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| **To:** | **Trust Board** |
| **From:** | **Women's and Children's Division** |
| **Date:** | **26th July 2012** |
| **CQC regulation:** | **NA** |

**Trust Board Paper F**

| | |
|---|---|
| **Title:** | **Interim Solution for Maternity and Gynaecology Services –Outline Business Case (OBC)** |

**Author/Responsible Director:**
Pete Rabey – Divisional Director
David Yeomanson – Senior Responsible Officer
Jane Porter – Project Manager

**Purpose of the Report:**
This OBC has been prepared to request approval from the Trust Board for £2.9m of capital investment to provide additional maternity and gynaecology capacity to meet the continued growth in birth rate and resultant activity.

**The Report is provided to the Board for:**

| | | | |
|---|---|---|---|
| Decision | x | Discussion | |
| Assurance | | Endorsement | |

**Summary / Key Points:**
This OBC recommends the investment of £2.9m to provide additional capacity which will meet short term and medium term demands on the service. A full evaluation of options has been undertaken and the preferred option (#12) includes :-

- 6 extra delivery rooms
- 3 additional high dependency care spaces
- 14 additional ward beds
- 4 bedded birth centre at LGH and relocation of the birth centre at LRI
- A maternity assessment centre situated away from labour wards on both sites
- Refurbishment of Ward 1 at the LRI to facilitate efficiencies in GAU
- Additional bathroom facilities for the majority of delivery rooms at the LRI
- Refurbishment and upgrade of maternity theatres at both sites.

**Context**
The initial case for change of the preferred long term and interim solutions for maternity and gynaecology in LLR, including the revenue and capital cost, was presented to the UHL and PCT Boards in December 2010. All three Boards approved the revenue for an increase in staffing; acknowledged the long term preferred option, recognising that at this time the capital investment of £80m was not affordable; and agreed that an interim solution should be developed in more detail.

Once the interim solution was developed this was then taken through the UHL Commercial Executive and Executive Team meetings prior to Trust Board in October 2011. At that time the Trust Board approved an investment of £3.7m, although due to the financial position of the Trust this was subject to further SHA approval which required a full OBC to be developed. Subsequently the Trust's 2012/13 capital programme was approved including

£2.8m for this interim solution.

Due to the urgency to commence changes to address clinical pressures the scheme was split to allow the gynaecology changes to progress into service. These changes were required in order to give additional space at the LRI site to expand maternity services. The majority of the gynaecology work is now complete.

The OBC is therefore a refresh of the capital costs for the maternity scheme presented in October 2011 to the Board.

**Recommendations:**
The Board is asked to **approve** the capital investment required for recommended option.

**Previously considered at another corporate UHL Committee?**
See context above

| **Strategic Risk Register** | **Performance KPIs year to date** |
|---|---|
| ID: 847 – Lack of Capacity in Maternity Services – currently 20 (high)<br>ID: 1467 – Routine Use of Delivery Suite Theatre 2 for major abdominal surgical procedures – currently 12 (moderate)<br>ID: 1042 - Unavailability of ultrasound scans and not meeting National standards for ultrasound scanning in Maternity – currently 20 (high) | Reduction in complaints and litigation claims.<br>Better patient experience feedback.<br>Reduction in transfers and closures.<br>Increase activity. |

**Resource Implications (eg Financial, HR)**
£2.9m of capital.

**Assurance Implications**
The OBC aims to provide assurance to the Trust Board regarding the response to capacity and risk issues within the maternity and gynaecology service.

**Patient and Public Involvement (PPI) Implications**
The interim solution has taken account of feedback received from the "Next Stage Review" (NSR) in 2009 and further formal public, patient and stakeholder engagement through the maternity liaison committee, trust members, Link members, consortia boards and internal and external media.

**Equality Impact**
The proposals set out in the OBC will address capacity and risk issues which potentially affect all users of the service.

**Information exempt from Disclosure**
NA

**Requirement for further review?**
None

University Hospitals of Leicester NHS
NHS Trust

Leicester Maternity

# University Hospitals of Leicester NHS Trust
# Interim Solution for Maternity and Gynaecology Services
# Outline Business Case
## 26 July 2012

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Appendix 2 - Option Cost Analysis Forms
Appendix 3 - Long List Reduction Briefing Paper
Appendix 4 - Short List Workshop Attendee List
Appendix 5 - Short List Briefing Paper
Appendix 6 - Option Appraisal Scoring sheets
Appendix 7 - Risk Workshop Attendee List
Appendix 8 - Risk Scores
Appendix 9 - Full Risk Profile with Mitigation
Appendix 10 - Project Programme
Appendix 11 - Option Plans

# 1 Executive Summary

## 1.1 Introduction

1.1.1 This OBC recommends the investment of £2.9m to provide additional capacity at the Leicester Royal Infirmary and Leicester General Hospital sites which will meet short term and medium term demands on the maternity service. The OBC also aims to deliver the outstanding improvements required to Gynaecology areas at both sites.

1.1.2 The case has been written with the knowledge that UHL is undertaking site reconfiguration work in responding to national changes with less acute work being positioned closer to the patient's home in community hospital sites and primary care centres, and acute hospitals increasingly becoming smaller and more specialised.

1.1.3 It is also written in the context of increasing financial pressures which are partly due to services being spread over three sites. For University Hospitals of Leicester NHS Trust (UHL) in the medium to long term, the Royal Infirmary and the Glenfield Hospital will become the two acute / emergency sites and the General Hospital site will be used for planned and day case activity as well as outpatient and intermediate care. This will help to concentrate clinical expertise where it is needed most and enable resources to be concentrated on elective work and emergency work independently.

1.1.4 Whilst the title of this OBC infers that the proposals within it are equally related to maternity and gynaecology, the bulk of the proposals included in it relate to maternity alone as a significant amount of work has already been undertaken in relation to gynaecology, with only some residual changes still needed.

1.1.5 Detailed changes already achieved for gynaecology include:

- The creation of / improvements to, the gynaecology emergency unit at LRI Ward 1 including the redesign of estate, backlog maintenance and provision of an ultrasound scanner.
- Consolidation of Early Pregnancy Assessment Unit in Jarvis
- Increased scanning capacity in outpatients and provision of an additional toilet, scan room
- Creation of Emergency sessions and related recovery space for theatres 17 and 18 at LRI.
- Increased beds on Ward 31 LGH involving redesign of the estate, provision of additional medical gases and furniture and fittings.
- Creation of a Day of Surgery Admissions unit ( DOSA) at LGH ward 11 with day surgery unit involving redesign of estate & furniture and fittings
- Re-provision of elective activity from LRI to LGH with Laparoscopic stack system & recovery monitors to theatres.
- Increased outpatient capacity to Gynaecology outpatients at LGH involving estate redesign.

1.1.6 Many of the above estate improvements can be considered enabling works for the maternity changes as they have released space particularly on the LRI site.

1.1.7 Women's Services at UHL have a four stage plan to improve the quality of services provided and meet increasing demand. The four stages are shown below:

| Stage | Development | Benefit |
|---|---|---|
| Stage 1 | The development of a new Neonatal Unit at the LRI to meet the current activity demand – DONE | Suitable environment to care for premature babies addressing infection control and privacy issues Increase capacity and potential expand. |

| Stage | Development | Benefit |
|---|---|---|
| Stage 2 | Investment by local commissioners to improve staffing levels over a three year period (obstetricians, midwives, sonographers, anaesthetists etc) – DONE | Deliver 60 hours consultant cover on delivery suite (safer childbirth)<br>Reduce midwife to birth ratio from 1:34 to 1:32<br>Work toward BAPM Neonatal standards<br>Work towards anaesthetic standards as per Safer Childbirth<br>Improve scanning to meet national screening committee standards<br>Above reduces risk associated with clinical staffing issues<br>Improve patient experience<br>Address in part the increase in activity in recent years |
| Stage 3 | Centralisation of elective gynaecology work at the LGH and emergency gynaecology work at the LRI to address gynaecology quality issues and create space for maternity service to expand into – DONE | Improved and more efficient care pathways for all aspects of gynaecology by separating emergency and elective work and centralising specialist services eg EPAU<br>A notable decrease in complaints regarding poor experience of emergency care<br>Improved nursing staff morale |
| Stage 4 | The capital development described in this OBC | Increased choice for Midwife led care separate pathway for elective caesarean section<br>More efficient process for non labouring women<br>Improved environment on both sites<br>Recognisable branding for Maternity Service<br>Reduced risk<br>Integration – One service thinking whilst on two sites |

1.1.8 The medium/long term aim for the Trust is to provide maternity services from one site and this will not be the LGH site. Achieving this will take a number of years and the pressures on services and current risk levels justify the investment in maternity services on the LGH site as an interim solution. Longer term reconfiguration may take 5-10 years to achieve. Notably in the business case the bulk of investment is on the LRI and not on the LGH site which does fit with longer term reconfiguration plans.

1.1.9 This case is requesting capital funding only as the three year package of revenue investment already referred to above has already been agreed with commissioners in anticipation of estate improvements at both LRI and LGH.

1.1.10 Revenue investment already secured includes:

- Increased scanning capacity to deliver a service that meets national standards and targets in both gynaecology and maternity services
- Increased obstetric consultant cover to the elective theatre sessions and ward areas and anaesthetic consultant cover to pre-assessment and maternity elective theatres
- Increase gynaecology consultant and nursing support to the emergency pathway. A package of investment to grow midwife numbers year by year until the service achieves a sustained 1:32 midwife to birth ratio and predicted growth in bookings and delivery numbers.

## 1.2 Strategic case

1.2.1 Maternity and Gynaecology Services are managed by UHL's Women's and Children's Division and in 2011 the division produced a 5 year integrated business plan which was approved by the Trust Board. The 5 Year Plan includes the following initiatives and objectives that are relevant to the production of this business case.

**Figure 1 – Business Case Objectives**

| Improvement | Objective | Outcomes |
|---|---|---|
| Redesign and reconfigure services to improve patient experience, strengthen safety and quality and maximize value for money | Transform, redesign and reconfigure gynaecology services | An improved, integrated gynaecology inpatient service through a smaller bed base<br>Provision of ambulatory gynaecology care and treatment services providing outpatient diagnostic and therapeutic procedures for elective patients. |
| | Redesign and reconfigure maternity services | Maintain level 1 CNST maternity standards, achieve level 2 and work towards level 3<br>Move to PbR Pathway tariff<br>Increase midwifery WTE to reflect the increased number of deliveries to maintain current 1:33 birth/midwife ratio and work towards 1:32 to maintain quality and safety<br>Increase midwifery WTE towards national guidance for maternity staffing levels by achieving 1:32 and then 1:30 birth/midwife ratio to deliver the vision of a centre of excellence for maternity care<br>Separate elective obstetric surgical patient pathways through the provision of an elective theatre and ward on one site<br>Redesign the urgent/emergency assessment process to create a single point of access for non-routine assessment to create capacity in delivery suite and reduce NZ codes<br>Enhance multidisciplinary pre delivery assessment<br>Work with clinical support to improve the support of anaesthetic provision for out of hours obstetrics<br>Expand the range of maternal medicine multidisciplinary clinics to include mental health, gastroenterology and others<br>Provide HDU maternity care on the labour suite<br>Increase consultant cover for labour suite to 98 hours as a staged increase to 24 hours |

1.2.2 Whilst it is not always helpful to revisit the history of previous attempts at investment it is important to understand the background and reasons for the current situation in maternity services. Since 2005 UHL have made two attempts to improve maternity services as a result of increasing risk levels. It is important to note early on that the original built birth capacity of the two maternity units at LRI and LGH was far lower than the current levels and this is described in more detail section 2.7

1.2.3 The first attempt to improve services involved a Trust wide Private Finance Initiative (PFI) Pathway Scheme which would have seen wide scale improvements to UHL's estate including the integration of Women's Services on to the Glenfield Hospital site. This was cancelled in 2007 for a number of reasons including the level of costs associated with the scheme.

1.2.4 Following, the cancellation of the PFI, UHL identified the reduction of risk and improving the quality of Maternity and Neonatal services as one of its continuing key priorities. During 2010/11 significant improvements and extension works were undertaken to the Neonatal unit on level 2 of Kensington building which have greatly reduced some of the risks in the service.

1.2.5 The second attempt was in 2009/10 culminating in the Next Stage Review Board agreeing to recommend a full new build to the PCT and UHL Boards in February 2010, as the clinically preferred option at an estimated cost of over £80m, after ruling out a series of other options, including doing nothing. The preferred option, at this time, was to create one centralised Maternity Unit at Leicester Royal Infirmary site plus antenatal and maternity care in Birth Centres in up to 2 community sites. Neonatal Support Services Levels 1, 2 and 3 would be provided at the LRI only.

1.2.6 The preferred option had wide scale support, however the financial climate in 2010 meant this option would not be deliverable in the short term. It was subsequently agreed that work would be undertaken by UHL to develop an interim scheme that would create a holding solution to 2017/18 pending future availability of capital funding. This solution would need to substantially mitigate the risks in current services which are on the UHL Trust Register.

1.2.7 The identified risks included:

- Lack of maternity service capacity
- Substandard obstetric theatre environment,
- Lack of scanning capacity, and,
- Low midwifery and obstetric staffing levels.

1.2.8 The drive to improve maternity and gynaecology services is also embodied within the 2012/13 Annual Operational Plan, with investment in Maternity Services noted as a key priority for performance improvement

## 1.3 The Case for Change

1.3.1 The figure below shows the projected increase in birth rate to 2017/18 and the increasing lack of capacity at UHL.

## Figure 2 – Birth Rate and Capacity Comparison

| Historical trend | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 |
|---|---|---|---|---|---|---|
| Activity growth | | 7.6% | (1.3%) | (0.0%) | 3.5% | 0.8% |
| Deliveries | 9,848 | 10,596 | 10,456 | 10,453 | 10,824 | 10,916 |
| Deliveries per day | 27 | 29 | 29 | 29 | 30 | 30 |
| Low risk delivery rooms<br>High risk delivery rooms | 6<br>20 | 6<br>20 | 6<br>20 | 6<br>20 | 6<br>20 | 6<br>20 |
| Ward beds | 83 | 83 | 83 | 83 | 83 | 83 |
| Theatres | 3 + 1 | 3 + 1 | 3 + 1 | 3 + 1 | 3 + 1 | 3 + 1 |
| **Growth impact** | **2012/13** | **2013/14** | **2014/15** | **2015/16** | **2016/17** | **2017/18** |
| Activity growth | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% |
| Deliveries | 11,025 | 11,135 | 11,247 | 11,359 | 11,473 | 11,588 |
| Deliveries per day | 30 | 31 | 31 | 31 | 31 | 32 |
| Low risk delivery rooms<br>High risk delivery rooms<br>HDU beds | 6<br>20<br>0 | 6<br>20<br>0 | 10<br>22<br>5 | 10<br>22<br>5 | 10<br>22<br>5 | 10<br>22<br>5 |
| Ward beds | 83 | 83 | 97 | 97 | 97 | 97 |
| Theatres | 3 + 1 | 3 + 1 | 5 | 5 | 5 | 5 |

Notes:

1. Existing theatre capacity is made up of 3 theatres plus 1 clean room; this becomes 5 theatres as a result of the OBC
2. Currently, a significant amount of labour ward activity is non labouring women attending for medical review. Creating dedicated maternity assessment centres on both sites realises additional delivery rooms for labouring women which is not shown in the additional capacity above.
3. The additional ward capacity will enable women to be transferred from a delivery room to a ward bed in a more timely manner eliminating bottle necks.
4. The maternity care pathway progresses women through different, interdependent, clinical areas which have to be used flexibly dependent on demand, therefore additional capacity will be created in all clinical areas. This will lead to less interdependence and improve the patient journey, experience and waiting times. For example, separation of emergency and elective caesarean activity.

1.3.2 In 2002 the delivery rate was 9,018 births per year and in 2011 it increased to 10,916 births per year. This shows an approximate 17% increase in deliveries in the past ten years.

1.3.3 Notably already during 2011/12

- 2 full closures where women have been sent to other regional centres
- 69 transfers of women were made from LRI to LGH
- 77 transfers of women were made from LGH to LRI
- Length of Stay (LOS) has shortened to critical levels

1.3.4 Summary of key issues for maternity services continue to include;

- Projected increase in number of births as demonstrated above
- Existing facilities only built to manage approximately 70% of the predicted through put
- Lack of capacity in delivery rooms
- Lack of capacity in maternity beds
- Substandard clinical environments in maternity areas
- Substandard obstetric theatres in maternity
- Leicester city is the 20th most deprived area in England
- High proportion of the population from BME groups
- High rates of infant mortality which may be linked to the population profile
- Lack of scanning capacity

## 1.4 Economic Case

1.4.1 In putting forward this OBC the Trust is acutely aware that this interim option for maternity services will not solve all of the pressures and issues across the system and ultimately the preferred option is at present a single site.

1.4.2 Having stated this, the Trust has had to balance the pros and cons of spending money on what is essentially a holding solution, with the immediate and on-going un-acceptable risks that lie in operating maternity services from the current configuration. The conclusion of the OBC is that this investment is both necessary and justified.

1.4.3 In March 2012 a long list of options to deliver the improvements was created resulting in 14 options. The number was considered high however the range of improvements to be made are complex and span two hospital sites at the Leicester Royal infirmary (LRI) and Leicester General Hospital plus it was considered necessary to provide options that would enable choice around the levels of capital cost.

1.4.4 The full long list can be reviewed in section 3.3.

## 1.5 The Short List

1.5.1 The long list of options was reduced to a short list of 5 at a workshop on April 25th 2012. The options shortlisted were 2, 5, 9, 12, and 14.

1.5.2 The table below details the shortlisted options in more contextual detail.

### Figure 3 – The Short List with Analysis

| Option | Summary | Contextual Notes |
|---|---|---|
| **Option 2**<br>Do minimum<br>Baseline option | Do minimum<br>• Cosmetic improvements to LRI and LGH delivery suites and maternity wards including creation of en-suites (LRI only)<br>• Creation of a functional gynaecology emergency unit on ward 1 LRI | Issues of risk and capacity not addressed but included in the short list as a baseline on which to judge other options<br>Does not create any additional delivery suite rooms other than releasing some existing delivery suite capacity and allows centralisation of emergency gynaecology (relies on changing the current clinical pathway to not go back to labour ward post- |

| Option | Summary | Contextual Notes |
|---|---|---|
| | • Create larger recovery area on level 1 LRI to move elective Low Risk Caesarean Section procedures from delivery suite at LRI | delivery.) |
| | | |
| **Option 5**<br>Slightly more ambitious | • Change part of Jarvis/RMO building to create a maternity out-patient facility<br>• Vacated o/p facilities on ground floor Kensington change to birthing unit. Relocate existing o/p from Jarvis<br>• Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites (optional) (LRI only)<br>• Addition of reception space at entry to ward 5 and 6 at LRI<br>• Creation of a functional gynaecology emergency unit on ward 1 LRI<br>• Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI | This option was included in the short list as it partially reduces risk for maternity services, provides a full range of services, adds capacity<br>Creates total 26 delivery rooms plus 10 midwife led beds<br>Does not add maternity beds |
| | | |
| **Option 9**<br>Slightly less ambitious than option 5 but more areas improved<br>This option provides an outline of the 'preferred way forward' (**not** preferred option) at Board discussion stage. | As per 2 plus<br>• Addition of reception space at entry to ward 5 and 6 at LRI<br>• Storage improvements at LGH<br>• Additional delivery rooms – 4 at LRI and 2 at LGH<br>• Additional antenatal/post natal beds (12-14) – Ward 1 LRI<br>• Theatre improvements to reduce risk of infections. – LRI and LGH<br>• Change of use delivery room at LRI delivery suite to 2 bedded HDU function<br>• Movement of the maternity assessment suites from delivery areas – and creation of maternity assessment units on ward 2 LRI and on outpatients at LGH<br>• Creation of additional scanning facilities - LRI<br>• Creation of day surgery /admissions area for elective | This option was included as it is addresses national policy directives, improves access, reduces risk around theatre quality plus improves on sustainability and efficiency in service location. This represents more closely the original plans to improve maternity care.<br>Adds 12-14 maternity inpatient beds, 6 midwifery led birthing rooms, 2 HDU beds, improves theatres, storage and scanning plus adds day surgery/admissions/flexible post natal area.<br>Creates separate maternity assessment suite at ward 2 LRI and outpatient area at LGH, releasing delivery suite space to create the HDU/additional delivery rooms |

| Option | Summary | Contextual Notes |
|---|---|---|
| | sections – LRI | |
| | | |
| Option 12<br><br>This option provides an outline of the 'preferred way forward' (**not** preferred option) at Board discussion stage but is slightly more ambitious | As per option 9 plus<br>• Creation of multifunctional/induction/post natal discharge area at LRI and creation of waiting area for partners.<br>▪ Addition of new birthing pools x 2 at LGH/LRI<br>▪ Improve staff facilities at LRI including improvements to kitchen and amalgamation of 2 sitting rooms<br>• Enable access to courtyard for staff and patients at LGH | This option was included as it represents more closely the original plans to improve maternity care and is similar to option 9, and addresses the issues around relatives' areas and further improves capacity in releasing beds early and increases ability to induce more patients in a timely way. It also improves the environment for staff and patients in terms of outside areas. It addresses national policy directives, improves access, reduces risk around theatre quality plus improves on sustainability and efficiency in service location.<br>Adds 12-14 maternity inpatient beds, 6 midwifery led birthing rooms, 2 HDU beds, improves theatres, storage and scanning plus adds day surgery/admissions/flexible post natal area.<br>Creates separate maternity assessment suite at ward 2 LRI, and outpatient area at LGH releasing delivery suite space to create the HDU/additional delivery rooms.<br>Adds birthing pools, multifunctional area plus partner wait and improves staff facilities, with access to outside courtyard for both staff and patients. |
| | | |
| Option 14<br>The most ambitious option | As per option 5 plus:<br>• Storage improvements at LGH<br>• Additional delivery rooms – 4 at LRI and 2 at LGH<br>• Additional antenatal/post natal beds (12-14) – Ward 1 LRI<br>• Theatre improvements to reduce risk of infections. – LRI and LGH<br>• Change of use delivery room at LRI delivery suite to 2 bedded HDU function<br>• Movement of the maternity assessment suites from delivery areas – and creation of maternity assessment units on ward 2 LRI and on outpatients at LGH<br>• Creation of additional scanning facilities - LRI<br>• Creation of day of surgery /admissions area for elective sections – LRI | Option 14 builds on option 5, and more fully reduces risk.<br>It addresses national policy directives, improves access, reduces risk around theatre quality plus improves on sustainability and efficiency in service location.<br>It also addresses the issues around relative's areas and further improves capacity in releasing beds early and increases ability to induce more patients in a timely way. It also improves the environment for staff and patients in terms of outside areas.<br>This option increases current delivery room numbers at LGH and LRI plus moves the 6 Kensington birth centre rooms to level 0 increasing the total number to 10<br>This gives a total of 15 obstetric rooms at LRI, 10 obstetric rooms at LGH and a purpose built collocated 10 bedded birthing unit within Kensington at LRI. Adds 12 - 14 maternity beds, 2 HDU beds, improves theatres, storage and scanning plus adds day surgery/admissions or a flexible post natal |

| Option | Summary | Contextual Notes |
|---|---|---|
| | • Improve staff facilities at LRI including improvements to kitchen and amalgamation of 2 sitting rooms<br>• Enable access to courtyard for staff and patients at LGH | area.<br>Creates a separate maternity assessment suite at ward 2 LRI, releasing delivery suite space to create the HDU/additional delivery rooms. Adds birthing pools, multifunctional area plus partner wait and improves staff facilities, with access to outside courtyard for both staff and patients. |

1.5.3 At this stage the project Steering Group made the decision to not proceed with further work up of option 5 due to its low ranking in the short list and the fact that it mirrors many of the proposals already included in option 14 and falls short of delivering the range of benefits associated with options 9,12 and 14. Option 2 has been included in the further work up despite its low ranking due to the need to maintain a baseline option for comparison.

1.5.4 Detailed plans for options 2,9,12 and 14 are included as appendix 11 to demonstrate viability of the proposals within the current footprint of buildings at LRI and LGH. Notably the bulk of the investment will be on the LRI site which is in line with both the current views on preferred long term configuration for maternity services and the current Trust Reconfiguration work.

1.5.5 It is important to note that this business case is focused on reducing existing clinical risk, not service cost reduction. A by-product of the OBC is the ability of the Trust to increase market share in repatriating lost activity. It is important to note also that the UHL maternity service currently has a very low reference cost position; in 2011-12 it was 0.79. This effectively represents the service being provided for just over 20% lower cost than the national average.

## 1.6 Key Findings

1.6.1 The following figure summarises the key results of the economic appraisals for each option. Figures include VAT.

### Figure 4 – Key Results of Economic Appraisals

| | Undiscounted (£k) | Net Present Cost (Value) (£k) |
|---|---|---|
| **Option 2 - Do Minimum/Status Quo** | | |
| Works cost | 1,481.4 | 1,442.4 |
| Fees and charges | 191.6 | 190.0 |
| Equipment | 17.4 | 17.0 |
| **Total costs for approval purposes** | **1,690.3** | **1,649.4** |
| **Option 9 - Reference Project/Outline Public Sector Comparator (less ambitious)** | | |
| Works cost | 2,416.7 | 2,365.2 |
| Fees and charges | 312.5 | 310.5 |
| Equipment | 58.0 | 56.4 |
| **Total costs for approval purposes** | **2,787.2** | **2,732.1** |
| **Option 12 - Reference Project/Outline Public Sector Comparator (more ambitious)** | | |
| Works cost | 2,520.4 | 2,465.1 |
| Fees and charges | 325.9 | 323.8 |
| Equipment | 58.0 | 56.4 |
| **Total costs for approval purposes** | **2,904.3** | **2,845.3** |
| **Option 14 - Reference Project/Outline Public Sector Comparator (radical change)** | | |
| Works cost | 8,307.7 | 8,099.4 |
| Fees and charges | 1,074.3 | 1,066.2 |
| Equipment | 261.0 | 256.1 |
| **Total costs for approval purposes** | **9,642.9** | **9,421.6** |

1.6.2 The following figure shows a summary of the results and a ranking associated with the economic appraisal of the shortlisted options.

**Figure 5 – Summary Table**

| Option | Description | Undiscounted (£k) | NPC (£k) | Ranking |
|---|---|---|---|---|
| **2** | Do Nothing/Do Minimum/Status Quo | 1,690.3 | 1,649.4 | **1** |
| **9** | Reference Project/Outline Public Sector Comparator (less ambitious) | 2,787.2 | 2,732.1 | **2** |
| **12** | Reference Project/Outline Public Sector Comparator (more ambitious) | 2,904.3 | 2,845.3 | **3** |
| **14** | Reference Project/Outline Public Sector Comparator (radical change) | 9,642.9 | 9,421.6 | **4** |

1.6.3 The results of the ranking above need to be considered alongside the risk and benefits appraisal below.

## 1.7 Overall Findings: The Preferred Option

1.7.1 The following figure shows a summary of the results and a ranking associated with the economic risk and benefits appraisal of the shortlisted options.

### Figure 6 – Evaluation Scores of Short-Listed Options

| Option Ranking | Option 2 | Option 9 | Option 12 | Option 14 |
|---|---|---|---|---|
| Economic appraisals | 1 | 2 | 3 | 4 |
| Risk appraisal | 3 | 2 | 1 | 4 |
| Benefits appraisal | 4 | 2 | 1 | 3 |
| Overall Rank | 3 | 2 | 1 | 4 |

1.7.2 The preferred option is Option 12 because it most fully addresses the critical success factors, the benefit criteria and has the lowest risk score. Notably it delivers 6 more delivery rooms in line with projected usage to 2021, and adds 12 maternity inpatient beds and a flexible area. It also has potential to add the most capacity and flexibility for the future should services need to expand further during times of high usage. The additional capacity is supported by the full range of maternity infrastructure including staffing to reduce risk on an interim basis.

## 1.8 Commercial Case

1.8.1 Consideration has been given to the best form of procurement for the types of works proposed in option 12. The outcome of the procurement option appraisal meeting was that a traditional procurement route consistently rated highest when evaluated against other forms of contract.

## 1.9 Required Services for the preferred option

1.9.1 Required services are as follows:

1.9.2 **LRI** - Structural changes plus refurbishment to maternity areas on levels 0, 1 and 4 in Kensington building LRI, comprising the following:

- Cosmetic improvements to delivery rooms and maternity wards including creation of en-suites
- Addition of reception space at entry to ward 5 and 6
- Creation of a functional gynaecology emergency unit on ward 1
- Create larger recovery area on level 1 to move elective Caesarean Section procedures from delivery suite
- Four additional delivery rooms
- 12 Additional antenatal/post natal beds– Ward 1
- Theatre improvements
- Change of use delivery room at on delivery suite to a 2 bedded HDU
- Movement of the maternity assessment suites from delivery area – and creation of maternity assessment units on ward 2
- Creation of additional scanning facilities
- Creation of day surgery /admissions area for elective sections
- Addition of one birthing pool
- Creation of multifunctional/induction/post natal discharge area, and creation of waiting area for partners.

- Improve staff facilities including improvements to kitchen and amalgamation of 2 sitting rooms

1.9.3 **LGH** - Structural changes plus refurbishment to maternity areas on level 0 in the maternity unit at LGH, comprising the following:

- Cosmetic improvements to delivery rooms and maternity wards
- Storage improvements
- Two additional delivery rooms
- Theatre improvements
- Movement of the maternity assessment suites from delivery area and creation of maternity assessment unit within current outpatients
- Addition of 1 birthing pool
- Enabling of access to courtyard for staff and patients.

1.9.4 To achieve the above the following external support services will be required to be appointed upon approval of the OBC:

- Design Consultants
- Cost Consultants
- Design and Construction – Subject to tender
- CDM coordinator
- Fire Safety Advisor
- Mechanical and Engineering Consultants
- Structural Advice
- Clerk of Works

## 1.10 Potential for Risk Transfer and Potential Payment Mechanisms

1.10.1 This section provides an assessment of how the associated risks might be apportioned between the trust and the contractor/s. The following matrix sets out the Trust view on how risk will be best managed during the design and construction phases.

1.10.2 Risks will be managed on an on-going basis through the Project Steering Group – see figure 9.

### Figure 7 – Risk Transfer Matrix

| Risk Category | Potential allocation | | |
|---|---|---|---|
| | Public | Private | Shared |
| 1. Design risk | X | | |
| 2. Construction and development risk | | | X |
| 3. Transition and implementation risk | X | | |
| 4. Availability and performance risk | | | X |
| 5. Operating risk | X | | |
| 6. Variability of revenue risks | X | | |
| 7. Termination risks | | | X |
| 8. Technology and obsolescence risks | | | X |
| 9. Control risks | | | X |
| 10. Residual value risks | X | | |
| 11. Financing risks | X | | |
| 12. Legislative risks | X | | |
| 13. Other project risks | | | X |

## 1.11 Financial Section

1.11.1 The table below gives a summary appraisal of the finances associated with the preferred option.

### Figure 8 – Summary of Financial Appraisal

| Preferred option: Option 12 - Reference Project/Outline Public Sector Comparator (more ambitious) | 2012-13 £k | 2013-14 £k | 2014-15 £k | 2015-16 £k | Total £k |
|---|---|---|---|---|---|
| Works cost | 919.1 | 1,567.6 | 33.6 | 0.0 | **2,520.4** |
| Fees and charges | 263.8 | 60.8 | 1.3 | 0.0 | **325.9** |
| Equipment | 11.6 | 46.4 | 0.0 | 0.0 | **58.0** |
| **Total costs for approval purposes** | **1,194.5** | **1,674.8** | **34.9** | **0.0** | 2,904.3 |
| **Funded by**: Trust capital programme – internal resources | | | | | |
| **Note:** There are £35k per year revenue costs associated with the planned capital expenditure which include additional hotel services, estates maintenance and energy costs. | | | | | |

## 1.12 Overall Affordability and Balance Sheet Treatment

1.12.1 The proposed capital cost of the project is £2.9m over the 3 years of the expected lifespan of the contract. This excludes provision for inflation (£93k).

1.12.2 This cost is split across 3 financial years in which the Trust has a capital plan of approximately £26m per year. The case therefore represents 5-7% of the Trusts capital resource in 2012-13 and 2013-14.

1.12.3 The revenue costs of increasing the staffing capacity linked to this OBC were approved by the UHL Trust Board and PCT Boards in December 2010. As a result the associated costs already form part of the Trust baseline and have been included in Trust future plans, they are therefore not subject to further approval alongside the capital costs in this OBC.

1.12.4 The revenue consequences of the capital works were not included in what has been previously approved so it is important to note the estimate of £35k per year associated with the planned capital expenditure.

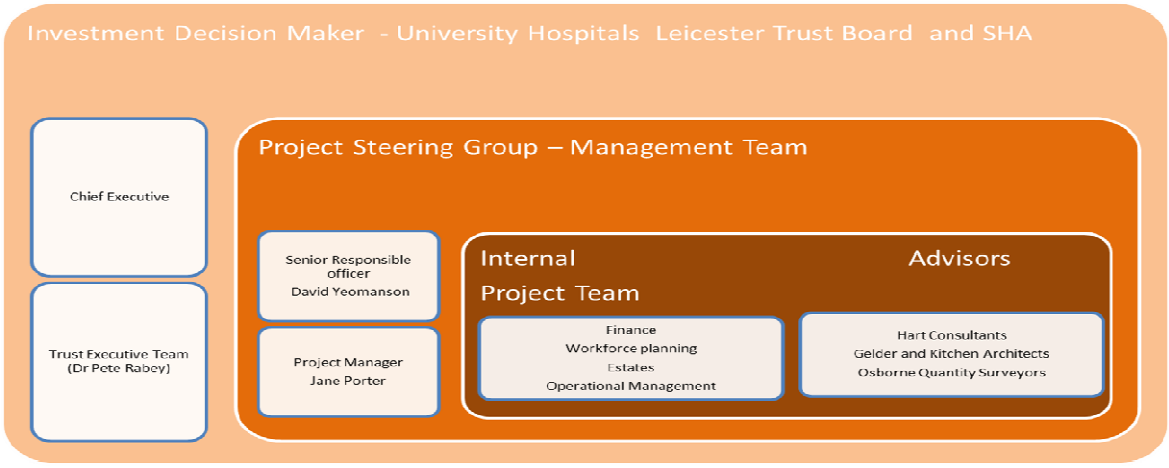
## 1.13 Management Case

1.13.1 The management structures are in place to deliver interim solution, in accordance with the project objectives.

1.13.2 The scheme level governance structure illustrated in the diagram overleaf will be reviewed and refined to ensure that it is fit for purpose for the duration of the design and construction phases.

1.13.3 The figure below provides an overview of the Maternity and Gynaecology OBC project structure.

### Figure 9 – Project Management Structure




1.13.4 The interim scheme has adopted a governance structure similar to that set out in the NHS Capital Investment Manual (CIM), supported by the project management principles of the Office of Government Commerce (OGC) Achieving Excellence in Construction Procurement Guide.

1.13.5 The decision making route is clarified and fully aligned with Trust corporate governance, and distinguished from advisory groups.

## 1.14 Project Timetable

1.14.1 A full programme timetable is available as an appendix with a summary version included below. The overall scheme will be completed by November 2013.

1.14.2 Although the duration of the works may feel protracted given the current clinical risks, all care has been taken with the phasing to ensure that impact on capacity is minimised.

1.14.3 The key project milestones are set out as follows:

### Figure 10 – Project Timetable – Key Milestones

| Key Event/Task | Timing |
|---|---|
| Trust Board Approve OBC | 26th July 2012 |
| Detailed design stage including Board approval to proceed to tender | 23rd November 2012 |
| Tender period | By 21st December |
| Contractor appointment | 25th January 2013 |
| Onsite works start | 21st January 2013 |
| Phase 1 | 21st January to 3rd May 2013 |
| Phase 2 | 7th May 2013 to 21st June 2013 |
| Phase 3a | 24th June 2013 to 2nd September 2013 |
| Phase 3b | 3rd September to 1st November 2013 |
| Phase 4 | 23rd September to 1st November |

| Key Event/Task | Timing |
|---|---|
| | 2013 |
| Phase 5 | 4th November to 15th November 2013 |
| Phase 6 | 24th June to 22nd November 2013 |
| Client commissioning training | 18th November to 22nd November 2013 |
| Unit fully open | 25th November 2013 |
| Post project evaluation | 5th June 2014 |

## 1.15 Benefits Realisation

1.15.1 The Strategic Case sets out the project objectives and benefits criteria identified for this project and their relationship to the over-arching scheme. A Benefits Realisation Plan (BRP) will be used to identify both the benefits that will result from the project and a mechanism to allow these to be measured. It will involve:

- Identification of the anticipated benefits which will be consistent with those identified in the benefits appraisal exercise
- Identification of any potential disadvantages
- A description of how the benefits will be measured and a timescale for their achievement
- Identification of those responsible for delivering the benefits; and
- Identification of those responsible for monitoring the benefits.

1.15.2 To allow as seamless a transition as possible the Trust will be aiming to deliver many elements of the BRP before the changes take place.

1.15.3 The detail of this is set out in set out in section 6

## 1.16 Risk Management Strategy

1.16.1 A scheme level risk register has been structured to address directly the project work streams, which will be strengthened under the Trust governance arrangements. These are:

- General (Strategic and cross-work stream);
- Finance and Procurement;
- Estates - including Construction Risks;
- Workforce; and
- Clinical Operations

1.16.2 The responsibility for continued risk identification, assessment and management, lies with the project work streams, facilitated by the Project Manager, who will be appointed post OBC stage. The work streams will meet monthly and review the register as part of their standard agendas. Key risks are then reviewed at the decision making PSG and advisory Project Board, both monthly, and if necessary escalated to the Trust Executive Team Meeting. Overall responsibility is held by the Senior Responsible Officer.

## 1.17 Post Project Evaluation (PPE)

1.17.1 The PPE will be phased over the life of the project and aligned with the overall project timetable. The phasing of the PPE will include the following

- Evaluation of the project on completion of the project
- Evaluation of the project six months after completion. (Initial PPE); and
- Evaluation of the project 2 years after the changes have been completed. (Follow-up PPE).

## 1.18 Recommendation

1.18.1 This Outline Business Case seeks the approval of this OBC and agreement to proceed to the next stage.

**Signed:**

**Date:**

**Senior Responsible Owner**

**Project team**

# 2 The Strategic Case

## 2.1 Introduction

2.1.1 This is an OBC to invest £2.9m in creating additional physical capacity for the delivery of maternity services at the Leicester Royal Infirmary and Leicester General Hospital sites. The OBC also aims to deliver the outstanding improvements required to Gynaecology areas at both sites.

2.1.2 The case has been written with the knowledge that UHL is undertaking site reconfiguration work in responding to national changes with the less acute work being positioned closer to the patients' homes in community hospital sites and primary care centres, and acute hospitals increasingly becoming smaller and more specialised.

2.1.3 It is also written in the context of increasing financial pressures which are partly due to services being spread over three sites. For UHL in the medium to long term, the Royal Infirmary and the Glenfield Hospital will become the two acute / emergency sites and the General Hospital site will be used for planned care and day case activity. This will help to concentrate clinical expertise where it is needed most and enable resources to be concentrated on elective work and emergency work independently.

2.1.4 Whilst the title of this OBC infers that the proposals within it are equally related to maternity and gynaecology, the bulk of the proposals included in it relate to maternity alone as a significant amount of work has already been undertaken in relation to gynaecology, with only some residual changes still needed. By moving the simple gynaecology work from the LRI to the LGH one of the site reconfiguration planned changes has already been undertaken

2.1.5 Detailed changes already achieved for gynaecology include:

- The creation of/improvements to the gynaecology emergency unit at LRI Ward 1 including the redesign of estate, backlog maintenance and provision of an ultrasound scanner.
- Consolidation of Early Pregnancy Assessment Unit in Jarvis
- Increased scanning capacity in outpatients and provision of an additional toilet, scan room
- Creation of Emergency sessions and related recovery space for theatres 17 and 18 at LRI.
- Increased beds on Ward 31 LGH involving redesign of the estate, provision of additional medical gases and furniture and fittings.
- Creation of a Day of Surgery Admissions unit ( DOSA) at LGH ward 11 with day surgery unit involving redesign of estate & furniture and fittings
- Re-provision of elective activity from LRI to LGH with Laparoscopic stack system & recovery monitors to theatres.
- Increased outpatient capacity to Gynaecology outpatients at LGH involving estate redesign.

2.1.6 Many of the above estate improvements can be considered enabling works for the maternity changes as they have released space particularly on the LRI site.

2.1.7 Women's Services at UHL have a four stage plan to improve the quality of services provided and meet increasing demand. The four stages are shown below:

Stage 1: the development of a new Neonatal Unit at the LRI to meet the current activity demand – DONE

Stage 2: investment by local commissioners to improve staffing levels over a three year period (obstetricians, midwives, sonographers, anaesthetists etc) – DONE

Stage 3: centralisation of elective gynaecology work at the LGH and emergency gynaecology work at the LRI to address gynaecology quality issues and create space for the maternity service to expand in to – DONE

2.1.8 Stage 4: the capital development described in this OBC

2.1.9 The medium/long term aim for the Trust is to provide maternity services from one site and this will not be the LGH site. Achieving this will take a number of years and the pressures on services and current risk levels justify the investment in maternity services on the LGH site as an interim solution. Longer term reconfiguration may take 5-10 years to achieve. Notably in the business case the bulk of investment is on the LRI and not on the LGH site which does fit with longer term plans.

2.1.10 This case is requesting capital funding only as the three year package of revenue investment already referred to above has already been agreed with commissioners in anticipation of estate improvements at both LRI and LGH.

2.1.11 Revenue investment already secured includes:

- Increased scanning capacity to deliver a service that meets national standards and targets in both gynaecology and maternity services
- Increased obstetric consultant cover to the elective theatre sessions and ward areas and anaesthetic consultant cover to pre-assessment and maternity elective theatres
- Increase gynaecology consultant and nursing support to the emergency pathway.
- A planned package of investment to grow midwife numbers year by year until the service can achieve a sustained 1:32 midwife to birth ratio with the predicted growth in bookings and delivery numbers.

## 2.2 Structure and Content of the Document

2.2.1 This OBC has been prepared using the agreed standards and format for business cases, as set out in the Treasury guide Public Sector Business Cases using the Five Case Model: a Toolkit and is provided in accordance with HM Treasury's Green Book (a Guide to Investment Appraisal in the Public Sector) and the Capital Investment Manuals for the NHS in England, Scotland and Wales.

2.2.2 The approved format is the Five Case Model, which comprises of the following key components:

- The strategic case section. This sets out the strategic context and the case for change, together with the supporting investment objectives for the scheme
- The economic case section. This demonstrates that the organisation has selected the choice for investment which best meets the existing and future needs of the service and optimises value for money (vfm)
- The commercial case section. This outlines the content and structure of the proposed deal
- The financial case section. This confirms funding arrangements and affordability and explains any impact on the balance sheet of the organisation
- The management case section. This demonstrates that the scheme is achievable and can be delivered successfully to cost, time and quality.

2.2.3 The purpose of this Strategic Case section is to explain how the scope of the proposed scheme fits within the existing business strategies of the organisation and provides the case for change, in terms of existing and future operational needs.

2.2.4 The proposals within the OBC are for Trust Board Review and approval and will also go before the Overview and Scrutiny Committee as part of the site reconfiguration work.

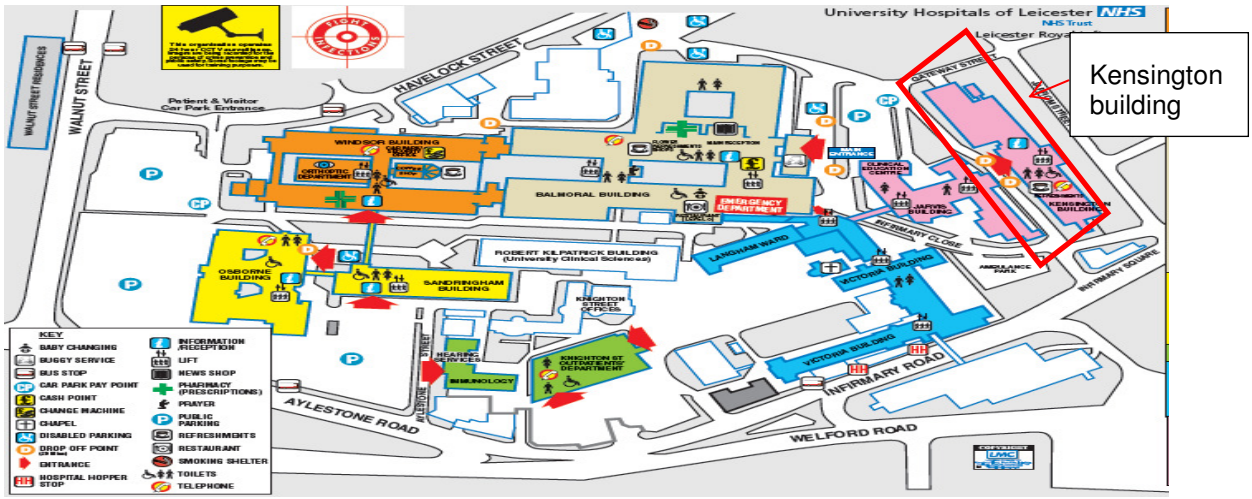
# Part A: The Strategic Context

## 2.3 Organisational Overview

2.3.1 UHL is one of the biggest NHS trusts in the country. It employs more than 10,000 staff providing a range of services primarily for the one million residents of Leicester, Leicestershire and Rutland. It has 3 main acute sites spread across the city. Site layout views are shown only for LRI and LGH. See figures below for site views. Figures 11 and 12 show LRI site views and layout.

### Figure 11 – Leicester Royal Infirmary (LRI)

### Figure 12 – Leicester Royal Infirmary - Site lay out (LRI)




2.3.2 Site views and layout views are shown for LGH below

### Figure 13 – Leicester General Hospital (LGH)

**Figure 14 – Leicester General Hospital - Site lay out (LGH)**

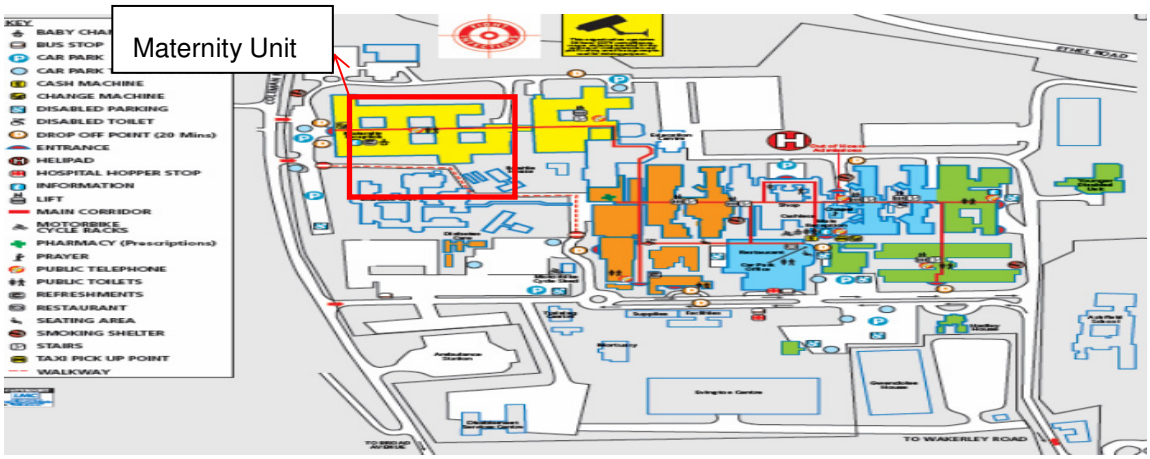


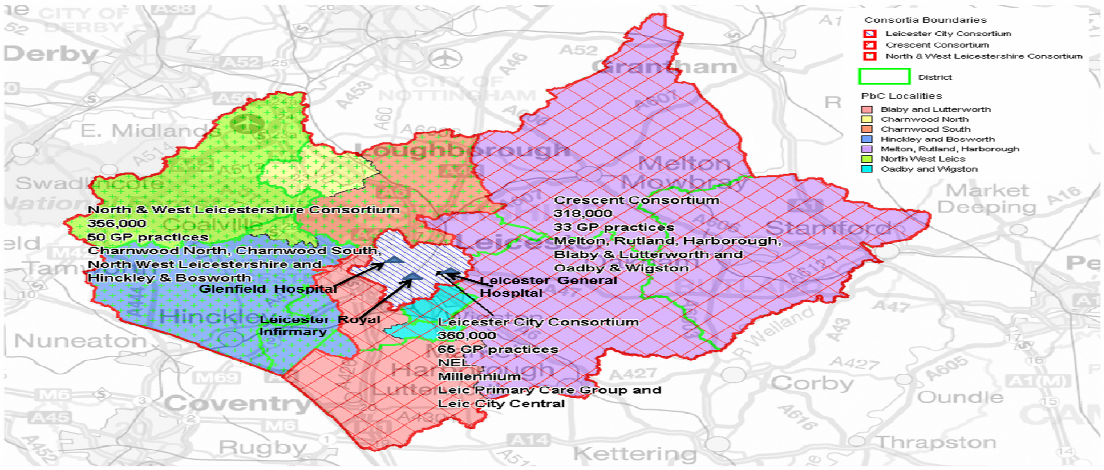

**Figure 15 – Glenfield Hospital – for Context Only (GH)**

2.3.3 Of the 3 sites, maternity and gynaecology services are provided at LRI and LGH only. For LRI maternity and gynaecology services are on levels 0, 1, 3 and 4 of the Kensington building. Neonatal services are provided at LRI level 2 Kensington. At LGH maternity services are on level 0 services only. Neonatal services are referred to in this OBC due to the critical paths between maternity and neonatal care.

2.3.4 The three acute sites are complimented by six community Hospitals of which only one - Melton Mowbray provides midwifery led maternity services (staffed and run by UHL). At the present time University Hospitals Leicester (UHL) is the main provider of maternity and gynaecology services to the Leicester, Leicestershire and Rutland population providing services for 86% of births.

2.3.5 A map of the CCGs that cover Leicester, Leicestershire County and Rutland is shown in the figure below and on this you can see how the 3 acute sites are spread across the city. Leicester City CCG is the lead commissioner for the UHL contract and therefore oversees maternity and gynaecology services.

**Figure 16 – CCG and UHL Profile**



## 2.4 Business Strategies

2.4.1 In April 2007 the Department of Health (DH) published a document entitled 'Maternity Matters'. The document highlighted a need for improvement in quality and service provision for maternity services in every locality whilst also acknowledging the existence of good practice and current best practice. Maternity Matters was built on the 'Every Child Matters: Change for Children' document that DH had published in 2004. This formed a National Service Framework that was focused on maternity services.

2.4.2 As well as Maternity Matters, there are numerous additional policies that all consistently emphasise the importance of choice, access and continuity of maternity care in a safe environment. These policies also encourage a multi-organisational approach. The key national drivers that underpin the case for change in service delivery and support safe practice include:

- Every Child Matters; Change for Children (2004)
- National Services Framework for Children (2004)
- Our Health, Our Care, Our Say (2006)
- Making it Better: For Mother and Baby (2007)
- Maternity Matters (2007)
- Review of Health Inequalities (2007)
- Safer Child Birth; NICE Guidance; Healthcare Commission of Maternity Services; and Neonatal Service standards
- Neonatal Taskforce (2009)
- Confidential Enquiry on Maternal and Child Health (CEMACH)(2008).

2.4.3 These strategies and policies have influenced the business case objectives and the benefit criteria noted in section 3.

2.4.4 Maternity and Gynaecology Services are managed by UHL's Women's and Children's Division and in 2011 the division produced a 5 year integrated business plan which was approved by the Trust Board. The plan's objectives are underpinned by the recommendations in the above policy and guidance documents.

2.4.5 The 5 Year Plan includes the following initiatives and objectives that are relevant to the production of this business case.

**Figure 17 – Business Case Objectives**

| Improvement | Objective | Outcomes | Year |
|---|---|---|---|
| Redesign and reconfigure services to improve patient experience strengthen safety and quality and | Transform, redesign and reconfigure gynaecology services | An improved, integrated gynaecology inpatient service through a smaller bed base | 1-3 |
| | | Provision of ambulatory gynaecology care and treatment services providing outpatient diagnostic and therapeutic procedures for elective patients. | 1-2 |

| Improvement | Objective | Outcomes | Year |
|---|---|---|---|
| maximize value for money | Redesign and reconfigure maternity services | Maintain level 1 CNST maternity standards, achieve level 2 and work towards level 3 | 1 |
| | | Move to PbR Pathway tariff | 1-2 |
| | | Increase midwifery WTE to reflect the increased number of deliveries to maintain current 1:33 birth/midwife ratio and work towards 1:32 to maintain quality and safety | 1 |
| | | Increase midwifery WTE towards national guidance for maternity staffing levels by achieving 1:32 and then 1:30 birth/midwife ratio to deliver the vision of a centre of excellence for maternity care | 1 |
| | | Separate elective obstetric surgical patient pathways through the provision of an elective theatre and ward on one site | 1 |
| | | Redesign the urgent/emergency assessment process to create a single point of access for non-routine assessment to create capacity in delivery suite and reduce NZ codes | 1-2 |
| | | Enhance multidisciplinary pre delivery assessment | |
| | | Work with clinical support to improve the support of anaesthetic provision for out of hours obstetrics | 2 |
| | | Expand the range of maternal medicine multidisciplinary clinics to include mental health, gastroenterology and others | 1-3 |
| | | Provide HDU maternity care on the labour suite | 2 |
| | | Increase consultant cover for labour suite to 98 hours as a staged increase to 24 hours | 2-5 |

2.4.6 The delivery of improved facilities and care pathways through this business case will enable the Trust to improve access, continuity and safety in line with the guidance and recommendations noted above.

2.4.7 The drive to improve maternity and gynaecology services is also embodied within the 2011/12 Annual Operational Plan, with investment in Maternity Services noted as a key priority for performance improvement.

## 2.5 Other Organisational Strategies

2.5.1 Whilst it is not always helpful to revisit the history of previous attempts at investment it is important to understand the background and reasons for the current critical situation in maternity services

2.5.2 Since 2005 UHL have made two attempts to improve maternity services as a result of increasing risk levels. It is important to note early on that the original built birth capacity of the two maternity units at LRI and LGH was far lower than the current levels and this is described in more detail section 2.7

2.5.3 The first attempt to improve services involved a Trust wide Private Finance Initiative (PFI) Pathway Scheme which would have seen wide scale improvements to UHL's estate including the integration of Women's Services on to the Glenfield Hospital site. This was cancelled in 2008 for a number of reasons including the level of costs associated with the scheme.

2.5.4 Following, the cancellation of the PFI, UHL identified the reduction of risk and improving the quality of Maternity and Neonatal services as one of its continuing key priorities. During 2010/11 significant improvements and extension works were undertaken to the Neonatal Unit on level 2 of Kensington building which has greatly reduced some of the risks in the Neonatal service creating additional cot spaces.

2.5.5 The second attempt was in 2009/10 culminating in the Next Stage Review Board agreeing to recommend a full new build to the PCT and UHL Boards in February 2010, as the clinically preferred option at an estimated cost of over £80m, after ruling out a series of other options, including doing nothing. The preferred option, at this time, was to create one centralised Maternity Unit at Leicester Royal Infirmary site plus antenatal and maternity care in Birth Centres in up to 2 community sites. Neonatal Support Services Levels 1, 2 and 3 would be provided at the LRI only.

2.5.6 The preferred option had wide scale support, however the financial climate in 2010 meant this option would not be deliverable in the short term. It was subsequently agreed that work would be undertaken by UHL to develop an interim scheme that would create a holding solution to 2017/18 pending future availability of capital funding. This solution would need to substantially mitigate the risks in current services which are on the UHL Trust Register. The identified risks included:

- Lack of maternity service capacity
- Substandard obstetric theatre environment,
- Lack of scanning capacity, and,
- Low midwifery and obstetric staffing levels.

# Part B: The Case for Change

## 2.6 The Case for Change

2.6.1 Summary of key issues for maternity services continue to include;

- Projected increase in number of births as demonstrated above
- Existing facilities only built to manage approximately 70% of the predicted throughput
- Lack of capacity in delivery rooms
- Lack of capacity in maternity beds
- Lack of scanning capacity
- Substandard clinical environments in maternity areas
- Substandard obstetric theatres in maternity giving increased risk of infection
- Leicester city is the 20$^{th}$ most deprived area in England
- High proportion of the population from BME groups
- High rates of infant mortality which may be linked to the population profile.

2.6.2 The East Midlands Public Health Observatory (EMPHO) was commissioned by both NHS Leicester City and NHS Leicestershire County and Rutland to undertake, comprehensive Infant and Maternal Health Equity Audits. Both these audits produced in 2009 provided an analysis and interpretation of the available data regarding the health outcomes, needs of and services provided to mothers and their infants. EMPHO accessed data from the Office of National Statistics (ONS), Hospital Episode Statistics (HES), Child Health Records and Euroking (the local maternity information system). The work incorporates information related to:

- Demography including age profiles, ethnicity, population projections and deprivation
- Births including fertility rates, trends and age specific birth rates
- Infant and maternal health indicators including birth weight and infant mortality
- Health and lifestyle equity including smoking, and breast feeding; and
- Infant and maternity service equity.

2.6.3 The Health Equity Audit for Leicester City provides a general demographic picture for Leicester which is very different to the East Midlands and England as a whole. NHS Leicester City has a much larger proportion of its population from Black and Minority Ethnic (BME) groups (41.7%) than the national proportion (15.8%). Leicester has a significantly higher proportion of females of childbearing age and a higher general fertility rate than England as a whole. NHS Leicester City is one of the most deprived cities in the Country (ranked 20$^{th}$ from the bottom) with a significantly higher proportion of its population living in the most deprived national quintile (47.3%) than both the regional (16.6%) and national (19.9%) figures. The neighbourhoods in Leicester show a large

childhood deprivation inequalities. Almost half of the childhood population in Leicester live in poverty and 44.9% of areas within NHS Leicester City rank in the lowest quintile for child wellbeing

2.6.4 Measures of infant and perinatal mortality are significantly higher in Leicester City than both the regional and national rates. The proportion of very low and low birth weight babies born in Leicester is significantly higher than the national and regional average. Teenage pregnancy rates were significantly higher than the national average (55.9 per 1000 compared to England 41.2 per 1000). Within Leicester there are significant hotspots for teenage pregnancy rates at a ward level. This clearly indicates that NHS Leicester City has a higher need for infant and maternal services than the East Midlands and England.

2.6.5 The figure below shows the projected increase in birth rate to 2017/18 and the increasing lack of capacity at UHL.

**Figure 18 – Birth Rate and Capacity Comparison**

| Historic trend | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 |
|---|---|---|---|---|---|---|
| Activity growth | | 7.6% | (1.3%) | (0.0%) | 3.5% | 0.8% |
| Deliveries | 9,848 | 10,596 | 10,456 | 10,453 | 10,824 | 10,916 |
| Deliveries per day | 27 | 29 | 29 | 29 | 30 | 30 |
| Low risk delivery rooms<br>High risk delivery rooms | 6<br>20 | 6<br>20 | 6<br>20 | 6<br>20 | 6<br>20 | 6<br>20 |
| Ward beds | 83 | 83 | 83 | 83 | 83 | 83 |
| Theatres | 3 + 1 | 3 + 1 | 3 + 1 | 3 + 1 | 3 + 1 | 3 + 1 |
| **Growth impact** | **2012/13** | **2013/14** | **2014/15** | **2015/16** | **2016/17** | **2017/18** |
| Activity growth | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% |
| Deliveries | 11,025 | 11,135 | 11,247 | 11,359 | 11,473 | 11,588 |
| Deliveries per day | 30 | 31 | 31 | 31 | 31 | 32 |
| Low risk delivery rooms<br>High risk delivery rooms<br>HDU beds | 6<br>20<br>0 | 6<br>20<br>0 | 10<br>22<br>5 | 10<br>22<br>5 | 10<br>22<br>5 | 10<br>22<br>5 |
| Ward beds | 83 | 83 | 97 | 97 | 97 | 97 |
| Theatres | 3 + 1 | 3 + 1 | 5 | 5 | 5 | 5 |

Notes:

1. Existing theatre capacity is made up of 3 theatres plus 1 clean room; this becomes 5 theatres as a result of the OBC
2. Currently, a significant amount of labour ward activity is non labouring women attending for medical review. Creating dedicated maternity assessment centres on both sites realises additional delivery rooms for

labouring women which is not shown in the additional capacity above.

3. The additional ward capacity will enable women to be transferred from a delivery room to a ward bed in a more timely manner eliminating bottle necks.
4. The maternity care pathway progresses women through different, interdependent, clinical areas which have to be used flexibly dependent on demand, therefore additional capacity will be created in all clinical areas. This will lead to less interdependence and improve the patient journey, experience and waiting times. For example, separation of emergency and elective caesarean activity.

2.6.6 Notably already during 2011/12

- 2 full closures where women have been sent to other regional centres
- 69 transfers of women were made from LRI to LGH
- 77 transfers of women were made from LGH to LRI
- Length of Stay (LOS) has shortened to critical levels

## 2.7 Investment Objectives

2.7.1 The Next Stage Review undertook extensive stakeholder engagement throughout 2009. Engagement activities took the form of stakeholder events with public and patients including 'seldom heard' groups and those in rural areas. This engagement was successful in capturing the views of a range of demographic groups, women of childbearing age, people within an age range that reflected that of the user population, people across LLR, including Rutland, people with disabilities and from people of different sexual orientations.

2.7.2 The feedback showed that any proposals needed to concentrate on

- Delivering safe services
- Ensuring access to services where birth complications could be managed
- Midwife clinics, scans, childbirth facilities and postnatal care close to home where possible
- Access to scans and examinations that are linked to obstetric care
- Access to home births if possible and midwifery led units separate or within acute hospital
- Access to active birth methods and a birthing pool.
- Areas where services could be extended or improved were identified as being: midwife-led units; more postnatal support, such as for breastfeeding; greater support for first-time parents; and improved access to antenatal care.

2.7.3 The current interim proposals focus on delivering on this feedback and further formal public, patient and stakeholder engagement is taking place through the Maternity Services Liaison Committee, Trust members, Links members, Consortia Boards and internal and external media.

2.7.4 The above feedback is reflected in the 6 investment objectives set out below which fall under four categories as follows, which have a delivery deadline set of 2013:

2.7.5 Clinical staff and resources

- Investment objective 1: Allow the separation and branding of dedicated midwifery led facilities on both sites by September 2013

2.7.6 Patient safety and outcomes:

- Investment objective 2 Deliver national screening requirements for Nuchal Translucency (NT) scans and foetal anomaly scans by September 2013
- Investment objective 3: Improve the environment of the obstetric theatres at LRI and LGH by September 2013

2.7.7 Strategic fit

- Investment objective 4: Increase maternity capacity to enable delivery of a minimum 1% growth per year. Ongoing

- Investment objective 5: Separate emergency and elective activity in both maternity services and gynaecology and increase access to ambulatory gynaecology care and treatment through an outpatient diagnostic and therapeutic procedures area by September 2013

2.7.8 Patient experience

- Investment objective 6: Provide a single point of access for non-routine assessments in maternity services to reduce inappropriate admissions and duplication, and streamline care pathways and access

2.7.9 The above investment objectives are to be considered in addition to the main benefit criteria.

## 2.8 Existing Arrangements

2.8.1 The current UHL estate profile for delivery of maternity and gynaecology services includes:

**Figure 19 – NHS Leicester, Leicestershire and Rutland Current Facilities**

| Facilities | Leicester Royal Infirmary | Leicester General Hospital | Melton Mowbray Community Hospital |
|---|---|---|---|
| **Delivery Suite** | 7 x delivery rooms<br>1 x pool room<br>1 x 4 bedded bay (Greenwood)<br>1 x 4 bedded bay (multipurpose)<br>1 x bereavement suite (Bracken) | 11 x delivery rooms<br>admissions rooms<br>obstetric beds<br>theatres<br>recovery | 2 x delivery rooms |
| **Wards / Beds** | **Ward 5**<br>26 beds<br>**Ward 6**<br>26 beds | **Ward 30**<br>32 beds<br>1 bed bereavement suite | 8 bed postnatal ward |
| **Other** | **Kensington Birth Centre**<br>5 delivery rooms (midwifery led care)<br>**Maternity Assessment Centre**<br>4 x side rooms | | |

2.8.2 The Glenfield Hospital site does not have any maternity or neonatal care.

2.8.3 As of 2011/12 the acute trust backlog maintenance for maternity care amounts to £9.8m

2.8.4 Premises condition assessments are graded as A, B, C or D under the following classifications:

- A - Ideal
- B - Acceptable
- C - Below standard
- D - Unacceptable

2.8.5 The 2014 target for this figure and other key measures of estate performance are shown below.

## Figure 20 – Leicester Royal Infirmary Maternity Unit – Current Performance and Targets for 2014

| Leicester Royal Infirmary Maternity Unit | Current Situation | Target for 2014 |
|---|---|---|
| Backlog Total | £4M | £3M |
| Physical Condition Category[i] | C | B - C |
| Fire Category | C | B |
| Health and Safety Category | B | B |
| DDA Compliance Category | B | B |
| Energy Consumption Category | C | B |
| Space Utilisation | O | F |
| Functional Suitability Category | C | B |
| Quality Category | C | B |

## Figure 21 – Leicester General Hospital Maternity Unit – Current Performance and Targets for 2014

| Leicester General Hospital Maternity Unit | Current Situation | Target for 2014 |
|---|---|---|
| Backlog Total | £2.6M | £2M |
| Physical Condition Category[ii] | B | B |
| Fire Category | B | B |
| Health and Safety Category | B | B |
| DDA Compliance Category | B | B |
| Energy Consumption Category | D | C |
| Space Utilisation | F | F |
| Functional Suitability Category | C | B |
| Quality Category | B | B |

## Figure 22 – Leicester General Hospital Gynaecology services – Current Performance and Targets for 2014

| Leicester General Hospital | Leicester General Hospital Current (m) | Leicester Royal infirmary Current (m) | Target for 2014 LGH (m) | Target for 2014 LRI (m) |
|---|---|---|---|---|
| Backlog Total (m) | £1.2m | £2m | £1m | £750K |
| Physical Condition Category[iii] | C | C | B | B |
| Fire Category | B | C | B | B |
| Health and Safety Category | B | B | B | B |
| DDA Compliance Category | B | C | B | B |
| Energy Consumption Category | D | C | B | B |
| Space Utilisation | O | O | F | F |
| Functional Suitability Category | C | C | B | B |
| Quality Category | B | C | B | B |

2.8.6 In summary the Trust's aim is to reduce back log maintenance on gynaecology areas by 1.45m by 2014 and for maternity areas at LRI and LGH to reduce back log maintenance by 1m and 600k respectively by 2014. The improvements proposed in this OBC will contribute to that reduction.

2.8.7 The figure below shows the current (2011-12) financial position for the related services.

## Figure 23 – Current Financial Profile

| 2011-12 Income & Expenditure | Maternity £m | Gynae £m | Neonates £m | Total £m |
|---|---|---|---|---|
| Patient care income | 38.9 | 14.8 | 15.2 | **68.9** |
| Other income | 3.5 | 2.8 | 1.8 | **8.1** |
| Direct and indirect costs | (27.7) | (15.1) | (12.8) | **(55.6)** |
| **Contribution to overheads** | **14.6** | **2.5** | **4.2** | **21.4** |
| Contribution to overheads % | 35% | 14% | 25% | 28% |

2.8.8 This financial profile is the Service Line Reporting (SLR) position of each specialty associated with the interim solution.

2.8.9 The financial information above has been used to give context to the capital investment. It should be noted that the position of each service is a snapshot which is subject to change on based on the impact of changes in national and local tariffs, delivery of service developments and cost improvement plans

## 2.9 Business Needs

2.9.1 The capacity of maternity services in Leicestershire is pressurised due to the rising number of births in the service as well as evidence of an increasingly complex case-mix in the population. See section 2.6.

2.9.2 The aim of the OBC is to identify a short to medium term solution to the capacity issues within Maternity Services and to ensure a high quality, value for money, equitable safe and sustainable service for the next 5 years to 2017/18 and at the same time address the current poor emergency care pathways in gynaecology.

2.9.3 The core business need to be addressed is to close the current gap in services that exists across maternity services.

2.9.4 Work will need to be undertaken during 2015/16 to revisit and refresh work undertaken in 2009/10 and through this OBC to design a long term solution to maternity service capacity.

2.9.5 Investment in additional delivery rooms and post natal beds through this interim OBC will however provide a significant increase in capacity which, with the already approved revenue investment, will give the service opportunity to repatriate any 'lost' activity and also reduce existing pressure in services whereby women that are ready to deliver are being delayed due to lack of delivery suites and post natal beds, and post natal women discharged too early.

## 2.10 Main Benefit Criteria

2.10.1 The main benefit criteria agreed by the project team and used to assess the options are set out in the table below. A detailed version with subcategories is set out in section 3. These compliment the investment objectives. The investment objectives and the benefit criteria were taken into account during the assessment of the options.

## Figure 24 – Summary Benefit Criteria

| Ref | Benefit Criteria ` |
|---|---|
| 1. | **Clinical Quality and Configuration**<br>***'Enables the provision of safe, sustainable, high quality services in line with national guidance standards and frameworks'*** |
| 2. | **Efficiency and Service Effectiveness**<br>***'More efficient and effective use of resources to reflect growing service provision'*** |
| 3. | **Flexibility**<br>***'The extent to which the development of services has the capability to respond flexibly to changes in clinical practice, activity and service delivery changes'*** |
| 4. | **Quality of the Patient Environment**<br>***'The provision of an environment that maximises the provision of high quality services'*** |
| 5. | **Acceptability**<br>***'Accepted by a full range of stakeholders'*** |
| 6. | **Training Education & Research**<br>***'Maintains and enhances education, training and research'*** |
| 7. | **Accessibility**<br>**The ease of external access to facilities and once on site to the services provided** |

## 2.11 Main risks

2.11.1 A full risk assessment has been undertaken see section 3.8, however the table below shows the main risk categories with description in relation to the proposals.

## Figure 25 – Categories of Project Risk

| Risk Category | Description |
|---|---|
| Financial risk | Risks in the design phase of the project, in particular the risk of the design failing to meet the brief or the Trust requiring changes to the design incurring additional cost. Risks relating to the accurate estimation of clinical and non-clinical operating costs of the new facilities. Instability of revenue funding. Developer contract failures |
| Clinical Risk | Patient flows do not match the new design. Patient safety is compromised. Changes to predicted birth rate. Impact on clinical standards |
| Governance Risks | Failures in communication, inadequate management of transition, adverse user experience, inadequate management of new patient flows |
| IM and T Risks | Infrastructure not fit for purpose, impact on IT set up |

| Risk Category | Description |
|---|---|
| Workforce Risks | Risks arising from unanticipated changes to the demand for clinical services. Failure to recruit staff. Reaction against new patient flows |
| Other Risks | Risks which do not fall within any of the above categories |

2.11.2 The above risks now identified have a plan for mitigation against them and key risks will be incorporated into the Trust Board Assurance Framework.

## 2.12 Potential Business Scope and Key Service Requirements

2.12.1 In putting forward this OBC the Trust is acutely aware that this interim option for maternity services will not solve all of the pressures and issues across the system and ultimately the preferred option is at present a single new build on the LRI site.

2.12.2 Having stated this, the Trust has had to balance the pros and cons of spending money on what is essentially a holding solution, with the immediate and on-going un-acceptable risks that lie in operating maternity services from the current configuration.

2.12.3 The Trust is clear that there are some minimum and maximum scope requirements to reduce the current unacceptable risk levels as follows:

2.12.4 Minimum requirements are:

- Creation of a functional gynaecology emergency unit on ward 1 LRI
- Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI
- Additional delivery suites – 4 at LRI and 2 at LGH
- Additional 12 antenatal/post natal beds– Ward 1 LRI
- Theatre improvements to reduce risk of infections. – LRI and LGH
- Change of use delivery room at LRI delivery suite to 2 bedded HDU function
- Movement of the maternity assessment suites from delivery areas – and creation of maternity assessment units on ward 2 LRI and on outpatients at LGH
- Creation of additional scanning facilities - LRI
- Creation of day surgery /admissions area for elective sections – LRI

2.12.5 Intermediate requirements are:

- Cosmetic improvements to LRI and LGH delivery suites and maternity wards including creation of en-suites (optional)
- Addition of reception space at entry to ward 5 and 6 at LRI
- Creation of a functional gynaecology emergency unit on ward 1 LRI
- Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI
- Storage improvements at LGH
- Additional delivery suites – 4 at LRI and 2 at LGH
- Additional 12 antenatal/post natal beds– Ward 1 LRI
- Theatre improvements to reduce risk of infections. – LRI and LGH
- Change of use delivery room at LRI delivery suite to 2 bedded HDU function
- Movement of the maternity assessment suites from delivery areas – and creation of maternity assessment units on ward 2 LRI and on outpatients at LGH
- Creation of additional scanning facilities - LRI
- Creation of day surgery /admissions area for elective sections – LRI

2.12.6 Maximum scope requirements are:

- As above plus:
- Addition of birthing pools x 2 at LGH/LRI
- Creation of multifunctional/induction/post natal discharge area at LRI and creation of waiting area for partners.
- Improve staff facilities at LRI including improvements to kitchen and amalgamation of 2 sitting rooms

2.12.7 To support the running of the proposed capital investment commissioners have agreed a 3 year package of revenue funding to:

- Increase scanning capacity to deliver a service that meets national standards and targets in both gynaecology and maternity services
- Increase obstetric consultant cover to the elective theatre sessions and ward areas and anaesthetic consultant cover to pre-assessment and maternity elective theatres
- Increase gynaecology consultant and nursing support to the emergency pathway.
- A planned package of investment to grow midwife numbers year by year until the service can achieve a sustained 1:32 midwife to birth ratio with the predicted growth in bookings and delivery numbers.

2.12.8 The figure below shows the expected clinical and service outcomes from both capital investment proposed and through additional revenue already secured.

## Figure 26 – Clinical and Service Outcomes

| 1. **Strategic Fit** | 2. **Patient outcomes and safetv** | 3. **Patient experience** | 4. **Clinical Staff & Resources** |
|---|---|---|---|
| • **Delivery of a service that meets or exceeds the best benchmarked maternity** and gynaecology services nationally<br>• Allows the achievement of CNST maternity standards level 3<br>• Centre of excellence for midwifery led care and maternal medicine<br>• Able to meet the demand for maternity services, keeping local activity local and have the ability to deliver capacity to 2014 | • **Increased consultant presence on delivery suite** and emergency gynaecology<br>• Enhanced MDT pre-delivery and pre-operative assessment ensuring all high risk women are identified<br>• Improved medical records management<br>• Improved provision of anaesthetic support out of hours for obstetrics<br>• Separation of emergency/elective care<br>• Improved emergency care flow - A&E through admission and home.<br>• Reduced risk rating on a number of risks on the Trust risk register in the Women's CBU and the Clinical Support Division<br>• Assurance to PCT's that services continue to be safe during this interim period.<br>• Reduced use of the second theatre on each delivery suite to address risks re inadequate size and infection prevention concerns<br>• A reduction in the number of transfers of activity and closures of the labour wards | • **Improved patient satisfaction and Family responsive pathway**<br>• Moves towards the achievement of 1:1 care of women in labour<br>• Improvement in midwife to birth ratio<br>• Reduced length of patient journey<br>• Development of one stop patient pathways<br>• Responsive to feedback from patient survey's and focus groups<br>• Choices for Women which include place of delivery, antenatal and postnatal care in line with national requirements<br>• Expanded ultrasound scanning capacity to meet national targets and standards<br>• Focus on admission avoidance and delivery of 'one stop' visits/clinics<br>• Maternity elective surgical service will improve the experience of women who will be dealt with in a timely and efficient manner reducing delays and cancellations.<br>• A dedicated service for women who present to the maternity unit who are not in established labour<br>• Improvement in the timeliness of induction of labour<br>• Reduction in the | • **Reduction in DNA's**<br>• Reduced readmissions in both maternity and gynaecology<br>• Improved recruitment and retention<br>• Continued low reference costs<br>• Reduced length of stay<br>• Increased day case rates<br>• Improved theatre and outpatient utilisation<br>• Increased number of patients treated in outpatient facilities<br>• Further reduction in follow up rates in gynaecology<br>• Reduces inpatient bed base<br>• Reduced duplication of services |

2.12.9 The main 'dis-benefits' to the OBC proposals are as follows:

- None of the proposed options achieve full integration of services on one site
- The medium and long term capacity issues are not addressed
- The staffing efficiency issues are not fully addressed
- Risk is mitigated partially but not fully

## 2.13 Constraints

2.13.1 There are a number of constraints that the business case project team have identified and these are shown below.

**Figure 27 – Constraints**

| | |
|---|---|
| **Capital cost** | **Options will need to fit within a level of capital funding available.** |
| **Timings** | **There may be a phased approach to achieving the preferred option.** |
| **Revenue cost** | **Must fit within the envelope of the Trust's medium term and long term financial plan and fit with CCG commissioning intentions.** |
| **Space** | **To achieve the option there must be an identifiable and adequate space on site.** |
| **Practical issues** | **The necessary decant of services may constrain the option timelines available under this project.** |

2.13.2 It has been acknowledged that the constraints listed would influence the final options selected.

## 2.14 Dependencies

2.14.1 The project is subject to the following dependencies that will be carefully monitored and managed throughout the lifespan of the scheme.

**Figure 28 – Dependencies**

| | |
|---|---|
| **Revenue Funding** | **That additional revenue streams allocated to maternity services are maintained in order to increase WTE staffing levels** |
| **Strategic changes** | **That the current configuration and capacity of surrounding maternity units remains the same** |

# 3 The Economic Case

## 3.1 Introduction

3.1.1 In accordance with the Capital Investment Manual and requirements of HM Treasury's Green Book (A Guide to Investment Appraisal in the Public Sector), this section of the OBC documents the wide range of options that have been considered in response to the potential scope identified within the strategic case.

## 3.2 Critical Success Factors

3.2.1 The following five Critical Success Factors for the scheme were derived from the selection criteria set by the Project Steering Group.

**Figure 29 – Critical Success Factors**

| | Success factors |
|---|---|
| **1.** | The preferred solution must enable the provision of safe, sustainable, high quality services and address the current identified gaps in care |
| **2.** | The configuration needs to be efficient and effective in terms of staff and patient flows making best use of resources to reflect growing service provision |
| **3.** | The option must enable the service to respond flexibly to changes in clinical practice and to activity and service delivery changes, |
| **4.** | The environment achieved must be synonymous with the provision of high quality services |
| **5.** | The option must have the support of the full range of stakeholders |

3.2.2 The critical success factors are used to objectively assess the potential outcomes of the preferred option.

## 3.3 The Long-Listed Options

3.3.1 A long list of options was agreed by the project team in March 2012 and are as follows:

**Figure 30 – Long List**

| Option | Summary | Notes |
|---|---|---|
| Option 1 | Do Nothing | Not included in short list as the level of risk and capacity is not addressed |
| Option 2 | Do minimum<br>Cosmetic improvements to LRI and LGH delivery suites and maternity wards including creation of en-suites (LRI only)<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Low Risk Caesarean Section procedures from delivery suite at LRI | Issues of risk and capacity not addressed but included in the short list as a baseline on which to judge other options<br>Does not create any additional delivery suite rooms other than releasing some existing delivery suite capacity and allows centralisation of emergency gynaecology care |

| Option | Summary | Notes |
|---|---|---|
| Option 3 | Cosmetic improvements to LRI and LGH delivery suites and maternity wards including creation of en-suites<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI<br>Storage improvements at LGH | Issues of risk and capacity not addressed. Fails on the majority of benefit criteria including most points in criteria 1, 2, 3, 4, 5 and 7<br>Does not create any additional delivery suite rooms other than releasing some existing delivery suite capacity |
| Option 4 | Use of Jarvis area to create midwife led unit with 10 delivery rooms and 6 birthing pools. Re-provide office/training and on call else where<br>Cosmetic improvements to LRI and LGH delivery suites and maternity wards including creation of en-suites<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI | The main failing point of the option is that risk is increased with the distance to travel and mode of travel if complications occur during a routine delivery and it reduces the critical mass of staff and activity.<br>Fails on many of the other benefit criteria. The separation of functions would not make best use of staff and resources, it reduces expansion potential, safe and easy access would be a particular issue, poor patient journey, would have low levels of support from clinical staff. Also access for patients would be compromised. |
| Option 5 | Change part of Jarvis/RMO building to create a maternity out-patient facility<br>Vacated o/p facilities on ground floor Kensington change to birthing unit. Relocate existing o/p from Jarvis<br>Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites (optional)<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI | This option was included in the short list as it partially reduces risk for maternity services, provides a full range of services, adds some capacity |
| Option 6 | Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites (optional)<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI | This option was excluded as it is sub optimal to option 9. It does not address national policy directives, does not adequately reduce risk and improve access. Efficiency of the service would remain partially compromised; no expansion potential and |

| Option | Summary | Notes |
|---|---|---|
| | Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI<br>Storage improvements at LGH<br>Additional delivery rooms – 4 at LRI and 2 at LGH<br>Additional antenatal/post natal beds (12 – 14) on Ward 1 LRI<br>Movement of the maternity assessment suites from delivery areas – and creation of maternity assessment units on ward 2 LRI and outpatients at LGH<br>Change of use delivery room at LRI delivery suite to HDU function | clinical adjacencies are not optimal |
| Option 7: | Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI<br>Storage improvements at LGH<br>Additional delivery rooms – 4 at LRI and 2 at LGH<br>Additional antenatal/post natal beds – Ward 1 LRI<br>Movement of the maternity assessment suites from delivery areas – and creation of maternity assessment units on ward 2 LRI and outpatients at LGH<br>Theatre improvements to reduce risk of infections. – LRI and LGH<br>Change of use delivery room at LRI delivery suite to HDU function | This option was excluded as it is sub optimal to option 9. It does not address national policy directives, does not adequately improve access. Efficiency of the service would remain partially compromised,<br>No expansion potential and clinical adjacencies are not optimal. It did however reduce risk around theatre quality. |
| Option 8: | Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI<br>Storage improvements at LGH<br>Additional delivery rooms – 4 at LRI and 2 at LGH | This option was excluded from the short list as it is sub optimal to option 9. It does not address national policy directives, does not adequately improve access. Efficiency of the service would remain partially compromised, not expansion potential, and clinical adjacencies are not optimal. It did however reduce risk around theatre quality plus improves on sustainability and efficiency in service location. |

| Option | Summary | Notes |
|---|---|---|
| | Additional antenatal/post natal beds (12-14) – Ward 1 LRI<br>Movement of the maternity assessment suites from delivery areas – and creation of maternity assessment units on ward 2 LRI and outpatient at LGH<br>Theatre improvements to reduce risk of infections. – LRI and LGH<br>Change of use delivery room at LRI delivery suite to 2 bedded HDU function<br>Creation of additional scanning facilities - LRI | |
| Option 9 | Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites (optional)<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI<br>Storage improvements at LGH<br>Additional delivery rooms – 4 at LRI and 2 at LGH<br>Additional antenatal/post natal beds (12-14) – Ward 1 LRI<br>Theatre improvements to reduce risk of infections. – LRI and LGH<br>Change of use delivery room at LRI delivery suite to 2 bedded HDU function<br>Movement of the maternity assessment suites from delivery areas – and creation of maternity assessment units on ward 2 LRI and on outpatients at LGH<br>Creation of additional scanning facilities - LRI<br>Creation of day surgery /admissions area for elective sections – LRI | This option was included as it is addresses national policy directives, improves access, reduces risk around theatre quality plus improves on sustainability and efficiency in service location. This represents more closely the original plans to improve maternity care. |

| Option | Summary | Notes |
|---|---|---|
| Option 10 | Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI<br>Storage improvements at LGH<br>Additional delivery rooms – 4 at LRI and 2 at LGH<br>Additional antenatal/post natal beds (12-14) – Ward 1 LRI<br>Theatre improvements to reduce risk of infections. – LRI and LGH<br>Change of use delivery room at LRI delivery suite to a 2 bedded HDU function<br>Movement of the maternity assessment suites from delivery areas – and creation of maternity assessment units on ward 2 LRI and on outpatients at LGH<br>Creation of additional scanning facilities - LRI<br>Creation of day surgery /admissions area for elective sections – LRI<br>Addition of new birthing pools x 2 at LGH/LRI | Note: was not included in the short list. It addresses national policy directives, improves access, reduces risk around theatre quality plus improves on sustainability and efficiency in service location.<br>This represents more closely the original plans to improve maternity care and is similar to option 9, but does not address the issues around relative's and staff/patient areas as well as option 11 and option 12. |
| Option 11 | Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI<br>Storage improvements at LGH<br>Additional delivery rooms – 4 at LRI and 2 at LGH<br>Additional antenatal/post natal beds (12-14) – Ward 1 LRI<br>Theatre improvements to reduce risk of infections. – LRI and LGH<br>Change of use delivery room at LRI delivery suite to 2 bedded HDU function<br>Movement of the maternity assessment suites from delivery areas – and creation of maternity | This option was excluded. It addresses national policy directives, improves access, reduces risk around theatre quality plus improves on sustainability and efficiency in service location. This represents more closely the original plans to improve maternity care and is similar to option 9, and addresses the issues around relatives areas and further improves capacity in releasing beds early and increases ability to induce more patients in a timely way and is similar to option 12 but does not have the added benefit of improving facilities for both staff and patients in terms of access to outside areas. |

| Option | Summary | Notes |
|---|---|---|
| | assessment units on ward 2 LRI and on outpatients at LGH<br>Creation of additional scanning facilities - LRI<br>Creation of day surgery /admissions area for elective sections – LRI<br>Addition of new birthing pools x 2 at LGH/LRI<br>Creation of multifunctional/induction/post natal discharge area at LRI and creation of waiting area for partners. | |
| Option 12 | Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI<br>Storage improvements at LGH<br>Additional delivery rooms – 4 at LRI and 2 at LGH<br>Additional antenatal/post natal beds (12-14) – Ward 1 LRI<br>Theatre improvements to reduce risk of infections. – LRI and LGH<br>Change of use delivery room at LRI delivery suite to a 2 bedded HDU function<br>Movement of the maternity assessment suites from delivery areas – and creation of maternity assessment units on ward 2 LRI and on outpatients at LGH<br>Creation of additional scanning facilities - LRI<br>Creation of day surgery /admissions area for elective sections – LRI<br>Addition of birthing pools x 2 at LGH/LRI<br>Creation of multifunctional/induction/post natal discharge area at LRI and creation of waiting area for partners.<br>Improve staff facilities at LRI including improvements to kitchen and amalgamation of 2 sitting rooms<br>Enable access to courtyard for staff and patients at LGH | This represents more closely the original plans to improve maternity care and is similar to option 9, and addresses the issues around relatives areas and further improves capacity in releasing beds early and increases ability to induce more patients in a timely way.<br>It also improves the environment for staff and patients in terms of outside areas. This option was included. It addresses national policy directives, improves access, reduces risk around theatre quality plus improves on sustainability and efficiency in service location. |

| Option | Summary | Notes |
|---|---|---|
| Option 13 | Use of Jarvis area to create midwife led unit with 10 delivery rooms and 6 birthing pools. Re-provide office/training and on call else where<br>Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI<br>Storage improvements at LGH<br>Additional delivery rooms – 4 at LRI and 2 at LGH<br>Additional antenatal/post natal beds (12-14) – Ward 1 LRI<br>Theatre improvements to reduce risk of infections. – LRI and LGH<br>Change of use delivery room at LRI delivery suite to 2 bedded HDU function<br>Movement of the maternity assessment suites from delivery areas – and creation of maternity assessment units on ward 2 LRI and on outpatients at LGH<br>Creation of additional scanning facilities - LRI<br>Creation of day of surgery /admissions area for elective sections – LRI<br>Improve staff facilities at LRI including improvements to kitchen and amalgamation of 2 sitting rooms<br>Enable access to courtyard for staff and patients at LGH | Notes – this option was excluded. Whilst it improves some safety aspects, adds capacity and improves the environment, the main failing point as with option 4 is that risk is increased with the distance to travel and mode of travel if complications occur during a routine delivery and reduces the critical mass of staff and activity. .<br>It also fails on many of the other benefit criteria. The separation of functions would not make best use of staff and resources, it reduces expansion potential, safe and easy access would be a particular issue, poor patient journey, would have low levels of support from clinical staff. Also access for patients would be compromised |
| Option 14 | Change part of Jarvis/RMO building to create a maternity out-patient facility<br>Vacated o/p facilities on ground floor Kensington change to birthing unit with 10 low risk delivery rooms with 5 birthing pools. Relocate existing o/p from Jarvis<br>Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures | Option 14 builds on option 5, and more fully reduces risk.<br>It addresses national policy directives, improves access, reduces risk around theatre quality plus improves on sustainability and efficiency in service location.<br>It also addresses the issues around relative's areas and further improves capacity in releasing beds early and increases ability to induce more patients in a timely way. It also improves the environment for staff and patients in terms of |

| Option | Summary | Notes |
|---|---|---|
| | from delivery suite at LRI<br>Storage improvements at LGH<br>Additional delivery rooms – 4 at LRI and 2 at LGH<br>Additional antenatal/post natal beds (12-14) – Ward 1 LRI<br>Theatre improvements to reduce risk of infections. – LRI and LGH<br>Change of use delivery room at LRI delivery suite to 2 bedded HDU function<br>Movement of the maternity assessment suites from delivery areas – and creation of maternity assessment units on ward 2 LRI and on outpatients at LGH<br>Creation of additional scanning facilities - LRI<br>Creation of day of surgery /admissions area for elective sections – LRI<br>Improve staff facilities at LRI including improvements to kitchen and amalgamation of 2 sitting rooms<br>Addition of birthing pools x 2 at LGH/LRI<br>Creation of multifunctional/induction/post natal discharge area at LRI and creation of waiting area for partners.<br>Enable access to courtyard for staff and patients at LGH | outside areas.<br>This option possibly gives the Trust the best option in terms of optimising patient pathways and increasing capacity for the future given the uncertain future of NHS funding for new builds. |

## 3.4 Short-Listed Options

3.4.1 These options were reduced to a short list of 5 at a workshop on March 27th. See **Appendix 1** attendee list. The options shortlisted are 2, 5, 9, 12, and 14.

3.4.2 The options that were not selected for the short list were removed on the following grounds:

### Figure 31 – Short List Exclusion Rationale

| Option | Reason for Exclusion |
|---|---|
| Option 1 | Level of risk and capacity is not addressed at all |
| Option 3 | Issues of risk and capacity were not addressed and it failed on the majority of benefit criteria including most points in criteria 1, 2, 3, 4, 5 and 7<br>Does not create any additional delivery suite rooms other than releasing some existing delivery suite capacity |
| Option 4 | Risk is increased with the distance to travel and mode of travel if complications occur during a routine delivery and it reduces the critical mass of staff and activity.<br>Fails on many of the other benefit criteria. The separation of functions would not make best use of staff and resources, it reduces expansion |

| Option | Reason for Exclusion |
|---|---|
| | potential, safe and easy access would be a particular issue, poor patient journey, would have low levels of support from clinical staff. Also access for patients would be compromised. |
| Option 6 | This option was excluded as it is sub optimal to option 9. It does not address national policy directives, does not adequately reduce risk and improve access. Efficiency of the service would remain partially compromised; no expansion potential and clinical adjacencies are not optimal |
| Option 7: | This option is sub optimal to option 9. It does not address national policy directives, does not adequately improve access. Efficiency of the service would remain partially compromised,<br>No expansion potential and clinical adjacencies are sub optimal. It did however reduce risk around theatre quality. |
| Option 8: | This option is sub optimal to option 9. It does not address national policy directives, does not adequately improve access. Efficiency of the service would remain partially compromised, not expansion potential, and clinical adjacencies are not optimal. It did however reduce risk around theatre quality plus improves on sustainability and efficiency in service location. |
| Option 10 | This represents more closely the original plans to improve maternity care and is similar to option 9, but does not address the issues around relative's and staff/patient areas as well as option 11 and option 12. |
| Option 11 | This option addresses national policy directives, improves access, reduces risk around theatre quality plus improves on sustainability and efficiency in service location. This represents more closely the original plans to improve maternity care and is similar to option 9, and addresses the issues around relatives areas and further improves capacity in releasing beds early and increases ability to induce more patients in a timely way and is similar to option 12 but does not have the added benefit of improving facilities for both staff and patients in terms of access to outside areas. |
| Option 13 | Whilst it improves some safety aspects, adds capacity and improves the environment, the main failing point as with option 4 is that risk is increased with the distance to travel and mode of travel if complications occur during a routine delivery and reduces the critical mass of staff and activity. .<br>It also fails on many of the other benefit criteria. The separation of functions would not make best use of staff and resources, it reduces expansion potential, safe and easy access would be a particular issue, poor patient journey, would have low levels of support from clinical staff. Also access for patients would be compromised |

3.4.3 The table below details the shortlisted options in contextual detail. This list was scored and ranked on the 27th April 2013 to deliver a preferred option. See section 3.7 for full details.

## Figure 32 – The Short List with Analysis

| Option | Summary | Notes |
|---|---|---|
| Option 2<br>Do minimum<br>Baseline option | Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites (LRI only)<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Low Risk Caesarean Section procedures from delivery suite at LRI | Issues of risk and capacity not addressed but included in the short list as a baseline on which to judge other options<br>Does not create any additional delivery suite rooms other than releasing some existing delivery suite capacity and allows centralisation of emergency gynaecology (relies on changing the current clinical pathway to not go back to labour ward post-delivery.) |
| | | |
| Option 5<br>Slightly more ambitious | Change part of Jarvis/RMO building to create a maternity (antenatal) out-patient facility<br>Vacated o/p facilities on ground floor Kensington change to10 room birthing unit. Relocate existing ground floor Jarvis functions<br>Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites (optional) (LRI only)<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI | This option was included in the short list as it partially reduces risk for maternity services, provides a full range of services, adds capacity<br>Creates total 26 delivery rooms plus 10 midwife led beds<br>Does not add maternity beds<br><br>Omitted from further work up – see para. 3.4.4 |
| | | |
| Option 9<br>Slightly less ambitious than option 5 but more areas improved<br>This option provides | Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites (optional) (LRI only)<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures | This option was included as it is addresses national policy directives, improves access, reduces risk around theatre quality plus improves on sustainability and efficiency in service location. This represents more closely the original plans to improve maternity care.<br>Adds 12-14 maternity inpatient beds, 6 midwifery led birthing rooms, 2 HDU beds, improves theatres, storage and scanning plus adds day surgery/admissions/flexible post natal |

| Option | Summary | Notes |
|---|---|---|
| an outline of the 'preferred way forward' (**not** preferred option) at Board discussion stage. | from delivery suite at LRI<br>Storage improvements at LGH<br>Additional delivery rooms – 4 at LRI and 2 at LGH<br>Additional antenatal/post natal beds (12-14) – Ward 1 LRI<br>Theatre improvements to reduce risk of infections. – LRI and LGH<br>Change of use delivery room at LRI delivery suite to 2 bedded HDU function<br>Movement of the maternity assessment suites from delivery areas – and creation of maternity assessment units on ward 2 LRI and on outpatients at LGH<br>Creation of additional scanning facilities - LRI<br>Creation of day surgery /admissions area for elective sections – LRI | area.<br>Creates separate maternity assessment suite at ward 2 LRI and outpatient area at LGH, releasing delivery suite space to create the HDU/additional delivery rooms |
| | | |
| Option 12<br><br>This option provides an outline of the 'preferred way forward' (**not** preferred option) at Board discussion stage but is slightly more ambitious | Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites(LRI only)<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI<br>Storage improvements at LGH<br>Additional delivery rooms – 4 at LRI and 2 at LGH<br>Additional antenatal/post natal beds (12-14) – Ward 1 LRI<br>Theatre improvements to reduce risk of infections. – LRI and LGH<br>Change of use delivery room at LRI delivery suite to a 2 bedded HDU function<br>Movement of the maternity assessment suites from delivery areas – and creation of | This option was included as it represents more closely the original plans to improve maternity care and is similar to option 9, and addresses the issues around relatives' areas and further improves capacity in releasing beds early and increases ability to induce more patients in a timely way. It also improves the environment for staff and patients in terms of outside areas. It addresses national policy directives, improves access, reduces risk around theatre quality plus improves on sustainability and efficiency in service location.<br>Adds 12-14 maternity inpatient beds, 6 midwifery led birthing rooms, 2 HDU beds, improves theatres, storage and scanning plus adds day surgery/admissions/flexible post natal area.<br>Creates separate maternity assessment suite at ward 2 LRI, and outpatient area at LGH releasing delivery suite space to create the HDU/additional delivery rooms.<br>Adds birthing pools, multifunctional area plus partner wait and improves |

| Option | Summary | Notes |
|---|---|---|
| | maternity assessment units on ward 2 LRI and on outpatients at LGH<br>Creation of additional scanning facilities - LRI<br>Creation of day surgery /admissions area for elective sections – LRI<br>Addition of birthing pools x 2 at LGH/LRI<br>Creation of multifunctional/induction/post natal discharge area at LRI and creation of waiting area for partners.<br>Improve staff facilities at LRI including improvements to kitchen and amalgamation of 2 sitting rooms<br>Enable access to courtyard for staff and patients at LGH | staff facilities, with access to outside courtyard for both staff and patients. |
| | | |
| Option 14<br>The most ambitious option | Change part of Jarvis/RMO building to create a maternity out-patient facility<br>Vacated o/p facilities on ground floor Kensington change to birthing unit with 10 low risk delivery rooms with 5 birthing pools. Relocate existing o/p from Jarvis<br>Cosmetic improvements to LRI and LGH delivery rooms and maternity wards including creation of en-suites (LRI only)<br>Addition of reception space at entry to ward 5 and 6 at LRI<br>Creation of a functional gynaecology emergency unit on ward 1 LRI<br>Create larger recovery area on level 1 LRI to move elective Caesarean Section procedures from delivery suite at LRI<br>Storage improvements at LGH<br>Additional delivery rooms – 4 at LRI and 2 at LGH<br>Additional antenatal/post natal beds (12-14) – Ward 1 LRI<br>Theatre improvements to reduce risk of infections. – LRI | Option 14 builds on option 5, and more fully reduces risk.<br>It addresses national policy directives, improves access, reduces risk around theatre quality plus improves on sustainability and efficiency in service location.<br>It also addresses the issues around relative's areas and further improves capacity in releasing beds early and increases ability to induce more patients in a timely way. It also improves the environment for staff and patients in terms of outside areas.<br>This option increases current delivery room numbers at LGH and LRI plus moves the 6 Kensington birth centre rooms to level 0 increasing the total number to 10<br>This gives a total of 15 obstetric rooms at LRI, 10 obstetric rooms at LGH and a purpose built collocated 10 bedded birthing unit within Kensington at LRI. Adds 12 - 14 maternity beds, 2 HDU beds, improves theatres, storage and scanning plus adds day surgery/admissions or a flexible post natal area.<br>Creates a separate maternity assessment suite at ward 2 LRI, |

| Option | Summary | Notes |
|---|---|---|
| | and LGH<br>Change of use delivery room at LRI delivery suite to 2 bedded HDU function<br>Movement of the maternity assessment suites from delivery areas – and creation of maternity assessment units on ward 2 LRI and on outpatients at LGH<br>Creation of additional scanning facilities - LRI<br>Creation of day of surgery /admissions area for elective sections – LRI<br>Addition of birthing pools x 2 at LGH/LRI<br>Creation of multifunctional/induction/post natal discharge area at LRI and creation of waiting area for partners.<br>Improve staff facilities at LRI including improvements to kitchen and amalgamation of 2 sitting rooms<br>Enable access to courtyard for staff and patients at LGH<br>Improve staff facilities at LRI including improvements to kitchen and amalgamation of 2 sitting rooms<br>Enable access to courtyard for staff and patients at LGH | releasing delivery suite space to create the HDU/additional delivery rooms. Adds birthing pools, multifunctional area plus partner wait and improves staff facilities, with access to outside courtyard for both staff and patients. |

3.4.4 At this stage the project Steering Group made the decision to not proceed with further work up of option 5 due to its low ranking in the short list and the fact that it mirrors many of the proposals already included in option 14 and falls short of delivering the range of benefits associated with options 9,12 and 14. Option 2 has been included in the further work up despite its low ranking due to the need to maintain a baseline option for comparison.

3.4.5 Detailed plans for options 2,9,12 and 14 are included as an appendix to demonstrate viability of the proposals within the current footprint of buildings at LRI and LGH. See appendix 11

## 3.5 Economic Appraisal

3.5.1 This section provides a detailed overview of the main costs and benefits associated with each of the selected options. Importantly, it indicates how they were identified and the main sources and assumptions.

### Main Benefits Criteria

3.5.2 This sub section describes the main outcomes and benefits associated with the implementation of the options in relation to business needs.

3.5.3 The benefits identified fell into the following **main** categories. In each case, the sources and assumptions underlying their use are explained.

**Figure 33 – Main Benefits**

| Type | Benefit Category |
|---|---|
| Quantitative | Measurable – for example, numbers of births able to be managed, increased LOS |
| Cash generation | For example repatriation of activity |
| Non-cash releasing | Efficiency and service effectiveness<br>Training and Education |
| Qualitative (or non-quantifiable) | Clinical quality and configuration<br>Flexibility<br>Patient environment<br>Acceptability<br>Accessibility |

3.5.4 It is important to note that this business case is focused on reducing existing clinical risk, not service cost reduction. A by-product of the OBC is the ability of the Trust to increase market share in repatriating lost activity. It is important to note also that the UHL maternity service currently has a very low reference cost position; in 2011-12 it was 0.79. This effectively represents the service being provided for just over 20% lower cost than the national average.

### Estimating Costs

3.5.5 The capital costs have been based on drawings of the proposed works prepared by Gelder and Kitchen, following briefing by the UHL maternity department and notes prepared by the Trust facilities department

3.5.6 Indicative elemental cost plans have been prepared for the construction works based on these drawings with mechanical and electrical budget costs prepared by Sutcliffe Consulting engineers

3.5.7 A Works contingency of 5% is included in all options to be carried through to tender stage and a design and price risk of 5% to reflect the early stage of design. Fees and charges have been included at 15% based on typical projects completed for UHL. There are generally no Non-Works costs, the works being phased and not requiring any temporary works

3.5.8 Equipment budgets have been estimated by the Trust based on the likely new equipment required for each option and the transfer of existing equipment

3.5.9 Inflation has been assessed based on the BIS Pubsec Indices for a start on site in the first quarter of 2012. VAT has been applied at 20% to all options with an anticipated reclaim of 20% of the VAT amount

3.5.10 It should be noted that room data sheets have not yet been prepared and the costs will be developed further during the design stage when data sheets are available

## 3.6 Net present cost findings

3.6.1 The detailed costings for each option are attached at Appendix 2.

3.6.2 The following figure summarises the key results of the economic appraisals for each option:

## Figure 34 – Key Results of Economic Appraisals

| | Undiscounted (£k) | Net Present Cost (Value) (£k) |
|---|---|---|
| **Option 2 – Do Nothing/Do Minimum/Status Quo** | | |
| Works cost | 1,481.4 | 1,442.4 |
| Fees and charges | 191.6 | 190.0 |
| Equipment | 17.4 | 17.0 |
| **Total costs for approval purposes** | **1,690.3** | **1,649.4** |
| **Option 9 - Reference Project/Outline Public Sector Comparator (less ambitious)** | | |
| Works cost | 2,416.7 | 2,365.2 |
| Fees and charges | 312.5 | 310.5 |
| Equipment | 58.0 | 56.4 |
| **Total costs for approval purposes** | **2,787.2** | **2,732.1** |
| **Option 12 - Reference Project/Outline Public Sector Comparator (more ambitious)** | | |
| Works cost | 2,520.4 | 2,465.1 |
| Fees and charges | 325.9 | 323.8 |
| Equipment | 58.0 | 56.4 |
| **Total costs for approval purposes** | **2,904.3** | **2,845.3** |
| **Option 14 - Reference Project/Outline Public Sector Comparator (radical change)** | | |
| Works cost | 8,307.7 | 8,099.4 |
| Fees and charges | 1,074.3 | 1,066.2 |
| Equipment | 261.0 | 256.1 |
| **Total costs for approval purposes** | **9,642.9** | **9,421.6** |

3.6.3 The following figure shows a summary of the results and a ranking associated with the economic appraisal of the shortlisted options.

## Figure 35 – Summary Table

| Option | Description | Undiscounted (£k) | NPC (£k) | Ranking |
|---|---|---|---|---|
| **2** | Do Nothing/Do Minimum/Status Quo | 1,690.3 | 1,649.4 | **1** |

| | | | | |
|---|---|---|---|---|
| **9** | Reference Project/Outline Public Sector Comparator (less ambitious) | 2,787.2 | 2,732.1 | **2** |
| **12** | Reference Project/Outline Public Sector Comparator (more ambitious) | 2,904.3 | 2,845.3 | **3** |
| **14** | Reference Project/Outline Public Sector Comparator (radical change) | 9,642.9 | 9,421.6 | **4** |

3.6.4 The results of the ranking above need to be considered alongside the risk and benefits appraisal below.

## 3.7 Qualitative Benefits Appraisal

3.7.1 The summary benefit criteria in figure 31 have been developed taking account of the type and scale of development proposed within the OBC. They were refined, approved, weighted and ranked during the option scoring meeting which was held on 27th March 2012. See appendix 3 for associated briefing paper. A further meeting was held on the 25th April 2012 to reduce the short list down to a manageable number of options to be taken forward for costing and first stage 1:200 plans. See appendix 4 for attendee list and appendix 5 for briefing paper.

3.7.2 The appraisal of the qualitative benefits associated with each option was undertaken by:

- Identifying the benefits criteria relating to each of the investment objectives
- Weighting the relative importance (in %'s) of each benefit criterion in relation to each investment objective
- Scoring each of the short-listed options against the benefit criteria on a scale of 0 to 10.

3.7.3 See full benefits definition table below.

### Figure 36 – Benefits Definition

| Ref | Benefit Criteria ` | Option Appraisal | Design Appraisal |
|---|---|---|---|
| **1.** | **Clinical Quality and Configuration**<br>***'Enables the provision of safe, sustainable, high quality services in line with national guidance standards and frameworks'*** | | |
| **1.1** | Enables the delivery of the proposed Service Models for Maternity and Gynaecology Care | **X** | **X** |
| **1.2** | Creates a critical sustainable mass of activity, staff and resources to deliver consistently safe, expert care | **X** | **X** |
| **1.3** | Provides a configuration of services that maximises the required service adjacencies, minimises clinical risk and enhances the overall patient experience. | **X** | **X** |
| **1.4** | Is in line with the Next Stage Review - Our NHS, Our Future, centralising care where necessary, localising where possible and yet is flexible to respond and adapt to future policy and enables consumer choice | **X** | **X** |
| **1.5** | Addresses the requirements of national and local policy for example Maternity Matters , NICE guidance, IOG guidelines | **X** | **X** |

| Ref | Benefit Criteria ` | Option Appraisal | Design Appraisal |
|---|---|---|---|
| | and relevant National Service Frameworks | | |
| **1.6** | Provides safe and clinically effective gynaecology services, minimising risk | **X** | **X** |
| **1.7** | Provides safe and clinically effective maternity services, minimising risk | **X** | **X** |
| **1.8** | Provides and sustains a full range of services to enable timely local access to services | **X** | **X** |
| **1.9** | Takes into account demography and deprivation | **X** | **X** |
| **2.** | **Efficiency and Service Effectiveness**<br>***'More efficient and effective use of resources to reflect growing service provision'*** | | |
| **2.1** | Enables provision of an efficient and effective service through appropriate location/s. | **X** | **X** |
| **2.2** | Allows provision of an effective service that maximises clinical governance whilst minimises clinical risk | **X** | **X** |
| **2.3** | Enables optimum use of all resources. | **X** | **X** |
| **2.4** | Enables provision of an efficient and effective service supported by up to date technology and information management systems | **X** | **X** |
| **2.5** | Delivers an acceptable transitional strategy: that maintains service capacity: patient accessibility; and minimises disruption during implementation | **X** | **X** |
| **2.6** | Demonstrates an efficient deliverable workforce solution that is sustainable | **X** | |
| **3.** | **Flexibility**<br>***'The extent to which the development of services has the capability to respond flexibly to changes in clinical practice, activity and service delivery changes'*** | | |
| **3.1** | Facilitates a generic approach where possible to the use of space and shared facilities whilst ensuring functionality. | **X** | **X** |
| **3.2** | Allows for expansion potential to meet new guidance; business opportunities and service demands | **X** | **X** |
| **3.3** | Accommodates changes in technology and its application to efficient delivery of services | **X** | **X** |
| **4.** | **Quality of the Patient Environment**<br>***'The provision of an environment that maximises the provision of high quality services'*** | | |

| Ref | Benefit Criteria ` | Option Appraisal | Design Appraisal |
|---|---|---|---|
| **4.1** | Enables maintenance of the patient's privacy and dignity | | **X** |
| **4.2** | Provides a welcoming environment and suitable facilities for patients, relatives and staff | | **X** |
| **4.3** | Meets the individual needs of patients. | | **X** |
| **4.4** | Provides adequate storage and space for equipment and consumables | | **X** |
| **4.5** | Provides safe and easy access to and through the building | | **X** |
| **4.6** | Meets HBN sizing guidance for space allowances in a new build solution, and achieves maximum HBNs where possible in existing estate | | **X** |
| **4.7** | Delivers the correct clinical adjacencies and optimises the patient journey | | **X** |
| **5.** | **Acceptability**<br>***'Accepted by a full range of stakeholders'*** | | |
| **5.1** | Patients, carers, relatives and visitors, voluntary agencies | **X** | **X** |
| **5.2** | Staff from all Clinical Business Units providing care and services | **X** | **X** |
| **5.3** | UHL, Commissioners and professional stakeholders – DH, SHA, PCTs and Clinical Commissioning Groups | **X** | **X** |
| **6.** | **Training Education & Research**<br>***'Maintains and enhances education, training and research'*** | | |
| **6.1** | Provide opportunities for education, training and research to be optimised | **X** | **X** |
| **7.** | **Accessibility**<br>**The ease of external access to facilities and once on site to the services provided** | | |
| **7.1** | Public transport links | **X** | **X** |
| **7.2** | Access for private vehicles and car parking | **X** | **X** |
| **7.3** | Overall patient journey | **X** | **X** |
| **7.4** | Complies with DDA requirements | | **X** |
| **7.5** | Access to the facilities is understandable by all and interpreting services will be improved by the configuration, | | **X** |

| Ref | Benefit Criteria ` | Option Appraisal | Design Appraisal |
|---|---|---|---|
| **7.6** | The environment will be culturally appropriate to all communities | | **X** |

3.7.4 The weightings shown in the figure below reflect the views of managerial and clinical staff across the health community.

## Figure 37 – Benefit Criteria Weightings

| Ref | Benefit Criteria | Weights % |
|---|---|---|
| 1 | Clinical Quality and configuration | 28.6 |
| 2 | Efficiency and Service Effectiveness | 20.0 |
| 3 | Quality of Patient Environment | 14.3 |
| 4 | Acceptability | 11.4 |
| 5 | Training and Research | 11.4 |
| 6 | Accessibility | 8.6 |
| 7 | Flexibility | 5.7 |
| | **Total** | **100** |

3.7.5 The next stage of the process was to apply the benefit criteria to each shortlisted option to quantify/judge the non-financial or qualitative benefits it delivers.

3.7.6 The guide to scoring options is shown below.

## Figure 38 – Option Scoring Table

| Score | Evaluation |
|---|---|
| 10 | Could hardly be better |
| 9 | Excellently |
| 8 | Very well |
| 7 | Well |
| 6 | Quite well |
| 5 | Adequately |
| 4 | Somewhat inadequately |
| 3 | Badly |
| 2 | Very badly |

| Score | Evaluation |
|---|---|
| 1 | Extremely badly |
| 0 | Could hardly be worse |

### Option Ranking

3.7.7 The results of the option scoring exercise are summarised and shown in the following figure. See Appendix 6 for the full set of scoring sheets.

**Figure 39 – Summary of Option Scoring Results**

| Ref. Principle | Benefit Criteria Group | Weight % | Option 2 | | Option 9 | | Option 12 | | Option 14 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | W | Score | WxS | Score | WxS | Score | WxS | Score | WxS |
| 1 | Clinical Quality and Configuration | 28.6 | 2 | 57.2 | 6 | 171.6 | 7 | 200.2 | 6 | 171.6 |
| 2 | Efficiency and Service Effectiveness | 20 | 2 | 40 | 6 | 120 | 7 | 140 | 4 | 80 |
| 3 | Quality of Patient Environment | 14.3 | 3 | 42.9 | 6 | 85.8 | 7 | 100.1 | 6 | 85.8 |
| 4 | Acceptability | 11.4 | 3 | 34.2 | 6 | 68.4 | 7 | 79.8 | 5 | 57 |
| 5 | Training and Research | 11.4 | 2 | 22.8 | 5 | 57 | 5 | 57 | 5 | 57 |
| 6 | Accessibility | 8.6 | 3 | 25.8 | 4 | 34.4 | 4 | 34.4 | 3 | 25.8 |
| 7 | Flexibility | 5.7 | 1 | 5.7 | 4 | 22.8 | 5 | 28.5 | 6 | 34.2 |
| | **Total** | **100** | | 228.6 | | 560 | | 640 | | 511.4 |
| | **Rank** | | | **4** | | **2** | | **1** | | **3** |

## 3.8 Risk

3.8.1 This section sets out the process used to assess the risks associated with the top 4 shortlisted options for the project as well as the baseline option. The Management Case describes the Risk Management Plan for the preferred option.

3.8.2 Together with financial and benefits appraisal, risk assessment is one of the core processes to be undertaken in determining the preferred option at outline business case stage. The process followed by the Project Team has included three stages:

- Risk Identification – developing a risk register covering all risks associated with the project
- Risk Assessment – assessing each short-listed option against the risks identified in the risk register, in terms of both impact and probability, to determine the overall level of risk exposure of each option.

- Risk Management – developing, for the preferred option, a risk management plan to manage the risks identified by the risk assessment. This includes identifying who is responsible for managing the risk and what contingency or mitigation measures are to be put in place.

3.8.3 A comprehensive list of risks likely to impact on the project was identified by the Project Team. The risks assessed fell into the categories shown in the table below.

3.8.4 The Project Team, together with appropriate colleagues, undertook an assessment of the impact and probability of each risk occurring for each of the short-listed options at a workshop on 30th April 2012. See appendix 7 for list of attendees. These risks were also compared to the Trust existing Project Risk Register.

3.8.5 The scoring process and definitions are shown in figures 32 and 33 below, which gives a brief summary of the categories used for assessing the potential impact on the project of each risk occurring and the scoring system:

## Figure 40 – Categories of Project Risk

| Risk Category | Description |
|---|---|
| Financial risk | Risks in the design phase of the project, in particular the risk of the design failing to meet the brief or the Trust requiring changes to the design incurring additional cost. Risks relating to the accurate estimation of clinical and non-clinical operating costs of the new facilities. Instability of revenue funding. Developer contract failures |
| Clinical Risk | Patient flows do not match the new design. Patient safety is compromised. Changes to predicted birth rate. Impact on clinical standards |
| Governance Risks | Failures in communication, inadequate management of transition, adverse user experience, inadequate management of new patient flows |
| IM and T Risks | Infrastructure not fit for purpose, impact on IT set up |
| Workforce Risks | Risks arising from unanticipated changes to the demand for clinical services. Failure to recruit staff. Reaction against new patient flows |
| Other Risks | Risks which do not fall within any of the above categories |

## Figure 41 – Risk Impact Scores

| Impact on Project | Score |
|---|---|
| No impact on project costs, timescales for delivery or quality of service provided | 0 |
| Negligible impact – insignificant slippage on delivery date or increase in cost AND/OR quality of service barely affected | 1 |
| Medium-low impact – up to 5% increase in costs or slippage on delivery date AND/OR some minor quality failures | 2 |
| Moderate impact – 5% to 10% increase in costs or schedule slippage AND/OR noticeable quality reductions | 3 |
| Medium-high impact – 10% to 25% increase in cost or delivery timescales AND/OR significant quality failures | 4 |

| Impact on Project | Score |
|---|---|
| Major impact – increase of 25% or more on costs or delivery timescales AND/OR serious and unacceptable quality failures | 5 |

3.8.6 This figure describes the categories used to assess the probability of the risk occurring in the project:

## Figure 42 – Risk Probability Scores

| Likelihood of Occurrence | Score |
|---|---|
| No probability of risk occurring (0% likelihood) | 0 |
| Occurrence is very unlikely | 1 |
| Occurrence possible but unlikely | 2 |
| Occurrence moderately likely | 3 |
| Occurrence very likely | 4 |
| Certainty that risk will occur (100% likelihood) | 5 |

3.8.7 The score for each risk for each option is therefore calculated as follows: Impact x Probability = Risk Score (minimum 0, maximum 25). This is illustrated in the figure below:

## Figure 43 – Risk Score Matrix

| | | IMPACT | | | | | |
|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 |
| LIKELIHOOD | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 1 | 2 | 3 | 4 | 5 |
| | 2 | 0 | 2 | 4 | 6 | 8 | 10 |
| | 3 | 0 | 3 | 6 | 9 | 12 | 15 |
| | 4 | 0 | 4 | 8 | 12 | 16 | 20 |
| | 5 | 0 | 5 | 10 | 15 | 20 | 25 |

3.8.8 The output of the risk scoring exercise of the 36 categories in relation to the short-listed options is summarised below (where lower score is favourable):

## Figure 44 – Risk Scores of Short-Listed Options

| Options | 2 | 9 | 12 | 14 |
|---|---|---|---|---|
| Risk Score | 264 | 196 | 193 | 311 |

| Rank | 3 | 2 | 1 | 4 |
|---|---|---|---|---|

3.8.9 Options 9 and 12 have the lowest risk, this is partly due to the fact that these options address the capacity and environmental issues, but also they are less complex than option 14 and do not impact on patient pathways in the way that option 14 does. Option 2 is relatively high as the current risks in maternity are not mitigated at all.

3.8.10 The detailed risk assessment scores for each option are included in the **Appendix 8.** It is important to note that the minimum score possible is 0 and the maximum is 900, when scores across 36 categories are aggregated.

3.8.11 The main business and service risks associated with the potential scope for this project are shown in **Appendix 9** together with their counter measures.

3.8.12 The results of investment appraisal are as follows:

3.8.13 Note option 5 has been removed from the scoring sheet and did not get taken through the risk appraisal as it was deemed similar but inferior to option 14 and was removed from the short list for costing purposes and has also been removed from figure 36.

3.8.14 The figure below gives a summary of overall results

**Figure 45 – Evaluation Scores of Short-Listed Options**

| Option Ranking | Option 2 | Option 9 | Option 12 | Option 14 |
|---|---|---|---|---|
| Economic appraisals | 1 | 2 | 3 | 4 |
| Risk appraisal | 3 | 2 | 1 | 4 |
| Benefits appraisal | 5 | 2 | 1 | 3 |
| **Overall Rank** | **3** | **2** | **1** | **4** |

## 3.9 Conclusion

3.9.1 The preferred option is Option 12 because it most fully addresses the critical success factors, the benefit criteria and has the lowest risk score. Notably it delivers 6 more delivery rooms in line with projected usage to 2021, and adds 12 maternity inpatient beds and a flexible area. It also has potential to add the most capacity and flexibility for the future should services need to expand further during times of high usage. The additional capacity is supported by the full range of maternity infrastructure including staffing to reduce risk on an interim basis.

## 3.10 Sensitivity Analysis

3.10.1 During the course of the option scoring workshop the team's maximum and minimum scores were recorded and substituted into the benefits appraisal scoring matrix above to see if the ranking of options changed.

3.10.2 On assessing the results of the high and low values, for the highest score there is no change in ranking to the top 2 options. When assessing the lowest score the top option, option 12 retains its highest ranking whilst option 14 becomes the second highest scorer followed by option 9 in third place

3.10.3 As the OBC relates almost entirely to capital costs, sensitivity in the costings has been accounted for using the inflationary and optimism bias allowances. The case is not supported by variables which can be tested any further than this already takes account of.

# 4 Commercial Case

## 4.1 Introduction to Section

4.1.1 The purpose of this section of the business case is to set out:

- The decision making process undertaken by the Trust in selecting the procurement route to deliver this OBC
- The procurement process proposed to be undertaken to select a private sector commercial partner (PSCP) as preferred developer
- Evidence to demonstrate that the Trust has complied with approval conditions and regulations around procurement.

4.1.2 The aims of the review were to develop a robust procurement process that:

- Addressed the DH approval conditions
- Met the project goals of affordability, quality and timetable
- Ensured that the recommendation(s) would fit with central guidance and best practice.

### Procurement Routes Covered by the Review

4.1.3 In developing its contract procurement strategy the Trust set up an Evaluation Team of key Trust representatives, which covered all areas of governance, to select the most appropriate procurement option for the maternity and gynaecology interim proposals.

4.1.4 The three options considered were:

- Procure 21 – where a consortium under the control of a Principle Supply Chain Partner works in partnership with the Trust to negotiate a total scheme package which includes design, quality and construction within an approved NHS framework
- Design and Build – where a contractor undertakes the detailed scheme design and submits the design and tender cost based on their interpretation of a schedule of requirements provided by the Trust
- Traditional – where the Trust engages an independent design team to develop the design in agreement with the Trust and procures the works through a tender process to select a contractor.

4.1.5 A fourth option, PFI, was removed from the shortlist on the grounds that the maternity scheme cannot meet the minimum financial constraints of PFI.

4.1.6 Alternative procurement options were not added as they did not meet the selection criteria defined in Concode1, in that the Maternity scheme is a one-off contract where the specification and extent of works can easily be defined, it has a relatively low contract value and although the urgency to complete the scheme is important, it is not the single most important factor.

4.1.7 The outcome of the procurement option appraisal exercise was that a traditional procurement route consistently rated highest when evaluated against other more traditional forms of contract.

4.1.8 The reasons for de-selection of Procure 21 are that it lends itself to large fast track schemes with open access to all work areas. The proposed project is spread over two sites and several departments which impacts on other adjacent directorates.

4.1.9 Design and build was de-selected because it is best used on new, open site projects and not pre-determined fractionalised units of work.

### Reasons for Selecting a Traditional Procurement Route for the OBC

4.1.10 A traditional route has been recommended as the preferred procurement method for the delivery of the interim Maternity and Gynaecology solution for the following reasons:

- It is the only procurement route able to deliver this phase of the project within the project timetable. (See Section 6)
- The evaluation of the commercial aspects of the route demonstrate that this offers value for money in the current market conditions

- The Trust will benefit from the appointment of technical advisors involvement in the early design and innovation that can be brought to this phase of the project.
- There is sufficient experience of available contractors to undertake the type of work included in the interim solution thereby ensuring an appropriate level of competition
- Risk can be placed with the party best able to manage it (See figure 39)
- The works to be undertaken across the two sites are fragmented and individually fairly small
- The requirements for each element of construction are well defined and not susceptible to extreme change
- Clinical support for the estate changes has already been secured.
- This procurement route is in compliance with current central NHS and the wider public sector procurement guidance.

### Traditional Procurement Process

4.1.11 By the traditional route the design is developed by the Trust and a tender issued for a contractor to build to the Trusts brief.

4.1.12 The Trusts is responsible for the design information and issuing this in a timely manner to the contractor

4.1.13 The advantages of this route are:

- Earlier and more accurate estimation of costs from a defined design
- Trust controls the quality
- Contractor selected on basis of best offer
- More control of cost variations

4.1.14 The disadvantages are

- Capital funding is required
- Trust holds the majority of the risk
- Design needs to be fully developed before a contractor can be appointed

4.1.15 In agreeing the traditional procurement route the Trust is satisfied that the risks around the noted disadvantages can be adequately managed.

4.1.16 The predicted capital costs of the building works are below the OJEU thresholds of £4,348,350 therefore OJEU publication is not required.

### Required Services

4.1.17 Required services are as follows:

**LRI**

- Structural changes plus refurbishment to maternity and gynaecology areas on levels 0,1, 3 and 4 in Kensington building LRI, comprising the following:
- Cosmetic improvements to delivery rooms and maternity wards including creation of en-suites
- Addition of reception space at entry to ward 5 and 6
- Creation of a functional gynaecology emergency unit on ward 1
- Create larger recovery area on level 1 to move elective Caesarean Section procedures from delivery suite
- Four additional delivery rooms
- 12 Additional antenatal/post natal beds– Ward 1
- Theatre improvements
- Change of use delivery room at on delivery suite to a 2 bedded HDU

- Movement of the maternity assessment suites from delivery area – and creation of maternity assessment units on ward 2
- Creation of additional scanning facilities
- Creation of day surgery /admissions area for elective sections
- Addition of one birthing pools
- Creation of multifunctional/induction/post natal discharge area, and creation of waiting area for partners.
- Improve staff facilities including improvements to kitchen and amalgamation of 2 sitting rooms.

**LGH**

4.1.18 Structural changes plus refurbishment to maternity areas on ground floor in the maternity unit at LGH, comprising the following:

- Cosmetic improvements to delivery rooms and maternity wards
- Storage improvements
- Two additional delivery rooms
- Theatre improvements
- Movement of the maternity assessment suites from delivery area and creation of maternity assessment units within current outpatients
- Addition of 1 birthing pool
- Enabling of access to courtyard for staff and patients.

4.1.19 To achieve the above the following external support services will be required to be appointed:

- Project Director
- Mechanical and Engineering Consultant
- Architectural Services
- Quantity Surveyor
- Construction Company
- CDM coordinator
- Infection Prevention
- Fire Safety Advisor
- Clerk of Works
- Building control

### Potential for Risk Transfer

4.1.20 The general principle is that risks should be passed to 'the party best able to manage them', subject to value for money.

4.1.21 Figure 46 provides an assessment of how the associated risks might be apportioned between the trust and the contractor/s

**Figure 46 – Risk Transfer Matrix**

| Risk Category | Potential allocation | | |
|---|---|---|---|
| | Public/Trust | Private | Shared |
| 1. Design risk | X | | |
| 2. Construction and development risk | | | X |
| 3. Transition and implementation risk | X | | |
| 4. Availability and performance risk | | | X |
| 5. Operating risk | X | | |
| 6. Variability of revenue risks | X | | |
| 7. Termination risks | | | X |
| 8. Technology and obsolescence risks | | | X |
| 9. Control risks | | | X |
| 10. Residual value risks | X | | |
| 11. Financing risks | X | | |
| 12. Legislative risks | X | | |
| 13. Other project risks | | | X |

## 4.2 Proposed Charging Mechanisms

4.2.1 The Trust intends to make payments in relation to the proposed products and services as follows

4.2.2 Monthly progress payments made in arrears on valuation via Quantity Surveyor and certification by the contract administrator up to the tendered amounts and retentions if applicable

## 4.3 Proposed Contract Lengths

4.3.1 A contract length of 10 months is proposed for the completion of building works on both sites.

## 4.4 Proposed Key Contractual Clauses

4.4.1 We envisage that a standard form of building contract would be used in this case. J.C.T. Standard Form of Building contract 2011.

## 4.5 Personnel Implications (including TUPE)

4.5.1 There are no personnel implications as a result of this procurement process

## 4.6 FRS 5 Accountancy Treatment

4.6.1 These assets are being funded by PDC and will be accounted for according to the Trusts accounting policies for fixed assets.

4.6.2 The cost of the improvements will be capitalised as a number of separate assets or additions to existing assets, each with their own lives. On coming into use those assets with will be valued and any difference between their valuation and cost will be written off to the revaluation reserve, if one exists for that asset or to expenditure. On coming into use the assets will then start to be depreciated.

## 4.7 Procurement Strategy and Implementation Timescales

4.7.1 As part of the approved procurement strategy the Trust is committed to competitively tendering the works.

4.7.2 The scheme will be competitively tendered based on designs and specifications prepared on behalf of the Trust by appointed consultants.

4.7.3 Specific requirements will be applied to the procurement process whereby 100% of the subcontracted works will be market tested to prove value for money is being achieved. Tender lists of 3 or more specialist subcontractors shall be agreed for each works package."

## 4.8 Equipment

4.8.1 The OBC assumes that all existing equipment would be transferred where appropriate

4.8.2 Where a department requires capital investment in new equipment to replace their existing equipment, funding will be sourced in the normal way via the Trust's capital bidding process which prioritises the Trust's capital resource limit within the available budget.

4.8.3 The procurement route for funded replacement equipment and any equipment requirements within the decant budget not procured via the contractor will be via:

- A framework agreement
- A competitive tender undertaken by the Trust
- An existing Trust contract for replacement equipment.

# 5 Financial Case

## 5.1 Introduction

5.1.1 The forecast financial implications of the preferred option (as set out in the economic case section) and the proposed deal (as described in the commercial case) are dealt with in this section of the OBC.

5.1.2 An overview of the option 12 is set out in the following figure with the detailed supporting costing included in appendix 2.

**Figure 47 – Summary of Financial Appraisal**

| Preferred option: Option 12 - Reference Project/Outline Public Sector Comparator (more ambitious) | 2012-13 £k | 2013-14 £k | 2014-15 £k | 2015-16 £k | Total £k |
|---|---|---|---|---|---|
| Works cost | 919.1 | 1,567.6 | 33.6 | 0.0 | **2,520.4** |
| Fees and charges | 263.8 | 60.8 | 1.3 | 0.0 | **325.9** |
| Equipment | 11.6 | 46.4 | 0.0 | 0.0 | **58.0** |
| **Total costs for approval purposes** | **1,194.5** | **1,674.8** | **34.9** | **0.0** | **2,904.3** |
| **Funded by**: Trust capital programme – internal resources | | | | | |
| **Note:** There are £35k per year revenue costs associated with the planned capital expenditure which include additional hotel services, estates maintenance and energy costs. | | | | | |

## 5.2 Impact on the financial statements

5.2.1 The proposed expenditure will be capitalised on balance sheet of the Trust and depreciated over the assumed 10 year life of the resultant assets.

5.2.2 The associated revenue consequences are split between those which relate to expanding staffing capacity and the revenue costs associated with the capital works.

5.2.3 The revenue costs of increasing the staffing capacity linked to this OBC were approved by the UHL Trust Board and PCT Boards in December 2010. As a result the associated costs already form part of the Trust baseline and have been included in Trust future plans, they are therefore not subject to further approval alongside the capital costs in this OBC.

5.2.4 The revenue consequences of the capital works were not included in what has been previously approved so it is important to note the estimate of £35k per year associated with the planned capital expenditure.

## 5.3 Overall Affordability

5.3.1 The proposed capital cost of the project is £2.9m over the 3 years of the expected lifespan of the contract. This excludes provision for inflation (£93k).

5.3.2 This cost is split across 3 financial years in which the Trust has a capital plan of approximately £26m per year. The case therefore represents 5-7% of the Trusts capital resource in 2012-13 and 2013-14.

5.3.3 The Trust capital plans already have funds allocated for this purpose making the identified costs affordable to the Trust.

# 6 The Management Case

## 6.1 Introduction

6.1.1 The OBC for the interim scheme sets out the delivery strategy for the overall development including the scheme timetable, governance structure, procurement, risk management and benefits realisation strategies.

6.1.2 The approach to Technical Advisers will be outlined in this section, as well as the contract management strategy. The procurement strategy, both for the project and scheme as a whole, is however addressed in the commercial case of this document.

6.1.3 The Trust's approach to involving key stakeholders is described, followed by the strategy for developing benefits realisation, and the risk management process that has been adopted.

6.1.4 The workforce impacts of the project are explored, along with the approach to IM&T and finally the Trusts plans for publication of key project documents.

## 6.2 Project Governance

6.2.1 The management structures are in place to deliver interim solution, in accordance with the project objectives. Additional Project Director support will be sought to strengthen the management team.

6.2.2 The scheme level governance structure allows clarity of decision-making routes, as well as aligning with the approved procurement route. This is illustrated in the diagram overleaf.

6.2.3 The interim scheme has adopted a governance structure similar to that set out in the NHS Capital Investment Manual (CIM), supported by the project management principles of the Office of Government Commerce (OGC) Achieving Excellence in Construction Procurement Guide.

6.2.4 This has enabled strengthened integration of the existing work streams (Finance & procurement; Clinical operations; Workforce and Estates Development), forming a decision making forum for the work stream leads.

6.2.5 The decision making route is clarified and fully aligned with Trust corporate governance, and distinguished from advisory groups.

6.2.6 Prince 2 methodology will be used to project manage the delivery of the preferred construction and service solution.

**6.2.7** A summary of the integrated approach proposed, is illustrated in the diagram overleaf. This will need to revisited post OBC approval.

## 6.3 Project Timetable

6.3.1 The timetable has been developed with regard to the internal pressures on clinical services.

6.3.2 The current scheme level master timetable is included in Appendix 10 Project Programme and is summarised below. The overall works will be completed by the middle of November 2013.

6.3.3 The key project milestones are set out below

**Figure 48 – Project Timetable – Key Milestones**

| Key Event/Task | Timing |
|---|---|
| Trust Board Approve OBC | 26th July 2012 |
| Detailed design stage including Board approval to proceed to tender | 23rd November 2012 |
| Tender period | By 21st December |
| Contractor appointment | 25th January 2013 |

| | |
|---|---|
| Onsite works start | 21st January 2013 |
| Phase 1 | 21st January to 3rd May 2013 |
| Phase 2 | 7th May 2013 to 21st June 2013 |
| Phase 3a | 24th June 2013 to 2nd September 2013 |
| Phase 3b | 3rd September to 1st November 2013 |
| Phase 4 | 23rd September to 1st November 2013 |
| Phase 5 | 4th November to 15th November 2013 |
| Phase 6 | 24th June to 22nd November 2013 |
| Client commissioning training | 18th November to 22nd November 2013 |
| Unit fully open | 25th November 2013 |
| Post project evaluation | 5th June 2014 |

6.3.4 The phases of the refurbishment and construction are shown in the figure below:

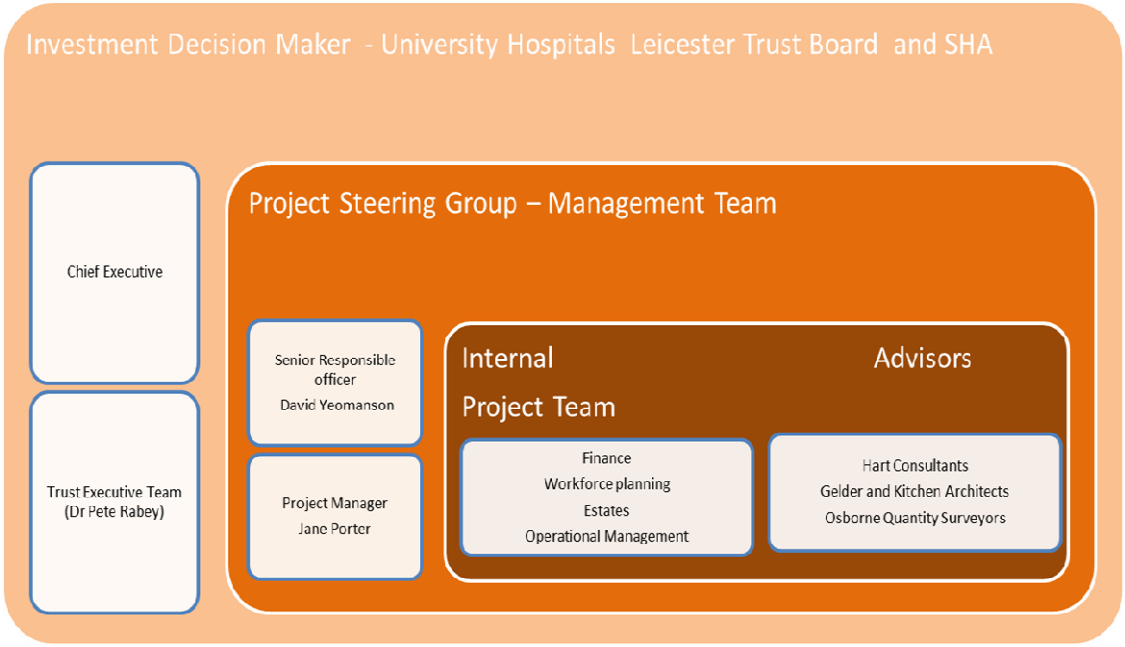
**Figure 49 – Scheme Values and Milestones**

| | **Cost excl VAT, Optimism Bias and inflation, at BIS PUBSEC** | **Timetable** |
|---|---|---|
| **Phase** | **Forecast Out-turn £k** | **Construction period** |
| Phase 1 | 1,087 | 21st January to 3rd May 2013 |
| Phase 2 | 122 | 7th May to 21st June 2013 |
| Phase 3a | 177 | 24th June to 2nd September 2013 |
| Phase 3b | 291 | 3rd September to 1st November 2013 |
| Phase 4 | 143 | 23rd September to 1st November |
| Phase 5 | 71 | 4th November to 15th November 2013 |
| Phase 6 | 657 | 24th June to 22nd November 2013 |
| **Total** | **2,549** | |

## 6.4 Project Structure, Skills and Resources

6.4.1 The figure below provides an overview of the Maternity and Gynaecology OBC project structure.

**Figure 50 – Project Management Structure**




6.4.2 The role of each body is summarised below.

### SHA

6.4.3 Whilst the SHA does not have responsibility for approval of the scheme due to the value being below 3m, they are an interested party and the Trust will be communicating progress. They are therefore noted on the structure diagram.

### Trust Board

6.4.4 The Trust Board is the investment decision maker in relation to major capital projects. The project senior responsible owner (SRO) David Yeomanson reports to Dr Peter Rabey who is the Divisional representative on the Executive Team that reports to the Trust Board.

### Project Steering Group

6.4.5 The Project Steering Group is supported by two 'core teams', the first of which is the Internal Project Team. This team is responsible for developing the Outline Business Case. This team includes internal experts representing functions such as estates and finance, alongside expert external advisers such as Gelder and Kitchen, and Osbornes.

### Technical Advisors

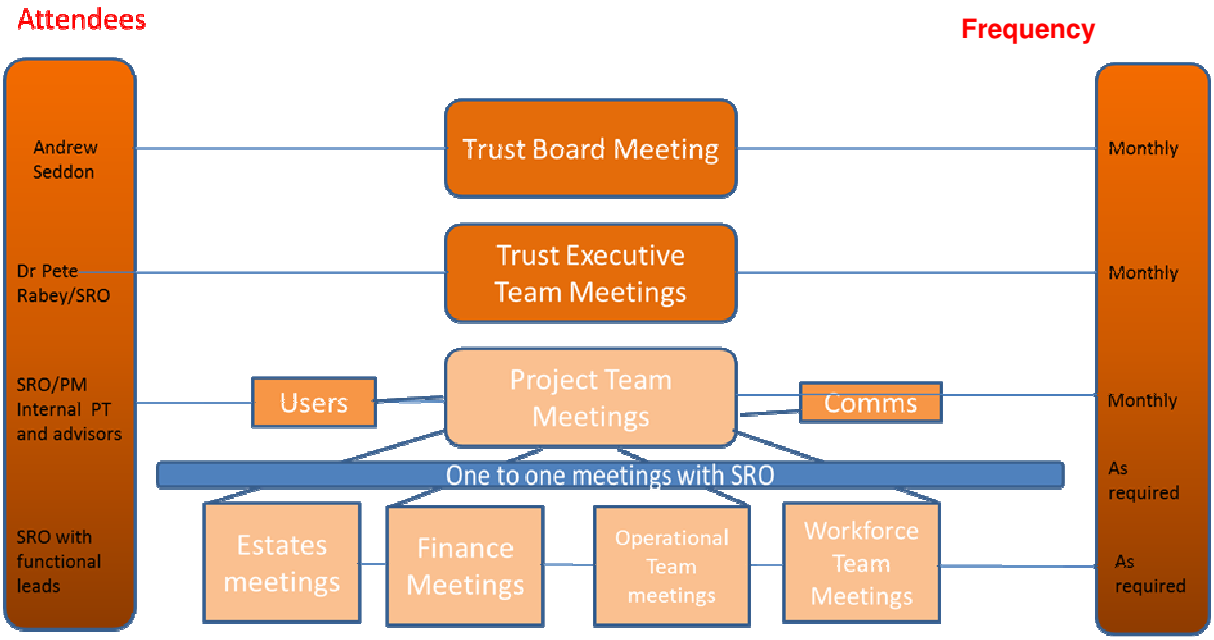
6.4.6 A set of experienced Technical Advisers have been in place to produce this OBC. Members of the advisor and internal project teams form a Design Team which is led by Gelder and Kitchen and has been commissioned by the Trust to support the development of the Estates Annex elements of the Outline Business Case. Key internal support is provided by UHL Deputy Director of Facilities. Key external support is provided by Osbornes Quantity Surveyors and Hart Consultants.

6.4.7 The decision making route and meeting hierarchy which flow from the governance structure is illustrated in the following diagram.

### Meeting hierarchy

6.4.8 A combination of both formal and informal meetings have been used to develop the OBC. These are shown in the figure below.

**Figure 51 – Meeting Hierarchy**




## 6.5 Use of Technical Advisers Contract Management Strategy

6.5.1 Wherever possible a whole-scheme approach has been adopted to the appointment of technical advisers. The project structure of the interim solution includes a number of external Technical Advisers responsible directly to the Senior Responsible Officer and advising on issues relating to their expertise and roles

6.5.2 These external advisers have been employed to provide skills and resource which are not available within the in-house project team. Key external advisors employed by the Trust are shown in the diagram below.

**Figure 52 – Key Partners**

**Key partners - OBC stage**

- Health-planning and Business Case Advisors – Hart Consultants
- Design Consultants – Gelder and Kitchen
- Cost Consultants – Osborne Quantity Surveyors

**Potential Key partners - Post OBC Approval**

- Design & construction – Subject to tender
- Design Consultants
- Cost Consultants
- CDM coordinator
- Infection Prevention
- Fire Safety Advisor

6.5.3 Governance structures and key partners will need to be revisited and revised after OBC approval to ensure that they meet the on-going needs of the design and construction phase.

## 6.6 Stakeholder Involvement and Consultation

### The Engagement Process

6.6.1 Wide scale engagement took place throughout November 2009 to determine what people wanted and needed from maternity services. A briefing document and questionnaire was prepared and made available in both paper based and web-based form. Engagement activities took place as follows:

- A stakeholder mapping workshop to understand who our stakeholders were, and their importance in relation to this issue.
- Three stakeholder events:
  - Aylestone Leisure Centre, Leicester, 11 November - 52 attendees
  - Hinckley Leisure Centre, 18 November – 25 attendees
  - Melton Covenant Life Church, 19 November – 28 attendees

6.6.2 A series of engagements took place with 'seldom heard' groups including Gypsy Travellers, South Asian women, young people, and asylum seekers. In addition a Pacesetters Maternity Project had earlier conducted interviews with 15 Bangladeshi women and this was fed into the engagement process. Engagement with other groups such as people with learning disabilities and people in rural areas also took place. This included:

- A questionnaire asking what people would like from services, available in paper format and on-line
- A letter was sent out to over 1,600 new mothers who had given birth during a six week period over the last 12months, inviting them to complete the questionnaire
- Publicity through the media (Leicester Mercury, Hinckley Times and Melton Times as well as Carillion Radio) and PCT/NHS trust newsletters.

6.6.3 A range of activities was undertaken to secure feedback from service users and the wider public. These included stakeholder events, activities aimed at securing the involvement of 'seldom heard' groups, publicity about the engagement activities and a questionnaire. This multi-faceted and pro-active approach was intended to maximise opportunities for engagement while seeking to ensure that a response was forthcoming from the target user group (women of childbearing age) and specific minority groups where difficulties in eliciting a response have previously been encountered.

6.6.4 Given that a significant consultation exercise took place only 2 years ago, and that the feed-back has been incorporated into the option development and benefit criteria, plus the fact that this is an interim solution only, it has been agreed that further consultation would not be of benefit.

### Workforce Planning and IM&T

6.6.5 The interim options involve some relocating of existing staff, and some growth in relation to additional delivery rooms and beds. The impacts of the strategy on existing staff have been explored and deemed to be minimal. The information management and technology (IM&T) implications of the interim improvements are being managed within the framework of a Trust wide IM&T strategy.

### Post-project evaluation & freedom of information

6.6.6 A robust post-project evaluation plan is in place to assess lessons learned.

6.6.7 The Trust commits to publishing this business case within 1 month of approval.

## 6.7 Contracting Arrangements

6.7.1 The appointment of a dedicated Project Director will be required to manage the transitional arrangements in respect of the clinical and estate changes proposed. The post will work across directorates and will report to the Trust Board.

6.7.2 The structure proposed for managing the contracts has been set out as follows:

**Figure 53 – Contract Structure**


## 6.8 Benefits Realisation

6.8.1 The Strategic Case sets out the project objectives and benefits criteria identified for this project and their relationship to the over-arching scheme. A Benefits Realisation Plan (BRP) will be used to identify both the benefits that will result from the project and a mechanism to allow these to be measured. It involves:

- Identification of the anticipated benefits which will be consistent with those identified in the benefits appraisal exercise;
- Identification of any potential disadvantages;
- A description of how the benefits will be measured and a timescale for their achievement;
- Identification of those responsible for delivering the benefits; and
- Identification of those responsible for monitoring the benefits.

6.8.2 To allow as seamless a transition as possible the Trust will be aiming to deliver many elements of the BRP before the changes take place.

6.8.3 A detailed benefits plan will be developed upon approval of the OBC.

## 6.9 Risk Management Strategy

6.9.1 The scheme level risk register has been structured to address directly the project work streams, which have been strengthened under the Trust governance arrangements. These are:

- General (Strategic and cross-workstream);
- Finance and Procurement;
- Estates - including Construction Risks;
- Workforce; and
- Clinical Operations

6.9.2 The responsibility for continued risk identification, assessment and management lies with the project workstreams, facilitated by the Project Director, who will be appointed post OBC stage. The workstreams will meet monthly and review the register as part of their standard agendas. Key risks are then reviewed at the decision making PSG and advisory Project Board, both monthly, and if necessary escalated to the Trust Executive Committee. Overall responsibility is held by the Senior Responsible Officer

6.9.3 The Trust holds its own corporate assurance framework and this is populated at a Directorate level and reviewed by the risk committee via the Trust Secretary, reporting into the Trust Board. There is a regular feed, roughly quarterly, of key scheme level risks into the main assurance framework.

6.9.4 The intention is to create a risk sub register for each phase of the interim scheme separated by the two sites, LGH and LRI.

6.9.5 The registers will continue to reflect the four work streams of Finance and Procurement, Estates, Workforce and Clinical Operations, which will enable the Trust's Project Manager to have visibility of the whole picture. However, responsibility for providing, and where relevant, updating content will be split as follows:-

- Finance and Procurement (Trust with input from Contractor);
- Estates - including Construction Risks (Contractor with input from Trust);
- Workforce (Trust); and
- Operations (Trust)

6.9.6 Risks have been quantified using the Expected Value method (probability x most likely impact. The 5 x 5 risk assessment matrix used by the Trust is used to inform risk quantification in the first instance. The risk register for the project is attached at Appendix 9

## 6.10 External Reviews

6.10.1 SHA review is not planned as the capital value excluding optimism bias and inflation does not exceed 3m.

## 6.11 Work Force Planning

6.11.1 The PCTs in Leicester City and Leicestershire County and Rutland have been in discussion with the Trust regarding the provision, mix and quantum of proposed increases in staffing identified as required for the reduction of risk, moving towards national staffing recommendations and related to the additional delivery rooms and maternity beds proposed under this scheme. Uplifts to staffing budgets have been secured pre OBC.

## 6.12 Information Management and Technology

6.12.1 The requirement for an effective information management and technology (IM&T) strategy to support the proposed increase in clinical services is critical to the success of this project. The Trust has assessed IT requirements and is clear that the current infrastructure will require minimal refurbishment in relation to the changes proposed in this OBC.

## 6.13 Post Project Evaluation

6.13.1 Post Project Evaluation (PPE) is a mandatory requirement on all Trusts undertaking a project of this scope and scale. To act as an aid to improving project performance, user satisfaction, and decision making on future projects, the Trust is committed to undertaking a robust PPE. This will assess the overall performance of the project on completion and will include Post Project Reviews (PPR) and Post Implementation Reviews (PIR).

6.13.2 As an underlying principle, the PPE will be carried out in accordance with the Department of Health guidance on Post Project Evaluation, "Good practice Guide – Learning Lessons from Post Project Evaluation" (2002). The Evaluation will report on a number of key issues focussed on cost, time, quality and general management/ process.

6.13.3 The PPE will be phased over the life of the project and aligned with the overall project timetable. The phasing of the PPE will include the following

- Evaluation of the project on completion of the project;
- Evaluation of the project six months after completion. (Initial PPE); and
- Evaluation of the project 2 years after the changes have been completed. (Follow-up PPE).

6.13.4 The project team will be responsible for managing the PPE process, supported by the appropriate external professionals. The table below outlines the key deliverables.

## Figure 54 – Post-Project Evaluation Plan

| Objectives | Performance Indicators | Method of Measurement | Responsibility |
|---|---|---|---|
| **Cost** | | | |
| C1 | Compliance with capital budget | Out-turn vs. budget | Project Accountant with cost advisor |
| C2 | Compliance with revenue affordability envelope | Actual revenue impacts vs. plan | Project Accountant |
| C3 | Effectiveness of contract strategy | Compliance with Scheme level procurement strategy | Project Procurement Lead |
| **Time** | | | |
| T1 | Compliance with overall timetable | Actual vs. planned occupation dates | Project Manager with advisors and contractor |
| T2 | Quality of programme | Key variances assessed | Project Manager with advisors and contractor |
| **Quality** | | | |
| Q1 | Continuity of service delivery | User review and satisfaction survey | Project Clinical & Estates Leads |
| Q2 | Fitness for purpose incl. statutory compliance | User, Building Control, fire officer and CDMC sign off. | Project Clinical & Estates Leads |
| Q3 | Compliance with specification | Report from Employers Agents incl. Estates input | Project Clinical & Estates Leads |
| **General** | | | |
| G1 | Effective communication & engagement | Facilitated Workshop with contractor. Staff survey. | Project Manager with contractor |
| G2 | Quality and timing of decision making | Facilitated Workshop with contractor. | As above |
| G3 | Validity of risk process | Review of process, and outcomes vs. priced register | Project Manager with Cost Advisor & Workstream Leads |
| G4 | Effectiveness of change management | Facilitated Workshop with contractor and internal review | Project Manager with contractor /advisors /Workstream Leads |

6.13.5 A planned and logical approach to data collection and analysis will be adopted for the evaluation. The relevant data will be collected from key project stakeholders as the project progresses. The collection of data will include documentary analysis and review of key project documents and monitoring information.

6.13.6 Findings from the reviews/evaluation will be signed off by the Project Steering Group comprised of senior management and disseminated amongst the project participants and key stakeholders involved in current and on-going projects.

## 6.14 Gateway Review Arrangements

6.14.1 The Trust is incorporating a Gateway Review Process. Three Gateway Reviews are planned. The first will occur in September 2012 following submission of the OBC for approval 26th July 2012. The review team will be an internal team. This will ensure that everything is in place to enable a successful delivery

6.14.2 The next two reviews will occur in November 2012 and January 2013

## 6.15 Contingency Plans

6.15.1 Responsibility for risk identification assessment and management will lie with the Project Director who will be appointed post OBC.

6.15.2 The risk management group will meet monthly and review the risk register for this project as part of their standard agenda.

6.15.3 Key risks will be escalated to the Trust Executive Committee as required.

6.15.4 The Trusts has an overall corporate Assurance framework which is populated at Directorate level and will be updated to take account of key risks within this scheme

## 6.16 Publication Arrangements

6.16.1 The Trust is committed to complying with the NHS *Code of Practice on Openness in the NHS*. Accordingly, the Trust will make key documents available on its website, where these do not disclose confidential commercial information. These will include:

- This business case and appendices within 1 month of approval;
- Development designs as they develop including material used in public exhibitions;
- Newsletters informing staff and stakeholders of progress with the project and the SHD scheme as a whole; and
- SHD Project Board papers.

6.16.2 The Local Planning Authority, Leicester City Council, will make any related planning documentation available in the normal way, on its web-portal and at the Council offices.

6.16.3 This is the end of the University Hospitals Leicester Interim Solution for Maternity and Gynaecology Services Outline Business Case. Thank you for reading it.

## Signed

## Senior Responsible Officer

## Date