Delivering a Healthy Future

181/07

Full Business Case (FBC) for the reconfiguration of acute services in west Hertfordshire

Author: Planning Directorate
Dated: July 2007

Version 2.0

Document Control

Document Title	FBC for Delivering a Healthy Future
Revision	2.1
Author	Planning Directorate
Date	1 August 2007

Document History			
Version	**Date**	**Author**	**Comments**
1.0	20 June 2007	Tim Pearce	No comments
1.1	20 June 2007	Planning Directorate	
1.2	4 July 2007	Planning Directorate	
1.3	10 July 2007	Planning Directorate	
1.4	10 July 2007	Planning Directorate	
1.5	13 July 2007	Planning Directorate	
2.0	19 July 2007	Planning Directorate	
2.1	1 August 2007	Planning Directorate	

Issue History			
Issued To	**Date**	**Revision**	**Purpose of Issue**
Finance & Performance Committee	25 June 2007	1.1	For review and recommendation to Trust Board
Helen Davis - SHA	20 June 2007	1.1	For initial review
Gareth Jones – Herts PCTs	20 June 2007	1.1	For initial review
Trust executives	19 July 2007	2.0	Response to SHA Queries
SHA	19 July 2007	2.0	Response to SHA queries
Trust Board	1 August 2007	2.1	Further response to CIB Queries re Procure 21

Contents

1. Executive Summary

1.1. Acute health services in west Hertfordshire have experienced many changes over a number of years. However, the legacy of operating acute clinical services on multi-sites has only ever been partially resolved during these changes. As a consequence the hospital services currently provided by the West Hertfordshire Hospitals NHS Trust have suffered significantly. This has manifested in a range of severe clinical safety and financial pressures.

1.2. In response to these escalating pressures across Hertfordshire a health economy wide service reconfiguration strategy was developed by the Bedfordshire and Hertfordshire Strategic Health Authority (SHA), the two acute trusts and the eleven Primary Care Trust (PCTs) in 2003. This strategy, known as Investing in Your Health (IiYH) was formally consulted on and was approved by all organisations in November 2003. The strategy sets out a model of care for primary and secondary care in Hertfordshire, most notably rationalising the number of acute hospitals from four to two, segregating acute services from planned care and delivering 'care closer to home'.

1.3. The overall affordability of the IiYH strategy has been subject to further review as part of the Acute Service Review (ASR) that was recently commissioned by the East of England SHA. The ASR has endorsed the proposal to centralise acute services in west Hertfordshire on the Watford General Hospital site as outlined in IIYH. This Business Case fully accords with the ASR Business Case and associated public consultation documentation.

1.4. In west Hertfordshire, the timescale for completion of IiYH is 2014 culminating in the opening of a new acute hospital on the Watford site. The reason for protracted timescale being the PFI procurement process.

1.5. The Trust fully subscribes to the model of care principles set out in IiYH, but it has become evident over the last two years that the benefits of service reconfiguration are needed in advance of the 2014 timescale if acute services in west Hertfordshire are to be sustained. As a result the Trust developed and consulted publicly on an interim reconfiguration strategy, known as Delivering a Healthy Future (DaHF) during the summer 2006. The outcome of the consultation exercise has been the subject of a Judicial Review. However, the Judge found in favour of the Trust in July 2007.

1.6. The clinical case for change is extremely strong. The Trust currently comprises of two small District General Hospitals located 9 miles apart each serving a catchment population of c. 250, 000. The absence of a critical mass of catchment population and significant service duplication places immense pressure on the Trust's ability to deliver safe clinical services and optimal outcomes. The financial pressures associated with multi-site working have exacerbated this further. Robust evidence exists which confirms that the centralisation of services, staff, equipment and other resources will significantly improve the Trust's clinical outcomes. These and other outcomes will be rigorously managed as part of the benefits realisation work associated with the delivery of the Business Case.

1.7. In essence, the Trust is seeking to expedite the acute elements of the IiYH strategy in advance of the full redevelopment of Watford General Hospital, owing to the time lag of the redevelopment. The service reconfiguration comprises three main elements:

1 The segregation of planned surgical services from acute services by the establishment of an elective care centre at St Albans City Hospital (SACH)
2 The consolidation of emergency services, including A&E and Critical Care services at Watford General Hospital
3 The creation of two vibrant non-acute hospital sites providing a range of outpatient, diagnostic, urgent care and intermediate care services at Hemel Hempstead and St Albans.

1.8. The first implementation phase of DaHF is the development of the elective care centre at St Albans City Hospital (SACH); this element of the programme was the subject of a Business Case approved by the East of England Strategic Health Authority (SHA) in January 2007. The centre will be completed in September 2007.

1.9. This Business Case is concerned with is the second implementation phase and seeks to consolidate all acute services at the Watford General Hospital (WGH) site. This is an interim development that precedes the overall proposed PFI redevelopment of the WGH site by 2014/15, and allows for service models to be developed and established in advance of the new hospital.

1.10. The final phase of the reconfiguration is the development of a local General Hospital on the Hemel Hempstead Hospital site, pending the current Acute Services Review (ASR) Consultation process. The local General Hospital will provide:

- Urgent care facilities;
- Intermediate care service; and
- A wide variety of outpatient and diagnostic services for the local Dacorum residents.

The Trust will undertake this development in conjunction with the PCT. The local General Hospital will require significantly less space than that currently occupied by the Trust as a consequence the Trust will look to dispose of any redundant estate as necessary. This development will be the subject of a separate Business Case to be submitted early in 2008.

1.11. The Trust has considered a number of options around how services could be reconfigured effectively in order to deliver the requisite clinical and financial benefits before the new hospital becomes available at Watford. This option appraisal exercise concluded that an interim reconfiguration on the WGH site was the most suitable option, particularly with the development of the AAU. A detailed appraisal was then undertaken in order to ascertain the most suitable method of delivering the preferred option

- A modular build option for the AAU plus refurbishment of discrete areas of existing estate including A&E, Critical care, car parking and improved access and egress;
- A traditional build option for the AAU plus refurbishment of discrete areas of existing estate including A&E, Critical care, car parking and; improved access and egress; and
- A Do Nothing option

1.12. This Business Case summarises a new model of care with the development of a 120 bedded Acute Admissions Unit (AAU) on the Watford site. This along with the activity assumptions reflecting the PCT commissioning intentions and improved productivity enables a reduction of 122 inpatient beds across the Trust. The planned movement of beds is as shown in Table 1 below:

Inpatient Beds	Current	2009/10
Watford	419	545
Hemel	251	0
SACH	28	31
Trust Total	**698**	**576**

Table 1 – Changes in Bed Capacity in West Hertfordshire Hospitals NHS Trust

1.13. The Acute Admission Unit (AAU) represents the majority of the capital cost and will be a new build facility providing an innovative way of managing the assessment and admissions of non-elective acutely unwell patients from the local health care economy. Clinical skills to support the rapid assessment of patients will be concentrated in the unit, over an extended working day.

1.14. The unit will have: 3 clinical floors for the assessment of acutely unwell patients, provision of diagnostic services CCT and X-ray, treatment and observation; 120 short-stay beds; cardiac specialist services for adult elective and emergency invasive cardiac interventions and investigations, including primary angioplasty and physiological testing.

1.15. The capital cost of the modular build has been calculated to be £36.8 million and the cost of traditional build is £36.6 million. It is assumed this will be spent across 2007/8, 2008/9 and 2009/10.

1.16. The Trust has assumed the capital costs will be funded through Interest Bearing Debt but is seeking funding through Public Dividend capital given the Trust's poor financial risk rating and the savings that will be gained as a result of the scheme.

1.17. The Modular build option scored significantly better than the other two options on both a non-financial and financial basis. The main reasons for this are the speed of construction and the reduced site disruption associated with modular construction The results are summarised in Table 2 below:

Option	Do Nothing	Option 1 Modular Build	Option 2 Traditional build
Non Financial Appraisal Score	362	601	527
Financial Appraisal Score (Risk Adjusted) NPV £000	1,670,107	1,587,992	1,600,218
Rank	3	1	2

Table 2 - Summary of Appraisal of Options Considered

1.18. A number of sensitivities have been run; none of which change the preferred option from either a non-financial or a financial perspective. The analysis assumes that the modular build can be adapted for an alternative use in the proposed new hospital.

1.19. In order to deliver the clinical and financial benefits described in this Business Case, the speed of construction has been a significant factor impacting upon not only the choice of a modular build over traditional, but also in the management of the overall construction programme. As a consequence the Trust has committed to undertaking a number of discrete projects as enabling schemes. These schemes include: creation of a new Post Graduate Medical Centre, movement of a gas main, a highway realignment scheme, the refurbishment of the A&E annex in order to create A&E observation beds and the erection of a boundary fence. By agreeing to fund these schemes from the Trust's capital programme in advance of the approval of the case by the SHA and the Department of Health demonstrates the Trust Board's commitment to DaHF. Carrying out the enabling schemes in advance of the final approval has enabled the construction programme to be reduced by more than 20 weeks.

1.20. The Trust has developed a medium term financial strategy based on the PCT strategic commissioning intentions developed as part of the ASR and the Trust's full implementation of the Delivering a Healthy Future proposals. The financial strategy assumes the following:

- Savings in costs as a result of rationalising acute services – clinical and management cost savings;
- Reduction in activity, income and costs as a result of the Trust moving off the Hemel Hempstead site;

- Savings as a result of improvement in performance as a result of consolidation of acute services and the implementation of new models of care; and
- The avoidance of extra costs resulting from the European Working Time Directive.

1.21. A Do Nothing position would mean that the Trust would incur additional costs as a result of the European Working Time Directive (EWTD) and other cost pressures and would not be able to deliver significant savings relating to site rationalisation. The continued provision of services across each site would also hamper the Trust's ability to make performance improvements as the level of service on each site means that a significant level of costs incurred by the Trust are fixed. Although the Trust is expecting to make a surplus in 2007/8 this will not be sustainable in a Do Nothing option, particularly as activity reduces (in line with the commissioning strategy expressed in Investing in Your Health and in the current Acute Services Review assumptions) and costs driven by the EWTD increase and may adversely impact on the service.

1.22. The financial strategy identifies an improved financial position with DaHF of £11 million per annum against a Do Nothing option. The proposed service changes enable the Trust to maintain a surplus of circa £5 million annually compared with a worsening financial position in the Do Nothing option, which would result in a deficit of £ 5.6 million in 2013/14.

1.23. A summary of the financial positions generated by a Do Nothing and the preferred option is shown below:

Do Nothing £m							
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Income	225.8	221.4	216.8	213.4	213.6	215.1	216.8
Expenditure	220.8	219.1	219.5	216.8	217.6	219.7	222.1
Surplus/(Deficit)	5.0	2.4	(2.8)	(3.4)	(4.1)	(4.6)	(5.3)
Change in position from 0708							
Reduction in income		(4.4)	(4.7)	(3.4)	0.2	1.6	1.7
Reduction in costs - Activity & Performance Efficiency		2.3	2.0	3.6	0.1	(1.3)	(1.2)
Efficiency target less efficiencies assumed		3.9	(0.0)	0.3	0.1	0.2	(0.2)
Additional costs EWTD		(2.8)	(1.6)	0.0	0.0	0.0	0.0
Additional Clinical costs - CT		(0.6)	0.0	0.0	0.0	0.0	0.0
Additional Costs backlog		(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)
Change from previous year		**(2.6)**	**(5.2)**	**(0.5)**	**(0.6)**	**(0.6)**	**(0.7)**
Surplus/(Deficit)	5.0	2.4	(2.8)	(3.3)	(4.0)	(4.6)	(5.3)
Watford £m							
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Income	225.8	213.5	206.5	203.2	203.3	204.9	206.5
Expenditure	220.8	210.2	199.7	196.6	196.9	198.8	201.0
Surplus/(Deficit)	5.0	3.4	6.8	6.6	6.4	6.1	5.4
Change in position from 0708							
DAFH- Site Rationalisation		2.8	7.1	0.0	0.0	0.0	0.0
Income Reduction		(12.2)	(7.0)	(3.4)	0.1	1.5	1.6
Reduction in costs - Activity & Performance Efficiency		7.8	6.0	2.5	(0.0)	(1.1)	(1.2)
Efficiency target less efficiencies assumed		3.5	(2.2)	0.2	0.1	0.3	(0.0)
Non Recurring Costs (Redundancy/ double running)		(2.5)	0.5	1.5	0.5	0.0	0.0
Additional Costs backlog Maintenance		(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)
		(1.6)	3.4	(0.1)	(0.3)	(0.2)	(0.7)
Surplus/(Deficit)	5.0	3.4	6.8	6.6	6.4	6.1	5.4

Table 3 – Summary of the Financial Impact of Do Nothing and Preferred Options

1.24. The development does not impair the proposed development of a new hospital at Watford owing to the modular manufacturing methodology and its location. In addition to this the development will ensure that the Trust will have taken significant steps in moving to the models of care and addressing workforce requirements needed to deliver the longer-term PFI scheme. It will implement the health economy's strategy for acute services in West Hertfordshire and will place the Trust on a strong footing to achieve and retain Foundation Trust status and to attract a PFI bidder.

2. Introduction

2.1. Purpose of Document

This combined Outline and Full Business Case (OBC/FBC) seeks approval to invest £37 million to deliver the consolidation of emergency services, including A&E and Critical Care services at Watford General Hospital.

This Business Case assumes that an Urgent Care centre and other Local General Hospital services will be provided in Hemel Hempstead in the future. The Business Case is not dependent on how and where these services are provided. It assumes that the Trust will release land it currently occupies at Hemel Hempstead but it is not dependent on that land being sold to the PCT. The development of the Urgent Care Centre at Hemel Hempstead General Hospital, capable of seeing the majority of A&E patients, will be the subject of a separate Business Case developed in conjunction with the PCT. Suitable interim arrangements will put in place by the Trust pending the development of the Hemel Hempstead Business Case.

This OBC/FBC has been prepared using the agreed standards and format for Business Cases, the HM Treasury's Green Book (A guide to capital investment in the Public Sector and the Capital Investment Manual.) The case is consistent with the health economy's agreed strategic direction.

2.2. Public Health Context

The population of the West Hertfordshire PCT was estimated to be around 529,771[1] in 2005. Given the geography, the area does not have a clear focal point of population and as a result no obvious location on which to centralise all health services.

WHHT provides acute health services to the residents of Dacorum, Watford, Three Rivers, St Albans and approximately a third of the Hertsmere population, a total catchment population in the region of 500,000 whom are resident in appropriately 88 electoral wards. Table 4 details the Councils within west Hertfordshire.

Council Areas
Dacorum
St Albans
Watford
Hertsmere (WHHT serves only part of this catchments)
Three Rivers

Table 4 – Local Councils within west Hertfordshire

Key Population Descriptors[2]

- Compared with the England average, Hertfordshire is more densely populated with higher proportions of the population in the younger age groups.
- On standard measures of health such as infant mortality and life expectancy, West Hertfordshire is healthier than the England average.
- Overall, Hertfordshire is at least twice as affluent as other areas in England, but there is considerable variation within the country.

[1] Source: Annual Public Health Report 2007, West Hertfordshire Primary Care Trust
[2] Source: Annual Public Health Report 2007, West Hertfordshire Primary Care Trust

- In the 2001 census 7% of the population of west Hertfordshire was classified as coming from a black and ethnic minority population.
- West Hertfordshire has a higher proportion of under fives(6.1%) compared with England.
- There are fewer people of pensionable age living in west Hertfordshire (17.9%) compared with England (18.5%).
- Men living in west Hertfordshire have not reached the Government's life expectancy target of 78.6 years. Life expectancy for women is most challenging for those living in Watford, Dacorum and Hertsmere council areas.
- Watford is the council area with the highest levels of deprivation and this area has the highest level of deaths from coronary heart disease and stroke.

2.3. Trust Background

2.3.1. Organisational History

The West Hertfordshire Hospitals NHS Trust was formed in 2001 following the merger of two former Trusts. In common with many Trust mergers, the organisation has been slow in altering its culture to reflect the larger organisation, with many departments and specialities remaining loyal to the original Trusts or the hospital buildings.

2.3.2. Location and services provided

West Hertfordshire is located to the north of London, with Hertfordshire as a whole considered to be one of the healthier counties in the country, covering an area of approximately 634 square miles. Figure x illustrates the west Hertfordshire area and the location of the WHHT hospitals.

Insert the map(Figure 1)

Figure 1 – Map of Hospitals in west Hertfordshire

Until the end of September 2006, the Trust provided services on four sites:

- Hemel Hempstead General Hospital (HHGH)
- Watford General Hospital (WGH)
- St Albans City Hospital (SACH)
- Mount Vernon Hospital (MVH)

Full district general hospital (DGH) services are provided at WGH, including centralised women's and paediatric services, A&E and critical care.

HHGH also offers DGH services including A&E and critical care, with the exception of women's and paediatric services, which have been centralised at WGH over recent years due to difficulties in covering the services with appropriately trained staff.

The management of inpatient paediatric services was transferred to the Trust on 1st October 2006 from Hertfordshire Partnership NHS Trust.

St Albans City Hospital has changed considerably over the last few years and has developed into a thriving elective care centre. The final phase of this development was the subject of a previous Business Case with the scheme due to complete in September 2007. There is a wide range of outpatient and diagnostic services along with some elective short stay and day surgery and a minor injuries unit provided on the site. Intermediate care beds operated by the PCT and some inpatient mental health facilities operated by Hertfordshire Partnership NHS Trust are also located on the site.

Until 2005 the Trust managed the Cancer services at Mount Vernon Hospital, however, these were transferred to the management of East and North Hertfordshire NHS Trust in advance of the proposed Hatfield hospital development. As a consequence the Trust retained only the management of Burns and Plastic services. However, a number of clinical governance and safety issues this situation has not proved sustainable and therefore, following significant discussions the inpatient services and overall management of the service was transfer to the Royal Free NHS Trust from the 1st October. Arrangements are in place for the Trust to withdraw completely from the Mount Vernon site.

Almost without exception, the condition of all Trust buildings and the infrastructure that supports them is extremely poor, having suffered many years of little preventative maintenance and investment. All the sites have grown up over a period of years and have suffered from the impact of a number of ad-hoc developments. As a consequence clinical adjacencies are not fit for purpose resulting in significant inefficiencies and an extremely inferior environment for patients, staff and visitors. The internal layouts of all sites are not legible making way finding difficult and confusing for patients.

2.3.3. Capacity– Key Facts

Key facts and figures regarding the Trust's current configuration, including the number of beds, and theatres on each site, are described below in Table 5.

2006/07	**Watford General Hospital**	**Hemel Hempstead General Hospital**	**Mount Vernon Hospital** (Site no longer managed by WHHT)	**St Albans City Hospital**
Bed Numbers	419	251	0	28
Theatres Complement (as at July 2007)	5 x Main theatres 3 x Day Surgery theatres 1x Gynaecology theatre	3 x Main theatres		5 x Main theatres
Key Services provided	General Surgery General Medicine A&E Critical Care Women's Services NICU/SCBU Paediatrics Outpatients Trauma and Orthopaedics Urology ENT Vascular Services Gastroenterology	General Surgery General Medicine Catheter Lab A&E Critical Care Outpatients Trauma and Orthopaedics Urology ENT Vascular Services Gastroenterology	Outpatients	Ophthalmology Elective Orthopaedics Breast Services Outpatients X-ray Day surgery Minor Injuries Phlebotomy
Services provided on Trust sites by other providers	Primary care OOH	Primary care OOH		Primary care OOH

Table 5 – WHHT Key facts

2.3.4. Activity

The Trust's planned income for 2007/08 is £226m. The majority of which is generated from a total of ten PCTs, with West Hertfordshire and East and North Hertfordshire representing the greatest proportion in terms of quantum and value.

WHHT Activity Plan 2007/8		
	Activity	Value (£m)
Elective Spells	33,319	36.5
Non-elective Spells (inc. A&E attendences)	158,162	67.8
Outpatient Attendences		
First Attendences	97,690	15.3
Follow-ups	159,058	12.8
Other attendences	1,680,299	30.9

Table 6 – Summary of the Trust's activity breakdown by type

2.3.5 Estate

Predominantly the condition of Trust buildings and the infrastructure that supports them is extremely poor, having suffered many years of minimal preventative maintenance and investment. All the sites have grown up over a period of years and have suffered from the impact of a number of ad-hoc developments. As a consequence clinical adjacencies are not fit for purpose resulting in significant inefficiencies and a sub optimal environment for patients, staff and visitors. The internal layouts of all sites are far from ideal making way finding difficult and confusing for patients.

2.3.6 Backlog Maintenance

The level of backlog maintenance reported through ERIC is estimated at £63m over its three sites. The reason that the level is so high is due to the lack of investment in previous years. The following is an estimate of the current levels of backlog maintenance at 2006.

	External Site Infrastructure £'000	Internal Building Infrastructure £'000	Total £'000
SACH	1043	8600	9643
HHGH	2526	12600	15126
WGH	7861	30900	38761
	11430	**52100**	**63530**

Table 7 – Backlog Maintenance

These figures are an estimate based on work carried out in 2002.

Summary capital requirements:

The Trust's estate department has reviewed the level of investment necessary to sustain its buildings in each of the three sites for a period of (5 years plus a residual life of 2 years) 7 years. The condition of these buildings would not be condition B as the buildings would not have a residual life of 5 years. They are therefore likely to be at best condition B/C. The 5 year appraisal period takes the Trust to the anticipated opening of the new PFI funded hospital. If this is delayed by any material amount of time then investment will need to continue beyond the 5 year period. The level of investment will be monitored in relation to progress to the new PFI scheme.

The option appraisal for this Business Case has been conducted over 10 years with additional backlog maintenance being included from year 6 to 10.

Site	Year 1 £'000	Year 2 £'000	Year 3 £'000	Year 4 £'000	Year 5 £'000	5-Year Total £'000
SACH	2100	1300	900	400	400	5100
HHGH	1900	1700	1200	600	600	6000
WGH	4400	3900	2700	1500	1500	14000
Total	**8400**	**6900**	**4800**	**2500**	**2500**	**25100**

Table 8 - Internal Building Infrastructure

Service	SACH £'000	HHGH £'000	WGH £'000	Total £'000
Total	**1043**	**2526**	**7861**	**11430**

Table 9 - External Site Infrastructure

In summary, the total 5-year programme of capital investment required (for all sites) is £36.5m to deliver in areas where there is backlog maintenance at best condition B/C, as compared with a full condition B investment of £63.5m. This assumes the retention of current buildings on all three sites. The level of backlog maintenance will reduce as a result of Delivering a Healthy Future as the Trust would not need to make the same level of investment in the Hemel Hempstead site.

Capital investment allowed for above consists of services infrastructure needs including: heating; hot and cold water system; building management system; ventilation and air conditioning systems; electrical services; building fabric including roof; primary and secondary plant and equipment.

Revenue Budget

The estates department currently has a 'maintenance' budget of £3.5 million to deal with backlog maintenance. This allows only for minimum planned preventative maintenance (PPM), with the bulk of the expenditure spent on reactive maintenance.

If the £25 million capital investment were to be made and the operational investment was not enhanced the Trust would gradually return to the present levels of PPM and backlog maintenance levels would start to increase.

Strategy for managing the backlog maintenance position

The DaHF Business Case facilitates the rationalisation of services on the three sites. It is estimated that the backlog maintenance figure will fall slightly on the Watford site as a result of the investment in 'DaHF'.

The withdrawal from some buildings on the Hemel site removes the need to maintain them at the same level and would postpone the requirement to resolve some elements of the backlog maintenance. The health economy's approach to the potential redevelopment of Verulam Wing as a local general Hospital but transferring services off the rest of the site means that any significant investment in backlog maintenance may be uneconomic. The Trust has therefore assumed that a minimal investment in the Hemel site is required until its future is resolved.

On the SACH site a significant element of the backlog maintenance will be reviewed as a result of any decision on the location of any Surgicentre development. For example, Investment in the Moynihan Wing roof and fire compartmentation will only be made when the long-term future plans are clear.

The future of the Watford site is more certain. However the buildings on the Watford site are likely to have a shorter life as a result of the proposed new build development and the subsequent demolition of the existing facilities. Any backlog maintenance investment will need to review the potential longevity of the facilities and the significance of the short term issues.

The Trust's capital programme assumes significant investment only in 2009/10, as a result of capital affordability in the next two years. The profile of investment in backlog maintenance has therefore been adjusted to reflect this.

2.3.5. Financial Background

The current in-year financial plan is to achieve a £5m surplus by year-end. The backlog maintenance is circa £63m.

The Trust has a history of significant financial deficit that at the end of 2005/06 had risen to £26.8 million. In 2006/07 the Trust launched a turnaround programme, achievement of which enabled the Trust to reduce this deficit to an agreed control target of £11.5m deficit at year-end.

Financial stability is essential if the Trust is to retain the prospect of the new hospital as well as future financial stability and to sustain safe clinical acute services to the population of west Hertfordshire.

In essence, the cost of providing the current range of clinical and support services across the Trust's sites is greater than the level of income it receives. This has led to a lack of investment in core services, buildings, site infrastructure and equipment. As a consequence, despite the best efforts of staff, this situation has resulted in a variable patient experience that is in danger of deteriorating further.

The challenge for the Trust is to sustain and improve clinical quality and meet NHS performance standards whilst reducing costs.

The gap between income and expenditure existed even before the Trust's inception in 2000. Figure 1 below illustrates the financial health of the Trust over the last six years. It describes the Trust's financial position at the end of each year since 2000 when the Trust was formed. A positive financial position was achieved only in 2002/3; this was due to a one off allocation of £20m by the NHS Bank. This in effect cleared the deficit of the previous organisations prior to the merger.

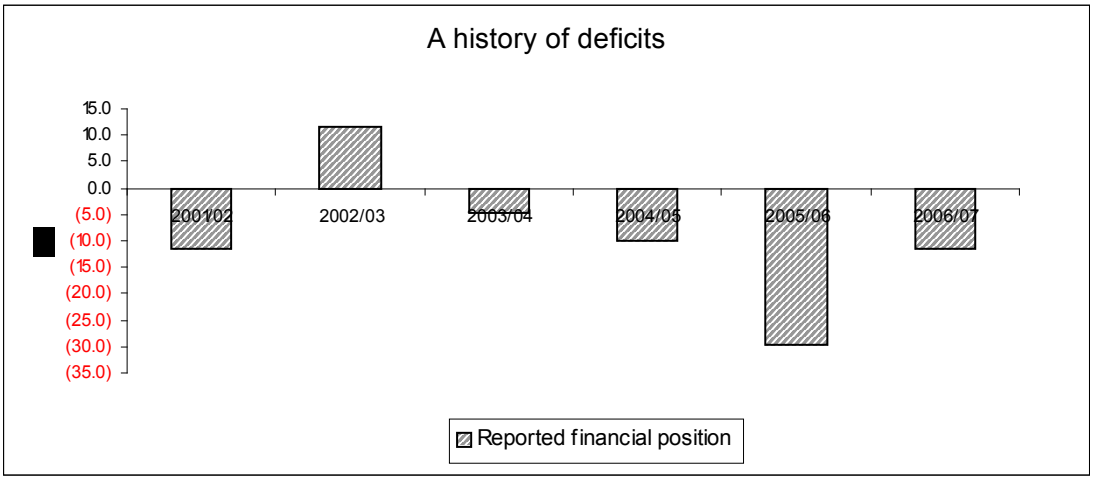


Figure 2 – A History of Deficits 2001 - 2007

Additionally, in line with the experience of many other Trusts, the WHHT position deteriorated considerably in 2005/06. This is as a consequence of *inter alia* increased

workforce costs, e.g. the new consultant contract, agenda for change, working time directive etc.

Over the past few years the Trust has met most operational performance targets. This has been a challenge and has been achieved in many areas by funding additional capacity or resources. The recent cost pressures in the Trust have made achievement of performance targets more challenging, particularly in relation to A&E waiting times and control of infection targets.

2.4. Project Scope

As previously stated, the scope of this Business Case is specifically concerned with the centralisation of acute services at WGH. The two other elements of the overarching strategy, namely, DAHF, are the subject of separate Business Cases. The Business Case for the elective care element was submitted to the SHA and received funding in January. The final phase which will focus on the future of the HHGH site will be developed in conjunction with the PCT following the outcome of the Acute Services Review that is currently subject to public consultation.

Delivery of the benefits described with in this case build upon those already delivered by the creation of an Elective Care Centre, and will be further enhanced by the benefits of resolving the future use of HHGH site; but are not in anyway reliant upon either of the Business Case. Therefore, this Business Case is discrete and can stand-alone.

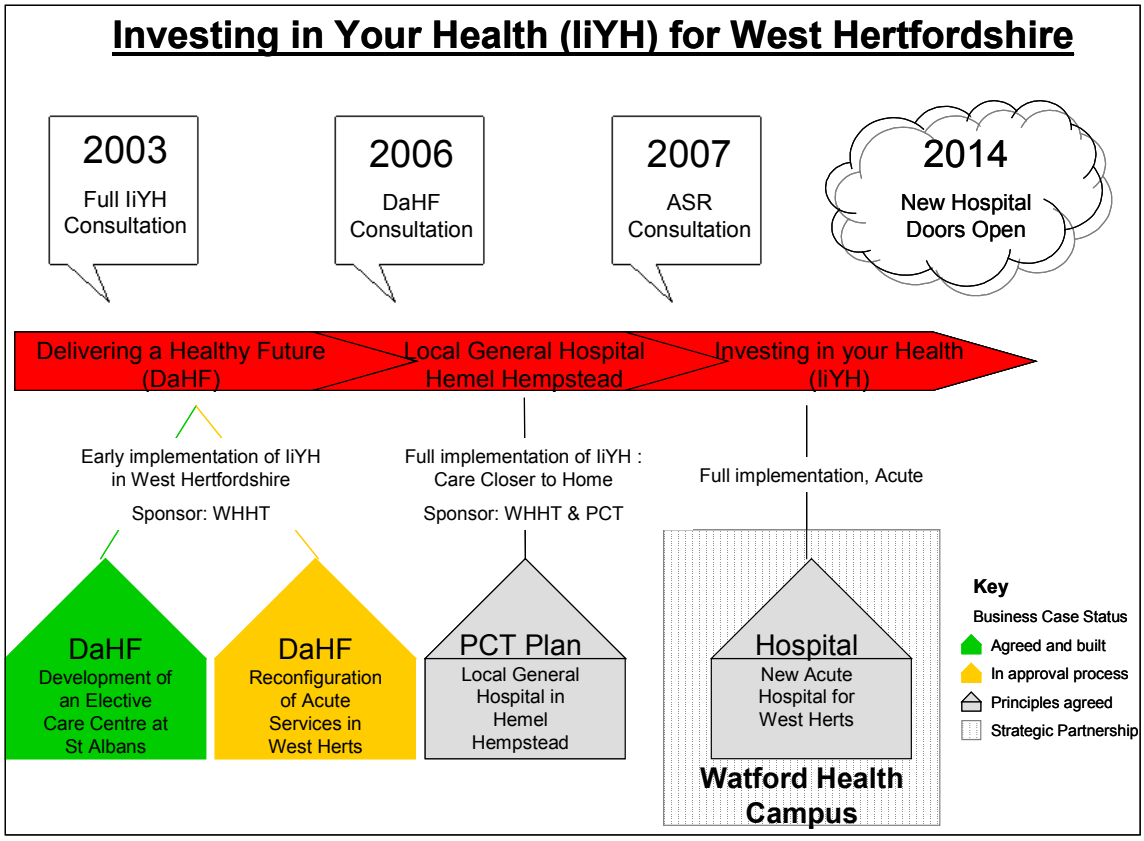


Figure 3 – IiYH and Related Business Cases

3. Strategic Context

3.1. National Policy Imperatives

The NHS is constantly subject to significant change in the pursuit of better quality patient services that harness new clinical technologies and treatment regimes whilst delivering tight financial targets. The tension between service improvement and value for money has never been stronger particularly with the development of Payment by Results, provider plurality and a trend to shift care from acute hospitals to community providers and primary care.

The NHS Improvement Plan sees the development of a patient-led NHS. This can be summarised as a service where patients have greater choice; where strong standards and safeguards are in place and lastly, where health organisations have a better understanding of patients' needs and expectations.

This is illustrated in Figure 4 below:

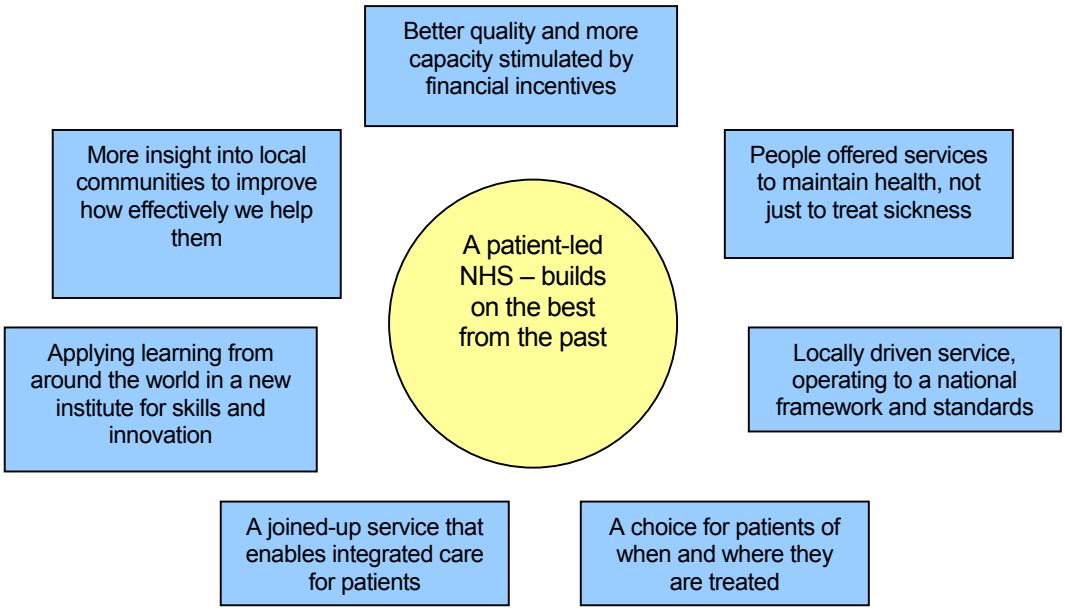


Figure 4: A Patient–led NHS

Access targets remain central to service provision with, for example, no patient waiting more than 18 weeks from consultation with their GP until treatment by the end of 2008. Targets related to service quality for example, NSF targets and A&E performance continue to be relevant.

These issues together with the choice agenda, which requires patients to be offered a choice of provider by 2008, makes the view of patients regarding the re-configuration of services vital if the future 'patronage' of the catchment population is to be counted on and for the long term viability of the Trust.

Choice for Orthopaedics is running on an earlier timescale and has been addressed as part of the Trust's establishment of an elective care centre at St Albans. The likely implications of this have been factored into the commissioning plans. Adequate critical mass of clinical services will become a more pertinent issue as sub-specialisation develops further, for example the

Royal College of Surgeons have recently announced that effective general surgical service require a minimum catchment population of 300,000.

- Changing needs of healthcare in general which impact on the way in which care is delivered, such as the impact of technology
- The current pattern of acute hospital services throughout the country has resulted in too many small DGH type hospitals serving very small populations, making the delivery of high quality care, which offers good value for money, very difficult
- The need to align resources with modern clinical practice, particularly the need to invest in community services to replace services currently provided in acute hospital
- Changing patterns of work as a result of the impact of the European Working Time Directive

3.2 Local Context

In the medium term the Trust is looking to achieve financial balance in 2007/8 and beyond and address the assumed loss of income in subsequent years as the PCTs commission activity away from the Acute Sector with a view to reproviding appropriate activity closer to home. The PCT's commissioning intentions (as highlighted in the Acute Services Review) underpin the Trust's decision to consolidate acute services on one site as the level of activity commissioned from acute Trusts can not be delivered economically, efficiently and safely on more than one site.

Specifically there are a series of linked initiatives that reflect a consistent direction of travel for west Hertfordshire. They can be described as follows:

- PCT Strategies
    - Investing in Your Health
        - A new major acute hospital for west Hertfordshire at Watford
        - Surgicentre
    - Acute Services Review
- Trust Strategic Direction
    - Improving Operational Efficiency – Turnaround Programme
    - Improving Clinical Effectiveness – service redesign
    - Delivering a Healthy Future
    - New major acute west Hertfordshire Hospital at Watford Health Campus

These initiatives are described in detail below.

3.2.1 Local Health Economy Overview

Until last year the local health economy comprised of four Primary Care Trusts (PCTs) albeit operated as two strategic alliances. This structure was reorganised from the 1 October 2006 and as a consequence there are now two Primary Care Trusts one covering west Hertfordshire and the other covering east and north Hertfordshire. One executive team, covering the two organisations, manages the PCTs.

The financial position of the local health economy has been fragile for many years and the level of debt within the west Hertfordshire PCT in 2006/7 stood at £41 million.

In response to national pressures the NHS organisations in Hertfordshire and South Bedfordshire jointly agreed to undertake a review of services in June 2001. The objective of this review was 'to create a network of high quality and sustainable health services[3]'. This review, known as Investing in Your Health (IiYH), was subject to public consultation and in November 2003 the health economy agreed the final configuration of services as detailed below:

- Two acute hospital sites for Hertfordshire
- Segregation of planned care from acute care site
- The creation of community Diagnostic and Treatment Centres (cDTCs)
- The expansion of primary care services.

[3] Source :Investing in Your Health – A Consultation Paper – March 2003

3.2.1.1 Overview of Investing in Your Health

The Trust's strategic direction has been heavily influenced by the IiYH strategy since 2003 as it describes a future strategic model for primary, community and intermediate care services as well as hospital services. Clinicians and managers at WHHT fully endorse the service model proposed under IiYH, but acknowledge that significant service re-design will be necessary for the new models to be fully implemented across the health economy.

As a consequence of the IiYH formal consultation process a strategic outline case (SOC) was submitted to the Department of Health. The SOC proposed that acute hospital services should be centralised on one location for each locality with services located at Watford General Hospital site for west Hertfordshire and at a new location in Hatfield for east and north Hertfordshire. It was proposed that the Stevenage and Hemel Hempstead sites would both become planned care centres with the co-location of all low risk elective surgical services.

The overall timescale for the full implementation of IiYH was 2014.

The strategy set out a network of services across the whole health community with inevitable changes to patient flows. It was assumed within the Strategic Outline Case (SOC) that hospital services would be decongested as a result of services shifting from a traditional 'hospital–centric' to a 'closer to home' service model.

The affordability of the IiYH SOC was predicated on growth assumptions in PCT income, however, since that time this funding has been required to mitigate the cost pressures of other policy imperatives such as Agenda for Change, the Consultants and GP Contracts and the full impact of payment by results, the effect of which could not have been quantified at the time. Therefore, whilst the principles inherent within IiYH are sound from a clinical perspective, the ability for the health economy to afford the significant capital costs required to implement the strategy is a major concern. In addition, it was anticipated that either the Watford or the Hatfield PFI schemes might not pass the Private Finance Units affordability review of PFI schemes given the financial health of both the acute Trusts and their ability to service the unitary charge. This concern has led to the new EoE SHA commissioning the Acute Services Review. This is described in more detail below.

3.2.1.1.1 Watford Health Campus

The development of a new acute hospital on the Watford General Hospital site was not only part of the implementation of IiYH but is also an important facet of a wider social regeneration scheme involving the Trust called the Watford Health Campus.

The Health Campus seeks to not only significantly improve health care by the provision new facilities but also to enhance a deprived part of Watford by providing employment opportunities, primary care services, housing, leisure facilities, sustainable energy production, much needed accessible green space and improved access to west Watford. The role of the Private Finance Initiative (PFI) funded new hospital development in the Watford Health Campus is discussed more fully in section 3.2.2.4

3.2.1.1.2 Surgicentre

In November 2003 – following the ***Investing in Your Health*** public consultation – a decision was taken to separate emergency and planned hospital care in Hertfordshire in order to improve efficiency and to help avoid the cancellation of planned operations. Planned treatment was to be provided in new "Surgicentre" at the Lister and Hemel Hempstead Hospitals.

Subsequently, the local NHS joined the Department of Health's Independent Sector Treatment Centre programme in order to find a private sector company that would develop the new Surgicentre. Clinicenta was chosen as the preferred bidder.

Through detailed discussions with Clinicenta it has become clear that physical constraints on the Hemel Hempstead site were leading to a more complex and more costly design and that the proximity of the site to residential property was resulting in onerous and costly planning requirements. These and other factors combined meant that the proposed private sector Surgicentre at Hemel Hempstead Hospital would be more expensive than expected and that planned care services in west Hertfordshire - delivered directly by the NHS – would offer better value for money. The Trust and PCT are therefore consulting on the long-term future location of planned care in west Hertfordshire.

However, before the affordability issues were fully understood In November 2006, the West Hertfordshire Hospitals NHS Trust board made an interim decision to locate planned care services at St Albans City Hospital until the proposed private sector Surgicentre at Hemel Hempstead Hospital was expected to be completed. This decision followed the ***Delivering a Healthy Future*** public consultation. As stated above the long-term location of an NHS run Surgicentre is included in the current Acute Services Review consultation. Hemel Hempstead and St Albans hospital sites are both considered, however, SACH is the preferred option of the Trust as it offers the greatest value for money.

St Albans City Hospital Future

Following its decision in November 2006 the WHHT Board approved a Business Case to centralise planned care at St Albans City Hospital. In February 2007. As discussed above the development will accommodate planned care services at St Albans until the new Surgicentre is completed. The expected life of the asset was 2 to 3 years. However if St Albans City Hospital is agreed as the new Surgicentre location then the expected life of the asset will extend.

3.2.1.2 Acute Services Review

In response to the affordability issues associated with IIYH described above and other financial pressures, the new East of England Strategic Health Authority (SHA) announced a review of acute services across the East of England.

This review examined the planning assumptions of IiYH particularly regarding the capital cost of acute hospitals and the impact of changing patient flows and income. The review has concluded that a new PFI funded hospital at Hatfield is not affordable. It has also concluded that an acute centre at Watford for West Hertfordshire is justifiable.

The Acute Services Review now proposes the establishment of a local general hospital at Hemel Hempstead, which will include an Urgent Care Centre, intermediate care, diagnostics and outpatient services. The Trust and the PCT will work together to produce a Business Case, which will support this development.

The Trust has been fully involved in the review and believes that the review is extremely unlikely to significantly alter the proposed configuration of acute hospital services in west Hertfordshire from that outlined in IiYH. The most major change is the location and extent of capital development for east and north Hertfordshire. This has a small but positive impact on the size of the catchment population for WHHT, the effect of which can be accommodated within the PFI design solution.

This revised strategy is currently out to public consultation, which is taking place between June and October 2007.

3.2.2 Trust Strategic Direction

Set against the national strategic context the Trust's ability to deliver sustainable acute clinical services and maintain a robust financial position and the action necessary to resolve these pressures have dominated the short-term strategic direction of the Trust. Without financial stability the Trust's ability to meet its statutory obligations, in terms of the delivery of safe acute services and financial balance will be severely affected.

The need to embed high quality financial management and operational control into the organisation is a high priority. This will be achieved by a radical re-structure of the Finance Department including investment in new posts and a rigorous professional development programme to improve financial management and planning skills both within the finance team and those of the operational managers. This will be set against the implementation of a robust performance management regime throughout the organisation focusing upon accountability and achievement of key financial and service targets.

The Trust has pursued a number of other strategies over the last financial year to deliver financial stability. Individually these strategies have led to significant cost reductions being implemented, however amalgamating these strategies into an overall package offers even greater service and financial benefits.

These strategies fall into three main categories:

- Improving operational efficiency (Turnaround Programme)
- Improving clinical effectiveness (Service Redesign)
- Streamlining Services (Delivering a Healthy Future)

3.2.2.1 Improving Operational Efficiency – Turnaround Programme

The Trust has worked on a standard savings plan known as the Turnaround Programme. This has resulted in cost reductions in £4m in 2005/06 and £12m in 2006/07. Work is ongoing to find further savings in order to align income reductions with cost reduction.

3.2.2.2 Improving Clinical Effectiveness – Service Redesign

The Trust has reviewed its clinical practice and has identified that further savings can be achieved by improving clinical performance. The Trust has set a target to perform at the level of the top 20% of the hospitals in the country, in terms of clinical practice.

Evidence suggests that highly effective clinical services not only improve clinical outcomes, but also significantly improve patient experience by:

- Improving patient care;
- Attracting and retaining high calibre staff;
- Segregating emergency and planned care; and
- Making services more responsive to patient needs.

It should be noted that in some areas the Trust's current level of clinical effectiveness is high, with the opportunity for improvement in others.

3.2.2.3 Delivering a Healthy Future (DaHF)

Improving both organisational efficiency and effectiveness contributes to reducing the Trust's financial deficit. Whilst both strategies have assisted the Trust in reducing its deficit position greater savings are necessary if the Trust is to sustain this position and move from a deficit position to generating the level of surplus required to facilitate future investment in the quality of clinical services. To achieve this the Trust proposes to radically reconfigure its acute services. This reconfiguration is in line with the overarching IiYH strategy discussed above, specifically the segregation of planned and acute care and site reconfiguration.

The scale of the financial problem suggests that the Trust's workforce needs to be reduced by in excess of 500 posts. Whilst approximately 100 of these can be achieved by redesigning how clinical services are delivered, the remainder requires a significant reduction in service duplication. This can only be achieved by site rationalisation.

To this end the Trust explored a number of options to reconfigure services as rapidly as possible in order to maximise the financial and service benefits. Whilst the reconfiguration proposals are in line with the principles set out in IiYH, DaHF seeks to achieve the reconfiguration broadly within the estate currently available plus some minor adaptations in advance of the new hospital being opened. The key features are:

- Consolidation of emergency care on the Watford General Hospital site
- Provision of most planned surgery on another hospital site at SACH in the short term; and
- The provision of a wide range of outpatient, diagnostic, urgent care and intermediate care services provided on the non-acute hospital sites in conjunction with PCT.

Given the poor condition of the estate and lack of spare capacity on all sites it is necessary to provide 6,000m2 of additional clinical accommodation on the WGH site and to make a number of minor alterations to the HHGH and SACH sites in order to implement the reconfiguration proposals. The scope of the work has been kept to a minimum as the Trust sees this as an interim solution in advance of the new hospital and does not wish to jeopardise its future.

This OBC/FBC will only address the case for consolidating acute services at Watford. The additional funding required rationalising of the Hemel Hempstead site will be subject to a further OBC/FBC as previously discussed.

The Trust accepts that to obtain investment in a new acute hospital in west Hertfordshire it is vital for the Trust to be performing well and have a strong financial position.

3.2.2.4 New Major Acute west Hertfordshire Hospital at Watford

As mentioned previously, the Trust is also working towards a new hospital on the Watford site, probably funded via the Private Finance Initiative, which will conduct the "acute" element of the Trust's current workload. The local Primary Care Trust has recently gone to Public Consultation (the ***Acute Services Review***) with proposals that see a significant shift of non-acute work to the primary care setting. The hospital proposed takes full account of these changes and the modelling of the activity has been conducted in conjunction with the Primary Care Trust's Director of Strategic Commissioning throughout the preparations for the consultation.

The proposed new facility is to be constructed immediately adjacent to the existing Watford General Hospital and is being closely co-ordinated through the Watford Health Campus as previously described . The master planners appointed to the Campus are the same Architectural practice as has been appointed for the hospital Public Sector Comparator so co-ordination of these elements is inherent within the project management structure and arrangements.

The Project has yet to go through the NHS PFI Review being conducted for the Private Finance Unit by Richard Glenn. This review of the Project has been delayed to enable the ***Acute Services Review*** to be concluded and to ensure that activity forecasts were consistent with the PCT's future expectations and plans.

The proposed new hospital will enable the Trust to deliver additional efficiencies over and above those identified in this Business Case, due to the ability to increase bed occupancy rates and further reduce average length of stay as a consequence of the enhanced clinical adjacencies and improved clinical process.

The single most compelling argument for the new hospital is the need to replace the existing estate, which is not viable in the long-term without significant major investment and significant refurbishment works. A preliminary estimate of the refurbishment cost has indicated that it would be less costly in capital terms to build new, than to refurbish. This is a reflection of the difficulty of refurbishing an occupied, complex and poorly maintained facility.

The Outline Business Case for the proposed new facility is expected to be submitted for SHA/ DoH approval during Summer 2008, with a financial close expected in 2010 and Hospital Operational in 2014.

The scheme proposed in this Business Case is sensitive to the requirements of the new hospital and reflects a flexible solution that potentially can be reused as part of the PFI. It is located away from the proposed PFI development does not intrude into the space earmarked for the new hospital. The DaHF scheme will also place the Trust in the right position to move forward with the new hospital on a firm clinical and financial footing.

This Business Case is an interim solution pending the redevelopment of Watford General Hospital into the single site Acute Hospital for West Hertfordshire as identified in Investing in Your Health.

4. Case for Change

4.1. Introduction

This Business Case sets out the strategic direction for Delivering a Healthy Future and is based on the financial and clinical needs of the organisation which reflects the National drivers, local context and enables the Trust to meet performance targets. The future Hospital plans identified in Investing in your Health will address these issues into the long term, but the Trust cannot afford, clinically or financially, to wait for the completion of the new hospital to implement these necessary service changes. It is essential that some of these changes are implemented early to ensure the Trust has a strong clinical and financial platform from which it can develop in a new facility.

The case for change is reflected in two distinct areas, clinical and financial.

4.2. Clinical

The Trust currently provides a mixture of elective and non-elective services across its three sites. By splitting emergency and elective care and centralising acute care on one site, the Trust will be able to address the following issues:

- Clinical Safety
    - Infection control
    - Segregation of trauma and emergency services away from planned procedures facilitates screening and appropriate care of elective patients (reducing cross infection rates and lengths of stay)
    - Offers the opportunity for full consultant led clinical services around the clock with no further increase in resources
    - Provides a critical mass of patients to be able to develop and maintain sub specialist expertise.
    - Equipment, less risk of routine maintenance or breakdown affecting patient care
- Workforce
    - Concentrates specialist staffing and expertise rather than dispersing them across more than one site
    - Training will be easier to manage and co-ordinate with a concentration of staff in one place
    - Morale and the ability to recruit and retain staff will be enhanced through more effective use of staff delivering more focused services. The Trust will be able to manage downward pressures on costs more effectively with a consolidated service relieving some of the pressures currently put on staff.
    - Increased Sub Specialisation opportunities for staff
    - Annual, study and sick leave cover will be improved
    - It will be possible to achieve compliance with the EWTD within tariff
- Facilities and buildings
    - Current levels of ventilation and decoration make it difficult to reduce hospital-acquired infections.
    - Space between bed centres is current very limited along with access to sanitary facilities both of which can be a contributory factors in the spread of infection
    - Working environment will improve significantly particularly in A&E, AAU, CED, Critical Care, Post Grad, Finance and Wards

- Patient Experience

    - Cancellation of procedures cannot be reduced significantly without segregating elective work from non elective
    - Acute services currently lack the focus, which an acute centre would bring.
    - Side rooms are currently in short supply
    - Current levels of decoration do not create a healing environment or create a perception of cleanliness which reflect in poor PEAT assessments.
    - Wayfinding – current design is confusing for patients, visitors and staff alike, leading to dissatisfaction and inefficiencies and impacts on clinical efficacy

4.3. Financial

By segregating emergency and elective care and centralising acute care on one site, the Trust will be able to address the following issues:

- In the context of the Government's White Paper 'Our Health Our Care Our Say' and the consequent declining activity provided by the Acute sector, provision of acute services across three sites is not sustainable;
- Levels of backlog maintenance are high with a disproportionate element of the Trust's capital programme having to be committed to the estate (as opposed to IT and equipment)
- Current configuration would not allow for compliance with EWTD without significant additional resource
- To maintain compliance with current guidance and legislation would increase the level of duplicate services and resources
- Enabling the Trust to meet its statutory responsibilities including Health and Safety legislation.

4.4. Conclusion

Without significant early investment the Trust will be unable to sustain provide safe clinical services, which would be financially sustainable. The only way this can happen is through the consolidation of acute services onto one site. This Business Case demonstrates that Doing Nothing is not a sustainable option.

5. Activity Planning and Performance Assumptions

5.1 Background to Modelling

The Trust set out its objectives to secure a sound clinical base and achieve significant financial savings to guarantee long-term financial stability. In order to ensure that it achieves these objectives it employed the services of specialist consultancies. Of particular relevance to this section are TRIBAL Secta and TEAMWORK.

The role of TRIBAL Secta was to develop a bed & facilities model and associated financial model to ensure that the plans and options being generated by the Trust would be both challenging and achievable but would also deliver the required savings.

The complementary work by TEAMWORK focussed more on validating the proposed model of care and how the Trust could deliver high performing services both in terms of efficiency and quality of service.

It should be noted that these pieces of work were not undertaken in isolation and that the findings from TEAMWORK were integrated into the model developed by TRIBAL Secta to ensure that there was a coordinated and validated vision for the future. This work was subsequently shared with the PCT in the development of the strategic commissioning plan.

The main thrust of the discussion below relates to bed modelling, as this is where it was identified that the greatest saving could be made. However, there is also a brief description of changes relating to other facilities, notably operating theatres.

All capacity modelling has been based on the PCT's strategic commissioning intentions developed in response to the ASR, see Table10. These intentions fully account for the delivery of government policy through admission avoidance, care closer to home and use of the independent sector and therefore, the east of England commissioning framework. They are described in more detail in the ASR Business Case, which forms Appendix K of this document. Since the DaHF project is effectively the Trust's means of implementing the ASR in advance of the availability of new buildings, the planning methodology is the same for each project. This ensures consistency and robustness of the assumptions.

ACTIVITY BY PROVIDER						
	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13
Elective and day cases	32,003	27,934	27,847	27,013	27,011	27,127
Non elective	32,784	32,766	29,201	29,906	29,915	29,932
Outpatients	90,178	83,970	74,597	71,244	67,864	67,947
Outpatients follow ups	143,625	130,587	116,854	112,781	108,669	108,984

SPEND BY PROVIDER						
	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13
Total	155,286	149,700	139,014	135,934	136,406	137,815
Elective and day cases	34,960	31,049	31,637	31,220	31,249	31,407
Non elective	54,697	54,330	47,345	48,470	48,572	48,689
Outpatients	24,745	23,008	20,567	19,766	18,957	18,994
A & E	8,629	8,802	8,074	4,147	4,326	4,424
Non PbR	32,255	32,511	31,390	32,332	33,302	34,301

Table 10 - PCT Strategic Commissioning Plan – ASR Preferred Option

5.1.1 Activity Planning

A number of key drivers, developed jointly with the PCT were identified that would underpin the level of activity that would be undertaken by the Trust. These are discussed briefly below.

5.1.2 Demography – growth figures were derived from two sources: Hertfordshire District Council for Hertfordshire and the Office of National Statistics for other areas. The rates of change were then applied as appropriate to all activity by area.

5.1.3 A&E catchment - was determined on the basis of two assumptions: Minor A&E activity currently treated at Hemel Hempstead would stay at Hemel but be treated in the PCTs Urgent Care Centre and second that a proportion of major A&E activity from Hemel Hempstead would be lost to other providers as the service shifts to the Watford General Hospital site.

5.1.4 Inpatient catchment was assumed to reduce by some 4,000 elective admissions as a result of the move, based on a detailed postcode analysis.

5.1.5 Outpatient catchment was assumed to experience only minor reductions from the current level, given that services will continue to be provided from the existing locations.

The model also reflects the PCT's commissioning intention to provide more outpatient care in community or primary care settings. The model assumes that 10% of current level of appointments will no longer be required as the activity will be undertaken in GP surgeries instead, and a further 10% will be undertaken by GPwSI's or specialist nurses or other healthcare professionals such as physiotherapists.

5.1.6 Admission Avoidance was assessed based on the advice received from the relevant local PCTs. This has removed in excess of 4500 spells from the Trust's activity base.

5.2 Performance Assumptions

Two performance factors were considered to have the greatest impact on the Trust's plan: average length of stay and shift to day case.

2005/06 outturn average lengths of stay for WHHT were benchmarked against a peer group of providers of similar size and location (using 2004/05 HES data, the most recent year available). The Trust is revalidating these benchmarks as part of its ongoing planning and performance management regime. The benchmarks have been calculated for each HRG and take into account elective / non-elective mix and the ratio of episodes to admissions at WHHT compared to the peer group.

The benchmark chosen was current (2005/06) WHHT performance for a given HRG or 80th percentile from the peer group, whichever was shorter. While, the Trust recognises that these benchmarks are a little dated but has also developed an implementation plan with 20 beds less than indicated by the bed model to reflect a more challenging target. This represents a further 16% reduction in the acute bed base, therefore the Trust is confident that the reductions are challenging but realistic against expected performance standards.

This resulted in a reduction in average length of stay of 0.39 days (11.2%) for electives and 0.80 days (11.2%) for non-electives. More detail is shown at specialty level in Appendix W.

This has also resulted in a reduction in excess bed days which addresses the EoE commissioning framework standards included in the 07/08 contract.

5.2.1 Shift to Day Case

The same process of defining assumptions was also applied to this performance measure. However, the gain was relatively small in terms of 2.4 beds released as shown in the table below.

5.3 Consistency between the two sets of modelling

The TEAMWORK analysis drew on national and international experience of what can be achieved in relation to various care pathways. Although the overall findings were somewhat greater than the TRIBAL Secta analysis by the time this was adjusted for what could be delivered over the timescale relevant to the DaHF project, there was effectively no difference between the two pieces of work. This gives added confidence that the assumptions on which the Trust has based this Business Case are both challenging and achievable.

5.4 Summary of the Bed Model

The tables below show the effect on the beds required from the baseline position through to the post DaHF position. This reflects the findings above and underlines the Trust's intention to operate a more efficient service for a slightly reduced population base, reflecting patient choice as services are rationalised onto fewer sites.

Specialty	Total Beds in 2007/08	Population Changes	Catchment Lost	Admission Avoidance	Reduced LOS	Shift to DC	Total Beds post DaHF In 2009/10
General Surgery	95	1.9	-9.6	0.0	-5.4	-0.5	81
Urology	15	0.4	0.0	0.0	-1.5	0.0	14
Trauma & Orthopaedics	94	1.8	-8.6	0.0	-11.4	-0.6	75
ENT	3	0.0	0.0	0.0	0.0	-0.1	3
Ophthalmology	0	0.0	0.0	0.0	0.0	-0.1	0
Oral Surgery	0	0.0	0.0	0.0	0.0	0.0	0
Plastic Surgery	0	0.0	0.0	0.0	0.0	0.0	0
Paediatric Surgery	0	0.0	0.0	0.0	0.0	0.0	0
Accident & Emergency	17	0.3	-3.3	0.0	-2.0	0.0	12
Anaesthetics	0	0.0	0.0	0.0	0.0	0.0	0
General Medicine	119	3.2	-22.8	-1.1	-10.2	0.0	88
Gastroenterology	22	0.6	-4.4	-0.1	-2.0	0.0	16
Endocrinology	2	0.1	-0.4	0.0	-0.1	0.0	2
Clinical Haematology	3	0.1	-0.4	0.0	-0.7	0.0	2
Cardiology	34	1.0	-4.0	-0.2	-3.5	-0.1	27
Dermatology	0	0.0	0.0	0.0	-0.1	0.0	0
Thoracic Medicine	20	0.6	-2.1	-0.2	-1.9	0.0	16
Nephrology	0	0.0	-0.1	0.0	0.0	0.0	0
Medical Oncology	0	0.0	0.0	0.0	0.0	0.0	0
Neurology	0	0.0	0.0	0.0	0.0	0.0	0
Rheumatology	11	0.3	0.0	-0.1	-1.1	0.0	10
Paediatric Medicine	45	0.0	0.0	0.0	-2.8	0.0	42
Elderly Medicine	145	2.5	-15.4	-1.2	-10.4	0.0	121
Obstetrics	50	0.0	-0.5	0.0	-2.6	0.0	47
Gynaecology	23	0.1	0.0	0.0	-1.4	-1.0	21
Clinical Oncology	0	0.0	0.0	0.0	0.0	0.0	0
Immunopathology	0	0.0	0.0	0.0	0.0	0.0	0
Grand Total	**698**	**12.8**	**-71.6**	**-3.1**	**-57.1**	**-2.4**	**576**

Table 11 – Drivers for Changes in Bed Numbers from 2007/8 to 2009/10

The Trust also recognises that the proposed changes will have an effect on both its activity and income base. The net reductions are summarised below and are reflected elsewhere in the strategic and economic analyses. The Trust is confident that this revised model will provide a sustainable service that is financially viable.

Driver	Projected Spells	Projected Income	Projected Critical Care Income
Baseline Data	**71,532**	**£115,519,717**	**£8,961,007**
Population Changes	1,507	£3,325,562	£163,001
Catchment Lost	-4,331	-£9,084,508	-£935,615
Admission Avoidance	-4,572	-£3,806,686	£0
Reduced LOS	0	-£2,954,992	-£64,933
Shift to DC	0	-£27,775	£0
Post DaHF Levels	**64,137**	**£102,971,318**	**£8,123,459**

Table 12 - Effect of DaHF Assumptions on Activity and Income

The changes in income highlighted in the Table above only account for the changes in income received for inpatients. Further detail is shown in the appendices with the full model available should further detail be needed.

5.5 Other Facilities

5.5.1 Operating Theatres

A review of current services has identified that the Trust is utilising more theatre resource than should be required for the level of activity that it is undertaking. This relates partly to efficiency but also to the configuration of services and sites.

The requirement to maintain an emergency take for surgical cases on two acute sites with associated theatre support is highly resource intensive. By confining this to a single acute site, the Trust can reduce both its in-hours planned sessions, achieving greater utilisation of the centralised trauma / CEPOD sessions and also its out of hours operating.

The existing utilisation of theatres is variable but is not good in some areas. By separating out the planned and emergency workstreams and improving the associated processes, the Trust with its advisers, has identified that there can be a substantial reduction in the amount of planned theatre sessions with no associated reduction in capacity (in terms of patients treated). Clearly, the anticipated loss of catchment area (identified above) will also tend to reduce the demand for operations.

The Trust is also actively pursuing a range of more innovative approaches to theatre utilisation and has employed a consultancy called 'Healthworks' to assist with this process as part of its service redesign work. By considering fully pooled lists (where appropriate) and non-standard working days e.g. three session days or extended sessions, it is apparent that further reductions in theatre requirement can be made.

Taking into account the above changes and without relying on the final set of most innovative changes, the Trust is confident that it can move from the existing position of having 17 theatres to a post DaHF position of 12 theatres plus an ophthalmology procedure room.

5.5.2 Outpatient New to Follow Ratios

The Trust has also examined the rate at which outpatients are followed up after their initial consultation. While there remain some concerns about the state of readiness of community-based service to receive these patients at an earlier point in their care pathway, there are clear opportunities to reduce this rate. This is also in keeping with both national strategy and that of the local PCTs. While important in its own right, this is not viewed as a particularly crucial element of the DaHF project as the savings released are likely to be matched closely by the loss of income, especially as services are to be maintained in existing locations.

5.5.3 Outpatient Performance assumptions

Performance in two areas of outpatient activity has been analysed. These are:

- DNA rates for first appointment;
- DNA rates for follow-up appointment.

For each area, 2005/06 Trust performance has been benchmarked against a peer group of similar acute providers (see Appendix W). The source of the benchmarking data is the national outpatient activity figures published by the Department of Health[4].
The benchmarking data only covers consultant-led outpatient activity, so nurse- and technician-led activity in the Trust's data has been excluded from the analysis.

Clinic Assumptions
In order to calculate the number of clinics required to accommodate projected outpatient activity, the following methodology has been applied:

- Assumptions made regarding the length of first and follow-up appointments
- Assumptions made regarding availability and utilisation of clinics to calculate how many clinics are required to accommodate the projected number of attendances. Average appointment times by specialty have been derived from the 2005/06 outturn data. These can be seen in Appendix W. The following availability and utilisation targets have been assumed for scheduled clinic time:
- 46 weeks per year physical availability;
- 5 days per week;
- 2 sessions per day;
- 210 minutes per session;
- 90% utilisation of scheduled clinic time.

5.6 Summary

The Trust has based its planning on a range of challenging but realistic performance assumptions as confirmed by external benchmarking performed with the support of specialist advisors. In addition, the Trust has applied the PCTs strategic commissioning plans agreed with the SHA in order to base it's own capacity assumptions.

[4] From Department of Health Hospital Activity Statistics, Outpatient Attendances 2005/06

6. Objectives, Benefits and Constraints

6.1. Investment Objectives

The investment objectives for this project are described below in the table below:

Investment Objective	Existing Situation	Problems associated with existing situation
1. To improve the effectiveness of the clinical services in order to meet national performance and quality targets by 200809.	Services offer variable levels of quality across the Trust.	Achieving clinical effectiveness and meeting performance targets has been a challenge for the Trust. This has often been achieved by increasing the resources utilised rather than by redesigning the services radically thereby increasing the financial burden on the Trust.
2. To improve efficiency and productivity of all clinical and non-clinical services to reduce unit cost to at or below tariff by 2008/09.	Capacity has not been effectively aligned with activity requirements due to the constraints around fixed and semi fixed costs and working practices as a consequence some services are fragmented across the Trust sites.	Facilities such as operating theatres are not routinely optimised to their fullest extent. This creates pressure on capacity elsewhere in the Trust and results in expensive resources being wasted. Leading to 'near' waiting list breaches and bed pressures compounding other operational problems in the Trust.
3.To facilitate a significant reduction in the cost base of the Trust, enabling the Trust to provide high quality services to its patients at tariff or below by 2008/9.	Services are currently duplicated across two main sites.	The current configuration of services generates many dis-economies of scale that increases costs and result in services costing more than the PBR tariff income generated.
4. To reduce staff costs by facilitating significant service re-design by 2007/8.	Staff are spread across all sites with variable levels of expertise, with vacancies routinely covered by temporary staff. The current duplication of services and the requirement to meet the European Working Time Directive requires additional staff across all sites.	Staff expertise is not maximised. Temporary staffing often carries a premium cost and can have a detrimental effect on permanent staff and their ability to deliver a high quality cost effective service. The creation of 'legal' rotas requires a significant number of additional staff and therefore, additional cost.
5. To ensure the Trust can meet its statutory obligations no later than 2008/09.	The Trust is unable to able to meet its statutory obligation to break even unless radical action is taken to reduce costs. Capital investment in the Trust's estate has been kept to the bare minimum over a number of years.	Current service configuration constraints have resulted in the Trust operating services at a substantial loss. Investment in the estate and major equipment has been woefully inadequate over the years giving rise to prosecution under Health and Safety legislation.
6. To provide a robust platform to enable the Trust to secure the development of an affordable new acute hospital by 2014 for west Hertfordshire.	The current financial health of the Trust seriously jeopardises the Trust's ability to secure a new hospital under PFI.	A strong financial platform will be required if the Department of Health are to sanction the Trust pursing a PFI scheme. In addition the Trust need to have a strong financial position in order to attract the best PFI partner.

Table 13- Investment Objectives

6.1.1. Business Objectives

The overall objective of the Trust is to ensure the delivery of high quality acute hospital services for the people of west Hertfordshire, making best use of the resources available.

Acute services in Hertfordshire are barely fit for purpose in the 21st Century and are increasingly unsustainable clinically, financially and in terms of infrastructure.

In recent years the Trust has fallen short of the performance standards required by the NHS despite having some very able staff. The Healthcare Commission's *Annual Health Check*[5] found the Trust to be weak on both quality of service and on management of resources; one of only 24 Trusts to be found wanting on both counts. The Trust's lead commissioner prior to the PCT reconfiguration, Watford and Three Rivers was also assessed as weak.

This performance accords with that of the previous star rating league tables, under which the Trust moved from zero star status in 2004 to one star in 2005.

As stated previously the current service configuration severely impedes the Trust's ability to deliver services within the PBR tariff income it receives, leading to an increasing deficit and therefore, makes it impossible for the Trust to meet its statutory responsibility to break even.

The Trust financial position deteriorated significantly as the previous non-recurrent "bale-outs" ceased, exposing the extent of the underlying financial problems. Whilst 2006/07 saw the Trust achieving its £11.5 deficit control total, further financial improvement requires significant change.

The current configuration of services severely limits the opportunity for clinical teams to work effectively for a variety of reasons including:

- Duplication of acute services at HHGH and WGH requires full on-call acute services rotas to operate on both sites.

- European Working Time Directive has decreased the number of hours staff can work per shift therefore increasing the number of staff required to establish a legal rota. Added to this it is becoming more difficult to fill many of the posts necessary to populate rotas as the work is not necessarily fulfilling. Therefore, finding substantive staff is become increasingly difficult. As a consequence, locum staff often have to be employed to ensure compliant rotas, many of these staff are paid at a premium rate.

- Major equipment, particularly imaging equipment is thinly spread across the localities. As a consequence service continuity can be severely affected when equipment fails or requires routine maintenance. Such events make the services very vulnerable and impact significantly on both the quality and safety of patient services.

  For example, both the hospitals at Watford and Hemel currently have one CT scanner. A CT scan is a vital diagnostic test for many emergency patients and rapid access to a CT scan can dramatically improve the prospects of recovery for some patients, for example, those who have suffered a stroke. Should the CT breakdown at Hemel Hospital and a patient is admitted to A&E arrangements have to be made to transfer the patient to WGH for a scan. The time taken to transfer the patient once the decision is made that they require an urgent CT delays the diagnosis and initiation of the appropriate treatment. This can impede the patient's recovery significantly.

  The CT Scanner is just one example of many issues that arise owing to the need to duplicate services and equipment across all sites.

[5] Annual Health Check, Healthcare Commission 2006

- The current physical configuration of services has fostered a culture of services silo working. In essence, most clinical services operate on a site-specific basis and therefore do not optimise the potential economies of scale that an expanded team could derive. This makes services more expensive to deliver.

- Previously capital funding was vired into revenue budgets. This has resulted in all the sites having a significant amount of backlog maintenance and buildings that are in a very poor state of repair. The infrastructure on all sites is under immense stress and is on the limits of its capacity resulting in regular unplanned breakdowns. The Health and Safety Executive prosecuted the Trust last year for contravening a number of health and safety regulations, many of which relate to the condition of the estate throughout the Trust.

- The overall culture of the Trust as a consequence of the issues listed above is poor which has inevitably lead to low morale amongst staff from all disciplines. This is beginning to lead to good staff leaving the Trust.

- The catchment population for each hospital is small and below that considered a suitable critical mass[6] to ensure a consultant led trauma service 24 hours a day for specialist services. Increasing sub specialisation particularly in surgical services makes it desirable to have discrete on-call rotas for Vascular, Urology and Gastro services that would be impossible without centralising acute services.

6.1.2. Scope of the DaHF Project – second phase

Planning permission has been granted conditionally until December 2017 so as not to prejudice the Watford Health Campus Master Plan. However should the Campus not proceed including the development of the new hospital the Trust will be able to renew this permission on the basis that it still requires the AAU. (See Appendix Q)

The scope of the Project is as follows:

- **Watford – New Build**
  - Admissions Unit, 120 acute beds (24 single rooms), new CT scanner, new x-ray, pharmacy manufacturing plant, pharmacy dispensary with robotics, space for 2 adjacent catheter labs

- **Watford – Refurbishment**
  - Princess Michael of Kent building
    - Expansion of ITU/HDU facilities
    - Expansion of A&E facilities for resuscitation and majors
    - Expansion of Children's Emergency Department for dedicated resuscitation, and additional treatment rooms
    - Relocation of discharge lounge from Saracens to front of hospital location
    - Refurbishment of the main entrance to the hospital site with co-location of public services available for patients
    - Re-designation of acute wards
  - Saracens
    - Refurbishment of portacabin to create clinical haematology day care unit
  - Finance/H Block & Pharmacy Building
    - Refurbishment of first floor of H block and the pharmacy building to create centralised Post Graduate Medical Centre facilities
  - Site Access, Egress and Car Parking
    - Additional car parking of 120 spaces is included with expansion and improvements to the Cardiff Road car park
    - Changes in the routing of ambulance traffic, designated pedestrian areas and routing of public, staff and supplies vehicles on site

[6] Delivering High Quality Surgical Services for the Future, Royal College of Surgeons, England, 2006

6.1.3. Benefits

The main outcomes and benefits of the scheme are delivered by the achievement of the investment objectives and also described in Section 8.

The scheme delivers tangible clinical and financial benefits to the Trust. These are described in more detail in section 8. However one specific benefit relating to the scope of the scheme includes an overall increase in the percent of single rooms available in the Trust from 12.3% to 14.8%

6.1.4. Main Risks

Risks can be categorised in to the following categories:

- Strategic Risks – the impact of delay in delivering the project or it not being delivered at all;
- Project Risks – the risks of the costs of the project increasing or the savings highlighted by the project not being delivered.
- Operational and demand risks – the risk of the Trust either not being able to deliver operational requirements and/ or losing income as a result of not being able to manage potential demand

All these risks are considered as part of the risk analysis and the Trust's risk management strategy. Referred to in Section 12

6.1.5. Constraints

The major constraints in relation to this development can be described as:

- The ability of the Trust to deliver a long term acute facility at Watford. IiYH confirmed that the location for a consolidated acute facility should be at Watford. Recent additional work carried out by the Trust in support of the Acute Services Review has confirmed and endorsed this decision. This has also confirmed that any interim development to facilitate the rationalisation of services should be at Watford.
- The ability of the Trust to make clinical and financial efficiencies as a result of the development. The Trust's financial position and the commissioning intentions of the PCT mean that financial balance is not sustainable unless the Trust's sites are rationalized
- The availability of capital funds. The Trust will only have limited access to capital funds as a result of its current financial position. The amount of PDC available is limited as a result of the new capital regime. Although there is no definitive figure, the level of funding either though IBD or PDC will need to be kept to as low a figure as possible, due to capital availability and the extra revenue costs associated with a bigger capital spend
- The ability of the Trust to draw down capital funds. There may be a timing issue between the availability of funds and the Trust's cash flow projections
- The timing of the development vis a vis the longer term PFI scheme. Any short term investment will need to be considered against the Trust's long term proposals for a PFI funded hospital at Watford. The future use of any capital development beyond the medium term will need to be considered
- The location of all acute services on the Watford site. Investment in the scheme needs to account for the future location of services. This relates to the longer term life of any investment in the medium term.

6.1.6. Dependencies

There are several issues on which the project's success will depend:

- Achievement of stated performance targets. The development of the AAU will help the Trust achieve the 80th percentile ALOS and beyond
- Reduced number of hospital acquired infections
- Delivery of changed working practices to deliver clinical and financial savings
- The approvability of a subsequent Business Case to enable the Trust to realize the full level of savings identified in the medium term financial plan
- The referral patterns to be broadly consistent with the Trust's assumptions (the management of downside and upside risk is covered in the Trust's risk management strategy)
- Clinical and management support to the changes
- Public acceptance of the changes

7. Summary of Strategic Outline Case

The Trust and the Health Economy produced a strategic outline case in 2004 in the context of Investing in Your Health, with a proposed new acute facility in Watford funded by the Government's Private finance initiative. Whilst this is ongoing the Trust is looking to transfer acute services before the PFI scheme in order to realize clinical and financial improvements early. This scheme does not therefore relate to a specific SOC or an OBC. The Trust has agreed with the SHA that it should move straight to a combined OBC and FBC given the need to deliver the savings from reconfiguration as early as possible

8. Options Consideration

8.1 Introduction

The Trust has undertaken a series of option evaluations in moving towards a preferred option. In 2006 the Trust went out to consultation on two options around the short term future of elective care, given that it had already consulted on the long term location of acute services on the Watford site in 2003. The options were:

1 To centralise acute services at Watford with planned care located at Hemel Hempstead;
2 To centralise acute services at Watford with planned care located at St Albans.

The Trust decided in November 2006 to pursue option 2, on the basis that it was less disruptive to the Trust's operations and cheaper due to the existing infrastructure already at the St Albans site. The St Albans element of the scheme has been funded by the SHA in 2006/7 and is currently progressing and it is due for completion in September 2007.

The condition of the Trust theatre stock across all sites is variable, with the best facilities being at St Albans, option 2 enables the Trust to maximise the use of this asset. Option 1 would require the Trust to refurbish and expand the theatre suite at Hemel, which is in a poor condition whilst making it's best at St Albans redundant.

The development presented in this Business Case reflects the consolidation of acute services at Watford.

The original long listing exercise for and the Public consultation is included in Appendix M. During the original feasibility phase the Trust explored a long list of 32 options, this was reduced to an initial short list of 6 options following a number of multi disciplinary option appraisal exercises. This process resulted in the centralisation of acute services at Watford being the preferred option.

Any interim solution that left significant services on the Hemel Hempstead site was not considered as none of the clinical or financial benefits could be achieved without the consolidation of acute services on one site.

The majority of clinical and financial benefits are associated with operating acute services from only 1 site. With all three sites currently fully utilised, no vacant space exists and even accounting for efficiency gains it is not possible to achieve this without investment in additional accommodation.

Consequently the do minimum option was rejected.

8.2 Critical Success Factors/Constraints

The major constraints are discussed in section 5.6 and can be summarised as:

- The ability of the Trust to deliver a long term acute facility at Watford;
- The ability of the Trust to make clinical and financial efficiencies as a result of the development;
- The availability of capital funds;
- The ability of the Trust to draw down capital funds;
- The timing of the development vis a vis the longer term PFI scheme;
- The requirement to make significant savings in the short term (12 to 24 months);
- The ability to use the capital investment beyond the development of the PFI scheme; and
- The location of all acute services on the Watford site.

The critical success factors can therefore be described as:

- The delivery of significant sustainable savings;
- The early delivery of new ways of working which will be a significant step towards the development of the new hospital facility at Watford;
- The maintenance of a robust financial position in the Trust enabling a successful Foundation Trust application; and
- The achievement of improved clinical outcomes and clinical standards

8.3 Long List of options to deliver Watford Acute Services

The scope of the development reflects the final solution being located on the Watford site. The long list of options reflects this scope and is as follows:

- Redevelopment of the whole of the Watford site
- Transfer of some clinical functions off the Watford site and refurbish for clinical use.
- Renting accommodation locally for non clinical services
- Additional new build to accommodate extra capacity requirements
- Additional modular build to accommodate extra capacity requirements
- Relocation of maternity services to release space for extra capacity requirements
- Do Minimum, partial centralisation
- Do Nothing leaving services at Hemel Hempstead.

An analysis of the options and their ability to be delivered within the constraints of the scheme are highlighted below:

Option	Comment	Short listed
Redevelopment of the Watford site	The Trust's long-term strategy is to develop a new hospital on the Watford site. The Trust is currently developing an OBC for this. However the likely timescale for the completion of the scheme is 2014/15 . Although this is in the Trust's plans it does not deliver short term savings and could not be brought forward any quicker than the planned timescale due to the likely funding through the PFI	No
Refurbishment of non clinical facilities	Although there is theoretically enough space to accommodate the extra activity going into Watford, it is currently dispersed across the site in poor accommodation. The Trust would need to invest heavily to: • get the estate into satisfactory condition; • convert into clinically functional accommodation. There would be a significant risk in pursuing extensive refurbishment in poor estate which would worsen the economic position of this option In addition to this the accommodation would not be positioned in the right place on the site and the Trust would not therefore be able achieve key clinical adjacencies and would not be able to make the required efficiencies. The investment would only have a limited life with the forthcoming PFI scheme which would make it difficult to justify on economic or affordability grounds	No
Additional New build	This would deliver efficiencies, however the length of construction would be longer than a modular build and the Trust would therefore not be able to realize savings early. In addition to this the permanent construction would potentially need to be demolished when the PFI scheme is delivered to allow for residential accommodation and the rest of the campus development. Retaining the development would reduce the benefits that could be realised from the proposed campus PFI development and potentially not deliver good clinical efficiencies resulting in less ability of the	Yes

	Trust to make efficiencies in the future. The Trust would therefore need to account for any investment over a shorter period of time. This would reduce the financial benefit of the scheme	
Additional Modular Build	This would allow for the proposed efficiencies to be delivered, essential clinical adjacencies to be maintained in a short time. The modular nature of the building means it should be relocated and reused	Yes
Relocation of Maternity	The current maternity unit would be used to accommodate the extra capacity required. However this would mean providing maternity services elsewhere on the site in new accommodation. The length of the development would be longer to accommodate the construction of the maternity unit before the refurbishment took place in the existing maternity block. The Trust would therefore not be in a position to realise savings quickly. In addition, whilst the extra capacity will be located in the same place, it would not be an ideal location to achieve essential functional adjacencies. The maternity unit would potentially have to be relocated again in the PFI scheme unless the PFI scheme was developed around this new build.	No
Do Minimum	The clinical and financial benefits are predicated on total centralisation. Partial centralisation would require dual running costs.	No
Do Nothing	Short listed for comparison purposes	Yes

Table 14 – Long List of Options

Based on the above analysis the options for additional modular build, additional new build and the Do Nothing option have been short listed for detailed appraisal.

8.4 Non financial appraisal

The Trust has carried out a non financial option appraisal of the three short listed options based on a set of criteria consistent with the objectives highlighted in the Business Case previously and also with current business objectives. An evaluation panel made up of clinicians, service managers and members of the planning team agreed the criteria and the scoring. The criteria and their weightings were as follows:

Criteria	Weight	Reason
Clinical Organisation	25	Need to establish sustainable high quality services
Quantity of Services	16	Must provide sufficient for sustainable market
Physical Quality of Facilities	15	Improve from current poor stock and backlog maintenance Health and Safety
Ease of Staffing	12	The ability to manage the requirements of the European WTD will be significant in this along with ability of the Trust to recruit and retain staff
Time Elapse	10	Changes becoming time critical in terms of sustainability, a key element of the scheme is to deliver savings as quickly as possible
Flexibility / Fit with the Future	8	Long term plan requirement for complete new build - must not be blocked
Accessibility	5	Access to quality services within locality more important than spread across sites
Acceptability	4	Changes may not be popular with all groups but alternatives are not realistic and would be less acceptable
Disruption	3	Project inherently involves disruption so can not be a key criterion
Complexity of Planning	2	As above

Table 15 - Criteria and Weightings

Weighting adds up to 100 and reflects the organisation's view on the importance of each of the criteria.

The evaluation team scored the options as follows:

Criteria	Weight	Do Nothing	Option 1 Modular	Option 2 Traditional
Clinical Organisation	25	2	7	7
Quantity of Services	16	6	5	5
Physical Quality of Facilities	15	3	5	5
Ease of Staffing	12	2	6	6
Time Elapse	10	6	6	2
Flexibility / Fit with the Future	8	4	7	6
Accessibility	5	4	6	6
Acceptability	4	3	6	3
Disruption	3	3	5	3
Complexity of Planning	2	7	7	3
Total Weighted	100	362	601	527

Table 16 – Option Scoring

In all criteria Option 1 scored equal to or more than option 2. Therefore with any weighting Option 1 would always score better than option 2.

The only criterion where Do Nothing scores better than option 1 is Quantity of services. The weighting of Quantity of Services would need to be 70 or over for Do Nothing to score best (with all other criteria equally weighted).

If Option 2 scored a ten on Clinical organisation or physical quality of facilities an 8 then it would score the best. However Options 1 and 2 have scored exactly the same in a number of criteria due to the fact that the clinical model and capacity requirements are exactly the same in the two options. Therefore if the score was increased in option 2 then it would be increased in Option 1.

Where Option 1 has scored better than Option 2. There is a clear auditable reason:

- Time elapse: The Traditional build will take longer to build 6 months as estimated by the Trust's cost Advisers;
- Flexibility/Fit with the Future: Modular build is by definition more flexible than Traditional build and will allow for future development on its proposed site and potential reuse of the modular facility;
- Acceptability: Demolition of a permanent new build within 10 years would be extremely unacceptable to the public who would perceive this to be a waste of money;
- Disruption: As the modular build will be manufactured off site, there will be less disruption on the Watford site;
- Complexity of Planning: The Modular build has already gained planning permission, the District council were keen that a permanent structure was not constructed on the proposed site and permission has been granted for 10 years. It is possible that planning permission for a traditional build would only be granted if the Trust undertook to demolish the building after the 10 year period, which itself would be likely to attract negative comment from the public and in the press.

In addition to this in a Do Nothing it is likely that there would be a significant amount of disruption as a result of the Trust having to deal with more backlog maintenance.

In conclusion Option 1 scores significantly better than Do Nothing or Option 2. There are no changes to either the weighting or the scoring which could be justified which would materially change the result of the appraisal.

8.5 Economic Appraisal

The purpose of the economic appraisal is to understand the impact of the options on the economic position for the public sector and rank them accordingly. As this appraisal is in relation to the impact for the public sector, indirect taxes such as VAT and non-financial elements such as capital charges are excluded. The costs associated with transfers in services to other healthcare providers are included.

The economic appraisal has been undertaken in line with DoH guidance and uses the Generic Economic Model (GEM).

It should be noted that all costs and income use a base date of 2007/8.

The individual cost categories included within the GEM are discussed in greater detail below.

8.5.1 Appraisal Period

The appraisal period used within the GEM is 10 years. Under option 1 the construction period is 69 weeks and under Option 2 the construction period is 95 weeks long. An operational period, post construction, is assumed to be 8.75 years to 2017.

The short appraisal period is due to the interim nature of this Business Case. It is anticipated that the Trust will procure a significant PFI project in 2010, with completion of the construction of the PFI by 2014/2015. Although the timescales are slightly different to the appraisal period, this reflects a baseline appraisal position. The sensitivity of a reduced appraisal period of 7 years has been developed.

It is anticipated that the new modular investment in Option 1 at the end of the appraisal period will be used in the proposed PFI development, albeit a different location and with a different use. There would also be options to sell the new modular build on to other health care providers. Option 2 assumes the demolition of the new build at the end of the appraisal period. It is likely that planning permission will only be granted for 10 years.

8.5.2 Capital Costs

As this Business Case is a combined Outline and Full Business Case, FB forms have been produced for the preferred option and OB forms for the other options. The same costing methodology has been used on both, to ensure an accurate comparison.

A summary of the capital costs are highlighted below for Options 1 and 2

£000	Do Nothing	Option 1 Modular Build	Option 2: New Build
Works Cost	0	19,102	18,680
Equipment costs	0	3,008	3,008
Fees	0	3,152	3,554
Contingencies	0	2,831	2,829
Optimism Bias	0	1,491	1,490
Inflation	0	2,196	2,152
Total (excluding VAT)	0	31,780	31,713
VAT	0	5,009	4,928
Total (including VAT)	0	36,789	36,641

Table 17 - Capital Costs

The Trust has assumed no VAT can be recovered apart from on fees. The majority of the scheme is considered new build which will is not VAT recoverable

Both the Modular build and Traditional build options require the transfer of land between Hertfordshire Partnership NHS Trust (HPT) and West Hertfordshire Hospitals NHS Trust. The net difference in the values of land being swapped is £150,000. The transaction is expected to be supported at the appropriate Trust Board meetings in August 2007.

8.5.3 Revenue Costs

The revenue costs relate to the delivery of services, clinical and non -clinical and building related for each shortlisted option. The methodology and assumptions the Trust has made on revenue costs are described in Section 9.

For the purposes of the economic analysis, the Trust has not included income in its analysis but has factored in the cost of the extra activity delivered in the Do Nothing option in the other options at tariff.

Section 9 describes the main savings achieved in Options 1 and 2, which are a combination of pay savings as a result of the site rationalisation and non pay as a result of reduced estate costs and less bed capacity.

8.5.4 Opportunity Costs and Residual Value

The economic appraisal also takes into account the opportunity costs associated with the buildings used through the development and the residual value at the end of the appraisal period.

The opportunity costs and residual values to the Trust are as follows:

£000	Do Nothing	Option 1: Modular Build	Option 2: Traditional Build
Opportunity Cost Year 1	108,272	59,947	59,947
Residual Value Year 10	0	9,685	0

Table 18: Opportunity Costs

Opportunity Costs have been calculated using the current Net Book Value of buildings on which services will be provided in the future. Do Nothing therefore reflects the value of the buildings at Hemel Hempstead. The Residual Value reflect the anticipated value of the buildings which will have a long term use post the appraisal period. And therefore reflect the value of the modular build. The residual value of the modular build has been reduced to reflect the potential change in use of the building

The sale of the Hemel Hempstead site has been anticipated in year 5 for the Do Nothing and Year 10 for the build options.

8.5.5 Lifecycle Costs and Backlog Maintenance

The Trust has reflected Lifecycle costs in relation to the new build and the areas of refurbishment in Options 1 and 2. These are expected to be low, as no expenditure will be incurred in the first 5 years post construction and only a small amount in the following 5 years.

Backlog Maintenance is higher for the Do Nothing Option and reflects the additional investment in Hemel Hempstead as a result of the long term use of the site. The expenditure on backlog maintenance does not cover all backlog maintenance issues but addresses all urgent issues over the 10 year appraisal period.

£000	Do Nothing	Option 1: Modular Build	Option 2: Traditional Build
Lifecycle cost Total Cost		372	194
Backlog Maintenance Total Cost	36,900	27,883	27,884
Total NPV	31,376	24,655	24,519

Table 19: Lifecycle costs

The lifecycle costs for both build options have been calculated on the same basis. The cost of the traditional build is less as a result of the construction being completed later in the appraisal period.

8.5.6 Contingencies and Optimism Bias

Risk is inherent in all projects and can have a significant impact on costs. Within the FB forms an allowance has been made for construction contingencies at a level of 11.2%, which is considered a typical level for a project of this nature and stage.

In addition, DH and HM Treasury guidance requires Trusts to take a detailed consideration of the level of 'optimism bias' within each option. As this scheme is at FBC stage, the level of optimism bias is small. However a provision of 5.9% has been made to reflect the potential need for changes post FBC approval.

Within the GEM the optimism bias has been included and the construction contingencies have been excluded. The calculated value of the risk for each Option has been added outside of the GEM. Details behind the calculation of optimism bias is found in Appendix O.

8.5.7 Results of Economic Appraisal

The GEM spreadsheets are available on request. The NPC and EAC of each option is summarised below:

£000	Do Nothing	Option 1 Modular Build	Option 2 Traditional Build:
NPC (excluding risk)	1,661,204	1,574,024	1,585,998
Risk NPC	8,903	13,969	14,220
NPC (including risk)	1,670,107	1,587,992	1,600,218
Gap from preferred option	82,115		12,226
EAC (excluding risk)	192,991	182,863	184,254
Risk EAC	956	1,499	1,526
EAC (including risk)	193,946	184,362	185,780
Gap from Preferred option	9,584		1,418
Rank	3	1	2

Table 20: Economic Appraisal Results

8.5.8 Sensitivity Analysis

Although risk and uncertainty is factored into the option appraisal through contingencies and optimism bias, it is also important to understand the sensitivity of the preferred option to discrete factors, as well as a holistic view. The sensitivity analysis undertaken by the Trust has enabled a greater understanding of the impact to the whole project of volatility of specific factors. In the first 5 key sensitivities impact on the traditional build will be the same as in the modular build. Where this happens the movement of the gap between the Do Nothing and the preferred option has been assessed.

The following sensitivities have therefore been tested.

Input	Sensitivity Range	Result of Sensitivity
Continued use of Hemel Hempstead site – no sale proceeds from Hemel Hempstead	Reduced land sale receipt by £19.3 million but increased residual value	Reduces gap between Modular build and Do Nothing from NPV of £ 82.1 to £28.8m
Reduced Sale Proceeds from the Sale of Hemel Hempstead	Land sales receipts reduced from £19.3 million to £10 million	Reduces gap between Modular build and Do Nothing from NPV of £82.1m to £74.0m
Capital cost increase	Capital cost increase by 20%	Reduces gap between Modular build and Do Nothing from NPV of £82.1m to £75.5 m
No sale proceeds from Hemel Hempstead included in the analysis	Reduced land sale receipt by £19.3 million	Reduces gap between Modular build and Do Nothing from NPV of £82.1m to £65.3 m
Impact of additional savings achieved in the Do Nothing	Do Nothing savings increase by £3 million per annum	Reduces gap between Modular build and Do Nothing from NPV of £82.1m to £59.3 m
No residual value in Option 1.	Reduce residual value by £9.7m.	Reduces the gap between Do Nothing and Modular build from £82.1 m to £75.0 m Reduces the gap between Traditional build and Modular Build from £12.2 m to £5.1 m
Impact of a 7 year appraisal period	Reduction in appraisal period to 7 years	Reduces the gap between Do Minimum and Modular build to £62.2 million. Increases the gap between Traditional Build and Modular Build from £12.2 million to £14.1million
Impact of a 20 year period	Increase in Appraisal period to 20 years	Increases the gap between Do Minimum and Modular build to £134.4 million. Reduces the gap between Traditional Build and Modular Build from £12.2 million to £6.6 million

Table 21: Sensitivities

The base input assumptions were adjusted by the sensitivities above and resulting NPCs are summarised below:

It should be noted that Disposal of the Hemel Site is not within the scope of this Business Case, as the future of the site has not yet been decided through the ASR. As a result the sensitivities are predicated upon the Hemel Site remaining as is. Clearly any future disposal will generate further financial benefits and these have been included in the overall financial plan.

In all sensitivities option 1 remains the preferred economic option.

8.5.9 Switching Points

The switching points against a series of sensitivities have also been tested. The switching point is the value, if any, at which economic preference for one option is "switched" to preference for another. The identification of this point through sensitivity analysis, and the understanding of the likelihood that this situation may arise could result in an option change.

The switching points can be summarised as:

Sensitivity Range	Switching Point
Amount of additional savings to make Do Nothing preferred option	Do minimum solution would need to save an extra £10.8 million per year before it was the most economic option
Additional Capital cost in Option 1 to make option 2 the preferred option assuming no change to Residual Value	Capital costs in option 1 would need to increase by 32% before option 2 was the preferred option. Assuming no change in the capital costs of option 2.
Additional Capital cost in Options 1 and 2 to make Do Nothing the preferred option Assuming no change to residual value	Capital costs would need to increase in options 1 and 2 by 215% and 150% respectively for the Do Minimum to become the most economic option

Table 22: switching point sensitivities

8.5.10 Financial Appraisal Conclusions

The economic analysis shows that Option 1 is the preferred option in the baseline appraisal and in all sensitivities modelled. There would also need to be a significant change in the assumptions used in the appraisal for it not to be the preferred option.

8.6 Conclusion of the Option Appraisal

Both the financial and non financial appraisals clearly identify option 1 as the preferred option. In both appraisals the switching values required would be outside of normal sensitivities to make another option the preferred option. Option 1 – Modular Build has therefore been identified as the preferred option.

9. Preferred Option

9.1 Introduction

The preferred option is to develop a new modular build Acute Admissions unit (AAU) on the Watford General Hospital site adjacent to A&E.

- The Acute Admission Unit (AAU) will be a newly built modular facility to provide an innovative way of managing the non-elective acutely; unwell admissions from the local health care economy.
- Cardiac specialist services for adult elective and emergency invasive cardiac interventions and investigations, including primary angioplasty will also be co-located with the AAU.
- The AAU will have 3 clinical floors for acutely unwell patient assessment, diagnostic services, treatment and observation.

The AAU floors will be as follows:

Floor 1 (Ground floor)
- Ambulance bays and covered link to the A&E
- 60 Acute admissions beds of which there are 12 en-suite single rooms and 8 bays, each with 6 trolleys/beds.
- A treatment room
- Plain film and processing room.
- Discharge lounge
- Offices and clinical support facilities

Floor 2
- 2 cardiac catheter laboratories with 12 day unit beds
- Cardiac physiology measurements (Exercise ECG and Echo/Toe)
- CT and ultrasound
- Pharmacy dispensary and manufacturing unit
- Staff and clinical support facilities

Floor 3
- 60 short stay beds of which 12 are en-suite single rooms, and 8 bays of 6 beds
- A treatment room
    - Staff and clinical support
    - Corridor link to the PMOK building

This section firstly describes the philosophy, patient management and flow of the AAU. Following this the Cardiac services are described and large equipment requirements and key adjacencies of the AAU building.

9.2 Key benefits of the AAU

The Acute Admission Unit model provides:
- A central point for acute admissions
- The facilities for intense assessment, rapid diagnosis & treatment
- Reduced length of stay and avoids inappropriate admissions
- Improvements to discharge planning.

9.3 Scope of Service

The AAU will contain 120 beds for all acutely unwell admissions from the Accident and Emergency, specialties clinics and direct referrals from GPs, with the exception of those listed below.

To support the efficient assessment and treatment of patients the AAU has integrated diagnostic facilities of plain film, CT and ultrasound. The AAU will accommodate the pharmacy dispensary providing a positive impact on the quality of prescribing, patient education, patient compliance and the overall length of stay.

In addition to the patient beds the unit also includes 2 cardiac catheter labs with recovery beds for planned cardiac procedures and, within protocol guidelines, patients appropriate for primary angioplasty.

9.3.1 Specific AAU Admission Exclusions

The Acute Admissions Unit will not admit patients who require the specialist care from the following departments and services. These patients will be admitted directly to the appropriate department following their Accident and Emergency assessment.

- Cardiac Care Unit

All patients with suspected STEMI will be managed according to the protocol for primary angioplasty (PCI). The majority of patients (GP heralded, paramedic assessments) will be taken directly to the AAU Cardiac Day Unit / Cath lab for assessment and treatment. Patients who have walked into A&E, self referrals, will be assessed in A&E and referred as appropriate for PCI (Cath Lab within hours, St Marys/Harefield out of hours). This is likely to amount to 5/6 patients/week within hours and approximately 2 out of hours.

- Critical Care Department

No ventilated patients (or patients that are likely to need ventilating as an emergency) will be brought direct to the AAU. These patients will be assessed in the resuscitation room in A&E. The medical staff in charge of the AAU will decide if a patient is too unwell to be managed in the Unit. In such instances, the medical staff will liase with A&E, and the critical care team to ensure safe transfer of the patient to the Critical Care department.

- Paediatric Ward (Children < 16 years)

All children will be assessed in the Children's Emergency Department, and admitted if necessary directly to the Children's ward.

- Obstetric patients will be admitted to the Maternity wards.
- Elective patients will be admitted to standard inpatient wards.

9.4 Acute Admission Workload Indicators

- The AAU is open 24 hours a day, 365(6) days a year for acute admissions.
- It is expected that the AAU will admit approximately 25,000 patients each year.
- The anticipated average daily admission rate is 66 patients. Historically the majority of non-elective admissions occur between 16:00 pm and 01:00 am.
- The bed base assumes an average occupancy level of 82% across the unit.
- The target time for patient examination, diagnostic tests, diagnosis and a decision with regard to the patient pathway is 6 hours.
- 50% of patients will be discharged home from the AAU within 24 hours. Of the other 50%, some will be admitted to a specialty ward within the first 24 hours, some will remain in the AAU for a maximum period of 48 hours prior to hospital discharge.
- The majority of patient transfers from the AAU and between the AAU floors will take place between 8:00 am and 11:00 am and patients will not be transferred to standard wards outside the extended working day of 08:00 am to 21:00 pm.

- Patients requiring an emergency surgical or medical intervention will return to the AAU following their procedure for observation up to the maximum period of 48 hours prior to their transfer to a specialty ward.
- 3 ward rounds will take place on the AAU daily to ensure patient care and that pathways are efficiently managed.

9.5 Key Operational Policies

9.5.1 Operational Processes and Philosophy

- The model of care is based on the separation of emergency and elective patients, in order to deliver a prompt and high-quality service to emergency patients during the period of assessment, diagnosis, treatment and observation, and to prevent disruption to elective care
- Patients admitted to the unit are acutely unwell. The provision of integral radiology, pharmacy and discharge facilities provides rapid access to diagnostics and treatment in order to manage patient treatment and achieve short lengths of stay.
- It is the Trust's aspiration for the majority of patients to be admitted to the AAU for a maximum of 24 hours7, although some patients will stay up to 48 hours. Patients known to require a period of 48 hours stay will be admitted to a single en-suite room where possible.
- The AAU provides 120 trolleys/beds8 split equally across 2 floors with clusters of 15 beds in each corner. A team of nursing and support staff will be designated on a shift basis to manage the care of each cluster of 15 beds. Each cluster will be made up of 2 bays (each with 6 beds) and 3 single rooms.
- Each bay has access to hand washing facilities and medical alcohol gel dispensers. The design of the AAU bay has been developed in line with the Hospital Acquired Infection (HAI) policy. In addition this has been discussed and agreed by the Trust's Control of Infection Team and the SHA.
- Some support facilities, including clean supplies/utility, treatment room and dirty utility are shared across more than one 15 bed cluster.
- Newly admitted patients will be assessed and a diagnosis and treatment pathway plan agreed in a target time of 6 hours.
- All bays will have the facility to monitor seriously ill patients with invasive monitoring and telemetry linked to the Cardiac Care Unit (CCU within PMoK) central monitors and the AAU nurse bases. A dedicated phone line will also be provided to facilitate a means of direct communication between the CCU and the AAU to inform nursing staff of adverse rhythm changes. The monitors will be mobile.
- Patient care and pathways will be protocol driven.
- Patient bays will be gender specific and designated medicine or surgery. 20% of the AAU beds are single rooms. In addition the Trust plans to increase the provision of single rooms within the main inpatient building to provide more isolation facilities.

9.5.2 Acute Admission Patient Flows

- Patients will be admitted from the Accident and Emergency and directly from the community (GP referrals) to floor 1 (ground floor). Patients will arrive at the AAU by wheelchair or trolley.
- On arrival staff escorting patients will report to the AAU reception / nurse base. Patients will be taken immediately through to an AAU bay. Patient's relatives may be directed to wait in the waiting lounge adjacent to the reception. Patients will be clerked by a receptionist or ward clerk.
- Patients' clothes and belongings will be put into an individual basket. The basket will stay with the patients' trolley. Valuable items will be sent home with the patients' relatives or locked away in the safe within patient affairs (using current Trust policies). Receipts will be used for all items given to relatives or stored in the safe. Patients changing in the radiology facilities on level 2 can use the lockers provided for the duration of their examination.

[7] DOH guidance on length of stay
[8] The term bed and trolley is used interchangeably

- Patients will undergo an assessment and diagnostic tests, including CT, ultrasound and plain film within the AAU. Cardiac diagnostics will take place within the physiological measurements room also located within the AAU. Patient treatment and a pathway plan will be agreed within 6 hours of admission.
- It is envisaged that patients will stay on the first floor of the AAU for less than 24 hours. Patients will return to the first floor following their diagnostic tests if the test is scheduled during the first day of their admission.
- Patients known to require a length of stay of up to 48 hours (including those with tests scheduled during their second day) will be transferred to the third floor the morning after their admission. Those requiring a stay in excess of 48 hours will be admitted to a specialty ward.
- Patients discharged from the AAU will be transferred to the discharge lounge within the unit whilst they await collection.
- Patients requiring emergency surgery or a medical intervention will be prepared for their intervention within the AAU or A&E. These patients will return from their procedure to the AAU (except PCI patients) for a period of up to 24 hours for their acute phase of observation. If these patients require a longer period of observation or care they will be transferred following their initial period of observation to a specialty ward. Patients who have had a PCI will be admitted directly to the CCU following their procedure.
- Patients will only be transferred between the AAU floors and to wards between 8:00 am and 9:00 pm. The majority of transfers between the floors and to the wards will take place between 8:00 am and 11:00 am. This allows the first floor to be ready for new admissions each day.
- Unless medically unstable, all patients transfers will use wheelchairs rather than trolleys. All patients will be covered with a sheet or blanket during their transfer to support their dignity.

The following diagram demonstrates the AAU patient flow* (diagrams do not indicate scale or size of areas):

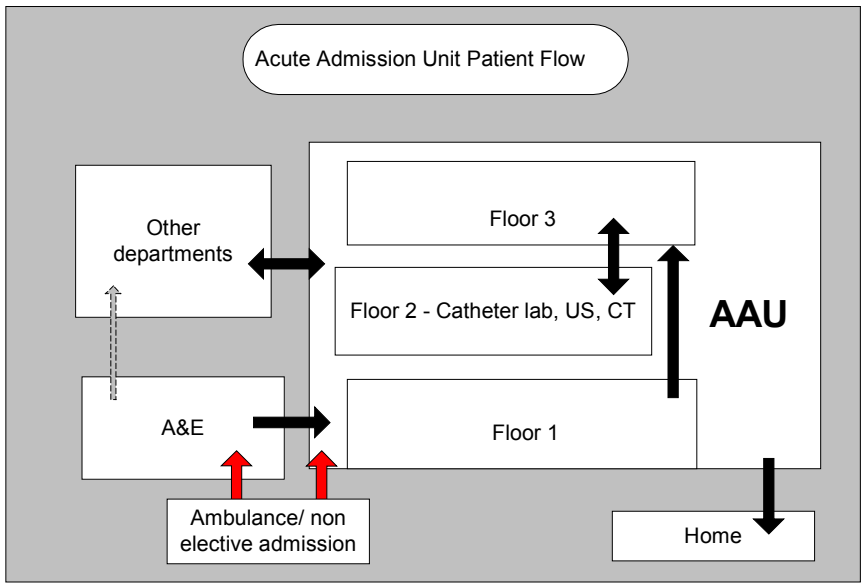


Figure 5 AAU Patient Flow

Specialty patients excluded from the AAU as described in the specific exclusions will be transferred directly from the A&E to the appropriate department.

Figure 6 shows the main areas of the AAU floors.

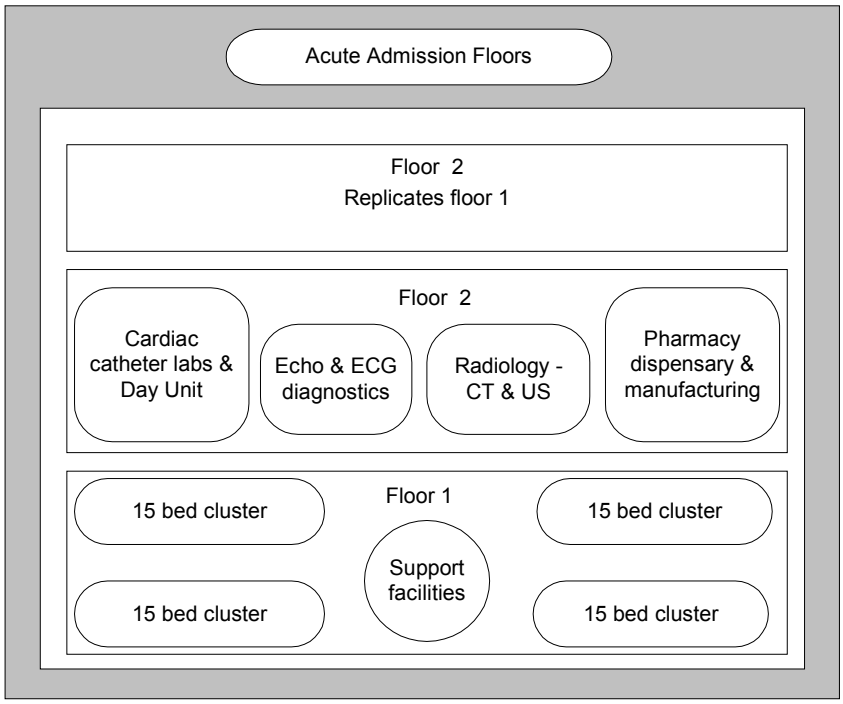


Figure 6 AAU Floor Layout

Figure 7 demonstrates the flow and facilities for each 15 bedded cluster:

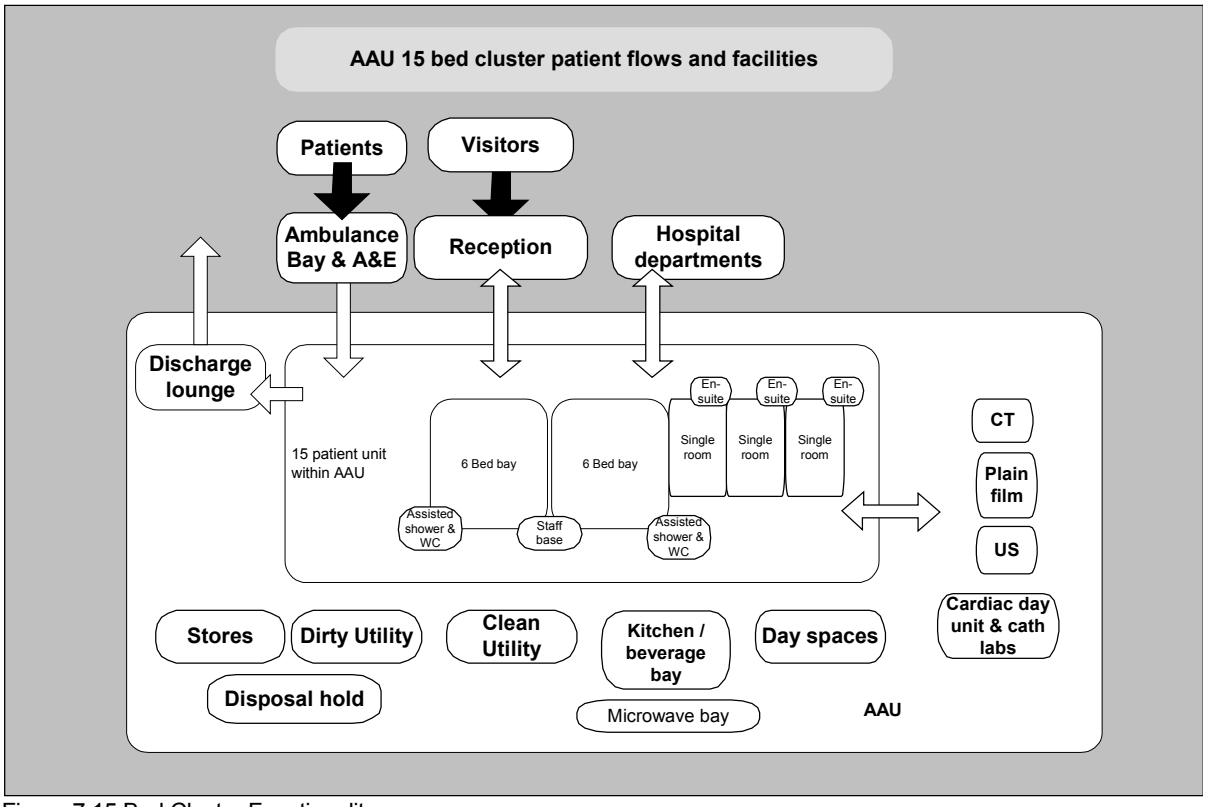


Figure 7 15 Bed Cluster Functionality

9.5.3 Supplies and Process Flows

- Domestic and nursing staff will take rubbish and dirty linen from the dirty and clean utilities and other patient rooms to the disposal hold. Porters are required to take the refuse away via a non-public and patient route.
- Sterile supplies and consumables will be transported to a store on each floor on a weekly basis to replenish and maintain adequate stock. The goods will arrive, be unpacked and put away into either the bulk store or the clean utilities by the stores staff.
- Patient notes will be stored at the staff base.
- A pneumatic tube terminal is located at a nursing station on each AAU floor to the pathology lab for specimen transfer. In addition samples may be delivered to the laboratory by contacting the urgent specimen porter or by personal delivery.
- The AAU has limited kitchen storage for edible consumables. Patient snacks and meals will be delivered to the unit on a daily basis. Each floor has its own microwave bay for the regeneration of hot meals and a beverage trolley bay for patient's drinks.
- Cleaners will be designated to clean each area of the AAU daily.

9.5.4 Patient Care Management

9.5.4.1 Medical Workforce

- During the extended working day it is envisaged the AAU patient care will be led by 1 of the 3 acute medical physicians supported by SpRs and FY1/2s. The Accident and Emergency consultants may need to undertake acute physician sessions.
- The Acute Physician leading the AAU will conduct ward rounds at 8:00 am and 4 pm.
- A "surgeon of the week or day" model will be employed and will also conduct ward rounds as above. Out-of-hours, the AAU will be managed by the on-call team led by consultants.

9.5.4.2 Specialist Teams within Medicine

- It is planned that Cardiology will attend the AAU on a daily basis, 7 days a week, advising and managing the care of patients appropriate to their specialty. Cardiology plan ward rounds at 8am and 4pm Monday to Friday and a morning round at weekends.
- Other specialties will attend the AAU daily Monday to Friday to advise as required by the patient's condition and specialty.

9.5.4.3 Nursing Staff

- Nursing staff will be employed to work across the entire AAU and A&E. This will provide a skilled flexible workforce and enable peaks and troughs of workload to be addressed within the AAU itself and the Accident and Emergency. Each floor of the AAU and A&E will be managed separately on a shift by shift basis.
- The entire AAU will have an operational nurse manager who will spend some time each day directly supervising the clinical areas and in addition will have responsibility for staffing issues, performance, standards and budgets. The nurse operational manager will have administrative support to ensure that s/he has sufficient time for clinical issues.

9.5.4.4 Physiotherapy and Occupational Therapy

Therapy will be a key determinant in achieving the projected lengths of stay. The service will provide a 7-day cover based on a shift system from 8am to 8pm.

- Physiotherapy is based on 30 new patients and follow-ups each day.
- Occupational Therapy staffing is based on 12 new patients and follow-ups each day.
- Staff will attend nurse handovers and can be contacted via bleep for new referrals. It is not envisaged that staff will attend ward rounds.

- The team will provide an outreach service to A&E and can be contacted by bleep for new referrals.
- Staff will be based in the Occupational and Physiotherapy Departments respectively and will attend the AAU as required.
- The team is resourced by the transfer of the medical and care of the elderly teams and the non-clinical staff from the centralisation of services from HHGH to WGH

9.5.4.5. Dietetics

Early nutritional assessment and intervention is key to patients' eventual health outcome. The work on the AAU demands a higher level of dietetic skill to cover the full range of conditions to be expected.

- Provision of a 7-day service, 9am to 6:30 pm, assumed to see twelve new patients a day and patient follow-ups. This staffing level allows for annual leave, study leave and short-term sick leave.
- Patient referrals are taken directly from the dietician during daily AAU presence, or by phone or bleep.

9.5.4.6 Speech & Language Therapy (SLT)

Medical teams will carry out screening tests to identify patients with swallowing problems ensuring that only appropriate patients are referred to SLT for further detailed assessment and management.

- Speech and Language Therapy support will be provided in the same way as for the current inpatient referral.
- Response time is within 2 working days (according to guidelines set by the Royal College of Speech and Language Therapists) and prioritised according to urgency/clinical need, as decided by the SLT.
- This service will be provided from the current staffing provision.

9.5.4.7 Discharge Planning

- The discharge of patients and their care management will be a key determinant of the efficiency and quality of patient services. The discharge planning team will play a key role in ensuring a smooth and prompt transition between the unit and home and also in reducing the number of unnecessary admissions.
- The team, often referred as the SPOT team, will work in conjunction with the AAU and A&E teams to prevent un-necessary hospital admissions. The team is comprised of the following members
    - Physiotherapist
    - Occupational therapist
    - Social worker
    - Nurse (the nurse is funded by the PCT).
- The team members will provide a specialist input based on their individual roles, however, it is envisaged that they will all be competent to deliver core services and to cover for colleagues during peaks in workload.
- The workforce plan is based on the following levels of provision: 1 team will cover A&E and the AAU from 8:00 am to 8:00 pm for 7 days. It is proposed that the members of the team stagger their hours to ensure that cover is provided for at least 14 hours per day. This level of provision requires 2.48 wte of each of the team members, including absence cover of 21%.

9.5.4.8 Administration and Clerical Support

For the efficiency and productivity of the AAU, administrative and clerical staff will be employed to support patient data entry and records to ensure that nursing staff and other clinical professionals remain focused on patient care. Staff will be deployed as follows:

- First floor reception: from 8:00 am – 8:00 pm, 7 days a week, receptionists will receive patients, admit GP referrals, enter information onto PAS and ensure that medical records are available and updated.
- First floor and floor 3: From 8:00 am – 8:00 pm, seven days a week each floor will have Ward Clerks and progress chasers. The progress chasers will monitor the patient's progress on the pathway to ensure their treatment and care progresses. They will attend ward rounds, book appointments and arrange for the services of other staff such as the discharge team.
- It is envisaged that these staff will stagger their working hours to ensure that cover is provided over a longer period than the 12 hours stated (e.g. 14 hours). It is also proposed that the staff should be able to cover during staff absence and during peaks and troughs of workload.
- It is expected that the operational manager should have an administrator / personal assistant.

9.5.4.9 Porters and Housekeeping

- To support the efficient transfer of patients it is envisaged that porters will be employed specifically for the AAU from 8:00 am – 8:00 pm, 7 days a week.
- Dedicated porters are required for the second floor to provide an immediate service transporting patients to and from the diagnostic and cardiac facilities. This is a key determinant in achieving an efficient diagnostic throughput.
- Porters are employed through a private contact with Medirest. The porters should stagger their working hours to ensure that there is cover over a 14 hour period.
- House keepers will be responsible for the serving of patient meals, drinks and snacks. They will also ensure all areas are maintained to high standards of cleanliness and the AAU environment is kept clean, tidy and welcoming for patients and visitors. It is anticipated that 1 housekeeper will be responsible for each of the bedded floors from 9:00 am – 5:30 pm, 7 days a week.
- Each of the AAU floors has a cleaner's facility. Cleaners are employed through a private contract with Medirest. A cleaner will be designated to clean each area of the AAU daily.

9.5.4.10 Pharmacy

- The main Pharmacy department is located in the AAU. Clinical and dispensing services, including robotic dispensing, will be provided from the department for the AAU and all other areas of the Watford hospital site.
- The opening hours of the AAU pharmacy will be 8:00 am – 10:00pm, 7 days a week.
- The most senior Pharmacist in the AAU will attend the 8am post take ward round on a daily basis.

Pharmacists Role

The level of provision pharmacy provides will have a positive impact on the quality of prescribing, patient education, patient compliance and the overall length of stay. The key elements of the pharmacy service are:

- The Pharmacists will take drug histories of all patients admitted within their working hours and ensure that the details are entered on the Infoflex system.
- Pharmacists monitor and advise on all aspects of drug treatment and counsel the patients in order to help them achieve optimal benefit from their medication.
- The Pharmacists will facilitate discharge from the AAU, either to home or to another area of the hospital. This will include arranging for appropriate TTAs to be dispensed or handing over the pharmaceutical care of the patient to the clinical Pharmacist covering the ward to where the patient is transferred.
- The technician will support the work of the Pharmacists by entering drug history details onto Infoflex, identifying and listing patients own drugs and preparing discharge medication.
- Independent prescribing Pharmacists working on the AAU will prescribe TTAs.

- It is also important that other staff within the A&E and AAU ensure that the patients own medication brought into the Trust on admission is retained and not sent home with a relative.
- Information back-up for the Pharmacists in AAU will be provided by the Medicines Information department within the main Pharmacy.

Supply and dispensing services

- The Trusts main pharmacy stores will be located at Hemel Hempstead Hospital. This main store will distribute stock directly to the AAU dispensary and deliver stock items to the individual wards and departments on the Watford hospital site.
- The AAU dispensary will receive top ups from the Hemel Hempstead pharmacy stores twice a day.
- Ward and department stock top up service will be provided by Pharmacy assistants on a weekly basis. The stock items will be delivered directly to the wards and departments from the Hemel Hempstead main store the following day.
- Individual items on an 'as required' basis will be supplied from the AAU Pharmacy. These will be requisitioned by the AAU or local department Pharmacists who will have screened them for appropriateness.
- AAU Dispensing will be facilitated by the implementation of robotics. Dispensed items will be supplied within one hour of receipt by the department if the screening has been completed.

Manufacturing

- The AAU pharmacy will individually prepare items in the technical services area for haematology, oncology and paediatric patients only. These are prepared and distributed to the patient for administration 'as required'.

Pharmacy Management and Clinical leadership

- Clinical leadership of the Pharmacists working within AAU will be provided by the Lead Pharmacist for Acute Medicine and the Lead Pharmacist A&E/Critical Care, managed by the Trust Pharmacy Clinical Services Manager.
- Management of the dispensing process will be by the site Pharmacy Operational Services Manager.
- Management of the topping up and stock supply process will be provided by the Chief Technician (distribution services) and the Operational Services manager for the Hemel site.

9.5.4.11 Pathology

- The Pathology Laboratory provides a comprehensive diagnostic testing and Consultant advisory service for the scientific disciplines of Cellular Pathology, Chemical Pathology, Haematology and Blood Transfusion, Immunology, Microbiology and Cytology.
- The department is open Monday to Friday 9:00 am to 17:15 pm and Saturday 9:00 am to 12:30 pm.
- An on call service is provided for urgent samples out of the hours. For this service the laboratory staff should be contacted to ensure the sample is fast tracked.
- Staff can access pathology results via the Trust's intranet using their login and personal password. In addition printed reports are sent to the departments.

9.5.4.12 Radiology

- The AAU has the integrated diagnostic and interventional imaging services of CT, ultrasound and plain film. Patients will attend from the AAU, and in some instances the A&E.
- The CT and US modalities will each be staffed between 8am and 10pm, 7 days of the week by a radiographer and supported by an assistant. The reception will be staffed by a clerical officer. After 10pm these modalities will be staffed by a radiographer.

- Plain film will be staffed by radiographers between 8am and 10pm. Out of these hours 1 radiographer will be designated to support the AAU. At night the radiographers will be located either in the AAU or A&E plain film rooms, depending on departmental demand. During this time radiographers can be contacted by bleep or telephone.
- Out of hours access is available to all modalities for clinical emergencies, except for MRI. There is a limited availability for interventional procedures out of hours. This will be assessed on an individual patient / clinician basis.
- It is anticipated that the majority of the demand for the CT scanner will be from within the AAU. The CT scanner in the AAU will be more modern than the current scanner within the main radiology department. Therefore it is possible some trauma patients will be examined within the AAU CT.

Radiology Referrals and Patient Flow

- Clinicians are required to complete x-ray forms requesting the particular examination stating the urgency and condition of the patient. Electronic order comms will be implemented Trust wide prior to the opening of the AAU.
- CT and ultra sound referrals can be made by direct contact with the radiologist on duty or on call.
- On receipt of a completed x-ray form, radiology staff will arrange for the patient transfer to the modality. Staff will note the referral time in order to comply with the 6-hour time limit from admission to pathway and treatment plan. To assist in the adherence to the 6-hour time limit, radiology referral should be undertaken within two hours of the patient's admission.
- Patients will be collected or requested just in time for their examination to minimise the holding time of acutely unwell patients.
- Patients will be escorted to and from the modality room on foot, in a wheelchair or trolley depending on their condition. Patients will be escorted by a porter and/or an AAU nurse depending on the patients acuity. Patients will either change within the modality room or should they already be undressed and requiring transfer to the modality room, by wheel chair or trolley staff will ensure patients are fully covered.
- Patients attending radiology for a ct or ultrasound scan will report to the radiology reception. 'Dressed' patients will be asked to wait in the 'dressed sub wait'. They will then be directed into the changing facility. Patients will be provided with hospital gowns and informed to use the lockers provided for their belongings. 'Undressed' patients will then wait in the 'undressed' sub wait for their examination. Following their examination they will return to their locker and changing facility prior to leaving the radiology area of the AAU. 'Undressed' patients attending the radiology facilities will bypass the 'dressed' sub wait.
- CT and US images will be viewed immediately after scanning by the radiologists. A report will be issued directly on to the pacs.
- Plain film x-rays will be available immediately on the Trust's intranet. A formal report will be issued at a later time.
- A mobile x-ray machine will be stored and charged on the ground / second floor of the AAU. This will be used for patients who require a chest x-ray, however are deemed too unwell to visit the modality.

9.6 Infection Control

- Each patient bay, treatment room and single room will have a clinical hand washbasin and medical alcohol gel dispenser located on access and egress to encourage staff and visitors to wash their hands in accordance with the Trusts' infection control policies and Infection Control Team guidance.
- It is anticipated that patients admitted to the AAU will have a rapid screening PCR (Polymerase Chain Reaction) test for the detection of MRSA. This will allow the medical staff to identify patients with MRSA and undertake the appropriate measures to treat and isolate the patient (according to the latest Trust policy).
- Single patient rooms, patient trolleys and equipment will be cleaned following each individual patient use.

9.7 Non-Clinical Support

9.7.1 Information Technology

- The use of a care record system is planned, to allow access for staff involved in the care of patients with greater efficiency. These systems benefit clinical staff by enabling them to order tests quickly and easily and have access to radiological and sample results the moment they are ready. When a patient is moved, the entire team is kept informed of the move by the IT system preventing staff from wandering the corridors searching for patients.
- All radiology images (PACS) will be viewed digitally at all data access points.

Cardiac Day Unit, Catheter labs and cardiac diagnostics

- The cardiac service is to provide adult elective and emergency invasive cardiac interventions and investigations.
- Patients will attend the Cardiac Day Unit for day case procedures undertaken within the Cardiac Catheter labs and the diagnostic tests of Echo and exercise ECG.
- Patients involved in clinical trials and undergoing therapy changes will also be admitted to the day unit for a period of observation.
- Direct admissions to the catheter lab from Ambulance crew will be accepted.
- The day unit activity excludes paediatrics, Inpatient Cardiology Care and critical care patients requiring intensive ventilation and organ support.
- The day unit will be open 8am – 7pm, 5 days a week.
- The cardiac catheter labs will be open 8:30 am – 5pm, 5 days a week, 10 sessions per week. Emergency cases are undertaken 8:30 am – 5pm, 5 days a week. There is potential to extend working hours and sessions at a later time depending on demand.
- Diagnostic tests within the exercise ECG and Echo rooms will take place between 8:00am – 6:00 pm, 7 days a week. Echos will also be undertaken between 9am and 12pm Saturday and Sunday.
- Staff currently providing the cardiac services will transfer into the new facility.

<u>Cardiac patient flow</u>

- Patients attending the Cardiac Day Unit for interventions and investigations will arrive from the following
    - Directly by ambulance
    - From within the AAU
    - Cardiac Care Unit
    - Home
    - Specialty wards
- Patients will arrive on an ambulance trolley, on their trolley/bed, wheelchair or they will walk depending on their acuity.
- On arrival patients and/or staff will report to the cardiac reception.
- Patients will be directed to the sub wait or taken directly to the Day Unit.
- Patients will be taken into the catheter lab for their intervention.
- Following their procedure patients will have a period of recovery within the Cardiac

<u>Day Unit.</u>

- Patients who have undergone an angioplasty will be admitted to the Cardiac Care Unit. Inpatients who have undergone other procedures will return to their department / AAU floor for observation and inpatient care.
- Day case patients will be discharged from the Cardiac Day Unit.
- Inpatients attending for diagnostic tests will do so just in time for their appointment. These patients will be taken into the appropriate room (either exercise ECG or Echo/Toe). Following their test they will return to their bed within the AAU. The technicians will report on each patients' test using the equipment within the diagnostic room
- Outpatients will not attend the diagnostic rooms within the AAU. They will go to the PMoK Cardiac diagnostic facilities.

9.8 AAU Equipment Requirements

Medical and clinical equipment required within the AAU for equipment procurement option includes:

- CT scanner
- Ultrasound Scanning facilities
- Plain film
- Mobile x-ray machine
- Catheter lab equipment
- Pharmacy robot
- Patient trolleys
- Computers and pacs equipment

9.9 AAU Building Key Functional Relationships

The table demonstrates the clinical adjacencies and the importance of the links between the AAU and the department listed. This reflects the rationale for the location of the AAU and the facilities within the AAU building.

Department	Reason	Essential/Important/Desirable
Accident & Emergency	Patient flow	Essential
Ambulance bay	Patient flow	Essential
Radiology – specifically plain film, CT and Ultrasound	Patient flow Within the AAU	Essential
Theatres	Patient flow	Important
Cardiac diagnostics	Patient flow	Important
Cardiac Care Unit	Patient flow from the Catheter labs	Important
Wards	Patient flow	Important
Radiology – MRI	Patient flow	Desirable

Table 23 – Clinical Adjacencies

10. Affordability Analysis

10.1 Introduction

This section reflects the work the Trust has done on its medium term financial plan reflecting the investment in DaHF.

The Trust has modelled the impact of Herts PCT's Commissioning intentions together with the financial implications of the DaHF project. This demonstrates that the Trust maintains a surplus position in each of the years to 2013/14. This is a direct consequence of cost reductions achieved as a result of site rationalisation and associated service reconfiguration on the Watford site.

The Financial Strategy is predicated on a planned Income and Expenditure position in 2007/8 of a £5 million surplus. This represents a sharp improvement from the reported deficits of £26.8m in 2005/06 and £11.4m in 2006/07. A reconciliation of the movement from the 2006/07 outturn to the 2007/08 is included in Appendix I. Any delay in delivering some of the service redesign project in 2007/8 may lead to a shortfall against the planned target. However this is likely to be a timing issue rather than fundamentally impacting on the financial strategy itself.

The Trust's financial strategy assumes the delivery of the Delivering a Healthy Future Scheme by Q3 2008/9 and further estate rationalisation in respect of the Hemel Hempstead and St Albans sites. The further rationalisation will be the subject of a further Business Case led by West Herts PCT. The strategy assumes that the Trust will vacate the Hemel Hempstead site, selling the Verulam wing to the PCT for development as a local General Hospital, with the remainder of the site being sold. The PCT is currently examining options for delivering a LGH in Hemel and may decide to deliver an alternative solution off the Hemel Hempstead site. If this is the case, the Trust would need to relocate Pathology services off the Hemel Site, or bear the costs of maintaining Verulam.

The Trust has projected average annual savings of £8.7million over the period 2008/9 – 2013/14 with reconfiguration at Watford, compared to a Do Nothing. As a prospective Foundation Trust, West Hertfordshire Hospitals NHS Trust will be required to generate a surplus each year to support the delivery of improved patient care and to afford the costs of new capital investment. In addition, a surplus is required in 2007/08 –2008/09 to offset the deficit incurred in 2006/07.

The detailed financial modelling to support the PFI Business Case is currently underway. Therefore the impact of DaHF on the PFI is still to be confirmed. However the consistent delivery of c £5m annual surplus and the potential additional efficiencies realised through the new hospital indicates that the proposed PFI scheme can be proven as financially viable.

Without a stable financial position the Trust would be unable to proceed with a PFI scheme.

10.2 Medium Term Financial Plan

The Trust's medium term financial plan based upon a Do Nothing option has been compared with the preferred option (at 2007/08 price base including efficiency requirement) and is summarised below:

Do Nothing £m							
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Income	225.8	221.4	216.8	213.4	213.6	215.1	216.8
Expenditure	220.8	219.1	219.5	216.8	217.6	219.7	222.1
Surplus/(Deficit)	5.0	2.4	(2.8)	(3.4)	(4.1)	(4.6)	(5.3)
Change in position from 0708							
Reduction in income		(4.4)	(4.7)	(3.4)	0.2	1.6	1.7
Reduction in costs - Activity & Performance Efficiency		2.3	2.0	3.6	0.1	(1.3)	(1.2)
Efficiency target less efficiencies assumed		3.9	(0.0)	0.3	0.1	0.2	(0.2)
Additional costs EWTD		(2.8)	(1.6)	0.0	0.0	0.0	0.0
Additional Clinical costs - CT		(0.6)	0.0	0.0	0.0	0.0	0.0
Additional Costs backlog		(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)
Change from previous year		**(2.6)**	**(5.2)**	**(0.5)**	**(0.6)**	**(0.6)**	**(0.7)**
Surplus/(Deficit)	5.0	2.4	(2.8)	(3.3)	(4.0)	(4.6)	(5.3)
Watford £m							
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Income	225.8	213.5	206.5	203.2	203.3	204.9	206.5
Expenditure	220.8	210.2	199.7	196.6	196.9	198.8	201.0
Surplus/(Deficit)	5.0	3.4	6.8	6.6	6.4	6.1	5.4
Change in position from 0708							
DAFH- Site Rationalisation		2.8	7.1	0.0	0.0	0.0	0.0
Income Reduction		(12.2)	(7.0)	(3.4)	0.1	1.5	1.6
Reduction in costs - Activity & Performance Efficiency		7.8	6.0	2.5	(0.0)	(1.1)	(1.2)
Efficiency target less efficiencies assumed		3.5	(2.2)	0.2	0.1	0.3	(0.0)
Non Recurring Costs (Redundancy/ double running)		(2.5)	0.5	1.5	0.5	0.0	0.0
Additional Costs backlog Maintenance		(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)
		(1.6)	3.4	(0.1)	(0.3)	(0.2)	(0.7)
Surplus/(Deficit)	5.0	3.4	6.8	6.6	6.4	6.1	5.4

Table 24 – Year on Year I&E Position for Do Nothing and Preferred Option

The Do Nothing position shows a slight increase in costs over the appraisal period against a reduction in income of £9 million. Reductions in costs as a result of improved efficiency and reductions in activity are offset by costs incurred as a result of :

- compliance with the European Working Time Directive with out the benefit of consolidated acute services on one site (£4.4 million per annum); and

- the revenue consequences of the increasing level of backlog maintenance across three sites (assumed increase of £1 million per annum year on year to a cost of £6 million in 2013/14))

The cost of the EWTD has been based on the additional hours required from junior doctors to achieve compliance with a 48 hour working week. Although the Trust is currently achieving 28% compliance it is estimated that the Trust will need to work towards a lower than average 48 hour week to ensure compliance in all specialties. It also reflects the move towards a consultant led service which would increase the cost per hour of the service being provided. The additional reductions on costs as a result of changes in Junior doctors rotas in the preferred option have been calculated at £1.5 million. This is a low number in respect of 55 Trust grade and junior doctors but avoids any double counting in respect of the EWTD.

The plan summarised above assumes that the Trust will vacate the Hemel Hempstead site in 2009/10 and that the PCT will take over the Verulam wing and develop the Local General Hospital at Hemel Hempstead. It is also assumed that the Trust would deliver a number of these services on behalf the PCT and the income and expenditure associated have been included. The PCT are unable to formally confirm this position in line with the production of this Business Case due to the timescales of the ASR consultation and consequent planning processes.

Should the PCT not pursue plans to develop a local General Hospital on the Hemel Hempstead site and in the worst case the Trust retains the whole of the site then the impact

on the Income and Expenditure position would be as described in the table below. However in this event the Trust would mitigate the impact by seeking to sell the redundant estate.

Watford with Hemel Retained £m	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Income	225.8	213.5	206.5	203.2	203.3	204.9	206.5
Expenditure	220.8	212.1	203.5	200.4	200.7	202.6	204.8
Surplus/(Deficit)	5.0	1.5	3.0	2.8	2.6	2.3	1.6

Table 25 – Preferred Option I&E Position with Hemel Hempstead Retained

10.3 Financial Planning Assumptions

The key assumptions and risks are described in the table below, along with the issues arising from these risks

Description/ Line	Assumptions/ comments	Issues/ risks	Potential Financial Impact
Income			
Activity Changes	The Trust has assumed a drop in income of £10 million as a result of site rationalisation at Watford. This relates to a significant proportion of Hemel Hempstead patients being treated elsewhere (reflecting 10% of activity). This is assumed to happen from the end of the 2nd quarter 2008/9 when the Acute Admissions Unit in Watford is complete. Growth in line with demographic projections has been assumed consistent with PCT assumptions	Any delay in the capital development will delay savings identified from site rationalisation. The Trust is likely to retain a larger amount of income until the move is effected	Initial savings from the development are estimated at £500,000 per month.
Expenditure			
Activity Changes/ performance improvement	As stated in income related activity changes (above) there is a significant drop in activity due to PCT commissioning intentions but also to the consolidation of services on the Watford Site. Significant performance efficiencies have been assumed as a result of the delivery of new models of care (particularly with the AAU) and the site consolidation. This has also been reflected in reductions in excess bed days in the income assumptions. The main reductions in staff costs are in medical and nursing.	A delay in the delivery of DaHF would mean that the efficiency savings assumed would not be fully realised. This will be compensated for to some extent by a higher level of activity and associated income. Other efficiencies highlighted elsewhere are assumed to be delivered part-year and therefore may not be affected. There is a risk around the delivery of these challenging targets. The Trust has employed Healthworks consultants to work with it to develop an implementation plan to achieve these efficiencies	Initial savings from the development are estimated at £500,000 per month.
Turnaround Plan	The Trust's projected surplus in 2007/8 is based on £9million turnaround savings and the maintenance of expenditure at Q3 2006/7 levels Turnaround savings identified have been reduced where they have already been assumed in the DaHF project. These relate to: • Ward closures/ savings, reduction in use of temporary staff; • Reduction in clinical support costs; • Medical locum expenditure; • Theatre efficiencies. In the activity and income assumptions a level of performance is assumed which will be partially met before DaHF through Turnaround. In 2009/10 £3 million has been netted off against savings to avoid a	Financial balance for the Trust is dependent on achievement of these savings recurrently. If this is not achieved, the level of efficiencies identified in future years would need to increase.	Turnaround savings of £9 million to be achieved

<table>
<tr><th>Description/ Line</th><th>Assumptions/ comments</th><th>Issues/ risks</th><th>Potential Financial Impact</th></tr>
<tr><td></td><td>double count against savings already identified in the activity changes.</td><td></td><td></td></tr>
<tr><td>Site Rationalisation</td><td>£2.8 million is saved in 2008/9 reflecting the part year effect of the Trust withdrawing from the Hemel Site and being able to recharge the cost of some of the St Albans site to the PCT. Offset against this is the extra cost of the AAU at Watford. The full year effect will impact in 2010/11.

A summary of savings is as follows:

<table>
<tr><td></td><td>£m</td></tr>
<tr><td>Additional Capital Charges/ Rent</td><td>2.4</td></tr>
<tr><td>Capital Charges Saved (Watford/Hemel)</td><td>(3.8)</td></tr>
<tr><td>Capital Charges Saved St Albans</td><td>(1.7)</td></tr>
<tr><td>Sub Total Capital Charge Impact</td><td>(3.1)</td></tr>
<tr><td></td><td></td></tr>
<tr><td>Utilities Savings</td><td>(1.5)</td></tr>
<tr><td>FM Savings</td><td>(1.3)</td></tr>
<tr><td>Net Change in rates etc</td><td>(0.5)</td></tr>
<tr><td>Additional Utilities</td><td>0.1</td></tr>
<tr><td>Additional FM</td><td>0.4</td></tr>
<tr><td>Total Savings</td><td>(5.9)</td></tr>
</table></td><td>Relevant estate costs at Hemel Hempstead will either be recharged to PCT or released as a consequence of sale of estate</td><td>Level of savings if the Trust remains on the Hemel Site would reduce by £3.8 million (capital charges)</td></tr>
<tr><td>Other cost pressures</td><td>The Trust has assumed cost pressures related to a further 0.5% of patient related income which would not be funded through tariff</td><td></td><td>Cumulative figure of £6 million per annum by 2013/14</td></tr>
<tr><td>Non Recurrent costs</td><td>It is assumed that there will be a total of £5 million non-recurrent costs for transport, double running and redundancy (split £2 million in 2008/9, £2 million in 2009/10 and a further £1 million in 2010/11)</td><td>This is currently a provisional sum and needs to be worked through in more detail.</td><td>Provision of £5 million may be understated</td></tr>
<tr><td>Efficiency Target</td><td>This equates to 2.5 % of patient-related income year on year (after 2007/8) and has been reflected as an increase in cost.</td><td>The efficiency target will be greater if activity is greater than that projected. However, this will be balanced by a greater level of income and a reduced requirement to make direct savings.</td><td></td></tr>
<tr><td>Efficiency savings</td><td>A number of efficiency savings have been identified which will only happen as a result of the consolidation of services. These relate to:

£ 1 m management costs
£ 1.5 m on Junior Doctor Rotas
£ 1.5 million in clinical efficiencies (Nurse staffing, skill mix etc.).

These savings could not be achieved without consolidation due to:

• The need for more staff to manage three sites rather than one major site. Split specialties will be more difficult to manage. The Trust's management cost percentage of Turnover on 2005/6 was 4.81%. Other similar size Trust's percentage ranges between 3.5% and 4.3%. The Trust has assumed it can reduce management costs to a percentage of 4.3% as a result of site</td><td>These savings will all be achieved as a result of site consolidation. It is likely that they will be phased in. Junior Doctor Savings will be tied in to the August and February intakes,</td><td>£4 million per annum has been assumed that could be saved</td></tr>
</table>

Description/ Line	Assumptions/ comments	Issues/ risks	Potential Financial Impact
	rationalisation • The need for more junior doctors on rotas as a result of having multi site specialties. The Associate Medical Director (Education & Training) has calculated that the savings as a result of site rationalisation based on a reduction of the service element of 55 junior doctor posts. This equates to 8 pre-reg house offices, 8 SHOs and 6 registrars in medicine and 33non training grades in surgery. It should be noted that most of the Trust junior doctors are currently graded Band 2b and therefore no saving from EWTD is expected under a do nothing option. • Less ability to flex staff between wards and manage overtime and agency work. A greater concentration of nursing staff in one place will enable the Trust to implement more effective skill mix arrangements. The new configuration of wards will enable the Trust to introduce more effective skill mix manage its nursing requirement more effectively. The Trust has assumed further efficiencies can be made in line with the view that Trust's should be making at least 3% efficiencies per annum. The level of unidentified efficiencies are the same for each option.	There is significant risk that the Trust would not be able to achieve the level of savings required by the Do Nothing Option. This is viewed to be extremely challenging.	
Other Assumptions			
Capital Funding/ Delivering a Health Future	The DaHF Business Case will be funded by: The Trust's self generated capital resources: £1.9m Interest Bearing Debt: £34.9m The Trust would require a further £4m funded through IBD as part of the subsequent Hemel Hempstead development. The Business case for which will be developed by the PCT It is anticipated that £2.3m would be repaid on the sale of the Hemel Hempstead site. Loan repayments are assumed to be £6.20 million starting part way through 2008/9.	The Trust is not likely to have a risk rating which will enable it to borrow £38.9 million. An inability to raise any capital funding through PDC or IBD would stop the capital development from proceeding. Any partial funding would need to be considered in the context of the Trust's capital programme. However any additional commitment from the Trust's capital programme would have an adverse impact on the Trust's ability to retain investment in equipment and address key backlog maintenance issues.	Likely financial impact will be the delay caused by lack of resolution on the funding issue. This reflects a cost to the Trust of £500,000 per month of delay
Impairments	No adverse impact has been assumed Hemel Hempstead will be revalued before resale. Impairment funding will cover the write off of the PGMC.	Depending on accounting treatment and funding issues	

Table 26 – Financial Planning Assumptions

10.4 Efficiency Savings

The Trust has established a financial profile based on implementing the DaHF project. It has identified a number of efficiencies, which can be achieved as a result of the project and assumed them in calculating the future capacity requirements. This has been in response to the purchasing intentions of Herts PCTs, which reduces income to the Trust over the period to 2013/14. The financial model reflects a number of cost drivers, which in turn reflect performance improvements and reductions in activity. In order to identify the savings driven by the DaHF scheme, the Trust has estimated a "Do Nothing" position, which reflects:

- The achievement of 50% of the performance improvement identified in DaHF;
- The same assumptions in respect of PCT commissioning intentions as DaHF;
- A smaller reduction in income and activity as a result of services remaining at Hemel Hempstead

The following table describes the levels of savings identified for each of the Do Nothing, and Watford Modular build options.

Description of Identified savings	Comment	Do Nothing £m	Watford Modular Build £m	Financial Impact of Modular build £m
Site Rationalisation	Breakdown included in the financial commentary. Figures based on capital charge savings for all of Hemel site and part of the St Albans site (partial savings on utilities and FM costs).		8.8	8.8
Increased costs as a result of capital investment	Increased capital charges and interest payments of £2.1 million plus additional FM and utility costs for new build at Watford/ Hemel Hempstead		(2.9)	((2.9)
Medical Rotas	Reduction in Junior Doctor surgical and medical rota releases 55 posts. See table 23		1.5	1.5
Management Costs	Assumption that the Trust will be able to rationalise management costs by rationalising sites to a percentage of 4% of Turnover		1.0	1.0
Nursing Skill Mix	Workforce review is likely to identify further savings that can be achieved with the clinical reconfiguration. This reflects the workforce review carried out in 2006.		1.5	1.5
European Working Time Directive	The Trust has anticipated that it will be able to implement the European Working Time Directive at no extra cost as a result of reconfiguration of services, no quality benefits from the EWTD have been assumed	(4.4)		4.4
Net Gains made through performance improvements against changes in activity	Performance gains are offset against a reduction in activity as a result of commissioning intentions and consolidation of services at Watford or Hemel Hempstead.	(3.6)	(5.4)	(1.8)
Additional MRI/ CT infrastructure if services not consolidated	The Trust has assumed that if there is no consolidation of services then the Trust would need to provide CT services at both Hemel Hempstead and Watford. The Trust would therefore require any extra CT scanner and would need to account for the cost of providing the service	(0.6)		0.6
Revenue consequences of not addressing backlog maintenance issues	A provision for the extra revenue consequences of not addressing the Trust's backlog maintenance programme. The Do Nothing benefits from more investment in backlog maintenance but will need to address a greater level of backlog maintenance across both sites	(6.0)	(6.0)	0.0
Further Efficiencies net of tariff reductions and Additional Cost Pressures	Both options show a level of efficiencies made over and above the likely level of efficiencies imposed through reductions in Tariff. This reflects the DH requirement to ensure that efficiencies of 3% are made year on year, The Trust has assumed cost pressures related to a further 0.5% of patient related income which would not be funded through tariff	4.3	1.9	(2.4)
Total change in I&E position from 2007/8		(10.3)	0.4	10.7

Table 27 – Comparison of Do Nothing and Preferred Options

This table summarises the position by 2013/14 over the position in 2007/8. The preferred option is assumed to deliver a surplus of £5.4 million, which is £0.4 million higher than the surplus projected to be achieved in 2007/8. The preferred option generates a financial position of £10.7m better than the Do Nothing position

The average annual efficiency as a percentage of relevant turnover for each option is as follows:

Option	verage level of Efficiency as a percentage of Turnover
Watford Modular Build	4.1%
Do Nothing	3.3%

Table 28 – Efficiency as Percentage

10.5 Capital Affordability

The Trust has a fully committed capital programme in 2007/8 and this is anticipated to be the case in the medium term. A breakdown of the Trust's medium term capital programme is as follows:

Capital Plan	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
	£000	£000	£000	£000	£000	£000	£000	£000
Source of Funds								
Depreciation	10,050	10,050	8,375	8,375	8,375	8,375	8,375	8,375
Rolled over Funding	2,431							
Land sales Receipts				19,300				
Insurance	428							
External Funding	16,794	22,111	0	-2,325				
Total Funding	**29,703**	**32,161**	**8,375**	**25,350**	**8,375**	**8,375**	**8,375**	**8,375**
Applications								
Delivering a Healthy Future	18,679	18,111	0					
Hemel Redevelopment		4,000						
Surgicentre				9,100				
Less Dahf spent in 2006/7	-996							
Brought Forward Schemes	2,549							
Maintenance and management of the Estate	2,817	2,230	2,230	10,123	2,213	2,221	2,216	2,217
Facilities initiatives	1,000	1,000	1,000	1,000	800	800	800	800
Equipment replacement	2,000	2,000	2,000	2,000	1,600	1,600	1,600	1,600
Service developments/minor schemes	826	1,000	1,000	1,000	800	800	800	800
Spend to Save initiatives	508	1,500	1,500		1,200	1,200	1,200	1,200
Information Technology	1,000	1,000	1,000	1,000	800	800	800	800
Salaries and Capital Consultancy	820	820	820	820	700	700	700	700
Contingency	500	500	500	307	262	254	259	258
Total Applications	**29,703**	**32,161**	**10,050**	**25,350**	**8,375**	**8,375**	**8,375**	**8,375**

Table 29 – Trust capital programme

This capital plan reflects the requirement to invest in backlog maintenance and also addresses issues in respect of equipment and facilities. The plan postpones to 2009/10 £8 million of backlog maintenance as a result of lack of capital availability. There is limited scope to fund a significant part of this scheme through the capital plan. The Trust has assumed that interest-bearing debt of £34.9 million will be used to fund the development. An additional £4 million will be needed to fund the Trust's element of the Hemel Hempstead redevelopment. The cash generated from surpluses made will be used to repay interest-bearing debt. Loan repayments of £6.20 million per annum are consistent with the project surpluses before interest in the Trust's financial plan If the sale of Hemel Hempstead did not go through, the Trust would not be in a position to develop its surgicentre proposals or address urgent backlog issues in 2010/11.

The assumed balance sheet position is included in Appendix I.

11. Workforce Planning

11.1 Introduction

Workforce planning is key to the successful delivery of the Delivering a Healthy Future scheme and the Trust is working to deliver and manage a coherent and logical strategy that not only delivers a clinically effective model but makes significant savings.

The Trust is currently managing a number of work streams to deliver this.

11.2 Workforce Diagnostic

The workforce diagnostic undertaken for the Trust by the SHA in October 2006 provided a steer for the organisation on areas of the workforce profile and practice that needed attention.

The key areas identified by the diagnostic where savings could be made were:

- Sickness levels high in some groups
- High level of temporary staffing spend
- High nursing skill mix
- High costs per WTE
- Productivity improvements

The Trust is continuing to use this data to drive further workforce productivity gain over and above what has been achieved during 2006/7. The immediate work being undertaken is a detailed review of nursing skill mix which is being jointly led by the Chief Nurse and Director of Workforce. The initial findings from this work show potential for a reduction of 90 wte. One of the barriers to managing skill mix more effectively has been 3 site working. Skill mix is generally higher in specialties with lower levels of activity as sufficient qualified staff need to be in place at any one time. The consolidation of acute services on to one site will enable an effective and clinically safe move to a lower skill mix. Work has also begun on reviewing the administrative and clerical workforce profile.

The Trust currently has a high level of junior medical staff to run rotas on 2 acute sites both with full A&E departments. To achieve full compliance with EWTD with our current rotas would require in simplistic terms an additional circa 95,000 hours of junior medical staff input. Even allowing for some of these hours being undertaken by advanced practitioners and the introduction of Hospital at Night on both sites it would require considerable additional financial investment.

11.3 Current Position

The planned position for 2007/8 as per the FIMS return is to deliver a 185 wte reduction against this baseline position (see summary of workforce below).

FULL-TIME EQUIVALENT STAFF IN POST (AT YEAR END)	2007/08 Plan (Overall Staff in Post)	2006/07 (Overall Staff in Post)	Variance
MEDICAL AND DENTAL	**477.1**	**504.2**	**(27.1)**
of which - Medical and Dental Consultants	**148.6**	157.0	(8.4)
Ambulance Staff	**0.0**	0.0	0.0
Managers and Senior Managers	**73.3**	77.5	(4.2)
Administration and Estates	**734.5**	776.1	(41.6)
Healthcare Assistants and other support staff	**517.0**	546.3	(29.3)
NURSING, MIDWIFERY AND HEALTH VISITING STAFF	**1099.1**	**1161.4**	**(62.3)**
of which qualified midwives	**147.1**	155.4	(8.3)
ALL SCIENTIFIC, THERAPEUTIC AND TECHNICAL STAFF	**345.0**	**364.6**	**(19.6)**
Of which - Healthcare Scientists	**131.0**	138.3	(7.3)
Of which - Allied Health Professionals	**137.9**	145.7	(7.8)
Others	**3.8**	4.0	(0.2)
All staff (Total)	**3249.8**	**3434.1**	(184.3)

Table 30 – Summary of Workforce Changes between 2006/07 and 2007/08

11.3 Workforce Modelling

The Trust has undertaken workforce modelling work in three areas:

- FIMS return for 2007/8 that has been completed used a purely mathematical model of conversion of required financial reduction to WTE. This provides a target for the Trust to achieve in 2007/8 of a reduction of 185 WTE . This equates to a full year saving of approx £7m and is a 5.4% reduction in staffing.
- Shared Solutions initial workforce modelling was undertaken in 2006/7 and worked on the assumption that the full *Delivering a Healthy Future (DaHF)* would be delivered in 2007/8. This shows a reduction in nurse staffing against nurses in post of 215 WTEs as a result of Delivering a Healthy Future. The level of savings identified related to a greater reduction reflecting the level of bank and agency the Trust was experiencing at the time.
- The Secta model was used to support the consultation on *Delivering a Healthy Future.* The Secta model projected a reduction of 256 WTEs (all staff groups) as a result of Delivering a Healthy Future. The PCT's commissioning intentions reflecting a further fall in activity lead to further reductions in staff.

The Secta model is based on high level assumptions about productivity, reduction in length of stay and changes in activity. It also does not reflect any new staffing models and skill mixes that can be implemented as a result of reorganisation, it projects the level of cost recovery by working through a clearly defined and agreed set of assumptions about productivity, performance and activity which have been summarised below.

Area	Assumptions	Potential Financial Impact
Demography	Herts District Council for Herts Office National statistics for other areas	
PCT Commissioning intentions	Based on agreed schedule of activity to be treated in Primary Care	Reduction of around 147 wte (£4m)

Outpatient Catchment	2% reduction in Emergency 13.5 % reduction in Elective Care 10% of activity will no longer be needed to take place 15% of activity will be seen by GP with Special Interest 5% will be seen by Specialist Nurse & AHP	
A&E Catchment	PCT Urgent Care Centre attached to the major A&E dept in WGH, operated by WHHT and services recharged to PCT. Standalone UCC at Hemel, managed by PCTS. Minor A&E activity currently treated at HH will be treated in PCTs Urgent Care centre	Reduction Of Around 51 Wte
Inpatient Catchment Length of stay /Daycase ratio	Some 4000 elective admissions lost based on postcode analysis. Equates to around 72 beds. Achieve 80th percentile, benchmarked against 16 similar providers. Equates to 59 beds.	Equates to around 256 wte
Operating theatre utilisation	48 weeks per year for scheduled activity 15 sessions per theatre per week 4 hours each 7.5 % cancellation rate 90% utilisation	

Table 31 – Drivers Behind Workforce Changes

The changes in workforce from the current base in 2007/8 to the end point position in 2013/14 can be summarised as follows:

Baseline 2007/8 (WTE)	3,250
PCT commissioning Intentions – Admission Avoidance and outpatients	(148)
Urgent Care Centre Hemel Hempstead	(52)
Reduction in Activity as a result of site consolidation at Watford	(154)
Improvement in Efficiencies (reductions in Lengths of stay/ Day Case Rates)	(103)
Direct consequence of site consolidation (Junior Doctors rotas. Management costs and clinical efficiencies).	(120)
Projected position in 2013/14 (WTE)	2,671

Table 32 – Summary of Workforce Changes

The detailed work that the Trust is taking forward with Health Works[9] to redesign clinical processes and pathways and with the Turnaround focus on productivity improvements will provide a more accurate assessment of the workforce needs over the coming months.

11.5 Phasing

The phasing of the DaHF model will require the workforce planning to be adjusted and refined as the details of the phased implementation timings and the service model changes are better defined. The Trust has modelled the impact of the DaHF project on the workforce and has assumed its delivery by Q3 2008/09, and a full year effect in 2009/10. The methodology used in determining the workforce changes is described in Appendix I5. The assumptions used for each element of workforce in each specialty are very specific, further detail available on request.

[9] External consultants working with the Trust on redesigning clinical processes and care pathways

The Trust's medium term workforce plan is summarised below:

Workforce	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
All staff (Total)	3249.8	3047.3	2768.7	2676.0	2659.3	2664.8	2670.9

Table 33 – Phased changes in Workforce

A breakdown of the changes in establishment by staff Group is included in Appendix T

There is potential for double running costs as the phasing of services requires provision of similar services on two sites. It is anticipated that this will be in the order of £5m tapering over the 18 months implementation timetable.

The strategy of the Trust is to keep redundancy costs for the implementation of DaHF as low as possible and with the current 12% turnover meaning that the Trust loses around 450 staff each year and the Trust is using at present around 150 wte in temporary staffing per year, it is hoped that the majority of the changes needed will be via natural wastage and reduction in temporary staffing requirements. However if 10% of the necessary reduction of staff would be via redundancies this would cost is the order of £1.1m[10].

11.6 Functional Staff Groups workforce planning

11.6.1 Medical and Nursing Workforce

The impact of a number of changes both national and local on the medical workforce will need to be modelled carefully in 2007/8. A programme of work, starting in the Medical Division will map these changes for consultant, non-training grades and junior medical staff and the introduction of Hospital at Night.

The Trust is current about 28% compliant in relation to EWTD but with the reconfiguration on to a single acute site the Trust would achieve compliance against the EWTD requirements. The detailed rotas are being developed at present across all the Divisions.

The Trust needs to define its strategy in relation to the non qualified workforce as currently there is a high turnover rate for this staff group and the substantial reduction on training and development funds to support their development will need to be stemmed if organisationally we believe that there is a need to increase the use of this staff group. Currently the Trust has invested little in the development of the assistant practitioner role (Band 4) and there is little doubt that in terms of cost effectiveness and ability to recruit this group of staff will be a vital element of the workforce profile in future.

High turnover in ITU and A&E will need to be targeted during the year particularly to ensure that vital skills are not lost from Hemel Hempstead General Hospital as the uncertainty created by *DaHF* impact on individual career decisions.

11.6.2 Clinical Support

It is likely that there will be a need to consider an increase the radiographic establishment to meet requirements of the extended working day in the elective surgery unit at St Albans and the development of the AAU. Part of this increased workforce may be met by an increase in the use of Assistant Practitioners. There is a lead time as with all professionally trained staff from deciding a role is needed to having a fully competent practitioner and therefore planning will be needed in 2007/8 to met this shortfall.

The modelling of the pathways to deliver the 18-week target in 2008 is likely to require additional staffing in the diagnostic areas such as radiography, pathology and physiological measurement as well as a broad basis of pre-operative assessment skills.

[10] assuming an average salary of £36K and an average length of service of 8 years.

With the emphasis on medicines management there will be extended roles for Pharmacists. Consultant Pharmacists/Pharmacist Independent Prescribers will become the norm in many clinical areas over the next 2/3 years and during this year preparatory work will be needed to develop this model further.

There are recruitment and retention issues with the current establishment of Biomedical Scientist staff as well as this being an ageing workforce. The potential re-provision of the Pathology services for Hertfordshire and the north of Bedfordshire will require a refocusing of the workforce profile to meet the changing nature of the provision of services. The detail of this work will be via the Pathology Project board and supporting project structure. The future workforce profile for pathology locally will need to take account of the outcomes of the East of England review of pathology to ensure a cost effective workforce skill mix.

11.6.3 Management Costs

The Trust is currently undertaking a consultation exercise to reconfigure its management structure in line with the DaHF workflow (emergency, diagnostic and outpatients and elective). It is anticipated that there will be reductions in management posts as a result of these changes though the management profile will need to flex to recognise the complexity and size of some of the new posts potentially required by this change.
The new structure is planned to be put in place on 1st April 2008.
A full review of management costs is being commissioned at present.
This will be supported by a Trust wide organisation development initiative known as the Leadership Academy.

11.6.4 Facilities Management

The requirements of the facilities management in the new arrangements needed for DaHF will be described in more detail as the service models are firmed up. It is likely that the bringing together of various disparate services on to a single site will reduce headcount and costs though the detail of this is not known at present.

11.7 Models of Care workforce planning

The DaHF project plan focuses on 6 key models of care delivery:

- Emergency care
- Critical Care – ITU, HDU, CCU
- Elective Care
- Facilities Management
- Clinical Support
- Cardiac Services

The project structure also includes Facilities management.

Each of these work streams will be supported by a workforce lead to help facilitate the articulation of the workforce profiling necessary to deliver this changed model of care. This work will draw on the Workforce Challenge programme delivered by the East of England.

Initial work has been undertaken to define the workforce profile for the Acute Assessment Unit (AAU) and work is now extending to map the impact on the surrounding wards and departments for the remaining element of the emergency care service provision. It is likely that there will be a need to increase the competency level for some staff groups to effectively deliver this new style of working.

Work is now in a final stage of development to define a different model of theatre utilisation at the planned care centre at St Albans City Hospital and this will link to the nursing skills mix model that has shown an overprovision of nursing staff in theatres.

11.8 Collaborative working with colleagues across Hertfordshire

Work will continue to develop a closer working relationship with colleagues in the provider arm of the PCT and East & North Hertfordshire Trust through the Hertfordshire Workforce Network to ensure that the staffing requirements are being supported and developed in appropriate primary and intermediate care settings which in turn will facility the more effective use of the acute based facilities.

11.9 Education and Training Requirements

Early discussions have started with the SHA Multi Professional Deanery and the University of Hertfordshire on the training requirements to meet this changing pattern of care delivery and the 1st cut of the education commissioning levels based on recruitment and retention of staff and the likely changes being predicted in the first set of data both from the models of care work and the function staff profiling will be developed later this Autumn.

12. Transitional Planning

12.1 Background

The Trust views the DaHF project as the major organisational change that will move it from its current position towards the position where it can secure NHS Foundation Trust Status and its long term future with a new PFI Hospital as part of the Watford Health Campus. In the light of this, there is a clear understanding of the complexity and importance of the transition planning within the project itself.

In order to initiate the process, a workshop was held on 20 November 2006 with wide ranging membership from the Trust and partner organisations. This identified a series of issues and actions that would be required to deliver the project successfully. A "mind map" of those issues is shown below:

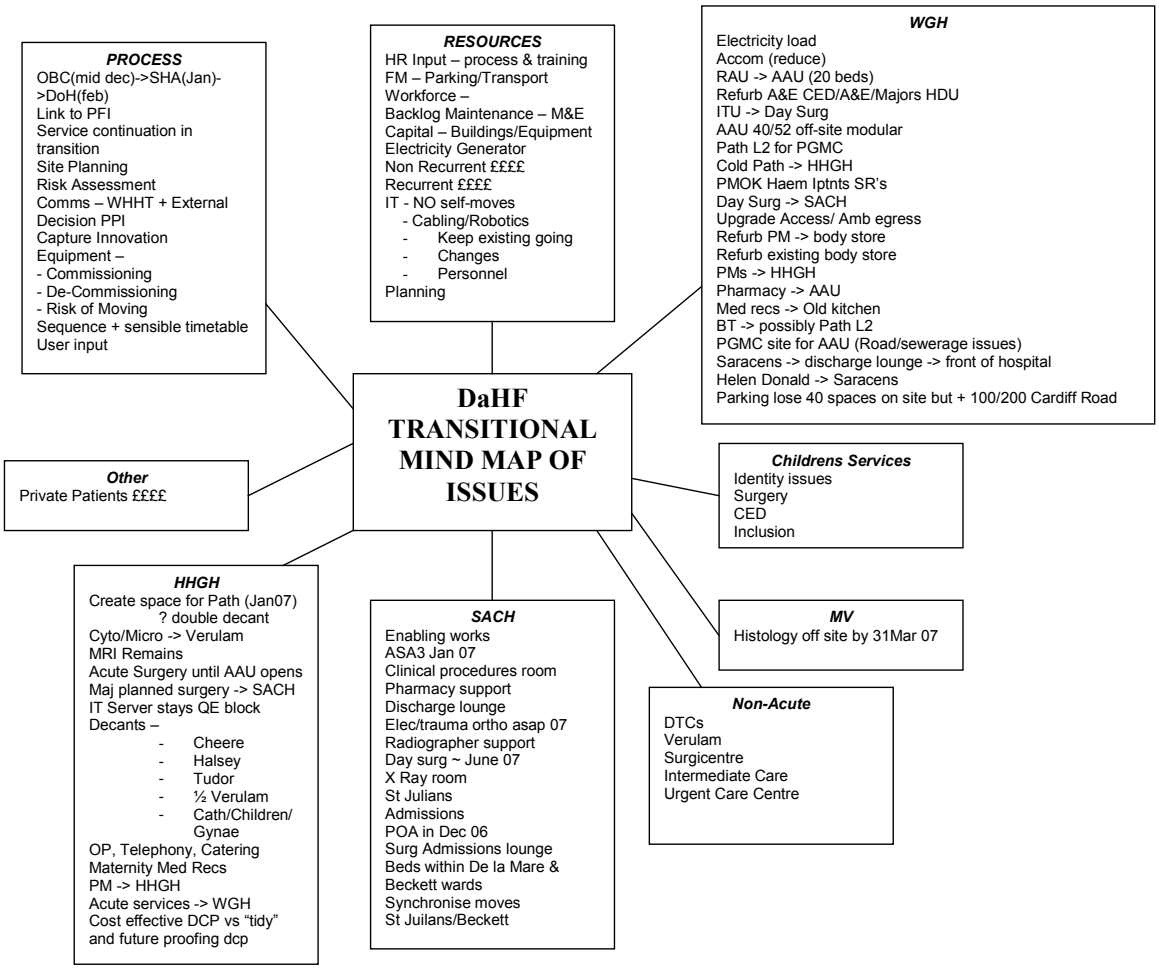


Figure 8

12.2 Delivering the Detailed Actions

As outlined in the Section on Project Management Arrangements, the Trust is utilising established Internal Hospital User Groups (iHUGs) as a key vehicle for defining and delivering change. Rather than establishing a new set of task groups to deliver the Transition Plan actions, these have been subsumed into the terms of reference of the iHUGs. These already contain the key players in each relevant area with links to Facilities, HR / Workforce, Finance and Planning and therefore are ideally constituted to carry forward the necessary level of detail. This also has the merit of ensuring that the actions to deliver DaHF are seen as part of the everyday operation of the Trust rather than being a separate project, which could become neglected in the face of normal day-to-day pressures.

12.3 Maintaining Pressure to Achieve Performance Standard

The Trust already has successful arrangements in place to ensure that it achieves and maintains its Financial Turnaround. The PMO meeting or its successor will continue to be the vehicle that monitor whether operational teams are achieving the performance gains indicated in Section 5 – Activity Planning and Performance Assumptions.

Although a key plank in the Trust's future model of care is the availability of the Acute Assessment Unit on the Watford General Hospital Site, it is fully recognised that many of the changes can and indeed must be made before it is available for use. It would not be credible to reduce by 122 beds in a single step.

In order to facilitate this, the Trust is enhancing its performance management tools to include profiled plans for reducing length of stay and theatre sessional requirements over the next twelve months. Given that it is impractical to remove one or two beds at a time from the bed base this will also include planned closures of particular wards. Some of these will be permanent and others used to facilitate changes and upgrades required as part of the DaHF project. Once fully developed, in conjunction with key stakeholders, this will also be used to underpin estates strategy and HR / workforce planning processes.

It should be noted that while this will make significant progress towards the overall bed reduction, it will leave a substantial step change at the end. The reason for this is two fold. As mentioned above, the AAU is key to achieving the full level of functional efficiencies planned by the Trust. Second, as shown by the analysis in section 5, a significant part of the bed reduction is based on a loss of workload owing to a reduced catchment after services have centralised. By definition, this capacity cannot be removed before the demand has reduced.

12.4 Decant Issues in the Preferred Option

The Trust has developed a decant strategy to minimise transitional and decant costs and time. This is centred on:

The development of the Elective Care Unit at St Albans (due to be complete in Sept 2007) will allow a series of developments in PMOK at Watford:

- refurbishment of Day Surgery Space for Fractured Neck of Femur (#nof) bay.
- Release of space vacated by #nof bay to accommodate the transfer of the Helen Donald Unit from Hemel Hempstead

The transfer of Finance from H Block to an off site solution will allow the refurbishment of H block and the transfer of the PGMC into it. This will allow for the demolition of the PGMC and the development of the AAU on the old PGMC site.

The RAU in PMOK will be relocated into temporary location to allow for decants into the space formerly occupied by the RAU.

This process will ensure that the Trust will not temporarily lose capacity at any time.

12.5 Summary

The DaHF project represents the major change plan for the Trust over the next 10 years and lays the groundwork for both the PFI and NHS FT Status. The Transition Plan therefore has the highest priority within the Trust. The key day-to-day changes have been wrapped into existing structures led by key operational managers. Overall strategic momentum will be maintained by tying the issues into the Financial Turnaround approach with profiled beds and resources plans to focus the scrutiny and delivery.

13. Risk Management

13.1 Risk Appraisal

The identification and understanding of risks associated with the options is important early in the process to ensure these risks are managed and mitigated as far as possible. The Trust has developed a detailed risk register and mitigation plan with is regularly reviewed and updated.

13.2 Methodology

The Trust has worked with Medicinq Osborne, its Procure 21 partner to develop a comprehensive risk register, which includes all risks and identifies responsibilities at an organisational and individual level in order to inform and manage the risks.

The Trust has used this risk register to inform its risk appraisal for the preferred option and the Do Nothing and Traditional Build options. The Trust has used a standard risk template to quantify the impact of each identified risk and the probabilities of those risks.

13.3 Summary of Risk Categories

The identified risks were classified and reviewed within the following categories:

1. Design Risks - Risk events associated with the design
2. Construction and Development – Risks inherent in construction and refurbishment
3. Commissioning – Risks associated with decant and commissioning of the final buildings
4. Operating – Risks relating to operating the facilities following end of construction
5. Variability of Revenue – Potential risks which would impact on the variability of revenue
6. Technology and obsolescence – risk of the buildings, equipment, IT etc becoming obsolete
7. Other project risks – other risks that may affect the project, for example the impact of the Surgicentre, ability to obtain planning permission.

13.4 Summary of Risk Register

The table below summarises the risks associated with each option and category. A more detailed risk register is included in Appendix F.

Risk Category	Do Nothing NPV £000	Option 1 Modular Build NPV £000	Option 2 Traditional Build NPV £000
Design	0	1,996	1,981
Construction and Development[11]	4,906	2,025	2,008
Performance	(1)	2,682	2,654
Operating	3,172	3,503	3,485
Variability of Revenue	(946)	(946)	(1,183)
Technology and Obsolescence	1,736	1,083	1,078
Residual Value Risks	0	1,854	0
Other Project Risks	36	1,771	4,196
Total	**8,903**	**13,969**	**14,220**

Table 34: Risk Summary

[11] Design and construction risks have been assessed on a capital cost basis but also in respect of lost savings (on a revenue basis) and therefore are greater than the level of contingencies in the capital cost forms

The main reasons for the difference in values of risks are as follows:

- The higher risk on construction for the Do Nothing option is a recognition of the higher risk of a drop in clinical standards as a result of lack of investment in the estate and a subsequent drop in Trust income
- The residual value risk in the modular build reflects the assumption that the Modular build will have a residual value, but it may be less than what has been assumed
- The higher value of other project risks in Traditional build reflects the potential lost savings as a result of planning delay.

13.5 Key Risks

The Key risks identified from the risk analysis are as follows:

Risk	Strategy
Change in requirements of the Trust	Robust change control mechanism
Latent Defects in the New build	Should be risk managed by Medicinq Osborne, although any dispute could cost the Trust money
Latent Defects in refurbished estate	Trust has to manage refurbished estate in the same way as other estate. This potentially will resolve backlog maintenance issues in some areas of retained estate
Level of Estate Savings	Level of estate savings may be overstated due to the condition of the estate at Watford. Prudent estimates of the estates savings at Hemel Hempstead have been made
Incorrect estimates of clinical costs	Clinical costs may be understated due to too aggressive assumptions on Nursing and medical staffing. Any analysis will be underpinned by detailed workforce plans
Incorrect estimates of maintenance costs	Level of maintenance costs may be understated/overstated due to the condition of the estate at Watford
Patient infection caused by poor facilities management	New development will help reduce risk
Patient infection – Other	New development will help reduce risk
Residual Estate Valuation	Risk that AAU will not be used in the PFI. Brief to bidders needs to give a clear steer to use the AAU in some form

Table 35 – Key Risks

The risk analysis also highlights some upside risk, particularly in respect of levels of activity expected by the Trust, where the Trust has identified a risk that the level of activity coming in to the Trust is more than the commissioners plans indicate. To manage this risk the Trust has a strategy for the following:

- Greater productivity in terms of lengths of stay. It is anticipated that the, as yet unidentified, efficiencies in future years will allow further reductions in capacity than is currently planned. If activity is greater than expected then it should be managed within the capacity identified
- Extension of use of theatres and outpatients in to the weekend
- Sub contract of extra capacity from the private sector on a temporary basis.

A comprehensive risk management strategy reflecting a DATIX score for each of the risks has been included in Appendix F.

14. Procurement Process

14.1 Procurement Strategy and Implementation Timescales

The most important objective the Trust has in relation to the DaHF Business Case is the need for implementation to occur as soon as possible, to be able to improve clinical outcomes and drive through the efficiency savings that must be made.

Therefore, the procurement options available to the Trust for the Delivering a Healthy Future have been focused on the quickest delivery of the scheme. If a PFI procurement route were undertaken for this project, the start on site date would be at the earliest around April 2009. The project could not be justified on this basis. It is also extremely unlikely given the scope of the project that a PFI provider would be found.

The Trust has carried out a Value For Money assessment of PFI funding and concluded from a qualitative perspective PFI funding could not be justified and on the basis that construction would start at the same time for a PFI funded option it can marginally be justifies from a quantitative perspective. However a PFI funded option would not be delivered for a further 2 years reducing the amount of savings that can be realised. If this were factored in to the quantitative assessment the PFI funded option would not be justified economically. A summary of the PFI assessment is included in Appendix S. In addition to the theoretical approach assumed in Appendix S. The qualitative assessment reflects the following issues:

- Very small scheme for a PFI marketplace full of "super schemes"
- Operational difficulty of maintenance integration of 6,000m^2 PFI estate with a neighbouring WHHT maintained estate approaching 60,000m^2
- Elements of significant refurbishment of existing facilities required (high risk and high cost for PFI)
- Complex phased implementation programme and phased decanting (high risk and high cost for PFI)
- WHHT strategy is for a new hospital adjacent but unlinked to the existing facilities or this proposed facility. This would be likely to be procured (indeed a Project Team has been established to deliver this) through a PFI. Organisations able to deliver the long-term hospital potentially would not be interested in delivery of the DaHF project.
- The location of the DaHF project is earmarked for housing under the proposed Watford Health Campus. The facility provided therefore needs to be relocatable in the event that the Campus progresses. This would reduce further the attractiveness of the scheme as the return period for the provider would be only 5-7 years. Clearly this would also push up the unitary payment and risk profile further for a PFI consortia, creating a significant challenge to affordability.

The Trust believes the most appropriate way to procure this project is by using public capital through Procure 21.

The Trust has already undertaken a number of Procure 21 projects, through their selected Private Sector Partner, Medicinq Osborne, and therefore the advantages of this approach are:

- Established and good working relationship with Medicinq Osborne;
- Good understanding of the contractual relationship under Procure 21 and allocation of risks;
- Speed of delivery, as Medicinq Osborne can start on site as soon as the Full Business Case has been approved rather than an tendering process using OJEU;
- Other advantages from the use of Procure 21 such as supply chain management and the sharing of potential savings against the Guaranteed Maximum Price

If the Trust pursues this development through a Traditional Procurement route rather than through Procure 21, it would need to tender for the delivery of the proposed development through OJEU. It is estimated that the procurement of the contractor would have taken an additional 3 months.

In order to expedite the delivery of the scheme, in particular to bring forward the opening of the AAU the Trust has decided to pursue a number of discreet stand alone enabling packages prior to the approval of this Business Case. These schemes are justified on their own merits and are included in the capital costs identified with this Business Case but will be funded by the Trust capital Programme. This represents the Trust's contribution to the overall funding of the scheme and by proceeding in advance of approval demonstrates the Trust Board commitment to this strategic project.

Further details of the elements of the Procure 21 scheme development are included in Appendix B

14.2 Risks Associated with Procure 21

As part of the Procure 21 process Medicinq Osborne and the Trust will agree a Guaranteed Maximum Price (GMP) before work commences. The Trust and Medicinq Osborne have worked together closely to generate this price. The Trust cost advisers will also independently validate the GMP. In the unlikely event that the GMP exceeds that quoted in the FB forms the Trust will fund the difference through the capital programme or by reducing the scope of the project. As over 70% of the net cost of the scheme is directly related to the AAU for which a quotation has already been obtained the potential for the GMP to be greater than that quoted in the FB forms (Appendix C) is limited.

In the event of the scheme costing more than the GMP Medicinq Osborne will have to bear the risk of costs being incurred over the level agreed. However if outturn costs are lower than the GMP then the Trust will receive 50% of the savings. Any works outside of the GMP instigated by the Trust will be at the Trust's risk and the Trust will endeavour to minimize these and ensure as much as possible is included in the GMP.

14.3 Timescales

A joint timescale has been agreed between the Trust and Medicinq Osborne, which is as follows:

- Completion of design work – July
- Agreement of GMP – 29 August 2007
- Contract signature – 11 October 2007 (assuming FBC approval)
- Start on site – 12 October 2007
- Completion of the AAU – 15th August 2008
- Construction end – 31 March 2009

14.4 Key Elements of the Contract

The Procure 21 contract allows for the following:

- The Trust to benefit from 50% of savings made against savings against overall GMP figure
- Delay damages of £16,000 per day after 6 weeks delay;
- Contingency items for out of hours work;
- Price certainty. The GMP is due to be agreed before FBC approval.

14.5 Value for Money of the Procure 21 Scheme

The departmental cost for the new build in AAU approximates to £2,163 per m2, which is within the expected value for an NHS construction project at MIPS current prices.

14.6 Equipment

Included in the capital costs is a sum of £3 million for equipment. This sum will fund medical equipment as well as fixtures and fittings. The Trust has identified its requirement for medical equipment and is developing a procurement plan to run in parallel with the construction timetable, the cost of medical equipment is £2 million. Other equipment is being reviewed as part of the design development. The Trust will assess the level of equipment that can be transferred into new and refurbished facilities in relation to the resources allowed for within the capital sum.

14.7 Information Technology

The Delivering a Healthy Future Project does not in itself increase the requirement for additional IT capacity on the Watford site. However the Trust is currently reviewing its infrastructure as part of the its normal IT planning cycle.

14.8 Impact on Potential PFI Scheme

The Procure 21 scheme described in this case comprises of a new modular build adjacent to the main clinical block (PMoK) at Watford General Hospital. In the Watford Health Campus Master plan this land is zoned for residential development in the future.

Given that the AAU itself would be an integral part of the new Acute Hospital and these demountable buildings would become redundant the Trust hosted a workshop in December 2006 with the DaHF design team and the Watford Health Campus design team to consider how and where the AAU building could be utilised on the site in the future. This session identified a number of suitable options including utilising the structure to provide a medical / administration office block for the Trust. Such use would reduce the scale and the cost of the PFI development as a consequence of 6000m2 of accommodation being provided out with the overall PFI construction contract. This would not constrain the project co providing FM services.

These ideas have been discussed with the planning department of the council and will be developed in more detail as a part of the Watford Health Campus and PSC design solution. The DaHF development will therefore not have an impact on the proposed location of Hospital PFI scheme. As an alternative these facilities could be used for other NHS purposes or sold to the private sector.

The DaHF scheme will also ensure that the Trust will deliver the performance requirements needed to deliver the PFI ahead of schedule. The level of organisational transition required will also be reduced. The project therefore helps the Trust manage its interim services in a more effective way.

15. Project Management Arrangements

15.1 Introduction

The Trust has put robust project management arrangements in place to manage both this project and the wider service reconfiguration project. This approach reflects the principles of programme management and uses elements of PRINCE 2 project management methodology.

The scheme is an integral element of the Investing in Your Health (IiYH) Programme, which comprises of portfolio of projects concerned with delivering strategic change in the Trust and the wider health community. The project is also an essential component of the Trust's financial turnaround programme, which consists of a range of projects to deliver financial recovery.

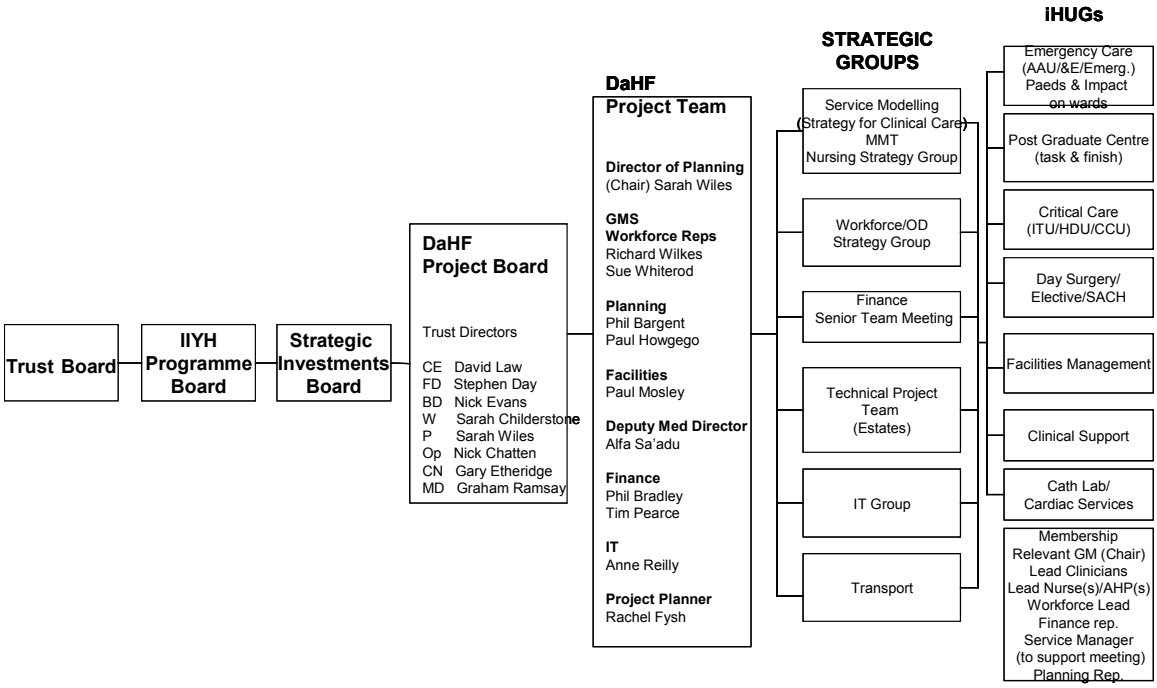
The DaHF programme underwent a Gateway 0 review at the end of June 2007. The review expressed concern about the scarcity of programme management resources. This concern lead to the issue being assigned a red status in the reports recommendations. The Trust takes this concern seriously and is currently seeking to increase these resources as a matter of urgency.

15.2 Project Reporting Structure

The DaHF Project Board reports through the Strategic Investments Board to the Trust's IiYH Programme Board, a formal sub committee of the WHHT Board. This ensures a coordinated approach to strategic development within the Trust. The Project Team is accountable to the Project Board and each sub group is accountable to the Project Team for the implementation of their element of the Project.

The DaHF Project Board has been subsumed within the weekly Director's meeting. This provides the opportunity for the Director of Planning to report progress on an exceptional basis. These arrangements are detailed in Figure 1.

DELIVERING A HEALTHY FUTURE – PROJECT STRUCTURE



15.3 Project Roles & Responsibilities

As stated above the project has been structured using the programme management principles and reflecting the PRINCE project management methodology. The key roles and responsibilities are as follows:

The Senior Responsible Owner (SRO) is Mr David Law, the Trust's Chief Executive.

Strategic Investments Board Membership

David Law	-	Chief Executive
Sarah Wiles	-	Director of Planning
Robin Douglas	-	Non Executive Director
Stephen Day	-	Director of Finance and Turnaround
Vacant post	-	Non Executive Director

The ***DaHF Project Board*** has been established, the membership of which is detailed below:

David Law	-	Chief Executive (Chair)
Sarah Wiles	-	Director of Planning
Graham Ramsay	-	Medical Director
Stephen Day	-	Director of Finance and Turnaround
Sarah Childerstone	-	Director of Human Resources
Gary Etheridge	-	Chief Nurse, Director of Quality
Nick Evans	-	Director Of Business Development
Nick Chatten	-	Operations Director

The Associate Director of Communications (Sue Fay) is briefed on any issues arising from the Project Board meeting in order to ensure key messages are briefed throughout the organisation and outside it. A communications plan that includes the Trust's approach to Public Consultation and Overview and Scrutiny, staff briefings, ministerial and MP briefings is currently being developed.

The Project Board is accountable for the overall success of the project and meets weekly to:-

- Set clear direction for the project;
- Agree the terms of reference for the Project Team and workstreams;
- Review progress against project plan;
- Arbitrate between work streams where necessary;
- Oversee the communications and consultation processes, ensuring all stakeholders are fully appraised of action;
- Sanction plans and action;
- Appraise the board and SHA of progress on a monthly basis and ministers when necessary.
- Authorising commitment of project resources;
- Agreeing the Project Timetable

The ***DaHF Project Team*** chaired by the Director of Planning oversees the overall delivery of the project to time and budget. This team meets monthly and is responsible for:

- Agreeing Business Case content and deliverables
- Setting targets and agreeing a project control system to ensure delivery of the programme objectives
- Reviewing and approving the deliverables
- Reviewing and approving any changes to programme plans
- Providing advice and guidance on further work and content within each project stream which maybe required
- Reviewing and approving proposed action plans
- Signing off each completed phase

- Authorising the start of each stage of the Project
- Ensuring that all deliverables are complete and delivered
- Developing the Outline Business Case to be submitted to the Project Board project managing and co-ordinating the different work streams that are required to produce an OBC in the required timescale
- Ensuring effective decision-making that delivers and adequately resources the programme

The Project Team consists of the following members:

Sarah Wiles	-	Director of Planning
Liz Rippon	-	Assistant Director of Planning IiYH
Phil Bargent	-	Acting Head of Capital Planning
Paul Howgego	-	Planning Project Manager
Melanie Dawes	-	Health Service Planner IiYH
Richard Simons	-	Head of Estates
Tracey Moran	-	Deputy Director of Nursing
Simon Green	-	Divisional Manager, Emergency & Acute Medicine
Maxine McVey	-	Divisional Manager for Surgery
Sally Tucker	-	Divisional Manager for Clinical Support
Paul Mosley	-	Acting Director of Estates and Facilities
Richard Wilkes	-	HR Representative from the Transformational Unit
Sue Whiterod	-	HR Representative from the Transformational Unit
Dr Alfa Sa'adu	-	Clinical Representative
Phil Bradley	-	Deputy Director of Finance
Anne Reilly	-	Associate Director of Clinical Informatics
Rachel Fysh	-	Project Planner

Internal Hospital User Groups

The project team will be supported by seven internal hospital user groups (iHUGS), as listed below:

- Emergency Care (AAU / A&E / Emergency Paediatrics and Inpatient Wards)
- Post Graduate Centre
- Critical Care (ITU / HDU / CCU)
- Day Surgery & Elective Unit at SACH
- Facilities Management
- Clinical Support
- Catheter Lab and cardiac services

Please note the AAU group will have reps from both Surgery and Medicine

The core membership of these groups has been reviewed and will now consist of:

General Manager – chair
Service Manager – secretary and support
Lead clinician(s)
Lead Nurse(s) & Lead AHP(s) (as appropriate)
Workforce Representative
Planning Representative
Finance Representative

These groups will be expected to co-ordinate the development of patient pathways, operational policies etc. To achieve this it is expected that they will commission 'task and finish' groups that will focus on particular areas. This is seen as essential to the progress of the overall project as co-opting members onto the iHUG itself has a tendency to create unmanageable meetings.

Strategic Groups

Strategic direction will be provided to the DaHF project in general and the iHUGs in particular from the various strategic groups already established in the Trust e.g. the Medical Management Team, Nursing Strategy Group etc.

Use of Special Advisors

In order to progress the overall 'DaHF' strategy the Trust has engaged a number of 'special advisors and consultants'. These engagements have been made where either the necessary skills are not available within the Trust or where they are not available within the timescale required for the project.

These special advisors have either been employed directly by the Trust or via Medicinq Osborne, the Trust's Procure21 advisor, the organisations consulted and their roles (which are kept under constant review) are detailed below:

Following the Gateway recommendation a Programme Manager, Business Change Manager and Programme Management Officer will be appointed without delay to supplement the current Project Team. The cost of these additional resources have been include for within the overall business case costs. Professional Project Management consultancies will be used in order to expedite the appointments.

Organisation/ Individual	Role
Tribal Secta	Activity and financial modelling
Medicinq Osborne	Procure 21
* Murphy Phillips	Architect
* DSSR	M&E Engineering
* Mott Macdonald	Traffic
* Arc Health	Health Planner
* Turner Townsend	Cost Consultants
* Paul Owen Associates	Structural Engineers
* Safetymark	Planning Supervisor
* Butler and Young	Building control
Northcroft	Cost Consultants
Ernst & Young	Business Case Support – commercial
Sedgwick Igoe	Business Case - financial
CLEAR Communications	Public Consultation Advice

* Denotes initially employed via Medicinq Osborne

Table 36 – Project Advisers

Gateway Review

The Trust received an OGC Gateway review in June 2007. The Gateway Review's key recommendation was to appoint a Programme Manager to take day-to-day responsibility for the management of the Programme. Furthermore a Programme Management Office (PMO) Manager should be appointed immediately to embed best practice Programme Management disciplines ahead of the delivery phase of the Programme. As a result of this recommendation the Trust is in the process of appointing the following:

- Programme Manager;
- Project Manager and;
- Business Change Manager.

These appointments will be in place soon as possible after the expected approval of the FBC.

15.4 Outline Arrangements for Change and Contract Management

Projects are often plagued by scope creep, i.e. changes being made without review, adding to the work of the project, and delaying the schedule, increasing the costs, or causing late Project Issues to arise. Change control usually grows more stringent as a project progresses, in order to protect the project against late, disruptive changes.

The Trust has developed a protocol to facilitate objective, informed submission, analysis and conscious decision making in relation to all identified Project Issues which could alter the scope of the Delivering a Healthy Future Project. It is also intended to ensure that the acceptance of changes arising from Project Issues are controlled within the financial approval parameters of the Capital budget, taking due cognisance of the Project's contingencies and allowances for optimism bias.

The protocol is based on the preparation and review of a Request for Change form for requesting and documenting changes to the Project (e.g. adding new features) or to elements within the Project (such as changing a major specification of a piece of a system, product, or other deliverable). It includes fields for impact of the proposed change on the project timeline, budget etc., and on the components of the Project deliverables.

Policy

Requests for Change to the scope of the Project may be generated due to a number of reasons, or Project Issues, including

- National policy or statutory requirements (e.g. legislative change)
- Local policy (e.g. commissioning decisions)
- Good practice guidance (e.g. Royal Colleges)
- Prior omissions or changes of view.

The Trust initial policy will be to resist changes to the brief unless absolutely necessary.

In the event that a Project Team member identifies a Project Issue that could amend the scope of the Project, they should complete the Request for Change form.

The Project Team member should liaise with relevant other Project Team members, accessing input from advisers as appropriate, in order to ensure that the cost, quality and timescale impact of the Project Issue has been appropriately assessed.

In parallel to the preparation of the Request for Change Form, the Project Team member should advise the Project Manager that the Project Issue has been identified in order that the Risk Register can be updated accordingly.

The Project Manager will be responsible for referencing the Request for Change form and logging it with other Project documentation.

The relevant Project Team member should submit the Request for Change form to the Change Control Team. The Change Control Team has delegated authority from the Project Board to consider and make decisions on proposed changes within agreed budgetary parameters, and can make recommendations to the Project Board on the acceptance or rejection of proposed changes beyond that budgetary allowance.

The Change Control Team shall be led by the Project Manager and shall have the following core members:
Project Manager;
Finance Lead;
Clinical Lead; and,
Capital Planning Lead
Estates and FM Lead.

In order to ensure that the level of analysis is commensurate with the cost and risk associated with the Project Issue, a two stage approach to analysis is proposed.
Following initial analysis, if the Project Issue has a projected cost impact of less than (£50,000 capital or £25,000 revenue) the Change Control Team may decide to reject or agree to the proposed change based on the initial level of analysis;
If the Project Issue has a projected cost impact of more than (£50,000 capital or £25,000 revenue) (the a detailed project impact analysis should be undertaken prior to the Change Control Team making a final recommendation being made to the Project Board.

At each stage of analysis, a decision may be made to accept the change, support more detailed analysis reject the change, or hold the change for future enhancements should funding etc. be identified.

15.5 Outline Arrangements for Benefits Realisation

The objectives and benefits of the project are set out in Section 6. A benefits realization plan is included in Appendix E. The Benefits Realisation Plan (BRP) identifies for each benefit:

- The measure of success;
- The current baseline position;
- How the benefits realisation will be monitored
- Who will have lead responsibility for the delivery of the benefit

The Trust's Project Board has overall responsibility for this process. Where relevant the performance measures identified within the benefits realization plan will be reviewed as part of the Post Project Evaluation Plan

15.6 Post Project Evaluation Plan

The purpose of undertaking a post project evaluation plan is to assess how well the scheme has met its objectives and whether they have achieved to time cost and quality. In particular this helps to ensure that any missed benefits can still be secured and that there is learning for the organisation for future projects. In accordance with current guidance and good practice the project will be evaluated in stages. The key stages of the evaluation are described below:

<u>Stage 1 – Procurement Process Evaluation</u>

An evaluation of the procurement process will be undertaken following contract signature, to assess the effectiveness of the procurement process in meeting project objectives and identify issues and lessons learned. This stage will also enable the project team to review its performance and aid in future development skills.

<u>Stage 2 – Monitoring the progress of the project and review the project outputs on completion of the construction phase</u>

During the construction period progress will be monitored to ensure delivery of the project to time, cost and quality and to identify issues and actions arising. On completion of the construction phase the actual project outputs achieved will be reviewed and assessed against requirements, to ensure these match the project's intended outputs and deliver its objectives.

<u>Stage 3 – Initial post project evaluation of the service outcomes</u>

This will be undertaken 6 to 12 months after the new facilities have been commissioned. The objective is to determine the success of the commissioning phase and the transfer of services into the new facilities, and what lessons may be learned from the process.

<u>Stage 4 – Follow up post project evaluation</u>

This will be undertaken two years into the operational phase by an evaluation to assess the longer term service outcomes, and ensure that the project's objectives continue to be delivered. In each stage the following issues will be considered:

- To what extent relevant project objectives have been achieved.
- To what extent the project went as planned;
- Where the plan was not followed, why this happened;
- How plans for the next phase of the project should be adjusted if appropriate

15.7 Summary

The project management arrangements for DaHF have been updated and refreshed to reflect the changing requirements of the project. They remain in line with the PRINCE project management methodology and are focussed on delivering the project objective to time in the most efficient and effective manner.

16. Conclusion

16.1 This Business Case clearly demonstrates that the Trust needs short term capital investment to enable it to:

- Sustain and improve clinical processes and outcomes
- Sustain financial balance
- Improve organisational performance
- Address the issues arising from the government's objectives of delivering care closer to home.

Without this investment the Trust would not be able to achieve any of the four key targets identified above and it would not be able to move towards its long term goal of delivering a new acute hospital on the Watford site. The development will also put the Trust in a strong position to deliver the improvements in performance required to deliver the longer-term goal whilst addressing a number of difficult transitional issues early.

17. Appendices

Appendix A	Development Control Plans and 1:200 and 1:50 designs for the Watford Refurbishment and AAU. Drawings Submitted in hard copy.
Appendix B	DH Capital Investment Branch Review- Procure 21 Developments
Appendix C	FB Forms: C1 AAU Modular Build C2 AAU Traditional Build C3 Watford Refurbishment
Appendix D	Construction Programme
Appendix E	Benefits Realisation Plan
Appendix F	F1 Risk Management Strategy F2 Modular Risk Analysis F3 Traditional Build Risk Analysis F4 Do Nothing Risk Analysis
Appendix G	Letters of Commissioner Support Outstanding
Appendix H	Board Minutes:- Business Case Endorsement Outstanding
Appendix I	Financial Analysis I1 Reconciliation of 2006/7 outturn to 2007/8 plan I2 Income and Expenditure Summary Modular Build I3 Income and Expenditure Summary Do Nothing 2 pages I4 Projected Balance sheet Position for Modular Build I5 Activity Modelling Methodology
Appendix J	Generic Economic Model Inputs J1 Calculation of relevant capital costs for economic appraisal J2 Opportunity costs and residual values
Appendix K	Acute Services Review Business Case
Appendix L	Communications Strategy
Appendix M	Long list of options from the feasibility phase.
Appendix N	Non Financial Appraisal Outputs
Appendix O	Optimism Bias Calculations O1 AAU Optimism Bias O2 AAU Optimism Bias Mitigation O3 Watford Other Optimism Bias O4 Watford Other Optimism Bias Mitigation
Appendix P	Gateway Risk Potential Assessment
Appendix Q	Planning Permission Notification
Appendix R	Turnaround programme. R1 Monthly Finance Report (May 2007) R2 Appendices 1 – 3 to the Finance report
Appendix S	Value for money assessment of PFI funded option. S1 PFI Assessment S2 Qualitative Assessment S3 Quantitative Evaluation Spreadsheet
Appendix T	Workforce
Appendix U	Analysis of Reference Costs
Appendix V	Modular Construction Evaluation Report Outstanding
Appendix W	W1 Activity and Performance Assumptions W2 Summary

Appendix X OGC Gateway Review

18. Glossary

Term	Definition/ Explanation
80th Percentile	Performance is in the top 20 percent of a specified group
A&E	Accident and Emergency Department
AAU	Acute Admissions Unit – Facility for managing non elective acutely unwell admissions
Acute Care	Specific care for diseases or illnesses that progress quickly, feature severe symptoms and have a brief duration.
Average Length of Stay (ALOS)	The average time a patient stays in a hospital bed for inpatients, can be broken down by specialty, HRG or procedure
Backlog Maintenance	The level of investment needed in the estate to bring it up to an acceptable condition (previously Estate Code condition B)
CEPOD	Confidential Enquiry into Peri-operative Deaths
Critical Care	An integrated service for critically ill patients when they are in the health system.
Equivalent Annual Cost (EAC)	The NPC annualised
European Working time Directive (EWTD)	From 2009, Trust will need to ensure that junior medical staff do not work over 48 hours in any one week. Most Junior doctors in non elective specialties currently work 56 hours a week
Financial Risk Rating	All Trusts now have a financial risk rating based on their historic financial performance. This governs the amount of money a Trust can borrow
Foundation Trust (FT)	NHS hospitals that are run as independent, public benefit corporations, which are both controlled and run locally.
Full Business Case (FBC)	Business Case exploring in more detail the preferred option and proving out the affordability, and developing the design and construction programme.
Generic Economic Model (GEM)	A standard model and methodology by which the economic appraisal is calculated
FB forms	Full Business Case financial analysis forms
Healthcare Resource Group (HRG)	Groups that provide a way of categorising the treatment of patients in order to monitor and evaluate the use of resources.
Impairments	When an asset is disposed of or demolished. The Trust will potentially have to write off the book value of the asset in its Income and Expenditure Account thereby accounting for a one off cost. Trusts have in the past sought impairment funding to cover this cost from the NHS Bank
Independent Sector Treatment Centre (ISTC)	Private sector treatment centres that offer pre booked day and short stay surgery, and diagnostic procedures.
Interest Bearing Debt (IBD)	Trusts will in the future be funded through a loan (IBD) on which interest is payable (currently 4.7%)
Intermediate Care	Integrated services for older people that promote faster recovery from illness, prevent unnecessary hospital admissions and maximise independent living.

Term	Definition/ Explanation
Investing in Your Health	The title of the Hertfordshire wide development of health services
Local General Hospital	Hospital providing planned and diagnostic facilities bit not acute non elective care
Modular build	Building technique where buildings are constructed off site and then assembled on location
Monitor	The independent regulator of NHS foundation Trusts that is responsible for authorising, monitoring and regulating them.
National Tariff	The system used by DH to commission health and social care services.
Net Present Cost (NPC)	The total cost of the development over the appraisal period discounted to reflect the reducing value of money over time (currently assumed at 3.5% per year)
Optimism Bias	Capital schemes have historically underestimated the final outturn costs. The Treasury now requires Trusts who are developing capital schemes to calculate a cost of optimism bias to cover things like scope creep unexpected factors etc. The level of optimism bias is expected to reduce by the time an FBC is produced
Our Health Our Care Our Say	White Paper that set out a vision to provide people with good quality social care and NHS services in the communities where they live.
Outline Business Case (OBC)	Business Case developed to explore the potential options in delivering the required solution. Completed before funding route (PFI or Treasury funds) is agreed
Payment by Results	Transparent rules based system that sets fixed prices (a tariff) for clinical procedures and activity in the NHS, enabling all Trusts to be paid the same for equivalent work. The majority of an NHS Trust's activity is paid for under payment by results. Each Trust is paid a standard tariff for the activity it carries out. This is then adjusted to reflect any significant local cost pressures (e.g. London weighting) through the Market Forces Factor
Primary Care Trust (PCT)	PCTs are responsible for commissioning healthcare for its residents. They also act as paymasters for GPs and manage the provision of primary care services.
Private Finance Initiative (PFI)	Initiative that provides a way of funding major capital investments, without immediate recourse to the public purse. The private sector borrows funds to develop new facilities and recharges the NHS for the use of the facilities over a period of normally 30 years.
Procure 21	A method of procuring capital schemes with a long term contractor partner. Establishing closer working relationships between the client and the contractor which in the long run would reduce the cost of capital schemes.
Public Dividend Capital (PDC)	The equivalent of share capital for the NHS – historically NHS Trust's major non PFI capital requirements have been funded through the issuance of PDC. Trusts are require to pay a dividend related to 3.5% of the value of their assets
Reference Costs	Library records of unit costs for a broad range of NHS treatments and clinical procedures since 1998.
Strategic Health Authority (SHA)	The local headquarters of the NHS, responsible for ensuring that national priorities are integrated into local plans, and that primary care Trusts (PCTs) are performing well
Strategic Outline Case (SOC)	Business Case justifying need for investment precedes OBC
Switching Points	The point at which a variable needs to change for the preferred option to change.
Traditional	Building technique using bricks and mortar

Term	Definition/ Explanation
build	
Treasury Green Book	The Treasury's guidance on how to appraise options from an economic perspective
Urgent Care Centre	Facility where patients need immediate attention but do not require hospital admission or continued clinical support
WTE	One Whole Time Equivalent - Full Time worker on 37 hour week.