3Ts
Hospital Redevelopment
Teaching • Trauma • Tertiary care

Brighton and Sussex NHS
University Hospitals

3Ts Hospital Redevelopment Programme
Full Business Case
Executive Summary

February 2016

brighton and sussex
medical school

NHS
Health Education Kent, Surrey and Sussex

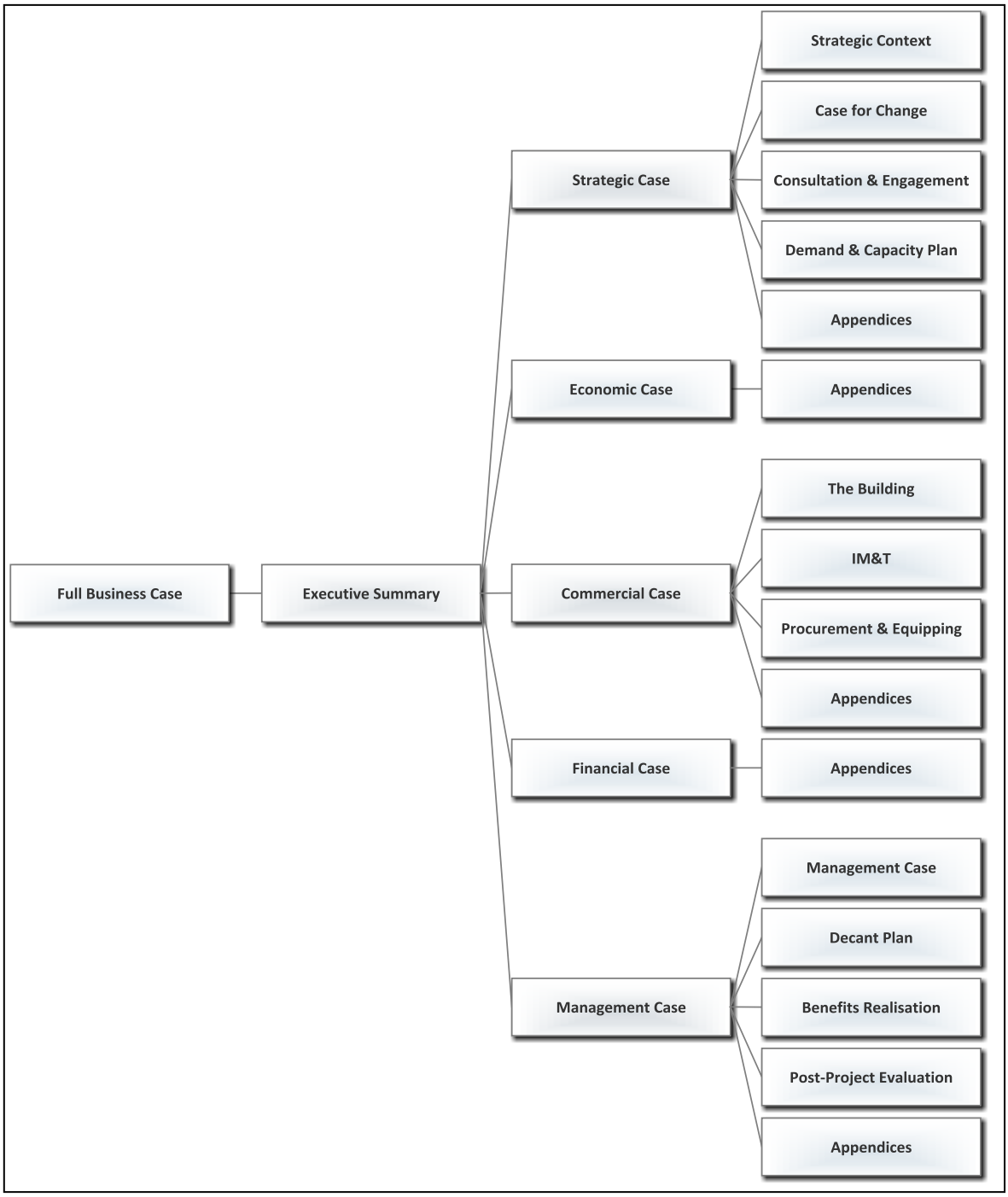
Contents

Please note: Any items referenced as appendices in the Executive Summary are appended to the Main Case documents and not the Executive Summary itself.

Five Case Model Structure

1. The Full Business Case (FBC) has been structured according to the 'Five Case Model' (per HM Treasury *Green Book*[1]). It also reflects NHS Trust Development Authority (TDA) and NHS England (NHSE) Project Appraisal Unit business case guidance[2,3]. For practical reasons (file size etc.), some chapters have been split into sections – the structure is shown below.

Figure 1 – FBC Structure



1 HM Treasury (2013) *Public Sector Business Cases Using the Five Case Model: Green Book Supplementary Guidance on Delivering Public Value from Spending Proposals*

2 NHS Trust Development Authority (June 2014) *Capital Regime and Investment Business Case Approvals: Guidance for NHS Trusts*

3 NHS England Project Appraisal Unit (November 2013) *Five Case Model Consolidated Business Case Checklist*

Business Case History

Table 1 – Business Case History of Approvals

Date	Body	Status	Evidence
Strategic Outline Case			
3rd June 2008	BSUH Board of Directors	Approval	Minutes
8th July 2008	South East Coast Strategic Health Authority	Approval	Letter
Outline Business Case			
1st June 2009	Central Sussex Independent Patients' Forum	Support	Letter
30th June 2009	BSUH Board of Directors	Approval	Minutes
10th July 2009	Brighton & Hove City Council	Support – Planning Consent Process	Letter
17th November 2009	South East Coast Strategic Health Authority	Approval	Minutes
13th January 2011	Kent, Surrey & Sussex Deanery	Support	Letter
17th January 2011	South East Coast Ambulance Service	Support	Letter
19th January 2011	Brighton & Sussex Medical School	Support	Letter
4th March 2011	Sussex PCT Cluster (NHS Sussex)	Support	Letter
13th June 2011	South East Coast Specialised Commissioning Group	Support	Letter
28th June 2011	Sussex Managed Clinical Networks	Support	Letter
25th July 2011	NHS Sussex	Approval	Letter
2nd August 2011	Mid Sussex CCG	Approval	Letter
30th October 2011	Central Sussex Independent Patients' Forum	Support	E-mail
8th February 2012	Brighton & Hove Local Involvement Network (LINk)	Support	E-mail
27th February 2012	BSUH Board of Directors	Approval	Minutes
27th March 2012	East Sussex Local LINk	Support	E-mail
27th March 2012	NHS Sussex	Approval	Letter
29th March 2012	NHS South of England (Strategic Health Authority Cluster)	Approval	Letter
1st May 2014	HM Treasury	Approval	Letter
9th June 2014	Department of Health	Approval	Letter
Decant Schemes			
22nd November 2012	St Mary's Full Business Case: NHS South East Coast	Approval	Letter
3rd January 2013	Front Car Park, Courtyard and Paediatric Audiology Full Business Case : NHS South of England	Approval	Letter
Full Business Case			
25h September 2014	Brighton & Hove Health and Wellbeing Board	Support	Minutes
17th October 2014	BSUH 3Ts Programme Board	Approval	Minutes
19th January 2015	BSUH Board of Directors	Approval	Minutes
21st October 2014	Healthwatch (Brighton & Hove, East Sussex, West Sussex, Surrey, Kent)	Support	Letter
9th September 2014	Health Education Kent, Surrey and Sussex	Support	Letter
22nd July 2015	Trust Development Authority	Approval	Letter
02nd December 2015	HM Treasury	Approval	Letter

Investment Objectives & Case for Change

Table 2 – Investment Objectives and Summary Case for Change

Investment Objective	Principal Services	Case for Change
1. Replace the Barry Building (1828) and Jubilee Wing (1887) with modern, fit for purpose accommodation.	- Clinical Infection Service (HIV, Infectious Diseases): inpatient ward and Outpatient facilities - Dementia Care - Elderly & Medicine inpatient wards - Stroke Unit - Medical Day Unit - Imaging & Nuclear Medicine - Outpatient and other ambulatory care facilities	• The Barry Building opened in 1828, nearly 20 years before Florence Nightingale started nursing. In 2015 it will be the oldest building in the NHS still in use for clinical services. • The recent Care Quality Commission and PLACE (Patient-Led Assessments of the Care Environment) inspections highlight the impact that continuing to operate from such cramped, outdated, functionally unsuitable estate is having on patient privacy, dignity, experience, on the quality and safety of care, and on staff's working environment.
2. Transfer the Regional Centre for Neurosciences from Hurstwood Park (Princess Royal Hospital) to the Royal Sussex County Hospital site.	- Neuro-Critical Care Unit - Neuro-Imaging - Neurology ward - Neurology Planned Investigation Unit (PIU) - Neurosurgery (Wards, Theatres) - Outpatients and other clinical support	The Hurstwood Park building (Regional Centre for Neurosciences) opened in 1938. It is: • too small (c. 30% of Sussex residents referred for neurosurgery have to attend centres outside the county); • functionally unsuitable (cf. the recent Care Quality Commission inspection report); and • is on the wrong site – it needs to be co-located with the Major Trauma Centre at Brighton campus (in line with NHS England commissioning requirements).
3. Replace the Sussex Cancer Centre with a larger, integrated facility to meet the growth in population/demand.	- Integrated Chemotherapy Daycase Unit - Oncology & Haematology Inpatient wards - Radiotherapy (Linear Accelerators,	The Sussex Cancer Centre needs to expand to keep pace with projected increases in demographics, morbidity and uptake of services. The location and configuration of the building mean that expansion in situ is not operationally viable and would provide poorer value-for-money over replacement.

Investment Objective	Principal Services	Case for Change
	Brachytherapy)	
	- Support accommodation, incl. Aseptic Suite, Medical Physics	
4. Provide bespoke clinical facilities to complete the Major Trauma Centre development.	- Helideck	• The Major Trauma Centre at the Royal Sussex County Hospital went live in April 2012, using temporary accommodation. In line with NHS England commissioning requirements, and the terms of the Centre's authorisation, the redevelopment will replace this with bespoke estate. • This also supports the Trust's ambition to be a Major Emergency Centre.
	- Major Trauma theatre and Interventional Radiology	
	- Critical Care Unit	
5. Enhance facilities for teaching, training and Research & Development, in partnership with the Brighton & Sussex Medical School; the Universities of Brighton and Sussex; and Health Education Kent, Surrey & Sussex.	- Brighton & Sussex Medical School Centre for Innovative Therapies (laboratory space)	• The Trust is the university Teaching Hospital for the region but lacks appropriate teaching and Research & Development facilities/capacity. • The cramped clinical environment also means that teaching risks compromising patient privacy and dignity (eg. visual and auditory privacy).
	- NIHR Clinical Research Facility	
	- Simulation Suite	
	- High-Fidelity Surgical Skills Lab	
	- Meeting & Teaching suite	

Summary of Strategic Alignment

Table 3 – Summary of Strategic Alignment between Investment Objectives and Policy/Strategy

3Ts Investment Objective	NHS Outcomes Frameworks	Putting Patients First 2014-2017	The Mandate 2014/15	NHS Constitution	Other National Policy	Contract/Registration Requirement	Monitor's Strategy 2014-17
Barry Building Replacement							
• Elderly Care	✓	✓	✓	✓	✓		
• Acute Brain Injury	✓	✓			✓		
• Clinical Infection *	✓	✓			✓		
Neurosciences	✓	✓				✓	
Cancer	✓	✓			✓	✓	
Major Trauma & Critical Care	✓	✓			✓	✓	✓
Teaching & Research							
Teaching & Research				✓			
Wider Benefits	✓				✓		

** Also specialist/tertiary service.*

Executive Summary

Introduction

2. This Full Business Case (FBC) seeks approval for Brighton & Sussex University Hospitals NHS Trust (BSUH, or the Trust) to invest £486m in the redevelopment of the Royal Sussex County Hospital using public funding. This is culmination of almost seven years of planning and preparation and represents a generational opportunity to provide enhanced services and facilities for the people of Brighton & Hove, Sussex and beyond.

3. It represents the opportunity to improve local services for local people and for those, both local and across Sussex, who require access to more specialised services – many of whom travel into London or other centres outside Sussex for their care.

Strategic Case

Strategic Context

4. The five Investment Objectives (set out above) remain unchanged from Outline Business Case (OBC) stage.

5. The 3Ts redevelopment remains a critical part of the Trust's strategic vision. It is aligned with:

   - the Trust Clinical Strategy and Integrated Business Plan (both appended);
   - NHS, Public Health and Health Education England Outcomes Frameworks (read-across is shown in the Management Case); and
   - national, regional and local policy and strategy priorities, including the Joint Strategic Needs Assessments/Health & Wellbeing Strategies, QIPP (Quality, Innovation, Productivity & Prevention), single-sex accommodation, patient choice, Fundamental Standards of Care and Emergency Preparedness, Resilience & Response (EPRR). (These are described in the Strategic Case).

6. The Full Business Case (FBC) has been approved by the Trust Board of Directors and principal Clinical Commissioning Groups. It has been endorsed by the Brighton & Hove Health & Wellbeing Board and a range of other stakeholders, including patient groups, Brighton & Sussex Medical School and partner NHS organisations. (Letters of support and other supporting evidence are appended).

Case for Change

7. The Case for Change (summarised above) remains unchanged from OBC stage, although the urgency of the need for investment has only increased in the intervening years. There are significant patient experience, quality and safety, commissioning and other regulatory issues arising from having to continue to provide services from such aged, cramped and functionally unsuitable estate.

8. The most urgent issues (eg. preventing the closure of the Nuclear Medicine service by transferring it into more suitable accommodation) will be addressed as part of the decent programme of works, however other issues will remain until each stage of 3Ts is complete.

Consultation & Engagement

9. The redevelopment has a large number and wide variety of stakeholders, including:
   - patients, carers and their representatives, in how the design will benefit them and accords with their wishes;
   - Trust clinicians/frontline staff who have been engaged fully in the design of the scheme and are fully engaged in the assessment of quality, safety and infection control aspects also;
   - local residents, members of the public, community groups and public representatives (Local Councillors, MPs etc.) and how this will impact on their lives;
   - local and national special interest groups (eg. architecture, heritage, design); and
   - other health and social care partners, including commissioners (Clinical Commissioning Groups, NHS England) and how its meets their intentions and planning imperatives.

10. Stakeholder engagement is a high priority. Over 700 queries, suggestions and ideas have been logged – this provides an audit trail to demonstrate that all suggestions are formally considered and that many have impacted planning and design. Key statistics on the engagement programme to date:-
    - 131 face-to-face events;
    - more than 7,000 direct interactions with members of the public;
    - more than 75 articles, adverts and broadcast pieces in local and regional media;
    - over 140,000 hits on the 3Ts Facebook page;
    - in excess of 84,000 hardcopy flyers mail-dropped locally;
    - more than 1,400 individuals and groups/businesses have asked to be kept up-to-date through regular mailings;
    - the Hospital Liaison Group (for local resident) has met 26 times since 2009; and
    - the 3Ts Patient & Public Design Panel met 29 times since 2010.

11. In addition to the general communications and engagement programme with staff, to date there have been over 90 design meetings, involving more than 200 staff from all disciplines. It is estimated that once the 1:50 designs are completed, the team will have met with clinical representatives 880 times and spent 400 hours in design meetings.

12. The programme has invested in engaging traditionally under-represented/harder-to-reach communities, including Black & Minority Ethnic (BME) and Lesbian, Gay, Bisexual & Transgender (LBTG) groups. This work has been undertaken with the Trust Head of Equality & Human Rights (letter of support appended) and Brighton & Hove City Council's Engagement Team. An independent Equality Impact ('Due Regard') Assessment has been undertaken, which concluded that the Trust 'is undertaking proper action as regards the proposals for the 3Ts development in line the Equality Act 2010.'

13. Only one of the investment objectives (transferring Hurstwood Park to the Brighton campus) potentially constitutes 'service change'; this has been extensively consulted on through a series of reviews since 1996. The Trust believes that all the investment objectives meet the 'four tests' for service change:
    - support for proposals from clinical commissioners;
    - clear clinical evidence base;
    - consistency with current and prospective need for patient choice; and
    - strong public and patient engagement.

Demand & Capacity Planning

14. Modelling for 3Ts is fully aligned within the Trust (eg. with the Long-Term Financial Model, Clinical Strategy, Integrated Business Plan, associated business cases) and with commissioners' planning (eg. demographic, prevalence and service uptake changes, demand management/Better Care Fund). Although the Trust's Long-Term Financial Model plans to 2023/24, modelling for 3Ts has been undertaken to 2027/28 (ie. five years after the completion of the scheme), in line with national guidance. Activity, income, Trust performance/efficiency assumptions and capacity planning are also fully aligned.

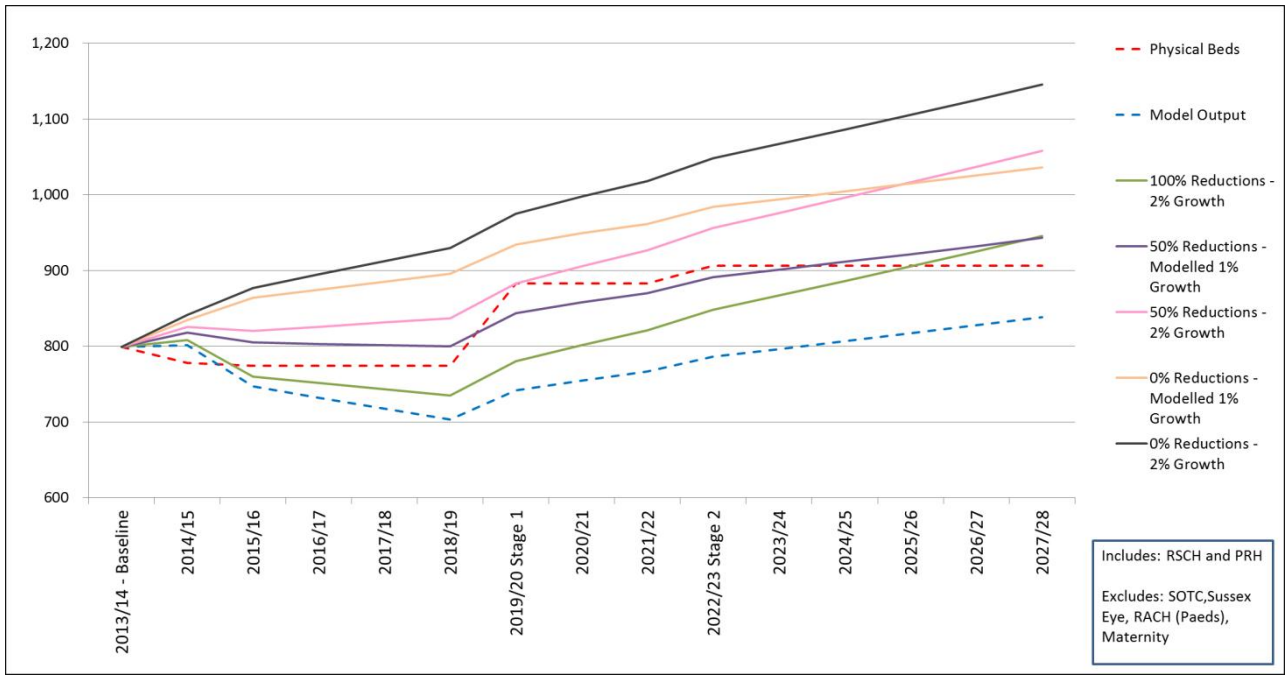
15. The net impact of modelling demand from growth, service developments, occupancy assumptions and winter/decant capacity, less the impact of demand management and Trust efficiencies, is an increase of 46 beds across the Trust by 2022/23. This demand increase is 46 beds higher than at OBC. This is shown in the table below.

Table 4 – Inpatient Demand & Capacity: OBC vs FBC

	OBC				FBC			
Site	**In-Patient Bed Demand 2012 13**	**Inpatient Bed Demand 2021/22**	**Physical Beds at 2021/22**	**Unallocated**	**In-Patient Bed Demand 2013 14**	**In-Patient Bed Demand 2022/23**	**Physical Beds at 2022/23**	**Unallocated**
	Baseline	**Stage 2**			**Baseline**	**Stage 2**		
Brighton - RSCH 3T Specialties & Neurosciences	313	296	351	55	298	333	361	28
Brighton - RSCH Rest of Site	262	246	283	37	268	242	293	51
Requirement for space to accommodate seasonal variation/temporary decant		*30*				*30*		
Subtotal RSCH & 3T Specialties	**575**	**572**	**634**	**62**	**566**	**605**	**654**	**49**
Haywards Heath – PRH	246	218	248	0	233	210	252	
Requirement for space to accommodate seasonal variation/temporary decant		*30*				*30*		
Subtotal PRH	**246**	**248**	**248**		**233**	**240**	**252**	**12**
Total Main Sites	**821**	**821**	**882**	**61**	**799**	**845**	**906**	**61**
Excluded from summaries on the basis that beds are ring fenced or Other Sites:								
Haywards Heath – SOTC (total 36 beds max capacity)	22		36		15		36	
Sussex Eye Hospital	3		3		3		3	
Maternity – PRH	38		38		38		38	
Maternity – RSCH	69		69		69		69	
Children's Hospital (RAH) – RSCH	35		36		41		60	
Total	**167**		**182**		**166**		**206**	
All Beds	**988**		**1064**		**965**		**1116**	

16. Scenarios/sensitivities have been undertaken to assess the impact of both over-achieving and under-achieving against ambitious Local Health Economy utilisation targets. This suggests that the inpatient capacity being built in 3Ts continues to represent reasonable planning assumptions. The Trust has developed, at high level, mitigation strategies in the event that there is too much, or too little, capacity. This is illustrated in the schematic below.

Figure 2 – Sensitivity Analysis (Demand for Inpatient Beds)



17. The diagram above illustrates that there is a high degree of sensitivity with regards to the assumptions made in the case. This Full Business Case takes a pragmatic approach to these and ensures that there is sufficient flexibility available as any scenario unfolds over time:
    - For scenarios that envisage a lower level of activity than the base case, the Trust would seek to reduce its available estate into the new 3Ts facilities;
    - For scenarios which envisage a higher level of activity than the base case, the Trust has flexibility up to a certain point, and then would need to consider the scope and functional content of Stage 2 of the development to assist in that.

Economic Case

18. The preferred option remains to redevelop the RSCH site as set out in the FBC (Option 1 in the OBC), as outlined above. The preferred funding route remains public funding since this represents, in the round, better value for money than a Privately Funded (PFI/PF2) alternative.

Table 5 – Preferred Option vs PFI

Option Appraisal Measure	Preferred Option	PFI (Partial)
Risk Adjusted NPC	17,775	17,747
Rank	**2**	**1**
Monetised Benefits NPV	-12,804	-12,474
Rank	**1**	**2**
Total NPC / (NPV)	4,971	5,273
Rank	**1**	**2**
Equivalent Annual Cost	645.9	639.9
Rank	**2**	**1**
Monetised Benefits EAV	-465.3	-449.8
Rank	**1**	**2**
Total EAC / (EAV)	180.6	190.1
Rank	**1**	**2**

19. Affordability remains the issue for the PFI route since the Unitary payment would need to be funded by either an increase in Surplus from operations (eg. more income or more CIPs), or from limited Capital resources, which would have an adverse effect on the safe delivery of services.

20. The delivery of benefits to the same timetable is again the issue for the PFI route – it has been estimated that even using the optimistic timescales promulgated for the application of PF2, there would still remain almost a two year difference in the delivery of the PF2 option. The preferred option is therefore to procure through a public funded route and (per approved OBC, version 17 dated January 2012) the preferred funding route remains 100% Public Dividend Capital.

21. When the assessment of non-financial benefits is considered, the Preferred Option continues to deliver greater benefits over the period, with PFI being two years behind in delivery of benefits. The Preferred Option therefore ranked higher than PFI.

22. These non-financial benefits also express the wider economic value of the development – through improved outcomes for patients and the benefits to the economy of the investment. The Trust's overall assessment is that the ratio of benefits to cost is 13:1, which comfortably exceeds the HM Treasury test of 4:1. As the table below illustrates, the assessment of benefits, which is strongly evidence-based and has been validated through discussions with clinicians, would have to be reduced by over 70% to fall below the 4:1 threshold. The outcome of this analysis can therefore considered robust.

Table 6 – Overall Benefits to Cost Ratios and Sensitivity

QALY valued Benefit	Calculations Explained	Base Case	Sensitivity : QALY benefit (drivers/events) reduced by :					
			20%	40%	50%	70%	80%	100%
Mortality rates for trauma & 3Ts specialties	A	-2,369	-1,895	-1,422	-1,185	-592	-474	0
Improved long term outcomes - stroke	B	-2,825	-2,260	-1,695	-1,412	-706	-565	0
Access to diagnostics 24/7	C	-1,914	-1,531	-1,148	-957	-478	-383	0
Improved access and clinical outcomes - trauma	D	-2,369	-1,895	-1,422	-1,185	-592	-474	0
Mortality rates for non 3Ts specialties	E	-2,278	-1,823	-1,367	-1,139	-570	-456	0
Total NPV	**F = Sum of A to E**	**-11,755**	**-9,404**	**-7,053**	**-5,878**	**-2,939**	**-2,351**	**0**
Other Benefits NPV	G	-1,049	-1,049	-1,049	-1,049	-1,049	-1,049	-1,049
Total NPV (Incremental Benefits)	**H = F+G**	**-12,804**	**-10,453**	**-8,102**	**-6,927**	**-3,988**	**-3,400**	**-1,049**
GEM NPC	I	17,775	17,775	17,775	17,775	17,775	17,775	17,775
Deduct NPC of existing costs	J	16,791	16,791	16,791	16,791	16,791	16,791	16,791
NPC of Relevant Costs	**K = I - J**	**984**	**984**	**984**	**984**	**984**	**984**	**984**
Incremental Benefits / Relevant Costs - should be > 4x	**H / K**	**13.0x**	**10.6x**	**8.2x**	**7.0x**	**4.1x**	**3.5x**	**1.1x**

Commercial Case

The Building

23. The design brief for the preferred option selected at OBC responds to the challenges and opportunities set out in the Strategic Case. The design solution reflects key priorities for the redevelopment, set out below.

24. 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 that optimises patient safety and quality, as well as improving patient experience and unifying the estate. Details of the adjacency reviews and underlying rationale are described in full within the FBC.

25. Safety and quality is a critical driver for the scheme, as reflected in the evidence-based approach to design choices adopted by the Trust. Clinical staff at all levels and in all relevant disciplines have been highly involved in the design process to ensure the redevelopment delivers a step-change in Infection Prevention & Control, privacy and dignity for patients.

26. 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 & 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.

27. Full Planning Consent has been granted for the scheme. The Planning Conditions and S106 agreement are set out in the relevant chapter.

Procurement & Equipping

28. The Commercial Case of the FBC details the delivery of the procurement and logistics of the Construction, Equipping and Services requirements to fully equip the 3Ts redevelopment. It clearly details the Trust's chosen method of procurement (ProCure 21) to select its Principal Supply Chain Partner (PSCP) and the process followed to select the service.

29. The Trust has produced its construction Procurement Strategy in partnership with Turner & Townsend PLC (its Independent Cost Consultant and Quantity Surveyors) and Laing O'Rourke (PSCP) to ensure that the investment represents good value for money for the public purse and is in accordance with national best practice.

30. This FBC, as part of the overall capital cost, seeks £31m to invest in new equipment for the project. The remainder will be funded from the Trust's operational capital programme and the transfer of existing equipment into the new facilities.

Legal & Commercial Issues

31. Legal advice provides assurance that the continued use of the P21 framework complies with procurement law, although the framework has since been replaced by ProCure21+ (P21+) and the Trust's PSCP is not on the P21+ framework. In this context, phases 2 to 4 of the contract are considered a single call-off contract, which can legitimately be continued beyond the expiration of the P21 framework.

32. Legal advice is that the introduction of new contractual terms, which modify the standard contract at Phase 4 by way of a Supplemental Agreement, would not amount to a material change to the original contractual arrangement (such that an OJEU complaint procurement exercise is required). The choice of procurement route also complies with the Public Contracts Regulations 2006.

33. The standard form of contract allows for a fixed construction price of two years: given that this is a nine year programme, there is the issue of how the risk of construction inflation over this period is managed to best protect the Trust. This is currently being developed and will be finalised before contract signature.

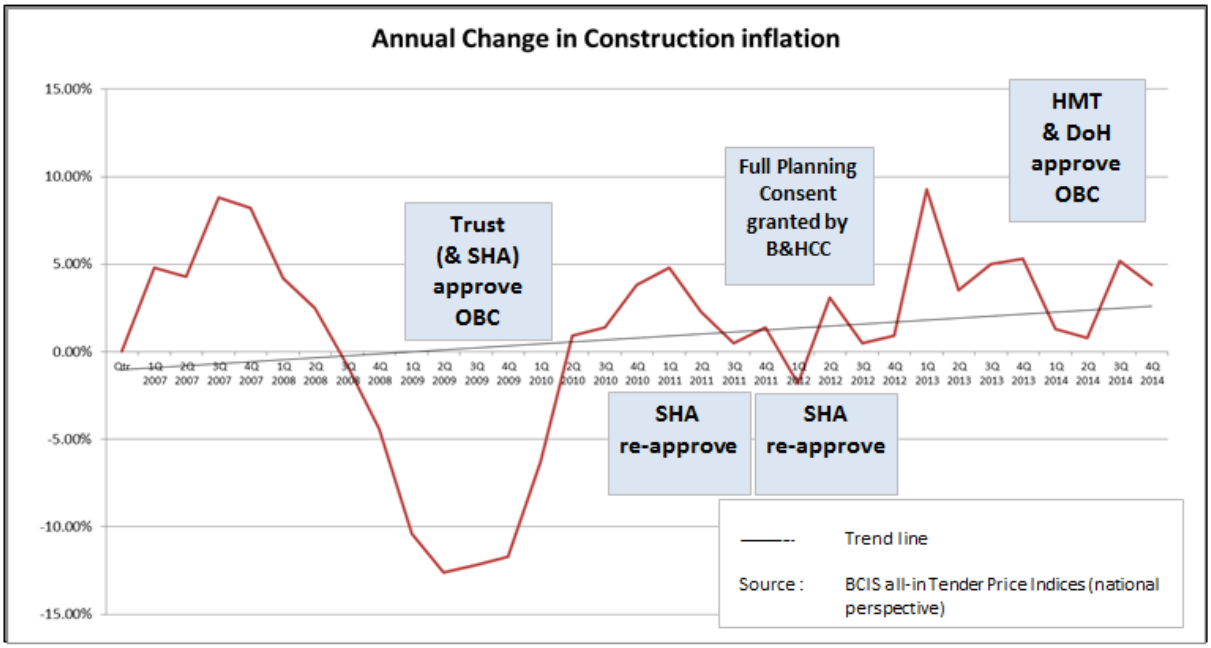
Planning Approval & Conditions

34. Planning approval for 3Ts was granted on 28th March 2012. This approval was validated following the expiry of the potential judicial review period on 20th June 2012. The approval expires five years from the date of the Committee (28th March 2017). The costs of all planning conditions are encompassed in the capital costs of the scheme.

Financial Case

35. The increase in capital costs against the financial envelope set at OBC stage in 2009/10 reflects the increase in general construction prices and the upward trend for Construction Inflation indices rather than a change in the scope of the 3Ts development.

Figure 3 - Construction Inflation Over Time



36. The Capital Cost, which has been rigorously market tested, has determined a Target Cost of £484.8m. This compares with a potential cost of £516.3m if the relevant index uplifts were applied.

37. The benefit of increased impairments (ie. the assessed value of the building in use versus the actual expenditure on the building) protects the revenue position but still increases the Capital Charges and CIPs requirement in advance of the building's opening (over and above those which would be required if the development did not proceed).

Table 7 – Comparison of Capital Costs

	OBC (Pubsec 173)	OBC (Pubsec 202)	FBC Contract Cost
Works	207,665	265,351	291,075
Fees	40,182	51,345	55,614
Non Works	28,102	29,248	28,102
Equipment	29,700	31,694	27,629
Contingencies	17,650	22,555	15,313
Optimism Bias	6,852	5,399	0
Inflation adjustments	28,752	35,298	4,725
Sub-Total	358,903	440,890	422,458
VAT	61,210	75,375	62,329
TOTALS	**420,113**	**516,265**	**484,787**

Note – All figures in £000s

38. The following table shows by Stage of development the annual cashflows of the scheme assuming Public Dividend Capital. If further borrowings above the Tier 1 level were levied on Trust, additional approvals and assurances would change this cashflow profile. The Trust's preferred option is to fund the scheme by 100% Public Dividend Capital (PDC) per the approved OBC and as demonstrated by the financial analysis in the Financial Case. The Trust's borrowing limit as it currently stands wopuld not allow for additional borrowing up to the limit required, so PDC (which is not a repayable loan) is being sought.

Table 8 – Annual Cashflows of PDC funded scheme

£m's	Total	Decant	Design	Stage 1	Stage 2	Stage 3
Sunk costs	59.80	20.90	38.90			
2015/16	31.79	10.40	5.10	16.29		
2016/17	64.66	2.40	1.70	60.56		
2017/18	89.86		1.60	88.26		
2018/19	98.47		0.20	98.27		
2019/20	38.47		0.20	37.71	0.57	
2020/21	21.63		0.20	0.14	21.29	
2021/22	40.89		0.20		40.69	0.00
2022/23	28.80				28.80	0.00
2023/24	9.32				0.00	9.32
2024/25	1.10					1.10
Out-Turn	**484.78**	**33.70**	**48.10**	**301.22**	**91.34**	**10.42**

Note: All figures £000s

39. The table below shows how this funding is to be structured.

Table 9 –Source of Funding for Capital

	OBC	FBC
Total Capital requirement	**420.1**	**484.8**
Trust Operational Capital		7.7
Trust Loans		45.1
Public Dividend Capital - Advanced	20.0	20.0
Public Dividend Capital - New	400.1	412.0
Total Funding	**420.1**	**484.8**

Note: All figures are in £millions

40. As can be seen from the above table, the requirement for new PDC is £412.0m and not the full £484.8m.

41. The Trust has used Operational Capital to fund the £7.7m cash element, based on the Board of Directors' assessment of risk to delivery. No repayment has been assumed in the LTFM and this contribution by the Trust to 3Ts as a strategic programme therefore represents a 'sunk cost'. No land sales or purchases are assumed as part of the 3Ts business case as there is no land required to purchase and there is no Trust estate to be disposed of as part of this FBC.

42. The table below shows the Income & Expenditure in the Base Case model (analysis for the full ten year planning period is appended). This is extracted from the Trust LTFM.

Table 10 – I&E impact of 3Ts

	2015/16	2016/17	2017/18	2023/24	2024/25
Total Income	507.9	520.9	523.8	566.8	571.2
Total Operating Expenditure	-491.0	-490.1	-482.6	-514.7	-519.6
- of which CIPs	25.0	27.3	28.8	18.1	16.8
- of which CIPs (% per LTFM)	4.9%	5.5%	6.0%	4.3%	4.0%
EBITDA	**16.9**	**30.9**	**41.2**	**52.1**	**51.6**
Depreciation/P&L on disposal	-23.3	-26.3	-24.2	-27.0	-27.1
Interest Payable / (Receivable)	-4.1	-4.4	-4.3	-4.1	-3.4
PDC Dividend	-8.7	-10.2	-12.7	-15.4	-15.5
Surplus / (Deficit) before impairments	**-19.2**	**-10.0**	**0.0**	**5.7**	**5.7**
Non Operational adjustments	-15.5	-5.8	-3.0	-12.1	-3.0
Net Surplus / (Deficit) per LTFM	**-34.7**	**-15.8**	**-3.0**	**-6.4**	**2.7**

Note: All figures are in £millions

43. Growth in Total Income over the ten year period of £63.3m (12.47%) is mainly PBR related (£35.9m) and PBR Exclusions (£24.7m). The balance is a mix of changes to Other Income and income driven by 3Ts changes (£6.6m):
    - Private Patients – £3.9m
    - Research Income – £1.5m
    - Additional car parking spaces (and therefore income) – £0.6m
    - Retail rents – £0.6m.

44. Over the ten year planning period, the total Trust efficiency requirements (CIPs) is currently calculated to be £211.5m at 2015/16 prices. At OBC stage this was £251.7m at 2013/14 prices. This reflects changing assumptions over the last few years given activity and financial changes across the health economy (analysis for the full ten year planning period is appended).

Table 11 – Cost Improvement Plans (Real Prices)

	2015/16	2016/17	2017/18	2023/24	2024/25
Non-Recurrent Savings	0.0	0.0	0.0	0.0	0.0
Recurrent Savings	25.0	27.3	28.8	18.1	16.8
Total savings planned	**25.0**	**27.3**	**28.8**	**18.1**	**16.8**
- % per LTFM	4.9%	5.5%	6.0%	4.3%	4.0%

Note: All figures shown are in £'millions

45. The table below shows the Risk Rating (CoSRR) for the Base Case model (analysis for the full ten year period is appended). These indicate the overall financial viability of the Trust over the period.

Table 12 – Financial Risk Ratings

		2015/16	2016/17	2017/18	2023/24	2024/25
Continuity of Service	Liquidity ratio	4	2	2	3	2
Risk Rating (CoSRR)	Capital servicing capacity ratio	1	2	3	3	3
	Weighted average	3	2	3	3	3

46. Once the Trust returns to Surplus, the intention is to deliver year-on-year Surpluses through a significant period of change and therefore scores well on both the Liquidity Ratio and the Capital Servicing Capacity Ratio, with a weighted average score of 3 in 9 out of 10 years in the LTFM.

47. The Trust will seek to maintain healthy cash positions across most of the planning period and will ensure that balances represent more than 10 days of Operating Expenses.

48. Maintaining the Trust's historic Tier 1 borrowings will ensure the Capital Servicing Capacity Ratio is controlled, but delivering an EBITDA margin of +9% remains the key to 3Ts affordability under a PDC funded route. The Trust would need to deliver a significant CIPs programme regardless of the 3Ts investment.

49. The table below identifies the source of Revenue Funding specific to 3Ts at key points in its development.

Table 13 – Revenue Source and Application

£millions	**Decant 2015/16**	**Stage 1 Opening 2019/20**	**Stage 2 Opening 2022/23**	**Stage 3 Opening 2023/24**
Costs :-				
- Transitional Costs	0.8	5.6	2.4	0.1
- Relevent Operating Costs (Pay, Drugs, Clinical Supps & Other)	0.0	1.0	4.8	6.5
- Facilities Management Costs of new buildings	0.1	2.6	10.5	12.8
- Capital Charges (Depreciation and Public Dividend Capital)	2.1	9.4	14.7	16.4
Total Costs	**3.0**	**18.6**	**32.4**	**35.8**
Funding :-				
- Operating Income - Repatriated income	0.0	1.7	7.7	9.8
- Operating Income - Private Patient income	0.0	0.3	2.6	3.9
- Other Operating Income (Retail and Car Parking Income)	0.0	0.1	1.4	2.2
- Capital Charges saved on demolished buildings	0.1	0.6	1.1	1.2
- Facilities Management costs saved on demolished buildings	0.0	0.9	1.8	2.2
Sub Total	0.1	3.6	14.6	19.3
- Transitional Support	0.9	5.6	2.4	0.1
- CIPs (cumulative effect)	2.0	9.4	15.4	16.4
Total Funding	**3.0**	**18.6**	**32.4**	**35.8**

Note: All figures shown are in £'millions

50. As can be seen, the change in Capital Charges and FM costs are the main cost pressures facing the Trust. These are unavoidable costs and are typical for a modern, fit-for-purpose estate.

51. The Repatriated Income is PBR related (the Trust is paid under the national pricing – or tariff system) and the Income relates only to the new inpatient beds created by the redevelopment and excludes income from 'replacement' beds. The analysis above therefore excludes what the Trust describes internally as 'enabled growth'. This is not additional or supply-induced demand but a mix of demographic growth, service developments and other Trust-wide income opportunities set out in the activity/capacity model agreed with commissioners. The increase in capacity in 3Ts therefore 'enables' this growth (which is net of demand management/Better Care Fund and other efficiencies), which would otherwise not be possible in capped Trust capacity.

52. In preparing the Trust's IBP for the next five years, the Board of Directors considered at a high level the types of mitigations available under a downside scenario. These assumptions were revisited in Summer 2015 as part of the assurance and approval process. They can be grouped as follows:
    - consolidating the Trust's estate to a smaller footprint, including vacating rented estate;
    - omitting high cost elements of future service developments;
    - withdrawing from 'unprofitable' services;

- making global changes to the Trust cost base. (In practice, the largest element of Trust expenditure, and the area with the most discretionary ability, is pay);
- reducing operational capital expenditure; and/or
- extending creditor payment terms and improved debt collection.

Downside Scenario: Commissioner Downside

53. The table below shows the Surplus/(Deficit) position of the Trust pre and post mitigations together with the financial impact of the chosen mitigation plans. This scenario is seen as the 'Worse Case' and was agreed with the Commissioners through an assurance review undertaken by NHSE in advance of TDA approval in July 2015. It reflects a downside of partial funding by Commissioners.

Table 14 – Commissioner Downside I&E pre and post mitigations

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Surplus/(Deficit) - Base Case	-19.2	-10.0	0.0	2.6	5.4	5.5	5.5	5.6	5.7	5.7
Impact of Downside	0.0	-13.8	-12.5	-9.8	-10.7	-15.0	-14.7	-15.2	-16.5	-15.0
Surplus/(Deficit) - Pre-mitigations	**-19.2**	**-23.8**	**-12.4**	**-7.2**	**-5.4**	**-9.6**	**-9.2**	**-9.6**	**-10.8**	**-9.3**
Mitigations	0.0	13.7	12.8	16.6	17.5	21.9	21.9	22.5	24.3	23.4
Surplus/(Deficit) - Post-mitigations	**-19.2**	**-10.0**	**0.3**	**9.5**	**12.1**	**12.3**	**12.7**	**12.8**	**13.5**	**14.1**

Note: All figures shown are in £'millions

54. This scenario assumes activity is reduced in line with the loss of Income, but since no specific activity was agreed with commissioners the mitigations are not speciality-specific. However as part of the mitigations it has been assumed that up to 141 beds (or 2 floors of 3Ts Stage 1) could be built as 'shell and core', ie. not fitted out and some space could be rented out.

55. As indicated in the table within the Strategic Mitigation Plans section, the Trust would need to utilise all its resources and adopt all schemes to meet this particular Downside scenario. A key element of the mitigation plans is Cost Reduction and costs have been stripped out using the same Marginal Rates that were used for activity growth.

56. Under this scenario it is assumed that the impact would be immediate, with significant loss of activity and Income in 2016/17. It is assumed that the Trust would take time to return to a Surplus position and by 2018/19 the full impact of the Estates mitigations would be realised. By 2024/25 the Surplus Margin would be close to 2.9%, which is nearly three times the Trust's current operating target. Further information on this Downside is appended.

57. The preferred funding route remains PDC. The Trust's preference is that borrowings at Tier 1 are maintained at a level that allows both reasonable debt servicing during a period of rising interest rates, sufficient headroom for capital reinvestment in the rest of the Trust's ageing estate, and an asset replacement programme that allows a safe continuity of service across all the Trust's sites. The scheme should therefore be funded by 100% Public Dividend Capital, which is in line with the approved OBC (version 17 dated January 2012 and approved in May 2014).

58. As stated in the Commercial Case and Management Case, the expectation is that the PSCP will provide the Trust with a Guaranteed Maximum Price by July 2015.

Management Case

Programme & Project Management Arrangements

59. Partner NHS organisations recognise the importance of the 3Ts programme to the wider health community locally and across the region. There has been widespread engagement with the programme at all levels of the local and regional health economy to ensure that there are clear links with other

developments. The TDA and NHSE are part of the governance framework has been set up to steer the programme appropriately at a senior level.

60. The framework for risk management follows Prince2 methodology and allows risk to be identified, owned and managed at the lowest possible level, with suitable mechanisms for escalation when required. The register is jointly managed in collaboration with the PSCP, as required under P21 and P21+procedures.

61. The Gateway recommendations from the three reviews have been implemented in full. The programme has also received a rating of 'significant assurance' from the external auditors.

62. The Trust, supported by its local partners, has established an extremely strong and experienced development team, which is managing the programme in accordance with best practice. It has selected a strong Procure 21 supply chain partner in Laing O'Rourke, which has established an experienced team to deliver the 3Ts programme.

Management Control Plan

63. The Trust has established a 3Ts modernisation workstream to ensure that workforce, communications/engagement and service modernisation are addressed in parallel with the capital development. A commissioning process and plan is already in place, which will be worked up in further detail prior to the completion of Stage 1. There is a clear management control plan for the programme and a Project Initiation Document (PID) for the next phase of the programme.

64. There has been significant clinical input across all disciplines into the programme at critical junctures. This has enabled the Trust to design a health facility that can meet changing clinical needs and ensure that Infection Prevention & Control and patient safety and quality imperatives are uppermost during and following implementation.

Programme Timetable

65. The outline timetable for the development and delivery of the 3Ts programme is set out below:

Table 15 – Programme: Key Milestones

Milestones December 2015	Date
SOC approved by SE Coast SHA	Complete July 2008
OBC to Trust Board for approval	Complete 30 June 2009
Submit OBC to NHS SE Coast for approval	Complete July 2009
OGC Gateway 1 assessment	Complete August 2009
OBC approval period	Complete July – October 2009
OBC approved by NHS South East Coast	Complete November 2009
Submission of OBC to DH	Complete November 2009
Refreshed OBC to NHS South East Coast and DH	Complete May 2011
Refreshed OBC approved by South East Coast SHA and resubmitted to DH	Complete July 2011
Application for Full Planning Consent submitted to Brighton & Hove City Council	September 2011
Full Planning Consent granted by Brighton & Hove City Council (subject to completion of Section 106 legal agreement)	Complete January 2012
Full Planning Consent released by Brighton & Hove City Council	Complete Mar 2012
Refreshed OBC re-approved by NHS South of England	Complete March 2012
Statutory planning submission for decant temporary buildings	Complete January 2013
OBC passed to DH	Complete March 2012
OBC passed to HMT	Complete July 2012

Milestones December 2015	Date
OBC supplementary submission to TDA	Complete May 2013
OBC approval announced by DH and HMT	Complete May 2014
Decant construction works period (5 sites – phased completion)	September 2013-June 2016
Confirm target cost for main construction works	September 2014
Gateway Review	Gate 3 – November 2014
Agree GMP	July 2015
FBC approved	December 2015
Commence Stage 1	Winter 2015/2016
Gateway Review	Gate 5 (Stage 1) – October 2020
Stage 1 Complete and Fully Operational	Spring 2020
Commence Stage 2 enabling works, demolitions and man build	Summer 2020
Gateway Review	Gate 4 (Stage 2) – July 2022
Complete Stage 2	Spring 2023
Stage 2 Fully Operational	Summer 2023
Gateway Review	Gate 5 (Stage 2) – Spring 2024
Gateway review	Gate 0 (Final) – Summer 2024
Overall Development Complete and Operational	Summer 2024

Benefits Realisation

66. The Benefits Realisation plan details the specific outcomes/benefits to be achieved through the investment. These include clinical outcomes (eg. reduced patient mortality), quality and safety (incl. patient experience), teaching & research, operational efficiency/productivity (incl. additional income) and wider societal benefits (eg. the value to investment in construction to the local economy).

67. Benefits include both cash-releasing (CIPs) and productivity/efficiency benefits. 3Ts-related CIPs (both those uniquely delivered by the 3Ts programme and those to which the 3Ts development will contribute) are set out in the Economic Case and have been factored into the Trust Long-Term Financial Model. They will in due course form part of the Trust-wide three-year rolling CIPs programme, which currently extends to 2016/17. A Quality Impact Assessment has been undertaken on the 3Ts CIPs, approved by the Chief Nurse, Medical Director and Chief of Safety & Quality as part of the same process the Trust undertakes for all efficiency projects.

68. The majority of benefits will be realised on occupation of each stage of the redevelopment. However some benefits are expected to have a lead-in time (up to two years following completion of each stage of the building).

69. Innovative work has been undertaken with Department of Health economists to monetise non-financial benefits using the Quality-Adjusted Life Years (QALY) framework. This approach has enabled these benefits to be reckoned into the economic analysis, giving effect to the Public Services (Social Value) Act.

Post Project Evaluation

70. Arrangements are in place for Post-Project Evaluation, which will be resourced appropriately and disseminated.

Concluding Remarks

71. The Trust has worked with its partners across the local health economy over the last almost seven years to develop an ambitious redevelopment programme that meets the needs of patients and the wider population.

72. This development represents a unique and generational opportunity to improve secondary care services for the immediate population of Brighton & Hove and to strengthen and expand specialist services both for the local population and population of Sussex and beyond. This will strengthen the Trust's leadership role in the delivery of networked clinical services in these areas.

73. The redevelopment will significantly enhance the Trust's reputation for excellence as a University Teaching Hospital, providing opportunities for ever closer partnership with the Brighton & Sussex Medical School, Health Education England and the Universities of Brighton & Sussex.