**Trust Board – 24 July 2013**  
Lister Macmillan Cancer Centre Full Business Case

### PURPOSE
To present the Lister Macmillan Cancer Centre Full Business Case for approval.

### PREVIOUSLY CONSIDERED BY
Divisional Executive Committee, OCH Programme Board, Finance & Performance Committee

### Objective(s) to which issue relates *

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To continuously improve the quality of our services in order to provide the best care and optimise health outcomes for each and every individual accessing the Trust’s services</td>
</tr>
<tr>
<td>2.</td>
<td>To excel at customer service, achieving outstanding levels of communication and patient, carer and GP satisfaction</td>
</tr>
<tr>
<td>3.</td>
<td>To provide and support the best standards of integrated care for the elderly and those with long term conditions by developing key partnerships and services</td>
</tr>
<tr>
<td>4.</td>
<td>To consolidate services and enhance local access to specialist services in order to deliver high quality, safe, seamless, innovative and integrated services which are sustainable</td>
</tr>
<tr>
<td>5.</td>
<td>To support the continued development of the Mount Vernon Cancer Centre and provision of leading local and tertiary cancer services</td>
</tr>
<tr>
<td>6.</td>
<td>To improve our staff engagement and organisational culture to be amongst the best nationally</td>
</tr>
</tbody>
</table>

### Risk Issues
As identified in the Full Business Case risks will be reviewed and managed through the OCH Programme Board.

### Healthcare/ National Policy
This project is consistent with national and local policy guidance on chemotherapy services.

### CRR/Board Assurance Framework *

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Corporate Risk Register</td>
</tr>
<tr>
<td></td>
<td>BAF</td>
</tr>
</tbody>
</table>

### ACTION REQUIRED *

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>For approval</td>
<td></td>
</tr>
<tr>
<td>For decision</td>
<td></td>
</tr>
<tr>
<td>For discussion</td>
<td></td>
</tr>
<tr>
<td>For information</td>
<td></td>
</tr>
</tbody>
</table>

### DIRECTOR:
Director of Strategic Development

### PRESENTED BY:
Director of Strategic Estates

### AUTHOR:
Project Manager

### DATE:
12 July 2013

---

* We put our patients first  
* We work as a team  
* We value everybody  
* We are open and honest  
* We strive for excellence and continuous improvement

* tick applicable box

May 2013
Commercial – In Confidence

Our Changing Hospitals – Phase 4

Chemotherapy Project

The Lister Macmillan Cancer Centre

Full Business Case
1 July 2013
Chemotherapy Full Business Case

1. Executive Summary  
   1.1 Introduction 5  
   1.2 Strategic Context 5  
   1.3 Case for Change and Objectives 5  
   1.4 Activity and Workforce Modelling 6  
   1.5 Options Considered 6  
   1.6 Changes from OBC from FBC 7  
   1.7 Affordability 7  
   1.8 Procurement 8  
   1.9 Programme and Project Management 8  
   1.10 Benefits Realisation 8  
   1.11 Timetable for Approvals 9  
2. Introduction 10  
   2.1 Purpose of the Full Business Case 10  
   2.2 Objectives 10  
   2.3 Constraints 11  
   2.4 Timescales 11  
   2.5 Compliance to Standards e.g. HTM, HBNs etc. 12  
   2.6 Decanting/Access During Construction 12  
   2.7 FBC Development – Improvements and Changes since OBC 12  
3. Strategic Context 13  
   3.1 Background 13  
   3.2 Local Commissioning Priorities 13  
   3.3 Trust Strategy 14  
   3.4 National Strategy 15  
   3.5 National Policy/Drivers 16  
   3.6 The NHS Plan Summary (2012-2015) 19  
   3.7 Key Local Drivers 19  
4. Case for Change and Objectives 20  
   4.1 Background 20  
   4.2 Forster Suite 21  
   4.3 Clinical Pathways and Models of Care 22  
   4.4 Teenagers and Young Adults 26  
   4.5 LMCC Hub and Spoke Model of Care 26  
   4.6 Outreach chemotherapy 27  
5. Activity Modelling 29  
   5.1 Demand Assumptions 29  
   5.2 Performance Assumptions 29  
   5.3 Requirements 29  
   5.4 Commissioners Support 30  
   5.5 Outreach Chemotherapy 30  
   5.6 Commissioners Support on Activity Assumptions 30  
6. Workforce 31  
   6.1 Background 31  
   6.2 Current Chemotherapy Service 31  
7. Option Appraisal 34  
   7.1 Introduction 34  
   7.2 Long/Short List of Options 34  
   7.3 Appraisal of Options 35  
   7.4 Options Scores 35  
   7.5 Sensitivity Assessment 36  
8. Development of Preferred Option 37  
   8.1 Preferred Option 37  
   8.2 Changes Driven by Overall Programme 37  
   8.3 Changes of Design from OBC to FBC 37  
   8.4 Updates to NHS Documentation 38  
9. Detailed Construction Programme 39
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1</td>
<td>Background</td>
<td>39</td>
</tr>
<tr>
<td>9.2</td>
<td>Enabling and Decanting Works</td>
<td>39</td>
</tr>
<tr>
<td>9.3</td>
<td>Refurbishment Area Works</td>
<td>40</td>
</tr>
<tr>
<td>9.4</td>
<td>Working Arrangements During Construction</td>
<td>40</td>
</tr>
<tr>
<td>9.5</td>
<td>Commissioning – Construction Services</td>
<td>40</td>
</tr>
<tr>
<td>9.6</td>
<td>Commissioning – Clinical Services</td>
<td>41</td>
</tr>
<tr>
<td>9.7</td>
<td>Handover Procedures</td>
<td>41</td>
</tr>
<tr>
<td>10.</td>
<td>Financial Affordability</td>
<td>42</td>
</tr>
<tr>
<td>10.1</td>
<td>Economic Appraisal</td>
<td>42</td>
</tr>
<tr>
<td>10.2</td>
<td>Changes in Capital Costs</td>
<td>42</td>
</tr>
<tr>
<td>10.3</td>
<td>Changes to Revenue Costs</td>
<td>42</td>
</tr>
<tr>
<td>10.4</td>
<td>Affordability</td>
<td>42</td>
</tr>
<tr>
<td>10.5</td>
<td>Changes in Revenue Position</td>
<td>42</td>
</tr>
<tr>
<td>11.</td>
<td>Estates Strategy</td>
<td>45</td>
</tr>
<tr>
<td>11.1</td>
<td>Background</td>
<td>45</td>
</tr>
<tr>
<td>11.2</td>
<td>Estates Strategy Priorities</td>
<td>45</td>
</tr>
<tr>
<td>11.3</td>
<td>Key Performance Indicators</td>
<td>46</td>
</tr>
<tr>
<td>11.4</td>
<td>Planning</td>
<td>47</td>
</tr>
<tr>
<td>11.5</td>
<td>Fire Strategy</td>
<td>47</td>
</tr>
<tr>
<td>11.6</td>
<td>Information Management and Technology</td>
<td>47</td>
</tr>
<tr>
<td>11.7</td>
<td>BREEAM</td>
<td>48</td>
</tr>
<tr>
<td>11.8</td>
<td>Energy</td>
<td>49</td>
</tr>
<tr>
<td>11.9</td>
<td>CRC</td>
<td>49</td>
</tr>
<tr>
<td>11.10</td>
<td>Backlog Maintenance</td>
<td>50</td>
</tr>
<tr>
<td>12.</td>
<td>Equipment Strategy</td>
<td>52</td>
</tr>
<tr>
<td>12.1</td>
<td>Introduction</td>
<td>52</td>
</tr>
<tr>
<td>12.2</td>
<td>Trust Equipment Policy</td>
<td>52</td>
</tr>
<tr>
<td>12.3</td>
<td>Transfer Equipment</td>
<td>53</td>
</tr>
<tr>
<td>12.4</td>
<td>Equipment Replacement Needs</td>
<td>53</td>
</tr>
<tr>
<td>12.5</td>
<td>Equipment Procurement</td>
<td>53</td>
</tr>
<tr>
<td>12.6</td>
<td>Equipment Specification</td>
<td>54</td>
</tr>
<tr>
<td>13.</td>
<td>Procurement Strategy</td>
<td>55</td>
</tr>
<tr>
<td>13.1</td>
<td>Procurement Strategy Route</td>
<td>55</td>
</tr>
<tr>
<td>13.2</td>
<td>Client’s Requirements</td>
<td>55</td>
</tr>
<tr>
<td>13.3</td>
<td>Contractors Proposals</td>
<td>55</td>
</tr>
<tr>
<td>13.4</td>
<td>Room Data Sheet Approval</td>
<td>55</td>
</tr>
<tr>
<td>13.5</td>
<td>Drawing Approval</td>
<td>56</td>
</tr>
<tr>
<td>13.6</td>
<td>Guaranteed Maximum Price</td>
<td>56</td>
</tr>
<tr>
<td>13.7</td>
<td>Tender Works Packages</td>
<td>56</td>
</tr>
<tr>
<td>13.8</td>
<td>Enabling Works</td>
<td>57</td>
</tr>
<tr>
<td>13.9</td>
<td>IT Equipment and Infrastructure</td>
<td>57</td>
</tr>
<tr>
<td>13.10</td>
<td>Macmillan Building Agreement</td>
<td>58</td>
</tr>
<tr>
<td>14.</td>
<td>Programme and Project Management</td>
<td>59</td>
</tr>
<tr>
<td>14.1</td>
<td>Project Management Structure</td>
<td>59</td>
</tr>
<tr>
<td>14.2</td>
<td>Project Meetings</td>
<td>59</td>
</tr>
<tr>
<td>14.3</td>
<td>Stakeholder Engagement</td>
<td>60</td>
</tr>
<tr>
<td>14.4</td>
<td>Change Control Process</td>
<td>60</td>
</tr>
<tr>
<td>14.5</td>
<td>Post Project Evaluation</td>
<td>60</td>
</tr>
<tr>
<td>15.</td>
<td>Risk Management</td>
<td>63</td>
</tr>
<tr>
<td>15.1</td>
<td>Overall Risk Management Process</td>
<td>63</td>
</tr>
<tr>
<td>15.2</td>
<td>Risk Identification and Assessment</td>
<td>63</td>
</tr>
<tr>
<td>15.3</td>
<td>Risk Management and Review</td>
<td>63</td>
</tr>
<tr>
<td>16.</td>
<td>Benefits Realisation</td>
<td>65</td>
</tr>
<tr>
<td>16.1</td>
<td>Introduction</td>
<td>65</td>
</tr>
<tr>
<td>16.2</td>
<td>Benefits</td>
<td>65</td>
</tr>
<tr>
<td>16.3</td>
<td>Benefits Realisation Plan</td>
<td>65</td>
</tr>
<tr>
<td>17.</td>
<td>Conclusions and Recommendations</td>
<td>69</td>
</tr>
<tr>
<td>17.1</td>
<td>Conclusions</td>
<td>69</td>
</tr>
<tr>
<td>17.2</td>
<td>Recommendations</td>
<td>69</td>
</tr>
<tr>
<td>18.</td>
<td>Schedule of Appendices</td>
<td>70</td>
</tr>
</tbody>
</table>
Tables:
Table 1: 3% Activity Growth ................................................................. 7
Table 2: Key Milestones ................................................................. 9
Table 3: Project Objectives - Measurable Strands ......................... 10
Table 4: Cancer Incidence Diagnosed at E&NH NHS Trust .......... 17
Table 5: 31 Day Treatment Targets ........................................... 18
Table 6: 62 Day Treatment Targets ............................................ 18
Table 7: Capacity Requirements .................................................. 29
Table 8: Chemotherapy Activity Assumptions .......................... 30
Table 9: Chemotherapy Staffing Levels - Whole Time Equivalents (WTE) ................................................................. 33
Table 10: Comparison of Chemotherapy Registered Nursing Staff ................................................................................................. 33
Table 11: Options ........................................................................ 34
Table 12: Raw Scores ................................................................. 35
Table 13: Weighted Scores ......................................................... 36
Table 14: Design Changes .......................................................... 37
Table 15: Additional Annual Income and Costs 2014/15 ............... 43
Table 16: 3% Activity Growth ..................................................... 43
Table 17: 6% Activity Growth ..................................................... 44
Table 18: Estates Strategy KPIs .................................................... 46
Table 19: AEDET workshop schedule ......................................... 48
Table 20: CRC published results, November 2011 ............... 49
Table 21: Backlog maintenance by category .......................... 50
Table 22: Admin Block Backlog Maintenance Figure .......... 50
Table 23: Equipment Groups .................................................. 54
Table 24: Risk Score Matrix .................................................... 63
Table 25: Benefits Realisation Plan ......................................... 66
Table 26: List of Appendices ....................................................... 70

Figures:
Figure 1: OCH Programme .......................................................... 14
Figure 2: Confirmed Cancers by Tumour Group ....................... 17
Figure 3: 31 Day Treatment Standard by Month ..................... 18
Figure 4: 62 Day Treatment Standard by Month .................... 18
Figure 5: Current Patient Pathway ........................................... 22
Figure 6: Chemotherapy 2 Visit Pathway for First Treatment ....... 23
Figure 7: Chemotherapy 2 Visit Pathway for First Treatment ....... 23
Figure 8: Subsequent Cycles Treatment ................................ 25
Figure 9: New Cancer Pathway .................................................. 28
Figure 10: Cancer Pathway ....................................................... 28
Figure 11: Chemotherapy Staffing Management Structure ....... 31
Figure 12: Project Management Structure ............................... 59
1. Executive Summary

1.1 Introduction

1.1.1 The purpose of this Full Business Case (FBC) is to seek Trust Board approval and authorisation to £3.024m (inclusive of VAT) capital expenditure at outturn prices, for relocating and developing a modern and efficient chemotherapy centre at the Lister Hospital. This will be named the Lister Macmillan Cancer Centre (LMCC). The proposed scheme is to be undertaken in collaboration with Macmillan Cancer Support who will provide £1.573 of funding, enabling significant improvements in services and patient experience to take place at Lister. The total Trust commitment is therefore £1.451m.

1.2 Strategic Context

1.2.1 The relocation and expansion of the existing chemotherapy service into the Administration Corridor will form one of the final phases within the DQHH Phase 4 consolidation programme and in the process release part of ward 10A for refurbishment into a 29 bed ward to support the consolidation of acute services on to the Lister site in 2014.

1.2.2 The business case has been updated to reflect legislative changes relating to building requirements, and the clinical activity and models of care have been subjected to review in light of QIPP (Quality, Innovation, Productivity and Prevention, clinical evidence and best practice).

1.2.3 As part of the relocation and expansion into the Administration Corridor the new LMCC will support National Strategy, National Policy/Drivers, the Strategy for Healthcare in Hertfordshire and Local Commissioning Priorities together with the Trust’s strategies for Site Master Planning.

1.2.4 The project has the following key objectives:
- address current capacity pressures and future capacity demands for ongoing chemotherapy services
- improve patient experience
- improve clinical outcomes
- improve staff retention
- release part of ward 10A as 29 bed additional ward for service changes
- increase income generation by additional activity.

1.3 Case for Change and Objectives

1.3.1 The Trust’s strategy to consolidate all acute inpatient services on to the Lister site formed the fundamental basis for the Phase 4 OBC, together with how associated services would be increased to deliver the anticipated level of healthcare activity.

1.3.2 The number of patients now living with cancer continues to rise rapidly as does the need to provide modern functional chemotherapy facilities in which to deliver complex and ongoing cycles of treatment.

1.3.3 Currently two million people in the UK are living with cancer, approximately 250,000 are diagnosed each year and 130,000 die from the disease. Overall cancer incidence is increasing by 3% annually and it is on this annual growth projection that the new LMCC FBC has been financially modelled. The support of specialist commissioners has been sought and confirmed at this level (reaffirmation has not been sought from commissioners due to organisational changes currently underway). However the service
is currently exceeding this level of activity and commissioners expect annual growth to be in the region of 5% – 7.5% per annum. Current activity levels are managed and maintained by intensive diary management where demand cannot be accommodated patients are redirected to Mount Vernon.

1.3.4 The benefits realisation of the chemotherapy project will include quality and value improvements for patients, staff and local communities. A Benefits Realisation Plan will also define how and when outcomes and benefits are measured. These will include opportunities to align the best in current clinical practice, opportunities to improve the range of designated care settings and physical environments, improvements in patient care and experience by consolidating the service, more flexible capacity to deal with variability in demand, more effective and efficient use of staff capacity and skills, contribute to the effectiveness of the local networks for critical care services and better opportunities for staff training.

1.4 Activity and Workforce Modelling

1.4.1 The finances, affordability and options appraisal for the project have been based on detailed analysis of past activity data and revenue spend for the service being delivered from within the Forster Suite to establish current inefficiencies and how these may be improved from within the new expanded LMCC. Initially chairs will increase from 10 to 14 with scope to extend to 18 as demand increases, please see commissioners support letter demonstrating predicted activity increase at Appendix 1 (reaffirmation has not been sought from commissioners due to organisational changes currently underway). Additional activity will also be generated by treatment of teenagers and young adults locally.

1.4.2 The OBC has been modelled on a conservative 3% year on year growth rate together with a sensitivity based on a 6% growth rate despite past activity being much higher. The 3% activity increase (in line with the national expected growth rates for cancer) is that which underpins the financial modelling for the OBC. Current activity levels for chemotherapy at Lister have increased 20% over the last 2 years.

1.4.3 There is currently no nationally agreed benchmark of nursing staff; detail around patient ratio for delivery of chemotherapy in the outpatient setting can be found at paragraph 6.2.4. The nursing workforce are agreed by Angela Thompson, Director of Nursing. Due to the high risk nature of chemotherapy and complex cannulation of chemotherapy patients, delivery of chemotherapy is carried out by registered nurses with an additional years training in an accredited chemotherapy course.

1.4.4 At the current time the Forster Suite is not subject to any planned workforce reductions in connection with the Trust’s LTFM. Also there are no cost improvement performances applicable to the Forster Suite as current activity levels have risen significantly, an overall increase of 20% over the last two years.

1.5 Options Considered

1.5.1 Each option has been carefully appraised and scored by the Project Team and key stakeholders and the benefits and issues related to each carefully considered before the preferred option of Option 3 to refurbish and extend the Administration Corridor at a cost of £3.024m including Vat at outturn prices, together with a £1.573m contribution from Macmillan, has been formally selected and developed as this FBC.
1.6 Changes from OBC from FBC

1.6.1 A number of issues were identified during the OBC approval and these have been addressed. There is no material impact to the project as a consequence. Most significant changes are detailed below:
- New tariff charges applicable to chemotherapy treatments
- Existing pathology area revised and permanent separation provided between both departments
- Switchboard area redesigned to provide chemotherapy waiting room toilet and dedicated switchboard toilet
- Retail fire exit route redirected into main entrance corridor along side of chemotherapy and switchboard to satisfy Fire Regulations
- Plant room relocated on to roof
- The overall size of the project has increased by 65m² as a result of layout changes.

1.6.2 These changes have driven an increase in cost of £103k which it is proposed will be funded jointly by the Trust and Macmillan.

1.7 Affordability

1.7.1 The July 2012 LTFM reflected the capital charges relating to the £2.921 scheme identified in the OBC. There will be a small increase in capital charges as a result of the increase in capital cost identified above. The Trust’s capital contribution of £1.451m is to be funded principally through the Trust’s operational capital programme for the Phase 4 consolidation of services on to the Lister site and with £30k coming from the backlog maintenance budget.

1.7.2 The £1.573m contribution from Macmillan which is secured through a formal Macmillan Building Agreement will necessitate a joint cashflow for funding the project between the Trust and Macmillan. Thereafter the Trust will take any risks associated with budgetary pressures or overspends beyond the £3.024m. Historically the Trust has a track record of delivering projects on time and within budget which will therefore mitigate any risks.

1.7.3 The following table shows the year on year position on the basis of 3% growth for which the FBC has been modelled, a 6% sensitivity analysis has also been undertaken (detailed under Section 10 – Affordability). At 3% growth this shows the revenue position moving from a deficit after 3 years – at 6% growth this is achieved after one year.

Table 1: 3% Activity Growth

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover</td>
<td>1,399,589</td>
<td>1,413,411</td>
<td>1,426,546</td>
<td>1,439,964</td>
<td>1,452,842</td>
<td>1,465,164</td>
<td>1,477,908</td>
<td>1,487,305</td>
</tr>
<tr>
<td>Increase of 3% over current income plus £13,000 repatriated activity and a further 3% per annum</td>
<td>3,820</td>
<td>3,971</td>
<td>4,122</td>
<td>4,273</td>
<td>4,424</td>
<td>4,575</td>
<td>4,726</td>
<td>4,877</td>
</tr>
<tr>
<td>Income</td>
<td>53,401</td>
<td>55,997</td>
<td>58,611</td>
<td>61,276</td>
<td>64,005</td>
<td>66,799</td>
<td>69,653</td>
<td>72,563</td>
</tr>
<tr>
<td>Increase of 3% over current income plus £13,000 repatriated activity and a further 3% per annum</td>
<td>53,401</td>
<td>55,997</td>
<td>58,611</td>
<td>61,276</td>
<td>64,005</td>
<td>66,799</td>
<td>69,653</td>
<td>72,563</td>
</tr>
<tr>
<td>Costs</td>
<td>144,929</td>
<td>147,862</td>
<td>149,755</td>
<td>151,633</td>
<td>153,593</td>
<td>155,534</td>
<td>157,466</td>
<td>159,384</td>
</tr>
<tr>
<td>Soft FM based on Bolton figures adjusted for 4 chairs and no catering</td>
<td>40,097</td>
<td>40,264</td>
<td>40,264</td>
<td>40,264</td>
<td>40,264</td>
<td>40,264</td>
<td>40,264</td>
<td>40,264</td>
</tr>
<tr>
<td>Hard FM Rates and utilities</td>
<td>10,672</td>
<td>10,672</td>
<td>10,672</td>
<td>10,672</td>
<td>10,672</td>
<td>10,672</td>
<td>10,672</td>
<td>10,672</td>
</tr>
<tr>
<td>Staff based on 4 additional Chairs</td>
<td>60,388</td>
<td>60,388</td>
<td>60,388</td>
<td>60,388</td>
<td>60,388</td>
<td>60,388</td>
<td>60,388</td>
<td>60,388</td>
</tr>
<tr>
<td>Non Pay consumables based on increase activity</td>
<td>14,429</td>
<td>25,862</td>
<td>37,259</td>
<td>49,075</td>
<td>61,176</td>
<td>74,022</td>
<td>88,253</td>
<td></td>
</tr>
<tr>
<td>Additional Capital Charges over and above LTFM</td>
<td>4,349</td>
<td>5,027</td>
<td>5,805</td>
<td>6,573</td>
<td>7,341</td>
<td>8,109</td>
<td>8,878</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>131,892</td>
<td>134,193</td>
<td>136,471</td>
<td>138,749</td>
<td>141,027</td>
<td>143,305</td>
<td>145,583</td>
<td>147,861</td>
</tr>
<tr>
<td>Surplus/ (Loss)</td>
<td>-78,231</td>
<td>-75,197</td>
<td>-72,080</td>
<td>-68,877</td>
<td>-65,674</td>
<td>-62,471</td>
<td>-59,268</td>
<td>-56,065</td>
</tr>
</tbody>
</table>

Additional Costs of Relocated Execs Corridor

| Soft FM                                           | 14,528 | 14,528 | 14,528 | 14,528 | 14,528 | 14,528 |
| Hard FM                                          | 38,603 | 38,603 | 38,603 | 38,603 | 38,603 | 38,603 |
| Rent                                             | 41,274 | 41,274 | 41,274 | 41,274 | 41,274 | 41,274 |
| Additional (Loss) Revenue                        | -173,377 | -132,243 | -100,112 | -68,973 | -37,834 | 2,982 | 38,379 |

7
1.7.4 Revenue costs are predicted to be slightly higher than the OBC figure and this is principally attributable to the change in tariff, increased capital charges and extra costs associated with Fern Ward. None of these changes alter the option appraisal outcome and would be the same for all OBC options.

1.8 Procurement
1.8.1 The Trust has developed procurement and equipment strategies to ensure that best value can be obtained from all procurement, in line with current legislation. The Trust appointed Integrated Health Projects as their Principal Supply Chain Partner as prescribed by the P21+ framework.

1.8.2 Key Benefits of P21+ include:
- fast track start
- distils the best of early designs
- time certainty
- best VFM
- no OJEU required
- cost certainty
- optimum environment
- savings shared.

1.8.3 P21+ also offers more certainty of cost. By using a Guaranteed Maximum Price (GMP), the Trust and PSCP agree a final cost for the scheme. Assuming the Trust does not make changes that affect cost, the final cost will be that of the GMP. Any overspend will be borne by the PSCP, any under spend will be shared 50:50, with the percentage increasing in the Trust’s favour for larger savings. Importantly the Trust has past experience of P21 and P21+ in terms of project management and its approach to procurement for other projects on the Lister site e.g. Maternity, Emergency Department Theatres and New Ward Block.

1.9 Programme and Project Management
1.9.1 Robust project management arrangements remain in place. A Project Board and Management Team have been established for reporting to the OCH Programme Board.

1.9.2 The project board will be subject to a rigorous scheme of control on the management of capital costs under the governance structures in place for the Phase 4 consolidation programme. Variations to contract and design plans resulting in any additional capital costs will be through the formal change control process.

1.9.3 The project risks have been kept under close review and an updated risk register is attached as Appendix 20 to this FBC. Arrangements are in place for a comprehensive Post-Project Evaluation, and a Benefits Realisation Plan (BRP) as set out in Section 16 is in place.

1.10 Benefits Realisation
1.10.1 The detailed BRP for the LMCC is contained in Section 16 and sets out the realisable benefits that are expected to be delivered as a result of this project. The overall responsibility for the delivery of the benefits rests with the Project Director. The BRP will be monitored during the project and reviewed as part of the Post Project Evaluation process.

1.10.2 The principal benefits of the LMCC service consolidation and expansion within the executive administration corridor include:
- opportunities to align the best in current clinical practice
• an opportunities to improve the range of designated care settings and physical environments
• improve patient care and experience by consolidating the service
• more flexible capacity to deal with variability in demand
• more effective and efficient use of staff capacity and skills
• contribute to the effectiveness of the local networks for critical care services
• better opportunities for staff training

1.11 Timetable for Approvals

1.11.1 The key milestones for approvals and further development of the project are outlined below. The Project Team are now progressing in line with a strict programme that will enable construction commencement July 2013;

Table 2: Key Milestones

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Board approval to develop OBC scheme</td>
<td>28 June 2012</td>
</tr>
<tr>
<td>OCH Programme Board OBC approval</td>
<td>11 October 2012</td>
</tr>
<tr>
<td>Finance and Performance Committee OBC approval</td>
<td>17 October 2012</td>
</tr>
<tr>
<td>Trust Board approval – OBC</td>
<td>24 October 2012</td>
</tr>
<tr>
<td>P21+ Stage 2</td>
<td>24 October 2012</td>
</tr>
<tr>
<td>Macmillan Approval Stage 1</td>
<td>9 November 2012</td>
</tr>
<tr>
<td>Macmillan Approval Stage 2</td>
<td>18 June 2013</td>
</tr>
<tr>
<td>Chemotherapy Project Board</td>
<td>4 July 2013</td>
</tr>
<tr>
<td>Charity Trust Commission</td>
<td>8 July 2013</td>
</tr>
<tr>
<td>DEC / Executive Committee</td>
<td>11 July 2013</td>
</tr>
<tr>
<td>OCH Programme Board FBC approval</td>
<td>11 July 2013</td>
</tr>
<tr>
<td>Finance and Performance Committee FBC approval</td>
<td>17 July 2013</td>
</tr>
<tr>
<td>Trust Approval – FBC</td>
<td>24 July 2013</td>
</tr>
<tr>
<td>P21 + Stage 3 (Trust Board Approval and Sign Off)</td>
<td>24 July 2013</td>
</tr>
<tr>
<td>P21 + Stage 4 (Award of Contract)</td>
<td>25 July 2013</td>
</tr>
<tr>
<td>Decant Execs Admin Corridor</td>
<td>27 July 2013</td>
</tr>
<tr>
<td>Trust Enabling Works to Admin Corridor</td>
<td>5 August 2013</td>
</tr>
<tr>
<td>Construction Commencement including IHP enabling works</td>
<td>16 September 2013</td>
</tr>
<tr>
<td>IHP Commissioning Commencement (four week period allowed)</td>
<td>17 March 2014</td>
</tr>
<tr>
<td>Practical Completion</td>
<td>28 April 2014</td>
</tr>
<tr>
<td>Trust Clinical Commissioning Commencement (3 week period)</td>
<td>28 April 2014</td>
</tr>
<tr>
<td>Forster Suite relocate into new unit</td>
<td>17 May 2014</td>
</tr>
<tr>
<td>New Chemotherapy service operational</td>
<td>19 May 2014</td>
</tr>
<tr>
<td>Post project evaluation (PPE)</td>
<td>September 2014</td>
</tr>
</tbody>
</table>
2. Introduction

2.1 Purpose of the Full Business Case

2.1.1 This Full Business Case (FBC) presents the detailed plans for the refurbishment and construction of a new chemotherapy centre as part of the *Our Changing Hospitals* Programme being undertaken by the East and North Hertfordshire NHS Trust (ENHT). It is one element of the £150m investment programme for the Lister site to deliver acute services consolidation. To date, over £70m has been committed on the Lister site and some services are completed and fully operational.

2.1.2 The Phase 4 Programme is the final element of the *Our Changing Hospitals* programme. The Phase 4 programme comprises 11 projects, of which chemotherapy is one, and which as a whole deliver the consolidation programme. The current timetable delivers consolidation in October 2014.

2.1.3 This document will:
- confirm that the strategic rationale for the investment remains sound, is in line with strategic goals and commissioner requirements, and that any issues raised at OBC stage have been addressed properly
- confirm that the preferred option still offers best value for money under latest assumptions and is affordable and feasible
- demonstrate that the project will be properly managed, executed and evaluated

2.2 Objectives

2.2.1 The primary objectives are set out in the table below:

<table>
<thead>
<tr>
<th>Objective</th>
<th>Comment (Measurements are detailed in the BRP)</th>
</tr>
</thead>
</table>
| **To provide a permanent solution to address capacity for ongoing chemotherapy services and Oncology/Haematology outpatient clinic facilities** | The current centre is unable to provide the adequate space for the following:  
- oncology and haematology outpatient activity data for 2011/12 shows a YTD average increase of 13.9%  
- chemotherapy activity has a YTD increase of 10.64% for 2011/2012  
- national increase in demand is predicted at 3% year on year  
- costs associated with staffing the additional space will be met from the increased activity generated. See staff numbers detailed in Table 15 and Income and Expenditure as detailed in Section 10 – Affordability. |
| **Improve patient experience** |  
- patients will no longer need to be referred to MVCC as a result of unavailable capacity  
- improved meridian scores - currently at 77-88% on average, target 95% or above  
- improved clinic waiting times - currently 57% waited no longer than 30 mins, target 80% or above  
- ensure 100% compliance to policy standards (audit)  
- additional national and locally driven support services required for delivery of high quality services to cancer patients as detailed within the Improving Outcomes Guidance (IOG). This combined with National Institute of Clinical Excellence (NICE) advocates improving the patient experience  
- The Macmillan Information Centre will provide relevant up to date accurate and easily accessible information |
### Improved clinical outcomes

- currently scoping equity of service and age profile of patients
- improved access to clinical trials - current 29%, target 40%
- improved access to CNS and support services – Current 73%, target 85% or above
- demonstrate a year-on-year improvement in the required clinical quality standards (peer review measures/improving outcomes guidance)
- reduced complaints by 50% from monthly average of 4 to 2
- improved mortality rate of deaths within 30 days – currently 0.5%, target 0.3%
- improved clinical outcomes Cancer Reform Strategy (CRS 2007) demonstrated by improved access to services
- equity for East and North Hertfordshire cancer patients
- improved access to Clinical Nurse Specialist (CNS) and support services
- currently there are no national benchmarks for clinical outcomes, although reporting of a minimum data set through the Systemic Anti Cancer Treatment SACT pilot commenced in September 2012. Full submission to the MDS commenced June 2013

### Improved staff retention

Evidence shows that high performing organisations recruit high quality staff. Both the service and the organisation are striving to be amongst the best. The new centre will
- improve the staff working environment both physically and operationally
- will increase available staff training facilities and staff career development opportunities
- improve staff recruitment and retention rates
- current staff turnover at 10.1%, the LMCC will aim to reduce this to below 7% amongst band 5 staff within the next 2 years
- Explore the development of Assistant practitioner roles within cancer and chemotherapy

### Release Ward 10a to provide an additional 29 beds for use as an additional ward or for service changes

The refurbishment of Ward 10A and then its use as a dedicated inpatient ward would provide a 29 bed area in conjunction with Endoscopy for the additional capacity required to support the consolidation of acute services on the Lister site in 2014.

### 2.3 Constraints

#### 2.3.1

Whilst maintaining the need to deliver a clinically robust and sustainable service, the project must deliver value for money whilst meeting timescales which underpin the OCH Phase 4 programme.

#### 2.3.2

The refurbishment and extension will be undertaken on a structure that has remained largely unchanged since first constructed in 1972, apart from usual planned maintenance and repair; has provided the project with challenges as limited flexibility in structural changes are possible. Also part of the footprint of the building sits over level 2 service tunnels located beneath proposed consulting rooms and consideration has been given to the hot and humid environment that at times exists. With the site being over 40 years old, services such as electrical and heating will be upgraded as part of the project. Limited inspection of the ceiling void has taken place due to health and safety issues connected with asbestos contamination, but elsewhere more detailed inspections and surveys have taken place to provide certainty on costs and minimise risks.

#### 2.3.3

The existing structural floor slabs will have to be modified to allow for additional services specifically waste, ventilation and other environmental services. Again this has been kept to a minimum.

### 2.4 Timescales

#### 2.4.1

The new LMCC project is independent of other OCH Phase 4 timescales; as such it is not on the critical path in connection with other projects but is a requirement to be
completed for the consolidation of all acute services on the Lister Hospital site in October 2014.

2.5 Compliance to Standards e.g. HTM, HBNs etc.
2.5.1 It is understood that when refurbishing structures, there will be a number of constraints on HBN and HTM compliancy. It should be acknowledged that a large part of HTMs and HBNs are focused on new builds and in a refurbishment scenario obtaining compliance can sometimes be difficult. The Trust has therefore looked to derogate against this where appropriate. All clinical derogations have been approved and signed off by the clinical staff through a formal process and consistent with the approach at OBC stage.

2.5.2 A BREEAM assessment has been carried on the FBC design stage in April 2013 and has currently targeted to achieve the following score: 61 (Very good).

2.6 Decanting/Access During Construction
2.6.1 The decanting for the scheme consists of the following decants and relocations scheduled to be completed in advance of the commencement on site and the costs of which form part of the enabling works budgets for the scheme
- Executives from Admin corridor to HPFT mental health unit located close by
- Volunteer driver within CCTV to Old School of Nursing
- Portacabin occupants to Frogmore
- Head of Telecoms from CCTV to Old School of Nursing
- IT engineers from portacabin to old cath lab portacabin at rear of level 2 service corridor
- PALS office into old police room adjacent to retail units
- Existing CRL3 major incident room re-provided within new video conference room

2.7 FBC Development – Improvements and Changes since OBC
2.7.1 The Phase 4 Outline Business Case, of which the new LMCC forms one of eleven consolidation projects, was approved in September 2010 by the Trust Board, the PCT and the SHA.

2.7.2 During the development of this FBC, the Trust has sought to:
- Optimise the design solution
- Optimise patient experience and outcomes
- Optimise efficiency and productivity
- Minimise the risk and impact of programme delays
- Minimise cost.

2.7.3 As a result, some changes have been made to the proposals described in the OBC. The key areas are as follows. More detail on each of these is given in Section 8 - Development of Preferred Option.
The most significant design changes are listed as follows:
- Existing walls to be removed and rebuilt because of acoustic requirements
- Existing pathology area revised and permanent separation provided between both departments
- Switchboard area redesigned to provide chemotherapy waiting room toilet and dedicated switchboard toilet
- Retail fire exit route redirected into main entrance corridor along side of chemotherapy and switchboard to satisfy Fire Regulations
- Piped medical gases and bed head trunking included
- Plant room relocated on to roof
- The size of the unit has increased by approximately 65m2 (8%)
3. Strategic Context

3.1 Background

3.1.1 The proposals within this Full Business Case (FBC) form part of a coherent local cancer strategy which integrates with the Trust’s consolidation programme strategy and in turn reflects the healthcare economic environment in which the Trust operates.

3.1.2 The chemotherapy unit (Forster Suite) on level 10A originally provided a chemotherapy service with six chairs; in April 2011 this was increased to ten chairs to meet capacity demand. By June 2012 activity had increased further and all ten chairs were at full capacity resulting in 32 patients being transferred to Mount Vernon. In order to manage the workload an additional 2 chairs were commissioned two days a week from January 2013 and a staff consultation commenced and completed in May 2013 to facilitate 12 hour days hence increasing flexibility of chair use. Until recently the additional demand had been managed by intensive diary management and staff working additional hours.

3.1.3 The outpatient waiting area is inadequate for the volume of patients, consulting rooms are small and too few to accommodate all required clinical and support services. There is a need to relocate the Forster Suite in order to achieve the following:
- increase in chemotherapy capacity to meet future demands
- improved outpatient facilities in order to meet future expectations, improve privacy and dignity and patient and carer experience
- ability to accommodate additional clinical activity e.g. nurse led clinics
- the investment is consistent with the strategy to consolidate acute care on the Lister site
- Flexibility and scope to accommodate changing service requirements
- Improve access to cancer support services available to patients
- Access and recruitment to clinical trials

3.1.4 The new LMCC will be designed and developed to:
- improve patient experience and staff satisfaction
- improve equity and access to chemotherapy services
- support delivery of safer healthcare through lean processes

3.1.5 In December 2007 the Boards of NHS Hertfordshire, East and North Hertfordshire NHS Trust (ENHT) and West Hertfordshire Hospitals NHS Trust (WHHT) approved the Delivering Quality Healthcare for Hertfordshire Business Case.

3.1.6 Following an extensive formal public consultation involving a diverse range of stakeholders, the following key principles were agreed with a wide spectrum of support:
- acute clinical services within local hospitals centralised onto a single site (Lister and Watford General) at each end of the county of Hertfordshire
- Other clinical and healthcare services could and should be provided in community settings, improving access for patients.

3.1.7 It was recognised that centralisation would help the local health economy sustain the current financial situation. These principles led to the development the Trust’s overarching long-term strategy under the title of Our Changing Hospitals (OCH).

3.2 Local Commissioning Priorities

3.2.1 NHS Hertfordshire developed a five-year commissioning strategy in 2009 which was refreshed in January 2010. It identifies the following goals for acute care:
- establish two clinically sustainable acute centres (Lister and Watford)
- develop stroke centres at Lister and Watford
- create a network of urgent care centres in the county of Hertfordshire
- eliminate unnecessary waits for diagnosis and routine treatment
- ensure choice, convenience and value for money for elective patients
- Establish two local general hospitals (LGH).

### 3.2.2

There are five key areas which all commissioners are expected to progress when working with providers:

- improve cleanliness and reduce health care acquired infections (HACI)
- improve access through achievement of 18 week maximum wait times
- improve the health of adults and children with particular action in cancer, stroke, children's and maternity services
- improve patient experience, staff satisfaction and engagement
- Prepare to respond to emergencies (e.g. pandemic flu).

### 3.2.3

Commissioning of the chemotherapy services currently sits with specialist commissioners. With the reconfiguration of Mount Vernon cancer network and the current development of LATS (Local Area Teams) and newly formed strategic clinical networks (SCN), it is unclear at this stage whether this will remain. It is likely the responsibility of some chemotherapy commissioning will be transferred to the Clinical Commissioning Groups (CCG’s) with advice from the SCN from a specialist commissioning perspective in the future.

### 3.3 Trust Strategy

#### 3.3.1

The OCH acute consolidation programme at Lister is an essential and vital component for the delivery of this strategy. This FBC forms a component of the over-arching OCH Phase 4 Programme which forms the final phase for the Trust in respect of Delivering Quality Healthcare for Hertfordshire. The overall programme comprises of the following:

![Figure 1: OCH Programme](image)

#### 3.3.2

The OCH Phase 4 Programme provides a strategic opportunity in terms of:
a means for the Trust to respond to the challenging economic conditions forecast for
the NHS through enabling quality improvements alongside increased productivity
a conduit that allows achievement of best clinical practice and improve outcomes and
productivity across the organisation
the opportunity to create a critical mass of clinical and specialist staff to allow the
Trust to sustain a wider range of high quality services and introduce new
technologies
a solution to enable the Trust to maintain 24/7 medical staffing rotas for all its
services
opportunity to modernise facilities and improve the ability to attract patients through
choice
a driver for improving the Trust’s ability to attract and retain high quality staff and
allow it to prepare for a future in which more acute care is delivered in the community
settings
a solution that enables reductions in estate and related costs from the reshaping of
the QEII site, offsetting the income loss and supporting the revenue consequences of
the capital investment on the Lister site
aims to improve patient experience and service together with improved physical
environment for patient care and staff working thereby addressing high quality care in
a tighter economic climate under QIPP (Quality Innovation, Productivity and
Prevention).

3.4 National Strategy
3.4.1 ‘Our Health, Our Care, Our Say’ White Paper defines a clear direction of travel for health
services policy and this is reinforced through NHS Hertfordshire’s approach in
commissioning services that meet national requirements.

3.4.2 The OCH Phase 4 OBC addressed national policy drivers and developed a strategy that
results in a sustainable configuration to best respond to the needs of the population and
national policy requirements.

3.4.3 ‘Towards the Best Together’ sets out pledges, the relevant areas being:
  - patient experience
  - access
  - heart disease, stroke and cancer
  - safer healthcare
  - Improving lives of those with long-term conditions

Service redesign, improved pathways and the critical mass achieved through
consolidation will help the Trust to deliver these pledges.

3.4.4 The National Cancer Peer Review Programme (Chemotherapy only as part of the NHS
Cancer Reform Strategy) measured the following five areas:
  - structure and function of the service
  - coordination of care/patient pathways
  - patient experience
  - clinical outcomes/indicators
  - Good Practice/Significant Achievements

3.4.5 The Mount Vernon Cancer Network has recently undergone reconfiguration with other
clinical networks. There are three Local Area Teams (LATs) of the National
Commissioning Board in place soon across the East of England area. The LAT which
includes Herts and Beds will be the Hertfordshire and South Midlands LAT which will be
led by Jane Halpin. The other two LATs in East of England are East Anglia and Essex.
3.4.6 East Anglia has been identified as the LAT that will host the new Strategic Clinical Networks that will cover the whole East of England patch. Following the disbanding of MVCN the SCN are currently embryonic in their role.

3.4.7 As well as Cancer, three other services (cardiac, maternity/children and mental health/neurological diseases) have been identified as Strategic Clinical Networks (SCNs) and they will all be supported by a small central team managed by the East Anglia LAT.

3.5 National Policy/Drivers

3.5.1 “Use of chemotherapy and other systemic agents for cancer is rapidly changing – treatment is improving steadily, sometimes dramatically; the rate of introduction of new drugs is accelerating; the number of patients benefiting from such treatments is increasing quickly; patients are increasingly being treated closer to home. With these very significant benefits come difficulties in delivering an optimal service with equitable access; chemotherapy services have tended to concentrate on the actual administration of treatment rather than the whole chemotherapy pathway”

3.5.2 In the last decade, cancer care has been a key feature in national health policy as evidenced by the provision of the
- NHS Cancer Plan (2000)
- Providing a Patient-Centred Service (2004)
- Improving supportive care for adults with Cancer (2004)
- Cancer Reform Strategy (2007)
- Improving Outcomes – a Strategy for Cancer (2011)

3.5.3 All of these documents detail the need for providers to ensure better treatment through improved environments, to deliver care in an appropriate setting and to “futureproof” services by building for the future. The national commitment to improving cancer services has also been demonstrated by the need for providers to achieve ambitious targets in relation to timely diagnostics and treatment for potential cancer patients.

3.5.4 More generally, the Department of Health publications Our Health, Our Care, Your Say (2006); Commissioning for Patients (2010); and the NHS Constitution (2010) reaffirm the commitment to putting patients at the very heart of their care, to ensuring patient choice, and the provision of appropriate, timely care at the chosen point of access.

3.5.5 Specifically in relation to chemotherapy, both the National Chemotherapy Advisory Group Report (2009), and the National Confidential Enquiry into Patient Outcomes and Death (2008) identified adverse outcomes with the inappropriate administration of chemotherapy drugs and suggested that prescribing mechanisms should be amended to include a national database of toxicity information and electronic E-prescribing in chemotherapy centres, the E-prescribing service is already in use by the existing chemotherapy service at the Lister site.

3.5.6 Activity - The table below demonstrates an increase year on year of cancer incidence by tumour site diagnosed (number of cases of cancer) at East & North Herts NHS Trust. This reflects a 58% increase in years 2009/10, 2011/12 and 12/13. This identifies cancer diagnosis who may or may not undergo adjuvant or palliative chemotherapy. The complexities relating to increases in chemotherapy are discussed in paragraph 5.3.1.

---

1 Professor Mike Richards National Cancer Director 2009
### Table 4: Cancer Incidence Diagnosed at E&NH NHS Trust

<table>
<thead>
<tr>
<th>Tumour Group</th>
<th>FY2009-10</th>
<th>FY2010-11</th>
<th>FY2011-12</th>
<th>FY2012-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brain/Central Nervous System</td>
<td>1</td>
<td>18</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>Breast</td>
<td>366</td>
<td>336</td>
<td>418</td>
<td>407</td>
</tr>
<tr>
<td>Gynaecological</td>
<td>114</td>
<td>173</td>
<td>197</td>
<td>170</td>
</tr>
<tr>
<td>Haematological</td>
<td>115</td>
<td>132</td>
<td>150</td>
<td>196</td>
</tr>
<tr>
<td>Head and Neck</td>
<td>84</td>
<td>181</td>
<td>243</td>
<td>172</td>
</tr>
<tr>
<td>Lower Gastrointestinal</td>
<td>234</td>
<td>386</td>
<td>436</td>
<td>394</td>
</tr>
<tr>
<td>Lung</td>
<td>230</td>
<td>419</td>
<td>448</td>
<td>333</td>
</tr>
<tr>
<td>Other</td>
<td>22</td>
<td>32</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Sarcoma</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Skin</td>
<td>249</td>
<td>395</td>
<td>407</td>
<td>457</td>
</tr>
<tr>
<td>Upper Gastrointestinal</td>
<td>120</td>
<td>286</td>
<td>324</td>
<td>324</td>
</tr>
<tr>
<td>Urological</td>
<td>429</td>
<td>630</td>
<td>650</td>
<td>614</td>
</tr>
<tr>
<td>Grand Total</td>
<td>1942</td>
<td>2980</td>
<td>3327</td>
<td>3130</td>
</tr>
</tbody>
</table>

**Figure 2: Confirmed Cancers by Tumour Group**

3.5.7 East & North Hertfordshire Trust performance against national cancer waiting times are shown below. This details 31 and 62 day treatment targets and incorporates all cancer treatment modalities, i.e. chemotherapy, surgery and radiotherapy. Currently the Cancer Division is outperforming current targets for cancer treatments. Open Exeter is the national reporting system for cancer waiting time standards.
Table 5: 31 Day Treatment Targets

### 31 Day 1st Definitive Treatment Standard by Month (From Final Open Exeter Reports)

#### All Tumour Sites

<table>
<thead>
<tr>
<th>Financial Years</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2010/11</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>99.3%</td>
<td>98.2%</td>
<td>99.1%</td>
<td>98.3%</td>
<td>99.6%</td>
<td>100.0%</td>
<td>99.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>FY2011/12</td>
<td>100.0%</td>
<td>99.0%</td>
<td>99.5%</td>
<td>99.5%</td>
<td>99.5%</td>
<td>100.0%</td>
<td>98.4%</td>
<td>100.0%</td>
<td>99.5%</td>
<td>97.3%</td>
<td>99.1%</td>
<td>98.5%</td>
</tr>
<tr>
<td>FY2012/13</td>
<td>97.8%</td>
<td>96.8%</td>
<td>97.7%</td>
<td>98.7%</td>
<td>98.8%</td>
<td>96.4%</td>
<td>97.4%</td>
<td>98.3%</td>
<td>100%</td>
<td>97.4%</td>
<td>97.1%</td>
<td>96.7%</td>
</tr>
</tbody>
</table>

#### National

| FY12/13 | 98.4% | 98.5% | 98.2% | 98.5% | 98.5% | 98.1% | 98.1% | 98.5% | 98.6% | 97.8% | 98.5% | 98.6% |

#### Target

| 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% |

Figure 3: 31 Day Treatment Standard by Month

The first definitive treatment is the time from initial referral to first treatment.

---

Table 6: 62 Day Treatment Targets

### 62 Day Standard by Month (From Final Open Exeter Reports)

#### All Tumour Sites

<table>
<thead>
<tr>
<th>Financial Years</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2010/11</td>
<td>89.1%</td>
<td>91.4%</td>
<td>88.9%</td>
<td>92.7%</td>
<td>85.5%</td>
<td>87.5%</td>
<td>89.2%</td>
<td>86.4%</td>
<td>90.3%</td>
<td>90.2%</td>
<td>88.3%</td>
<td>88.9%</td>
</tr>
<tr>
<td>FY2011/12</td>
<td>87.8%</td>
<td>88.2%</td>
<td>93.7%</td>
<td>87.6%</td>
<td>89.1%</td>
<td>85.6%</td>
<td>86.5%</td>
<td>85.5%</td>
<td>85.8%</td>
<td>85.4%</td>
<td>88.3%</td>
<td>89.3%</td>
</tr>
<tr>
<td>FY2012/13</td>
<td>88.9%</td>
<td>88.0%</td>
<td>85.5</td>
<td>87.9%</td>
<td>85.9%</td>
<td>87.2%</td>
<td>85.5%</td>
<td>86.1%</td>
<td>85.8%</td>
<td>82.6%</td>
<td>86.5%</td>
<td>87.5%</td>
</tr>
</tbody>
</table>

#### National

| FY2012/13 | 88.0% | 87.2% | 86.6% | 87.0% | 87.7% | 86.5% | 87.2% | 87.8% | 88.3% | 85.5% | 85.3% | 87.8% |

#### Target

| 85% | 85% | 85% | 85% | 85% | 85% | 85% | 85% | 85% | 85% | 85% | 85% |

Figure 4: 62 Day Treatment Standard by Month

---
3.6 The NHS Plan Summary (2012-2015)

3.6.1 This is built around the needs of patients and addresses the fundamentals of better quality care and includes:

- health and care systems integrated around the needs of patients and users
- promote better healthcare outcomes
- revolutionise NHS accountability
- promote public health

3.7 Key Local Drivers

3.7.1 The key local drivers to the development of the Lister Macmillan Cancer Centre are as follows:

- need to ensure appropriate capacity for services which match current and forecast increases in demand. This requires a unit “fit for purpose” with the ability to grow in line with future demand based on the demographic forecasts for the catchment population. The ability to develop new pathways and services such as outreach chemotherapy
- identified need to improve the patient experience by improving the quality of the environment in which treatments are delivered (ensuring that they are well furnished and create a pleasant atmosphere) This has been frequently mentioned in patient feedback/surveys (formal and informal including complaints). Integrating existing services to combine medical, emotional and practical care for people affected by cancer
- ensure patient safety is enhanced through ease of access to the centre, improved disabled access and facilities, improved privacy for patients/carers with increased consultation/quiet rooms, clear exit routes form the centre for patients who become unwell and require transfer to the main hospital, increased waiting area space will improve comfort and ease of mobility for patients
- Lister has recently been designated as a provider for Teenagers and Young Adults with cancer (TYA)
- reconfiguration of the Trust services at the Lister site in line with ‘Our Changing Hospitals Programme’
- ensuring that the Trust is in a strong position to be the local provider of choice
- Macmillan ongoing support and commitment to the Trust and involvement in Operational Policy.

3.7.2 Patient safety issues currently that will be addressed by the new LMCC are:

- privacy/dignity for patients/relatives will improve due to increased quiet room/consultation room space
- easy exit route from the unit for unwell patients needing transfer to the main hospital
- increased waiting area space improve comfort and ease of mobility for patients
- directly located on the ground floor of main hospital will provide easy access for patients
- closer proximity to pharmacy for transportation of cytotoxic therefore reduced risk of spillage.

3.7.3 In addition to the above key local drivers East and North Hertfordshire NHS Trust achieved its Commissioning for Quality and Innovation (CQUIN) target for 2012/13 ensuring holistic needs assessments were completed at key points during the patient journey whilst under active care of the Trust, for 85% of cancer patients. This CQUIN reflects one of the components of the National Institute for Centre of Excellence guidance - Improving Supportive and Palliative Care for Adults with Cancer (2004). Assessments are largely facilitated by face to face consultations with the specialist cancer workforce. This is currently difficult to manage due to the space constraints in the Forster Suite. The new LMCC will assist in the delivery of the cancer quality scheduled in subsequent years.
4. Case for Change and Objectives

4.1 Background

4.1.1 The Trust’s strategy to consolidate all acute inpatient services onto the Lister site formed the fundamental basis for the Phase 4 Outline Business Case (OBC). It set out in detail how the bed base, theatres, emergency department and all associated services would be increased to deliver the anticipated level of healthcare activity. The Phase 4 OBC identified how the whole programme could be delivered within the constraints of:

- maintaining the Trust’s income and expenditure position and delivering savings over and above the loss of income and additional costs of the investment
- ensuring the programme reflects the revised strategic commissioning intention of NHS Hertfordshire.

4.1.2 The OCH Phase 4 Programme involves the consolidation of all inpatient and acute clinical services from QEII onto the Lister Hospital site via a combination of:

- new build to provide an increase in capacity
- refurbishment of existing buildings to meet the current models of care and best practice. The full consolidation of services onto the Lister Hospital site is anticipated to be achieved in October 2014 subject to certain external approvals.

4.1.3 The incidence of cancer is rising nationally. Some of this is related to ageing population although some reasons are still not fully understood. There are currently two million people in the UK living with Cancer, approximately 250,000 are diagnosed each year and 130,000 die from the disease. Cancer incidence is increasing by 3% annually. It is predicted that 4 million will be living with the disease by 2030; it is this group of patients that are currently having the greatest impact on the delivery and capacity requirements of chemotherapy services.

4.1.4 In addition the following information indicates the increases that are taking place in relation to cancer incidences and chemotherapy treatments:

- Increase of 20% in new cancers 2002-2009 (Improving Cancer outcomes 2011 - 3% year on year increase)
- The use of chemotherapy has expanded markedly in recent years, with an increase of around 60% in the amount of chemotherapy delivered over a four year period by the National Cancer Action Group (NCAG 2009). This reflects not only chemotherapy for patients with a new cancer diagnosis, but subsequent treatments for patients with a new cancer diagnosis and subsequent treatments for patients with metastatic disease. This group of patients have increased significantly over the last decade when previously chemotherapy treatment options may have been limited. Patients are living longer with their disease, largely due to new chemotherapy regimens and drug combinations, cancer drugs fund and clinical trials access increasing demands on the service.

4.1.5 It is anticipated that, in line with the predicted population growth and the increase in residents aged 65+, there will be an increase of up to 30% of new cancer diagnosis by 2021 (Improving Cancer outcomes 2011 – 3% increase annually). This figure reflects increase in cancer diagnosis and not chemotherapy delivery.

4.1.6 The new LMCC will enable the Trust to provide a future patient centred service incorporating increasing demands to accommodate more complex treatments and needs of patients.
4.1.7 In respect of this FBC the Trust have based their financial evaluation and modelling of the scheme on a conservative 3% year on year growth in activity and have sought confirmation that these assumptions are in line with the specialist commissioners' assumptions for the future. Commissioners confirm this national growth figure, however they believe increases of between 5% and 7.5% are more likely. See commissioners support letter at Appendix 1 (reaffirmation has not been sought from commissioners due to organisational changes currently underway).

4.2 Forster Suite

4.2.1 The Forster Suite currently undertake over 100 treatment regimens which are detailed in Appendix 2. These regimens can range in duration from 30 minutes up to eight hours. Regimens also undertaken by the Forster Suite which are not included in the Appendix are trial regimens for patients involved in research trials, regimens funded by the Cancer Drugs Fund, off protocol regimens and maintenance supportive treatments.

4.2.2 Ward 10A is currently used by a variety of services, both, clinical and non-clinical. The list of current usage of Ward 10a and the proposed relocation is as follows:
- Chemotherapy treatments
- Outpatient clinics and cancer procedures
- Nurse led clinics
- Psychology service
- Cancer haircare service
- Access to Clinical Nurse Specialists
- Research and recruitment to clinical trials within the new Lister Macmillan cancer centre (LMCC)

4.2.3 Current accommodation within the Forster Suite makes some of these services often difficult to provide due to the layout and limitations of the accommodation currently in use. The relocation of the Forster Suite into the new will eradicate all of these issues. A draft operational policy for the new LMCC is attached at Appendix 3.

4.2.4 The proposal for the refurbishment and expansion of the Administration Corridor into the LMCC includes the following:
- Increase the physical space available for the delivery of chemotherapy to maximize available appointments. This will be achieved by an increase of 10 to 18 chairs from which to deliver chemotherapy treatments
- Expand and redesign the physical environment to improve privacy and dignity during treatment including enabling relatives/carers to remain with the patient
- Provide space where teenagers and young adults can be treated in an age-appropriate environment
- Creation of quiet space for counselling and discussion of sensitive information with clinical/nursing staff
- Creation of a dedicated informal area suitable for delivery of the survivorship initiatives being undertaken within the Trust
- Create a light, airy, and calming environment for patients before, during and after treatment including an external courtyard area
- Provision of Wi-Fi access to enable patients to bring in personal electronic items to occupy them during treatment
- Increase storage facilities for cytotoxic drugs
- Increase space for cancer consultant outpatient facilities adjacent to treatment areas.
- Create capacity for support services i.e. Psychology and Welfare benefits advice

4.2.5 The scheme will encompass at the front entrance of the new facility a highly visible, but separate, Macmillan Cancer Information Centre which will include 2 quiet/interview
rooms that will give an additional benefit of privacy for visitors which is not currently available with the existing information centre.

4.2.6 The existing hospital chemotherapy day centre facilities have now been outgrown by the department due to the existing capacity and future growth demands on the service.

4.2.7 It is often difficult for patients’ relatives and carers to remain with the patient during treatment due to lack of space around and between the chemotherapy chairs.

4.3 Clinical Pathways and Models of Care

4.3.1 This section outlines the main processes within the Cancer Treatment and Support Centre service.

4.3.2 The model of care is for a patient's treatment and consultations to be planned in advance, delivered in as few visits as possible and in a timely manner that respects the patient’s time as a key priority. It is recognised that no patient wants to remain in any hospital facility longer than is necessary, no matter how modern and high quality the environment, but that each patient needs to feel that they have sufficient time during their care to allow them to feel supported and treated with dignity. The aim of the model of care is to deliver ‘minimal waits’ care in an efficient manner without patients feeling that they are being merely ‘processed’.

4.3.3 The culture of the centre will be one of patient focus, with the delivery of efficient and effective clinical care.

4.3.4 Currently the Forster Suite is open to treat patients from 0900 - 1800 hours, Monday to Friday. Following a staff consultation it is expected the Forster suite to provide a 12 hour service Monday- Friday from July 2013. This is as a direct consequence of managing the current capacity.

4.3.5 Feasibility work is currently in progress exploring new models of care including the concept of outreach chemotherapy to be provided by ENHT. Early discussion with CCG’s has commenced.

4.3.6 The current patient pathway is demonstrated below.

Figure 5: Current Patient Pathway
4.3.7 The proposed patient pathways for the new LMCC are shown below; these pathways will be supported by Clinical Psychologist, Macmillan Benefits Advisor, Clinical Nurse Specialist and Research Nurses.

Figure 6: Chemotherapy 2 Visit Pathway for First Treatment

Figure 7: Chemotherapy 2 Visit Pathway for First Treatment
Chemotherapy 2 Visit Pathway for First Treatment

Day Two
Chemotherapy authorised
day before patient arrivers. Pharmacy trigger

Patient Drop Off

Reception
Self Service

Chemotherapy Waiting Room
Volunteer takes patient to chemo waiting area
5 minutes

Scalp Cooling
If appropriate 30 minutes

Treatment Chair
Calculate and check patient details
Treatment commence within 30 mins

CNS
If required

Research Nurse
If required

Treatment Ranges
1 1/2 hour - 3 hours

Chemotherapy Nurse
Make next Chemotherapy appointment, TTO's
If required

Home
4.3.8 Under arrangements within the Forster Suite there are generally accepted problems with the current patient journey focussed around waiting for assessment and treatment. These following paragraphs describe how these problems will be alleviated by the new centre.

4.3.9 Currently during outpatient visits, patients can spend a long time waiting to be seen by a doctor. Within the new centre this issue will be improved by having the accommodation and facilities to implement a nurse led assessment clinic.

4.3.10 During pre-chemotherapy treatment patients can experience delays and inconvenience awaiting blood tests. The new centre will provide a separate phlebotomy room which will accommodate a point of care testing unit to undertake blood tests and toxicity assessments promptly; if the patient is neutropenic or at a high infection risk their treatment will be deferred.

4.3.11 From day one of the chemotherapy service operating from the new centre it is envisaged that the 8 and 6 treatment bays will be operational and running at capacity or close to it.

4.3.12 Improved 8-6-4 treatment bay layouts and overall accommodation improvements should assist staff efficiency and therefore improve waiting times experienced by patients seeing doctors or awaiting blood tests. In addition this will allow chemotherapy staff to cohort certain treatment types enabling efficiencies in staffing.

4.3.13 Furthermore the revised 8-6-4 bay layout should enable the separation of young people from adults in a smaller 4 chair bay when receiving treatment. This is a clinical improvement now regularly supported and promoted by the National Cancer Action Team and the specialist Commissioners where space and staffing permit. In addition the layout will also allow potential flexibility to receive private patients if demand for such services arises. The new unit will have an acute assessment area if the patient becomes unwell or requires close observation.

4.3.14 Within the new centre, enlarged and increased waiting areas and a sub-waiting area will assist in ensuring patients are waiting in a pleasant and comfortable environment with adequate seating and the option of sitting outside in the courtyard garden areas when the weather is fine. The quiet rooms in the centre will be utilised for a number of potential functions, some of these being privacy for distressed patients/families, complementary
therapies, consultations with doctors or nursing staff, research nurse assessments and staff training.

4.4 **Teenagers and Young Adults**

4.4.1 Currently teenagers and young adults have to travel to University College London Hospital for treatment. Following submission of expression of interest to the specialist commissioners, it has been confirmed that the Lister and Mount Vernon sites will be designated for young people with cancer aged 19-24. These patients can have their treatment at a Patient Treatment Centre (PTC) located in the University College London Hospital or they can choose to have treatment where appropriate within facilities hosted by the Trust which are supported by PTC. A letter confirming these details can be found in Appendix 4.

4.4.2 It is anticipated there would be a requirement for age appropriate facilities for this age group. The new centre will ensure these facilities are accommodated.

4.5 **LMCC Hub and Spoke Model of Care**

4.5.1 The commissioning of chemotherapy, along with radiotherapy, currently sits with specialist commissioners. It is possible that this will revert back to local clinical commissioning groups (CCG) in 2013/14 although there is currently lack of clarity with the PCT/CCG changes.

4.5.2 Nationally there has been a move to providing cancer treatments closer to home. This includes both chemotherapy and radiotherapy services.

4.5.3 In some areas of the UK chemotherapy is delivered at home; with chemotherapy trained nurses in cancer patients own homes. This model can work well in more rural/remote areas where access to services and distance to chemotherapy units is an issue. It is an expensive model as it requires 1:1 chemotherapy trained nursing staff to deliver this. Chemotherapy units have more flexibility with staffing/patient ratios thus making them more cost effective.

4.5.4 The LMCC will provide a hub and spoke model of care in order to ensure accessibility for patients and carers providing the following chemotherapy delivery

- oncology and haematology outpatients
- access to specialist oncology services and advice
- access to psychology services
- CNS support
- welfare benefits advice
- information and support services.

4.5.5 All of these services would be available within the hub. There is an opportunity to develop the spoke services around the hub. These outreach services are already in place for some aspects of care including:

- information services available in local libraries for the population
- home visits by psychologists and welfare benefits advisors for patients who have difficulty accessing secondary services
- streamlined services to specialist palliative care community clinics.

4.5.6 This will ensure patients and carers in East and North Hertfordshire receive cancer care in the most appropriate setting; either in primary or secondary care. In addition it will enable the Trust to be the provider of these services.
4.6 Outreach chemotherapy

4.6.1 Community chemotherapy is described in Building Britain’s Future and NHS 2010-2015: From Good to Great as an area where potentially high-impact changes could be made for patients. The Operating Framework 2010-11 confirms the on-going direction of travel towards having more services closer to home and therefore less investment and activity in the acute sector. The National Chemotherapy Advisory Group (NCAG) report, Chemotherapy Services in England: Ensuring quality and safety, which reported in August 2009, concluded that each cancer network should consider whether there were opportunities to deliver chemotherapy closer to patients’ homes.

4.6.2 Where most chemotherapy treatment has traditionally been delivered in the cancer centre, there has been a significant shift recently to move more services closer to patients’ homes and into cancer units at local District General Hospitals. Outreach chemotherapy services go one step further and are those where patients receive their chemotherapy treatment outside of the accredited cancer centres and cancer units in facilities nearer to home such as in mobile units, in GP surgeries, community hospitals and hospices.

4.6.3 The key drivers for delivering chemotherapy services in the community are improved patient choice and experience and managing the on-going increasing demand for chemotherapy. Additionally, in some circumstances there is the potential for it to deliver efficiencies, particularly where physical expansion is required.

4.6.4 Best practice guidance for commissioning of chemotherapy services is described in detail in the NCAG report. The report addresses key issues including the use of e-prescribing systems, commissioning agreed pathways and specifications, clinical governance and leadership, all of which will be incorporated into peer review measures that will apply equally to community based services. Offering the choice of community chemotherapy can form a part of a quality chemotherapy service where that service fulfils the criteria set out in the NCAG 2009 report.

4.6.5 Following the changes to the cancer networks and local commissioners it is not yet clear how potential changes in service delivery will configure locally.

4.6.6 Although providing home chemotherapy may appear to be the delivery of choice it has two major drawbacks

- Home chemotherapy is an expensive model of care requiring 1:1 chemotherapy nursing
- The experience of patients undergoing chemotherapy at home can be isolating and ‘bringing their treatment into their home’ a negative experience for many.

4.6.7 There is however a potential option for providing a model for outreach chemotherapy across East and North Herts locality, as discussed previously. Although not confirmed with the CCG that this will be commissioned it is likely that if this model of care is intended and not provided by ENHT other providers may approach to provide this service resulting in two potential risks:

- Loss of opportunity for ENHT to provide that service
- Loss of significant income for Trust
4.6.8 The Cancer Division is meeting with the CCG in July 2013 to discuss the option of outreach chemotherapy and to ensure that ENHT are in a position to be a service provider.

4.6.9 Preliminary discussions have already taken place between Macmillan and the Trust with new posts to support 'hub and spoke' model of care for the new unit. Development of new roles within the unit will enable ENHT to be a provider 'hub' of services with outreach to the primary care setting.

Figure 9: New Cancer Pathway

New Cancer Pathway

Figure 10: Cancer Pathway
5. Activity Modelling

5.1 Demand Assumptions

5.1.1 The Trust have assumed a 3% growth rate per annum on chemotherapy activity for the Lister Macmillan Cancer Centre (LMCC) this is despite experiencing much higher levels of growth for chemotherapy. In 2012/13 episodes of chemotherapy treatments increased by 10.64% compared to 11/12. The 3% demand reflects the national 3% growth of the predicted increase in cancer incidence nationally.

5.2 Performance Assumptions

5.2.1 Over the last couple of years the existing Forster Suite has been exceeding capacity and struggled to service demand. In March 2011 the Forster suite increased its chair capacity from 6 to 10 chairs. Within 24 months the additional 4 chairs were at capacity. In order to manage the workload an additional 2 chairs were commissioned two days a week from Jan 2013 and a staff consultation commenced and completed in May 2013 to facilitate 12 hour days hence increasing flexibility of chair use. As a direct result of increasing demands in 2012/13 32 patients were transferred for treatment to MVCC.

5.2.2 Treatment times vary considerable for chemotherapy. This can range from a 1 hour to 8 hour infusion dependent on cancer type, intention of treatment (palliative or adjuvant), staging of disease and dependent on whether first line or subsequent regimen. The latter has had the most significant impact on increased activity. This impact tallies with the national predictions identifying a significant increase in the number of cancer patients living with their disease.

5.2.3 There may be a future demand for the treatment of private chemotherapy patients which could be offered within the new centre to expand the current service. However for the purposes of this business case no assumptions have been made that include private patient activity within the new centre.

5.2.4 There is further scope for repatriation of patients from UCLH however this is limited. These numbers are small as the majority will require radiotherapy in addition to chemotherapy and therefore be treated at MVCC. These numbers are included in the activity assumption in the table below.

5.3 Requirements

5.3.1 The table below outlines capacity requirements. Predictions are based on potential 3%, 6% and 10% increases.

<table>
<thead>
<tr>
<th>Table 7: Capacity Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chemotherapy Chair Capacity Planning</strong></td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

5.3.2 As previously stated the exact % increase in chair time can be difficult to predict due to the following:

- Increase in demands due to increase in cancer referrals
- Increase in subsequent treatment regimens that were not previously available
- Changes to treatment times based on complexity of regimens
- Patient choice
- Access to clinical trials

5.3.3 A 3% increase in will provide capacity for 9-5 Monday – Friday service for 15 years until 2028. Scope for providing additional capacity in subsequent years includes:
- Extended working hours i.e. 8am – 8 pm
- Weekend working
- Outreach chemotherapy

5.4 Commissioners Support
5.4.1 Commissioner support for the OBC was provided in September 2012 by Barbara Gill, MVCN Director. MVCN acknowledged the difficulties in predicting precise future demands for chemotherapy provision and indicated a potential range of 5-7.5% increase. Following the disbanding of MVCN in March 2013, there is lack of clarity with the commissioning changes with the future roles of the CCGs, specialist commissioning and the newly formed Strategic Cancer Networks (SCN). Further guidance is awaited following this transition.

5.5 Outreach Chemotherapy
5.5.1 Providing chemotherapy closer to home has been an area of contention over a number of years. The concept of providing home chemotherapy may appear palatable to some; it is however an expensive model of care requiring 1:1 trained chemotherapy nursing time. This may be beneficial in some more remote and rural parts of the United Kingdom. ENHT is currently exploring the concept of outreach chemotherapy to health centre or hospices in the East and North Herts locality. This work is currently embryonic and would be dependent on CCG support

Table 8: Chemotherapy Activity Assumptions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Planned activity Day Cases</td>
<td>141</td>
<td>141</td>
<td>141</td>
<td>141</td>
<td>141</td>
<td>141</td>
<td>141</td>
<td>141</td>
<td>141</td>
<td>141</td>
</tr>
<tr>
<td>Day Case Chemo Growth @3%</td>
<td>4</td>
<td>8</td>
<td>14</td>
<td>20</td>
<td>26</td>
<td>32</td>
<td>38</td>
<td>44</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>Outpatient Chemo Growth @3%</td>
<td>107</td>
<td>213</td>
<td>326</td>
<td>442</td>
<td>562</td>
<td>685</td>
<td>812</td>
<td>943</td>
<td>1,078</td>
<td></td>
</tr>
<tr>
<td>Repatriated Activity</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td><strong>Total Activity</strong></td>
<td><strong>3,691</strong></td>
<td><strong>3,802</strong></td>
<td><strong>3,948</strong></td>
<td><strong>4,067</strong></td>
<td><strong>4,189</strong></td>
<td><strong>4,315</strong></td>
<td><strong>4,444</strong></td>
<td><strong>4,577</strong></td>
<td><strong>4,715</strong></td>
<td><strong>4,856</strong></td>
</tr>
</tbody>
</table>

5.6 Commissioners Support on Activity Assumptions
5.6.1 A letter from the commissioners supporting the activity assumptions for the business case can be found in Appendix 1 and indicates likely activity growth rates for chemotherapy to be in the range of 5% to 7.5% per annum.
6. Workforce

6.1 Background

6.1.1 The workforce requirements for chemotherapy nursing have increased since 2000 and is set to grow further during 2012/13. This reflects the increase in activity, changes from inpatient to outpatient chemotherapy delivery, increase in cancer survivors requiring subsequent treatments and rapidly evolving complexity of treatments. Activity has increased by over 30% alongside a 25% increase in staffing.

6.1.2 At the current time the Forster Suite is not subject to any planned workforce reductions in connection with the Trust’s LTFM. It is anticipated efficiencies in workforce utilisation will be achieved with the ability to cohort regimen groups dependent on infusion time and tumour type. This cannot be achieved or quantified currently due to the geographical and environmental constraint in the current unit.

6.1.3 There is no current national benchmark establishment for outpatient chemotherapy nursing delivery. The predications for such workforce requirements are complex i.e. chemotherapy nursing workforce time for individual regimens vary, as do chair times for patients. The chair time does not accurately reflect or quantify any additional nursing requirement for patients. To provide assurance of nursing time modelling a study comparing, Addenbrookes, Mount Vernon and The John Radcliffe chemotherapy unit staffing and shift times has been undertaken.

6.2 Current Chemotherapy Service

6.2.1 Outpatient chemotherapy services are located at Lister hospital. There were until recently seven chairs however in order to meet demand of the service this was expanded to 10 as an interim measure in March 2011. These chairs are fully booked in advance all day Monday- Friday. Occasionally chairs are not fully utilised due to last minute cancellations which are difficult to predict.

6.2.2 Due to increase activity and capacity requirements a consultation with staff was completed in May 2013 to increase working day to 8-8. This along with the additional use of 2 chairs two days a week (adjacent to the Forster suite) increases chair capacity to 12 chairs. The staffing in table below reflects the increase in staffing requirements for this financial year.

6.2.2 The diagram below shows the current Chemotherapy Forster suite Staffing Management Structure.

*Figure 11: Chemotherapy Staffing Management Structure*
Registered Nursing staff
A years training is required for registered nurses to become chemotherapy competent. Key responsibilities include:
- Cannulation and chemotherapy administration
- Providing specialist advice for patients via Forster suite based chemotherapy help line
- Pre-chemotherapy counselling
- Toxicity assessments
- Nurse led protocol based follow up ‘proceed to treatments’
- Coordination and management of case load
- Support and liaison with all members of cancer multiprofessional team
- E prescribing

Clinical support workers
There is currently only one CSW within the current establishment. Key responsibilities include:
- Assessments of patients
- Supporting clinical staff
- Preparing clinical environment
- Supporting electronic prescribing
- Telephone triage

Receptionists
- Booking in patients to clinic
- Cashing up clinics
- Managing telephone enquiries regarding bookings
- Liaising with clinical staff
- Preparing clinics and notes

Volunteers
The volunteers in the Forster suite have a pivotal role within the Foster suite team. Their role includes:
- Meeting and greeting patients
- Supporting staff in administration tasks
- Providing simple support for patients
- Providing patients with refreshments

Expansion and future roles
- Expansion of chemotherapy nurse led follow up
- Higher level band 4 Assistant Practitioner
- Potential additional roles for modelling outreach chemotherapy

Increased productivity
The new unit will provide opportunities to create efficiencies, increase productivity and improve patient experience. The exact scope of efficiencies and potential cost benefits are difficult to quantify but include the following:
- Cohort of longer/ shorter treatments into bays were possible, this allows more efficient utilisation of nursing staff
- Further development of Cancer CNS staff supporting oral chemotherapy regimens

6.2.3 The current structure for the Forster Suite providing 10 chemotherapy chairs is detailed above and below within the Staffing levels WTE’s table. This also details the additional staff that will be required to run the service within the new centre as increased activity is phased in up to 14 chairs and 18 chairs. Costs associated with staffing the additional space will be met from the increased activity generated. See staff numbers detailed in
Table 15 below and Income and Expenditure as detailed in Section 10 – Affordability. Table 16 and 17 detail 3% and 6% activity growth based on 4 chairs increasing to 8 additional chairs.

Table 9: Chemotherapy Staffing Levels - Whole Time Equivalents (WTE)

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>Proposed For 14 Chairs</th>
<th>Proposed For 18 Chairs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Band 7 Charge Nurse</td>
<td>1.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Band 6 Chemotherapy Nurse</td>
<td>3.00</td>
<td>0.00</td>
<td>0.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Band 6 Service Coordinator</td>
<td>1.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Band 5 Nurse</td>
<td>7.60</td>
<td>2.00</td>
<td>2.00</td>
<td>11.60</td>
</tr>
<tr>
<td>Band 4 Oncology Secretaries</td>
<td>2.00</td>
<td>0.00</td>
<td>0.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Band 3 Receptionists</td>
<td>3.00</td>
<td>0.00</td>
<td>0.50</td>
<td>3.50</td>
</tr>
<tr>
<td>Band 3 Secretarial Support</td>
<td>1.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Band 3 CSW</td>
<td>1.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

6.2.4 As there is no national benchmark for chemotherapy trained nursing staff in an outpatient setting attempts have been made to benchmark establishments on chair time; however this does not accurately reflect the nursing time required for each patient. For example a patient undergoing Cisplatin or RCHOP treatments may require a chair for 8 hours but the nursing time for 1:1 nursing time for administration is 1hour 25mins. The patient still requires nursing time but with differing periods of intensity. Patients requiring infusions such as Gemzar require the chair for 2 hours but require 1:1 nursing time for 1 hour of their stay. The cancer division are confident this model provides safe and appropriate staffing levels for the complexity of treatments.

6.2.5 The table below shows the comparison of chemotherapy registered nursing staff.

Table 10: Comparison of Chemotherapy Registered Nursing Staff

<table>
<thead>
<tr>
<th>Unit</th>
<th>Specifics</th>
<th>Chairs</th>
<th>Band 7</th>
<th>Band 6</th>
<th>Band 5</th>
<th>Total Trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount Vernon outpatient</td>
<td>2 units (not co-located)</td>
<td>38</td>
<td>2</td>
<td>6.62</td>
<td>15.86</td>
<td>24.48</td>
</tr>
<tr>
<td>John Radcliffe</td>
<td>Opens Saturdays</td>
<td>42</td>
<td>2</td>
<td>3</td>
<td>21</td>
<td>26</td>
</tr>
<tr>
<td>Lister</td>
<td>Mon- Friday 8am-8pm</td>
<td>18</td>
<td>1</td>
<td>3</td>
<td>11.6</td>
<td>15.6</td>
</tr>
</tbody>
</table>
7. Option Appraisal

7.1 Introduction

7.1.1 Since the OBC was approved internally in October 2012 the Trust has made substantial progress in the development of detailed plans for the new LMCC. The demand and activity assumptions and models of care have been validated, and the detailed design proposals scrutinised. This process has confirmed that the plans and designs for the new LMCC are sound and fit-for-purpose.

7.1.2 As a result of this work, the project team has reconfirmed the original option appraisals and agreed that the preferred option set out in the OBC still represents the best way forward and is feasible. The option appraisal has not been re-run, on the grounds that any changes since OBC are immaterial. The economic appraisal has, however, been re-run to demonstrate that the preferred option still represents value for money when compared with the Do Minimum benchmark.

7.1.3 This section summarises the option appraisal process undertaken. The option appraisal had two components: a benefit and affordability appraisal of options to deliver its specific objectives; then the economic appraisal (using the Generic Economic Model (GEM)) was undertaken.

7.1.4 Each option in terms of its high level content and identified benefits and issues were assessed and Option 3 to refurbish and extend the existing Administration Corridor and increase the chair capacity from 10 to 18 chairs was selected as the preferred option. Full details of this options appraisal and the other options that were considered together with all their benefits and issues are detailed below.

7.1.5 In summary, not only does Option 3 appear significantly financially better than the alternative options, it also brings the following benefits:

- improved environment for chemotherapy patients
- increases capacity by 80%
- no disruption to existing chemotherapy services
- attracts Macmillan funding
- potential for developing training and education

7.2 Long/Short List of Options

7.2.1 Only 4 options were listed at long list stage (including Do Nothing) and all were taken forward for formal appraisal at short list stage. The options were as follows:

<table>
<thead>
<tr>
<th>Option</th>
<th>Benefits</th>
<th>Issues</th>
</tr>
</thead>
</table>
| **Option 1 - Do nothing**  
This would leave all services configured as now with no improvements other than future lifecycle based refurbishment | • no disruption to existing chemotherapy services  
• retention of current accommodation for executives | • ward 10A would not be released to provide extra bed capacity on the Lister site, potentially meaning that the Trust would not be able to consolidate services from the QEII  
• poor environment remains for both the provision of Chemotherapy  
• no opportunity for expanding current capacity |
| **Option 2 - Relocate Chemotherapy Unit to executive corridor retain 10 chairs** | • no disruption to existing chemotherapy services  
• improved environment for chemotherapy patients | • although an improvement the services would still be constrained by space  
• there would be no opportunity to increase capacity |
Option 3 – Extend Administration Corridor to create eight additional chair capacity

- improved environment for chemotherapy patients
- increase capacity by 80%
- no disruption to existing chemotherapy services
- attracts Macmillan funding
- potential for development training and education

Option 4 – Build a 2 storey unit on top of the Administration Corridor to create eight additional chair capacity

- improved environment for chemotherapy patients
- increase capacity by 80%
- no disruption to existing chemotherapy services
- attracts Macmillan funding
- potential for development training and education

7.3 Appraisal of Options

7.3.1 In accordance with Capital Investment Manual and Department of Health Estates guidance on appraisal, a formal non-financial appraisal of the 4 short listed options was undertaken. This was carried out by a multidisciplinary group of stakeholders and involved a sequential and systematic approach covering

Criteria selection:
- Weighting of criteria to reflect their relative importance;
- Consideration of the options and scoring against the identified criteria; and,
- Analysis of the results and sensitivity testing to establish the robustness of the conclusions.

7.3.2 A workshop was held on 8th August 2011 to review the appraisal criteria and score the options. The benefits criteria and the weightings which the appraisal team adopted are summarised in Appendix 5.

7.4 Options Scores

7.4.1 The raw and weighted scores and consequent rankings for each of the options are summarised in the following tables.

Table 12: Raw Scores

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Option Do Nothing</th>
<th>Option Existing Admin corridor 10 Chairs</th>
<th>Option Admin Corridor Extension 18 chairs</th>
<th>Option 2 Storey Admin Corridor 18 chairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Care</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Accessibility</td>
<td>4</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Sustainability</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Capacity</td>
<td>1</td>
<td>3</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Quality of the Physical Environment</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Deliverability</td>
<td>5</td>
<td>8</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Human Resources</td>
<td>5</td>
<td>6</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Training and Education</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>29</strong></td>
<td><strong>41</strong></td>
<td><strong>56</strong></td>
<td><strong>59</strong></td>
</tr>
</tbody>
</table>
Table 13: Weighted Scores

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Option Do Nothing</th>
<th>Option Existing Admin corridor 10 Chairs</th>
<th>Option Admin Corridor Extension 18 chairs</th>
<th>Option 2 Storey Admin Corridor 18 chairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Care</td>
<td>8</td>
<td>9</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Accessibility</td>
<td>6</td>
<td>10</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Sustainability</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Capacity</td>
<td>2</td>
<td>5</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Quality of the Physical Environment</td>
<td>6</td>
<td>8</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Deliverability</td>
<td>6</td>
<td>10</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Human Resources</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Training and Education</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>41</strong></td>
<td><strong>58</strong></td>
<td><strong>80</strong></td>
<td><strong>85</strong></td>
</tr>
</tbody>
</table>

7.4.2 These results show that Option 4 is the preferred option from a non-financial perspective. This was based on the original larger two storey £5m scheme which was not affordable.

7.5 Sensitivity Assessment

7.5.1 A range of sensitivity tests have been applied including reversed weighting and average weighting scores. None of the changes in weighting altered the order of the ranking of the options.
8. Development of Preferred Option

8.1 Preferred Option

8.1.1 The OBC concluded that Option 3 was the best economic option and this has been progressed and developed as part of the FBC. The capital and revenue assumptions of this option are detailed in Section 10 Financial Affordability.

8.1.2 During the development of this scheme since the OBC was submitted, the Trust has sought to:

- Optimise the design solution
- Optimise patient experience and outcomes
- Optimise efficiency and productivity
- Minimise the risk and impact of programme delays
- Minimise cost
- Respond to issues arising elsewhere in the Our Changing Hospitals programme.

As a result, some limited changes have been made to the proposals described in the OBC. The key areas are set out and summarised below.

8.2 Changes Driven by Overall Programme

8.2.1 Layout - The original chemotherapy layout plan assumed that part of the existing pathology area could be incorporated as an area for the chemotherapy scheme. Developments of the pathology project subsequently placed this area as a necessity for that project and the chemotherapy scheme was therefore rationalised and redesigned to facilitate this change. Rooms were reprovided by reconfiguring the existing internal layout and also including part of the switchboard area. In addition the chemotherapy project team have compromised on staff changing and showering facilities.

8.3 Changes of Design from OBC to FBC

8.3.1 The most significant design changes are listed as follows:

**Table 14: Design Changes**

<table>
<thead>
<tr>
<th>Area</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Walls</td>
<td>Existing corridor walls to be removed and rebuilt because of acoustic requirements</td>
</tr>
<tr>
<td>Pathology</td>
<td>Existing pathology area revised and permanent separation provided between both departments</td>
</tr>
<tr>
<td>Switchboard</td>
<td>Switchboard area redesigned to provide chemotherapy waiting room toilet and dedicated switchboard toilet having been along term requirement</td>
</tr>
<tr>
<td>Fire Regulations</td>
<td>Retail fire exit route redirected into main entrance corridor along side of chemotherapy and switchboard to satisfy Fire Regulations</td>
</tr>
<tr>
<td>Treatment areas</td>
<td>Nurse call rationalised and medical gases and bed head trunking provided</td>
</tr>
<tr>
<td>Pneumatic Tube</td>
<td>Pneumatic tube excluded from scheme. Not currently used by Chemotherapy and no future requirement exists</td>
</tr>
<tr>
<td>Plant room</td>
<td>Plant room relocated on to roof to achieve leave available ground floor area for future expansion</td>
</tr>
<tr>
<td>Building services</td>
<td>Localised controls substituted for Building Management System and other design elements rationalised.</td>
</tr>
<tr>
<td>Overall Floor Area</td>
<td>Floor plan changes instigated by above points resulted in a floor area increase of 65m² (8%)</td>
</tr>
</tbody>
</table>
8.4 Updates to NHS Documentation

8.4.1 Infection Control - HBN 00-09 Infection control in the built environment March 2013 – Most recent infection control, HBN has been reviewed by clinicians and design team who have reviewed the recommendations against the guidance and are assured that the LMCC is compliant with requirements.

8.4.2 Derogations - A full schedule of the agreed derogations Appendix 6 for the scheme has been agreed and signed off by the project team and infection control where appropriate.
9. Detailed Construction Programme

9.1 Background

9.1.1 This FBC is one of a suite of Business Cases that collectively form the Our Changing Hospitals programme. The overall reconfiguration of services requires a number of temporary and permanent moves. The moves have required relocating some departments, offices and staff.

9.1.2 This section sets out the agreed construction programme for the LMCC, demonstrating that it is consistent with the overall Our Changing Hospitals Programme, and that it can be implemented while maintaining all clinical services in a “live mode” on the Lister Hospital Site. To facilitate the construction programme there are some non-clinical moves.

9.1.3 The programme is based on all internal approvals of this FBC including the Trust Board being achieved during July 2013. The project does not require CCG or SHA approval as it falls within the Trust delegated financial limits.

9.1.4 The preferred construction programme is illustrated by IHP the contractor is included within Appendix 7.

9.1.5 The full plans for the site set up and phasing of the work can be found in Appendix 8.

9.2 Enabling and Decanting Works

9.2.1 As part of the overall enabling and decanting works to be carried out in connection with the chemotherapy project the existing CRL3 Major Incident room has already been re-provided. These requirements have been incorporated within the design for the new video conference room on level 3 which was commissioned in June 2013.

9.2.2 It is envisaged that relocation of the admin corridor executives, IT staff within the portacabins, volunteer drivers within the CCTV room and PALS office will be undertaken as enabling works during the preliminary stages of the construction phase.

9.2.3 The Trust Executives will be relocated into the 1st Floor Fern Ward in the HPFT mental health unit building located close by in July. Enabling works for fitting out the former ward area will be completed in July allowing this transfer to take place later in the month. To avoid unnecessary disruption to services the site compound and satellite site office will be established to the rear of the admin corridor. The PSCP will commence operations by relocating and removing the existing portacabins and installing a secure hoarding around the perimeter of the site. This will be followed by the location of the temporary satellite site offices and their connections to services.

9.2.4 Prior to any construction work being carried out, any existing services surveys not already carried out will be undertaken. This will be followed by works to any services that require additional protection or rerouting during the enabling phase of the works e.g. telecom cable, autoclave steam pipe and tunnel ventilation shaft relocation.

9.2.5 During the enabling works phase the Trust will carry out an asbestos survey of the building and arrange for specialist removal as necessary. Also at this stage the PSCP will carefully remove any fixtures and fittings that are required to be saved for future use by the Trust. Demolition and strip out of the admin corridor can then take place, recycling all possible materials.
9.3 Refurbishment Area Works

9.3.1 The works to this area will run concurrently with the new build element, commencing with the demolition and strip out, introduction of temporary steel bracing to compensate for the removal of spine walls, alterations to the switchboard room, builder's work in conjunction with services including slab penetrations and trenches, forming of openings to the existing roof for rooflights, including steel trimming and weathering. This will be followed by window replacement. The remaining works will be as detailed under the new build section and carried out in the same programmed sequence.

9.4 Working Arrangements During Construction

9.4.1 Although the construction works are within an isolated wing of the Lister, the Trust has imposed a construction prerequisite on the PSCP construction to ensure that all services can operate at near to normal throughout the construction. The risks have been controlled and mitigated by the following measures:

- Screening and hoarding between work areas and public areas
- Service isolations planned three weeks in advance, with a Permit to Work System.
- Rigid monitoring and review for noise and dust to be managed via the weekly construction programme
- Advance notice to estates teams for construction risk assessments and method statements.

9.4.2 The PSCP will undertake their work through standard construction procedures and standards including:

- Building Regulations
- Construction Design and Management Regulations (CDM)
- The Health and Safety Regulations
- Construction Skills Certification Scheme (CSCS)
- The East and North Hertfordshire NHS Trust code of practice for all Construction Contractors

9.4.3 The PSCP contractor will essentially work during the normal hours of 07:30 to 18:00. However, where access requirements dictate, working outside of the normal hours will be accepted but additional costs will be borne by the Trust unless the out of hours working is for the convenience of the contractor whereby no additional costs will be applicable.

9.4.4 These areas will be utilised as the main construction site set up for the new LMCC for the duration. See site layout diagrams in Appendix 8.

9.5 Commissioning – Construction Services

9.5.1 Commissioning of the construction and building services shall conform to the following standards:

- C.I.B.S.E. Commissioning Codes
- Commission and Validation of Services volumes of the relevant HTMs
- The Building Log Book C.I.B.S.E. TM 37
- East and North Hertfordshire Infection and Prevention Standards for Ventilation Systems

9.5.2 As part of the commissioning of the construction services, the PSCP will provide a deep clean of the internal building surfaces, including chlorination of all domestic water services. Following the builders’ deep cleaning procedures, a full deep clinical clean in accordance with the Trust Infection Prevention and Control policy will be undertaken. The effectiveness of the full deep clinical clean will be demonstrated by “culture plates” left in the respective area for 24 hours.
9.5.3 The PSCP’s construction programme has allocated adequate time for the commissioning of the services at the end of each phase of the works.

9.6 **Commissioning – Clinical Services**

9.6.1 Equipment commissioning will be a Trust led activity drawing on the skills and experience of earlier phases of the OCH Programme. All commissioning will be planned in conjunction with key stakeholders and will minimise service disruption. Where equipment is transferred from one area into a newly refurbished area, the equipment will be cleaned in accordance with the Trust’s equipment decontamination and cleaning procedures. The commissioning process will also include any staff familiarisation and training as deemed necessary by the staff of the day. Where equipment has been moved and requires connection into the building services (e.g. water connection, fixed electrical connection) the equipment will be re-commissioned in accordance to the manufacturer’s requirements.

9.6.2 The PSCP’s construction programme has allocated adequate time for the commissioning of clinical services.

9.7 **Handover Procedures**

9.7.1 The Procure 21+ framework procedures provide an adequate set of requirements to ensure successful handover. The PSCP will include the following as part of the handover documents:
- As Installed Record Drawings
- Comprehensive Operational and Maintenance Manuals
- Full Test Certificates of all installed services and system
- Comprehensive Building Log Book
- All keys and security devices
- A Comprehensive Risk Register included all COSHH procedures
- A zero defect list

9.7.2 The Trust will fulfil its duties under handover procedures by:
- Attending all familiarisation meetings as set up by the PSCP
- Understanding the Building Log Book and Operational Procedures
- Signing off all documents offered as part of the Handover procedure
- Co-operating with the clearance of defects

9.7.3 The Project Closure will take place following the one year defects and liability period from the practical completion of the final phase.
10. Financial Affordability

10.1 Economic Appraisal
10.1.1 The OBC concluded that its Option 3 was the best economic option. This option has been progressed and developed as part of the FBC. The capital costs of this option are now assumed to be £3.024 million. This is marginally greater (£103,000) than that assumed in the OBC. The revenue position has changed slightly with the baseline position being updated and the cost of the re-provision of the Executive Corridor now finalised. This currently shows a slightly worse position than highlighted in the OBC. However the change in position would be the same for all the OBC options.

10.2 Changes in Capital Costs
10.2.1 As previously described, a number of factors have changed since the OBC and have lead to the additional £103k capital cost. The finalised design is 65m2 larger than the OBC allowance but the cost per square metre is approximately £170 /m2 less. The FB forms included as Appendix 9 demonstrate the project remains value for money.

Representatives of Macmillan have been fully involved in the design development process and are supportive of the finalised scheme. They have indicated that they are willing in principle to fund half the additional cost subject to final ratification by a special meeting of their Finance Committee in July. It is proposed that the necessary additional funding from the Trust side will covered by re-allocating part of the cost of relocating the major incident room (£20k) and a £31k contribution from the estate’s capital allocation in recognition of the significant reduction in backlog maintenance that will be achieved as a result of the project.

10.3 Changes to Revenue Costs
10.3.1 The revenue position has changed as a result of updating the planned activity position for 2013/14 and reflecting the changed Tariff. This has reduced the potential financial gain from growth. Again this would be common to all options.

10.3.2 The additional costs now reflect the updated position on the relocated executive administration corridor to the Mental Health Unit. These costs are slightly greater as a result of the occupied space being greater than anticipated (649m2 vs 600 m2). The overall position is considered in detail in the affordability section below.

10.4 Affordability
10.4.1 This section assesses the overall affordability of the scheme in the context of the Trust’s Long Term Financial Model. It assumes that the development is funded through a combination of the Trust’s internally generated resources and funding from Macmillan.

10.5 Changes in Revenue Position
10.5.1 The table below provides a summary of the full impact of the additional costs identified. It has been assumed that the Trust will be able to provide an enhanced and more appropriate level of care as a result of this scheme, with additional income related to an assumed 3% per annum growth and some repatriation of patients from UCLH. The level of income increases annually in relation to 3% growth projections.
Table 15: Additional Annual Income and Costs 2014/15

<table>
<thead>
<tr>
<th>Area of Savings</th>
<th>Recurrent Additional costs/income £'000</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td><strong>Direct Costs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Clinical Staffing costs</td>
<td>60</td>
<td>Related to the staffing of 4 additional chairs</td>
</tr>
<tr>
<td>Additional Clinical non pay</td>
<td>15</td>
<td>Based on current budgets with assumption that 5% of drugs are non rechargeable</td>
</tr>
<tr>
<td>Additional Capital charges as a result of capital cost increase</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>Indirect costs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional soft FM costs</td>
<td>40</td>
<td>Includes £10k set up costs</td>
</tr>
<tr>
<td>Additional hard FM costs</td>
<td>11</td>
<td>Based on cost of £56 per m2 for additional space</td>
</tr>
<tr>
<td><strong>Total Additional Costs</strong></td>
<td>132</td>
<td></td>
</tr>
<tr>
<td><strong>Total contribution to I&amp;E</strong></td>
<td>(78)</td>
<td></td>
</tr>
</tbody>
</table>

10.5.2 The current position in Year 1 is an income and expenditure deficit of £78,000 after the set up costs for FM have been accounted for. Each year the position improves as income generated from growth is allowed for. Based on 3% growth this deficit is eliminated by Year 4. In addition to this is a further cost of the relocated Administration Corridor. This was originally assumed to be relocated into existing Trust accommodation at no additional revenue costs. The executive corridor is now planned to move to Fern Ward in the Mental Health Unit. The costs of rep provisioning the exec corridor in the Fern Ward is estimated to be £97,000 per annum. This includes £42,000 in capital charges. The staffing costs currently allow for four additional chairs, it is unlikely that all four chairs will be immediately required and as a result the staffing may be reduced to cover the deficit.

10.5.3 In subsequent years the overall position improves as the Trust delivers increasing activity levels. The following table shows the year on year position on the basis of 3% growth for which the OBC has been modelled. However a 6% sensitivity analysis has been undertaken which reflects an improved financial position for the scheme. It should be noted that the activity support letter received from commissioners indicates likely activity levels to be in the range of 5%-7.5%.

Table 16: 3% Activity Growth

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover</td>
<td>1,359,599</td>
<td>1,413,200</td>
<td>1,455,596</td>
<td>1,499,264</td>
<td>1,544,242</td>
<td>1,590,569</td>
<td>1,638,286</td>
<td>1,687,435</td>
</tr>
<tr>
<td>Activity</td>
<td>3,820</td>
<td>3,971</td>
<td>4,090</td>
<td>4,212</td>
<td>4,339</td>
<td>4,469</td>
<td>4,603</td>
<td>4,741</td>
</tr>
<tr>
<td>Increase of 3% over current income plus £13,000 repatriated activity and a further 3% per annum</td>
<td>53,601</td>
<td>95,997</td>
<td>139,665</td>
<td>184,643</td>
<td>230,970</td>
<td>278,687</td>
<td>327,836</td>
<td></td>
</tr>
<tr>
<td>Costs</td>
<td>40,097</td>
<td>30,264</td>
<td>30,264</td>
<td>30,264</td>
<td>30,264</td>
<td>30,264</td>
<td>30,264</td>
<td>30,264</td>
</tr>
<tr>
<td>Soft FM based Rolston figures adjusted for 4 chairs and no catering</td>
<td>10,672</td>
<td>10,672</td>
<td>10,672</td>
<td>10,672</td>
<td>10,672</td>
<td>10,672</td>
<td>10,672</td>
<td>10,672</td>
</tr>
<tr>
<td>Hard FM Rates and utilities</td>
<td>6,038</td>
<td>6,038</td>
<td>6,038</td>
<td>6,038</td>
<td>6,038</td>
<td>6,038</td>
<td>6,038</td>
<td>6,038</td>
</tr>
<tr>
<td>Staff based on 4 additional Chairs</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
</tr>
<tr>
<td>Rent</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
</tr>
<tr>
<td>Non Pay consumables based on increase activity</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
</tr>
<tr>
<td>Additional Capital Charges over and above LTFM</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
<td>41,724</td>
</tr>
<tr>
<td>Total</td>
<td>131,832</td>
<td>133,194</td>
<td>144,731</td>
<td>156,620</td>
<td>168,872</td>
<td>181,499</td>
<td>194,511</td>
<td></td>
</tr>
<tr>
<td>Surplus/ (Loss)</td>
<td>-78,231</td>
<td>-37,197</td>
<td>-5,066</td>
<td>28,023</td>
<td>62,098</td>
<td>97,188</td>
<td>133,325</td>
<td></td>
</tr>
</tbody>
</table>

Additional Costs of Relocated Exec Corridor

| Soft FM                                           | 14,528 | 14,528 | 14,528 | 14,528 | 14,528 | 14,528 | 14,528 | 14,528 |
| Hard FM                                           | 38,693 | 38,693 | 38,693 | 38,693 | 38,693 | 38,693 | 38,693 | 38,693 |
| Rent                                              | 41,724 | 41,724 | 41,724 | 41,724 | 41,724 | 41,724 | 41,724 | 41,724 |

Additional Cost of Relocation of Exec Corridor      | 94,946 | 94,946 | 94,946 | 94,946 | 94,946 | 94,946 | 94,946 | 94,946 |

Additional (Cost) Revenue                          | 1,73,377 | -132,143 | -150,012 | -66,923 | -32,848 | 2,242 | 38,379 |         |
10.5.4 A sensitivity based on 6% growth has been run detailed below. This delivers a balanced position covering the additional cost of the exec corridor from 2016/17.

Table 17: 6% Activity Growth

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 2013/14 Plan</td>
<td>1,359,599</td>
<td>1,454,625</td>
<td>1,541,902</td>
<td>1,634,416</td>
<td>1,732,481</td>
<td>1,836,430</td>
<td>1,946,616</td>
<td>2,063,413</td>
</tr>
<tr>
<td>Increase of 6% over current income plus £13,000 repatriated activity and a further 6% per annum as</td>
<td>527</td>
<td>512</td>
<td>772</td>
<td>1,048</td>
<td>1,340</td>
<td>1,649</td>
<td>1,977</td>
<td>£</td>
</tr>
<tr>
<td>Income</td>
<td>95,026</td>
<td>182,303</td>
<td>274,817</td>
<td>372,882</td>
<td>476,831</td>
<td>587,017</td>
<td>703,814</td>
<td>£</td>
</tr>
<tr>
<td>Costs</td>
<td>14,528</td>
<td>14,528</td>
<td>14,528</td>
<td>14,528</td>
<td>14,528</td>
<td>14,528</td>
<td>14,528</td>
<td>£</td>
</tr>
<tr>
<td>Additional Revenue</td>
<td>142,984</td>
<td>156,427</td>
<td>181,113</td>
<td>207,293</td>
<td>235,058</td>
<td>336,333</td>
<td>367,556</td>
<td>£</td>
</tr>
<tr>
<td>Surplus/ (Loss)</td>
<td>47,958</td>
<td>25,876</td>
<td>93,704</td>
<td>165,589</td>
<td>241,774</td>
<td>250,684</td>
<td>326,258</td>
<td>£</td>
</tr>
<tr>
<td>Additional Costs of Relocated Exec Corridor</td>
<td>94,946</td>
<td>92,024</td>
<td>92,024</td>
<td>92,024</td>
<td>92,024</td>
<td>92,024</td>
<td>92,024</td>
<td>£</td>
</tr>
<tr>
<td>Additional (Cost) Revenue</td>
<td>142,904</td>
<td>64,140</td>
<td>1,680</td>
<td>73,585</td>
<td>149,749</td>
<td>158,660</td>
<td>234,235</td>
<td>£</td>
</tr>
</tbody>
</table>

10.5.5 This reflects a slightly worse position than described in the OBC. It also does not reflect the potential reduction in recharges to HPT as a result of using the Mental Health facility. Although the Trust will need to allow for this in its future plans this is not a direct consequence of the Chemotherapy development and therefore is not included in the analysis.

10.5.6 The LTFM currently reflects capital charges relating to the additional Macmillan investment of £1.573m. This is consistent with the current position.

10.5.7 The Trust’s £1.451m contribution to the scheme will be funded principally through the Trust’s established operational capital programme for the consolidation of services on to the Lister site. The arrangement and structure of the partnership that the Trust will have with Macmillan through the Macmillan building agreement will necessitate the Trust funding the design fees up to P21+ stage 2 which will then be simultaneously recovered from Macmillan. It has been agreed that certificated apportioned payments between both parties can be undertaken, thereby improving the Trust’s committed cash flow for the overall consolidation programme.
11. Estates Strategy

11.1 Background

11.1.1 The Trust’s estates strategy was last revised in 2009 to reflect the Our Changing Hospitals programme and the Phase 4 development, and the new Lister Macmillan Centre (LMCC) project located within the refurbished and extended administration corridor is fully consistent with it.

11.1.2 In addition to consolidating acute services and increasing capacity on the Lister site, there are a number of other issues which drive the Estates Strategy. The performance of the estate against NHS targets is set out in the strategy, based on 2007/08 data. The Trust performs well overall with regard to space efficiency measured in terms of income, activity and asset value per m² occupied. However backlog maintenance is an area of concern along with energy and utility costs. There is also a need to improve the quality of the hospital environment for patients of all ages, including children. More detail on this is given below.

11.1.3 Sustainability and environmental management is high on the agenda and it is an objective of the projects to meet the best practice BREEAM targets in refurbishment and new build projects.

11.2 Estates Strategy Priorities

11.2.1 The top ten estates priorities set out in the Strategy are (not in priority order):
- Consolidation of Women’s Services – Completed October 2011
- Car parking – Completed September 2011
- The provision of adequate clinical capacity
- Achieving Phase 4 of the OCH Programme
- Paediatric care
- Quality
- Flexibility
- Modernisation of energy sources (Combined Heat and power completed October 2012)
- Environmental and sustainability policies
- Efficient use of space

11.2.2 The Estates Strategy describes a Master plan for the development of the Lister site. The principles underpinning it were arrived at as a result of extensive consultation including Design Review Panels, and are:
- Clear access points and sense of arrival / civic presence
- Segregation of traffic (externally) and separation of flows (internally)
- High sense of external and internal security
- Minimisation of entrances to hospital buildings
- Adequate and conveniently located car parking
- Encouraging alternative modes of transport to and from hospital
- Good variety of public spaces, landscaping and usable green space
- Good variety of amenities e.g. use of art, waiting space, play space, retail outlets – integrated with hospital functions
- Sufficient natural light within the buildings
- Intuitive way-finding

11.2.3 In addition, several ‘fixed points’ were identified:
- Strathmore Building to be retained
- Inpatients to remain in the Tower Block
11.2.4 The resulting Master plan has underpinned the more detailed planning for the Our Changing Hospitals Programme. This business case for the new LMCC delivers the principal objectives of the Master plan and is in line with the agreed principles and identified future developments.

11.3 **Key Performance Indicators**

11.3.1 The Trust’s current Estates Strategy identifies a number of Key Performance Indicators requiring any significant improvement works, as indicated in the table below.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire precautions</td>
<td>Not fully-compliant. Risk assessed including escape routes from tower block</td>
</tr>
<tr>
<td>Health and Safety</td>
<td>Many issues addressed e.g. scalding, falls from heights</td>
</tr>
<tr>
<td>Asbestos</td>
<td>Present in a number of locations but being managed and risk mitigated</td>
</tr>
<tr>
<td>DDA</td>
<td>Issues exist but the OCH works will deliver significant improvements</td>
</tr>
<tr>
<td>Electricity</td>
<td>Upgrade works undertaken to increase mains and standby generator capacity</td>
</tr>
<tr>
<td>Gas</td>
<td>Adequate supply</td>
</tr>
<tr>
<td>Water</td>
<td>Adequate supply</td>
</tr>
<tr>
<td>Lifts</td>
<td>Main lifts have been refurbished and bed lifts programmed to follow</td>
</tr>
<tr>
<td>BREEAM</td>
<td>BREEAM assessments required as part of new builds and refurbishment. Sustainable energy review undertaken.</td>
</tr>
<tr>
<td>Carbon reduction</td>
<td>The Trust endorses the Carbon Reduction Commitment scheme and the OCH works will see the Trust achieve its targets.</td>
</tr>
</tbody>
</table>

11.3.2 Some of the KPIs, particularly in relation to energy performance, have been addressed through Phase 0 of the Our Changing Hospitals programme, which includes Electrical Infrastructure upgrades and a Combined Heat and Power Plant, which not only benefits the OCH programme but also the retained estate.

11.3.3 The LMCC Project Team have ensured the designs make additional contributions to the energy balance by:
- control of solar gain
- building fabric insulation
- plant efficiencies and carbon reduction
- appropriate clinical adjacencies

11.3.4 This Project also contributes to the Trust’s commitment to improve the Estates Strategy KPIs, by addressing the relevant parts of the backlog maintenance.

11.3.5 The BREEAM KPI has to be addressed under any capital scheme for compliance with Building Regulations and the Procure 21+ framework. The work supporting this Full Business Case for the new LMCC fully addresses the relevant BREEAM requirements.
11.3.6 The Trust has continuously invested in the upkeep of the estate at the Lister Hospital site. Nevertheless, there is still a significant programme of backlog maintenance to be addressed in parallel with delivering the *Our Changing Hospitals* Programme. The LMCC refurbishment and extension will significantly reduce the backlog maintenance.

11.3.7 Much of the estate dates from the 1970’s and, whilst consolidating acute services and increasing capacity is a key priority, the OCH programme will deliver significant improvement in the quality of the hospital environment for patients of all ages.

11.3.8 The Trust will be emphasising sustainability and environmental management to ensure the Trust meets the best practice BREEAM targets in refurbishment and new build projects. The overall OCH programme will ensure that the Trust more than achieves its 2015 carbon reduction targets.

11.3.9 The Trust recognises that it operates in a dynamic and changing healthcare environment, and that its planning must remain flexible, so that it has the ability to respond to changes in the future.

11.4 Planning

11.4.1 Outline planning approval was granted in 2009, with reserved conditions. These have been complied with during the FBC design development and the relevant details, satisfying the detailed planning application, was granted consent on 7th May 2013 under delegated powers, see Appendix 10. On completion of the GMP, the planning authority will be consulted and any of the design development matters affecting the elevations and materials will be regularised in respect of the final consent.

11.5 Fire Strategy

11.5.1 The Fire Strategy for the new LMCC has been developed and designed through various consultations with estates and building control, ensuring that the design reflected the requirements of HTM 05 Fire Code. The recommendations of independent assessors, commissioned by the design teams for this purpose, have been incorporated. The FBC design development has also been critiqued by the independent Fire Engineering assessors.

11.5.2 The Fire Strategy Document for the new LMCC project is contained within Appendix 11.

11.5.3 The Fire Strategy addresses a number of issues including fire safety design philosophy, statutory compliance, mandatory requirements, fire hazards, compartmentalisation, exit routes, limiting internal and external fire spread, fire signage and fire fighting provision.

11.6 Information Management and Technology

11.6.1 Overview - The consolidation of services onto the Lister Hospital site will drive a requirement for changes in information management and technology to support the changes in clinical practice.

11.6.2 Design Requirements - Cat5e cabling is required to all clinical spaces. Wireless technology is required to all areas to enable mobile and flexible working. This will include the existing data cabinet and active equipment with links from the new LMCC to the Trust’s core infrastructure.

11.6.3 Changes in Technology - key changes in technology will be:
- Proposed Cable types to be Cat5e.
- Current data and Telephone network system – switched fast Ethernet with Gigabit Uplinks to core network.
Proposed Data and Telephone network costs are included within the GMP under Trust allowances. Telephones will have a dedicated socket connection outlet independent of the IT data sockets requirements. Cabling costs and IT department commitments have been formally confirmed and advised to Chemotherapy project team.

Scope and range of Wi-Fi - Wi-Fi is available in most areas within the Lister Hospital and it is proposed to extend this to all new builds.

11.6.4 Support - All printing and fax facilities are the responsibility of Danwood Ltd, who are contracted to supply, maintain and relocate all devices.

11.6.5 Responsibilities - All internal Cat5e cabling, outlets, trunking, data cabinet provision, including patch panels and provision for the data sockets in the ceiling to accommodate the access point is to be provided and funded by the project via the Procure 21 partner. All fibre cabling from the core to the data cabinets and all active equipment supplied in the data cabinets is to be provided and funded by IT capital funding.

11.6.6 AEDET - The FBC design development team have undertaken a design quality assurance process using the Achieving Excellence in Design Evaluation Toolkit (AEDET). The toolkit takes a layman’s view of the design process and involves a range of participants including:

- Clinical Stakeholders
- Patients
- Design Team
- The Project Team

11.6.7 The toolkit measurements include ease of circulation and navigation, visual ambience, and designs reflecting users’ questions and concerns. The AEDET procedure normally has three workshops, at the commencement of the project (completed), prior to confirming the contract costs, and shortly after project handover. The table below shows the timing of these workshops. A more comprehensive report on the AEDET process is Appendix 12.

Table 19: AEDET workshop schedule

<table>
<thead>
<tr>
<th>AEDET workshops</th>
<th>First</th>
<th>Second</th>
<th>Third</th>
</tr>
</thead>
<tbody>
<tr>
<td>New LMCC</td>
<td>2 May 2013</td>
<td>Prior to construction</td>
<td>Post handover</td>
</tr>
</tbody>
</table>

11.7 BREEAM

11.7.1 The NHS requires all Procure 21+ construction projects to undertake a “BREEAM for Healthcare” quality assessment. The Building Research Establishment Environmental Assessment Method (BREEAM) superseded the NHS Environmental Assessment Toolkit (NEAT) which ceased in mid 2008. One of the major elements of BREEAM is the achievement of certain energy criteria, which are further detailed below.

11.7.2 BREEAM is an holistic assessment for the project as a whole, and embraces all aspects of energy conservation associated with the design and construction of a building. It is based upon a weighted score for various credits contained within 9 assessment categories, as detailed below, plus an “innovation” category.

- Management
- Health and Wellbeing
- Energy
- Transport
- Water
- Materials
Waste
Land Use and Ecology
Pollution

11.7.3 BREEAM “ratings” are targeted based upon the nature of the project and range from pass, through good, very good and excellent to outstanding. The Trust have targeted a ‘Very Good’ rating for refurbishment developments which have been confirmed through the pre-assessment process undertaken indicating 61% at stage F. A percentage score of 55% is required to achieve a ‘Very Good’ rating.

11.7.4 Whichever BREEAM rating is targeted, there are mandatory credits which must be successfully achieved; otherwise the rating cannot be awarded regardless of whether the overall credit score exceeds the minimum level.

11.7.5 The current BREEAM assessments are included in Appendix 13. The scoring matrix indicates that the project remains on target to achieve ‘Very Good’ for the refurbishment of the LMCC. This cannot be fully ratified until all the relevant evidence can be assessed by the BREEAM assessor, and the interim submission (design stage) is submitted to the BRE for ratification.

11.8 Energy
11.8.1 The Lister CHP project facilitates the achievement of the BREEAM mandatory ENE1 credit to enable the ‘Very Good’ standard to be attained for this project.

11.8.2 The M&E design teams have developed engineering solutions to provide energy efficient solutions in order to comply with EnCode target of 35/55 for acute hospital developments.

11.9 CRC
11.9.1 As a result of the submission of the Trust’s CRC footprint report, it was benchmarked against 2,013 other CRC participants from the public and private sectors and is currently positioned 601 out of 1,301. A comparison of 12 regional NHS acute Trusts shows the Trust as 4th highest out of this group.

Table 20: CRC published results, November 2011

<table>
<thead>
<tr>
<th>Trust</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Princess Alexandra Hospital NHS Trust</td>
<td>80</td>
</tr>
<tr>
<td>Cambridge University Hospitals NHS Foundation Trust</td>
<td>501</td>
</tr>
<tr>
<td>Basildon &amp; Thurrock University Hospitals NHS Foundation Trust</td>
<td>556</td>
</tr>
<tr>
<td>East and North Hertfordshire NHS Trust</td>
<td>601</td>
</tr>
<tr>
<td>Hinchinbrooke Healthcare NHS Trust</td>
<td>782</td>
</tr>
<tr>
<td>Mid Essex Hospital Services NHS Trust</td>
<td>782</td>
</tr>
<tr>
<td>Milton Keynes Hospitals NHS Foundation Trust</td>
<td>782</td>
</tr>
<tr>
<td>Royal Free Hampstead NHS Trust</td>
<td>926</td>
</tr>
<tr>
<td>Southend University Hospital NHS Trust</td>
<td>926</td>
</tr>
<tr>
<td>Bedford Hospital NHS Trust</td>
<td>1301</td>
</tr>
<tr>
<td>Luton &amp; Dunstable Hospital NHS Foundation Trust</td>
<td>1301</td>
</tr>
<tr>
<td>West Hertfordshire Hospitals NHS Trust</td>
<td>1301</td>
</tr>
</tbody>
</table>
11.9.2 As from April 2012 the Trust will be liable to pay the carbon tax for the preceding years (31 March 2011 – April 2012) CO2 emissions. The cost of this will be £12/tonne CO2, and will be dependant on the Trust’s CO2 emissions throughout the year. This is being closely monitored. For budgetary purposes, a forecast estimate of CO2 consumption for the Trust is 16,410 tCO2 @ £12/tonne = £196,920 with + or – 7% of certainty. The current floor price for CO2 tax is £12/tonne this is expected to rise to £16/tonne for 2012/13 with a continual annual rise of £2/tonne p.a. for successive years after that.

11.9.3 The Lister CHP project completed in September 2012 and the project agreement guarantees that the Trust’s carbon emissions will reduce by 4,040 tCO2e and will remove backlog maintenance costs of £1,296,000, associated with the main boiler house, and significantly improve the resilience of steam supply to the Lister site.

11.9.4 The project will deliver in excess of the 2015 NHS CO2 reduction target requirement and it is expected that further CO2 reductions will be achieved through site consolidation and the carbon reduction schemes identified within the nine year carbon reduction strategy December 2010.

11.10 Backlog Maintenance
11.10.1 The backlog maintenance position of the Trust as reported is as follows; please note updated figures for 2013 are awaited.

Table 21: Backlog maintenance by category

<table>
<thead>
<tr>
<th>Site</th>
<th>High £000</th>
<th>Significant £000</th>
<th>Moderate £000</th>
<th>Total £000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lister</td>
<td>174</td>
<td>1,938</td>
<td>20,973</td>
<td>23,085</td>
</tr>
<tr>
<td>QEII</td>
<td>108</td>
<td>2,595</td>
<td>13,534</td>
<td>16,237</td>
</tr>
<tr>
<td>Total</td>
<td>282</td>
<td>4,533</td>
<td>34,507</td>
<td>39,322</td>
</tr>
</tbody>
</table>

11.10.2 In calculating backlog maintenance the Trust has adopted an approach of totalling the high, significant and moderate categories of maintenance. The Lister and QEII backlog maintenance figures were therefore £23.085m and £16.237m respectively.

11.10.3 The current OCH programme therefore eliminates the backlog maintenance at QEII and reduces the level of backlog maintenance at the Lister by £5.1m (this figure has altered slightly due to inflation and certain works having been undertaken). This reduces the currently estimated level of backlog maintenance at the Lister to £16.254m once consolidation has taken place.

11.10.4 The backlog maintenance for the Administration block is calculated as follows:

Table 22: Admin Block Backlog Maintenance Figure

<table>
<thead>
<tr>
<th>Location</th>
<th>Type</th>
<th>Description</th>
<th>Cond</th>
<th>Life</th>
<th>Pri</th>
<th>Qty</th>
<th>Units</th>
<th>Unit Price 02/03</th>
<th>Replace Cost 09/10</th>
<th>Next Year</th>
<th>&lt; 5 Years</th>
<th>&lt; 10 Years</th>
<th>&gt; 10 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMIN</td>
<td>ACCESS</td>
<td>Access Provision/DDA</td>
<td>B</td>
<td>15</td>
<td>P3</td>
<td>1</td>
<td>N/A</td>
<td>2,800</td>
<td>4,382</td>
<td>0</td>
<td>4,460</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ADMIN</td>
<td>FIRE</td>
<td>Fire Precautions</td>
<td>B</td>
<td>15</td>
<td>P3</td>
<td>1</td>
<td>N/A</td>
<td>6,700</td>
<td>10,484</td>
<td>0</td>
<td>3,565</td>
<td>7,107</td>
<td>0</td>
</tr>
<tr>
<td>ADMIN</td>
<td>BOILER</td>
<td>Boiler/Calorifiers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADMIN</td>
<td>CLAD</td>
<td>Ext. Cladding</td>
<td>B</td>
<td>20</td>
<td>P4</td>
<td>600</td>
<td>m2</td>
<td>150</td>
<td>140,830</td>
<td>0</td>
<td>59,415</td>
<td>83,937</td>
<td>0</td>
</tr>
<tr>
<td>ADMIN</td>
<td>FLOOR</td>
<td>Floor Finishes</td>
<td>B</td>
<td>15</td>
<td>P4</td>
<td>600</td>
<td>m2</td>
<td>50</td>
<td>46,943</td>
<td>0</td>
<td>23,892</td>
<td>23,892</td>
<td>0</td>
</tr>
<tr>
<td>ADMIN</td>
<td>H&amp;S</td>
<td>Health &amp; Safety</td>
<td>B</td>
<td>15</td>
<td>P3</td>
<td>1</td>
<td>N/A</td>
<td>11,000</td>
<td>17,213</td>
<td>0</td>
<td>0</td>
<td>17,521</td>
<td>0</td>
</tr>
<tr>
<td>ADMIN</td>
<td>HEAT</td>
<td>Heating System</td>
<td>B</td>
<td>15</td>
<td>P4</td>
<td>1</td>
<td>UNIT</td>
<td>22,000</td>
<td>34,425</td>
<td>0</td>
<td>0</td>
<td>35,041</td>
<td>0</td>
</tr>
<tr>
<td>Location</td>
<td>Type</td>
<td>Description</td>
<td>Cond</td>
<td>Life</td>
<td>Pri</td>
<td>Qty</td>
<td>Units</td>
<td>Unit Price 02/03</td>
<td>Replace Cost 09/10</td>
<td>Next Year</td>
<td>&lt; 5 Years</td>
<td>&lt; 10 Years</td>
<td>&gt; 10 Years</td>
</tr>
<tr>
<td>----------</td>
<td>--------</td>
<td>------------------------------</td>
<td>------</td>
<td>------</td>
<td>-----</td>
<td>-----</td>
<td>-------</td>
<td>------------------</td>
<td>-------------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>ADMIN</td>
<td>HVAC</td>
<td>Heating Ventilation Air Cond.</td>
<td>B</td>
<td>15</td>
<td>P4</td>
<td>1</td>
<td>UNIT</td>
<td>22,000</td>
<td>34,425</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>35,041</td>
</tr>
<tr>
<td>ADMIN</td>
<td>LIFT</td>
<td>Lift</td>
<td>0</td>
<td>N/A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ADMIN</td>
<td>LV</td>
<td>Low Voltage</td>
<td>C</td>
<td>5</td>
<td>P4</td>
<td>1</td>
<td>UNIT</td>
<td>22,000</td>
<td>34,425</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>35,041</td>
</tr>
<tr>
<td>ADMIN</td>
<td>MGAS</td>
<td>Medical Gas System</td>
<td>0</td>
<td>N/A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ADMIN</td>
<td>ROOF</td>
<td>Roof</td>
<td>B</td>
<td>20</td>
<td>P4</td>
<td>1</td>
<td>UNIT</td>
<td>22,000</td>
<td>93,887</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ADMIN</td>
<td>WATER</td>
<td>Water System</td>
<td>B</td>
<td>15</td>
<td>P4</td>
<td>1</td>
<td>UNIT</td>
<td>22,000</td>
<td>34,425</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>35,041</td>
</tr>
<tr>
<td>ADMIN</td>
<td>WIN/D</td>
<td>Windows/Doors</td>
<td>C</td>
<td>3</td>
<td>P4</td>
<td>1</td>
<td>UNIT</td>
<td>22,000</td>
<td>34,425</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>35,041</td>
</tr>
<tr>
<td>ADMIN</td>
<td>BUILD</td>
<td>Building Fabric</td>
<td>600</td>
<td>m2</td>
<td>200</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>187,774</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>131,720</td>
</tr>
</tbody>
</table>

**Total** | 826,988 | 0 | 8,025 | 448,311 | 385,456

11.10.5 The LMCC project will clear all backlog with the exception of the roof covering and will contribute a total reduction of £746,224. This figure is included in the £5.1m total referred to above.

11.10.6 Further management of the backlog maintenance position will be addressed through the Trust’s capital programme. The LTFM assumes expenditure of £11.2m in the years 2011/12 to 2016/17 addressing the Trust’s backlog maintenance position. Off setting this is the increasing cost of backlog maintenance as the estates deteriorates. This has been estimated to be a further £2m based on an increase in cost of 3% per annum over the 5 year period.

11.10.7 The estates team will make recommendations to the Capital Control Group for the expenditure of capital to reduce backlog maintenance on a year by year basis. The decisions will be based on a prioritised assessment of the building condition surveys, recorded risks and local knowledge. Where practicable, work will be combined with the investment associated with service developments. The table shows this reduction on a year on year basis.
12. Equipment Strategy

12.1 Introduction
12.1.1 This section describes the Trust’s approach to providing equipment for this project aligned to the objectives of the overall Phase 4 development and those of the Trust in general. The equipment strategy follows the principles set out in the Capital Investment Manual “Commissioning a Health Care Facility” It outlines:
- the Trust Equipment Policy
- how transfer equipment will be defined
- the principles for procurement of new equipment, including any equipment to be provided by the P21+ provider

12.1.2 The general principle of the approach is that this is a consolidation project. Consequently, there should be sufficient (and possibly some surplus) equipment to cover all needs with the exception of where new types of service or service development necessitate new equipment purchases.

12.2 Trust Equipment Policy
12.2.1 The aim is to re-use existing equipment subject to condition and suitability and secure best value from new equipment purchased. The process begins with an equipment audit. A database has been developed which contains each item of existing equipment. This database includes and incorporates information on each asset as follows:
- Unique Serial / Barcode Number
- Asset Description
- Origin Room Location
- Destination Room Location
- Condition
- Whether Medical, Non-Medical or IT
- Age of Asset

12.2.2 Using plans and room lists a full audit has been conducted of the areas where each item of equipment is logged to form the basis of the database. These are usually Group 3 items (items that are not fixed) however there are some Group 1 or 2 items that have also been logged e.g. Major Medical Equipment. The database is then matched with the issued room data sheets. This identifies the required purchase quantities after the transfers have been matched.

12.2.3 A costing has then been allocated against the items in the Room Data Sheets which, once transfers are taken into account, will provide the total cost of the required equipment items. The costing is based on historical evidence from recent or actual specific information from suppliers.

12.2.4 The final equipment audit database is a summary document which shows all of the above information and will be used as a basis for equipping the projects and the commissioning plan. Its applications will include:
- Setting the right specification in line with clinical/operational requirements
- Obtaining the best price for the agreed specification, by competitive tendering (or use of existing frameworks)
- A detailed analysis in the evaluation of whole life costs, including
  - Staff and training
  - Maintenance
  - Consumables and energy
  - Disposal
Consideration of sustainability matters
Consideration of matters relating to the building BREEAM ratings

12.3 Transfer Equipment

12.3.1 In the audit of existing equipment, the following has also been identified:
- Existing equipment that is transferable and has a useful life beyond the time of transfer.
- Existing equipment that is fit for transfer but additional capacity required due to increase in service provision etc. Possible operational problems arising from consistency in use (training and risk factors)
- Existing equipment that is unfit for transfer.
- Whether or not any loan equipment is needed to cover the transfer period and specialist decommissioning, removal and re-commissioning requirements.

12.3.2 The outcome of this analysis is shown in Appendix 14 and is used to match transferable items with the requirements specified on the component list of the room data sheets.

12.4 Equipment Replacement Needs

12.4.1 The Trust has an agreed policy to cover the replacement of equipment which is no longer usable on the basis of service improvement and/or risk management. There is a clear distinction between replacements and equipment needed as a consequence of the project. The project budget will fund purchase of equipment which is deemed necessary for service development arising from the consolidation or enlargement. Medical equipment which has come to the end of usable life will be replaced subject to the Trust Medical Devices Management policy and it is not intended that these replacements are funded from the project budget. Equipment is replaced by the Trust in one of the following instances:
- Issue of an Item Condemned Certificate
- As part of the annual replacement programme
- As a replacement under the Medical Devices Management Policy and meeting the criteria of:
  - being beyond economic repair
  - obsolete and no longer supported
  - change in clinical requirements

12.5 Equipment Procurement

12.5.1 Group 1 equipment will be procured as part of the P21+ contract GMP. This will include fitted items which have a direct bearing on the final design and operation of the building. It also includes items where there would be an unacceptable contractual risk if supplied by the Trust.

12.5.2 The Trust recognises that some items of equipment are best supplied by the P21+ provider. This is to offset risk arising from delivery delays (affecting the overall programme) and space planning.

12.5.3 Group 2 and 3 equipment will be purchased by the Trust utilising the benefits of consolidation where possible by way of Trust negotiated contracts and national framework agreements, as long as best value can be demonstrated.
Table 23: Equipment Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Examples</th>
<th>Supplied</th>
<th>Fitted by</th>
<th>Maintained</th>
</tr>
</thead>
</table>
| 1     | Sanitary fittings  
Lighting and electrical fittings | P21 Provider  | P21 Provider | P21 Provider |
| 2     | Notice boards  
Dispensers  
Clocks | ENHT | P21 Provider | ENHT |
| 3     | Loose furniture  
Medical equipment  
Catering equipment | ENHT | ENHT or contractor | ENHT |

12.6 Equipment Specification

12.6.1 User input in design process and equipment detailing was achieved at an early stage in the process by chemotherapy clinicians attending reviews of RDS and C sheets. This has been supported by one-one meetings to provide further details. All decisions regarding equipment specification will include input from applicable users, considering issues such as infection control; EBME and manual handling/H&S.
13. Procurement Strategy

13.1 Procurement Strategy Route

13.1.1 The original *Delivering Quality Healthcare in Hertfordshire* (DQHH) Business Case (2007) initially considered the Local Initiative Finance Trust (LIFT) as the proposed procurement route for the *Our Changing Hospitals* programme. The Trust has developed the LMCC Project under the Procure 21+ framework in accordance with NHS procurement guidance.

13.1.2 The Trust wrote to all six Procure 21+ framework members inviting expressions of interest based on a High Level Information Pack. The Trust stated that a condition of scheme appointment would be to novate the Architects and Building Services teams (who developed the OBC documentation) as Primary Supply Chain Members (PSCM) to the appointed Principal Supply Chain Partner (PSCP). The QS is to be a shared appointment, with special provisions to ensure contractual integrity.

13.1.3 The Trust appointed Integrated Health Projects (IHP) as its Principal Supply Chain Partner, following an open day and subsequent interviews. The criteria for appointment were based on a high level questionnaire and scoring mechanism prescribed by the Procure 21+ framework. The process was supported and critiqued by representatives of the DH P21+ team. IHP secured appointment by gaining consistently high scores throughout the assessment.

13.2 Client's Requirements

13.2.1 The Trust developed the Client’s Requirements for the new LMCC based on a number of parameters, including:

- Delivery on the OCH requirements
- Provision of adequate space to satisfy the NHS requirements and guidance (HTM HBN etc) and the requirements of the clinical teams
- Fulfil the Option Appraisal Preferred Option
- Information contained in the High Level Information Pack
- Positive change in backlog maintenance
- Positive change in the energy performance of the existing buildings
- Achieve an very good BREEAM score
- Make a positive contribution to the Trust’s carbon reduction commitment
- Comply with all relevant legislation
- Complete within the consolidation timeframe of October 2014.

The Client’s Requirements also included the service strategies and philosophy.

13.3 Contractors Proposals

13.3.1 The contractor has delivered their proposal through a number of media including:

- 1:200 Floor Plan Drawings
- 1:50 Room Layout Drawings
- Room Data Sheets – including some 3D images
- Performance Specification - Architectural
- Performance Specification - Building Services
- Performance Specification - Structural

13.4 Room Data Sheet Approval

13.4.1 The Trust has used the NHS Room Data Sheets (RDS) as set out in the relevant HBNs and Activity Databases (ADB). The design process included a number of clinical workshops design approvals meetings held between June 2012 and March 2013 where the end users described the requirements and rooms layouts to the PSCP team. The
Project Management team duly verified the Room Data Sheets for compliance with NHS guidance, HBN requirements and affordability. The signed-off RDS and 1:50 detailed drawings will form part of the GMP contract documents, please see Appendix 15.

13.4.2 In some cases the RDS show a departure from the NHS guidance given in HBNs. These derogations (where the contractor’s proposals do not fully comply with the NHS guidance documents) have been fully assessed and signed off by the appropriate clinical and estates representatives.

13.5 Drawing Approval
13.5.1 The PSCP has managed the preparation of the drawings throughout the FBC development process. The drawings and design at GMP will match the level of information defined by the Royal Institute of British Architects (RIBA) scheme of work stages A through to F. Revised scheme layout and room schedule are detailed at Appendices 16 and 17 respectively.

13.5.2 The LMCC Project Board have reviewed the proposed design drawings through a number of workshops. Those present included the clinical stakeholders, the Health Care Planner patient representatives, the project management team, and representatives from Estates and Facilities. Each drawing has been signed off for functional compliance and approved by the Infection Control representative.

13.5.3 During the construction period the PSCMs will develop their designs suitably for construction and as fitted. The drawings will develop the design from RIBA stage F through to RIBA stage K. Drawings and design changes will be reviewed and approved by the project management team and clinical stakeholders as required.

13.6 Guaranteed Maximum Price
13.6.1 The Procure 21+ framework requires the PSCP to prepare their proposals in the form of a Guaranteed Maximum Price (GMP). The PSCP’s offer clearly defines the cost build up and what they propose to do for the offer price. The allocation of risk is jointly agreed with the PSCP with due financial allowances included in both the GMP and the project contingencies. The GMP is within the affordability parameters highlighted in Section 10.

13.7 Tender Works Packages
13.7.1 In developing the GMP under the terms of P21+, the PSCP is required to tender 80% of the measured works. These packages should also be benchmarked. The GMP for the LMCC project has been calculated following a comprehensive tendering exercise undertaken by IHP and monitored by Northcroft, the Trust’s and IHP’s jointly appointed cost consultants. The process follows the P21+ guidelines and provides a demonstrable and transparent audit trail.

13.7.2 The process has achieved the following:
- A total value of competitively tendered works packages of £1,257,149.55
- This represents 97.8% for the total value of the Measured Works for the LMCC
- Less 3% of work packages (excluding Mechanical and Electrical Works) were based on a single subcontractor quote and this represents 4.8% of the total Measured Works change for LMCC
- The lowest subcontract price received was used in the GMP except in a small minority of cases where a valid reason demonstrated that an alternative bid represented better overall value for money change for LMCC

13.7.3 Throughout the process Northcroft have reviewed and analysed the GMP, including all back-up information and cost breakdowns provided by IHP, and raised queries where
appropriate. In completing this review, Northcroft have compared the overall GMP and the work packages against benchmark cost information for similar projects to ensure wherever possible that the Trust has a GMP which reflects overall value for money in line with the current market.

13.7.4 In addition to the above and the comprehensive tendering exercise undertaken, IHP have committed to retender significant works packages throughout Stage 4 and to engage alternative subcontractors where there is a financial benefit. Where a lower cost is achieved this will be allocated between the parties on completion of the project on the basis of the prescribed profit share set out in P21+ (whereby the Trust receives the majority share) as per the P21+ framework agreement.

13.7.5 The Trust has as per other consolidation projects followed a similar additional clause for the P21+ Stage 4 contract which will bind IHP to continuing to tender works packages where appropriate. The P21+ process has been varied to allow all buying gain share to be passed onto IHP up to an agreed threshold in recognition of the IHP commercial contribution provided by IHP at Stage 3 towards the targeted GMP. The reductions in the costs will be detailed to the Trust in the form of a compensation event payment.

13.8 Enabling Works
13.8.1 Prior to the commencement of the refurbishment and extension of the Administration Corridor a number of pre-surveys for deleterious materials, existing availability of services, structural condition and detailed location of the underground tunnels have been conducted as part of the P21+ procurement process. In addition to this the rear portacabins will be demolished or relocated (subsequent to condition surveys and suitability as retained accommodation), whilst the staff located within the Administration Corridor will be relocated to alternative accommodation elsewhere on site, within the HPFT Mental Health Unit. Those persons in occupation of the rear portacabins are included within a Trust wide decant schedule and move into vacant available accommodation with the Origin Housing residences of block 61-66 Frogmore. All survey and decant costs are included within the overall scheme budget of £3.024m including VAT.

13.9 IT Equipment and Infrastructure
13.9.1 A survey was undertaken by the IT Department on 22 November 2012 and the initial report was updated on 13 May 2013, please see Appendix 18. Subsequent to this it has now been established that a new data 800mm x 800mm cabinet will no longer be required and the existing 600mm x 600mm unit within the Level 2 PABX room will be utilised. This cabinet will allow the IT enabling works to be undertaken to the admin corridor area prior to construction together with other affected areas on the network including PALS, reception, switchboard, coffee shop and transport service which will be incorporated within this new cabinet. All costs relating to these IT enabling works have been budgeted accordingly between IT and the Chemotherapy project. The LMCC data and cabling within the main construction refurbishment will be undertaken by IHP the contractor and these costs are incorporated within the GMP.

13.9.2 Currently there is no allowance specifically allocated to computer and IT hardware however there is a substantial sum enclosed within the Northcroft Cost Advisors elemental cost break-down to cover furniture and equipment including the purchase cost of any IT cabinets. Within the general fittings allowance a sum has been allocated for communication, security and control systems.
13.10 **Macmillan Building Agreement**

13.10.1 Early in the project Macmillan approached the Trust and expressed an interest in supporting the project. This additional funding has enabled the scheme design to now include additional accommodation and design features aimed at improving the patient experience, in line with the Macmillan ethos.

13.10.2 Representatives from Macmillan have been involved with the option appraisal process and the finalised scheme is considered to represent the optimum solution. Macmillan have agreed to provide grant funding of £1.521m plus an additional £52k (subject to ratification) which matches the Trust’s project allocation of £1.451m.

13.10.3 Macmillan document their funding in a standard building agreement which details the parties to the project, the scope, purpose and length of the agreement. The original Macmillan Building Agreement can be found in Appendix 19. In conjunction with Macmillan the standard agreement has been modified to reflect the P21+ procurement route and to agree the specific details for the LMCC. The most significant provisions of the final agreement will include:

- Macmillan and the Trust will jointly provide the capital funding for the project with an agreed cashflow
- The Trust will have a continuing obligation to use the building for the purpose for which it was designed
- Macmillan have confirmed their funding contribution is “genuinely contributed funds” and this will enable the full agreed VAT recovery of the project at 35.2% to be recycled as part of the funding towards the scheme
- Where a discontinuation of the designed use is necessary Macmillan will have diminishing clawback rights over the term of the agreement (15 years) in respect of their funding
- Macmillan will run an appeal for the project to support their overall level of commitment. The Trust will be expected to support the appeal and not compete for fund raising for the project.
- The Trust will be responsible for the running costs of the new facility
- There will be ongoing monitoring and evaluation obligations
- Macmillan will require their branding to be positively linked with the project
- Details of the increased shared costs between the Trust and Macmillan
- The revised contribution drawdown schedule between both parties
- Wording will include “genuinely donated funds” to achieve maximum VAT recovery for the project on all contributions

13.10.4 The Macmillan Building Agreement is a legally binding contract. A limited commitment to the project has been given and Macmillan will fund the project design up to FBC stage. The Macmillan Building Agreement will be formally entered into at the same time as the main building contract.
14. Programme and Project Management

The Project Management of the LMCC centre has followed a recognised management structure.

14.1 Project Management Structure

14.1.1 The LMCC centre forms part of the overall Our Changing Hospitals programme. The Programme Management structure of Our Changing Hospitals is illustrated below. It is consistent with the good practice promoted by:

- Office Government and Commerce (OGC)
- Capital Investment Manual (CIM)
- Procure 21+.

Figure 12: Project Management Structure

14.2 Project Meetings

14.2.1 The Project Board and Project Team held regular meetings during the development of this Full Business Case as shown below:-

- Project Board Meetings - monthly
- Clinical Group Meetings - monthly Design Team Meetings or additional as required for specific aspects, e.g., RDS’s, interiors, infection control
- Trust Risk Shop Meetings - monthly
- Design Team Risk workshops - monthly
- Cost Plan Review Meetings - monthly
- Contractors proposals Meetings - weekly at the end of the FBC and GMP development period.

14.2.2 The Project Board and Project Team will meet regularly during the construction phase of the project, as follows:

- Project Board Meetings – monthly, then weekly during the Trust commissioning phases
- Construction Review Meetings - Initially monthly but then fortnightly during testing and commissioning phases
Programme Review Meetings - Initially fortnightly then monthly
Risk Review Meetings - monthly
Cost Plan Review Meetings - monthly

14.3 Stakeholder Engagement
14.3.1 The stakeholders of this project have been engaged throughout the transition from OBC to FBC. Project Board meetings, Room Data Sheet Workshops, Risk Workshops, Clinical Pathway Reviews and AEDET Workshops have been attended not only by internal stakeholders, but also by Patient Representatives and P21+ Partners.

14.4 Change Control Process
14.4.1 Projects are often plagued by scope creep, i.e. changes being made without review, adding to the work of the project, delaying the schedule, increasing the costs or causing late issues to arise. With Phase 4 being a programme comprising many projects it was essential that a process to control change was implemented in order to protect the programme and individual projects against late disruptive changes.

14.4.2 A change control process protocol has been developed to facilitate objective, informed submission, analysis and conscious decision making in relation to all identified project and programme issues which could alter the scope of the Phase 4 scheme.

14.4.3 The protocol is based on the preparation and review of a request for change form for requesting and documenting changes to a project (e.g. adding new features, amending designs) or to elements within the project (such as changing a specification of a system, product or other deliverable). The form includes fields for the impact of the proposed change on the project timeline, budget, workforce savings, and clinical outputs, and on the components of the project deliverables. This process is repeated for the allocation of contingency, post FBC approval.

14.4.4 The request for change form is submitted to the Project Board who consider and make a decision on the proposed change, providing it is within the agreed budgetary parameters and there is no impact on any other projects or elements of the Phase 4 programme. If, following initial analysis, the Project Board identifies that the project issue has a cost/revenue impact, timescale issue, workforce issue and/or impact on another project or element of the Phase 4 programme, the Project Board arrange for a detailed impact analysis to be undertaken in preparation for referral to the OCH Programme Board.

14.4.5 When request for change forms are submitted to the OCH Programme Board for approval, the OCH Programme Board may identify a sub group to undertake the review of the information and make recommendations regarding approval to the board. At a minimum this group must have clinical, financial and human resources representation.

14.5 Post Project Evaluation
14.5.1 The Trust is committed to ensuring that a thorough and robust post project evaluation is undertaken at key stages in the process, to ensure that positive lessons can be learnt from the project. The lessons learned will be of benefit when undertaking future capital schemes.

14.5.2 Post project evaluation (PPE) also sets in place a framework within which the benefits realisation plan (described in Section 16) can be tested to identify which benefits have been achieved and which have not – with the reasons for these understood in a clear way.
14.5.3 Recent NHS guidance on PPE has been considered and the proposed approach will accord fully with this during the various evaluation stages. The key stages that will be evaluated are:

- implementation
- in use shortly after the new service has been brought on line
- once the service is well established

14.5.4 The plan for evaluation at each of these stages is set out below, together with a description of how these arrangements will be managed, how information will be disseminated and over what timescale. The evaluation will be overseen by the Trust OCH Programme Board who will act as the evaluation steering group. The Trust’s preferred P21+ partners (IHP) will be involved in all PPE activities.

**Implementation** -
The objective of this evaluation stage is to assess how well and effectively the project was managed from the business case process through to implementation, including the construction phase. It will be undertaken using a 360° view of the process using internal and external stakeholders. It is planned that this evaluation will take place within three months of opening of the facility and will examine:

- the effectiveness of the project management of the scheme – viewed internally and externally
- communications and involvement during the project
- the effectiveness of advisors used on the scheme.

**Evaluation in Use** -
It is proposed that this stage of the evaluation be undertaken between six and twelve months after the completion of operational commissioning, in order that the lessons learned are still fresh in the minds of the stakeholders. This stage of the evaluation will also encompass the evaluation of the scheme whilst in construction.

The objective of this stage is to assess how well and effectively the project was managed during the Trust’s operational commissioning phase and into the actual operation of the new facilities. Again, the intent is to use a 360° view of the process using internal and external stakeholders.

The evaluation at this stage will examine:

- Effectiveness of the Trust project management of the scheme – viewed internally and externally
- The effectiveness of the P21+ process – viewed internally and externally
- Communications and involvement during commissioning and into operations
- Effectiveness of the joint working arrangements established within the P21+ partner (IHP)
- Support during this stage from other stakeholder organisations – CCG’s, Cancer Network and others as appropriate
- Overall success factors for the project in terms of cost, time and quality
- Extent to which it is felt the facilities meet users’ needs – from the point of view of service users/carers and staff

**Evaluation once the service is well established** -
It is proposed that this evaluation is undertaken about two to three years following the establishment of the new facilities. The objective of this stage will assess how well and effectively the project was managed during the actual operation of the service. Again the objective is to use a 360° view of the
process using internal and external stakeholders. The evaluation at this stage will examine:

- the effectiveness of the joint working arrangements established by the P21+ partner (IHP) and the Trust Project Team
- the extent to which it is felt the design meets users’ needs – from the point of view of the staff, service users and carers

**Management of the evaluation process and resource to deliver** -
The process will be managed by the project director, working through the Trust OCH Programme Board.

All evaluation reports will be completed within three months of the completion of the data collection. The results of each report will be made available to all participants in each stage of the evaluation.

The costs of the final post project evaluation, once the service is fully established, are not included in the costs set out in this FBC as it is assumed that this work will be undertaken in-house as part of the Project Director’s role.
15. Risk Management

15.1 Overall Risk Management Process

The process of risk management used within the Trust is:

- Risk identification – develop a risk register covering key risk areas and individual risks within these areas
- Risk assessment – assessing each of the options against the risk register, evaluating the impact, probability and exposure using a simple scale of one (low) to five (high). The overall exposure to risk is the product of the impact of a risk and the likelihood of the same risk occurring
- Risk monitoring – the process of regularly reviewing all risks to ensure effective control, mitigation and action planning
- Developing a risk management plan – a plan to manage all the risks identified in the risk register, including responsible persons and a monitoring mechanism
- Assigning a Cost of the Risk from the PSCP’s perspective and the Trust’s perspective.

15.2 Risk Identification and Assessment

15.2.1 An initial risk assessment has been undertaken by the Project Board and will be further developed incorporating those risks known to the P21+ Primary Supply Chain Partner (PSCP), Integrated Health Partnerships (IHP). Each risk has been evaluated on two parameters, Consequence and Likelihood, each with a rank of 1 to 5. The product of these scores defines the risk value, as illustrated below.

Table 24: Risk Score Matrix

<table>
<thead>
<tr>
<th>LIKELIHOOD</th>
<th>1 None</th>
<th>2 Minor</th>
<th>3 Moderate</th>
<th>4 Major</th>
<th>5 Catastrophic</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Certain</td>
<td>Yellow: Low 5</td>
<td>Yellow: Low 10</td>
<td>Orange: Moderate 15</td>
<td>Red: High 20</td>
<td>Red: High 25</td>
</tr>
<tr>
<td>4 Likely</td>
<td>Yellow: Low 4</td>
<td>Yellow: Low 8</td>
<td>Orange: Moderate 12</td>
<td>Red: High 16</td>
<td>Red: High 20</td>
</tr>
<tr>
<td>3 Possible</td>
<td>Green: Very Low 3</td>
<td>Yellow: Low 6</td>
<td>Orange: Moderate 9</td>
<td>Red: High 12</td>
<td>Red: High 15</td>
</tr>
<tr>
<td>2 Unlikely</td>
<td>Green: Very Low 2</td>
<td>Green: Very Low 4</td>
<td>Yellow: Low 6</td>
<td>Orange: Moderate 8</td>
<td>Red: High 10</td>
</tr>
<tr>
<td>1 Rare</td>
<td>Green: Very Low 1</td>
<td>Green: Very Low 2</td>
<td>Yellow: Low 3</td>
<td>Orange: Moderate 4</td>
<td>Red: High 5</td>
</tr>
</tbody>
</table>

15.2.2 All risks are entered on the project Risk Register and have been reviewed by the Project Teams with responsibility for the new LMCC. The construction risks that have an impact on the delivery of any patient services or that could impact upon patient, visitor or staff safety will be delegated to staff within the Trust to mitigate. Residual third party risks, i.e. those owned by IHP, will continue to be monitored by the programme board throughout the life of the project to ensure that they are being managed effectively and do not present a potential threat to the Trust's activity or reputation.

15.3 Risk Management and Review

15.3.1 The Trust has developed a continuous process of risk review, assessment, and revaluation as required. To make sure that the highest level of scrutiny and control is exercised, the project risk register is reviewed at each Project Board Meeting. The risk management is likewise reviewed at the Our Changing Hospitals Programme Board. Many of the Trust’s risks are common to other work streams of the DQHH Business Case and consequently there are synergies in risk management across all DQHH...
programmes. Regular monitoring of all risks and progress on the mitigating actions will be undertaken to ensure the project is not significantly impacted by the occurrence of any risk.

15.3.2 As expected for a project of this size and nature, a significant number of risks have been identified over the development of the project. Some of these have been ranked as high but this is subject to regular review. The risks currently assessed as 'high' are shown below, together with the agreed mitigation and management strategy for each.

15.3.3 The current Project Risk Register is shown at Appendix 20. It should be noted that, following the appointment of IHP as the P21+ contractor, a number of ongoing comprehensive risk workshops have been undertaken. This involved representatives from all aspects of the project. Once the details identified have been reaffirmed, the risk register will be substantially updated and will supersede the current version. The new register will be subject to the monitoring and review as noted above.

15.3.4 The high risks in relation to this project have all been mitigated against as part of the FBC and GMP process. This has resulted in there being no high risks at present but this will be monitored throughout the life of the project.
16. Benefits Realisation

16.1 Introduction
16.1.1 A Benefits Realisation Plan (BRP) describes the objectives and benefits of an integrated change programme and outlines the projects required to deliver them. It ensures that the integrated change programme is designed and managed in the right way to deliver quality and value benefits to patients, staff and local communities. A BRP will also define how and when outcomes and benefits are measured.

16.2 Benefits
16.2.1 Benefits of service consolidation and expansion within the executive administration corridor include:
- opportunities to align the best in current clinical practice
- opportunities to improve the range of designated care settings and physical environments
- improve patient care and experience by consolidating the service
- more flexible capacity to deal with variability in demand
- more effective and efficient use of staff capacity and skills
- contribute to the effectiveness of the local networks for critical care services
- better opportunities for staff training

16.3 Benefits Realisation Plan
16.3.1 The BRP in the matrix below provides realisable benefits that are expected to be delivered as a result of this project. The overall responsibility for the delivery of the benefits rests with the Project Director.
<table>
<thead>
<tr>
<th>Objectives</th>
<th>Benefits</th>
<th>Enablers</th>
<th>Projects</th>
<th>Timescales</th>
<th>Responsible Owner</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated Chemotherapy unit</td>
<td>Provide an improved physical environment to address capacity for ongoing chemotherapy services and oncology/haematology outpatient clinic facilities improve patient care and staff working, thereby assist in recruitment and retention. Use the estate effectively to improve overall efficiency</td>
<td>Provide modern healthcare facilities for improved patient experience Efficient use of facilities</td>
<td>Master planning project Relocation of level 3 admin corridor staff QIPP</td>
<td>Submit OBC for approval Complete FBC within agreed timescales Ensure consistency with other DQHH projects Identify equipment requirements</td>
<td>Ongoing</td>
<td>Project Team/Unit Team Improved patient experience through use of patient tracker Improved physical environment for patients, their visitors and staff. Improved environmental audits for the unit - current average 94%, target 100% Increased chemotherapy outpatients capacity to meet local population needs - Increase from 10 chairs to 18 chairs. Reduce transfers to Mount Vernon - Current 30 patients per year, target less than 5</td>
</tr>
<tr>
<td>Improved clinical outcomes</td>
<td>By providing care in a specialised unit</td>
<td>Improved clinical outcomes</td>
<td>Ensure pathways are implemented and regularly reviewed Ensure continuation of skills development for all staff</td>
<td>Ongoing</td>
<td>LL/Unit Nursing team/CNS Currently scoping equity of service and age profile of patients Improved access to clinical trials – The Trust scored 29% in the National Patient Survey 2011/12; the target is 40% or above Improved access to CNS and support services – The Trust scored 73% in the National Patient Survey 2011/12; the target is 85% or above Increase the information</td>
<td></td>
</tr>
<tr>
<td>Objectives</td>
<td>Benefits</td>
<td>Enablers</td>
<td>Projects</td>
<td>Timescales</td>
<td>Responsible Owner</td>
<td>Outcomes</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>------------</td>
<td>-------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Improved patient experience and</td>
<td>Aim to improve service and</td>
<td>Improved patient choice</td>
<td>Patient surveys</td>
<td>Ongoing and at key project milestones</td>
<td>Unit Nursing team</td>
<td>Improved meridian scores - currently at 77-68% on average, target 95% or above</td>
</tr>
<tr>
<td>choice</td>
<td>facilities using feedback and</td>
<td>Improved patient satisfaction</td>
<td>National surveys</td>
<td></td>
<td></td>
<td>Teenagers and young adults managed locally</td>
</tr>
<tr>
<td></td>
<td>key themes from patient complaints, audits and Meridian tracker feedback</td>
<td>Improved service reputation</td>
<td>QIPP</td>
<td></td>
<td></td>
<td>Improved clinic waiting times - currently 57% waited no longer than 30 minutes, the target 80% or above</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Communicate benefits and changes in service to client population in order to demonstrate change</td>
<td></td>
<td></td>
<td>Improve the privacy and dignity for patients when discussing condition/treatments - currently the Trust scored 81% in the National Patient Survey 2011/12; the target is above 90%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

and treatment of potential side effects of chemotherapy – The Trust scored 75% in the National Patient Survey 2011/12; the target is 85% or above

Demonstrate a year-on-year improvement in the required clinical quality standards (peer review measures/ improving outcomes guidance)

Reduced complaints by 50% from monthly average of 4 to 2

Improved mortality rate of deaths within 30 days – currently 0.5%, target 0.3%
<table>
<thead>
<tr>
<th>Objectives</th>
<th>Benefits</th>
<th>Enablers</th>
<th>Projects</th>
<th>Timescales</th>
<th>Responsible Owner</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff recruitment and retention</td>
<td>Attract staff in an increasingly difficult recruitment market and assist in replacing staff due to retire in the next 5 – 10 years</td>
<td>Improve recruitment and retention rates</td>
<td>Workforce planning</td>
<td>Develop training schemes and career progression opportunities for all staff</td>
<td>Charge nurse/HRM</td>
<td>Ensure 100% compliance to policy standards (audit)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Current staff turnover at 10.1% to reduce this to below 7% amongst band 5 staff within the next 2 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Maintain sickness at below the trust target</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Introduction of structured development/progression plan at band 5</td>
</tr>
<tr>
<td>Increase income generation by additional activity</td>
<td>Ensure capacity to support increased survivorship requiring subsequent treatments</td>
<td>Further opportunities to maintain and grow and income</td>
<td>Commissioner support National cancer plan</td>
<td>Explore new models of care – outreach chemotherapy at home Develop alternative therapies Implement private patient pathways</td>
<td>On completion of project</td>
<td>LL/Finance Manager/Unit team</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Deliver more care closer to home, by reducing the transfer of patients to Mount Vernon for treatment from the predicted 30 patients per year to less than 5 patients</td>
</tr>
</tbody>
</table>
17. Conclusions and Recommendations

17.1 Conclusions
17.1.2 This FBC describes the proposal is to relocate the chemotherapy day case and outpatient services from its current location in Ward 10A to its permanent location within the extended Administration Corridor to allow the delivery of a refurbished and extended Lister Macmillan Chemotherapy Centre jointly funded with Macmillan.

17.2 Recommendations
17.2.1 The Trust Board is requested to approve this FBC and authorise a total expenditure of £3.024m inclusive of VAT, at outturn prices.
18. Schedule of Appendices

18.1 The appendices to the FBC are listed below. These are not included in the document however can be obtained through David Parnell, Project Manager, 01438 296602, david.parnell@nhs.net.

Table 26: List of Appendices

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Activity Support Letter</td>
</tr>
<tr>
<td>2</td>
<td>Treatment Regimens</td>
</tr>
<tr>
<td>3</td>
<td>Operational Policy</td>
</tr>
<tr>
<td>4</td>
<td>Teenagers and Young Adults Letter</td>
</tr>
<tr>
<td>5</td>
<td>Benefits Criteria</td>
</tr>
<tr>
<td>6</td>
<td>List of Derogations</td>
</tr>
<tr>
<td>7</td>
<td>IHP Programme</td>
</tr>
<tr>
<td>8</td>
<td>IHP Contractor Site/Phasing Plans</td>
</tr>
<tr>
<td>9</td>
<td>FB Forms</td>
</tr>
<tr>
<td>10</td>
<td>Planning</td>
</tr>
<tr>
<td>11</td>
<td>Fire Plan</td>
</tr>
<tr>
<td>12</td>
<td>AEDET</td>
</tr>
<tr>
<td>13</td>
<td>BREEAM</td>
</tr>
<tr>
<td>14</td>
<td>Equipment Schedule</td>
</tr>
<tr>
<td>15</td>
<td>Room Data Sheets</td>
</tr>
<tr>
<td>16</td>
<td>Scheme Layout</td>
</tr>
<tr>
<td>17</td>
<td>Room Schedule</td>
</tr>
<tr>
<td>18</td>
<td>Chemotherapy IT</td>
</tr>
<tr>
<td>19</td>
<td>Macmillan Building Agreement</td>
</tr>
<tr>
<td>20</td>
<td>Risk Register</td>
</tr>
</tbody>
</table>