

Sensitivity Testing

There are only two sub criteria where the ECH option does not achieve the highest benefit score;

- Staff criterion - flexibility of utilisation, and
- Access criterion - internal access to departments.

To change the ranking of the options for the criterion within which these sub criteria fit, would involve substantially increasing the weighting of the sub criteria and an equivalent reduction in the other sub criteria in the criterion.

For the staff criterion this would require increasing the weighting from 20 to 32, for the access criterion the increase required would be from 20 to 74. Changing these weightings however, does not affect the relative benefits of the three options when considering the total weighted scores.

5.8 CAPITAL COSTS

The capital cost for each option is given in Table 39, Table 40 and Table 41. These are broken down into the acute hospital costs and the local care centre costs and are based at MIPS 345 VoP. The costs include an estimate of the Section 106 commitments required as a condition of the planning approval. Copies of the OB forms are provided in Appendix 10.

Table 39 – Capital Cost of the Do Minimum Option including VAT (£,000)

Element of Option	Works costs	Equipment cost	Other costs	Total
Acute Hospital Development	£123,467	£30,726	£48,526	£202,719
Integrated Care Centre	£14,021	£1,630	£4,197	£19,848
Land Purchase			£3,000	£3,000
Total	£137,488	£32,356	£55,723	£225,567

Table 40 – Capital Cost of the ECH Hub Option including VAT (£,000)

Element of Option	Works costs	Equipment cost	Other costs	Total
ECH Hospital Development	£153,805	£30,726	£64,491	£249,022
Integrated Care Centre	£14,021	£1,630	£4,197	£19,848
Land Purchase	0	0	0	0
Total	£167,826	£32,356	£68,688	£268,870

Table 41 – Capital Costs of PDH Hub Option including VAT (£,000)

Element of Option	Works costs	Equipment cost	Other costs	Total
PDH Hospital Development	£179,660	£30,276	£66,667	£276,603
Integrated Care Centre	£14,021	£1,630	£4,197	£19,848
Land Purchase	0	0	£3,000	£3,000
Total	£193,681	£31,906	£73,864	£299,451

5.9 DEVELOPMENT PROGRAMMES

A development programme as been defined for each option that covers enabling works, the construction phases, decanting and service transfers. The programmes for each option are detailed in Table 42, Table 43 and Table 44.

Table 42 – Development Programme for the Do Minimum Option

Phase	Works Cost (exc. VAT) (£,000)	Duration including decant and transfers (weeks)	Cumulative Time (years)
-------	-------------------------------	---	-------------------------

1	32,571,000	101	2.0
2	13,803,000	82	3.6
3	33,961,000	114	5.8
4	2,571,000	28	6.3
5	22,172,000	116	8.5

Table 43 – Development Programme for the PDH Option

Phase	Works Cost (exc. VAT) (£,000)	Duration including decant and transfers (weeks)	Cumulative Time (years)
1	4,758,000	28	0.5
2	5,376,000	41	1.3
3	41,990,000	123	3.7
4	1,761,000	41	4.4
5	38,522,000	161	6.8
6	15,188,000	82	8.3
7	18,605,000	95	10.2
8	26,670,000	116	12.5

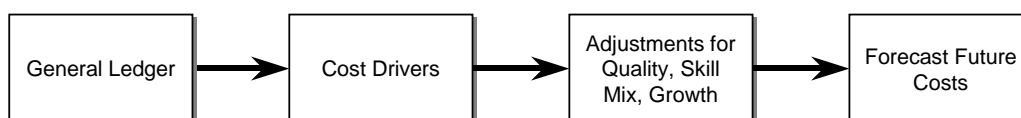
Table 44 – Development Programme for the ECH Option

Phase	Works Cost (exc. VAT) (£,000)	Duration including decant and transfers (weeks)	Cumulative Time (years)
1 & 2	18,979,000	66	1.3
3	70,874,000	125	3.6
4	41,045,000	106	5.8

5.10 REVENUE COSTS

Forecast revenue costs have been developed using a model that takes current cost information from the Trust's ledger, applies growth factors based on defined cost drivers, allows adjustments for changes in skill mix, quality and new services, and splits out the acute hospital costs from those that relate to the integrated care centre, see Figure 14. The base costs, cost drivers, and forecast future costs have been agreed with the PCTs.

Figure 14 – Basic Components of the Revenue Model



The costs have been separated into:

- Achieving targets and population growth.
- Integrated Care Centre.
- Facilities Costs.
- Capital Charges.

The current cost base for the project (2002/03), assumptions, cost drivers and forecast factors have been agreed with the PCTs. Table 45 provides a comparison of the additional costs of each option. Full details are provided in Appendix 11.

Table 45 – The Additional Costs Associated with each Option

Additional costs (£,000)	Do Minimum Option	PDH Option	ECH Option
Achieving Targets and Population Growth	£10,401	£10,401	£10,401
Integrated Care Centre	£1,446	£1,446	£1,446
Facilities Costs	£1,051	£1,041	£1,034

Additional costs (£,000)	Do Minimum Option	PDH Option	ECH Option
Park & Ride and Ambulance Shuttle	£50	£184	£0
Additional Ward Costs	£2,107	£0	£0
Additional Medical Cover Costs	£157	£0	£0
Capital Charges	£20,164	£22,904	£19,882
Total	£35,376	£35,976	£32,763
Percentage Increase on 2002/03 cost base	33.48%	34.05%	31.01%

5.10.1 ACHIEVING TARGETS AND POPULATION GROWTH

These are the cost associated with the forecast increase in activity required to meet the access and capacity targets and growth in the catchment population. The growth assumptions used are:

- 1% annual population growth.
- 1% annual growth in elective workload. (excluding paediatrics and obstetrics)
- 2% annual growth in emergency workload. (excluding paediatrics and obstetrics)

The same activity base and assumptions have been used for all three options. Therefore the change in cost is also the same for all three options.

It has been assumed the waiting times targets for outpatient and inpatient treatments will have been achieved in accordance with the NHS Plan. Therefore the activity forecasts for 2010 are based on maintaining this position by matching capacity to demand.

5.10.2 INTEGRATED CARE CENTRE

These are the new costs associated with the operation of the integrated care centre, including medical and nursing staff, management and those new non-pay costs not covered in the facilities costs. Full details of these costs are provided in Appendix 11. The integrated care centre proposals are the same in all three options.

5.10.3 FACILITIES COSTS

These are the facilities costs for the new acute hospital and integrated care centre, including hard and soft FM costs, energy, utilities and rates. Various cost drivers have been used for these, including:

- Change in floor area.
- Change in occupied bed days.
- Change in the area of land holdings.

Some costs have been subjected to further adjustments to account for:

- The increase in service quality required to meet NHS Plan and PEAT targets for hospital cleanliness and catering.
- The duplication of services associated with the Do Minimum option due to operating across multiple sites.
- The logistical implications of splitting the hospital building in the PDH option across Alderman's Drive.

5.10.4 PARK & RIDE AND AMBULANCE SHUTTLE

The space limitations on the PDH site significantly limit the availability of car parking. Therefore the PDH and Do Minimum options include park-and-ride facilities of varying capacity at the ECH site. The cost shown covers the free shuttle bus service for staff and patients.

5.10.5 ADDITIONAL WARD COSTS

Ward staff costs have been based on the proposed ward configurations in each option. Generally these are based on units of 32 beds. In the Do Minimum option the limitations of the retained estate mean a much wider variation in ward size from 15 to 30 beds per unit. Therefore there are more individual wards in the Do Minimum option. These costs relate to the additional staffing costs associated with the additional wards required to achieve the target bed numbers.

5.10.6 ADDITIONAL MEDICAL COVER COSTS

The Do Minimum option will result in a significant increase in workload at the Edith Cavell Hospital. This cost relates to the additional medical cover required to ensure the clinical safety of the increased activity.

5.10.7 CAPITAL CHARGES

The changes in capital charges take into account the different capital costs of each option, the variations in retained assets and land purchase for the integrated care centre for the Do Minimum and PDH options.

5.10.8 IMPACT ON THE PCTS

The impact of the additional costs has been assessed by PCT based on their current financial commitment. The cost of the integrated care centre has only been credited against the two Peterborough PCTs. The impact on the four PCTs are shown in Table 46.

Table 46 – Impact of the Additional Costs on the PCTs

Additional Costs (£,000s)	Do Minimum Option		PDH Option		ECH Option	
	Cost	% change	Cost	% change	Cost	% change
North Peterborough PCT	£15,440	43.53%	£15,683	44.22%	£14,350	40.46%
South Peterborough PCT	£11,106	42.74%	£11,258	43.42%	£10,313	39.68%
Lincolnshire South West PCT	£5,464	34.78%	£5,575	35.49%	£5,013	31.91%
East Cambs. & Fenland PCT	£2,223	34.76%	£2,269	35.47%	£2,040	31.89%
Other	£1,142	5.17%	£1,165	5.27%	£1,048	4.74%
Total	£35,375	33.48%	£35,950	34.05%	£32,764	31.01%

5.10.9 NON-RECURRENT COSTS

The revenue costs exclude the non recurrent costs associated with the commissioning of the new facilities, the transfer of services or decommissioning of vacated facilities. The costs have been estimated using data from the actual commissioning costs for two similar sized projects. A summary of these costs are provided in Table 47.

Table 47 – Non-recurrent Costs (The Integrated Care Centre Cost is shown separately)

Commissioning Costs (£,000s)	Do Minimum Option	PDH Option	ECH Option	ICC
Cost of utilities	150	150	150	-
Excess cost insurance	100	100	100	-
Removal costs *	-	-	-	-
Temporary protection of walls	75	75	75	10
Communications - ext/int	75	50	50	10
Renting temporary equipment	25	75	75	-
Security & ID badges	50	50	50	2
Releasing staff for familiarity/training	200	200	200	-
Transfer of equipment	300	500	700	-
Decommissioning of old hospital *	-	-	-	-
Additional staff travel costs	150	150	150	2

Commissioning Costs (£,000s)	Do Minimum Option	PDH Option	ECH Option	ICC
Moving of specialist equipment	100	300	300	-
Commissioning costs	300	250	250	10
Staff overtime for move period	50	250	250	-
Waste disposal	200	200	200	5
Recruitment Costs	150	150	150	100
Clinical Clean	150	200	200	25
Total	1,825	2,450	2,650	164

* Included in capital cost estimates but excluded from the calculation of capital charges

5.11 SENSITIVITY TESTS

The sensitivity of the revenue costs to changes in the project has been tested for the following scenarios:

- Increase in the capital cost (works cost only) of 5%
- Increase in clinical costs of 5%
- Increase in FM costs of 5%
- Increase in activity levels of 5%
- Decrease in activity levels of 5%

These scenarios have also been used to test the sensitivity of the affordability of the preferred option in Chapter 8. The results of the tests are given in Table 48.

Table 48 – Results of the Revenue Sensitivity Tests, (Change in Cost Base)

Test	Do Minimum Option (£,000)	PDH Option (£,000)	ECH Option (£,000)
Capital costs + 5%	£448	£762	£548
LDP costs + 5%	£520	£520	£520
FM costs + 5%	£168	£61	£52
Activity + 5%	£1,011	£1,011	£1,011
Activity – 5%	(£1,011)	(£1,011)	(£1,011)

5.12 HIGH LEVEL RISK ASSESSMENT

The high-level risk assessment has identified five key risk areas:

Design Risks

- Failure to develop correct design brief.
- Failure to design to the brief.
- Change in requirements of the trust.
- Change in design required due to external influences.
- Failure to build to design.

Construction and Development Risks

- Incorrect cost estimates.
- Incorrect time estimate.
- Unforeseen ground or site conditions.
- Unforeseen conditions within remodelled buildings.
- Delay in gaining access to the site.
- Responsibility for maintaining on-site security.
- Responsibility for maintaining site safety.