2011	Shower/wc + wash ambulant ensuite	BDP-AR-SW-AOO-LP-OO-S134	4.5
S135	F04	25/01/2011	Pantry cook chill, hot trolleys up to 24 persons	BDP-AR-SW-AOO-LP-OO-S135	15
S136	F04	25/01/2011	Pantry cook chill, hot trolleys up to 80 persons	BDP-AR-SW-AOO-LP-OO-S136	30
S137	F04	25/01/2011	Disposal Hold	BDP-AR-SW-AOO-LP-OO-S137	20
S138	F04	25/01/2011	Disposal Hold	BDP-AR-SW-AOO-LP-OO-S138	20
S139	F04	25/01/2011	Linen store	BDP-AR-SW-AOO-LP-OO-S139	6
S140	F04	25/01/2011	Clinical equipment store	BDP-AR-SW-AOO-LP-OO-S140	60
S141	F04	25/01/2011	Bulk supplies medical & surgical store	BDP-AR-SW-AOO-LP-OO-S141	45
S142	F02	01/10/2010	Staff change room 22 places	BDP-AR-SW-AOO-LP-OO-S142	25
S143	F02	01/10/2010	Staff change room 60 places	BDP-AR-SW-AOO-LP-OO-S143	45
S144	F02	01/10/2010	Staff change room 66 places	BDP-AR-SW-AOO-LP-OO-S144	50
S145	F04	25/01/2011	Staff change room 18 places	BDP-AR-SW-AOO-LP-OO-S145	20
S146	F02	01/10/2010	Staff change room 8 places	BDP-AR-SW-AOO-LP-OO-S146	4.5
S147	F02	01/10/2010	Rest room 16 staff	BDP-AR-SW-AOO-LP-OO-S147	24
S148	F04	25/01/2011	Rest room 36 staff	BDP-AR-SW-AOO-LP-OO-S148	50
S149	F04	25/01/2011	Rest room 12 staff	BDP-AR-SW-AOO-LP-OO-S149	19
S150	F04	25/01/2011	Rest room 16 staff + lockers	BDP-AR-SW-AOO-LP-OO-S150	26
S151	F04	25/01/2011	Rest room 38 staff	BDP-AR-SW-AOO-LP-OO-S151	54
S152	F04	25/01/2011	Rest room 16 staff	BDP-AR-SW-AOO-LP-OO-S152	24
S153	F04	25/01/2011	Rest room 10 staff	BDP-AR-SW-AOO-LP-OO-S153	19
S154	F04	25/01/2011	Rest room 20 staff	BDP-AR-SW-AOO-LP-OO-S154	29
S155	F04	25/01/2011	WC ambulant staff	BDP-AR-SW-AOO-LP-OO-S155	2.5

Office Batch (33 Standard Rooms)

Ref	Rev	Date issued	Areas included	Drawing Ref	Scheduled m ²
S005	F05	08/02/2011	Group room 28 people inc. wheelchair	BDP-AR-SW-AOO-LP-OO-S005	40
S006	F04	08/02/2011	Office 12 staff	BDP-AR-SW-AOO-LP-OO-S006	60
S008	F04	08/02/2011	Office 1 staff	BDP-AR-SW-AOO-LP-OO-S008	9
S009	F04	08/02/2011	Office 6 staff	BDP-AR-SW-AOO-LP-OO-S009	36
S010	F04	08/02/2011	Office 6 staff – Hot desk	BDP-AR-SW-AOO-LP-OO-S010	30
S012	F04	08/02/2011	Office open plan 1 space	BDP-AR-SW-AOO-LP-OO-S012	5
S019	F04	08/02/2011	Office 10 staff	BDP-AR-SW-AOO-LP-OO-S019	60
S030	F04	08/02/2011	Office 2 staff	BDP-AR-SW-AOO-LP-OO-S030	12
S041	F04	08/02/2011	Office 3 staff	BDP-AR-SW-AOO-LP-OO-S041	18
S042	F04	08/02/2011	Quiet work space	BDP-AR-SW-AOO-LP-OO-S042	6
S043	F04	08/02/2011	Printer copier room	BDP-AR-SW-AOO-LP-OO-S043	6
S046	F04	08/02/2011	Interview meeting room 6 persons	BDP-AR-SW-AOO-LP-OO-S046	9
S047	F05	08/02/2011	Group room 36 people inc. wheelchair	BDP-AR-SW-AOO-LP-OO-S047	50
S048	F04	08/02/2011	Group room 20 people inc. wheelchair	BDP-AR-SW-AOO-LP-OO-S048	30
S051	F05	08/02/2011	Group room 9 people inc. wheelchair	BDP-AR-SW-AOO-LP-OO-S051	15
S052	F04	08/02/2011	Office 3 staff Hot Desks	BDP-AR-SW-AOO-LP-OO-S052	15
S053	F04	08/02/2011	Meeting room 8 persons	BDP-AR-SW-AOO-LP-OO-S053	12
S056	F04	08/02/2011	Interview room 4 places inc. wheelchair	BDP-AR-SW-AOO-LP-OO-S056	8
S074	F04	08/02/2011	Office 4 staff	BDP-AR-SW-AOO-LP-OO-S074	24
S083	F04	08/02/2011	Break out space	BDP-AR-SW-AOO-LP-OO-S083	6
S085	F04	08/02/2011	Office 4 staff Hot Desks	BDP-AR-SW-AOO-LP-OO-S085	20
S089	F04	08/02/2011	Office 1 staff + meeting table	BDP-AR-SW-AOO-LP-OO-S089	12
S096	F04	08/02/2011	Office 5 staff	BDP-AR-SW-AOO-LP-OO-S096	30
S104	F05	08/02/2011	Group room 40 people (inc. wheelchair)	BDP-AR-SW-AOO-LP-OO-S104	60
S106	F04	08/02/2011	Office 7 staff	BDP-AR-SW-AOO-LP-OO-S106	42
S117	F03	04/10/2010	Office 3 staff Hot Desks	BDP-AR-SW-AOO-LP-OO-S117	16
S118	F03	04/10/2010	Office 3 staff Hot Desks	BDP-AR-SW-AOO-LP-OO-S118	17
S120	F04	08/02/2011	Office 4 staff Hot Desks	BDP-AR-SW-AOO-LP-OO-S120	20
S121	F04	08/02/2011	Office 5 staff Hot Desks	BDP-AR-SW-AOO-LP-OO-S121	25
S123	F04	08/02/2011	Office – Open Plan space 1 staff	BDP-AR-SW-AOO-LP-OO-S123	6
S124	F05	08/02/2011	Group room 9 inc. 1 wheelchair	BDP-AR-SW-AOO-LP-OO-S124	15
S125	F03	15/10/2010	Store Records	BDP-AR-SW-AOO-LP-OO-S125	6
S126	F04	08/02/2011	Store Records	BDP-AR-SW-AOO-LP-OO-S126	4

Ward Batch (33 Standard Rooms)

Ref	Rev	Date issued	Areas included	Drawing Ref	Scheduled m ²
S003	F04	15/02/2011	Isolation Single Room Critical Care	BDP-AR-SW-AOO-LP-OO-S003	26
S016	F04	15/02/2011	Waiting area 10 person	BDP-AR-SW-AOO-LP-OO-S016	10
S022	F04	15/02/2011	Treatment room	BDP-AR-SW-AOO-LP-OO-S022	16
S032	F04	15/02/2011	Staff base touch down	BDP-AR-SW-AOO-LP-OO-S032	3
S033	F04	15/02/2011	Staff communication base 3 staff	BDP-AR-SW-AOO-LP-OO-S033	8
S034	F04	15/02/2011	Sitting dining room	BDP-AR-SW-AOO-LP-OO-S034	18
S035	F04	15/02/2011	Isolation single bed CIS negative pressure	BDP-AR-SW-AOO-LP-OO-S035	19
S036	F04	15/02/2011	Single bedroom	BDP-AR-SW-AOO-LP-OO-S036	19
S038	F04	15/02/2011	Resus trolley bay	BDP-AR-SW-AOO-LP-OO-S038	2
S055	F04	15/02/2011	Interview room	BDP-AR-SW-AOO-LP-OO-S055	9
S058	F04	15/02/2011	X-ray parking bay	BDP-AR-SW-AOO-LP-OO-S058	4
S059	F04	15/02/2011	Bay hoists	BDP-AR-SW-AOO-LP-OO-S059	4
S060	F04	15/02/2011	Lobby isolation single bedroom	BDP-AR-SW-AOO-LP-OO-S063	6
S062	F04	15/02/2011	Multi-bedroom	BDP-AR-SW-AOO-LP-OO-S062	72
S066	F04	15/02/2011	Shower Room – assisted	BDP-AR-SW-AOO-LP-OO-S066	7.5
S067	F04	15/02/2011	Shower Room – ensuite chamfered	BDP-AR-SW-AOO-LP-OO-S067	4.5
S070	F04	15/02/2011	Dirty utility_9m	BDP-AR-SW-AOO-LP-OO-S070	9
S071	F04	15/02/2011	Dirty utility_6m	BDP-AR-SW-AOO-LP-OO-S071	6
S072	F04	15/02/2011	Dirty Utility_12m	BDP-AR-SW-AOO-LP-OO-S072	12
S076	F04	15/02/2011	Commode Wash	BDP-AR-SW-AOO-LP-OO-S076	9
S079	F04	15/02/2011	Clean Utility_6m	BDP-AR-SW-AOO-LP-OO-S079	6
S080	F04	15/02/2011	Clean Utility_12m	BDP-AR-SW-AOO-LP-OO-S080	12
S081	F04	15/02/2011	Clean Utility / Preparation Room	BDP-AR-SW-AOO-LP-OO-S081	18
S082	F04	15/02/2011	Store – sterile supplies	BDP-AR-SW-AOO-LP-OO-S082	16
S088	F04	15/02/2011	Bathroom assisted	BDP-AR-SW-AOO-LP-OO-S088	14
S108	F04	15/02/2011	Staff Base - Critical Care	BDP-AR-SW-AOO-LP-OO-S108	15
S109	F04	15/02/2011	Assisted Shower room (Critical Care)	BDP-AR-SW-AOO-LP-OO-S109	14
S110	F04	15/02/2011	WC assisted	BDP-AR-SW-AOO-LP-OO-S110	
S111	F02	17/09/2010	Multi-bed Room – 4 beds (AMU)	BDP-AR-SW-AOO-LP-OO-S111	63
S112	F04	15/02/2011	Multi-bed Room- 4 beds (Critical Care)	BDP-AR-SW-AOO-LP-OO-S112	110
S113	F04	15/02/2011	Clean Utility_18m (Critical Care)	BDP-AR-SW-AOO-LP-OO-S113	18
S114	F04	15/02/2011	Patient Hygiene Trolley Store	BDP-AR-SW-AOO-LP-OO-S114	9
S115	F04	15/02/2011	Near patient testing	BDP-AR-SW-AOO-LP-OO-S115	3

Summary

Summary Points

1. The design brief for the preferred option selected at OBC intends to respond to the challenges and opportunities set out in the Strategic Case. The design solution reflects key priorities for the redevelopment, set out below.
2. A robust and detailed health planning process has driven the design, informed by national guidance and best practice, external expertise, extensive consultation and a dedicated in-house team. The clinical and non-clinical adjacencies and relationships to the retained estate are designed to deliver a model of care which optimises patient safety and quality, as well as improving patient experience. Details of the adjacency reviews and underlying rationale are described in full.
3. Safety and quality is a critical driver for the scheme, as reflected in the evidence-based approach to design choices which has been adopted by the Trust. Clinical staff have been highly involved in the design process to ensure the redevelopment delivers a step-change in Infection Prevention and Control and privacy and dignity for our patients.
4. The building design has also been shaped by a well-considered Design Philosophy, which seeks to enable a positive, healing environment for patients and carers as well as a highly-functional building. This includes investment in an integrated Public Arts Strategy and a patient-centred Interior and Landscape Design strategy. The quality of the design has been measured in several ways, including AEDET, ASPECT, External Design Review and a Health Impact Assessment.
5. Full Planning Consent has been granted for the scheme. The Planning Conditions and S106 agreement are set out in the chapter.