

**Remodelling the Acute Care Pathway for East Kent  
Older Adult Services**

**Option Appraisal**

**Kent & Medway NHS & Social Care Partnership Trust  
working in partnership with NHS Kent and Medway**



Kent and Medway

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NHS and Social Care Partnership Trust

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### Glossary

Term	Explanation
<b>Non-financial appraisal</b>	A process where a set of options is appraised against a qualitative set of criteria. The process involves scoring the options against each criterion. The option with the highest score gives the best performance against the criteria compared with the other options considered
<b>Benefits criteria</b>	A set of criteria that reflect the benefits sought from options that could satisfy the service objectives of a proposed development.
<b>Weighted criteria</b>	A system to ensure that the more important criteria will have a greater effect on the overall scores on options. For example a criterion with a weighting of 20 will have greater effect on an option's score compared with one with a weighting of 10.
<b>Raw score</b>	The score allocated to an option based on how well the option performs against the relevant criterion. Raw scores are usually scored out of a maximum of ten.
<b>Weighted scores</b>	The raw score allocated to an option multiplied by the weight attached to the criterion. For example, a raw score of 7 against a criterion with a weighting of 20 will give weighted score of 140.
<b>Pairwise comparisons</b>	Pairwise comparison consists on selecting two criteria and deciding how much less important the second criterion is to the first criterion. For example, if the first criterion is assigned a weight of 100, and the second criterion is considered to be half important, then a weight of 50 is assigned to the second criterion. This process is repeated for each successive pair of criteria, until each has been weighted (i.e. the first and the second criteria, then the second and third, and so on). The weights of each criterion are then scaled so that they sum to 100.
<b>Discounted Cash Flow (DCF)</b>	A series of cash flows that have been subject to discounting.
<b>Discounting</b>	The economic technique used to reflect the time value of money. It is normally regarded that £1 in one year's time will be worth less than £1 today. This is not because of inflation, but because: people prefer to receive benefits sooner rather than later, there is uncertainty about future years, and because in later years it is assumed people will be better off, and so value an additional £1 less.
<b>Net Present Cost (NPC)</b>	The best recognised discounting technique, in which all future costs are discounted to their present costs. The total of the present costs is the net present cost.
<b>Equivalent Annual Cost (EAC)</b>	This is used to compare the costs of options with different life spans. The different life spans are accommodated by discounting the full cost and showing this as a constant annual sum over the lifespan of the investment.

## Executive Summary

### Introduction

1. NHS Kent and Medway in partnership with Kent and Medway NHS and Social Partnership Trust (KMPT) is looking to change the pattern of services provided to older adults with mental health issues (OPMH) in East Kent. The aim will be to provide early intervention and responsive care in a crisis which will reduce reliance on acute mental health beds in order that the OPMH inpatient facilities in East Kent can be reviewed and reconfigured. The reconfigured inpatient services will aim to provide high quality person centred care in appropriate environments which will treat individuals in a timely manner in order that people can return to their long term home setting as soon as the person is fit for discharge
2. As part of the service development exercise, the service has undertaken an option appraisal to assess the relevant merits of alternative in patient bed configurations on different sites in East Kent. The appraisal examined a set of short listed options that could deliver the objectives of older people's services and was in three parts:
  - A non-financial appraisal that assessed the benefits that could be delivered by each option against a set of weighted criteria;
  - An economic and financial appraisal that assessed the relative value for money and affordability of each option;
  - A risk assessment of the options to see which options performed better in terms of levels of risk to the health economy
3. The results of the three appraisals were then combined to determine which options should be taken forward to consultation.

### Non-financial appraisal

4. A workshop was held on the 22<sup>nd</sup> December 2011, attended by key stakeholders in the service (see Appendix A) and facilitated by Hygeian Consulting. The appraisal assessed the following short listed options:

	Canterbury	TMHU (Woodchurch)	TMHU (Sevenscore)	Ashford (Winslow)
<b>Option 1</b> Locality Configuration Mixed Gender Mixed Functions	Mixed Functional and Organic ward		Mixed Functional and Organic ward	Mixed Functional and Organic ward
<b>Option 2</b> Separate Functions Single-sex	Organic		Functional male	Functional female
<b>Option 3</b> Separate Functions Single-sex		Organic	Functional male	Functional female
<b>Option 4</b>				

	Canterbury	TMHU (Woodchurch)	TMHU (Sevenscore)	Ashford (Winslow)
Separate Functions Mixed Gender	Organic		Functional	Functional
<b>Option 5</b> Locality Configuration Mixed Gender Mixed Functions	Mixed Functional and Organic ward	Mixed Functional and Organic ward	Mixed Functional and Organic ward	
<b>Option 6</b> All wards at Thanet		mixed Functional and Organic	Sevenscore & Elmstone Mixed Functional and Organic	
<b>Option 8</b> Do nothing	Cranmer Functional –	Functional	Organic	Mixed Organic and Functional

- Option 7 was deleted from an initial long list that was discussed at the workshop as it was agreed unsuitable for taking forward for further analysis however the original option numbering was retained to maintain an audit trail.
- The options were assessed using a ranked and weighted set of benefits criteria. The performance of each option against each criterion was assessed by allocating a score out of ten. The criteria weights then translated the raw score into a weighted score. The weighted scores for each option are summarised in the table below.

Criterion	Option						
	1	2	3	4	5	6	8
Clinical quality & Integration	141	66	69	79	116	112	102
Operational & Environmental Suitability	81	84	78	84	102	115	55
Staff Recruitment, training & development	107	76	63	83	93	97	68
Access	107	46	55	57	59	46	70
Efficiency	69	43	54	54	86	112	41
Sustainability & flexibility	63	44	42	49	63	69	44
<b>TOTAL</b>	<b>569</b>	<b>358</b>	<b>361</b>	<b>405</b>	<b>519</b>	<b>551</b>	<b>380</b>
<b>Rank</b>	<b>1</b>	<b>7</b>	<b>6</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>5</b>



7. The results show that the highest scoring option was option 1. Subsequent sensitivity tests confirmed that this option was relatively insensitive to changes in scoring or weightings.
8. The outcome of the non-financial appraisal indicated that three of the seven options evaluated performed consistently better than the other options – options 1, 5 and 6. It was also agreed that a non-mixed function option should also be taken forward and option 4 was selected for this purpose. It was therefore agreed that these options were taken forward to the financial/economic and risk analyses along with the Do Nothing option that would act as a baseline option.
9. For information these options are summarised below.

	Canterbury	TMHU (Woodchurch)	TMHU (Sevenscore)	Ashford (Winslow)
<b>Option 1</b> Locality Configuration Mixed Gender Mixed Functions	Mixed Functional and Organic ward		Mixed Functional and Organic ward	Mixed Functional and Organic ward
<b>Option 4</b> Separate Functions Mixed Gender	Organic		Functional	Functional
<b>Option 5</b> Locality Configuration Mixed Gender Mixed Functions	Mixed Functional and Organic ward	Mixed Functional and Organic ward	Mixed Functional and Organic ward	
<b>Option 6</b> All wards at Thanet		mixed Functional and Organic	Sevenscore & Elmstone Functional Mixed and Organic	
<b>Option 8</b> Do nothing	Cranmer Functional –	Functional	Organic	Mixed Organic and Functional

## Economic and financial appraisal

10. For the economic appraisal a discounted cash flow for each of the options was undertaken using a discount rate of 3.5% in line with the requirements of HM Treasury Green Book and Department of Health guidance. Both the Net Present Cost (NPC) and Equivalent Annual Cost (EAC) have been calculated. The EAC is particularly useful for comparison where the options have different life spans as it converts the NPC to an annual figure.
11. For the financial appraisal the affordability of the options were considered by examining staff and running costs of the facilities and the capital charges of any new build / refurbishment.
12. The savings that would be derived from each option are as follows:

£000	Option 1	Option 4	Option 5	Option 6	Do nothing
Pay Costs	4,507	4,507	4,424	4,237	5,880
Drugs and Pharmacy	138	138	131	126	161
Other non pay	204	204	204	231	271
Running costs (incl current depr / ROR))	3,491	3,491	3,199	1,684	3,731
<b>Total pay and non pay</b>	<b>8,340</b>	<b>8,340</b>	<b>7,958</b>	<b>6,278</b>	<b>10,043</b>
Capital charges new	529	529	523	560	-
<b>Total costs before overheads</b>	<b>8,869</b>	<b>8,869</b>	<b>8,481</b>	<b>6,838</b>	<b>10,043</b>
Directorate overheads	361	361	361	361	361
Contribution to central overheads	554	554	531	432	624
<b>Total overheads</b>	<b>915</b>	<b>915</b>	<b>892</b>	<b>793</b>	<b>985</b>
<b>Total revenue costs</b>	<b>9,784</b>	<b>9,784</b>	<b>9,373</b>	<b>7,631</b>	<b>11,028</b>
<b>Saving from Do nothing</b>	<b>1,244</b>	<b>1,244</b>	<b>1,655</b>	<b>3,398</b>	<b>-</b>

13. The table shows that option 6 delivers the highest level of savings by a clear margin followed by option 5 which is narrowly ahead of options 1 and 4.
14. The equivalent annual cost (EAC) of each option is shown in the table below.

£000	Option 1	Option 4	Option 5	Option 6	Do nothing
Equivalent Annual Costs	8,864	8,864	8,491	6,938	9,947
<b>Rank</b>	<b>3=</b>	<b>3=</b>	<b>2</b>	<b>1</b>	<b>5</b>

15. The table shows that Option 6 gives the lowest EAC with Option 5 in second place.
16. The risks assessment shows the following risk scores by risk category:

Risk Category	Option 1 – Canterbury, Thanet, Ashford – mixed function / gender	Option 4 – Canterbury, Thanet, Ashford – split function, mixed gender	Option 5 – Canterbury, Thanet (x2) – mixed function / gender	Option 6 – Thanet (x3) – mixed function / gender	Option 8 – Do nothing
Operational	51	53	48	54	69
Finance / commercial	66	70	48	42	56
Service / clinical	87	87	62	73	95
Refurb / equipment	48	46	46	50	42
Project	56	56	60	64	8
<b>TOTAL</b>	<b>308</b>	<b>312</b>	<b>264</b>	<b>283</b>	<b>270</b>
<b>Rank</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>2</b>

17. The number of red-rated risks incurred by each option is:

- Option 1: 2
- Option 4: 3
- Option 5: 1
- Option 6: 5
- Option 8: 8

18. This indicates that options 6 and 8 contains a number of risks that would be major in nature and would need careful monitoring.

### Identification of the preferred option

19. A summary of the outcomes of each appraisal and ratios is shown below:

	Option 1	Option 4	Option 5	Option 6	Option 8
Benefit points	569	405	519	551	380
<b>RANK</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>5</b>
Capital Costs	7,903	7,903	7,815	8,354	0
<b>RANK</b>	<b>3=</b>	<b>3=</b>	<b>2</b>	<b>5</b>	<b>1</b>
Revenue costs	9,784	9,784	9,373	7,361	11,028
<b>RANK</b>	<b>3=</b>	<b>3=</b>	<b>2</b>	<b>1</b>	<b>5</b>
Economic Appraisal (NPC)	229,965	229,965	220,298	180,011	258,063
<b>RANK</b>	<b>3=</b>	<b>3=</b>	<b>2</b>	<b>1</b>	<b>5</b>
Capital cost per benefit point	13.89	19.51	15.06	15.16	0
<b>RANK</b>	<b>2</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>1</b>
Revenue cost per benefit point	17.2	24.2	18.1	13.4	29.0
<b>RANK</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>5</b>
Net present cost per benefit point	404.2	567.8	424.5	326.7	679.1
<b>RANK</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>5</b>
Risk Analysis - overall	308	312	264	283	270
Risk Analysis – number of high risks	2	3	1	5	8
<b>RANK - score</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>2</b>
<b>RANK – high risks</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>5</b>

## Conclusion

20. This appraisal has assessed five options from which to select a minimum of three to put forward for consultation. Based on the analysis above it is clear that the Do nothing option should not be taken forward. In common with all option appraisals in the NHS it is used as a base line against which change options can be compared. It does not address the requirements of the new patient pathway and neither does it deliver any revenue savings which is a key requirement.
21. Of the remaining options the analysis indicates that options 1, 5 and 6 should be taken forward as the relative benefits of each varies depending on benefits delivered, costs and levels of risk. The consultation process should reveal which if these are regarded as more important and the level of any compromise that would be required in order to conclude on a preferred option. Given the relatively poor performance of option 4 compared with the other change options it may be appropriate not to take this forward unless it was believed that a split function option should be tested further within a consultation process.

# 1 Introduction

## 1.1 Background

1.1.1 NHS Kent and Medway in partnership with Kent and Medway NHS and Social Partnership Trust (KMPT) is looking to change the pattern of services provided to older adults with mental health issues (OPMH) in East Kent. The aim will be to provide early intervention and responsive care in a crisis which will reduce reliance on acute mental health beds in order that the OPMH in-patient facilities in East Kent can be reviewed and reconfigured. The reconfigured inpatient services will aim to provide high quality person centred care in appropriate environments which will treat individuals in a timely manner in order that people can return to their long term home setting as soon as the person is fit for discharge.

1.1.2 As part of the service development exercise, the service has undertaken an option appraisal to assess the relevant merits of alternative in patient bed configurations on different sites in East Kent. The objective of the option appraisal is to determine which options for older people's services most appropriately meet the required features of a modern inpatient service for older people with a mental illness and their carers.

1.1.3 This report:

- Describes the process undertaken for carrying out an option appraisal on the identified options;
- Lists the options considered;
- Sets out the results of the non-financial appraisal carried out on a set of short listed options using a set of weighted criteria;
- Describes the results of a finance and economic appraisal of an agreed set of options taken forward from the non-financial appraisal;
- Describes the process for undertaking a risk analysis on each option, indicating an overall risk score against agreed categories of risk and identifying the number of major risks applicable to each option.
- Draws initial conclusions on the options to be taken forward for consultation.

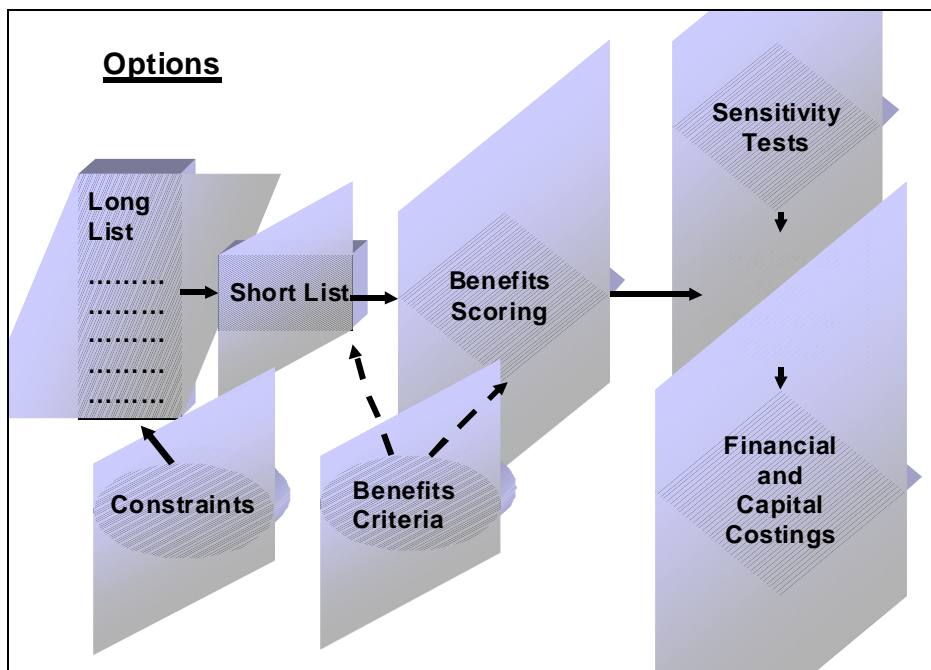
## 1.2 Approach – Non-financial appraisal

1.2.1 The development of the non-financial option appraisal process involved the participation of all of the stakeholders involved in the service development including representatives from:

- Service commissioners;
- Service users and carers;
- Clinicians;
- Social services;
- Local authorities;
- NHS managers from the East Kent health community.

- 1.2.2 The process of identifying options, developing and weighting evaluation criteria and scoring the options is illustrated below.

**Figure 1 – Option Appraisal Process**



- 1.2.3 A draft list of options was developed by clinicians and managers from the East Kent OPMH service in October 2011 and presented in a report to the Strategic Oversight Group on the 28<sup>th</sup> October 2011. This resulted from a workshop involving managers and clinicians from the OPMH to formulate options that could deliver the required objectives. In addition, a do minimum option was added and these eight options formed the basis of the option appraisal included in this report.
- 1.2.4 The workshop also agreed a draft set of criteria to evaluate the options. These were discussed further between representatives from KMPT and NHS Kent and Medway to discuss the criteria, supported and advised by Andrew Leeson from Hygeian Consulting. Hygeian then drafted a set of criteria for presentation to the option appraisal workshop. This was based on similar non-financial appraisals they have facilitated involving mental health services. These were circulated to the workshop participants as part of the briefing papers and then discussed at the workshop for comment and refinement. Following discussion the agreed criteria definitions were used to score the short listed options.
- 1.2.5 The non-financial appraisal workshop was held on 22<sup>nd</sup> December 2011 to:
- Ensure an understanding of the options to be evaluated;
  - Rank the evaluation criteria in order of importance;
  - Weight the criteria;
  - Score the options against each criterion to reflect how well the option performed;
  - Agree any sensitivity tests where alternative rankings, weights and scorings were considered important;

- Reviewing the overall outcome to ensure the results accurately reflected the views of the participants.

- 1.2.6 The workshop was attended by representatives from the service stakeholders as referred to in paragraph 1.2.2 above and was facilitated by Andrew Leeson of Hygeian Consulting a firm of healthcare specialists who have undertaken similar appraisals for mental health services elsewhere. A list of attendees is provided in Appendix A.
- 1.2.7 Participants in the workshop were initially allocated into one of 8 groups: A to H however the number of attendees on the day allowed a reduction to seven groups with Group D no longer included (participants allocated to this group were transferred to the other seven groups).
- 1.2.8 Each group ranked the benefits criteria according to level of importance. The average ranking was then presented and discussed. Suggestions on any variance from the average ranking were then agreed to be tested via sensitivity tests.
- 1.2.9 Each group then took the average ranking and weighted the criteria using the Pairwise comparison technique. As for the ranking, the average weightings were adopted and any agreed variations were included in the sensitivity tests.
- 1.2.10 Finally each group scored each option against each criterion with a mark out of ten and the average of the groups' scores was subjected to a weighted score.
- 1.2.11 The results for each group were compared for consistency and to ensure that assumptions about each option did not vary significantly between groups. The results of the scoring process were discussed to ensure that the outcome reflected the participants' views on how each option performed against the criteria used.
- 1.2.12 It should be noted that the options will also be subjected to financial / economic and risk analyses in order to conclude on an overall preferred option.

### 1.3 Structure of report

- 1.3.1 The remaining sections of this report cover the following:
- Section 2 describes the long and short listed options and the benefit criteria used for evaluation. It also indicates the weights attached to the criteria.
  - Section 3 describes the process for scoring the options and the outcome of the scoring exercise that took place at the workshop. This section draws initial conclusions on the better performing non-financial options after carrying out sensitivity tests.
  - Section 4 describes the process and results of an economic and financial appraisal of those options from the non-financial appraisal that were agreed to be carried forward to the economic / financial and risk analyses.
  - Section 5 describes the process and results of a risk assessment of the options.
  - Section 6 summarises the results from each analysis and draws initial conclusions on options that should be taken forward for consultation.

## 2 Options and Benefits Criteria

### 2.1 Introduction

2.1.1 This section describes:

- The options considered for older adult inpatient services in East Kent for evaluation purposes;
- The criteria used to evaluate the options;
- The results of the ranking and weighting of the criteria used to evaluate the options.

### 2.2 Options for Evaluation

2.2.1 A key stakeholder group, involving clinicians and managers from KMPT, NHS Kent and Medway and CCGs developed a long list of options based on a proposed service model pathway presented in a report to the Strategic Oversight Group.

2.2.2 The options for older people's inpatient services are set out below.

**Figure 2 – Option long list**

	Canterbury	TMHU (Woodchurch)	TMHU (Sevenscore)	Ashford (Winslow)
<b>Option 1</b> Locality Configuration Mixed Gender Mixed Functions	Mixed Functional and Organic ward		Mixed Functional and Organic ward	Mixed Functional and Organic ward
<b>Option 2</b> Separate Functions Single-sex	Organic		Functional male	Functional female
<b>Option 3</b> Separate Functions Single-sex		Organic	Functional male	Functional female
<b>Option 4</b> Separate Functions Mixed Gender	Organic		Functional	Functional
<b>Option 5</b> Separate Functions Mixed Gender		Organic	Functional	Functional
<b>Option 6</b> All wards at Thanet		mixed Functional and Organic	Sevenscore Elmstone Functional Organic	& Mixed and
<b>Option 7</b>				



	Canterbury	TMHU (Woodchurch)	TMHU (Sevenscore)	Ashford (Winslow)
Single sex mixed diagnosis & mixed gender functional	Organic female		Organic male	Functional male and female
<b>Option 8</b> Do nothing	Cranmer Functional –	Functional	Organic	Mixed Organic and Functional

2.2.3 The above long list was presented to the workshop participants for discussion with an objective of deriving a short list for further evaluation. The following adjustments were agreed:

- Options 5 and 7 would not be short listed as the other options would always be selected in preference;
- An additional option would be evaluated. This would be the same as Option 1 with the one exception that the mixed functional and organic ward provided from Ashford in Option 1 would be provided from Woodchurch in Thanet. This became the new option 5.
- After the workshop had taken place, and the options subjected to the economic, financial and risk analyses, a further option was proposed by East Kent Hospitals University Foundation Trust. This was the same as for option 5 with the exception that the Canterbury ward would be located on the acute hospital site. It was agreed that this option would not be assessed as part of this report. The option may be assessed at a later stage if a suitable location was agreed by all stakeholders on the Canterbury Hospital site.

2.2.4 The short list taken forward for further evaluation is shown below. The eliminated options are highlighted.

**Figure 3 – Options short list**

	Canterbury	TMHU (Woodchurch)	TMHU (Sevenscore)	Ashford (Winslow)
<b>Option 1</b> Locality Configuration Mixed Gender Mixed Functions	Mixed Functional and Organic ward		Mixed Functional and Organic ward	Mixed Functional and Organic ward
<b>Option 2</b> Separate Functions Single-sex	Organic		Functional male	Functional female
<b>Option 3</b> Separate Functions Single-sex		Organic	Functional male	Functional female
<b>Option 4</b>				

	Canterbury	TMHU (Woodchurch)	TMHU (Sevenscore)	Ashford (Winslow)
Separate Functions Mixed Gender	Organic		Functional	Functional
<b>Option 5 (original)</b> Separate Functions Mixed Gender		Organic	Functional	Functional
<b>Option 5 (new)</b> Locality Configuration Mixed Gender Mixed Functions	Mixed Functional and Organic ward	Mixed Functional and Organic ward	Mixed Functional and Organic ward	
<b>Option 6</b> All wards at Thanet		mixed Functional and Organic	Sevenscore & Elmstone Mixed Functional and Organic	
<b>Option 7</b> Single sex mixed diagnosis & mixed gender functional	Organic female		Organic male	Functional
<b>Option 8</b> Do nothing	Cranmer Functional –	Functional	Organic	Mixed Organic and Functional

2.2.5 Option 8, Do Nothing, was short listed as a means of comparing potentially suitable options against the current configuration. This is normal for option appraisals carried out in the NHS.

## 2.3 Benefits Criteria

2.3.1 A set of high-level criteria with sub-definitions was presented to the participants of the non-financial appraisal workshop. The definitions were discussed in further detail and a number of minor modifications agreed. Participants then ranked the high level criteria in order of importance. They then weighted the criteria using the Pairwise comparisons technique. This work was carried out in groups and the overall outputs represented the average views of the groups. The criteria are listed below.

### Figure 4 – Evaluation Criteria

<p><b>1. Clinical Quality and Integration</b></p> <ul style="list-style-type: none"> <li>• Demonstrates a good service user experience</li> <li>• Facilitates multi-disciplinary and inter-agency working</li> <li>• Provides a good strategic fit as part of the whole system approach</li> <li>• Ensures consistent and equitable access to the patient care pathway</li> <li>• Supports a needs-led approach to service delivery which takes account of</li> </ul>
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	<p>patient choice and carer needs</p> <ul style="list-style-type: none"> <li>• Maximises service integration with mental health and social services, community services, the third sector and other health services</li> <li>• Enables compliance with national standards such as CQC etc</li> </ul>
<b>2. Access</b>	<ul style="list-style-type: none"> <li>• Enables timely access to district general hospital facilities, support and assessment</li> <li>• Service readily accessible by service users, families and carers through local transport solutions</li> </ul>
<b>3. Sustainability and Flexibility</b>	<ul style="list-style-type: none"> <li>• Feasible and achievable within a reasonable and acceptable time frame</li> <li>• Ability to meet current and future demand for acute services, for example through demographic growth. Services to manage demand may include dementia crisis service, greater provision of home care, shorter lengths of stay, appropriate training to address increasing complexity of patient care / treatment</li> <li>• Ability to adapt to meet national, regional and local requirements in the future</li> <li>• Ability to accommodate additional service developments</li> </ul>
<b>4. Operational and Environmental Suitability</b>	<ul style="list-style-type: none"> <li>• Supports the safe management of environmental risk through well designed and fully compliant accommodation</li> <li>• Considers the “green” agenda</li> <li>• Good physical condition, elimination of backlog maintenance and compliance with Health &amp; Safety</li> <li>• Provides a welcoming and therapeutic environment (internal and external)</li> </ul>
<b>5. Efficiency</b>	<ul style="list-style-type: none"> <li>• Enables efficient and effective 24/7 service delivery through the creation of appropriately balanced critical mass to support training, rotas, ECT delivery, research, etc.</li> <li>• Creates flexibility in bed use and patient case mix</li> <li>• Facilitates progression through the care pathway</li> </ul>
<b>6. Staff Recruitment, Training and Development</b>	<ul style="list-style-type: none"> <li>• Attractiveness to staff – recruitment and retention</li> <li>• Provides better training and development opportunities and career pathways across the health and social care system</li> <li>• Provides opportunities to re-model current workforce and improve staff morale / job satisfaction across the health and social care system.</li> </ul>

2.3.2 The results of the weighting criteria process for older adult inpatient services are shown below. Details of the ranking and weighting by each group are shown In Appendix B.

**Figure 5 – Benefit Criteria Weighting**

Criterion	Rank	Raw Weight	%
Clinical quality and integration	1	100	22
Operational and environmental suitability	2	83	18
Staff recruitment / training	3	77	17
Access	4=	69	15
Efficiency	4=	69	15
Sustainability and flexibility	6	56	13
			100

Note: differences in additions are due to rounding

### 2.3.3 Findings arising from the ranking process include:

- Five out of seven groups selected the highest ranking criterion, the two groups that didn't ranked this criterion as third;
- Operational environment was ranked marginally higher than staff recruitment and retention. With the latter, five groups out of seven ranked staffing as second highest, however two groups ranked operational environment as highest, hence its higher overall ranking;
- No groups ranked the efficiency and sustainability criteria higher than third with most groups ranking these criteria as fourth or below.

### 2.3.4 Overall the groups agreed to the average rankings and weights and these were used to score each of the options. This is described in the next section.

### 3 Scoring of Options

#### 3.1 Introduction

3.1.1 This section shows the results of the scoring of each of the options against each of the weighted criteria. This then shows the highest scoring option for older adults inpatient services. The section then tests the strength of the results by showing the effects of sensitivity tests on the ranking, weighting and scoring.

#### 3.2 Process

3.2.1 The scoring was undertaken by each of the seven groups for the short listed options.

3.2.2 The scores were made on the following basis:

10 - Could hardly be better
9 - Excellently
8 - Very well
7 - Well
6 - Quite well
5 - Adequately
4 - Somewhat inadequately
3 - Badly
2 - Very badly
1 - Extremely badly
0 - Could hardly be worse

3.2.3 The final results were the average scores of the groups. The outcome of the scoring process was reviewed at the plenary session and initial conclusions drawn, including agreement on sensitivity tests to be performed on the results.

#### 3.3 Results of benefit scoring

3.3.1 The results of the scoring are shown below.

**Figure 6 – Benefit scores: average unweighted**

Criterion	Option						
	1	2	3	4	5	6	8
Clinical quality & Integration	6.4	3.0	3.1	3.6	5.3	5.1	4.7
Operational & Environmental Suitability	4.4	4.6	4.3	4.6	5.6	6.3	3.0
Staff Recruitment, training & development	6.3	4.4	3.7	4.9	5.4	5.7	4.0
Access	7.0	3.0	3.6	3.7	3.9	3.0	4.6
Efficiency	4.6	2.9	3.6	3.7	5.7	7.4	2.7
Sustainability & flexibility	5.1	3.6	3.4	4.0	5.1	5.6	3.6
<b>TOTAL</b>	<b>34</b>	<b>21</b>	<b>22</b>	<b>24</b>	<b>31</b>	<b>33</b>	<b>23</b>
<b>Rank</b>	<b>1</b>	<b>7</b>	<b>6</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>5</b>

3.3.2 Details of the scores allocated by each group are provided in Appendix C.

**Figure 7 – Benefit scores: average weighted**

Criterion	Option						
	1	2	3	4	5	6	8
Clinical quality & Integration	141	66	69	79	116	112	102
Operational & Environmental Suitability	81	84	78	84	102	115	55
Staff Recruitment, training & development	107	76	63	83	93	97	68
Access	107	46	55	57	59	46	70
Efficiency	69	43	54	54	86	112	41
Sustainability & flexibility	63	44	42	49	63	69	44
<b>TOTAL</b>	<b>569</b>	<b>358</b>	<b>361</b>	<b>405</b>	<b>519</b>	<b>551</b>	<b>380</b>
<b>Rank</b>	<b>1</b>	<b>7</b>	<b>6</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>5</b>

Note: differences in additions are due to rounding.

3.3.3 In scoring the options the groups stressed a number of assumptions behind their scores. These were:

- For all options the units will be refurbished / remodelled to ensure fit for purpose facilities -
  - Some groups specified this for the Canterbury site only;
  - Some groups specified patients have their own room with separate dedicated areas
- Staff accommodation issues (KCC) will be addressed;
- Staff training would be provided to derive the best service from the new units;
- “Lost” beds will be replaced by equivalent community services;
- For option 6 under access, a patient transport scheme is operated to transport patients and carers to Thanet;
- It was assumed that a successful recruitment campaign took place for option 6 under the staff recruitment / training criterion.

3.3.4 The results show that option 1 scored the highest weighted score. Its unweighted score was one point higher than option 6. It is also noted that the average scoring was no higher than 7 for any of the options suggesting that none of the options performed better than “well” against the criteria. It also reflects the differing views of the groups when scoring the options.

### 3.3.5 Further points raised from the scoring include:

- There was a notable gap between the scoring of the top three options (1, 5 and 6) compared with the rest. These options were all based on mixed gender, mixed function wards, allowing for the greatest flexibility in terms of bed capacity;
- Option 6 scored well on the efficiency and operational environment criteria, reflecting the provision of the service from one location;
- Option 1 scored above 5 for all criteria except operational environment and efficiency (interestingly the opposite to option 6), reflecting the easier access for patients across East Kent and the greater attraction for staff recruitment / retention;
- Option 5 (similar to option 1 but one ward provided from Woodchurch rather than Ashford) score marginally less than option 1 across all criteria with the exception of operational environment (option 5 score higher due to better quality facilities) and access (option 5 scored considerably lower given the concentration of beds in fewer locations).
- All groups gave competitive scores to option 6 across most criteria, however it was noted that one group scored this option poorly giving a zero score for clinical quality and integration and access criteria;
- The Do Nothing option (option 8) scored better than options 2 and 3 overall. Notable criteria where this was the case was with clinical quality and integration and access.

#### Switching Analysis Test

3.3.6 The switching analysis test shows by what percentage the lower scoring options must increase in order for them to become the highest scoring option. The results are shown below.

**Figure 8 - Switching analysis tests**

Option	1	2	3	4
Rank	1	7	6	4
Weighted Scores	569	358	361	405
% increase required	N/A	37.1	36.5	28.8

Option	5	6	8
Rank	3	2	5
Weighted Scores	519	551	380
% increase required	8.7	3.0	33.2

3.3.7 The results of the switching value test shows that the second and third highest scoring options would need to increase their weighted score by 8.7 and 3.0% respectively which

indicates that changes in assumptions could change the option ranking for these options. Conversely the fourth highest scoring option and below would need to increase their score by at least 29% to become the highest scoring option

### Sensitivity Analysis

3.3.8 The following sensitivities were applied to the appraisal:

- Test 1 – switch the ranking of the operational / environment criterion with the staff recruitment criterion – although the operational / environment criterion was ranked higher on average, the staff recruitment criterion was ranked second highest by 5 out of the seven groups.
- Test 2 -.compensate for optimistic / pessimistic bias – this is a common sensitivity to test whether any moderation of group scores would change the ranking of options.

3.3.9 The results of the tests are shown below.

**Figure 9 - Sensitivity tests on benefit scoring**

Option	Initial Score	Rank	Test 1 Revised Score	Rank	Test 2 Revised Score	Rank
Option 1 – mixed gender, mixed functions – Canterbury, Thanet, Ashford	569	1	565	1	577	1
Option 2 – separate functions, single sex Canterbury, Thane, Ashford	358	7	354	7	351	7
Option 3 – Separate functions single sex, Thanet (2), Ashford	361	6	357	6	363	6
Option 4 – Separate function, mixed gender, Canterbury, Thanet, Ashford	405	4	401	4	408	4
Option 5 – mixed function, mixed gender, Thanet (2), and Canterbury	519	3	514	3	516	3
Option 6 – All wards at Thanet	551	2	545	2	544	2
Option 8 – Do nothing	380	5	378	5	374	5

3.3.10 The results of the sensitivity tests show that the ranking of the options does not change as a result of the sensitivity tests, indicating that the assumptions behind the scoring are robust. However given the closeness of the highest three scoring options the finance /economic and risk implications of these three options would be necessary before concluding on an overall preferred option.

## 3.4 Conclusions

3.4.1 The outcome of the non-financial appraisal indicated that three of the seven options evaluated performed consistently better than the other options – options 1, 5 and 6. In



terms of which options to take forward for further analysis it was agreed that, in addition to the above options a non-mixed function option should also be taken forward and option 4 was selected for this purpose. It was therefore agreed that these options were taken forward to the financial/economic and risk analyses along with the Do Nothing option that would act as a baseline option.

3.4.2 For information these options are summarised below.

**Figure 10 – Summary of preferred options for finance / economic and risk assessment**

	Canterbury	TMHU (Woodchurch)	TMHU (Sevenscore)	Ashford (Winslow)
<b>Option 1</b> Locality Configuration Mixed Gender Mixed Functions	Mixed Functional and Organic ward		Mixed Functional and Organic ward	Mixed Functional and Organic ward
<b>Option 4</b> Separate Functions Mixed Gender	Organic		Functional	Functional
<b>Option 5</b> Locality Configuration Mixed Gender Mixed Functions	Mixed Functional and Organic ward	Mixed Functional and Organic ward	Mixed Functional and Organic ward	
<b>Option 6</b> All wards at Thanet		Mixed functional and organic	Sevenscore & Elmstone functional and organic mixed	
<b>Option 8</b> Do nothing	Cranmer Functional –	Functional	Organic	Mixed Organic and Functional

## 4 Economic and financial appraisal

### 4.1 Introduction

4.1.1 This section presents an economic and financial appraisal of each of the options that were agreed to be suitable for further analysis on the non-financial appraisal. The economic appraisal assesses the value for money generated by each option whilst the financial analysis assesses their affordability.

4.1.2 For the economic analysis a discounted cash flow for each of the options has been undertaken using a discount rate of 3.5% in line with the requirements of HM Treasury Green Book and Department of Health guidance.

4.1.3 Both the Net Present Cost (NPC) and Equivalent Annual Cost (EAC) have been calculated. The EAC is particularly useful for comparison where the options have different life spans as it converts the NPC to an annual figure.

### 4.2 Methodology and assumptions

4.2.1 A discounted cash flow model, following the principles of the Department of Health Generic Economic Model (GEM), was populated with the base data for each option.

4.2.2 As all options are predominately refurbishment (it is assumed that the Do nothing option would involve regular maintenance costs only). It has been assumed for comparability purposes that all the facilities become operational during the summer / autumn of 2014, depending on option.

4.2.3 No differential inflation has been applied to any costs. This is because it is anticipated that this will have a similar impact on each of the short listed options, and so will not affect the results of the economic appraisal.

4.2.4 Further details of the costs used for the economic appraisal are detailed below.

### 4.3 Capital Costs

4.3.1 Capital costs for the options have been prepared by the Trust. Key features of the capital costs are as follows:

- Costs have been prepared at PUBSEC FP 173. These have then been adjusted to PUBSEC FP 182 for inflation purposes.
- A planning contingency of 10% has been assumed for all options.
- An optimism bias adjustment of 10.0% has been applied to all refurbishment options.
- VAT at 20% has been applied to all costs except fees.

4.3.2 The capital cost of each option is presented below. The capital cost OB Forms, prepared by Turner & Townsend, Quantity Surveyors are presented in Appendix D.

**Figure 11 - Capital costs of options**

£000	Option 1	Option 4	Option 5	Option 6	Do nothing
Departmental Costs	3,664	3,664	3,664	3,859	N/A
On Costs	382	382	336	418	
Works Cost Total	4,046	4,046	4,000	4,277	
Location Adjustment	324	324	320	342	
Sub Total	4,370	4,370	4,320	4,619	
Fees	699	699	691	739	
Non-Works Costs	66	66	65	69	
Equipment Costs	131	131	130	139	
Planning Contingency	526	526	521	557	
<b>Sub Total</b>	<b>5,792</b>	<b>5,792</b>	<b>5,727</b>	<b>6,123</b>	
Optimism bias	579	579	573	612	
<b>Total for approval</b>	<b>6,371</b>	<b>6,371</b>	<b>6,300</b>	<b>6,735</b>	
Inflation adjustment	331	331	328	350	
<b>Total before VAT</b>	<b>6,702</b>	<b>6,702</b>	<b>6,628</b>	<b>7,085</b>	
VAT	1,201	1,201	1,187	1,269	
<b>Grand Total</b>	<b>7,903</b>	<b>7,903</b>	<b>7,815</b>	<b>8,354</b>	

Source: Trust / Turner & Townsend

- 4.3.3 It has been assumed that option 4 costs are the same as those for option 1. Option 5 has similar costs with option 6 being the highest. This is because the refurbishment of at Thanet, included in option 6, involves an element of new build.

#### Phasing of capital costs

- 4.3.4 The phasing of the capital spend is required both for capital budgeting purposes (where VAT is included), and for the discounted cash flow analysis (where VAT is excluded).
- 4.3.5 Details of the phasing of the capital costs (both including and excluding VAT) are shown below.

**Figure 12 - Phasing of capital costs (including VAT)**

£000	TOTAL	Year ending		
		31/03/2013	31/03/2014	31/03/2015
Option 1	7,903	541	5,760	1,602
Option 4	7,903	541	5,760	1,602
Option 5	7,815	535	5,681	1,599
Option 6	8,354	572	6,184	1,598
Do nothing	N/A	N/A	N/A	N/A

Source: Trust / Turner &amp; Townsend

**Figure 13 - Phasing of capital cost (excluding VAT)**

£000	TOTAL	Year ending		
		31/03/2013	31/03/2014	31/03/2015
Option 1	6,703	521	4,840	1,342
Option 4	6,703	521	4,840	1,342
Option 5	6,628	515	4,773	1,340
Option 6	7,085	551	5,194	1,340
Do nothing	N/A	N/A	N/A	N/A

Source: Trust / Turner &amp; Townsend

## 4.4 Lifecycle costs

4.4.1 Detailed life cycle costs have not been prepared for this analysis. As an alternative it has been assumed that the capital costs will be repeated every 35 years for the refurbishment element and every 5 years for equipment. This approach has been adopted for the Economic analysis.

## 4.5 Transitional costs

4.5.1 Transitional costs include:

- Moving (assumed £20k per ward);
- Assisted travel (£10k per ward for isolated sites);
- Parking (£5k);
- Double running costs (1 month SLA)

**Figure 14 - Transitional costs of short-listed options**

£	Year ending			
	31/03/2013	31/03/2014	31/03/2015	31/03/2016
Option 1	-	-	-	-
Option 4	-	-	-	-
Option 5	-	-	73,871	-
Option 6	-	-	225,166	-
Do nothing	-	-	-	-

Source: Trust

4.5.2 No transition costs have been assumed for options 1, 4 and 8 as the existing wards would continue to be used. For options 5 and 6 the following assumptions apply:

- Moving costs are for 1 ward (option 5) and 2 wards (option 6);
- Assisted travel costs are for 1 ward (option 5) and 2 wards (option 6);
- Additional parking costs assumed for option 6 only;
- Double running costs assumed as 1 month's SLA for options 5 and 6 plus one month's running costs for option 6 (including St Martin's depreciation)..

## 4.6 Revenue costs

4.6.1 The Trust has carried out a detailed analysis of the revenue consequences of each option. A detailed summary is provided in Appendix E. This is an extract from a detailed revenue analysis of each option, prepared by the Trust's finance department. The analysis can be obtained from the department by request. A summary (full year effect) is provided below.

**Figure 15 – Revenue costs by option**

£000	Option 1	Option 4	Option 5	Option 6	Do nothing
Pay Costs	4,507	4,507	4,424	4,237	5,880
Drugs and Pharmacy	138	138	131	126	161
Other non pay	204	204	204	231	271
Running costs (incl current depr / ROR))	3,491	3,491	3,199	1,684	3,731
<b>Total pay and non pay</b>	<b>8,340</b>	<b>8,340</b>	<b>7,958</b>	<b>6,278</b>	<b>10,043</b>
Capital charges new	529	529	523	560	-
<b>Total costs before</b>	<b>8,869</b>	<b>8,869</b>	<b>8,481</b>	<b>6,838</b>	<b>10,043</b>

£000	Option 1	Option 4	Option 5	Option 6	Do nothing
<b>overheads</b>					
Directorate overheads	361	361	361	361	361
Contribution to central overheads	554	554	531	432	624
<b>Total overheads</b>	<b>915</b>	<b>915</b>	<b>892</b>	<b>793</b>	<b>985</b>
<b>Total revenue costs</b>	<b>9,784</b>	<b>9,784</b>	<b>9,373</b>	<b>7,631</b>	<b>11,028</b>
<b>Saving from Do nothing</b>	<b>1,244</b>	<b>1,244</b>	<b>1,655</b>	<b>3,398</b>	<b>-</b>

Source: Trust

- 4.6.2 The table shows that there is potentially significant savings to be made compared with the Do nothing option.

#### Pay costs

- 4.6.3 Pay costs supporting the above revenue costs are as follows:

**Figure 16 – Pay costs**

£000	Option 1	Option 4	Option 5	Option 6	Do nothing
Ward	3,604	3,604	3,594	3,479	4,753
Psychology	106	106	106	106	137
Medical	797	797	724	652	990
<b>Total pay costs</b>	<b>4,507</b>	<b>4,507</b>	<b>4,424</b>	<b>4,237</b>	<b>5,880</b>
<b>Saving from Do nothing</b>	<b>1,373</b>	<b>1,373</b>	<b>1,456</b>	<b>1,643</b>	<b>-</b>

- 4.6.4 The significant reduction in pay costs reflect the reduction in bed numbers compared with the Do nothing option. This assumption is based on the implementation of the new care pathways planned in the community in line with that implemented in Medway.

#### Running costs

- 4.6.5 Running costs, excluding depreciation and return on capital are shown below.

**Figure 17 – Running costs**

£000	Option 1	Option 4	Option 5	Option 6	Do nothing
Internal recharges	765	765	237	237	769
Hotel costs	692	692	912	709	912
Utilities	191	191	207	77	207
Rent and rates	155	155	155	46	155

£000	Option 1	Option 4	Option 5	Option 6	Do nothing
Site administration	306	306	306	133	306
<b>Total running costs</b>	<b>2,109</b>	<b>2,109</b>	<b>1,817</b>	<b>1,202</b>	<b>2,349</b>
<b>Saving from Do nothing</b>	<b>240</b>	<b>240</b>	<b>532</b>	<b>1,147</b>	<b>-</b>

Note: The variance of the total running costs from the revenue summary above are the existing and new depreciation / RoR charges, analysed below

- 4.6.6 The significant reduction in running costs for options 5 and 6 reflect the smaller number of sites. For option 5 the current running costs of Arundel have been deducted (£526k internal recharge) and for option 6, both Arundel and Canterbury have been deducted (£1,854k, internal recharge and capital charges).

### Capital charges

- 4.6.7 The effect on capital charges for each option is shown in the table below.

**Figure 18 – Effect on Capital Charges**

£k	Opening capital charges	Capital charges on new facilities	Capital charge saving on existing facilities	Closing Capital charges	Net increase / (decrease)
Option 1	1,381	529	-	1,910	529
Option 4	1,381	529	-	1,910	529
Option 5	1,381	523	-	1,904	523
Option 6	1,381	560	900	1,042	339
Do nothing	1,381	-	-	1,381	0

- 4.6.8 It has been assumed that the refurbishment work will add to the capital value of the buildings (except Arundel which is rented), therefore the capital charges will be added to the existing charges. Note that the Arundel element would be reflected in increased rent rather than capital charge. The reduction in capital charges for option 6 reflects the vacating of the ward at St Martin's in Canterbury.

### Summary of revenue cost savings over Do nothing

- 4.6.9 A summary of the overall savings derived from each cost heading is provided below.

**Figure 19 – Summary of cost savings**

£000	Option 1	Option 4	Option 5	Option 6	Do nothing
Opening cost	11,029	11,029	11,029	11,029	11,029
Pay costs	(1,373)	(1,373)	(1,456)	(1,643)	-

£000	Option 1	Option 4	Option 5	Option 6	Do nothing
Non pay	(90)	(90)	(97)	(75)	-
Running costs	(240)	(240)	(532)	(1,147)	-
Capital charges	529	529	523	(339)	-
Contribution to overheads	(70)	(70)	(93)	(192)	-
<b>Option cost</b>	<b>9,785</b>	<b>9,785</b>	<b>9,374</b>	<b>7,633</b>	<b>11,029</b>
<b>Saving from Do nothing</b>	<b>1,244</b>	<b>1,244</b>	<b>1,655</b>	<b>3,398</b>	<b>-</b>
<b>% Saving from Do nothing</b>	<b>11.2</b>	<b>11.2</b>	<b>15.0</b>	<b>30.8</b>	<b>N/A</b>

4.6.10 It can be seen that the larger areas of savings are in pay costs (due to the smaller number of beds) and running costs due to the smaller areas / sites from which the service will be provided.

## 4.7 Economic appraisal results

4.7.1 Discounted cash flow analysis using the Net Present Cost (NPC) method is used to compare the options over the relevant time period. Discounting is undertaken to reflect the fact that £1 in one year's time is worth less than £1 today.

4.7.2 The evaluation has been carried out in accordance with the Capital Investment Manual and HM Treasury's The Green Book – Appraisal and Evaluation in Central Government.

4.7.3 In accordance with guidance, the cash flows exclude:

- Depreciation, as this cost is reflected through the life cycle costs; and
- VAT, as this represents a flow of money from one part of Government to another.

4.7.4 In addition, the following assumptions apply to the appraisal:

- The start point for the economic appraisal is assumed to be 1<sup>st</sup> April 2012;
- A discount factor of 3.5% has been applied to cash flows for years covered by the analysis;
- A price base of 2011/12 has been used;
- A 60 year appraisal period has been used. This represents the standard 60 year appraisal period for new build.
- Life cycle costs have been assessed based on a full replacement cost of the upgrade costs every 35 years (5 years for equipment).

4.7.5 The costs of the proposed investment have been assessed and aggregated to reflect:

- The total expected property-related, capital and revenue costs of each option;
- The opportunity costs of each option;



- The cost implications for all public sector parties that arise as a consequence of the investment.

4.7.6 Figure 20 summarises the results of the economic appraisal over 60 years, commencing 2012/13. A year by year analysis is provided in Appendix F.

**Figure 20 - Cash flows of short-listed options**

£000	Option 1	Option 4	Option 5	Option 6	Do nothing
Undiscounted Cash flow	530,441	530,441	506,386	405,553	603,161
Discounted cash flow (Net Present Cost)	229,965	229,965	220,298	180,011	258,063

Source: Trust / Hygeian

4.7.7 The Equivalent Annual Costs of the options are provided below.

**Figure 21 - Equivalent annual costs of short-listed options**

£000	Option 1	Option 4	Option 5	Option 6	Do nothing
Equivalent Annual Costs	8,864	8,864	8,491	6,938	9,947
<b>Rank</b>	<b>3=</b>	<b>3=</b>	<b>2</b>	<b>1</b>	<b>5</b>

Source: Trust / Hygeian

4.7.8 The economic analysis shows that option 6 has the lowest equivalent annual cost and demonstrates the lowest economic cost out of all of the options. This arises from the service being provided from one site with the savings in associated running costs and more efficient staffing costs.

## 4.8 Sensitivity tests

4.8.1 In order to test the robustness of the above economic analysis the key variables have been subjected to a sensitivity analysis of the key variables. The tests look at changes to the variables that may change the ranking of the options.

- Capital costs – for the base line assessment the costs for option 8 assume that capital investment would be required after five years, using figures from options 4 and 5 on the grounds that these options involved three sites. A test was undertaken to see the effect of delaying such investment by a further 5 years.
- Savings from vacating St Martin's – option 6 assumes that the running costs for St Martin's and Arundel would cease at the same time that the new facilities were opened. In the case of Arundel, this would be feasible from a KMPT perspective as notice could be served on the landlord in good time, however with St Martin's the reduction in running costs may not be immediate. This test assumes that the reduction in running costs are phased over three years post commissioning of the new facilities (option 6).

- Savings from vacating Arundel – options 5 and 6 involve the vacation of Arundel ward at Ashford. This ward is currently rented and the base line analysis assumes that the rent would cease immediately the service moves to the new premises. Economic analyses examine costs from the perspective of the health economy as a whole and it is likely that the costs associated with running the service at Ashford could be fixed and would be difficult to avoid in the short term. This test delays the reduction in running costs at Ashford by three years.

4.8.2 The results of the sensitivity tests are shown below.

**Figure 22 – Sensitivity tests**

£000	Option 1	Option 4	Option 5	Option 6	Do nothing
<b>Base line</b> Equivalent Annual Costs	8,864	8,864	8,491	6,938	9,947
<b>Rank</b>	<b>3=</b>	<b>3=</b>	<b>2</b>	<b>1</b>	<b>5</b>
<b>Sensitivity 1 – Delayed cap ex on Do Nothing</b> EAC	8,864	8,864	8,492	6,938	9,899
<b>Rank</b>	<b>3=</b>	<b>3=</b>	<b>2</b>	<b>1</b>	<b>5</b>
<b>Sensitivity 2 – delayed reduction in running costs – Option 6</b> EAC	8,864	8,864	8,492	6,959	9,947
<b>Rank</b>	<b>3=</b>	<b>3=</b>	<b>2</b>	<b>1</b>	<b>5</b>
<b>Sensitivity 3 – delayed reduction Arundel rent – options 5 and 6</b> EAC	8,864	8,864	8,546	6,993	9,947
<b>Rank</b>	<b>3=</b>	<b>3=</b>	<b>2</b>	<b>1</b>	<b>5</b>

4.8.3 The above sensitivity analysis shows that the ranking of the options does not change for the sensitivity test which indicates that the options are relatively insensitive to changes in assumptions around costs and their timing.

#### Switch Values

4.8.4 The percentage change in variables sensitised in Figure 21 above at which the EAC of Option 1 equals Option 2 is shown below.

**Figure 23 – Switching values**

£000	Option 1	Option 4	Option 5	Option 6	Do nothing
Equivalent Annual Costs	8,864	8,864	8,491	6,938	9,947
Change required to become lowest EAC	(1,926)	(1,926)	(1,553)	-	3,548
%	-21.7	-21.7	-18.3	-	-35.7

4.8.5 The table indicates that Option 6 gives a significantly lower equivalent annual cost compared with options 1, 4 and 5 (c20%) and Do nothing (c35%). Therefore significant changes in assumptions or cost estimates would be necessary to change the highest ranking option.

## 4.9 Conclusions

4.9.1 The overall conclusion from the economic appraisal of the options is that Option 6 gives the lower economic cost of the options which indicates that this option would provided the best value for money overall

4.9.2 In terms of affordability all of the change options deliver savings over the status quo, ranging from between 11% and 31%. The overall conclusion will depend on the extent of savings delivered compared with the benefits and relative risks applicable to each option.

## 5 Risk analysis

### 5.1 Introduction and approach

5.1.1 Representatives from the Older Adult service, together with commissioners and staff from estates and finance carried out a qualitative risk assessment of the short listed options.

5.1.2 The approach adopted involved firstly identifying potential risk areas such as operational, finance and project risk. Each of the options was scored against each risk on two counts:-

- impact of risk on the service should it occur; and
- the likelihood of the risk occurring.

5.1.3 The basis for the assessment in terms of impact and probability are shown below.

**Figure 24 – Basis of risk scoring**

	Impact	Probability
1	Insignificant	Remote
2	Minor	Possible
3	Moderate	Medium
4	Major	Likely
5	Catastrophic	Almost certain

5.1.4 The overall exposure to risk is then a combination of the impact of risks and likelihood of them occurring, taking into account the likely effectiveness of a risk management strategy.

### 5.2 Defining the risk register

5.2.1 A risk register was developed based on the expected areas of key risk which each option would be exposed to. The risks were categorised into the headings shown in the table below.

**Figure 25 - Risk Categories**

Risk Category	Comment
Operational	These are risks that can impair the older adults' service ability to provide health services, for example continued compliance with national and local regulations / guidelines
Commercial / financial	These are risks associated with the revenue and costs of providing the service within current and future funding parameters.
Service / clinical	These risks relate to the ability of the Trust to recruit and retain the right calibre of staff, both clinical and support. It also identifies risks associated with retaining clinical accreditation, operating within set out clinical guidelines etc.
Refurbishment	These risks relate to the refurbishment process and result in delays to completion of the facility or increased costs. An example may include

Risk Category	Comment
equipment	unforeseen complications with refurbishment on some of the options.
Project	These risks relate to the ability to run the development project to time and budget, for example ensuring that properly qualified and experienced personnel are appointed and that other projects do not detract from the need to devote the right time and commitment to this project

### 5.3 Results of risk assessment of the short listed options

5.3.1 A summary of the risk scores for each short listed option is provided below. The results also summarise the number of risks occurring in each category of risk exposure based on the following criteria:

- Yellow: low risk
- Orange medium risk
- Red high risk

5.3.2 The numbers in each coloured box indicates the number of risks that have been classified as the combination of impact and likelihood.

5.3.3 The overall scores by risk category are summarised below. A detailed assessment of the options is provided in Appendix G.

**Figure 26 – Scores by risk category**

Risk Category	Option 1 – Canterbury, Thanet, Ashford – mixed function / gender	Option 4 – Canterbury, Thanet, Ashford – split function, mixed gender	Option 5 – Canterbury, Thanet (x2) – mixed function / gender	Option 6 – Thanet (x3) – mixed function / gender	Option 8 – Do nothing
Operational	51	53	48	54	69
Finance / commercial	66	70	48	42	56
Service / clinical	87	87	62	73	95
Refurb / equipment	48	46	46	50	42
Project	56	56	60	64	8
<b>TOTAL</b>	<b>308</b>	<b>312</b>	<b>264</b>	<b>283</b>	<b>270</b>
<b>Rank</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>2</b>

5.3.4 The table indicates that option 5 provides the lowest level of risk followed by options 8 and 6. Option 8 can be discounted as the low score is due to it not being subject to refurbishment and project risks. In the areas of operational and service / clinical risks it performed poorly. The good performance of options 5 and 6 is partly due to their being on two and one site respectively and are therefore less exposed to site-based risks.

5.3.5 The number of risks occurring under each of the headings low, medium and high for each option is shown below

**Figure 27 - Outputs from risk assessment**

KMPT - Older Adult Inpatient Services 1 - Canterbury, Thanet, Ashford - mixed function / gender							
LIKELIHOOD	Almost Certain	5					
	Likely	4		1	3	2	
	Medium	3		1	2	12	
	Possible	2		2	8	1	
	Remote	1					
308			1	2	3	4	5
			Insignificant	Minor	Moderate	Major	Catastrophic
			IMPACT				

KMPT - Older Adult Inpatient Services 4 - Canterbury, Thanet, Ashford, - Split function, mixed gender							
LIKELIHOOD	Almost Certain	5					
	Likely	4		1	3	3	
	Medium	3		1	2	10	
	Possible	2		2	6	4	
	Remote	1					
312			1	2	3	4	5
			Insignificant	Minor	Moderate	Major	Catastrophic
			IMPACT				

KMPT - Older Adult Inpatient Services 5 - Canterbury, Thanet (x2) - mixed function / gender							
LIKELIHOOD	Almost Certain	5					
	Likely	4		1	2	1	
	Medium	3		2	4	6	
	Possible	2		3	8	4	
	Remote	1				1	
264			1	2	3	4	5
			Insignificant	Minor	Moderate	Major	Catastrophic
		IMPACT					

KMPT - Older Adult Inpatient Services 6 - Thanet (x3) - mixed function / gender							
LIKELIHOOD	Almost Certain	5				2	
	Likely	4		1	3	3	
	Medium	3		4		5	
	Possible	2		6	1	2	1
	Remote	1	1	1		2	
283			1	2	3	4	5
			Insignificant	Minor	Moderate	Major	Catastrophic
		IMPACT					

KMPT - Older Adult Inpatient Services 8 - Do nothing							
LIKELIHOOD	Almost Certain	5				2	1
	Likely	4	1		1	3	
	Medium	3	1	1	1	3	2
	Possible	2		1	1		3
	Remote	1	8	1	1	1	
			1	2	3	4	5
270			Insignificant	Minor	Moderate	Major	Catastrophic
			IMPACT				

5.3.6 The diagrams indicate the following:

- Although the Do nothing option scores favourably it has 8 risks rated as red, that is, the probability and impact of these risks occurring are significant and, potentially unacceptably high.
- Option 6 scored well however there are 5 risks rated as red which means that certain risks are likely and/or would have a high impact if they occur.
- Option 5 had the lowest risk score and has 1 risk rated as red indicating that this option's risks could be managed effectively.
- Option 1 and 4 had 2 and 3 red rated risks respectively which would be acceptable, however their overall risk score placed them at a higher overall risk than option 5 and 6.

## 5.4 Conclusion

5.4.1 The risk assessment of the options indicates that option 5, two sites at Canterbury and Thanet (2 wards) has the lowest level of risk overall. This is due to a number of factors but more notably the fact that this option operates from two sites rather than 3, has one site co-located with an acute hospital and would be regarded as reasonably accessible to patients, visitors and staff. The Do nothing options came second which was due to the negligible risk associated with refurbishment and project management risks. If these risks were excluded from the overall score, it would be the highest level of risk overall.

5.4.2 The results of this analysis will be included in the overall assessment described in the preferred option section.



## 6 Summary of option performance

### 6.1 Introduction

6.1.1 This section summarises the results of the non-financial, economic and risk appraisals of the short listed options to determine the better performing configurations with manageable levels of risk.

### 6.2 Comparison of cost and benefit points

6.2.1 The table below summarises the results of the three option appraisal analyses

**Figure 28 – Summary of option appraisal**

	Option 1	Option 4	Option 5	Option 6	Option 8
Benefit points	569	405	519	551	380
<b>RANK</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>5</b>
Capital Costs	7,903	7,903	7,815	8,354	0
<b>RANK</b>	<b>3=</b>	<b>3=</b>	<b>2</b>	<b>5</b>	<b>1</b>
Revenue costs	9,784	9,784	9,373	7,361	11,028
<b>RANK</b>	<b>3=</b>	<b>3=</b>	<b>2</b>	<b>1</b>	<b>5</b>
Economic Appraisal (NPC)	229,965	229,965	220,298	180,011	258,063
<b>RANK</b>	<b>3=</b>	<b>3=</b>	<b>2</b>	<b>1</b>	<b>5</b>
Capital cost per benefit point	13.89	19.51	15.06	15.16	0
<b>RANK</b>	<b>2</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>1</b>
Revenue cost per benefit point	17.2	24.2	18.1	13.4	29.0
<b>RANK</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>5</b>
Net present cost per benefit point	404.2	567.8	424.5	326.7	679.1
<b>RANK</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>5</b>
Risk Analysis - overall	308	312	264	283	270
Risk Analysis – number of high risks	2	3	1	5	8
<b>RANK - score</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>2</b>
<b>RANK – high risks</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>5</b>

6.2.2 The above analysis gives a mixed result. A summary of the performance of each option is provided below.

- **Option 1** – this shows average rankings for the economic, finance and risk scores, however its high benefit score has meant that it has performed favourably when comparing the benefit score with the other analyses.
- **Option 4** – this is the same as option 1 with split functions. It has performed relatively poorly across all analyses and, although costs are the same as for option

1 its lower benefit score means that it always performs less well compared with option 1

- **Option 5** – this option has one ward at Canterbury and two at Thanet. It scores well in the revenue and economic analyses, being second to option 6 due to the greater savings to be derived from providing all of the inpatient services from two sites rather than 3. However its benefit scores were lower than for options 1 and 6 which means that its benefit score compared with the other analyses places it below options 1 and 2. The exception was its risk scores where it was seen as being more acceptable to commissioners while still delivering savings.
- **Option 6** – this option involves all three wards being provided from Thanet. It was the lowest cost option in terms of revenue savings and economic costs but was the highest capital cost due to the level of refurbishment required to provide all inpatient services on one site. It was second highest in benefit scores which meant that it performs well when compared with the other analyses. Although it performed well in terms of risk score (3<sup>rd</sup>) the risks included 5 red-rated risks which was due to the likely issues perceived during the consultation stage.
- **Do nothing** – although this option score well in capital costs (1<sup>st</sup>) and risk score (2<sup>nd</sup>) these should be considered in the light of no refurbishment being undertaken with the consequences on building quality and their not being fit for purpose. The risk score relates to the lack of construction risks and the number of major risks shows this option to be high risk in terms of service and finance risks. Finally this option does not deliver savings and would not be consistent with planned changes to the care pathways and improved community service.

## 6.3 Conclusion

6.3.1 This appraisal has assessed five options from which to select a minimum of three to put forward for consultation. Based on the analysis above it is clear that the Do nothing option should not be taken forward. In common with all option appraisals in the NHS it is used as a base line against which change options can be compared. It does not address the requirements of the new patient pathway and neither does it deliver any revenue savings which is a key requirement.

6.3.2 Of the remaining options the analysis indicates that options 1, 5 and 6 should be taken forward as the relative benefits of each varies depending on benefits delivered, costs and levels of risk. The consultation process should reveal which of these are regarded as more important and the level of any compromise that would be required in order to be able to conclude on a preferred option. Given the relatively poor performance of option 4 compared with the other change options it may be appropriate not to take this forward unless it was believed that a split function option should be tested further in a consultation.

