

Trust Board Paper N

To:	Public Trust Board
From:	Chief Executive
Date:	28 November 2013
CQC regulation:	All applicable

Title: Emergency Floor Outline Business Case								
Author/Responsible Director: Nicky Topham- Project Director, Chris Turner- Project Manager, John Adler- Chief Executive								
<p>Purpose of the Report: Following the Trust Board Development session on 21st November, this paper is being presented to request that the Trust Board:</p> <ul style="list-style-type: none"> - Approve The Emergency Floor Outline Business Case. - Delegate authority to the Chief Executive to decide on the pace at which we mobilise enabling works - in consultation with the Acting Chair and having regard to the views of the NTDA - and with a report on the outcome to be notified to the Trust Board at the earliest opportunity - Support the project team progressing the Full Business Case post internal OBC approval and prior to NTDA formal approval to maintain programme. 								
<p>The Report is provided to the Trust Board for:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px;">Decision</td> <td style="border: 1px solid black; text-align: center; width: 30px;">X</td> <td style="border: 1px solid black; padding: 5px;">Discussion</td> <td style="border: 1px solid black; width: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;">Assurance</td> <td style="border: 1px solid black; width: 30px;"></td> <td style="border: 1px solid black; padding: 5px;">Endorsement</td> <td style="border: 1px solid black; width: 30px;"></td> </tr> </table>	Decision	X	Discussion		Assurance		Endorsement	
Decision	X	Discussion						
Assurance		Endorsement						
<p>Summary / Key Points:</p> <ol style="list-style-type: none"> 1. Attached is the Outline Business Case (OBC). 2. The project was initiated following feedback from ECIST and identifying drivers for change. 3. Clinical model was developed and agreed in full liaison with all Emergency Floor lead clinicians and approved by the Project Steering Group and Board, as well as being shared with the Urgent Care Board. 4. The Schedules of Accommodation have been worked up using current and projected activity data and objectively challenged by independent Health Care Planners. 5. Room size comparisons indicate a significant change between that currently utilised and that proposed. There has been deviation to Health Building Notes to ensure value for money whilst maintaining clinical functionality and flexibility in design. 6. The SOC was submitted for approval in July 2013 to the NTDA and projected a required emergency floor space of approximately 7,200m² in line with an affordability envelope of £38 – 43m excluding enabling works. 7. Feedback from the NTDA expressly requires an OBC, including enabling works. This was a 								

deviation in procurement to that outlined at SOC stage, where the NTDA endorsed a route straight through to the Full Business Case.

8. The Better Care Together Programme commissioned Mckinsey's to undertake a financial modelling exercise, which challenged the Health Community to reduce emergency admissions by 30%. This is felt to be too dramatic a reduction:
 - The single front door has already deflected all "minor injuries and illnesses" into the Urgent Care Centre setting so a significant left shift has already occurred.
9. Activity modelling has therefore been carried out using Emergency Department attendances and assessment activity (emergency admissions) separately to reflect the different trends in each.
 - For Emergency Department activity three scenarios were modelled: low (demographic growth only, c10% over 10 years), high (historic trend growth, c50% over ten years), and medium, as a halfway house (30% over 10 years).
 - Capacity has been modelled on the basis of the three scenarios and on current practice (current treatment times).
 - Capacity is provided to meet the requirement for medium growth with current practice, but also meets high growth provided improvements in treatment times are delivered (i.e. efficiencies).
 - The improvements in treatment time are expected to be driven by the model of care for the Emergency Floor (collocation of the Emergency Department with assessment, diagnostic imaging, pathology, pharmacy).
 - The high growth scenario is slightly tempered by playing in a 30% left shift of Urgent Care Centre activity into the community. However, this is a relatively small number compared to the overall growth in everything else (majors, minors, paed, resus) so the net impact remains for the high scenario to have a greater overall Emergency Department workload than the medium scenario.
 - A left shift is not played into the assessment scenarios, which otherwise work in a similar fashion as above, except with slightly different growth rates (15%, 25% & 35%). However, there may be other patients who attend via ambulance (frail elderly) who could perhaps be treated in their own setting (remain in nursing home etc) but community services need to deliver this to prevent admissions. Current levels of attendances have therefore been used until such time as alternatives exist. In addition the number of Emergency Frailty Beds have increased to try to turn this population round at the front door negating admission to hospital so will be better able to deal with this group in the new build (currently 8 EFU beds, increasing to 16 beds in new model).
10. As part of the OBC process, a long list of 7 options was developed for clinical and technical appraisal, and as a consequence a short list of 3 was defined.
11. A full clinical, technical and financial appraisal was undertaken on the short list of options to identify a preferred option for detailed development at Full Business Case stage.
12. The preferred option was identified as 3A – Extension of current Emergency Department toward the Victoria building, incorporating demolition of the Langham Wing and Chapel.
13. This solution has the added advantage that wards can be added to it with additional floors providing flexibility for the future.
14. The OBC financial appraisal has indicated a whole project cost of approximately £48m representing works costs of £40m (including £4m pre construction fees) and enabling costs of £8m. This has potential to equate to a potential loan value of approximately £36m in conjunction with a £12m capital programme investment (for fees and enabling).

15. The preferred option has a far less complex approach to enabling works required, in comparison to the Balmoral option and as a consequence has significant financial and programme benefits.
16. Initial meetings on the preferred option with the Highways department have been very positive, with an agreed approach to widen the remit and incorporate a site wide parking solution. Interserve are developing an 'enterprise solution' for car parking, the commercial viability for which will be known in January. The Full Business Case for the parking solution will be developed by June, in line with Emergency Floor FBC.
17. Enabling works for the preferred option have been packaged into a number of different Work Packages to enable delivery and management:
 - Modular Ward (x1) development to replace Fielding Johnson
 - Relocation of Urgent Care Centre to outpatient 1 and 2 Clinics
 - Relocation of outpatient 1 and 2 Clinics to Modular accommodation pending the new hub
 - Utilisation of Oliver Ward, St Marks and St Lukes to provide office accommodation (currently housing medical records and IT equipment)
 - Re-utilisation of Diabetes outpatient accommodation for clinical genetics
 - Refurbishment of the old Linac Bunker for use
 - Re-opening of original Victorian entrance
 - Demolition of the chapel (potential risk in programme with Victorian Society and League of Nurses – need to retail artefacts)
18. Enabling works are to be funded from the UHL capital programme, and have been programmed for delivery between 2013/14 and 2014/15. This is possible with a revision in the current capital programme.
19. With approval to proceed before the Full Business Case is approved,, the delivery of the Enabling Works can be phased with completion in line with the project's programmed start date.
20. The project will be delivered in 2 phases – phase 1 will be the new Emergency Department, phase 2 will deliver the assessment areas.
21. Proceeding with enabling as soon as the OBC is approved by the Trust Board would result in delivery of phase 1, the new Emergency Department by October 2015:
 - Waiting for NDTA approval of the OBC would mean delivery in December 2015
 - Waiting for NDTA approval of the FBC will result in a July 2016 delivery of the Emergency Department.
 - Phase 2 would be delivered April 2016, August 2016 and January 2017.
22. The Trust Board will recall the discussion regarding the early delivery of the enabling schemes at the Trust Board Development Session; dialogue continues with the NTDA. So as not to delay progress with delivery of the Emergency Floor, the Board are recommended to delegate authority to the Chief Executive and having regard to the views of the NTDA to decide on the pace at which we mobilise works with regards to the enabling works - in consultation with the Acting Chair; with a report on the outcome to be notified to the Trust Board at the earliest opportunity. This will include consideration of:
 - The UHL capital programme
 - Confirmation of the level of risk being taken by undertaking the enabling works early

23. Once approved by the Trust Board, this OBC will be presented to the three CCG Trust Boards and the Urgent Care Board in December, whilst being forwarded to the NTDA for support.

Recommendations:

The Trust Board is asked to:

- **Approve** The Emergency Floor Outline Business Case.
- **Delegate** authority to the Chief Executive to decide on the pace at which we mobilise works with regards to the enabling works - in consultation with the Acting Chair and having regard to the views of the NTDA and with a report on the outcome to be notified to the Trust Board at the earliest opportunity
- **Support** the project team progressing the Full Business Case post internal OBC approval and prior to NTDA approval to maintain programme.

Strategic Risk Register	Performance KPIs year to date
	N/A

Resource Implications (e.g. Financial, HR)

Assurance Implications:

Patient and Public Involvement (PPI) Implications

Healthwatch and the Better Care Together Board, OSCs and Urgent Care Board, NTDA and NHS England.

Equality Impact Due regard assessment needed at project design stage

Information exempt from Disclosure

For further review?

Decision taken by Chief Executive in consultation with Acting Chair and having regard to the views of the TDA on early enabling works to be reported back to the Board, Full Business case to be reviewed in July 2014.



property and infrastructure | health

Outline Business Case

Emergency Floor

November 2013

Version **FINAL**
Issue date 18th November 2013

Document Quality Management

Title OBC Emergency Floor

Date 18/11/2013

Prepared by Marianne Graham, Senior Consultant, Capita

Checked by Michael Rope, Associate Director, Capita

Authorised by Chris Turner, Director, Capita

Document History

Version	Date Issued	Brief Summary of Change	Author
1.0	24/09/13	Template	M Graham
1.1	1/10/13	Work in progress issued to C Turner Including draft Strategic Case (not formatted), with Strategic Case extracted to allow C Turner to issue for comment	M Graham
1.2	3/10/13	Input trust confirmed objectives and benefits and key deliverables. Draft Commercial case and Management Case	M Graham
1.3	4/10/13	Update strategic case for distribution	M Graham
1.4	8/10/13	Input weighted scores and complete the non financial component of economic case	M Graham
1.5	14/10/13	Input clinician feedback on strategic case	M Graham
1.6	15/10/13	Revise management case, commercial case and exec summary	M Graham
1.7	21/10/13	Exec Summary update	M Graham
1.8	23/10/13	Input Commercial case input	M Graham
1.9	28/10/13	Review and update strategy case re CQC standards	M Graham
1.10	31/10/13	Rework strategic case to show strategic case in two docs v1.10 and 1,10 without summarised strategic case appendix	M Graham
1.11	04/11/13	Format, QA, update exec summary and appendix	M. Graham
1.12		Update Appendix	M Graham
1.13	08/11/13	Input internal feedback and additional comments for client review	M Graham
1.14	11/11/13	Client review and input changes	M Graham
1.15	13/11/13	Formatting and input additional changes from client	M Graham
1.16	14/11/13	Final input of information and Trust feedback	M Graham
1.17	14/11/13	Additional iterations	M Graham
1.18	15/11/13	Addition of draft financial analysis	M Rope/ V Chalmers
1.19	15/11/13	Further iterations - typographical checks/updated commercial case	M Graham
1.20	15/11/13	Further iterations	M Rope
1.21	17/11/13	Final iterations, document check & internal sign off	C Turner
1.22	18/11/13	Final amendments from v1.21 checks	M Graham/M Rope

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1 | Executive Summary

1.1 Introduction

This Outline Business Case (OBC) is for the redevelopment of the Emergency Department (ED), creating a new emergency floor on the Leicester Royal Infirmary site of University Hospitals of Leicester NHS Trust (UHL/The Trust). It proposes to develop an emergency floor concept that will address the demand challenges faced by both ED and assessment services, with the intention of developing a future proofed solution that will flexibly meet future demand over the next 10 years.

The Trust is one of the largest teaching Trusts in the country and operates across three main sites; Leicester Royal Infirmary, Leicester General Hospital and the Glenfield Hospital, and is the only acute Trust serving the diverse local population of Leicester, Leicestershire and Rutland (LLR); equating to approximately 1 million residents.

Figure 1A University Hospitals of Leicester NHS Trust Sites



Glenfield Hospital



Leicester General Hospital



Leicester Royal Infirmary

Leicester Royal Infirmary provides Leicestershire's only accident and emergency service (ED). The hospital has approximately 890 beds and is the base for the Trusts Children's Hospital and Urgent Care Centre (UCC).

In 2012 the Trust identified a number of services requiring redevelopment/development across their three sites to ensure ongoing enhancement and maintenance of essential health services to the local community. The Trust set up a Reconfiguration Programme Board to provide an integrated and strategic approach to developing, implementing and monitoring the delivery of the Trust reconfiguration plans. The UHL has ensured that this programme is significantly aligned to the Trust's Integrated Business Plan and its associated Foundation Trust application processes.

This business case focuses on the Emergency Floor Reconfiguration project. It highlights that current arrangements do not meet the current demands or the projected requirements over the next 5-10 years. Whilst process redesign has been undertaken within the existing footprint and built environment, it highlights that there is still an issue with the size of the emergency floor in its entirety and that it is deemed inadequate to cope with the demand. This OBC highlights the urgent need for change to the physical estate to create an emergency floor in order to improve patient flows, staff efficiencies, capacity issues and adjacencies.

1.2 Strategic Case

1.2.1 The Strategic Context

The Trust has seven organisational objectives which are:

- ▶ Provide safe, high quality, patient-centred healthcare
- ▶ Provide joined up emergency care
- ▶ To be the provider of choice
- ▶ Integrated care closer to home
- ▶ Enhanced reputation in research, innovation and clinical education
- ▶ To be a professional, passionate and valued workforce
- ▶ Sustainable, high performing NHS Foundation Trust

These objectives are underpinned by the following Investment objectives of this project:

- ▶ To provide the Trust with increased capacity for emergency services to meet the demands of population growth, changing service models and improved efficiency targets
- ▶ To increase the productivity of emergency care at LRI
- ▶ To develop a centre of excellence, enhancing the Trust's reputation for training, service delivery and treatment, through the provision of a centralised service in modern accommodation
- ▶ To ensure that the changing needs and expectations of a growing population are met in line with Trust clinical strategy and national guidance standards
- ▶ To provide an ED that is compliant with NHS building guidance standards
- ▶ To improve the clinical effectiveness and safety of urgent and emergency care service across Leicester
- ▶ To improve the clinical adjacencies of services to optimise clinical safety and reduce clinical risk
- ▶ To facilitate the modernisation of services, including streamlining patient pathways and efficient working practices providing an ED that ensures adequate infrastructure and capacity for supporting services that are conducive to the needs of a modern workforce
- ▶ To equip the ED to respond effectively to existing and known commissioning requirements, as well as to respond flexibly to future changes in service direction and demand
- ▶ To improve the environment and the experience of users (patients, visitors and staff) of Leicester Royal Infirmary Hospital Accident and Emergency Department
- ▶ To provide a solution that is aligned to the Trust DCP plan and Trust organisation as a whole
- ▶ The development will be delivered on time with minimal disruption to current service delivery

Each of the project objectives has been formulated based upon the drivers for change and national, regional and local strategic directions, promoting efficiencies in practice and ensuring statutory and national targets are achieved.

National, Regional and Local Strategies, Programmes and Guidance

National and Regional strategies and programmes affecting the provision of Emergency care services at LRI site are set out in Section 2 and include:

National

- ▶ Health and Social Care act 2012
- ▶ Quality, Innovation, Productivity and Prevention (QIPP) Programme
- ▶ Department of Health Emergency Department Clinical Quality Indicators
- ▶ NHS Operating Framework
- ▶ Care Quality Commission: Five Domains of Quality
- ▶ Transforming Urgent and Emergency Care services in England: Urgent and Emergency Care Review, End of Phase 1 Report, NHS England November 2013
- ▶ High Quality Care for all, Now and for Future Generations: Transforming Urgent and Emergency Care Services in England June 2013
- ▶ Future Hospital: Caring For Medical Patients, Royal College of Physicians (September 2013)
- ▶ HBN 15-01 Planning and Design Guidance: Accident and Emergency Departments (April 2013)
- ▶ Royal College of Paediatric and Child Health 'Standards for Children and Young People in Emergency Care Settings' [third edition] 2012¹
- ▶ The Silver book – National Guidance 'Quality Care For Older People With Urgent and Emergency Care Needs, June 2012
- ▶ Guidance for Commissioning Integrated Urgent and Emergency Care A 'whole system' approach, July 2013²

Regional

- ▶ CCG out of hospital strategies
- ▶ Joint Strategic Needs Assessment (JSNA)
- ▶ Emergency Care Network

Local

- ▶ Better Care Together Strategy 2012-2022
- ▶ Trust Strategy 2012 -2022
- ▶ Trust Estate strategy and Estate Transformation Plan
- ▶ Foundation Trust

1.2.2 The Case for Change

Emergency Medicine is the secondary care specialty which provides immediate care for patients of all ages presenting with illness and injury of all severities. In order to

¹ www.rcpch.ac.uk/system/files/protected/page/Intercollegiate%20Emergency%20Standards%202012%20FINAL%20WEB.pdf

² <http://www.rcgp.org.uk/news/2013/july/-/media/Files/Policy/A-Z-policy/Urgent-emergency-care-whole-system-approach.ashx>

provide the level of high quality emergency care and assessment services that comply with regulatory standards expected of the Trust, it is essential that the Trust ensures that its patients and staff can work and receive treatment in a safe environment and that patient treatment is efficient and timely in its delivery.

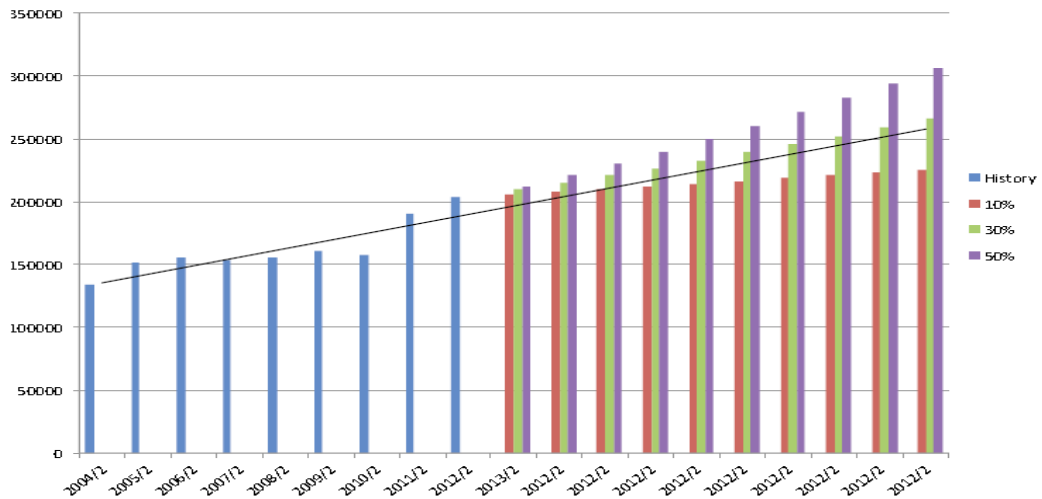
In doing so, provision of adequate capacity to support the functions of emergency services delivery and enhanced quality of care is required. Section 2.13 – 2.15 details the case for change.

Capacity and Demand

The Trust is now in a position where lack of capacity cannot support Trust business needs and growing activity requirements. UHL has experienced a rise in attendances to its ED. Section 2.9 illustrates that UHL’s performance is well below the target 95%. This reflects poor quality of care for patients, reduced clinical effectiveness, and an unacceptable delay in treatment, increased clinical risk and compromised patient safety.

The department serves annual attendances of approximately 200,000; including urgent care services. 52,000 of the annual attendances are ambulance patients which are seen through a 16 cubicled majors area. Figures suggest there is a 5-6% annual growth of emergency attendances at the Trust. The table below outlines this growth over a 10 year period up to 2012/13 and projects forwards on the basis of the three ED growth scenarios detailed above (10%, 30%, 50% growth over 10 years).

Figure 1B Activity Growth up to 2012/13



Quality of Care

In order to provide the level of high quality emergency care that is expected of a tertiary referral Trust, it is essential for the Trust to ensure that its emergency services is designed to accommodate the care needs of patients accessing emergency care, their relatives and carers and the staff.

The current challenges to the service, current demand, future demand and environmental issues are affecting the quality of care provided. These quality issues are outlined in Section 2.15 and are considered within the framework of the five domains of quality as defined by the Care Quality Commission (CQC). These five domains are:

- ▶ Safety
- ▶ Effectiveness
- ▶ Caring
- ▶ Responsive to people's needs
- ▶ Well led at organisational, hospital and service level

Efficiency

The current ED efficiencies are impacted on by wait time and capacity availability and current department layout and size. This has a significant impact when it relates to resuscitation Emergency Decision Unit (EDU) and Elderly Frail Unit (EFU) services, therefore compromising patient safety and quality of care. The current location of the Medical Assessment Unit (MAU) on the 5th floor of the Balmoral Wing is unsuitable for efficiencies in patient flows. It is essential that this service be provided on the same floor as the ED and be provided with additional capacity to enhance efficiencies and meet demand. Development of a single floor ED will provide the Trust with the opportunity to meet its strategic clinical objectives and optimise key clinical adjacencies and clinical requirements for the next 10 year period.

Section 2.13 outlines the case for change that relates to efficiencies in care.

1.2.3 Drivers for Change

The following are key drivers for change:

- ▶ The increasing demand for emergency services is greater than the current capacity can provide. Historic trends in growth suggest a 5% annual growth in ED activity and 3.5% annual growth in assessment unit activity
- ▶ Requirement for single floor Emergency and Assessment Department that incorporates key adjacencies and presence of diagnostics and assessment unit services on the same floor. This enables implementation of the developed model of care for both adults and children accessing ED
- ▶ Changes in the local and national demographics combined with the Trust's plan to remain an emergency care centre for Leicester is impacting on increased emergency care demand
- ▶ The Trust requires additional capacity to reflect NHS national guidance. The emergency floor project reduces the risk of compromising compliance of other standards of care such as quality, infection control, emergency and urgent care standards and commissioning standards

- ▶ The requirement to address the 4 hour target and ambulance to trolley transfer will have a significant impact on Trust financial performance if capacity issues are not resolved
- ▶ Redevelopment and increased capacity will provide opportunities for the Trust to fulfil the Trusts overall strategic transformation programme

1.3 Economic Case

An economic appraisal of the Emergency Floor redevelopment options has been completed in accordance to the Capital Investment Manual and requirements of Her Majesty's Treasury's (HMT) Green Book (A Guide to Investment Appraisal in the Public Sector). A long list of options were compiled and then this was appraised to identify a short list of options to take forward into a full appraisal process.

1.3.1 The Long List

The long listed options considered in this business case are as follows:

Table 1.1 Long List

Option	Description
0	Do Minimum - Ensure critical backlog maintenance is undertaken and review clinical processes & procedures
1A	Balmoral Building – Existing 1 st floor refurbishment with some assessment provision elsewhere (inc courtyard infill & extension)
1B	Balmoral Building – Existing 1 st floor and ground floor refurbishment hot floor/assessment floor
1C	Balmoral Building – Existing floor refurbishment with displacement of radiology
2A	Jarvis Building – Demolition of Jarvis building and part new build/part refurbishment existing floor
2B	Jarvis Building - Demolition of Jarvis building and new build
2C	Jarvis Building - Demolition of Jarvis building and new build ED and refurbish assessment on single floor
3A	Victoria Building – Demolition of Victoria building and part new build/part refurbish assessment on single floor
3B	Victoria Building - Demolition of Victoria building and new build
4	Sandringham Building – refurbishment of 2 floors Sandringham building and new build extensions

Option	Description
5	Havelock Street Car park – New build 2 storey development on Havelock Street car park
6	Knighton Street Car park - New build 2 storey development on Knighton Street car park
7	Victoria Building Staff Car park - New build 2 storey development on Victoria Street car park

The long list of options were then work shopped by the project team to progress this list to a viable short list of options.

1.3.2 The Short List

The shortlisted options taken forward into this OBC are as follows:

Table 1.2 Short List

Option 0	Do Minimum - Ensure critical backlog maintenance is undertaken and review clinical processes & procedures
Option 1A	Balmoral Building – Existing 1st floor refurbishment with some assessment provision elsewhere (inc courtyard infill & extension)
Option 2C	Jarvis Building - Demolition of Jarvis building and new build ED and refurbish assessment on single floor
Option 3A	Victoria Building – Demolition of Victoria building and part new build/part refurbish assessment on single floor

1.3.3 Qualitative Benefits - Preferred Option

The shortlisted options were appraised against benefit criteria to establish a preferred option. The key benefits that would be delivered by the Emergency Floor redevelopment and against which the options were appraised are:

- ▶ To implement a design solution that provides a safe emergency care service that ensures capacity and flexibility for current and future demands of patients requiring emergency care
- ▶ Improve patient pathway management reducing the clinical risk and discomfort through the emergency care pathway
- ▶ Support and consolidate the provision of emergency floor concept at LRI
- ▶ Ensures that the service model of care is delivered in line with National ,Trust and local health economy KPI's
- ▶ Patient safety is enhanced, and clinical risk is reduced

- ▶ Where possible ensures that the service is developed in line with NHS Guidance interims of HBN, HTM, national and Trust policy and local health economy policy in terms of capacity provision
- ▶ Quality of care is enhanced, in terms of the model of care, and seamless pathways of care and patient flows
- ▶ The built environment enhances clinical practice that support clinical effectiveness, improved patient outcomes and patient safety
- ▶ Provides enhanced departmental relationships and clinical adjacencies that support clinical effectiveness and improved patient outcomes
- ▶ Ensures facilities are future proofed and adaptable to the changing needs of the health economy
- ▶ Improved privacy and dignity provisions for all patients
- ▶ Consolidates existing services & provides clinical expertise whilst realising the Emergency Floor concept
- ▶ Improved patient access through a single front door
- ▶ Enhances patient, visitor and staff safety through the built environment
- ▶ The design solution minimises the impact of the construction process on the site and therefore delivery of the Trust core services
- ▶ Option enables future proofing of the physical ED environment aligned to DCP future expansion needs
- ▶ The enabling moves will facilitate the Emergency Floor programme whilst minimising delay to delivery
- ▶ Reduces complexity and sequence dependency of enabling moves
- ▶ Maintains blue light access throughout whole build process

The scores for each option to deliver the project benefits are outlined below.

Table 1.3 Raw Scores

Criteria	Option			
	0	1A	2C	3A
To implement a design solution that provides a safe emergency care service that ensures capacity and known flexibility for current and known future demands of patients requiring emergency care	1.00	7.00	5.00	7.50
Improve patient pathway management reducing the clinical risk and discomfort through the emergency care pathway.	1.00	7.50	5.00	7.00
Support and consolidate provision of emergency floor concept at LRI	1.00	7.50	7.00	7.50
Ensures that the service model of care is delivered in line with National, Trust and local health economy KPIs	1.00	7.50	6.00	7.50
Patient safety is enhanced, and clinical risk is reduced.	1.00	6.50	7.50	7.50
Where possible ensures that the service is developed in line with NHS Guidance in terms of HBN, HTM, national and Trust policy and local health economy policy in terms of capacity provision	1.00	6.00	8.00	8.00
Quality of care is enhanced, in terms of the model of care, and seamless pathways of care and patient flows.	1.00	8.00	6.00	7.50

Criteria	Option			
	0	1A	2C	3A
The built environment enhances clinical practice that support clinical effectiveness, improved patient outcomes and patient safety	1.00	8.00	6.00	8.00
Provides enhanced departmental relationships and clinical adjacencies that support clinical effectiveness and improved patient outcomes	1.00	8.00	6.00	8.00
Ensures facilities are future proofed and adaptable to the changing needs of the health economy	1.00	6.00	7.00	8.00
Improved Privacy and dignity provisions for all patients	1.00	6.00	8.00	8.00
Consolidates existing services & provides clinical expertise whilst realising the Emergency Floor concept	1.00	8.00	6.00	7.50
Improved patient access through a single front door process	2.00	9.00	9.00	9.00
Enhances patient, visitor and staff safety through the built environment	1.00	7.50	8.00	8.00
The design solution minimises the impact of the construction process on the site and therefore delivery of the Trust core services	7.18	4.64	3.54	4.91
Option enables future proofing of the physical ED environment aligned to DCP future expansion needs	1.00	4.00	6.00	8.00
The enabling moves will facilitate the Emergency Floor programme whilst minimising delay to delivery	10.00	4.00	7.50	7.00
Reduces complexity and sequence dependency of enabling moves	10.00	4.00	7.50	7.00
Maintains blue light access throughout whole build process	8.00	6.00	5.00	7.50
	51.18	131.74	129.64	148.71
Rank	4	2	3	1

These scores were then weighted in the ratios as applied to the original raw scores. The results are shown in Table 3.17 Section 3 of this document.

1.3.4 Key Findings of the Economic Appraisal

The overall financial summaries of the three options based on the cash flows input to the Generic Economic Model (GEM) are as follows:

Table 1.4 Key Results of Economic Appraisals

Option	Appraisal period	NPC £ 000	Risk Adjusted £ 000	Risk Adjusted NPC £ 000
Do Minimum	60 years	1,297,886.6	109.0	1,299,093.6
Option 1A Balmoral	60 years	1,276,086.1	1,207.0	1,277,293.1
Option 2C Jarvis	60 years	1,272,779.4	1,268.0	1,274,047.4
Option 3A Victoria	60 years	1,272,084.7	1,253.0	1,273,337.7

1.3.5 Economic Appraisal Conclusion

The option which offers the best value for money is the one with the lowest NPC and EAC. This is the preferred option from a purely financial perspective.

Option 3A has the lowest in both cases and is therefore the preferred option.

1.3.6 Overall Findings Preferred Option

As identified above the preferred option from both a financial and non financial perspective is option 3A Victoria.

This option offers the best value for money as it has the lowest NPC and is the most effective solution based on the non financial review.

As can be seen from the table the second ranked option from the qualitative appraisal is option 1A Balmoral. We have therefore, for the switching point assessed the point at which this option becomes the preferred based on the NPC per point.

Analysis shows that the costs of the preferred option would need to increase by 12% before option 1A becomes the preferred option.

Table 1.5 Summary of Economic and Value for Money Appraisal

Criteria	Option			
	0	1A	2C	3A
Raw scores	51.18	131.74	129.64	148.71
Weighted Scores	2.27	6.74	6.27	7.54
Rank (non-financial)	4	2	3	1
Net present cost (NPC) (£k)	1,299,094	1,277,293	1,274,047	1,273,338
NPC per point score (£k)	572,288	189,509	203,197	168,878
Rank (VFM)	4	3	2	1
Rank	4	2	3	1

1.4 Commercial Case

1.4.1 Procurement Strategy

The scheme will be procured through UHL's framework partnership with Interserve Facilities Management (IFM). The framework for major projects has been set up to mirror the Procure 21+ (P21+) framework principles for the delivery of construction projects.

The P21+ framework was initiated in July 2012 and is available to NHS organisations in England. It is the Department of Health's preferred method of procurement for new builds and refurbishments on the NHS estate. Procure 21+ and its predecessor Procure 21 have over £5bn worth of schemes registered. The Department of Health has stated that P21+ schemes are providing value for money solutions to over 200 NHS Trusts.

Whilst the LLR FMC partnership is bespoke to UHL, and therefore outside the P21+ framework, it offers the same value for money assurances on construction. This is through adherence to an agreed schedule of professional services rates, and use of overhead and profit recovery percentages that reflect recognised P21+ pricing structures.

Value for money considerations over business case and design development during the early stages of projects have been assured through the procurement of the partnership with IFM, under which professional services rates have been benchmarked against the current OGC framework for such services.

1.4.2 Potential for Risk Transfer

The LLR Framework has a single comprehensive risk management process, which the Trust will be using. The Emergency Floor Project Senior Responsible Officer (SRO) and IFM act as joint owners of the joint project Risk Register for this scheme, responsibility for risks identified in it are then to be allocated and identified on the associated risk register. The risk of cost overrun is transferred to IFM once the GMP has been agreed and construction stage commenced.

1.5 Financial Case

The Financial Case sets out the financial implications for the Trust in terms of capital expenditure and cash flow, income and expenditure account and borrowing.

1.5.1 Capital Costs

The capital costs have been determined by the Design Team technical advisors and summarised below.

Table 1.6 Summary of Capital Costs

Capital Costs	Option 3A Victoria (£)
Construction	23,643,192
Fees	6,344,090
Equipment	1,635,853
Decant	7,840,866
Planning Contingency	1,586,707
Sub Total	41,050,708
Optimism bias	3,411,420
Inflation	3,466,908
Total	47,929,036

The capital expenditure profile is set out below:

Table 1.7 Summary of Capital Expenditure

UHL ED Floor	2013/14 £	2014/15 £	2015/16 £	2016/17 £	2017/18 £	TOTAL £
Capital Expenditure	8,323,572	13,848,153	24,480,266	1,106,701	170,344	47,929,036

1.5.2 Revenue Costs

These are described in detail in the Financial Case (Section 5) but broadly comprise the pay and non-pay costs and other allocated direct costs

1.5.3 Financing

The Trust will be undertaking several capital projects in the next few years and it is anticipated that the capital expenditure for this scheme will be as follows:

Table 1.8 Sources and applications of funds

UHL ED Floor	2013/14 £	2014/15 £	2015/16 £	2016/17 £	2017/18 £	TOTAL £
Capital Expenditure	8,323,572	13,848,153	24,480,266	1,106,701	170,344	47,929,036
Funded By:						
PDC/Public Loan		9,927,720	24,480,266	1,106,701	170,344	35,685,031
Trust Resources	8,323,572	3,920,433				12,244,005
Total Funding	8,323,572	13,848,153	24,480,266	1,106,701	170,344	47,929,036

The impact of the scheme on the Trust's Income & Expenditure account is as follows:

Table 1.9 Income & Expenditure Impact – Trust Resources & Exceptional PDC

Impact of Scheme	2014 /15 £k	2015 /16 £k	2016 /17 £k	2017 /18 £k	2018 /19 £k	2019 /20 £k	2020 /21 £k	2021 /22 £k	2022 /23 £k
Reduction in Agency costs			-1,693	-1,693	-1,693	-1,693	-1,693	-1,693	-1,693
Reduction in Staff Costs			-416	-416	-416	-874	-874	-1,357	-1,357
Change in depreciation	-170	-170	711	1,005	1,005	1,005	1,005	1,005	1,005
Additional FM costs			127	127	127	127	127	127	127
Change in Rate of return	-89	-89	962	932	897	862	827	792	756
Total impact	-259	-259	-309	-44	-79	-572	-607	-1,127	-1,162

The key sensitivities are the expectations of growth together with the additional revenue and the Trust's ability to realise the savings it has identified.

Below we have modelled the impact on additional income of 1% less growth pa than forecast. As can be seen this has a significant impact on the additional income levels.

However in response to this scenario the Trust would be able to reduce its recruitment of additional staff.

Table 1.10 Impact of 1% less Growth

	2014/15 £k	2015/16 £k	2016/17 £k	2017/18 £k	2018/19 £k	2019/20 £k	2020/21 £k	2021/22 £k
Income Growth Assumption	676	1,374	2,094	2,837	3,604	4,395	5,212	6,055
Income Growth at 1% less pa	465	940	1,425	1,922	2,429	2,947	3,477	4,018

We have also modelled the impact of the Trust not achieving the savings in staff due to moving to the upper quartile in staffing for the ED and not fully achieving its target reduction in agency staff

As can be seen this will have a major impact on the affordability. However the Trust is currently developing a workforce plan so as to ensure it has a robust strategy to achieve the savings.

Table 1.11 Impact of not Achieving Staff Savings

	2014/15 £k	2015/16 £k	2016/17 £k	2017/18 £k	2018/19 £k	2019/20 £k	2020/21 £k	2021/22 £k
Reduction in Agency Costs	0	0	-1,693	-1,693	-1,693	-1,693	-1,693	-1,693
Reduction in Staff Costs	0	0	-416	-416	-416	-874	-874	-1,357
Impact	0	0	1,055	1,055	1,055	1,283	1,283	1,525

1.5.4 Impact on the Balance Sheet

The proposed expenditure will have the impact on the Trust balance sheet as shown in the table below.

Table 1.12 Impact on Trust Balance Sheet

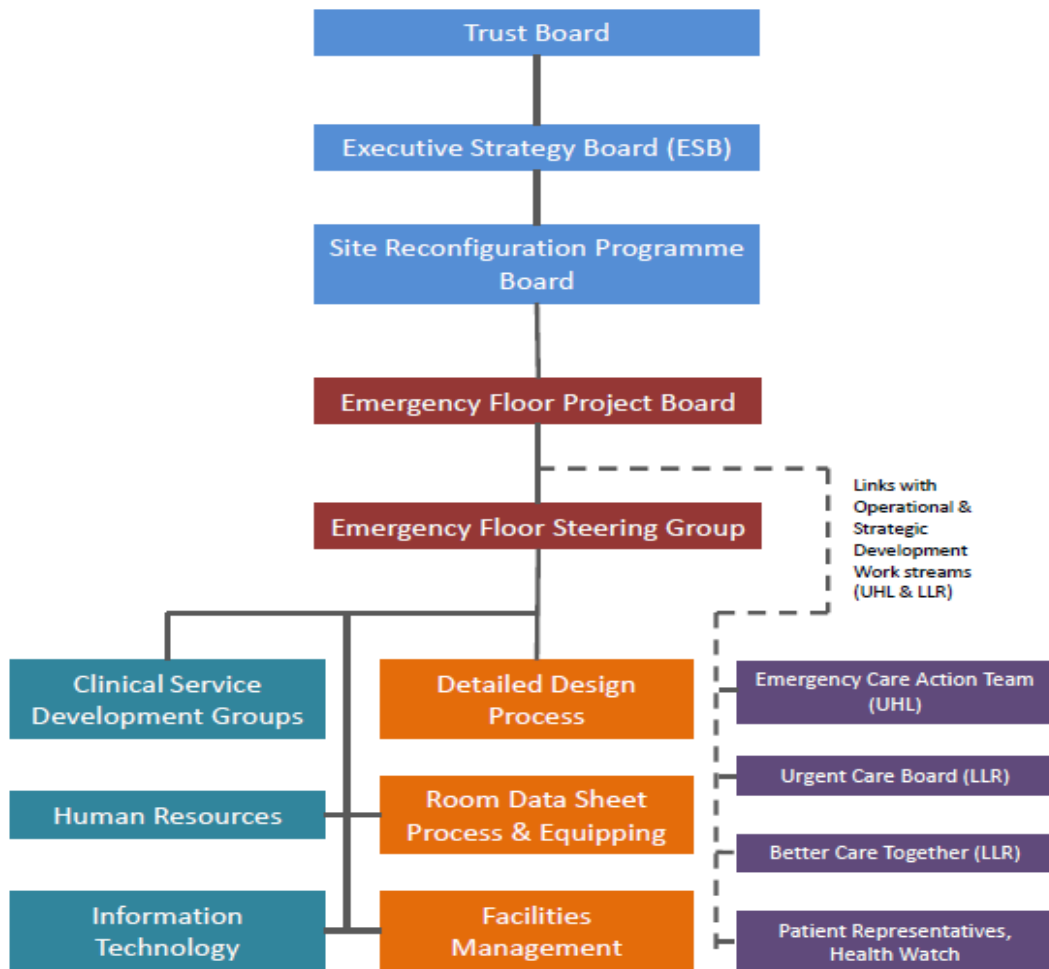
Balance Sheet	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18	2018 /19	2019 /20	2020 /21	2021 /22	2022/23
Assets Under Construction	8,323,572	13,848,153	24,480,266	1,106,701	170,344					
Impairments on new building coming into use (DV likely revaluation)				-17,024,301						
Impairment on partial demolition of Victoria based m2	-2,472,646									
Depreciation				-711,445	-1,005,283	-1,005,283	-1,005,283	-1,005,283	-1,005,283	-1,005,283
Change to Fixed Assets	-2,472,646			30,022,946	29,188,007	28,182,723	27,177,440	26,172,157	25,166,873	24,161,590
Impact on Balance Sheet	-2,472,646									
Rate of return on assets				1,050,803	1,021,580	986,395	951,210	916,025	880,841	845,656

1.6 Management Case

1.6.1 Project Management Arrangements

The project will be managed reflecting national guidance³ and the Trust’s own Capital Governance Framework, as shown in the diagram below:

Figure 1C Governance Framework



³ Capital Investment Manual ‘Managing Capital Projects’ (Department of Health); PRINCE2 (Office of Government Commerce); Managing Successful Programmes (Office of Government Commerce/ Efficiency & Reform Group)

The programme anticipated completion is set out below:

Table 1.13 Project Milestones

Milestone	Date
Preparation of Outline Business Case	October/ November 2013
Outline Business Case circulated to Executive Team for review	18 th November 2013
Outline Business Case presented to Executive Team	19 th November 2013
Outline Business Case circulated to Trust Board for review	21 st November 2013
Outline Business Case presented to Trust Board Development	21 st November 2013
Outline Business Case presented for Trust Board approval	28 th November 2013
Outline Business Case sent to the NTDA	December 2013
Outline Business Case presented to CCGs & UCB	December 2013
NTDA approval of the Outline Business Case	February 2014
Commence Full Business Case	February 2014
Commence enabling works	March 2014
Full Business Case presented for Trust Board approval	June 2014
Full Business Case sent to the NTDA	July 2014
NTDA approval of the Full Business Case	September 2014
Enabling works completed/ commence construction phase	December 2014
Handover	July 2016
Trust Commissioning Period	July/ August 2016
Trust Operational	August 2016

1.6.2 Benefits Realisation and Risk Management

The delivery of benefits will be managed through the Programme Board. A copy of the project benefits realisation plan is attached at Appendix 11. This sets out who is responsible for the delivery of specific benefits, when they will be delivered and how achievement of them will be measured.

The Trust ensures through the involvement of its employees, that risk management serves as a mechanism for risk reduction. Also, by taking a proactive approach to managing risk exposure, the Trust ensures protection of its patients, staff, visitors, assets and reputation. This project will be managed in that context.

1.6.3 Post Project Evaluation Arrangements

The outline arrangements for post project evaluation review (PER) have been established in accordance with best practice. These arrangements are outlined in Section 6.9.

1.7 Recommendation

The Trust Board is recommended to approve this business case for submission to the NTDA.

Signed:

Senior Responsible Owner

Date:.....

Senior Responsible Owner
Project Team

2 | The Strategic Case

2.1 Introduction

This document sets out University Hospitals Leicester NHS Trusts (hereafter referred to as 'the Trust' or 'UHL') proposals to invest in a fit for purpose, modern emergency floor for the provision of emergency services at its Leicester Royal Infirmary (LRI) site.

In line with the national concern about the ability of emergency services to cope with demand, UHL has experienced a rise in attendances to its Emergency Department (ED). This has resulted in many patients waiting for excessive periods and performance being well below the standard 95% (week ending 3rd November and 10th November 2013 it was 87.8% and 90.2% respectively)⁴. This reflects poor quality of care for patients, reduced clinical effectiveness, an unacceptable delay in treatment and increased clinical risk and compromised patient safety.

UHL has instigated a number of short term measures to improve performance, such as the addition of adult assessment beds to alleviate current pressures. Whilst process redesign is being undertaken within the existing footprint and built environment, there is still an issue with the size of the current ED and associated assessment areas in its entirety and is deemed totally inadequate to cope with the demand by the Emergency Care Intensive Support Team (ECIST). Appendix 1a highlights the ECIST review of the LRI ED.

Their findings (review undertaken in March 2013) identified that 12,600 patients are seen annually in a 6 bedded resuscitation area and 52,000 ambulance patients through a 16 cubicled majors area. Inadequate space results in patients being lined up in trolleys in the open floor space in majors and doubled up in cubicles. Size and poor adjacencies therefore inhibit the Trust's ability to smoothly move patients through the department and associated floors assessment areas. In addition, the Medical Assessment Unit (MAU) is currently on the 5th floor of the Balmoral building and there is no access to x-ray of CT services within the ED, all of which further hinders efficiency.

As a consequence, there is an urgent need for change to the physical estate currently supporting the ED and associated assessment areas in order to improve patient flows, staff efficiencies, capacity issues and adjacencies.

This business case highlights the current arrangements for provision of emergency services, projected requirements over the next 5 to 10 years and proposes a preferred option as a solution.

⁴ UHL NHS Trust Emergency Care 4hour Performance Trajectory 2013 – Refer to Appendix 3d

2.2 Structure and Content of the Document

This business case has been prepared using the agreed standards and format for business cases, as set out in DH guidance and HM Treasury Green Book. The case comprises 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

Part A: The Strategic Context

2.3 Introduction

This section provides an overview of the context in which the Trust provides its services and the strategic guiding principles, directives and policies that ensure clinical quality standards are met. The intention is to provide an overview of the Trust, its strategic objectives and highlight current emergency care service delivery and set the context for this business case. It also provides an overview of the driving policies and guidance documents at National, Regional and Local level.

2.4 Organisational Overview and Background

2.4.1 University Hospital Leicester NHS Trust

UHL is one of the largest teaching hospitals in the country and operates across three main sites; the Leicester Royal Infirmary, Leicester General Hospital, and the Glenfield Hospital and is the only acute Trust serving the diverse local population of Leicester, Leicestershire and Rutland (LLR); equating to approximately 1 million residents. The majority of the population is split as follows:

- ▶ Leicester City – population 304,722
- ▶ Leicestershire County and Rutland – population 685,100

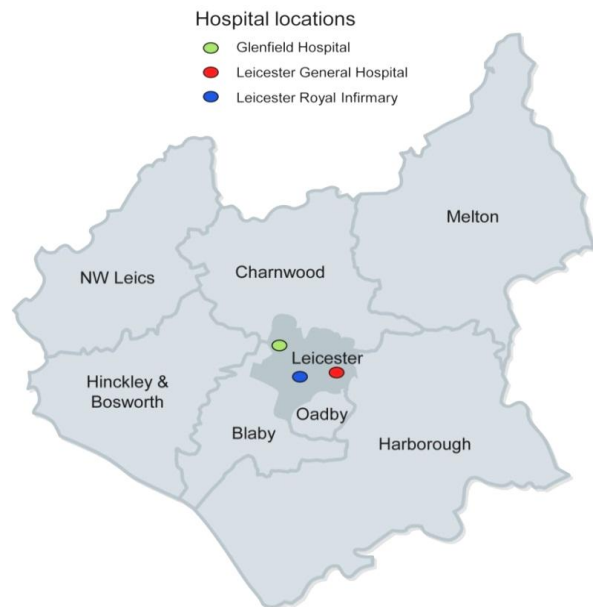


Figure 2A *University Hospitals of Leicester NHS Trust Locations*

The Trust provides a wide range of services across its three main sites; these are summarised in the following table:

Table 2.1 Trust Services

Leicester Royal Infirmary		Leicester General Hospital	Glenfield Hospital
General Surgery	Vascular Surgery	Elective Orthopaedics	Paediatric Oncology
Gastroenterology	Plastic Surgery	Urology	Cardiothoracic Surgery
Trauma	Clinical Haematology	Nephrology	Respiratory Medicine
Obstetrics	Dermatology	Renal transplantation	Breast Surgery
Emergency Gynaecology	Infectious Diseases	End Stage Renal Failure	Breast Screening
Well babies	Genetics	Sports Medicine	Orthodontics
Rheumatology	Genito-urinary Medicine	Neurology	Restorative Dentistry
Diabetes & Endocrinology	Immunology	Obstetrics	Adult Cardiology
Adult and Paediatric A&E	Stroke Medicine	Planned Gynaecology	Clinical Support Services
Acute Medicine	Elderly Medicine	Elective Gynaecology	
Paediatric Medicine & Surgery	Clinical Support Services	Clinical Support Services	
Oncology & Radiology	Central Pathology	Emergency Surgery	
Ears, Nose & Throat (ENT)	Emergency Surgery	Hepatobiliary	
Ophthalmology		Diabetes Centre of Excellence	
Maxillofacial Surgery			

2.4.2 Clinical Management

The Clinical Management is structured into seven management groups, with each group led by a senior consultant in the role of director. The seven Clinical Management Groups (CMGs) are as follows:

- ▶ Cancer, Haematology, GI Medicine and Surgery
- ▶ Emergency and Specialist Medicine
- ▶ Musculoskeletal and Specialist Surgery
- ▶ Professional Services, Imaging, Medical Physics and Empath
- ▶ Cardiac, Renal and Respiratory
- ▶ Critical Care, Theatres, Anaesthetics, Pain and Sleep
- ▶ Women's and Children's

Each director has a clinical background and works in a clinical environment as well as providing overall leadership for the CMG. Alongside the director the CMG's each have a head of nursing and a CMG manager. Across the three management groups there are fifteen core service lines. Each of these is led by a clinician, senior nurse and manager.

The clinical management of the organisation is supported by the following corporate directorates:

- ▶ Marketing and Communications
- ▶ Medical
- ▶ Finance and Business Services
- ▶ Human Resources and Learning and Organisational Development
- ▶ Operations
- ▶ Nursing
- ▶ Strategy including Capital projects
- ▶ Corporate and Legal Affairs
- ▶ IMT
- ▶ Facilities Management

2.4.3 Activity & Finance

During 2012/ 13 UHL delivered 10,841 babies, and treated 102,800 inpatients, 80,900 day cases and 763,427 outpatients.

Currently the Trust has approximately 10,000 staff based in substantive whole time equivalent (WTE) posts. In addition there are 1,075 active volunteers, volunteering across a range of services including the Royal Voluntary Service (RVS), Chaplaincy and other groups such as the Radio Fox team.

UHL financial results for 2011/ 12 and 2012/ 13 show that the Trust made a surplus of £88k and £91k respectively. Details for future years are set out in the financial case section of this document.

2.5 Trust Vision

The Trust has developed a vision to be achieved over the next five years. This vision is to become a successful, patient centred hospital that is internationally recognised for placing quality, safety and innovation at the centre of service provision.

The Trust will build on it's strengths in specialised services, research and teaching; offering faster access to high quality care, developing staff and improving patient experience. The Trust refers to this vision as 'Caring at its best'. The Trust recognises the challenges facing the organisation which are the consequence of significant external challenges which include:

- ▶ The financial pressures facing public sector organisations
- ▶ Rigorous regulation of healthcare providers
- ▶ Changes in the wider health and political landscape
- ▶ Focus on choice and greater patient and community involvement

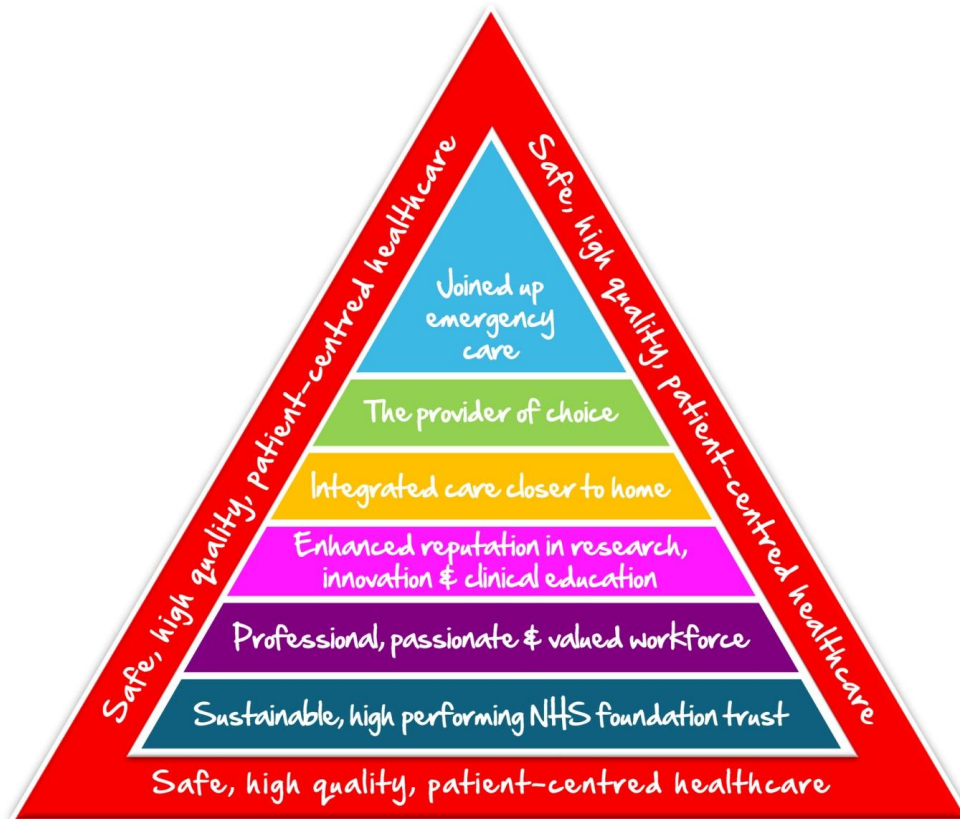
2.6 Trust Strategic Objectives

Each year the Trust sets corporate objectives, identifying the key short term goals necessary in progressing towards its vision of 'Caring at its best'. The Trust's current corporate objectives are:

1. Provide Safe, high quality, patient-centred healthcare
2. Provide joined up emergency care
3. To be the provider of choice
4. Integrated care closer to home
5. Enhanced reputation in research, innovation and clinical education
6. To be a professional, passionate and valued workforce
7. Sustainable, high performing NHS Foundation Trust

The diagram below reflects these objectives acknowledging objective 1 as the overarching objective.

Figure 2B Corporate Objectives



Each element of the objectives and supporting strategy are performance managed by the Trust Board, as a result of the Quality and Performance report which contains the NTDA indicators.

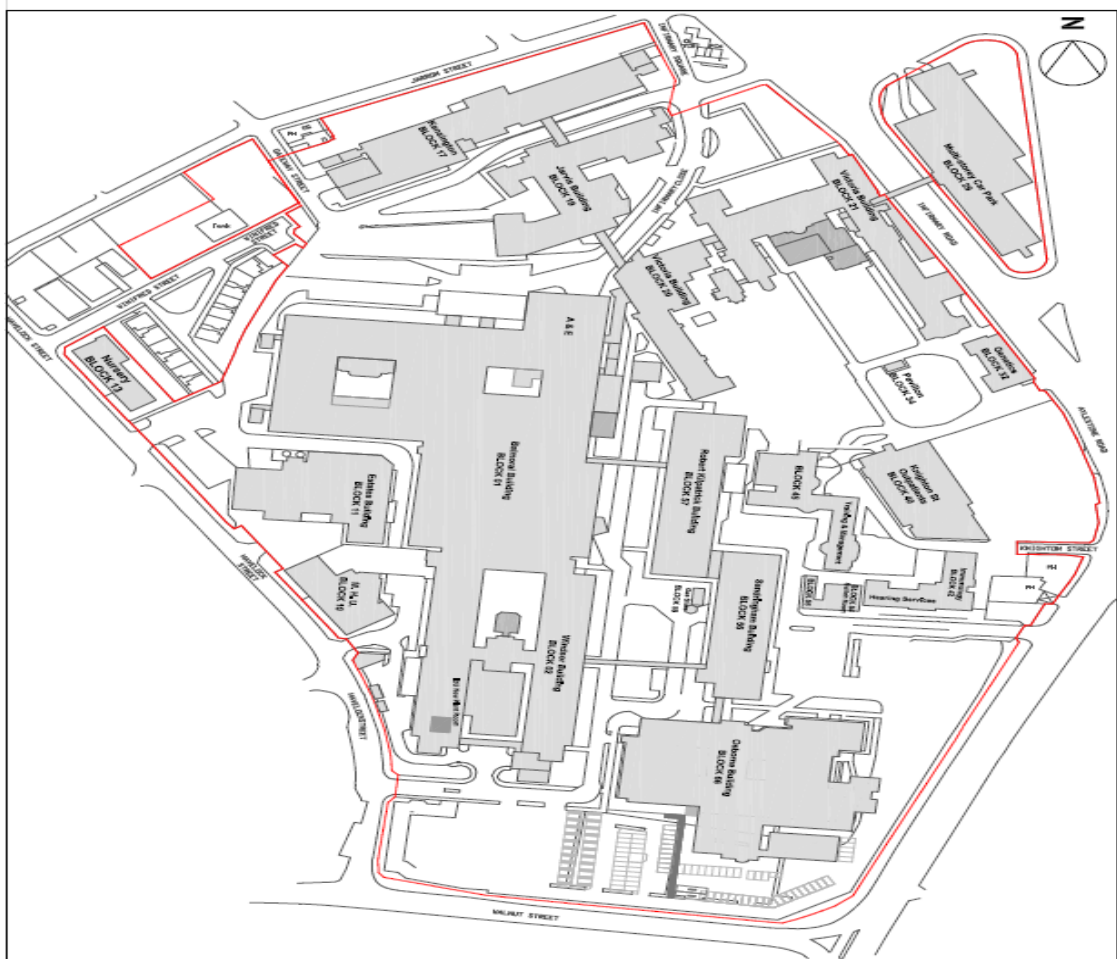
2.7 The Leicester Royal Infirmary Site

Leicester Royal Infirmary provides Leicestershire's only accident and emergency service (ED). The hospital has approximately 890 beds. The LRI hospital site is illustrated below in Figure 2B.

2.7.1 Site Ownership

The land in the ownership of the LRI is highlighted below.

Figure 2C Current Site Plan



2.8 Site Specific Constraints

The site is heavily occupied with access points for the Emergency Floor Reconfiguration specifically constrained from the one way road system and lay out of the site

Options for construction are severely limited due to the highly developed nature of the current site.

Any construction will take place on a fully operational site, and the sequencing and project timetable will be constrained by the need to maintain safe operations at all times.

2.9 Background to the Redevelopment Requirement for Emergency Care

Over the past 8 years there has been increasing concern within the Trust that the demands placed on emergency services exceed capacity. An indication of this problem is an increase in attendances to its ED, which has been growing at around 5% per annum (including the Urgent Care Centre). This has resulted in many patients waiting for excessive periods; UHL's performance is well below the standard 95% (week ending 3rd November and 10th November 2013 it was 87.8% and 90.2% respectively)⁵. This manifests itself in reduced quality of care for patients, reduced clinical effectiveness, an unacceptable delay in treatment, increased clinical risk and compromised patient safety. In a similar fashion, emergency admissions to the Trust have been growing at around 3.5% per annum, creating similar pressures on assessment bed stock.

The Trust has established a Site Reconfiguration Programme to deliver an overarching Strategic Outline Case which as a consequence, various capital projects will be delivered across the Trust. The Emergency Floor reconfiguration sits within this programme. In June 2013 a Strategic Outline Case for the Emergency Floor was submitted setting out the key strategic drivers and objectives for the proposed project.

Additionally, UHL has submitted its trajectory for improvement to the NHS Trust Development Authority (NTDA) which was agreed by the Trust Board as part of the Trust's Annual Operating plan. However, poor performance may result in significant financial penalties which will impact on the Trust's ability to deliver a financial balance with potential fines of £600k per month and a potential fine of £3.25m for penalties associated with transfer from ambulance trolley to bed.

The Trust has undertaken demand forecasting to understand the 10-year projected demand for ED and associated assessment unit services. This forecasting was based on the consideration of three scenarios for future activity (refer to Section 3).

The table below outlines the conclusion of this work showing the projected growth in ED attendances over the next 10 years. The three scenarios are based on:

- ▶ low: demographic growth (as per ONS data), 11% over 10 years
- ▶ medium: intermediate growth scenario, 31% over 10 years
- ▶ high: historic trend in growth (c.5% per annum overall), 46% over 10 years

These scenarios have been abbreviated to 10%, 30% and 50% growth over 10 years for planning purposes for the ED and associated assessment areas of the scheme.

⁵ UHL NHS Trust Emergency Care 4hour Performance Trajectory 2013 – Refer to Appendix 3d

Table 2.2 Projected Activity Growth (ED attendances)

Percentage Growth 2012/13 - 2022/23	Paeds	Eyes	Majors	Minors	Resus	Grand Total	UCC	All inc. UCC
Low Scenario	12%	9%	14%	-32%	16%	12%	75%	11%
Medium Scenario	32%	29%	34%	-20%	36%	32%	108%	31%
High Scenario (inc. shift)	77%	49%	54%	-8%	56%	52%	86%	46%

Similar work has been undertaken for the assessment unit capacity, with three scenarios being generated as follows:

- ▶ low: demographic growth (based on ONS data), 11% over 10 years
- ▶ medium: intermediate growth scenario, 25% over 10 years
- ▶ high: historic trend in growth (c.3.5% per annum), 35% over 10 years;

These scenarios have similarly been abbreviated to 15%, 25% and 35% growth over 10 years for planning purposes for the adult assessment areas of the scheme

Demand analysis work outlined has been initiated in order to address the need for increased capacity and the requirement for emergency services to be compliant with National, regional and local standards to provide a safe and accessible service that enhances the Trust' performance plans.

Section 2.14 details the impact demand issues have on the capacity and service provision.

2.10 Existing Arrangements

The current ED and associated assessment areas was originally designed to serve annual attendances of approximately 100,000. Current service activity, including urgent care services, is over 200,000 attendances to ED (160,000) & UCC (40,000) per annum, and the proposed Emergency Floor development is expected to cater for the medium growth scenario in emergency services of up to 270,000 attendances.⁶ Adult emergency admissions at LRI are currently in the region of 24,000 per annum (excluding stroke and oncology which do not use the emergency floor facilities), and the new Emergency Floor is expected to cater for the medium growth scenario of up to 30,000 admissions on the basis of the current Average Length Of Stay (ALOS) (or higher with an improved ALOS).

The reasons for the increased pressure on LRI's emergency services can be summarised as follows:

⁶ University Hospitals of Leicester NHS Trust LRI Emergency Services Design Operational Policy 2013

- ▶ The local community is an ageing population and there has been growth in the number of frail patients and those suffering from dementia, UTIs and D&V, demanding an increase in isolation facilities⁷.
- ▶ UHL's emergency services supports a population of approximately 1 million, making the LRI the largest emergency services department in the country
- ▶ There is no other emergency floor within a 25 mile radius
- ▶ The way the out of hour's service has developed across the community has increased pressure on EDs

There is an unusual double peak in daily activity between early afternoon and the evening; unlike other centres it is unique in that the second peak is higher than the first with the highest attendances between 8pm and 10pm. At any one hour of the day, there may be between 1 to 16 attendances in any area of the department. There can be at least 40 patients attending the department per hour for 3 or more hours at a time.

Whilst there has been a successful recruitment drive at LRI for all levels of staff, the unit remains short-staffed and has to place a heavy reliance on agency staff, which is further exacerbated by the poor environment resulting in a difficulty recruiting. This is a contributing factor to the worsening financial performance.

The final 2012/13 year to date 4 hour wait figure for UHL, including the Urgent Care Centre (UCC), was 91.9% of attendances. In response to a consistent underachievement of the 4 hour target, new clinical roles were introduced and a new pathway commenced in November 2011 called 'Right Place, Right Time'. This initially resulted in a considerable improvement in the Trust's emergency service performance. However, following a number of challenging weeks of activity (with ED attendances 5% higher and emergency admissions 7% higher in the final quarter (2012/13 compared to the same period last year) achievement of the 4 hour target deteriorated (week ending 3rd November and 10th November 2013 it was 87.8% and 90.2% respectively)⁸.

The Emergency Care Action Team (ECAT) was set up by the Trust in response to ongoing 4 hour target underachievement and options to address capacity issues. ECAT has implemented a number of strategies via development of an Action Plan (Refer to Appendix 1b) that is focussed on improving ED performance and patient experience via operational improvements and investing in a capital project to develop an Emergency Floor solution.

Whilst ongoing operational improvements are being made to current emergency service processes, the proposed investment and development of the Emergency Floor is the Trust's strategic response to ensure that there is sustained delivery of the emergency process. In conjunction with primary care, UHL will develop joined up emergency care by improving models of care both outside and within the hospital setting. For those who have to attend hospital, care will be provided in an environment designed to deliver a better patient experience and better quality outcomes.

⁷ University Hospitals of Leicester NHS Trust LRI Emergency Services Design Operational Policy 2013

⁸ UHL NHS Trust Emergency Care 4hour Performance Trajectory 2013 – Refer to Appendix 3d

The space, adjacencies and quality of accommodation provided for emergency care at LRI is unsuitable and does not comply with current national guidelines. The following outlines current status:

- ▶ **Access:** Patients currently experience poor patient journey when accessing emergency care and UCC departments. There is a dislocation of front door access relating to booking in and assessment within reception at the UCC and then a further booking process required at the ED when a patient is redirected there
- ▶ **Paediatrics:** UHL needs to meet the NSF for Children and Young People standards relating to separate entry, discrete space and child friendly environment. The department currently has limited cubicles that do not meet the need of current attendances
- ▶ **Majors:** Currently there are 16 majors spaces. The provision does not meet demand with the following consequential issues:
 - ◆ Patient safety– is compromised with severely non-compliant space around the bed for major incident and patient access
 - ◆ Doubling up of cubicles with chairs to house more than one patient at a time. Chairs used are currently those allocated to patient relatives and are intended for patient use (12 chairs are currently used)
 - ◆ The corridors leading out of majors are continuously blocked by patients in trolleys or chairs in an attempt to meet capacity
 - ◆ Privacy and dignity for patients is severely compromised
 - ◆ Compliance with infection control standards is compromised by limited space
 - ◆ Patient satisfaction is challenged, as is any opportunity for a sustainable enhancement of the patient experience
 - ◆ Cubicle space to accommodate incoming ambulance arrivals is insufficient, contributing to the current delays with ambulance handovers into the unit
- ▶ **Resuscitation:** There are 6 bays and each are significantly undersized with non compliant space around the bed for service delivery
- ▶ **Minors:** These are significantly undersized compromising patient flows with the overall numbers slightly underprovided. It is important to note that ‘minors’ attendances at LRI ‘minors’ tend to be of a higher acuity (fractures/significant soft tissue injuries) than the nearby walk in centres at Loughborough (x1) Leicester City Centre (x2). This is due to patients with lower acuity minor injuries choosing to be seen at those centres (approx 150,000 between those three walk in centres), leaving the higher acuity work being treated at LRI ED
- ▶ **Imaging:** There is currently no dedicated emergency imaging suite; patients are required to attend the main imaging department reducing efficiencies and patient experience and safety
- ▶ **Mental Health:** There is a need to meet requirements relating to a dedicated area (inclusive of own WC) that can be secured off from the rest of the department. Section 136 requirements need consideration.
- ▶ **Emergency Decision Unit (EDU):** The space provided is currently 50% undersized
- ▶ **Elderly Frail Unit (EFU):** The space provided is currently 50% undersized

- ▶ **Medical Assessment:** There is an essential need to provide a triage and assessment service adjacent to the emergency floor for GP referred patients to enhance patient flows through the department to improve working relationships, processes and clinical effectiveness. Assessment beds are currently provided on 5th floor of the Balmoral Building

The ED current capacity provision is summarised below:

Table 2.3 Current Capacity Provision

Name	Service	Capacity
Majors	Patients with potentially serious conditions or are too unwell to be able to walk without help. Most patients in this area will have been brought in by ambulance	16 spaces (plus 12 chairs in doubled up cubicles)
Minors and UCC	Less serious illnesses or injuries and functions similar to an NHS Walk-In Centre or Minor Injuries Unit. Patients will be assessed and treated by Emergency Nurse Practitioners, physiotherapy practitioner and ED doctors. The ED review clinic, in which patients with certain soft tissue injuries are reassessed, is held in this space 3 times per week	21 spaces
Resuscitation	This area for specialist equipment and space for patients with life-threatening illnesses, such as heart attacks or severe breathing problems, as well as major injuries.	6 spaces
Paediatrics	Emergency services for children and young people under the age of 16. Cared for by specially trained staff. Unwell or severely injured children are treated in the main resuscitation room	12 spaces
Ophthalmology	Eye emergency services (currently located at Level 1 Windsor)	4 spaces

2.11 Strategy

This business case, and the associated corporate and project objectives, are supported by a number of significant strategic documents and programmes. It provides an overview of the driving policies and guidance documents at National, Regional and Local level that can provide context and support the case for change in relation to increasing capacity and providing modern accessible emergency services. These range from national and local strategies and programmes, to national and local standards and guidance. The relevant documents and programmes are set out below.

2.11.1 National Strategies, Programmes and Guidance

The National programmes and guiding policies are summarised below. A more detailed summary with references can be found in Appendix 1c.

Table 2.4 National Strategies, Programmes and Guidance

NATIONAL	
Health and Social Care Act 2012	The government's Health and Social Care Bill outlines the future commissioning arrangements across the NHS
Department of Health Emergency Department Clinical Quality Indicators	The Revisions to the NHS Operating Framework for 2010/ 11 signalled the intention to replace the 4 hour waiting time standard for EDs with more clinically relevant indicators. The clinical quality indicators for the ED have been designed to present a comprehensive and balanced view of the care, and accurately reflect the experience and safety of patients and the effectiveness of the care they receive. These indicators support patient and public expectations of high quality emergency services and allow EDs to demonstrate their ambition to deliver consistently excellent services which continuously improve.
Care Quality Commission	The Care Quality Commission (CQC) implemented 5 domains of quality care ⁹ to assess provision of care against. These domains are defined as Safety, Effectiveness, Caring, Responsive to people's needs and well led organisation In addition the CQC have recently implemented an intelligent monitoring approach to give inspectors a clear picture of the areas of care that need to be followed up within an NHS acute trust.

⁹http://www.cqc.org.uk/sites/default/files/media/documents/20130503_cqc_strategy_2013_final_cm_tagged.pdf

NATIONAL

<p>NHS Operating Framework</p>	<p>The Operating Framework for the NHS in England 2012/13¹⁰ sets out the business and planning arrangements for the NHS. 2011/12 saw the introduction of a set of clinically led indicators to allow a more rounded view to be taken of the performance of emergency services. Those indicators will continue to be in place during 2013/14 for local use, and will be published locally for patients and the public. The ability for local commissioners to impose fines through the national contract will continue. In judging performance nationally, the Department of Health (DH) will use the operational standard of 95% of emergency patients being seen within 4 hours.</p>
<p>Transforming Urgent and Emergency Care Services in England: Urgent and Emergency Care Review, End of Phase 1 Report, High Quality Care For All, Now and for Future Generations, NHS England November 2013</p>	<p>NHS England has completed phase one of their review of urgent and emergency care in England, which proposes a fundamental shift in how urgent care and emergency services are delivered. It aims to introduce two levels of hospital based emergency centre with specialist services in larger units. The report highlights the need for. It the importance of emergency services being able to provide access to the very best care for the most seriously ill and injured patients, 24 hours a day and 7 days a week. The review highlights five key elements to ensure success of implementing the reviews proposal of a two tiered emergency centres</p>
<p>High Quality Care for All, now and for Future Generations: Transforming Urgent and Emergency Care Services in England June 2013</p>	<p>NHS England have implemented an initiative that focuses on high quality care for all, now and for future generations. This initiative focuses on how emergency services can deliver the best outcomes for patients and the community in the future</p>
<p>Future Hospital: Caring for Medical Patients, Royal College of Physicians (Sept 2013)</p>	<p>RCP established the Future Hospital Commission, an independent group tasked with identifying how hospital services can adapt to meet the needs of patients, now and in the future. Its report, Future Hospital: Caring for Medical Patients sets out their vision and recommendations.</p>
<p>Quality, Innovation, Productivity and Prevention (QIPP)</p>	<p>QIPP is a large-scale transformational program for the NHS. It involves all NHS staff, clinicians, patients and the voluntary sector. The purpose is to improve the quality of care the NHS delivers and deliver £20billion of efficiency savings by 2014-15, which will then be reinvested into frontline care.</p>

¹⁰ Department of Health (2011, Nov). The Operating Framework for the NHS in England 2012-13.

NATIONAL

HBN 15-01 Planning and Design Guidance: Accident and Emergency Departments (April 2013)

HBN 15-01 provides guidance on design considerations for the built environment in ED areas. These areas include designated clinical spaces such as minors, majors, resuscitation, mental health, children's and adult spaces and other hospital locations that are key to adjacency requirements, as well as the support facilities that underpin these areas. The guidance outlines the emerging principles in planning facilities for emergency care people such as user requirements and their views, location and departmental factors.

Royal College of Paediatric and Child Health 'Standards for children and young people in emergency care settings' [third edition] 2012¹¹

This guidance document replaces the 'redbook' guidance and sets out the minimum standard requirements for how children in emergency settings should be treated - covering areas from service design and environment to staff training and safeguarding. It also contains specific standards against which healthcare providers can be measured.

The Silver book – National Guidance 'Quality Care For Older People With Urgent and Emergency Care Needs, June 2012

This national guidance document addresses the care for older people during the first 24 hours of an urgent care episode. It outlines the urgent care needs of older people and the competencies required to meet these needs. It states that the older person's care needs must be delivered within the first 24 hours and as part of a whole systems strategy. This document outlines current clinical guidance and suggested standards¹².

Guidance for commissioning integrated URGENT & EMERGENCY CARE - A 'whole system' approach, July 2013¹³

This guidance document focuses on the interdependencies between services. It describes what urgent and emergency care is, why it is important to commissioners,

And the need have a holistic system in terms of commissioning urgent and emergency care. It provides guidance on how to ensure integrated 24-hour urgent and emergency care focussing on consistency, quality, safety and improved patient experience. How patient pathways can be streamlined.

¹¹ www.rcpch.ac.uk/system/files/protected/page/Intercollegiate%20Emergency%20Standards%202012%20FINAL%20WEB.pdf

¹² www2.le.ac.uk/departments/cardiovascularsciences/people/conroy/docs/SILVER_BOOK_FINAL.pdf

¹³ <http://www.rcgp.org.uk/news/2013/july/~media/Files/Policy/A-Z-policy/Urgent-emergency-care-whole-system-approach.ashx>

2.11.2 Transforming Urgent & Emergency Care Services in England: Urgent & Emergency Care Review, End of Phase 1 Report - Potential Impact on UHL

Recent publication of NHS England's (November 2013) end of Phase 1 Report relating to transforming urgent and emergency care across England, highlights particular relevance to this section and therefore summarised separately and highlighted within the main body of this OBC below. Refer to Appendix 1c for detailed outline of additional Nationalguiding documents and strategies.

Hospital EDs are set to be reclassified, with between 40 and 70 offering a higher level of staffing and expertise. Sir Bruce Keogh has proposed that existing accident and emergency departments are designated as either "emergency centres" or "major emergency centres" – although these titles could change.

Major emergency centres will be large units and will provide a range of highly specialised services delivering the very best outcomes for patients. Specifically noted is the ability to treat heart attacks and stroke patients.

In accordance with the above, UHL is likely to be designated a "major emergency centre", with the LRI supporting the emergency floor and Glenfield Hospital providing highly specialised cardiac care. Work will need to be undertaken to understand how much additional work this may bring to LRI from neighbouring hospitals rebadged as "emergency centres". Since the closest ED is approximately 25 miles away, it is possible the LRI already deals with much of this work. However, this will need to be tested when there is a better understanding of how services are to be configured locally.

There is a recommendation for the ED and Urgent Care Centre's to be colocated when it comes to delivering emergency services, which has already been clinically modelled as part of the proposed LRI Emergency Floor project, however, there will be renewed impetus to avoid patients coming to the LRI site in the first place.

This could be expected to reduce workload at the UCC/ Minors end of the clinical spectrum, and the projects Health Care Planners have factored an approximation of this into the "high" scenario through the inclusion of a "left shift into the community". Again, this will need to be tested with Commissioners with regards their thoughts on how this will be delivered.

On balance there will be two pressures:

1. An outward shift of less acute care
2. An inwards shift of more complex care.

These may or may not balance each other out, and work will need to be undertaken to understand the overall impact of these factors. The focus of the Health Care Planners and associated Emergency Floor Project Team has always proposed generic flexible accommodation to respond to changing shifts in acuity, workload and case mix. The design solution now needs to ensure that this is delivered and that facilities remain as generic as possible to deal with changing demand.

The second phase of the review will now look at the issues in more detail. It is unclear when it will report.

2.11.3 Regional Strategy/Guidance

CCG Out of Hospital Strategies

There are three LLR CCGs across Leicester: all three have agreed to commission major provider contracts collaboratively. The three CCGs are:

- ▶ Leicester City
- ▶ West Leicestershire
- ▶ East Leicestershire & Rutland

When developing commissioning plans, the following goals were agreed:

- ▶ To improve health outcomes
- ▶ To improve the quality of healthcare services
- ▶ To use our resources wisely

During 2012/13 the key transformation programmes developed were:

- ▶ Proactive Care
- ▶ Emergency and Urgent Care
- ▶ Capacity and capability in Primary Care
- ▶ Community Hospitals: The way forward

It is important to note all CCGs were contacted by the Trust during the SOC process to obtain support for the Emergency Floor Reconfiguration project.

Joint Strategic Needs Assessment (JSNA)

The development of a Joint Strategic Needs Assessment (JSNA) is a requirement from the DH that is placed upon the Directors of Public Health, Adult and Children's Services in all boroughs. The JSNA provides a systematic method for reviewing the health and well-being needs of a population, taking account of those groups or individuals whose needs are not being met, who are experiencing poor outcomes, or for whom special arrangements may be necessary.

It aims to understand both short-term needs (3 to 5 yrs) and long-term needs (5 to 10 yrs) and service requirements for patients in a given population.

The JSNA for Leicester is relevant to this business case setting health themes that suggest that implementation of key strategies should reduce non-elective admissions and therefore reduce demand for ED services at RFI. For example Older Persons strategy, non emergency 111 phone, out of hours care.

Emergency Care Network

The Leicester, Leicestershire & Rutland (LLR) Emergency Care Network (ECN) role is to put in place measures to improve urgent care across LLR. Outlined below are some of the key initiatives the network is implementing:

- ▶ **Emergency Response** - specialised services in fewer hospitals (emergency dept, specialised services such as trauma, stroke, primary angioplasty, vascular/emergency surgery, and emergency ambulance service). These ED centres will be operational 24/7 with full and continuous cover.
- ▶ **Urgent Care System** - A key priority for improving urgent care is to improve patient flows across the whole system with all agencies involved in delivering urgent care working effectively together. This is governed by the LLR Emergency Care Network, which is chaired by Leicester City CCG on behalf of the local health and social care community. An integrated approach utilising reworked Urgent Care criteria such as agreed range of urgent care services (cuts, stings, etc), alcohol and substance misuse, crisis resolution, (mental health and social care), see & treat and hear & treat.
- ▶ **Integrated Health & Social Care System** – consistent standards, shared protocols, timely flow, integrated workforce, training and education, care networks. Access will be determined by local demand.
- ▶ **NHS 111** - In Sept 2013 the Trust became part of the LLR-wide NHS 111 programme, a new service introduced to make it easier for patients to access local NHS healthcare services when they need medical help fast but it isn't a 999 emergency. Demand on UHL's emergency services is anticipated to further increase as a result of the new NHS '111' service being introduced. The service has been launched in other areas of the country already and early indications point to increased attendance rates at EDs as a result.
- ▶ **EMAS Local Response** - Building on a successful pilot, the CCG continues to work closely with EMAS to deflect and reduce inappropriate secondary care activity. This will be achieved by an innovative pathway to keep patients within the care of general practice, where it is safe and appropriate to do so, thereby avoiding an unnecessary journey to hospital.

2.11.4 Local Strategy

Better Care Together Strategy 2012-2022

Working together, LLR health and social care teams have developed this strategy to provide integrated, high quality services, delivered in local community settings where it is appropriate to do so, whilst improving the emergency and acute care provided to the people of the area.

The Better Care Together Strategy is relevant to this business case; it provides the framework to improve current emergency and acute care across LLR, whilst aiming to reduce acute attendance and promote care closer to home.

Trust Strategic Direction 2012 -2017

UHL Trust Strategy outlines the overall Trust aims, and highlights the clinical service aims of the Trust for the next 10 years. This strategy is supported by a set of enabling strategies such as, Estate Strategy, Quality Improvement Strategy, Education and Research Strategy and Workforce Strategy.

The crux of this strategy is to expand and develop key specialist services. The Better Care Together Programme and the Site Reconfiguration Programme will be instrumental in this delivery, driving up quality, enabling integrated patient flows and keeping costs down. The Emergency Floor project needs to be in a position to provide the appropriate capacity and level of care for this strategy to succeed.

The 10 year strategy sets out the Trust's vision for the future built around delivering healthcare that is of high quality, safe, compassionate and affordable.

The key corporate objectives are:

- ▶ Safe high quality patient centred health care
- ▶ Joined up emergency care
- ▶ The provider of choice
- ▶ Integrated care closer to home
- ▶ Enhanced reputation in research innovation and clinical education
- ▶ Professional, passionate and valued workforce
- ▶ Sustainable high performing NHS Foundation Trust

The Emergency Floor reconfiguration project is a key element in delivering these objectives.

UHL Reconfiguration Programme – Strategic Outline Case

In support of the strategic direction, UHL are currently developing a Strategic Outline Case which will identify option for future site reconfiguration in line with the Trusts Clinical Reconfiguration Strategy.

All options being assessed will maintain the LRI as the main emergency site and as such the Emergency Floor project will support the Strategic Outline Case.

A paper was supported by the Executive Strategy Board on the 5th November 2013 describing the Options Appraisal process proposed to be undertaken, the scoring mechanism and the format of each of the required forums. The Strategic Outline Case will be due for completion and submission to the Trust Board for approval at its March 2014 meeting.

Trust Estate Strategy and Estate Transformation Plan 2013

The quality and fitness for purpose of the NHS Estate and the services that maintain it are integral to delivering high quality, safe and efficient care (Treasury Value for Money Update 2009). It is also an area of significant spend; the budget for Estates and FM Services across the Trust in 2012/ 2013 was £31m.

Over the last two and a half years the LLR Health Community has worked together to better understand the collective capacity and estate challenge facing local organisations. Informed by jointly commissioned analysis, the local health community has committed to a strategy to simplify, standardise and share the delivery of core Estates/ FM services and to work together in reducing the collective asset base by 20%, better utilising the residual space and capacity footprint and improve the quality of the physical environment.

Efficient estate solutions will improve frontline service provision as well as achieving improved utilisation of the estate and unlocking its embedded value. This is possible by delivering a high quality clinical and working environment for patients and staff, resulting in better levels of productivity, flexibility and patient satisfaction. This will also support cross-divisional strategies that maximise optimisation of the estate resources across UHL.

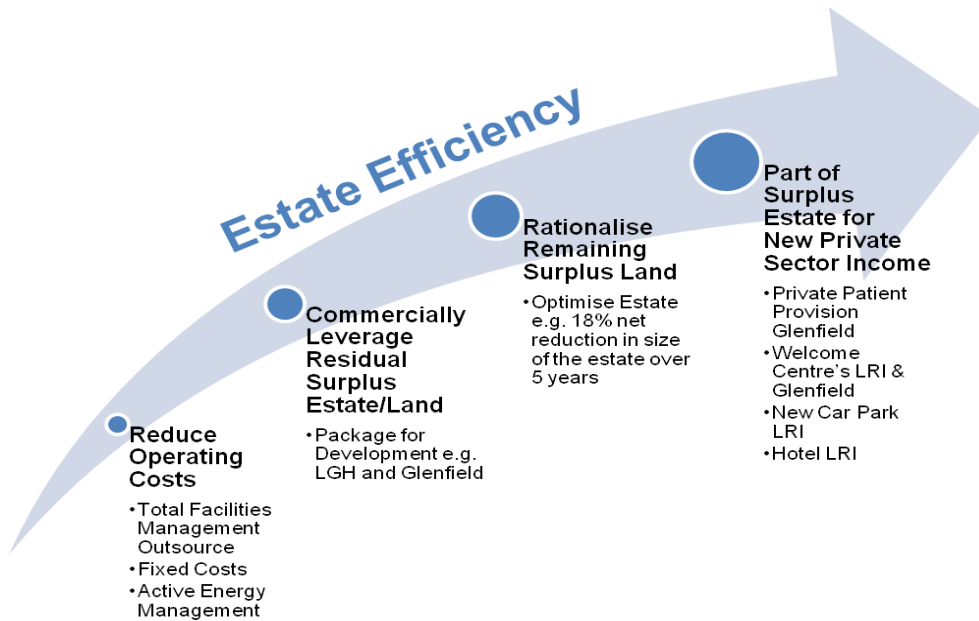
The Trust identifies the need for flexibility to move from being a constraint to an enabler for change. UHL is developing a Hospitals Estate Transformation Plan which is based on a strategic framework that consolidates the estate, develops new facilities, disposes of surplus land and buildings and encourages third party partnerships that will raise income for the Trust. This will be a cornerstone of service reconfiguration and improved utilisation of the Trust's estate. This must be balanced by organisational and public expectations about the provision of highly specialised services alongside local access to primary and secondary care, in the context of high levels of public support for the associated hospitals. It is in this context that the opportunity for significant and far reaching estate transformation will be determined.

The Transformation Plan will;

- ▶ Underpin the strategic direction
- ▶ Support the clinical strategy
- ▶ Support the strategic outline case for the whole site reconfiguration
- ▶ Show a clear implementation programme over five years for transformation with tangible benefits
- ▶ Improve the patient and staff built environment, investing in improved facilities and infrastructure; greatly aiding recruitment and retention
- ▶ Identify capital development to unlock the embedded value of Trust assets and support its ability to deliver clinical transformation and achieve QIPP efficiency savings

The following illustrates the cycle of estate transformation incorporating review, consultation, investment, rationalisation, development and ultimate delivery of schemes to meet the Trusts strategic and service objectives.

Figure 2D Estate Transformation Cycle



The Estates Transformation Plan sets out detailed strategies for its three main hospital sites. The Emergency Floor project is considered key in this plan in supporting the Trusts service strategies specifically for the LRI.

2.12 Summary

Key national and regional business strategies suggest that the urgent and unscheduled care environment in the NHS is changing significantly, with a number of initiatives underway to reduce ED attendances and non-elective admissions across LLR.

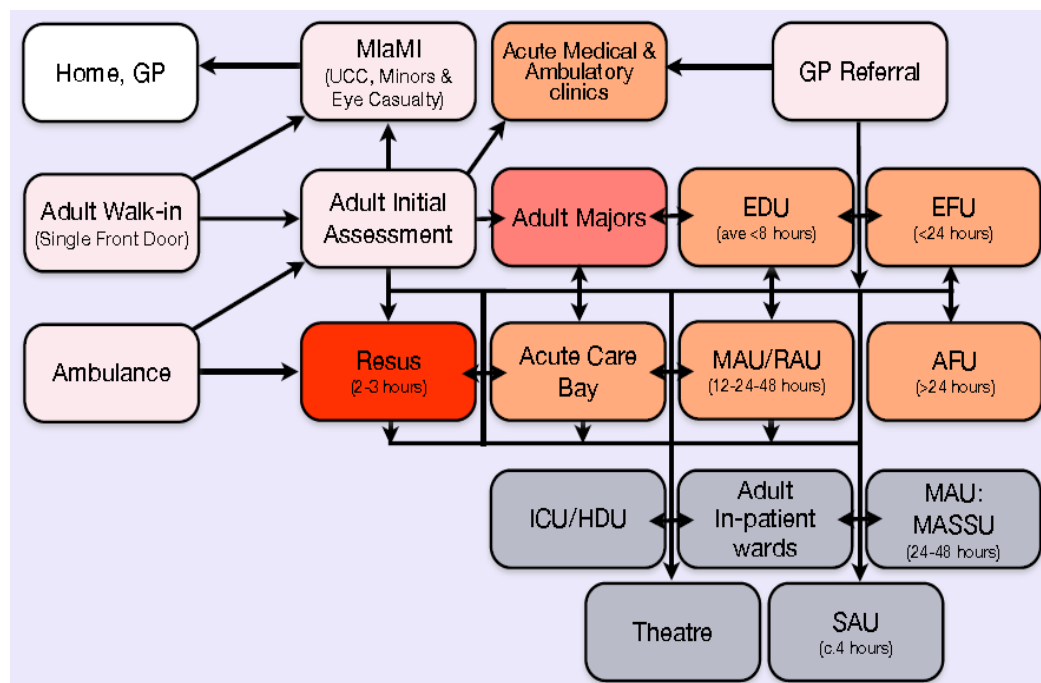
At the same time, the Better Care Together Programme and the integrated transformation programme are underway which identify how and where acute care is provided. LRI emergency services have an important role to play in supporting UHL and the entire health economy with increased activity projected, highlighting LRI as a main emergency service provider for the region. LRI emergency services will also be significant in meeting the two Trust strategic programmes, the challenges and opportunities, a key driver for investing in its long-term success.

Part B: The Case for Change

2.13 Introduction

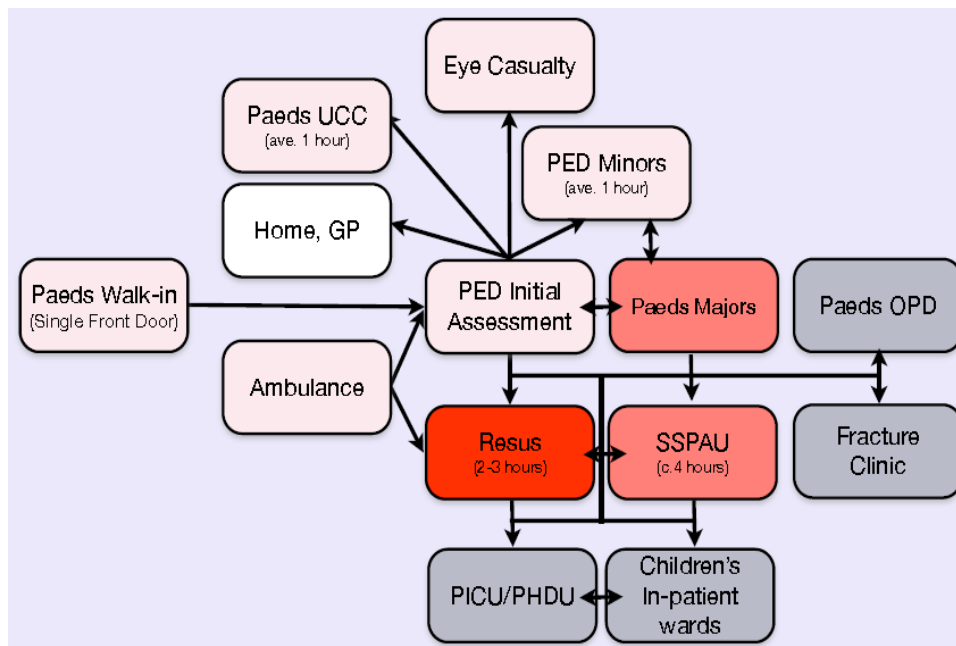
The purpose of this section of the business case is to outline the strategic case for change. Emergency Medicine is a secondary care specialty which provides immediate care for patients of all ages presenting with illness and injury of all severities¹⁴. The Trust clinicians have developed specific Models of Care for both Adult and Children's emergency services to be implemented into the proposed Emergency Floor development, providing new ways of working, improved process flows, improved efficiencies and continued safe care. Appendix 3a details the model of care, however they are outlined in the following diagrams.

Figure 2E Adult Model of Care



¹⁴ The College of Emergency (2011, February). What is Emergency Medicine? A guide.

Figure 2F Paediatric Model of Care



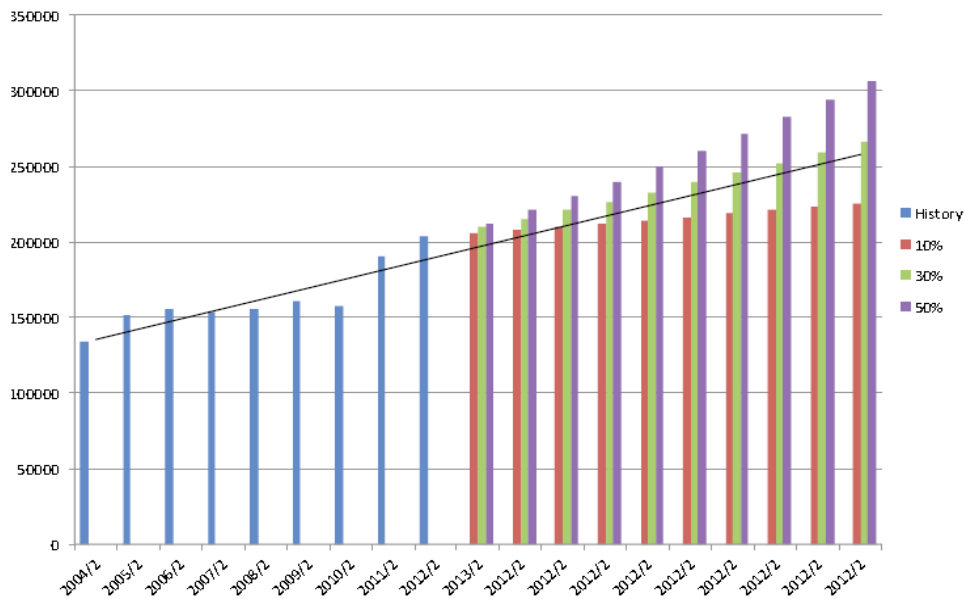
The Trust is expected to provide high quality emergency care and assessment services to comply with regulatory standards. It also needs to ensure that its patients and staff can receive treatment and work in a safe environment and that patient treatment is efficient and timely in its delivery. In doing so, provision of adequate majors cubicles, mental health, minors, imaging, resus, paediatrics, medical assessment and supporting infrastructure accommodation/ environment to support the specific service delivery requirements relating to the associated emergency and assessment care will be required.

2.14 Capacity and Demand

In line with national concern about the ability of emergency services to cope with demand, UHL has experienced a rise in attendances to its emergency services. Section 2.9 which demonstrated UHL's performance is well below the standard 95%. This reflects poor quality of care for patients, reduced clinical effectiveness, and an unacceptable delay in treatment, increased clinical risk and compromised patient safety.

The department currently serves annual attendances of approximately 200,000; including urgent care services. 52,000 of the annual attendances are ambulance patients which are seen through a 16 cubicled majors area. Figures suggest there is a 5-6% annual growth of emergency attendances at the Trust. The table below outlines this growth over a 10 year period up to 2012/13 and projects forwards on the basis of the three ED growth scenarios detailed above (10%, 30%, 50% growth over 10 years).

Figure 2G Activity Growth up to 2012/13



The Trust has undertaken extensive work projecting ED activity across the next 10 year period. The projected 10 year increase has been determined utilising a three scenario methodology (refer to Section 3). The three scenarios are:

- ▶ Baseline Scenario, this is based on ONS projections of population growth, and reflects the changes to the organisation of minors & UCC services implemented in 2013 with the commencement of a single front door policy for all adult walk-in attenders. This is factored in both as a one-off adjustment to the 2012/13 dataset and a further shift of future activity to the UCC from minors
- ▶ Medium Scenario, this is an intermediate scenario between the high and low growth rate projections
- ▶ High Scenario, this is based on historic trend in ED attendances

The table 2.5 and 2.6 below reflects the three scenario growth assumptions across specialty areas and the overall projected activity over the next 10 years. The increase will require additional capacity to deliver emergency services across the next 10 years.

Table 2.5 Scenario Projected Growth Across ED Specialty Areas

	Paeds	Eyes	Majors	Minors	Resus	Grand Total	UCC	All inc. UCC
Demographic Growth	12%	9%	14%	8%	16%	12%	10%	11%
Uplift for Medium Growth	20%	20%	20%	20%	20%	20%	20%	20%
Uplift for High Growth (Historical)	20%	20%	20%	20%	20%	20%	20%	20%
UCC Front Door Immediate				-40%			65%	0%
UCC Share of Future Growth				-16%			26%	
Left shift to Primary Care							-30%	-5%
Children UCC to ED	25%						-25%	0%
Base Scenario	12%	9%	14%	-32%	16%	12%	75%	11%
Medium Scenario	32%	29%	34%	-20%	36%	32%	108%	31%
High Scenario (inc. shift)	77%	49%	64%	-8%	66%	62%	86%	46%

For modelling purposes for the ED the scenarios have been abbreviated to low (10%), medium (30%) and high (50%).

The final 2012/ 13 year to date 4 hour wait figure for UHL, including the UCC, was 91.9% of attendances. In response to a consistent underachievement of the 4 hour target, new clinical roles were introduced and a new pathway commenced in November 2011 called 'Right Place, Right Time'. This initially resulted in a considerable improvement in the Trust's ED performance.

However, following a number of challenging weeks of activity (with ED attendances 5% higher and emergency admissions 7% higher in the final quarter compared to the same period last year) achievement of the 4 hour target deteriorated. This is a contributing factor to the worsening financial performance and impact on achieving the Trust strategic plans.

It is important to acknowledge that the Trust has implemented the models of care that focuses on a single door entry point whereby patients present to UCC first and then referred to the ED. Although this initially seemed to improve performance the ability to achieve the 4 hour target is limited. This is primarily due to the current capacity requirements.

The increasing attendance levels creates increased demand for major cubicles, minor cubicles and resuscitation beds and ultimately impacts on waiting times. Inadequate space and the inadequate size of the department currently results in patients waiting on trolleys queuing in the open floor space in the majors area. As well as compromising patient privacy & dignity, this inhibits the Trust's ability to move patients smoothly through the emergency pathway and creates an unnecessary infection control risk.

In addition to the activity projections, the Trust has also undertaken activity analysis relating to hourly arrival percentiles. The 95th percentile number of hourly arrivals across the entire unit is in the region of 40 patients/hour. On rare occasions this volume may recur for two or three hours at a time. The analysis has focussed on treatment and wait times associated at each stage of the journey. The table below outlines percentile hourly arrivals for each clinical area. For the purposes of planning the new department, the capacity requirement has been based on 95th percentile hourly arrivals. Appendix 3b provides more statistical detail relating to waits and activity.

Table 2.6 Current Hourly ED Arrival Percentiles

Eye Casualty		Minors		UCC exc. ED double counts		Resus	
Percentile	Pts/Hr	Percentile	Pts/Hr	Percentile	Pts/Hr	Percentile	Pts/Hr
98%	14	98%	14	98%	14	98%	5
95%	11	95%	12	95%	12	95%	4
90%	10	90%	11	90%	11	90%	3
50%	5	50%	6	50%	6	50%	2
Mean	6	Mean	6	Mean	6	Mean	2

Children		Majors		All UCC inc. ED double counts		Department exc. UCC	
Percentile	Pts/Hr	Percentile	Pts/Hr	Percentile	Pts/Hr	Percentile	Pts/Hr
98%	12	98%	14	98%	17	98%	38
95%	10	95%	12	95%	14	95%	34
90%	9	90%	11	90%	12	90%	32
50%	4	50%	7	50%	6	50%	21
Mean	5	Mean	7	Mean	6	Mean	19

It is important to note that efficiencies are impacted by the extent that patients occupy clinical spaces – resus bays, majors cubicles, etc – purely for the purpose of waiting (e.g. waiting for diagnostics or transfer, rather than for clinical intervention).

In addition to capacity it is essential that adjacency requirements are considered and the associated impact on efficiencies and patient experience. This is particularly relevant for both the Medical Assessment Unit (MAU) and Diagnostic services.

Assessment

MAU is currently on the 5th floor of the Balmoral Building. This location creates inefficiencies in patient flows. It is essential that this service be provided on the same floor as the ED with additional capacity to enhance efficiencies and meet demand. The assessment unit provides a medical decisions unit that is essential in providing an extension of care to the resuscitation, diagnostic and treatment. The unit also receives referrals direct from G.Ps which, at times, will be referred to the ED for treatment.

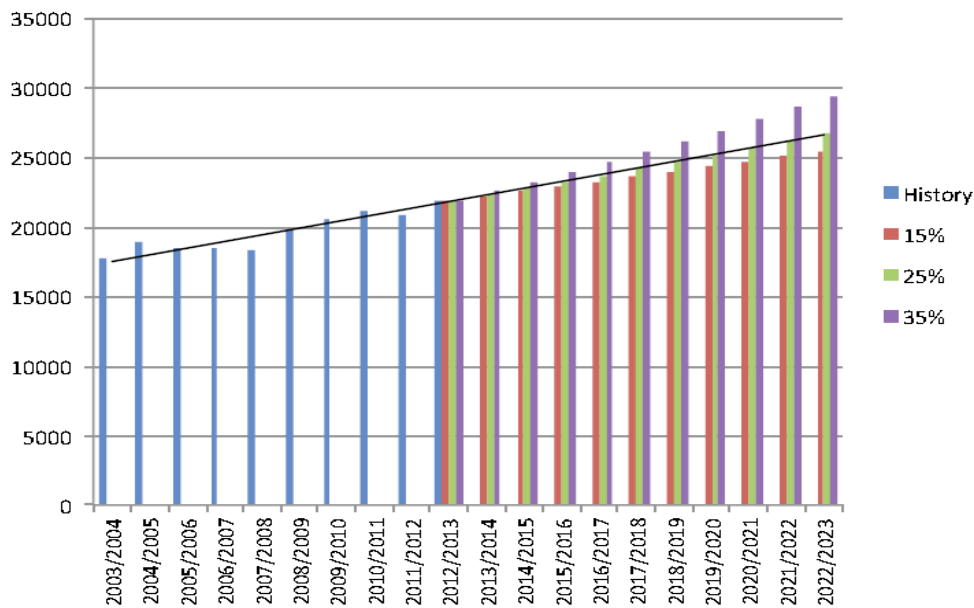
MAU activity has recently been growing at around 3.5% annually (Refer to Appendix 3a) and the adjacency to the ED will assist in managing this growth rate by streamlining patient pathways and flows.

As with the ED flows, work has been undertaken to model the projected number of emergency medical admissions, with three scenarios being generated as follows:

- ▶ Low: demographic growth (based on ONS data), 11% over 10 years;
- ▶ High: historic trend in growth (c.3.5% per annum), 35% over 10 years;
- ▶ Medium: intermediate growth scenario, 25% over 10 years.

These scenarios have been abbreviated to 15%, 25% and 35% growth over 10 years for planning purposes for the adult medical assessment areas of the scheme.

Figure 2H Historic & Projected Assessment Unit Activity (LRI Adult Medical Emergency Admissions, excludes Stroke & Oncology)



Diagnostics

The existing ED and MAU has no dedicated emergency imaging suite. When ED patients require diagnostic services they are required to attend the main imaging department and at times require a porter and/or nurse to transport the patient to these facilities.

The requirement for a rapid, reliable diagnostic imaging service as part of the emergency patient pathway is increasing, with growing demand for the assessment of patients with trauma, stroke, and other conditions in line with national guidance. It is likely that demand for cross-sectional imaging will continue to grow and this proposal incorporates a strategy for future enlargement of capacity.

The pathway of care can be overlaid on this whole-system approach, and it has four key stages:

- ▶ Identification of the need for care (by self, by carer, by professional, by other)
- ▶ Assessment of need (by telephone, by face to face)
- ▶ Initiation of right response (emergency response, urgent response, rapid/moderate response and integrated health and social care) – outlined in more detail below
- ▶ Follow through to closure (episode complete, planned follow-up, on-going care)

A diagnostic hub that is central for all patients within the Emergency Floor will provide improved patient flows and reduce the time to diagnose patients. Staff efficiencies will also be enhanced by gaining back the time that staff spend each day escorting patients to the main imaging department. Appendix 3b outlines the capacity requirements and based on intermediate growth suggests 265 CT and 2,141 plain films per week in ten years' time (in comparison to 200 and 1,650 currently).

In a similar fashion, the project envisages satellite pathology and pharmacy facilities in order to provide local diagnostic testing and pharmacy dispensing. It is expected that the physical proximity of these facilities will engender truly multi-disciplinary working within the emergency service, as well as improving the turnaround times for pathology tests and the dispensing of medications.

The overall increase in demand at the ED and associated Assessment Unit is comprised of a number of key drivers that include:

Local Demographic Factors

- ▶ The local community is an ageing population and there has been growth in the number of frail patients and those suffering from dementia
- ▶ LRI 'minors' attendances tend to be of a higher acuity (fractures/significant soft tissue injuries) than the nearby walk in centres at Loughborough (x1) Leicester City Centre (x2). This is due to patients with lower acuity minor injuries choosing to be seen at these centres (approx 150,000 between the three walk in centres), leaving the higher acuity cases to be treated at LRI ED
- ▶ UHL's emergency services serves a population of approximately 1 million, making it one of the largest emergency services departments in the country
- ▶ There is no other ED within a 25 mile radius
- ▶ The local community lack confidence in the GP out of hour's service which has increased pressure on EDs
- ▶ The local community has one of the highest birth rates in the country, generating additional paediatric workload

Service Development Factors

The proposed Emergency Floor project will be a significant driver in the Trust's LRI site wide reconfiguration plans. The development will immediately begin to address the sites lack of clear demarcation with regards access/ egress arrangements for staff, public, patients and blue light, by creating a 'hot' end to the LRI site.

Currently the hospitals main entrance is immediately adjacent to the drop off point and access to the ED and associated assessment areas, which provides very little privacy and dignity for patients and their families. There are also considerable health and safety issues with regards the number of people in the vicinity in conjunction with ambulances and other vehicles operating in and around the same area.

The proposed development will separate blue light access/ egress away from what will eventually become the main entrance. A site wide parking solution will also be

developed in parallel, with an immediate aim to alleviate vehicular congestion in and around the site during peak times.

2.15 Quality of Care

The following outlines specific issues across the current ED and associated assessment areas requiring change to meet demand requirements set out above, meet future activity and more specifically what the Trust needs to implement to achieve strategic requirements relating to quality.

As indicated throughout this document, there are various elements of the physical environment of the existing ED and supporting clinical areas that are unsatisfactory and compromise the emergency services clinical quality indicators and may lead to an impact on safety and a negative experience for patients, carers and staff. For example:

- ▶ Flows through the ED are poor; it is cramped and not fit for purpose
- ▶ Limited space for provision of an adequate number of majors cubicles compromises many elements of care and patient experience, particularly:
 - ◆ Patient safety
 - ◆ Privacy and dignity
 - ◆ Infection control
 - ◆ Patient pathways
 - ◆ Ability to meet ED targets, including the 4 hour wait and the ambulance handover target

It is important to consider this within the framework of the five domains of quality as defined by the Care Quality Commission (CQC)¹⁵. These five domains are:

1. Safety
2. Effectiveness
3. Caring
4. Responsive to people's needs
5. Well led at organisational, hospital and service level

¹⁵http://www.cqc.org.uk/sites/default/files/media/documents/20130503_cqc_strategy_2013_final_cm_tagged.pdf

Table 2.7 Quality of Care by CQC Domain

Department	CQC Domain
<p>ED Front Door: In line with current guidance (DH and CEM) there is a requirement for one front door for adult patients presenting for emergency treatment. All patients would be assessed on arrival and directed to the appropriate level of care; i.e. acute medical clinics, UCC, minors or majors and resuscitation.</p> <p>A separate front door is required for paediatric cases in line with National Service Framework (NSF) for Children and Young People</p> <p>A dedicated ambulance entrance would also be provided.</p>	<p>Safety</p> <p>Responsive to people's needs</p> <p>Caring</p> <p>Effectiveness</p>
<p>Paediatrics: UHL needs to meet the NSF for Children and Young People standards relating to discrete space and child friendly environment. The department will require an increase in cubicle numbers to cater for the attendances (refer to Appendix 3b) and the proposed growth, and will incorporate a short stay facility, including the potential shift of paediatric emergency care from an adjacent hospital. A dedicated paediatric single front door will ensure a child-focused approach to emergency care for children.</p>	<p>Safety</p> <p>Responsive to people's needs</p> <p>Caring</p> <p>Effectiveness</p> <p>Well led at organisational, hospital and service level</p>
<p>Majors: Currently there currently 16 majors spaces; with additional ad-hoc chairs doubling up in cubicles and the ED corridor. Activity/ capacity analysis carried out (Refer to Appendix 3b) demonstrates that there should be a minimum of 32 majors cubicles in order to serve the attendances. The proposed change will provide the following:</p> <ul style="list-style-type: none"> • Patient safety– providing compliant space around the bed for major incident and patient access. • Privacy and dignity for patient. • Compliance with infection control standards. • Patient satisfaction and sustainable enhancement of the patient experience. • Cubicle space to accommodate ambulance arrivals to the Trust, addressing the current delays with ambulance handovers into the unit. 	<p>Safety</p> <p>Responsive to people's needs</p> <p>Caring</p> <p>Effectiveness</p> <p>Well led at organisational, hospital and service level</p>
<p>Resuscitation: There is a need to improve efficiencies and increase the capacity from 6 spaces to 12 spaces (including paed)</p>	<p>Safety</p> <p>Responsive to people's needs</p> <p>Caring</p> <p>Effectiveness</p> <p>Well led at organisational, hospital and service level</p>
<p>EDU: There is a need to increase capacity to ensure efficiencies in flows across the emergency care pathway. Activity analysis indicates this service requires 13 beds, 3 chairs</p>	<p>Safety</p> <p>Responsive to people's needs</p> <p>Caring</p> <p>Effectiveness</p> <p>Well led at organisational, hospital and service level</p>

Department	CQC Domain
<p>EFU: There is a need to increase capacity to ensure efficiencies in flows across the emergency care pathway. Activity analysis indicates this service requires 16 beds</p>	<p>Safety Responsive to people's needs Caring Effectiveness Well led at organisational, hospital and service level</p>
<p>Minors: There is a need to improve patient efficiencies and staff flows within the minors area of the ED, though significantly undersized the overall numbers slightly underprovided.</p>	<p>Safety Responsive to people's needs Caring Effectiveness Well led at organisational, hospital and service level</p>
<p>Diagnostics: There is currently no dedicated emergency imaging suite; patients are required to attend the main imaging department. A diagnostic hub that is central for all patients within the ED will provide improved patient flows and reduce the time to diagnose patients. Staff efficiencies will also be enhanced by gaining back the time that staff spends each day escorting patients to the main imaging department.</p>	<p>Safety Responsive to people's needs Caring Effectiveness Well led at organisational, hospital and service level</p>
<p>Mental Health: There is a need to meet requirements relating to a dedicated area (inclusive of own WC) that can be secured off from the rest of the department. Consideration regarding provision of as separate entry/ exit to the department in order to enhance compliance to Section 136 requirements is essential. Capacity work undertaken by the Trust reflects a requirement of 3 rooms (within EDU area)</p>	<p>Safety Responsive to people's needs Caring Effectiveness Well led at organisational, hospital and service level</p>
<p>Medical Assessment: There is an essential need to provide a triage and assessment service adjacent to the ED and diagnostics to enhance patient flows through the department, with the benefit of improved working relationships, processes and clinical effectiveness for patients.</p>	<p>Responsive to people's needs Caring Effectiveness Well led at organisational, hospital and service level</p>

In addition to these domains, the CQC implemented an 'Intelligent Monitoring' approach (October 2013) to assess which Trusts will be visited first in the next wave of CQC inspections. This approach is based on 150 indicators that look at a range of information including patient experience, staff experience and statistical measures of performance for example whether a Trust is hitting the accident and emergency (A&E) 4 hour wait target. The Trust is then banded between 1 and 6 (Band 1 represents a higher risk than Band 6). UHL is currently banded by the CQC as Band 1 and therefore representing a high risk with ED performance viewed as a key indicator in this banding.

The CQC will be undertaking an inspection visit in January 2014, with specific areas for inspection to be confirmed.

To improve on this banding the proposed Emergency Floor project will contribute significantly in improving on these quality indicators.

Difficulty Recruiting and Staffing Specialist Medical Roles

Nationally, there is a declining medical workforce specialising in the area of emergency medicine. Whilst there has been a successful recruitment drive at LRI for all levels of staff, the unit remains short-staffed and has to place a heavy reliance on agency staff, which is further exacerbated by the poor environment resulting in a difficulty recruiting.

Whilst ongoing operational improvements are being made to ED processes, the proposed investment and development of the Emergency Floor is the Trust's strategic response to ensure that there is sustained delivery of the emergency care. For those who have to attend hospital, care will be provided in an environment designed to deliver a better patient experience and better quality outcomes.

Future proofing of emergency care provision and changes in patient activity in line with national and regional models of care make it timely for the Trust to review and identify options for enhanced emergency care provision at the LRI, as well as the environment it's delivered in.

The Trust believes that some of the barriers to recruitment and retention of specialist ED staff are as follows:

- ▶ Inadequate working environment leading to substandard patient care and increased risk of adverse incidents. This in turn impacts on staff and presents risk of staff stress and increased sick leave
- ▶ Inadequate training facilities based on limited capacity and flexibility of emergency care infrastructure

A consolidated centralised unit, to meet capacity will contribute to attracting emergency medicine staff to the Trust.

The above case for change relating to both capacity and quality manifests itself into what ultimately becomes a far from satisfactory patient experience; in May 2013 patient complaints hit an all-time high, with the receipt of 30 formal complaints as a consequence of service received from the ED.

Summary

Redevelopment of the emergency care facilities would allow the Trust to meet the current demand and capitalise upon the options to develop improve services, reduce wait times, thereby securing and improving Trust performance. It will also provide the Trust with the opportunity to meet its strategy to achieving the Trusts reconfiguration plans. Redevelopment of the ED and associated assessment areas, to provide a single Emergency Floor, will allow for the consolidation of specialist staff, would create a modern fit for purpose unit in line with national guidance and best practice; which is essential in achieving other standards and efficiencies in patient pathways, clinical synergies and quality of emergency care service delivery. It will also achieve all the quality needs for the patient and the pathways served by this service.

2.16 Investment Objectives

In the context of the above and the Trust's Corporate objectives outlined in Section 2.6 above, the investment objectives for this project are detailed below. It is important to note that these objectives are aligned to the Critical Success Factors outlined in Section 3.2.

Table 2.8 Project Objectives

Critical Success Factor: Business Need	
Investment objective	<ol style="list-style-type: none"> 1. To provide the Trust with increased capacity for emergency services to meet the demands of population growth, changing service models and improved efficiency targets. 2. To increase the productivity of emergency care at LRI 3. To develop a centre of excellence, enhancing the Trust's reputation for training, service delivery and treatment, through the provision of a centralised service in modern accommodation.
Critical Success Factor: Strategic Fit	
Investment objective:	<ol style="list-style-type: none"> 4. To ensure that the changing needs and expectations of a growing population are met in line with Trust clinical strategy and national guidance standards 5. To provide an ED that is compliant with NHS building guidance standards
Critical Success Factor: Quality	
Investment objective	<ol style="list-style-type: none"> 6. To improve the clinical effectiveness and safety of urgent and emergency care service across Leicester: 7. To improve the clinical adjacencies of services to optimise clinical safety and reduce clinical risk.
Critical Success Factor: Sustainability, Service Modernisation, Value for Money	
Investment objective	<ol style="list-style-type: none"> 8. To facilitate the modernisation of services, including streamlining patient pathways and efficient working practices providing an ED that ensures adequate infrastructure and capacity for supporting services that are conducive to the needs of a modern workforce.
Critical Success Factor: Meeting Commissioners' intentions for healthcare services	
Investment objective	<ol style="list-style-type: none"> 9. To equip the ED to respond effectively to existing and known commissioning requirements, as well as to respond flexibly to future changes in service direction and demand. 10. To improve the environment and the experience of users (patients, visitors and staff) of Leicester Royal Infirmary Hospital Accident and ED
Critical Success Factor: Achievability	
Investment objective	<ol style="list-style-type: none"> 11. To provide a solution that is aligned to the Trust DCP plan and Trust organisation as a whole. 12. The development will be delivered on time with minimal disruption to current service delivery

The table below details the key deliverable for each objective.

Table 2.9 Key Deliverables

Project Objective	Key Deliverable	Link with Strategy
To provide the Trust with increased capacity for emergency services to meet the demands of population growth, changing service models and improved efficiency targets.	Meet target to provide efficiency in patient throughput and times to be seen and diagnosed Infection Control standards met	QIPP Trust Strategy Emergency Care Standards Commissioning intentions
To increase the productivity of emergency care at LRI	Targets met relating to patients wait times and time for diagnosis	QIPP Trust Strategy Emergency Care Standards Commissioning intentions
To develop a centre of excellence, enhancing the Trust's reputation for training, service delivery and treatment, through the provision of a centralised service in modern accommodation.	ED will reflect specialised staff with emergency care expertise and increased recruitment /retention level	QIPP Trust Strategy Commissioning intentions
To ensure that the changing needs and expectations of a growing population are met in line with Trust clinical strategy and national guidance standards	Meet Guidance standards	Health Building Notes Estate Strategy QIPP Trust Strategy Emergency Care Standards Commissioning intentions
To provide an ED that is compliant with NHS building guidance standards	Meets NHS building guidance standards	Health Building Notes Estate Strategy
To improve the clinical effectiveness and safety of urgent and emergency care service across Leicester:	Model of Care reflects seamless pathways and reduced waiting times	QIPP Trust Strategy Commissioning intentions
To improve the clinical adjacencies of services to optimise clinical safety and reduce clinical risk.	Meet adjacency target	QIPP Trust Strategy Commissioning intentions
To facilitate the modernisation of services, including streamlining patient pathways and efficient working practices providing an ED that ensures adequate infrastructure and capacity for supporting services that are conducive to the needs of a modern workforce.	Adjacency requirements are met	QIPP Trust Strategy Emergency Care Standards Commissioning intentions
To provide an ED that ensures adequate infrastructure and capacity for supporting services that are conducive to the needs of a modern workforce	New Emergency care facilities will be compliant with Health Building notes and emergency care standards	QIPP Trust Strategy Emergency Care Standards Commissioning intentions

Project Objective	Key Deliverable	Link with Strategy
To equip the ED to respond effectively to existing and known commissioning requirements, as well as to respond flexibly to future changes in service direction and demand.	New Emergency care facilities will be compliant with Health Building notes and emergency care standards	QIPP Trust Strategy Commissioning intentions
To improve the environment and the experience of users (patients, visitors and staff) of Leicester Royal Infirmary Hospital Accident and Emergency Department	New Emergency care facilities will be compliant with Health Building notes and emergency care standards	QIPP Trust Strategy Emergency Care Standards Commissioning intentions
To provide a solution that is aligned to the Trust DCP plan and Trust organisation as a whole.	Option selected will be derived through option appraisal that considers associated benefits relating to minimum disruption	QIPP Trust Strategy Emergency Care Standards Commissioning intentions
The development will be delivered on time with minimal disruption to current service delivery	Emergency care project will be delivered with minimal disruption during project	QIPP Trust Strategy Emergency Care Standards

2.17 Design Quality and Philosophy

The design will reflect the importance of flexibility, quality and will be informed by the latest design guidance where appropriate. It will be a contemporary building, respectful of locally sensitive areas. The building will not affect statutory and non-statutory designated sites.

2.18 Summary

2.18.1 Drivers for Change

The following are key drivers for change:

- ▶ The increasing demand for emergency services is greater than the current capacity can provide. Historic trends in growth suggest a 5% annual growth in ED activity and 3.5% annual growth in assessment unit activity
- ▶ Requirement for single floor Emergency and Assessment Department that incorporates key adjacencies and presence of diagnostics and assessment unit services on the same floor. This enables implementation of the developed model of care for both adults and children accessing emergency services
- ▶ Changes in the local and national demographics combined with the Trust's plan to remain an emergency care centre for Leicester is impacting on increased emergency care demand

- ▶ The Trust requires additional capacity to reflect NHS national guidance. The Emergency Floor project reduces the risk of compromising compliance of other standards of care such as quality, infection control, emergency and urgent care standards and commissioning standards
- ▶ The Trust needs to be in a position to be named as a 'Major Emergency Centre' as outlined in the Urgent and Emergency Care Review November 2013 – End of Phase 1 Report (Keogh)
- ▶ The requirement to address the 4 hour target and ambulance to trolley transfer will have a significant impact on Trust financial performance if capacity issues are not resolved
- ▶ Redevelopment and increased capacity will provide opportunities for the Trust to fulfil its strategic redevelopment programme

2.18.2 Energy Efficiency

The preferred option design solution will enhance and improve on overall energy efficiencies, contributing to the NHS sustainability targets of reduce 2007 carbon footprint by 10% by 2015.

2.18.3 Future Flexibility

Consideration of increased demand will provide opportunity for a solution that is flexible in functionality and that can provide capacity for current demand whilst enabling realisation of the 10 year capacity requirement.

A core component of the design solution will be a generic approach to clinical space which will allow the usage of suites of clinical spaces to be flexed in response to changing demand, pathways and clinical practice.

2.18.4 Conclusion

The drivers for change set out above form the basis of the strategic importance the Trust attaches to the redevelopment of emergency care department at Leicester Royal Infirmary. The drivers for change have been recognised in the project objectives.

In the context of the national, regional, local and Trust strategies, alongside the current configuration with the associated lack of capacity and the condition of the current ED and associated assessment areas, it is clear that investment is required to achieve the project objectives. The proposals outlined in this OBC provide a range of options that will enable the Trust to achieve these aims.

2.19 Potential Business Scope and Key Service Requirements

The Trust is seeking to resolve the shortcomings of its existing ED facility through the development of a purpose-built facility for the provision of emergency care.

The following key service requirements have been identified to meet the current business needs:

- ▶ Increased capacity to meet current and future emergency service related activity
- ▶ Enhanced clinical adjacencies to facilitate better access to related core emergency care facilities and improved process flows
- ▶ Improved access to diagnostics (imaging and pathology)
- ▶ Improved environment
- ▶ Improved retention and recruitment
- ▶ Aligns with the Trusts redevelopment strategic plans

The main components of the required scope for the new Emergency Floor are:

- | | |
|----------------------------------|-----------------------------------|
| ▶ Urgent Care Centre | ▶ Diagnostic Imaging |
| ▶ Ambulance Entrance | ▶ Paediatrics |
| ▶ Resuscitation | ▶ Assessment/Treatment Facilities |
| ▶ EDU | ▶ Support Accommodation |
| ▶ EFU | ▶ Seminar Room |
| ▶ Majors | ▶ Staff Facilities |
| ▶ Minors | ▶ Offices |
| ▶ Plaster Suite & Procedure Room | ▶ Simulation facilities |

Summary

The lack of physical space and capacity in both clinical and non-clinical areas within the ED is affecting its performance in meeting the 4 hour standard and ambulance turnaround times, as well as the overall patient experience currently received. It also creates a significant safety risk when Majors and Resuscitation facilities are over capacity (up to and over 200% in Q4 2012).

The current ED facility also lacks flexibility to accommodate any further increases in activity due either to population growth and/or reconfiguration reflected within Trust redevelopment plans. As Leicester Royal Infirmary consolidates its role as a centre for emergency care across LLR, existing facilities will be stretched even further.

2.20 Main Benefits Criteria

Table 2.9 below shows how the benefit criteria link to the project objectives.

Table 2.10 Investment Objectives and Benefits

Investment Objective	Benefit Criteria
To provide the Trust with increased capacity for emergency services to meet the demands of population growth, changing service models and improved efficiency targets.	To implement a design solution that provides a safe emergency care service that ensures capacity and flexibility for current and future demands of patients requiring emergency care
To increase the productivity of emergency care at LRI	Improve patient pathway management reducing the clinical risk and discomfort through the emergency care pathway.
To develop a centre of excellence, enhancing the Trust's reputation for training, service delivery and treatment, through the provision of a centralised service in modern accommodation.	Support and consolidate the provision of emergency floor concept at LRI
To ensure that the changing needs and expectations of a growing population are met in line with Trust clinical strategy and national guidance standards	Ensures that the service model of care is delivered in line with National ,Trust and local health economy KPI's
	Patient safety is enhanced, and clinical risk is reduced
To provide an ED that is compliant with NHS building guidance standards	Where possible ensures that the service is developed in line with NHS Guidance in terms of HBN, HTM, national and Trust policy and local health economy policy in terms of capacity provision
To improve the clinical effectiveness and safety of urgent and emergency care service across Leicester	Quality of care is enhanced, in terms of the model of care, and seamless pathways of care and patient flows.
	The built environment enhances clinical practice that support clinical effectiveness, improved patient outcomes and patient safety
To improve the clinical adjacencies of services to optimise clinical safety and reduce clinical risk.	Provides enhanced departmental relationships and clinical adjacencies that support clinical effectiveness and improved patient outcomes
To facilitate the modernisation of services, including streamlining patient pathways and efficient working practices providing an ED that ensures adequate infrastructure and capacity for supporting services that are conducive to the needs of a modern workforce	Ensures facilities are future proofed and adaptable to the changing needs of the health economy
To equip the ED to respond effectively to existing and known commissioning requirements, as well as to respond flexibly to future changes in service direction and demand.	Improved privacy and dignity of provisions for all patients
	Consolidates existing services & provides clinical expertise whilst realising the Emergency Floor concept
To improve the environment and the	Improved patient access through a single

Investment Objective	Benefit Criteria
experience of users (patients, visitors and staff) of Leicester Royal Infirmary Hospital Accident and Emergency Department	front door
	Enhances patient, visitor and staff safety through the built environment
To provide a solution that is aligned to the Trust DCP plan and Trust organisation as a whole.	The design solution minimises the impact of the construction process on the site and therefore delivery of the Trust core services
	Option enables future proofing of the physical ED environment aligned to DCP future expansion needs
The development will be delivered on time with minimal disruption to current service delivery	The enabling moves will facilitate the Emergency Floor programme whilst minimising delay to delivery
	Reduces complexity and sequence dependency of enabling moves
	Maintains blue light access throughout whole build process

2.21 Main Risks

Table 2.11 Main Risks and Counter-Measures

Risk	Mitigation
NTDA, CCG's, OSC's, Better Care Together Board and other key external stakeholders - are not supportive of the project	Engagement progressed from SOC stage onwards, with full involvement and engagement anticipated during the development of the Full Business Case
Potential change in organisational clinical strategy	Medical Director, who is responsible for clinical strategy, chairs the Project Board
NTDA approval and/ or funding not forthcoming	Ongoing discussions with NTDA with approval of key milestones. Do Minimum option would be pursued in the event of a lack of capital funding
Victorian Society/ League of Nurses – concern at Chapel being demolished - potential risk to programme	Once OBC approved, engagement with Victorian Society/ League of Nurses to agree the relocation of historical artefacts
Planning & Highways - do not support design proposals	Initial meetings with Council have been very positive – full engagement planned with highways consultants during design development
Extended project programme - will result If enabling works not progressed prior to FBC approval	Trust Board to agree assurance required to proceed enabling works at risk
Delay - due to unforeseen demolition and construction risks	Surveys carried out for M&E and statutory compliance related areas to identify potential issues

Risk	Mitigation
	in advance
Service Disruption – The project impacts negatively on provision of emergency care services during implementation significantly affecting patient outcomes and surgical services	This risk is mitigated by an assessment of the programme and developing a project plan that limits disruption. Communication with design and project management team is essential

2.22 Constraints and Dependencies

The constraints and dependencies relevant to the project are:

- ▶ **Budget** - the Trust has a limited capital budget, and must seek approval from the NTDA for any expenditure of over £5m of Treasury capital (i.e. excluding funds from donations). The Trust currently has access to approximately £8m for any required enabling works and £4m for business case and design development related fees.
- ▶ **Physical** - the existing accommodation is heavily occupied, making enabling works an essential component of this project and the potential for disruption to the Trust organisation and infrastructure as a whole
- ▶ **Phasing** - difficult, and potentially reducing the ability to comply with national guidance
- ▶ **Timeliness** – the hospital will see a year on year increase in demand, both in terms of Urgent care and Emergency reviews The new facility must be operational by August 2016
- ▶ **Trust Transformation Programme**- Trust wide schemes for redevelopment of the Trust sites are all interdependent. It is essential that phasing and enabling works are scoped accurately to minimise any disruption
- ▶ **Capital** - The project overall is dependent on the Trust securing the majority of capital through support from the NTDA

3 | The Economic Case

3.1 Introduction

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. It identifies the critical success factors, determines the shortlisted options and appraises each to determine the preferred option.

Additionally, this case also provides an overview of the main costs, benefits and risks associated with each of the selected options. Importantly, it indicates how they were identified and the main sources and assumptions.

3.2 Critical Success Factors

The critical success factors for this project are considered to be:

Table 3.1 Critical Success Factors

No.	CSF	Explanation
1	Quality	To what extent does the option provide opportunities to deliver "Caring at its Best" by optimising the quality (clinical outcomes, safety and experience) of patient services provided during the transition period and in the future?
2	Meeting Commissioners' intentions for healthcare services	Does the option satisfy the existing and future anticipated models of care?
3	Business Needs	The preferred option satisfies the existing and future business needs of the Trust as described in the Strategic Case.
4	Strategic Fit	The preferred option provides a holistic fit and synergy with other key elements of national, local and Trust strategies
5	Value for Money (VFM)	The option provides economies of scale, scope and efficiencies, whilst maintaining quality and standards of effectiveness in the delivery of care.
6	Benefits Optimisation	How well does the option optimise the potential return on expenditure – business outcomes and benefits (qualitative and quantitative, direct and indirect to the Trust) – and assist in improving overall VFM (economy, efficiency and effectiveness)?

No.	CSF	Explanation
7	Potential Affordability	Does the option satisfy the Trust's ability to innovate, adapt, introduce, support and manage the required level of change, including the management of associated risks and the need for supporting skills (capacity and capability).
8	Sustainability	The Trust is confident in its ability to fund the required level of expenditure – namely, the capital and revenue consequences associated with the proposed investment
9	Achievability	The preferred option provides the Trust with maximum flexibility to respond to continuously evolving healthcare provision, for example reducing our carbon footprint and modifying site capacity

3.3 Determining the Capacity

The approach used to determine capacity requirements for emergency care is based on activity projection across three scenarios. These scenarios are as follows:

- ▶ **Base Scenario: Demographic growth at 10% over ten years**
- ▶ **Medium Scenario: 30% growth over ten years to reflect additional impacting issues over and above demographic increase**
- ▶ **High Scenario: 50% growth over ten years, reflecting the recent historical growth rate**

The scenarios for assessment activity (driven by LRI medical emergency admissions) are as follows:

- ▶ **Base Scenario: Demographic growth at 15% over ten years**
- ▶ **Medium Scenario: 25% growth over ten years to reflect additional impacting issues over and above demographic increase**
- ▶ **High Scenario: 35% growth over ten years, reflecting the recent historical growth rate**

Percentage adjustments are then applied to each scenario relating to model of care improvements to determine overall capacity requirements across the three scenarios. These models of care adjustments relate to Urgent Care Centre's current share of attendances, Urgent Care Centre future share of growth, shift to Primary Care and Paediatric UCC referrals to ED. Table 3.1 outlines the projected activity for each scenario and the associated ED capacity requirement. The agreed schedule of accommodation can be found at Appendix 3d. The proposed space requirement is 7137.4sqm.

Table 3.2 Scenario Activity Projections and Associated ED Capacity Requirements (current treatment times)

Percentage Growth 2012/13 - 2022/23	Paeds	Eyes	Majors	Minors	Resus	Grand Total	UCC	All inc. UCC
Low Scenario	12%	9%	14%	-32%	16%	12%	75%	11%
Medium Scenario	32%	29%	34%	-20%	36%	32%	108%	31%
High Scenario (inc. shift)	77%	49%	54%	-8%	56%	52%	86%	46%

Rooms Required 2022/23	Paeds	Eyes	Majors	Minors & UCC	Resus	Grand Total
Current (estimated)	10	4	29	17	12	72
Low Scenario	12	4	31	19	13	79
Medium Scenario	14	4	36	22	14	90
High Scenario (inc. shift)	16	4	40	22	16	98

The activity model facilitated an assessment of the impact of varying assumptions about the productivity on the resultant number of ED places required. An efficiency saving of 20% in the average treatment time has been incorporated into the model to reflect the improvement expected to be delivered from the provision of purpose-built ED facilities collocated with assessment, diagnostic imaging, pathology and pharmacy services. Factoring in this reduction in treatment time reduces the capacity requirement for ED and allows the projected number of places to deal with the high scenario rate of growth.

Table 3.3 Scenario Activity Projections and Associated ED Capacity Requirements (20% reduction in treatment times)

Rooms Required 2022/23	Paeds	Eyes	Majors	Minors & UCC	Resus	Grand Total
Reduction in Treatment Time	N/A	N/A	-20%	N/A	-20%	
Low Scenario	12	4	25	19	10	70
Medium Scenario	14	4	29	22	11	80
High Scenario (inc. shift)	16	4	32	22	13	87
Proposal	15	4	32	22	12	85

A similar exercise was undertaken for the assessment unit places, and a target of a 20% reduction in average length of stay (from 20 hours to 16 hours) incorporated. The beds required for current ALOS are detailed for the three growth scenarios below.

Table 3.4 Scenario Activity Projections and Associated Assessment Capacity Requirements (current ALOS)

Growth Scenario	Average arrivals per hour	Beds required (20 hour ALOS)	Activity Growth	Occupancy Rate
Baseline	2.70	81	0%	70%
Demographic (15%)	3.11	91	12%	70%
Intermediate (25%)	3.38	98	21%	71%
High (35%)	3.65	105	29%	72%

The reduction in ALOS allows the high scenario growth to be accommodated in the same bedstock as the model predicts for current workload (and current ALOS), ie, 81 beds. Assuming a generic 16-bed module of accommodation has driven the provision of 80 beds for medical assessment services, which is modelled to be sufficient to deal with the highest growth scenario on the basis of the reduction in ALOS being achieved.

Features of the scheme which support the delivery of a reduced ALOS include:

- ▶ Provision of single-floor emergency service obviating the need for lift travel to other floors and the consequential transfer times and inefficiencies;
- ▶ Integration of assessment and ED services with satellite imaging, pharmacy & pathology services to facilitate rapid diagnosis and discharge of patients.
- ▶ Inclusion of enhanced ambulatory care facilities to avoid treating patients in trolley/bed spaces at all, and to divert them to clinic facilities more suitable to their condition (e.g., DVT, cellulitis, TIA, etc).

Table 3.5 Scenario Activity Projections and Associated Medical Assessment Capacity Requirements (20% reduction in ALOS)

Growth Scenario	Average arrivals per hour	Beds required (16 hour ALOS)	Activity Growth	Occupancy Rate
Baseline	2.70	60	0%	66%
Demographic (15%)	3.11	67	12%	68%
Intermediate (25%)	3.38	72	21%	68%
High (35%)	3.65	77	29%	69%

A similar approach has been taken to the modelling of other functions: understanding the impact of securing efficiencies to deliver more productive clinical capacity rather than building the maximum accommodation to deal with the highest possible annual growth rate.

3.4 Long-list of options

The long list of options is described below in Table 3.3. This list has been reviewed in a number of clinical forums. The long list has also been subjected to a technical appraisal to determine impact relating to site constraints and requirements of the building. Table 3.3 provides the outcome of these reviews, identifying whether the option was shortlisted for detailed appraisal, or discounted. The key criterion for short listing was based on the extent to which each option met the project objectives, for example, Emergency Floor concept, access and timing to deliver.

Table 3.6 Long Listed Options

Option	Description
0	Do Minimum - Ensure critical backlog maintenance is undertaken and review clinical processes & procedures
1A	Balmoral Building – Existing 1 st floor refurbishment with some assessment provision elsewhere (inc courtyard infill & extension)
1B	Balmoral Building – Existing 1 st floor and ground floor refurbishment hot floor/assessment floor
1C	Balmoral Building – Existing floor refurbishment with displacement of radiology
2A	Jarvis Building – Demolition of Jarvis building and part new build/part refurbishment existing floor
2B	Jarvis Building - Demolition of Jarvis building and new build
2C	Jarvis Building - Demolition of Jarvis building and new build ED and refurbish assessment on single floor
3A	Victoria Building – Demolition of Victoria building and part new build/part refurbish assessment on single floor
3B	Victoria Building - Demolition of Victoria building and new build
4	Sandringham Building – refurbishment of 2 floors Sandringham building and new build extensions
5	Havelock Street Car park – New build 2 storey development on Havelock Street car park
6	Knighton Street Car park - New build 2 storey development on Knighton Street car park
7	Victoria Building Staff Car park - New build 2 storey development on Victoria Street car park

A summary of the review of the long listed options is set out in Table 3.2 below.

Table 3.7 Results of Review of Long Listed Options

Option	Current Discounted/Shortlisted Status
0 Do Minimum - Ensure critical backlog maintenance is undertaken and review clinical processes & procedures	Shortlisted as a baseline comparator
1A Balmoral Building – Existing 1st floor refurbishment with some assessment provision elsewhere (inc courtyard infill & extension)	Shortlisted
1B Balmoral Building – Existing 1st floor and ground floor refurbishment hot floor/assessment floor	<i>Discounted – This was discounted on the basis that it does not strategically fit to the Trusts critical success factors requirement for a single floor ED</i>
1C Balmoral Building – Existing floor refurbishment with displacement of radiology	<i>Discounted – This option was discounted on the basis of diagnostics needing to be a key adjacency requirement of the ED. This option could not deliver the Trust strategic requirements</i>
2A Jarvis Building – Demolition of Jarvis building and part new build/part refurbishment existing floor	<i>Discounted – This option does not meet the essential adjacency requirements and ED single floor concept and timing to deliver</i>
2B Jarvis Building - Demolition of Jarvis building and new build	<i>Discounted - - This option does not strategically fit with the Trust's DCP plans and timing to deliver. It also does not strategically fit to the Trusts critical success factor regarding the requirement for a single floor emergency and assessment service</i>
2C Jarvis Building - Demolition of Jarvis building and new build ED and refurbish assessment on single floor	Shortlisted
3A Victoria Building – Demolition of Victoria building and part new build/part refurbish assessment on single floor	Shortlisted
3B Victoria Building - Demolition of Victoria building and new build	<i>Discounted - This option does not strategically fit with the Trust's DCP plans and timing to deliver. It also does not strategically fit to the Trusts critical success factors requirement for a single floor ED</i>

Option	Current Discounted/Shortlisted Status
4 Sandringham Building – refurbishment of 2 floors Sandringham building and new build extensions	<i>Discounted – This was discounted on the basis that it does not strategically fit to the Trusts critical success factor regarding the requirement for a single floor emergency and assessment service</i>
5 Havelock Street Car park – New build 2 storey development on Havelock Street car park	<i>Discounted– This was discounted on the basis that it does not strategically fit to the Trusts critical success factors requirement for a single floor ED</i>
6 Knighton Street Car park - New build 2 storey development on Knighton Street car park	<i>Discounted– This was discounted on the basis that it does not strategically fit to the Trusts critical success factor regarding the requirement for a single floor emergency and assessment service</i>
7 Victoria Building Staff Car park - New build 2 storey development on Victoria Street car park	<i>Discounted– This was discounted on the basis that it does not strategically fit to the Trusts critical success factor regarding the requirement for a single floor emergency and assessment service</i>

3.5 Short Listed Options

The short listing took place in a project meeting and the non-financial option appraisal agreement in October 2013. The revised options are detailed below:

- ▶ Option 0: Do Minimum - Ensure critical backlog maintenance is undertaken and review clinical processes & procedures
- ▶ Option 1A: Existing 1st floor refurbishment with some assessment provision elsewhere, (inc courtyard infill & extension)
- ▶ Option 2C: Demolition of Jarvis building & new build ED & refurbish assessment on single floor
- ▶ Option 3A: Demolition of Victoria building and part new build/part refurbish assessment on single floor

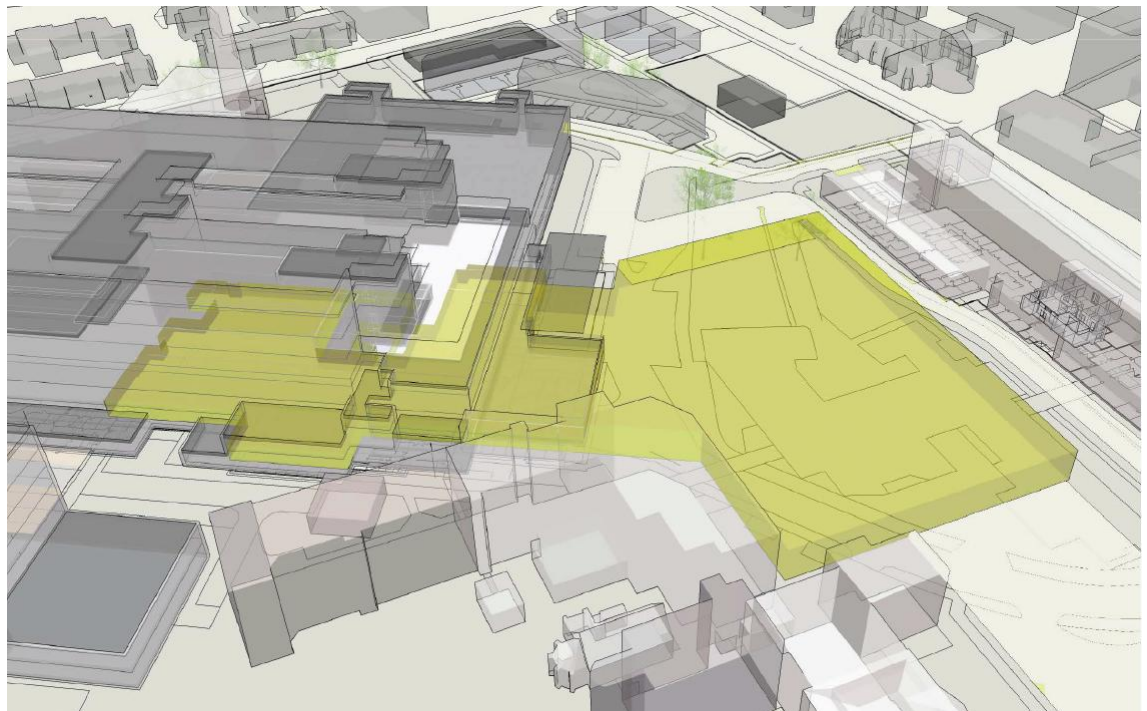
Figure 3A details the proposed location of the shortlisted options. Appendix 5a outlines the phasing works required for each option.

Figure 3A Proposed Location of Options

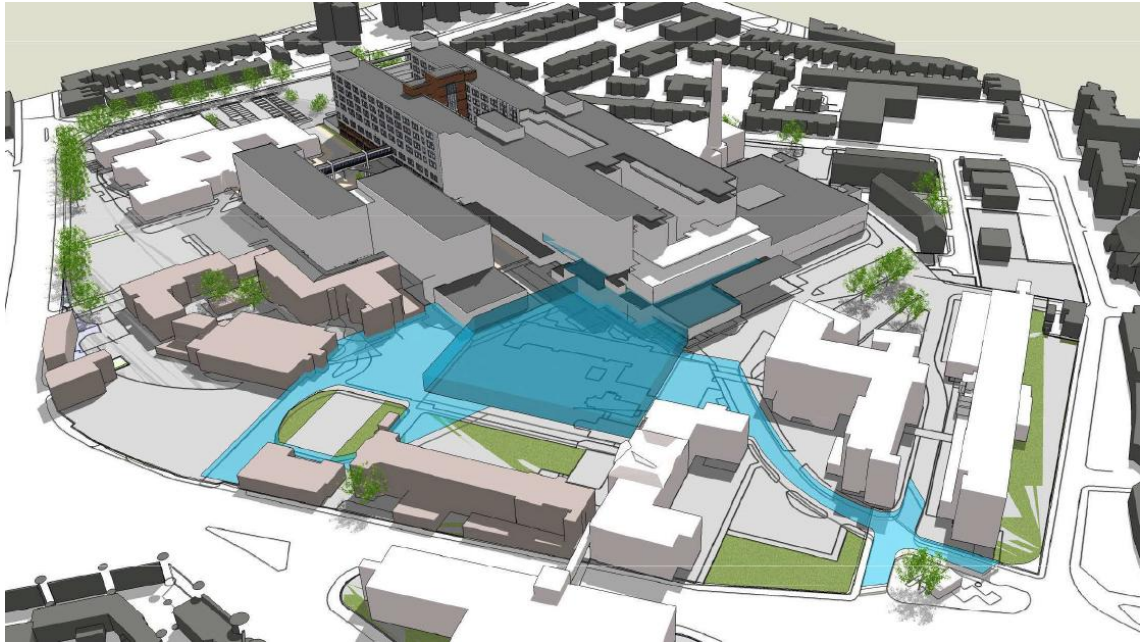
Option 1A



Option 2C



Option 3A



3.6 Economic Appraisal

3.6.1 Introduction

This section provides a detailed overview of the main costs, benefits and risks associated with each of the selected options. Importantly, it indicates how they were identified and the main sources and assumptions. The economic appraisal is summarised at Appendix 6.

3.6.2 Estimating Benefits

Methodology

The benefits associated with each option were identified by the Project Steering Group and confirmed at 2 workshops held in October 2013 (Appendix 7) with the stakeholders for the ED Floor scheme.

Description, Sources and Assumptions

The benefits identified fell into the following main categories, as shown in Table 3.4 below. Costs and cash-releasing benefits are included in the economic appraisal, together with qualitative and societal benefits. Qualitative benefits have been assessed using a weighting and scoring process.

*Table 3.8 Main Qualitative or non-cash releasing Benefits to the Trust***Quality**

- ▶ Quality of care is enhanced, in terms of the model of care, and seamless pathways of care and patient flows.
- ▶ The built environment enhances clinical practice that support clinical effectiveness, improved patient outcomes and patient safety
- ▶ Provides enhanced departmental relationships and clinical adjacencies that support clinical effectiveness and improved patient outcomes

Meeting Commissioner Intentions

- ▶ Improved Privacy and dignity provisions for all patients
- ▶ Consolidates existing services & provides clinical expertise whilst realising the Emergency Floor concept
- ▶ Improved patient access through a single front door process
- ▶ Consolidates existing services & provides clinical expertise whilst realising the Emergency Floor concept

Business Need

- ▶ To implement a design solution that provides a safe emergency care service that ensures capacity and known flexibility for current and known future demands of patients requiring emergency care
- ▶ Improve patient pathway management reducing the clinical risk and discomfort through the emergency care pathway.
- ▶ Support and consolidate the provision of emergency floor concept at LRI

Strategic Fit

- ▶ Ensures that the service model of care is delivered in line with National, Trust and local health economy KPI's
- ▶ To implement a design solution that provides a safe emergency care service that ensures capacity and known flexibility for current and known future demands of patients requiring emergency care

Sustainability/ Value for Money

- ▶ Ensures facilities are future proofed and adaptable to the changing needs of the health economy

Achievability/ Affordability

- ▶ The design solution minimises the impact of the construction process on the site and therefore delivery of the Trust core services
- ▶ Option enables future proofing of the physical ED environment aligned to DCP future expansion needs
- ▶ The enabling moves will facilitate the Emergency Floor programme whilst minimising delay to delivery
- ▶ Reduces complexity and sequence dependency of enabling moves
- ▶ Maintains blue light access throughout whole build process

3.6.3 Estimating Costs

Capital Costs of the shortlisted options

The total capital costs for each of the following options are summarised below full details can be found in the OB forms in Appendix 8a, 8b and 8c.

Table 3.9 Summary of Capital Costs

Capital Costs	Option 1A Balmoral £	Option 2C Jarvis £	Option 3A Victoria £
Construction	22,524,225	23,769,432	23,643,192
Fees	6,221,226	6,719,934	6,344,090
Equipment	1,725,917	1,635,853	1,635,853
Decant	13,550,282	8,644,584	7,840,866
Planning Contingency	1,528,869	1,612,611	1,586,707
Sub Total	45,550,519	42,382,414	41,050,708
Optimism bias	4,250,254	4,483,058	3,411,420
Inflation	3,340,533	3,523,508	3,466,908
Total	53,141,306	50,388,980	47,929,036

Capital costs were compiled by the Trust's cost advisers and the main assumptions are

- ▶ Cost for each of the options are at PUBSEC 191
- ▶ A provisional location adjustment of -6% has been applied
- ▶ VAT has been included at 20% where it is generally applicable although the intention is to work with VAT advisers to identify elements of the costs for which recovery can be made.
- ▶ The capital cost for the Do Minimum option have been based on an assessment of backlog maintenance and the current known costs of upgrading the accommodation to condition B16 and is estimated as £3,577K. This includes c£1m of sunk costs which have been excluded from the Generic Economic Model (GEM).

In accordance with the Capital Investment Manual and the Treasury Green Book the capital for each of the shortlisted options have been adjusted for optimism bias

The costs used in the GEM were based on these costs but excluded VAT inflation and sunk costs and these are shown below. Full details of these costs and the cashflows associated with each element are shown in Appendix 9a (GEM feeder files).

¹⁶ The Trust are in the process of reviewing the current costs however these are the latest known estimates

Table 3.10 Summary of Capital Costs Used for GEM

Capital Costs Ex VAT and Inflation	Option 1A Balmoral £	Option 2C Jarvis £	Option 3A Victoria £
Construction	18,770,188	19,807,860	19,702,660
Fees	5,272,669	5,705,778	5,379,243
Equipment	1,438,264	1,363,211	1,363,211
Decant	11,291,902	7,203,820	6,534,055
Planning Contingency	1,274,058	1,343,843	1,322,256
Sub Total	38,047,080	35,424,512	34,301,425
Optimism bias	3,541,878	3,735,882	2,842,850
Sunk Costs	-1,310,201	-1,310,201	-1,310,201
Total for Gem	40,278,757	37,850,192	35,834,074

The capital costs for the Do Minimum option excluding VAT inflation and sunk costs is £2,475,006.

Risks

The risks associated with each option have been captured in the planning contingency which reflects the risks and uncertainty associated with each option. This has then been used in the GEM.

Life-Cycle Costs

Lifecycle costs associated with each option have been provided by the quantity surveyors Capita for a period of 60 years and these have been used in the economic appraisal. With regard to the do nothing an assumption of similar spend every ten years has been made.

Revenue Costs

The impact of the three options is primarily of a capital nature together with savings which the new development will enable.

Revenue costs are based on those shown in the Financial Case. For the Do Minimum option the baseline position has been used (i.e. that with no savings). For the shortlisted options the impact of the savings has been included in line with the assumptions in the financial case but excluding the impact of capital charges as this is taken into account within the economic appraisal.

Table 3.11 Revenue Costs

ED Income and Expenditure	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18	2018 /19	2019 /20	2020 /21	2021 /22	2022/23
	Actual £k	Out-turn £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k
Income											
ED Tariff	21,162	21,129	21,129	21,129	21,129	21,129	21,129	21,129	21,129	21,129	21,129
ED Other	4,657	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402
Medical Assessment Unit		8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263
Impact of single front door			-1,370	-1,370	-1,370	-1,370	-1,370	-1,370	-1,370	-1,370	-1,370
Growth			676	1,374	2,094	2,837	3,604	4,395	5,212	6,055	6,925
Total	25,820	33,794	33,100	33,798	34,518	35,261	36,028	36,820	37,637	38,479	39,349
Expenditure											
Pay											
Nursing	6,441	6,880	6,880	6,880	6,880	6,880	6,880	6,880	6,880	6,880	6,880
Nursing Agency	1,598	1,445	1,445	1,445	1,445	1,445	1,445	1,445	1,445	1,445	1,445
Medical Staff	6,790	8,008	8,008	8,008	8,008	8,008	8,008	8,008	8,008	8,008	8,008
Medical Locum	2,311	1,630	1,630	1,630	1,630	1,630	1,630	1,630	1,630	1,630	1,630
A&Cs	958	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210
EDU	673	643	643	643	643	643	643	643	643	643	643
EDU Agency	15	285	285	285	285	285	285	285	285	285	285
Impact of single front door			-536	-536	-536	-536	-536	-536	-536	-536	-536

ED Income and Expenditure	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18	2018 /19	2019 /20	2020 /21	2021 /22	2022/23
	Actual £k	Out-turn £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k
Additional staff costs due to activity growth					1,155	1,155	1,155	2,425	2,425	3,124	3,124
Total	18,785	20,099	19,562	19,562	20,717	20,717	20,717	21,988	21,988	22,686	22,686
Non pay											
Nursing	1,823	1,705	1,705	1,705	1,705	1,705	1,705	1,705	1,705	1,705	1,705
Medical Staff	67	95	95	95	95	95	95	95	95	95	95
A&C	26	119	119	119	119	119	119	119	119	119	119
EDU	202	185	185	185	185	185	185	185	185	185	185
Impact of single front door			-136	-136	-136	-136	-136	-136	-136	-136	-136
Additional non pay costs due to activity growth			67	132	200	269	341	414	491	569	650
Total	2,119	2,104	2,035	2,100	2,167	2,236	2,308	2,382	2,458	2,537	2,618
Total Direct cost	20,904	22,202	21,597	21,662	22,884	22,953	23,025	24,369	24,446	25,222	25,304
Medical assessment unit		8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263
Additional MAU beds			0	0	933	1,466	1,999	2,532	3,065	3,598	-8,263
Savings on repatriation to additional MAU beds			0	0	-933	-1,466	-1,999	-2,532	-3,065	-3,598	8,263
FM costs	471	471	471	471	636	636	636	636	636	636	636

ED Income and Expenditure	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18	2018 /19	2019 /20	2020 /21	2021 /22	2022/23
	Actual £k	Out-turn £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k
Support service costs	3,897	3,864	3,864	3,864	3,864	3,864	3,864	3,864	3,864	3,987	4,115
Overheads	8,745	11,233	11,233	11,233	11,233	11,233	11,233	11,233	11,233	11,233	11,233
Impact of single front door			-165	-165	-165	-165	-165	-165	-165	-165	-165
Additional support costs due to activity growth			82	164	247	329	411	493	575	658	658
Total Costs (baseline)	34,017	46,033	45,344	45,492	46,960	47,112	47,266	48,692	48,851	49,834	50,043

Table 3.12 Impact of Scheme

Impact of scheme including capital charges	2014 /15 £k	2015 /16 £k	2016 /17 £k	2017 /18 £k	2018 /19 £k	2019 /20 £k	2020 /21 £k	2021 /22 £k	022/23 £
Reduction in Agency and other costs			-1,693	-1,693	-1,693	-1,693	-1,693	-1,693	-1,693
Reduction in Staff Costs			-416	-416	-416	-874	-874	-1,357	-1,357
Change in depreciation	-170	-170	711	1,005	1,005	1,005	1,005	1,005	1,005
Additional FM costs			127	127	127	127	127	127	127
Change in Rate of return	-89	-89	962	932	897	862	827	792	756
Impact on Trust I and E	-259	-259	-309	-44	-79	-572	-607	-1,127	-1,162

3.6.4 Net Present Cost Findings

The overall Net Present Cost (NPC) summaries of the three options based on the costs and cash flows outlined above are as follows (full details and cashflows are in the GEM provided in Appendix 9a, with the outputs summarised below):

Table 3.13 Key Results of Economic Appraisals

Option	Appraisal period	NPC £ 000	Risk Adjusted £ 000	Risk Adjusted NPC £ 000
Do Minimum	60 years	1,297,886.6	109.0	1,299,093.6
Option 1A Balmoral	60 years	1,276,086.1	1,207.0	1,277,293.1
Option 2C Jarvis	60 years	1,272,779.4	1,268.0	1,274,047.4
Option 3A Victoria	60 years	1,272,084.7	1,253.0	1,273,337.7

3.6.5 Equivalent Annual Cost Findings

The overall Equivalent Annual Cost (EAC) summaries of the three options based on the costs and cash flows outlined above are as follows:

Table 3.14 Overall NPC Summaries Based on Costs & Cash Flows

Option	Appraisal period	EAC £ 000	Risk Adjusted £ 000	Risk Adjusted NPC £ 000
Do Minimum	60 years	49,483.87	4.068643	49,487.94
Option 1A Balmoral	60 years	48,652.69473	45.053689	48,697.74842
Option 2C Jarvis	60 years	48,526.62194	47.330636	48,573.95257
Option 3A Victoria	60 years	48,500.13379	46.770731	48,546.90452

3.6.6 Economic Appraisal Conclusions

Economic Appraisal Conclusion - Cost

The GEM is a discounted cash flow model widely used in public sector business cases. It is used to help assess the relative costs and benefits of the shortlisted options contained in OBCs and FBCs and in particular to assess which option offers best value for money and should therefore be selected as the 'Preferred Option'. It is underpinned by Treasury 'Green Book' and DH guidance.

The GEM calculates NPC and EAC for the options under consideration. The NPC for an option is the present value of the cost of that option over the appraisal period. The discount rate used is 3.5% over the first 30 years and 3% beyond 30 years. The EAC is the NPC converted into an equivalent annual cash flow. The costs used in the GEM agree to, or are reconcilable to, the costs used in the financial appraisal.

The option which offers the best value for money is the one with the lowest NPC and EAC. This is the preferred option from a purely financial perspective.

As can be seen from the above Option 3A has the lowest in both cases and is therefore the preferred option.

3.7 Qualitative Benefits Appraisal

The qualitative benefits appraisal took place in October 2013 (2nd October and 7th October) and summarised the views of project team on the major qualitative beneficial features of the project. A weighting and scoring exercise was carried out as described below¹⁷.

Table 3.7 below identifies those representing the main stakeholders in the project taking part in the benefits appraisal in June 2013.

¹⁷ It is important to note: Objective 11, Benefit 1 was scored by the technical team to assist in the scoring exercise when related to impact of construction on the Trust services as a whole. Refer to Appendix 15 to view this process

Table 3.15 Project Team

Name	Role	Organisation
Nicky Topham	Project Director	UHL
Louise Naylor	Project Manager – Site Reconfiguration	UHL
David Finch	Building Services Manager	UHL
Nigel Bond	Capital Projects Manager	UHL
Jane Edyvean	CMG General Manager	UHL
Ben Teasdale	Lead Consultant ED High Acuity	UHL
Catherine Free	CBU Medical Lead	UHL
Sam Jones	Lead Consultant Paeds ED	UHL
Chris Turner	Project Manager	Capita
Michael Rope	OBC PM	Capita
Marianne Graham	OBC Author	Capita
Ian Morgan	Senior Architect	Capita
Debbie Saunders	Senior Architect	Capita

The project team initially reviewed the Benefit Criteria and Weighting; these are agreed as follows:

Table 3.16 Criteria Weighting Results

Criteria	Weight %
1. To provide the Trust with increased capacity for emergency services to meet the demands of population growth, changing service models and improved efficiency targets	10
2. To increase the productivity of emergency care at LRI	7.5
3. To develop a centre of excellence, enhancing the Trust's reputation for training, service delivery and treatment, through the provision of a centralised service in modern accommodation	7.5
4. To ensure that the changing needs and expectations of a growing population are met in line with Trust clinical strategy and national guidance standards	7.5
5. To provide an ED that is compliant with NHS building guidance standards	2.5
6. To improve the clinical effectiveness and safety of urgent and emergency care service across Leicester	20
7. To improve the clinical adjacencies of services to optimise clinical safety and reduce clinical risk	5
8. To facilitate the modernisation of services, including streamlining patient pathways and efficient working practices providing an ED that ensures adequate infrastructure and capacity for supporting services that are conducive to the needs of a modern workforce	10

Criteria	Weight %
9. To equip the ED to respond effectively to existing and known commissioning requirements, as well as to respond flexibly to future changes in service direction and demand	5
10. To improve the environment and the experience of users (patients, visitors and staff) of Leicester Royal Infirmary Hospital Accident and Emergency Department	5
11. To provide a solution that is aligned to the Trust DCP plan and Trust organisation as a whole.	8
12. The development will be delivered on time with minimal disruption to current service delivery	12
TOTAL	100

Table 3.17 Raw Score Results

Criteria	Option			
	0	1A	2C	3A
To implement a design solution that provides a safe emergency care service that ensures capacity and known flexibility for current and known future demands of patients requiring emergency care	1.00	7.00	5.00	7.50
Improve patient pathway management reducing the clinical risk and discomfort through the emergency care pathway.	1.00	7.50	5.00	7.00
Support and consolidate the provision of emergency floor concept at LRI	1.00	7.50	7.00	7.50
Ensures that the service model of care is delivered in line with National ,Trust and local health economy KPIs	1.00	7.50	6.00	7.50
Patient safety is enhanced, and clinical risk is reduced	1.00	6.50	7.50	7.50
Where possible ensures that the service is developed in line with NHS Guidance interms of HBN, HTM, national and Trust policy and local health economy policy in terms of capacity provision	1.00	6.00	8.00	8.00
Quality of care is enhanced, in terms of the model of care, and seamless pathways of care and patient flows.	1.00	8.00	6.00	7.50
The built environment enhances clinical practice that support clinical effectiveness, improved patient outcomes and patient safety	1.00	8.00	6.00	8.00
Provides enhanced departmental relationships and clinical adjacencies that support clinical effectiveness and improved patient outcomes	1.00	8.00	6.00	8.00

Criteria	Option			
	0	1A	2C	3A
Ensures facilities are future proofed and adaptable to the changing needs of the health economy	1.00	6.00	7.00	8.00
Improved Privacy and dignity provisions for all patients	1.00	6.00	8.00	8.00
Consolidates existing services & provides clinical expertise whilst realising the Emergency Floor concept	1.00	8.00	6.00	7.50
Improved patient access through a single front door process	2.00	9.00	9.00	9.00
Enhances patient, visitor and staff safety through the built environment	1.00	7.50	8.00	8.00
The design solution minimises the impact of the construction process on the site and therefore delivery of the Trust core services	7.18	4.64	3.54	4.91
Option enables future proofing of the physical ED environment aligned to DCP future expansion needs	1.00	4.00	6.00	8.00
The enabling moves will facilitate the Emergency Floor programme whilst minimising delay to delivery	10.00	4.00	7.50	7.00
Reduces complexity and sequence dependency of enabling moves	10.00	4.00	7.50	7.00
Maintains blue light access throughout whole build process	8.00	6.00	5.00	7.50
	51.18	131.74	129.64	148.71
Rank	4	2	3	1

The reasons for differences in scores between options are discussed below.

Option 0 It was agreed to maintain this option within the shortlist as a baseline comparator. This option scored less well than the other options demonstrating that it does not support the strategic fit for the Trust in providing increased capacity, flexibility in capacity, efficiencies in emergency care pathways, or contribute to benefits relating to patient experience and privacy and dignity.

Option 1A This option scored reasonably in most areas of benefit criteria, however in terms of future proofing capacity requirements and benefit realisation it was viewed that this option could not deliver the maximum benefits that Option 3A could. The existing floor plate would be utilised, however the single floor concept for all services, inclusive of assessment could not be achieved. The following outline additional reasons for this options scoring:

- ▶ It was viewed that maintaining access for blue light services throughout the project would provide more complexities than options 2C and 3A potentially impacting on clinical efficiencies and patient safety
- ▶ Continuation of service delivery throughout the project could be compromised due to all the enabling works required

- ▶ Constraints relating to decanting issues on the 2nd floor and design around existing stair wells and lifts
- ▶ Paediatric access is not optimal requiring entry to ED via lift which is not considered best practice and will require street level access.
- ▶ The current 1 way traffic system impacts on patient access with this option
- ▶ Compliance with HBN standards is constrained since the majority of the proposed development sits in the retained estate, as opposed to 2C and 3A options

It is also clear the enabling moves required to facilitate this option would be more significant in comparison to the other shortlisted options, and as a consequence would prove considerably disruptive to a number of services that would need to relocate. The services have been identified as the following:

- ▶ Adult Outpatients 1 to 4
- ▶ Childrens Outpatients 1 to 4
- ▶ Out of Hours Service
- ▶ Fracture Clinic
- ▶ Ophthalmology
- ▶ ENT
- ▶ Max Fax Outpatients
- ▶ Physio Gymnasium
- ▶ Main Entrance, WH Smiths, WRVS, Pharmacy and Police

Option 2C This option demonstrated similar scoring to 1A, however for different benefit achievement. It was viewed that this option could not deliver the maximum benefits required to achieve the strategic fit for the Trust and improve capacity, efficiencies and reduce impact on Trust DCP operationally. Although this option could provide opportunities for further expansion and maintain emergency services operations throughout the build project it was viewed that it limits itself as a viable non financial option by:

- ▶ Ambulance access is across area where 'walk in' is required and therefore compromising the 'walk in' patient access
- ▶ Assessment services are not a key adjacency in this option therefore constraining pathway /process development and compromising efficiencies in service delivery.
- ▶ The new build element does not enhance multidisciplinary working with key adjacencies not on the same floor (e.g. surgical separate from assessment clinic). It was viewed that the adjacencies were inferior to what 1A option could provide (diagnostic adjacency to assessment services restricted)
- ▶ This option will require a temporary entrance to access the ED department and then transfer to permanent site once completed. In the interim this will require outpatients accessing the area at the same time which is viewed as not appropriate for a ED department
- ▶ This option potentially impacts on the Trust's DCP and strategic redevelopment plans relating to women's services in the Kensington building

Further to the above, the enabling moves required to implement this option are deemed not to be as significant as option 1A due to the nature of the services and associated areas required for relocation. Identified for relocation under this option is as follows:

- ▶ Printing Services
- ▶ Medical Records (ED), Stores & Facilities Management space
- ▶ Childrens Laundry
- ▶ University Space
- ▶ Women's & Childrens Management Offices
- ▶ Women's & Childrens Clinical Services
- ▶ GU Clinic
- ▶ Gynaecology
- ▶ HR Shared Services
- ▶ Link Corridor & Bridge to Kensington

Option 3A This option demonstrated through the non-financial appraisal process that the Trust is able to realise benefits and achieve strategic objectives and critical success factors of providing an appropriate solution to meeting current and future capacity demands for emergency care. This option lends itself to a detailed design process that provides essential departmental adjacencies.

- ▶ This option lends itself to a detailed design process that provides essential departmental adjacencies
- ▶ Majors and Resuscitation areas can be located close to the front door and the ambulance will have an ambulance only access to the department
- ▶ Adjacencies to the minor injuries and minor illness unit are enhanced and assessment services will maintain essential adjacencies within the department
- ▶ Paediatric emergency services demonstrated good adjacencies and separate paediatric entrance point is provided
- ▶ Ambulance access is provided on the same level as department entry which is essential for blue light access. The provision of an ambulance only access to the hospital department is seen as a better outcome to that which the other options can provide
- ▶ The single floor concept can be achieved with provision of diagnostics and assessment within the department and opportunities for flexibility and future proofing the design

In comparison to the other shortlisted options, the enabling moves associated with option 3A are deemed the least disruptive to the wider organisation with regards clinical and non clinical operations, and are more aligned with the overarching vision for the site. Required relocations have been identified as follows:

- ▶ Urgent Care Centre
- ▶ Out Patient Clinics
- ▶ Fielding Johnson Ward
- ▶ Medical Physics & IM&T

- ▶ Multi Disciplinary Team Office
- ▶ Clinical Genetics OP Clinics and Clinical Skills Reception
- ▶ Chapel

The option scores were then weighted in the ratios as applied to the original raw scores. The results are shown in Table 3.10 overleaf.

This clearly shows that Option 3A is the preferred non-financial option. It provides an effective solution to the Trust's needs and in particular will be significantly more effective than the other options at providing flexibility, meeting capacity demands, enhancing the patient experience and emergency care pathway efficiencies. It also offers a solution with the least impact on the Trust's clinical and non clinical operations, DCP and strategic plans.

Table 3.18 Scoring Results – Weighted

	Critical Success Factor	Project objective	Benefit Criteria	Weight	Option 0		Option 1A		Option 2C		Option 3A		
					Do Minimum. Ensure critical backlog maintenance is undertaken and review clinical processes & procedures	Existing 1st floor refurb with some adult assessment allowed for elsewhere (inc courtyard infill & extension)	Demolition of Jarvis building & new build ED & refurb assessment on single floor	Demolition of Victoria building & new build ED & refurb assessment on single floor	Score (1-10)	Weighted score	Score (1-10)	Weighted score	Score (1-10)
1	Business Need	To provide the Trust with increased capacity for emergency services to meet the demands of population growth, changing service models and improved efficiency targets.	To implement a design solution that provides a safe emergency care service that ensures capacity and known flexibility for current and known future demands of patients requiring emergency care	25%	10.0%	1	0.1	7	0.7	5	0.5	7.5	0.75
2	Business Need	To increase the productivity of emergency care at LRI	Improve patient pathway management reducing the clinical risk and discomfort through the emergency care pathway.		7.5%	1	0.075	7.5	0.5625	5	0.375	7	0.525
3	Business Need	To develop a centre of excellence, enhancing the Trust's reputation for training, service delivery and treatment, through the provision of a centralised service in modern accommodation.	Support and consolidate the provision of emergency floor concept at LRI		7.5%	1	0.075	7.5	0.5625	7	0.525	7.5	0.5625
4	Strategic Fit	To ensure that the changing needs and expectations of a growing population are met in line with Trust clinical strategy and national guidance standards	Ensures that the service model of care is delivered in line with National, Trust and local health economy KPIs Patient safety is enhanced, and clinical risk is reduced.	10%	2.5%	1	0.025	7.5	0.1875	6	0.15	7.5	0.1875
					5.0%	1	0.05	6.5	0.325	7.5	0.375	7.5	0.375
5	Strategic Fit	To provide an Emergency Department that is compliant with NHS building guidance standards	Where possible ensures that the service is developed in line with NHS Guidance in terms of HBN, HTM, national and Trust policy and local health economy policy in terms of capacity provision		2.5%	1	0.025	6	0.15	8	0.2	8	0.2
6	Quality	To improve the clinical effectiveness and safety of urgent and emergency care service across Leicester:	Quality of care is enhanced, in terms of the model of care, and seamless pathways of care and patient flows. The built environment enhances clinical practice that support clinical effectiveness, improved patient outcomes and patient safety	25%	10.0%	1	0.1	8	0.8	6	0.6	7.5	0.75
					10.0%	1	0.1	8	0.8	6	0.6	8	0.8
7	Quality	To improve the clinical adjacencies of services to optimise clinical safety and reduce clinical risk.	Provides enhanced departmental relationships and clinical adjacencies that support clinical effectiveness and improved patient outcomes		5.0%	1	0.05	8	0.4	6	0.3	8	0.4
8	Sustainability, Service Modernisation, Value for Money	To facilitate the modernisation of services, including streamlining patient pathways and efficient working practices providing an Emergency Department that ensures adequate infrastructure and capacity for supporting services that are conducive to the needs of a modern workforce	Ensures facilities are future proofed and adaptable to the changing needs of the health economy	10%	10.0%	1	0.1	6	0.6	7	0.7	8	0.8
9	Meeting Commissioners' intentions for healthcare services	To equip the Emergency Department to respond effectively to existing and known commissioning requirements, as well as to respond flexibly to future changes in service direction and demand.	Improved Privacy and dignity provisions for all patients Consolidates existing services & provides clinical expertise whilst realising the Emergency Floor concept	10%	3.0%	1	0.03	6	0.18	8	0.24	8	0.24
					2.0%	1	0.02	8	0.16	6	0.12	7.5	0.15
10	Meeting Commissioners' intentions for healthcare services	To improve the environment and the experience of users (patients, visitors and staff) of Leicester Royal Infirmary Hospital Emergency Department	Improved patient access through a single front door process Enhances patient, visitor and staff safety through the built environment		2.0%	2	0.04	9	0.18	9	0.18	9	0.18
				3.0%	1	0.03	7.5	0.225	8	0.24	8	0.24	
11	Achievability	To provide a solution that is aligned to the Trust DCP plan and Trust organisation as a whole.	The design solution minimises the impact of the construction process on the site and therefore delivery of the Trust core services Option enables future proofing of the physical A&E environment aligned to DCP future expansion needs	20%	4.0%	7.182	0.28728	4.636	0.18544	3.545	0.1418	4.909	0.19636
					4.0%	1	0.04	4	0.16	6	0.24	8	0.32
12	Achievability	The development will be delivered on time with minimal disruption to current service delivery	The enabling moves will facilitate the Emergency Floor programme whilst minimising delay to delivery Reduces complexity and sequence dependency of enabling moves Maintains blue light access throughout whole build process		4.0%	10	0.4	4	0.16	7.5	0.3	7	0.28
				4.0%	10	0.4	4	0.16	7.5	0.3	7	0.28	
				4.0%	8	0.32	6	0.24	5	0.2	7.5	0.3	
				100%			2.26728		6.73794		6.2968		7.53636
							Rank						1
							4		2		3		

3.8 Risk Appraisal – Unquantifiable

The Trust relevant risks for this business case are outlined in Section 6.

3.9 The Preferred Option

Combined Investment Appraisal – Value for Money

As identified above the preferred option from both a financial and non financial perspective is option 3A Victoria.

This option offers the best value for money as it has the lowest NPC and is the most effective solution based on the non financial review.

As can be seen from the table the second ranked option from the qualitative appraisal is option 1A Balmoral. We have therefore for the switching point assessed the point at which this option becomes the preferred based on the NPC per point.

Analysis shows that the costs of the preferred option would need to increase by 12% before option 1A becomes the preferred option.

Table 3.19 Summary of Economic and Value for Money Appraisal

Criteria	Option			
	0	1A	2C	3A
Raw scores	51.18	131.74	129.64	148.71
Weighted Scores	2.27	6.74	6.27	7.54
Rank (non-financial)	4	2	3	1
Net present cost (NPC) (£k)	1,299,094	1,277,293	1,274,047	1,273,338
NPC per point score (£k)	572,288	189,509	203,197	168,878
Rank (VFM)	4	3	2	1
Rank	4	2	3	1

4 | The Commercial Case

4.1 Introduction

This section of the OBC outlines the proposed procurement strategy in relation to the preferred option outlined in the Economic Case.

4.2 Procurement Strategy

The scheme will be procured through UHL's framework partnership with Interserve Facilities Management (IFM). The framework for major projects has been set up to mirror the Procure 21+ (P21+) framework principles for the delivery of construction projects.

The P21+ framework was initiated in July 2012 and is available to NHS organisations in England. It is the Department of Health's preferred method of procurement for new builds and refurbishments on the NHS estate. Procure 21+ and its predecessor Procure 21 have over £5bn worth of schemes registered. The Department of Health has stated that P21+ schemes are providing value for money solutions to over 200 NHS Trusts.

Whilst the LLR FMC partnership is bespoke to UHL, and therefore outside the P21+ framework, it offers the same value for money assurances on construction. This is through adherence to an agreed schedule of professional services rates, and use of overhead and profit recovery percentages that reflect recognised P21+ pricing structures.

Value for money considerations over business case and design development during the early stages of projects have been assured through the procurement of the partnership with IFM, under which professional services rates have been benchmarked against the current OGC framework for such services.

NHS Horizons has been set up as a client function for UHL and will act for them in development of the commercial and contractual arrangements for the scheme.

The benefits of the bespoke framework are that a high quality pre-approved supply chain is available to UHL without having to go through EU OJEU or NHS framework processes. This saves an estimated 6 months in procurement time and significant consequential costs. In addition, it allows UHL and Interserve to work collaboratively in developing the scheme using common principles and tools that are proven to deliver quality schemes on time and within budget.

Under the bespoke framework, IFM is appointed as prime contractor for the delivery of projects; commercial arrangements and contracts are pre-agreed to cover commissioning of the business case through to final delivery of the asset using negotiated, and NEC 3, forms of contract. The risk of cost overrun is transferred to IFM once the GMP has been agreed and construction stage commenced.

Project risk is dealt with openly from the outset of the project and the client, IFM and design are encouraged to take an active role in identifying, mitigating and apportioning risk to the party best suited to deal with it.

IFM's supply chain for professional and construction services is as follows:

Table 4.1 Supply Chain Details

Role	Organisation
Pre-construction	
Business case preparation	Capita
Mechanical and electrical consultants	Capita
Architects	Capita
Structural engineers	Capita
Cost Consultants	Capita
GMP development	Interserve Construction
Construction	
Building contractor	Interserve Construction
Mechanical and electrical contractor	Interserve Construction

Under the framework, IFM has:

- ▶ Taken single point responsibility to manage the design and construction process from completion of OBC through to project completion
- ▶ Assembled a dedicated team from its supply chain of experienced health planners, designers and specialists, to successfully deliver facilities that will benefit patients and staff alike
- ▶ Provided benefits of experience of long term partnering arrangements that will continue throughout the life of the project
- ▶ Committed to identifying construction solutions that will assist in the implementation of improved service delivery, best practice and delivering best value.

IFM and UHL will work together through the full business case (FBC) stage in the coming months to develop and agree a guaranteed maximum price for delivery of the scheme. This will reflect:

- ▶ Nationally agreed profit and overhead rates (P21+ overhead and profit equivalents)
- ▶ Fees for professional advice such as design and cost management
- ▶ Market tested packages for construction works on an open book basis

The GMP will be assessed for overall value for money by cost consultants acting for both IFM and NHS Horizons, the client organisation working on behalf of UHL. This will take into account elements such as:

- ▶ Prevailing rates for similar works nationally and locally.
- ▶ Published cost indices.
- ▶ Knowledge of the cost of work in the hospital from other recent schemes
- ▶ Prime contractor and client retained risks as identified in the joint risk register

Should the scheme not proceed, the Trust will own the design at point of termination but will be liable for IFM costs up to that point, in line with contractual commitments made during commissioning of the project.

4.3 Key Factors Affecting Outcomes

4.3.1 Design, Build and Construction Management

The preferred option will require planning consent. Appendix 10 highlights the planning related issues and the key planning policies for each shortlisted option. Discussions are now underway with the local planning authority to initiate the planning application process.

It should also be noted that a key aspect of the enabling requirements with regards the preferred option is to move the Trusts chapel/ multi faith provision so the associated building can make way for the proposed development. Due to projects that have been considered in recent years, substantial work has been undertaken with the Trusts Chaplaincy and other key benefactors to identify all that required to undertake such a move.

It is of course considered unfortunate for the chapel to have to make way for the preferred option, but all involved recognise the current accommodation does not align itself with what is considered appropriate for the provision of modern day multi faith requirements, especially for a major acute hospital with diverse multi cultural needs.

Specialist consultants will be involved in this aspect of the planning application to provide the necessary advice when it comes to dealing with such buildings.

Full building control approval will be sought to current standards.

Phasing/enabling of works can be viewed within Appendix 5a.

4.3.2 Implementation Timescales

Section 6 of this business case, (Table 6.3) outlines the implementation programme.

The Project Programme is intended to deliver the project by August 2016, though this timeline is predicated on the enabling works being commenced post NTDA approval of the Outline Business Case and in parallel with commencement of the Full Business Case process.

The Trust Board and NTDA should have assurance with this approach as the majority of enabling and associated demolition works sit comfortably with the the future Development Control Plan for the LRI site.

4.3.3 Building Research Establishment Environmental Assessment Method (BREEAM)

The Trust are committed to achieving no less than a Very Good rating under BREEAM assessment. This will be achieved through the contractual obligation that underpin the P21+ Framework

In addition to BREEAM the AEDET (Achieving Excellence in Design Evaluation Toolkit) evaluation process will take place as the design proposals develop through the FBC process. The detailed design process at FBC stage will also demonstrate building regulation and fire code compliance.

4.3.4 Potential for Risk Transfer

The LLR Framework has a single comprehensive risk management process, which the Trust will be using. The Emergency Floor Project Senior Responsible Officer (SRO) and IFM act as joint owners of the joint project Risk Register for this scheme, responsibility for risks identified in it are then to be allocated and identified on the associated risk register. The risk of cost overrun is transferred to IFM once the GMP has been agreed and construction stage commenced.

4.3.5 Proposed Charging Mechanisms

The Trust intends to make payments in relation to works required in accordance with the LLR Framework Agreement. The NEC Option C Form of Contract will be the agreed form of Building Contract for IFM works. The Building Contract stipulates the payment mechanism, timescales, method of payment calculation etc.

Charging mechanisms approach applied relates to IFM being paid the Defined Cost of the works plus their fee up to the GMP. Under the current contract there is a mechanism for a Gain Share whereby if the final costs are below the GMP then there is the potential for both the Trust and IFM to share the savings, generally on a 50/50 basis if the final cost is up to 5% less than the GMP; if the final cost is more than 5% lower than the GMP then the client generally retains 100% of the savings (if the final cost exceeds the GMP then there is no additional cost to the Client, unless instructed otherwise). This in turn incentivises efficient working and unnecessary cost.

4.3.6 Proposed Contract Lengths

Contract lengths will be set in relation to the LLR Framework Agreement. The basis of the ED Project Contract will be the NEC Option C contract which contains core clauses and Secondary / Z clauses specific to the Framework route and bespoke requirements of the Client.

4.3.7 Proposed Key Contractual Clauses

Key contractual clauses in relation to works associated with this scheme will be in accordance with LLR Framework contract terms, or existing Trust contracts as appropriate.

4.3.8 Personnel Implications (including TUPE)

TUPE Regulations will not apply to this investment as no undertakings will transfer between employing entities.

4.3.9 Procurement Strategy and Implementation Timescales

The procurement strategy is outlined above, and the Implementation timescales are outlined in Section 6.

4.3.10 Equipment Strategy

The Trust intends to implement an equipment strategy that incorporated the following:

- ▶ Ownership of the majority of equipment
- ▶ Some Equipment leased e.g. beds and trolleys leased under the bed management contract
- ▶ Larger imaging equipment within the ED will be included within the Trust's Managed Equipment Service (MES) contract e.g. diagnostics/ imaging.

The equipment work stream will continue to progress the equipment strategy in more detail throughout the FBC process.

4.3.11 Financial Reporting Standard 5 Accountancy Treatment

Assets underpinning delivery of the service will be reflected on the Trust's balance sheet.

5 | The Financial Case

5.1 Introduction

The purpose of this section is to set out the forecast financial implications of the preferred options as set out in the Economic Case and the proposed deal (as described in the Commercial Case). The Trust was formed in April 2000 and has achieved its financial targets over the past 12 years. The financial results for 2011/12 and 2012/13 show that the Trust made a surplus of £88k and £91k respectively - details for future years are set out below.

The short listed options have undergone a rigorous level of scrutiny as far as practicably possible for this stage in business case proceedings, and have proved to be robust in terms of the delivery of significant clinical benefits. It is now important to ensure that these options will be affordable to the Trust and will remain so.

5.2 Capital Costs

The capital costs of the preferred option total £48.7M including forecast out-turn inflation. This figure also includes the decant costs associated with the scheme. Below is an analysis of the total costs.

Table 5.1 Summary of Capital Costs

Capital Costs	Option 3A Victoria (£)
Construction	23,643,192
Fees	6,344,090
Equipment	1,635,853
Decant	7,840,866
Planning Contingency	1,586,707
Sub Total	41,050,708
Optimism bias	3,411,420
Inflation	3,466,908
Total	47,929,036

5.3 Financing

The table below sets out the cashflow associated with the scheme together with sources of funding. This shows that the Trust has clearly identified its capital requirements and has also identified relevant sources of funding.

As can be seen the Trust is funding both the initial development costs and the decant costs from its own resources.

The Trust will require a total of £47,929,036 of this, £12m will be funded through Trust capital and £36m through exceptional PDC and/or public loan funding:

Table 5.2 Borrowing Profile

UHL ED Floor	2013/14 £	2014/15 £	2015/16 £	2016/17 £	2017/18 £	TOTAL £
Capital Expenditure	8,323,572	13,848,153	24,480,266	1,106,701	170,344	47,929,036
Funded By:						
PDC/Public Loan		9,927,720	24,480,266	1,106,701	170,344	35,685,031
Trust Resources	8,323,572	3,920,433				12,244,005
Total Funding	8,323,572	13,848,153	24,480,266	1,106,701	170,344	47,929,036

5.4 Income and Expenditure

As discussed earlier in the business case the Trust has undertaken a review of future demand within the UHL ED. This work based on a number of factors including demographics and acuity has identified significant increases in the coming years. Additionally the Trust has recently introduced a single front door initiative which has resulted in the diversion of minors activity from ED to the Urgent Care Centre which is currently operated by George Elliott NHS Trust.

The table below shows the impact of these factors on current activity levels and this in turn underpins the assumptions shown in the forecast income and expenditure table below (further details are contained within the finance Appendix 9).

Table 5.3 ED Floor Forecast Activity Analysis (excludes UCC)

	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18	2018 /19	2019 /20	2020 /21	2021 /22
Paeds	33,933	35,002	36,104	37,242	38,415	39,625	40,873	42,161	43,489	44,897
Eyes	15,913	16,374	16,849	17,338	17,841	18,358	18,891	19,438	20,002	20,503
Majors	59,369	61,328	63,352	65,443	67,602	69,833	72,138	74,518	76,977	79,677
Minors	47,475	29,539	30,455	31,399	32,372	33,376	34,410	35,477	36,577	37,787
Resus	13,518	14,018	14,537	15,075	15,632	16,211	16,811	17,433	18,078	18,410
Total	170,208	156,262	161,297	166,496	171,862	177,403	183,122	189,027	195,123	201,273

This increase in activity leads to an increase in costs both for staffing and non pay.

With regards to staffing the Trust is developing a detailed workforce plan which will form part of the assumptions at FBC stage.

At OBC stage the Trust has assumed that without investment in this scheme additional staff will be required in line with its current staff to activity ratios for medical and nursing staff but that administration and clerical staff will remain constant.

Support costs such as Imaging Pathology and Therapies are also expected to increase although not in direct proportion to activity.

With regard to staffing increases, these are not expected to be linear and annual, but rather on a stepped basis as activity reaches certain levels.

In addition to addressing practical issues of accommodating this increasing activity, the proposed scheme will enable the Trust to make significant savings and these are shown in the table below.

Key assumptions that underpin the additional savings are the move to upper quartile peer group staffing ratios for additional staff to cover the additional activity and the significant reduction in agency staff.

In identifying these savings the Trust has ensured that there is no double count with current CIP savings. Currently the Trust has an internal CIP target of c6% and for the purposes of the OBC it is assumed that this will address the tariff deflation.

The following table shows the impact on the division's income and operating costs at 2013/14 prices but assuming no investment. As can be seen the additional income associated with the increased activity is offset by increased costs.

Table 5.4 ED – Income & Expenditure

ED Income and Expenditure	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18	2018 /19	2019 /20	2020 /21	2021 /22	2022/23
	Actual £k	Out-turn £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k
Income											
ED Tariff	21,162	21,129	21,129	21,129	21,129	21,129	21,129	21,129	21,129	21,129	21,129
ED Other	4,657	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402
Medical Assessment Unit		8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263
Impact of single front door			-1,370	-1,370	-1,370	-1,370	-1,370	-1,370	-1,370	-1,370	-1,370
Growth			676	1,374	2,094	2,837	3,604	4,395	5,212	6,055	6,925
Total	25,820	33,794	33,100	33,798	34,518	35,261	36,028	36,820	37,637	38,479	39,349
Expenditure											
Pay											
Nursing	6,441	6,880	6,880	6,880	6,880	6,880	6,880	6,880	6,880	6,880	6,880
Nursing Agency	1,598	1,445	1,445	1,445	1,445	1,445	1,445	1,445	1,445	1,445	1,445
Medical Staff	6,790	8,008	8,008	8,008	8,008	8,008	8,008	8,008	8,008	8,008	8,008
Medical Locum	2,311	1,630	1,630	1,630	1,630	1,630	1,630	1,630	1,630	1,630	1,630
A&Cs	958	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210
EDU	673	643	643	643	643	643	643	643	643	643	643
EDU Agency	15	285	285	285	285	285	285	285	285	285	285
Impact of single front door			-536	-536	-536	-536	-536	-536	-536	-536	-536

ED Income and Expenditure	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18	2018 /19	2019 /20	2020 /21	2021 /22	2022/23
	Actual £k	Out-turn £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k
Additional staff costs due to activity growth					1,155	1,155	1,155	2,425	2,425	3,124	3,124
Total	18,785	20,099	19,562	19,562	20,717	20,717	20,717	21,988	21,988	22,686	22,686
Non pay											
Nursing	1,823	1,705	1,705	1,705	1,705	1,705	1,705	1,705	1,705	1,705	1,705
Medical Staff	67	95	95	95	95	95	95	95	95	95	95
A&C	26	119	119	119	119	119	119	119	119	119	119
EDU	202	185	185	185	185	185	185	185	185	185	185
Impact of single front door			-136	-136	-136	-136	-136	-136	-136	-136	-136
Additional non pay costs due to activity growth			67	132	200	269	341	414	491	569	650
Total	2,119	2,104	2,035	2,100	2,167	2,236	2,308	2,382	2,458	2,537	2,618
Total Direct cost	20,904	22,202	21,597	21,662	22,884	22,953	23,025	24,369	24,446	25,222	25,304
Medical assessment unit		8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263
Additional MAU beds			0	0	933	1,466	1,999	2,532	3,065	3,598	-8,263
Savings on repatriation to additional MAU beds			0	0	-933	-1,466	-1,999	-2,532	-3,065	-3,598	8,263
FM costs	471	471	471	471	636	636	636	636	636	636	636

ED Income and Expenditure	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18	2018 /19	2019 /20	2020 /21	2021 /22	2022/23
	Actual £k	Out-turn £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k	Forecast £k
Support service costs	3,897	3,864	3,864	3,864	3,864	3,864	3,864	3,864	3,864	3,987	4,115
Overheads	8,745	11,233	11,233	11,233	11,233	11,233	11,233	11,233	11,233	11,233	11,233
Impact of single front door			-165	-165	-165	-165	-165	-165	-165	-165	-165
Additional support costs due to activity growth			82	164	247	329	411	493	575	658	658
Total Costs (baseline)	34,017	46,033	45,344	45,492	46,960	47,112	47,266	48,692	48,851	49,834	50,043

Below we have modelled the income and expenditure impact of the scheme including capital charges. As can be seen, under a Trust resources and exceptional PDC option, the scheme is affordable.

We have also modelled a Trust resources and loan scenario based on a 25 year loan and the current debt management office public loan rates. This indicates that the Trust would need to find additional savings to ensure affordability throughout the period, however, as discussed above, the Trust is currently developing a detailed Workforce Plan for ED and it is anticipated that this will identify further significant savings. The Trust has prudently not included them at OBC stage.

Table 5.5 *Income & Expenditure Impact – Trust Resources & Exceptional PDC*

Impact of Scheme	2014 /15	2015 /16	2016 /17	2017 /18	2018 /19	2019 /20	2020 /21	2021 /22	2022 /23
	£k	£k	£k	£k	£k	£k	£k	£k	£k
Reduction in Agency costs			-1,693	-1,693	-1,693	-1,693	-1,693	-1,693	-1,693
Reduction in Staff Costs			-416	-416	-416	-874	-874	-1,357	-1,357
Change in depreciation	-170	-170	711	1,005	1,005	1,005	1,005	1,005	1,005
Additional FM costs			127	127	127	127	127	127	127
Change in Rate of return	-89	-89	962	932	897	862	827	792	756
Total impact	-259	-259	-309	-44	-79	-572	-607	-1,127	-1,162

Below is the impact of the loan option:

Table 5.6 *Income & Expenditure Impact – Trust Resources & Loan*

Impact of loan option	2014 /15	2015 /16	2016 /17	2017 /18	2018 /19	2019 /20	2020 /21	2021 /22	2022 /23
	£k	£k	£k	£k	£k	£k	£k	£k	£k
Reduction in Agency costs	0	0	-1,693	-1,693	-1,693	-1,693	-1,693	-1,693	-1,693
Reduction in Staff Costs	0	0	-416	-416	-416	-874	-874	-1,357	-1,357
Change in depreciation	-170	-170	711	1,005	1,005	1,005	1,005	1,005	1,005
Additional FM costs	0	0	127	127	127	127	127	127	127
Repayment of loan capital	397	1,376	1,427	1,427	1,427	1,427	1,427	1,427	1,427
Interest on loan	397	1,360	1,356	1,299	1,242	1,185	1,128	1,071	1,014
Total impact	624	2,567	1,513	1,750	1,693	1,178	1,121	580	523

5.5 Impact on Trust Income, Cash Flow & Balance Sheet

The Table below sets out the impact on the Trust's balance sheet. Further details to support these figures are within the finance Appendix (9).

Table 5.7 Impact on Trust Balance Sheet

Balance Sheet	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18	2018 /19	2019 /20	2020 /21	2021 /22	2022/23
Assets Under Construction	8,323,572	13,848,153	24,480,266	1,106,701	170,344					
Impairments on new building coming into use (DV likely revaluation)				-17,024,301						
Impairment on partial demolition of Victoria based m2	-2,472,646									
Depreciation				-711,445	-1,005,283	-1,005,283	-1,005,283	-1,005,283	-1,005,283	-1,005,283
Change to Fixed Assets	-2,472,646			30,022,946	29,188,007	28,182,723	27,177,440	26,172,157	25,166,873	24,161,590
Impact on Balance Sheet	-2,472,646									
Rate of return on assets				1,050,803	1,021,580	986,395	951,210	916,025	880,841	845,656

As can be seen, the demolition of part of the existing Victoria Building will lead to an impairment in the first instance and this has been based on the square meterage demolished as a percentage of the total building area.

The new Emergency Floor project is expected to be available in August 2016 and prior to this it is treated as an asset under construction.

On coming into use, we have assumed that as a result of the DV valuation there will be an impairment of 30%. With regard to the decant, this work is not anticipated to add significant value to the estate and we have assumed an impairment of 70% for this work.

The value of these impairments are shown below:

Table 5.8 Value of Impairments

Impairments	£K
Demolitions	2,473
Decant Schemes	5,489
New asset coming into use	11,536
Total	19,497

5.6 Sensitivity

The key sensitivities are the expectations of growth together with the additional revenue and the Trust's ability to realise the savings it has identified.

Below we have modelled the impact on additional income of 1% less growth pa than forecast. As can be seen this has a significant impact on the additional income levels.

However in response to this scenario the Trust would be able to reduce its recruitment of additional staff.

Table 5.9 Impact of 1% less Growth

	2014/15 £k	2015/16 £k	2016/17 £k	2017/18 £k	2018/19 £k	2019/20 £k	2020/21 £k	2021/22 £k
Income Growth Assumption	676	1,374	2,094	2,837	3,604	4,395	5,212	6,055
Income Growth at 1% less pa	465	940	1,425	1,922	2,429	2,947	3,477	4,018

We have also modelled the impact of the Trust not achieving the savings in staff due to moving to the upper quartile in staffing for the ED and not fully achieving its target reduction in agency staff.

As can be seen this will have a major impact on the affordability. However the Trust is currently developing a workforce plan so as to ensure it has a robust strategy to achieve the savings.

Table 5.10 Impact of not Achieving Staff Savings

	2014/15 £k	2015/16 £k	2016/17 £k	2017/18 £k	2018/19 £k	2019/20 £k	2020/21 £k	2021/22 £k
Reduction in Agency Costs	0	0	-1,693	-1,693	-1,693	-1,693	-1,693	-1,693
Reduction in Staff Costs	0	0	-416	-416	-416	-874	-874	-1,357
Impact	0	0	1,055	1,055	1,055	1,283	1,283	1,525

5.7 Affordability

As can be seen the scheme is affordable under an exceptional PDC funding route and with additional savings being reviewed as part of the workforce planning will be affordable under a loan funding option.

5.8 Long Term Financial Model

Set out below is the Trust's current Long Term Financial Model (LTFM) assumptions. The LTFM is currently being updated and will incorporate the impact of the scheme as outlined below.

Table 5.11 LTFM Assumptions

	2014/15 £k	2015/16 £k	2016/17 £k	2017/18 £k	2018/19 £k	2019/20 £k	2020/21 £k	2021/22 £k	2022/23 £k
Change in Income									
Impact of single front door	-	-	-	-	-	-	-	-	-
Growth	1,370	1,370	1,370	1,370	1,370	1,370	1,370	1,370	1,370
Total	-694	4	724	1,467	2,234	3,025	3,842	4,685	4,685
Change in Costs									
Impact of single front door	-165	-165	-165	-165	-165	-165	-165	-165	-165
Additional staff costs due to activity growth			1,155	1,155	1,155	2,425	2,425	3,124	3,124
Impact of single front door Non pay	-136	-136	-136	-136	-136	-136	-136	-136	-136
Additional Non Pay costs due to activity growth	67	132	200	269	341	414	491	569	569
Impact of single front door on indirect costs	-165	-165	-165	-165	-165	-165	-165	-165	-165
Additional indirect Support costs due to activity growth	82	164	247	329	411	493	575	658	658
Sub Total	-318	-170	1,134	1,285	1,439	2,866	3,024	3,884	3,884
Reduction in Agency costs			-	-	-	-	-	-	-
			1,679	1,847	1,847	1,847	1,847	1,847	1,847

Change in Income	2014 /15 £k	2015 /16 £k	2016 /17 £k	2017 /18 £k	2018 /19 £k	2019 /20 £k	2020 /21 £k	2021 /22 £k	2022 /23 £k
Reduction in Staff Costs			-416	-416	-416	-874	-874	-	-
Change in depreciation	-170	-170	735	1,037	1,037	1,037	1,037	1,037	1,037
Additional FM costs			127	127	127	127	127	127	127
Change in Rate of return	-89	-89	968	938	902	866	829	793	793
Total	-577	-430	869	1,124	1,242	2,175	2,297	2,636	2,636

Income figures in this table are consistent with the Trust Integrated Business Plan (IBP) and Long Term Financial Model (LTFM).

Expenditure figures are also consistent with the IBP and LTFM. These include agreed CIPs.

As outlined in the base case table above the increase in activity will lead to an increase in income and in costs.

Table 5.12 Impact on LTFM

Change in Income	2014 /15 £k	2015 /16 £k	2016 /17 £k	2017 /18 £k	2018 /19 £k	2019 /20 £k	2020 /21 £k	2021 /22 £k
Impact of single front door	-1,370	-1,370	-1,370	-1,370	-1,370	-1,370	-1,370	-1,370
Growth	676	1,374	2,094	2,837	3,604	4,395	5,212	6,055
Total	-694	4	724	1,467	2,234	3,025	3,842	4,685
Change in Costs								
Impact of single front door	-165	-165	-165	-165	-165	-165	-165	-165
Additional staff costs due to activity growth			1,155	1,155	1,155	2,425	2,425	3,124
Impact of single front door Non pay	-136	-136	-136	-136	-136	-136	-136	-136
Additional Non Pay costs due to activity growth	67	132	200	269	341	414	491	569
Impact of single front door on indirect costs	-165	-165	-165	-165	-165	-165	-165	-165
Additional indirect Support costs due to activity growth	82	164	247	329	411	493	575	658
Sub Total	-318	-170	1,134	1,285	1,439	2,866	3,024	3,884
Reduction in Agency costs			-1,679	-1,847	-1,847	-1,847	-1,847	-1,847
Reduction in Staff Costs			-416	-416	-416	-874	-874	-1,357
Change in depreciation	-170	-170	735	1,037	1,037	1,037	1,037	1,037

Change in Income	2014/15 £K	2015/16 £K	2016/17 £K	2017/18 £K	2018/19 £K	2019/20 £K	2020/21 £K	2021/22 £K
Additional FM costs			127	127	127	127	127	127
Change in Rate of return	-89	-89	968	938	902	866	829	793
Total	-577	-430	869	1,124	1,242	2,175	2,297	2,636

It should be noted that a key assumption underpinning the figures is that the overheads (e.g. Instrumentation, Discharge Lounge, HR, Finance etc) within the Trust remain constant despite the increase in activity. This will be further examined in the FBC.

As can be seen from the sub total income will be higher than the additional cost primarily because of the overheads assumption outlined above.

The further savings are a result of the impact of the scheme.

As will be noted Income and Expenditure (table 5.4) above includes the overheads allocated to the department by the PLICS system.

Below we have assessed the impact of excluding these overheads and as can be seen the ED does not make a financial contribution.

We have also outlined below the contribution required at varying levels of overhead charges.

Table 5.13 Impact of Excluding Overheads

ED INCOME AND EXPENDITURE Excluding overheads	2012/ 13 Actual £k	2013/ 14 Out-turn £k	2014/ 15 Forecast £k	2015/ 16 Forecast £k	2016/ 17 Forecast £k	2017/ 18 Forecast £k	2018/ 19 Forecast £k	2019/ 20 Forecast £k	2020/ 21 Forecast £k	2021/ 22 Forecast £k	2022/ 23 Forecast £k
INCOME	21,162	21,129	21,129	21,129	21,129	21,129	21,129	21,129	21,129	21,129	21,129
ED Tariff	4,657	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402
ED Other		8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263
Medical Assessment Unit			-1,370	-1,370	-1,370	-1,370	-1,370	-1,370	-1,370	-1,370	-1,370
Impact of single front door			676	1,374	2,094	2,837	3,604	4,395	5,212	6,055	6,925
Total	25,820	33,794	33,100	33,798	34,518	35,261	36,028	36,820	37,637	38,479	39,349
EXPENDITURE: Pay											
Nursing	6,441	6,880	6,880	6,880	6,880	6,880	6,880	6,880	6,880	6,880	6,880
Nursing Agency	1,598	1,445	1,445	1,445	1,445	1,445	1,445	1,445	1,445	1,445	1,445
Medical Staff	6,790	8,008	8,008	8,008	8,008	8,008	8,008	8,008	8,008	8,008	8,008
Medical Locums	2,311	1,630	1,630	1,630	1,630	1,630	1,630	1,630	1,630	1,630	1,630
A&C	958	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210	1,210
EDU	673	643	643	643	643	643	643	643	643	643	643
EDU Agency	15	285	285	285	285	285	285	285	285	285	285
Impact of single front door			-536	-536	-536	-536	-536	-536	-536	-536	-536

ED INCOME AND EXPENDITURE Excluding overheads	2012/ 13 Actual £k	2013/ 14 Out-turn £k	2014/ 15 Forecast £k	2015/ 16 Forecast £k	2016/ 17 Forecast £k	2017/ 18 Forecast £k	2018/ 19 Forecast £k	2019/ 20 Forecast £k	2020/ 21 Forecast £k	2021/ 22 Forecast £k	2022/ 23 Forecast £k
Additional staff costs due to activity growth					1,155	1,155	1,155	2,425	2,425	3,124	3,124
Total	18,785	20,099	19,562	19,562	20,717	20,717	20,717	21,988	21,988	22,686	22,686
EXPENDITURE: Non Pay											
Nursing	1,823	1,705	1,705	1,705	1,705	1,705	1,705	1,705	1,705	1,705	1,705
Medical Staff	67	95	95	95	95	95	95	95	95	95	95
A&C	26	119	119	119	119	119	119	119	119	119	119
EDU	202	185	185	185	185	185	185	185	185	185	185
Impact of single front door			-136	-136	-136	-136	-136	-136	-136	-136	-136
Additional Non Pay costs due to activity growth			67	132	200	269	341	414	491	569	650
Total	2,119	2,104	2,035	2,100	2,167	2,236	2,308	2,382	2,458	2,537	2,618
TOTAL DIRECT COSTS	20,904	22,202	21,597	21,662	22,884	22,953	23,025	24,369	24,446	25,222	25,304
Medical Assessment Unit		8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263
Additional MAU beds			0	0	933	1,466	1,999	2,532	3,065	3,598	-8,263

ED INCOME AND EXPENDITURE Excluding overheads	2012/ 13 Actual £k	2013/ 14 Out-turn £k	2014/ 15 Forecast £k	2015/ 16 Forecast £k	2016/ 17 Forecast £k	2017/ 18 Forecast £k	2018/ 19 Forecast £k	2019/ 20 Forecast £k	2020/ 21 Forecast £k	2021/ 22 Forecast £k	2022/ 23 Forecast £k
Savings on repatriation to additional MAU beds			0	0	-933	-1,466	-1,999	-2,532	-3,065	-3,598	8,263
FM Costs	471	471	471	471	636	636	636	636	636	636	636
Support Service Costs	3,897	3,864	3,864	3,864	3,864	3,864	3,864	3,864	3,864	3,987	4,115
Overheads	8,745	11,233	0	0	0	0	0	0	0	0	0
Impact of single front door			-165	-165	-165	-165	-165	-165	-165	-165	-165
Additional Support costs due to activity growth			82	164	247	329	411	493	575	658	658
TOTAL COSTS (BASELINE)	34,017	46,033	34,112	34,259	35,728	35,879	36,033	37,460	37,618	38,602	38,810
Deficit	8,197	12,239	1,011	461	1,209	618	5	640	-18	122	-539
Overhead contribution											
At 5%			1,706	1,713	1,786	1,794	1,802	1,873	1,881	1,930	1,941
At 10%			3,411	3,426	3,573	3,588	3,603	3,746	3,762	3,860	3,881
At 20%			6,822	6,852	7,146	7,176	7,207	7,492	7,524	7,720	7,762

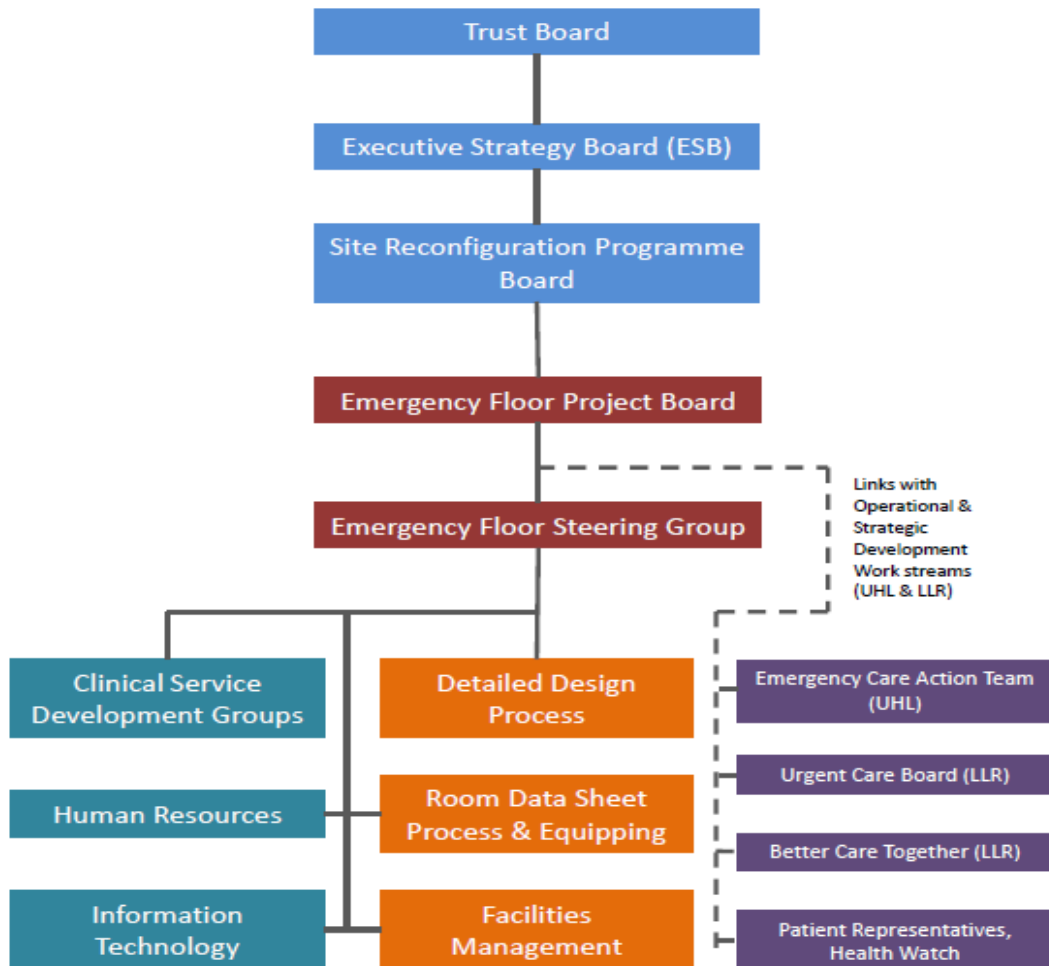
6 | The Management Case

6.1 Introduction

The Management Case provides a summary of the arrangements which have been put into place for the successful delivery of the proposed reconfiguration of the Emergency Floor, the associated other service relocations required as a result of the decanting moves, service operational changes, and to secure the benefits sought through the investment.

6.2 Project Governance Arrangements

Project Governance arrangements have been established to reflect national guidance¹⁸ and the Trust’s own Capital Governance Framework, as shown in the diagram below:



¹⁸ Capital Investment Manual 'Managing Capital Projects' (Department of Health); PRINCE2 (Office of Government Commerce); Managing Successful Programmes (Office of Government Commerce/ Efficiency & Reform Group)

6.3 Outline Project Roles and Responsibilities

Key Project delivery roles are described below:

- ▶ **Senior Responsible Owner (SRO):** This role is being performed by the Medical Director, with responsibility to the Executive Trust Board for delivery of the project to meet their terms of reference

- ▶ **Senior User:** This role is being performed by the Clinical Director for the Emergency & Specialist Medicine CMG, with responsibility for ensuring that the project maintains alignment with the service and business targets described in the Business Case and working within the terms of reference set by the Project Board.

- ▶ **Project Director:** This role is being performed by the Site Reconfiguration Project Director with overall responsibility for directing the Trust's capital development schemes and reporting to the Site Reconfiguration Programme Board.

- ▶ **Development Project Manager:** This role is being performed by the Regional Operations Director for Capita Property & Infrastructure (Health Division). The person will have day to day responsibility for administration of the development of the project (within the delegated role permitted by Project Board).

- ▶ **Service Project Managers:** Senior managers from the ED and associated departments that are proposed to make up the Emergency Floor solution will undertake this role, having day to day responsibility for providing advice on the service brief to the development team and for planning and delivery of service and workforce change under the direction of the Senior User.

Regular Progress Reports will be submitted to the Site Reconfiguration Programme Board and Executive Strategy Board for onward reporting and management within the established Trust management structure.

6.3.1 Core Group Responsibilities:

The roles and responsibilities for the main project groups are summarised as follows:

Executive Strategy Board (ESB)

This group is a designated committee appointed by the Trust Board, with responsibilities which in summary, include:

- ▶ To advise the Trust Board on formulating strategy for the organisation.
- ▶ To ensure accountability by holding each other to account for the delivery of the strategy and through seeking assurance that all systems of control are robust and reliable.

To lead the Trust executively, in accordance with our shared values, to deliver our vision and, in doing so, help shape a positive culture for the organisation

Site Reconfiguration Programme Board

This group is a designated committee appointed by the Trust Board, with responsibilities which in summary, include:

- ▶ Monthly review of scheme progress and status
- ▶ Provision of interim direction to maintain progress
- ▶ Decision on matters for escalation for ESB and Trust Board direction/ information

Emergency Floor Project Board

The membership of the Project Board is:

Table 6.1 Trust Transformation Project Board

Member	Title
Dr Kevin Harris	Chair/ Medical Director
Nicky Topham	Project Director/ Programme Director of Reconfiguration, UHL
Chris Turner	Project Manager/ Associate Director, Capita
Stephen Samuels	Senior Supplier/ Director of Interserve, UHL Facilities Management
Andrew Seddon	Director of Finance
Phil Walmsley	Head of Operations
Catherine Free	Senior User/ Acute CMG
Andrew Furlong	Senior User/ Deputy Medical Director
Ian Scudamore	Senior User/ Woman's & Children's Divisional Director or Representative
Kim Wilding	Senior User/ UCC Divisional Manager or Representative
Nigel Bond	LLR Faculties Management Company

Key roles and responsibilities will include:

- ▶ Responsibility for delivering the project within the parameters set within the business case
- ▶ Providing high level direction on stakeholder involvement and monitoring project level management of stakeholders
- ▶ Providing the strategic direction for the project
- ▶ Ensure continuing commitment of stakeholder support
- ▶ Key stage decisions
- ▶ Progress monitoring

Monthly progress reports, including projections of forthcoming key activities and decisions, will be submitted to the Project Board by the Project Director
The standing agenda will be as follows:

- ▶ Apologies:
- ▶ Minutes of Previous Meeting
- ▶ Matters Arising
- ▶ Development Progress Report
- ▶ Clinical Service update
- ▶ Service model refinement
- ▶ Recruitment and training
- ▶ Stakeholders and Communications
- ▶ Any other business
- ▶ Date of Next Meeting

Emergency Floor Steering Group

The membership of the Steering Group is:

Table 6.2 Emergency Floor Steering Group

Member	Title
Nicky Topham	Project Director
Chris Turner	Project Manager
Andrew Seddon	Director of Finance
Louise Naylor	Trust Site Reconfiguration Project Manager
David Finch	Building Services Manager
Nigel Bond	Trust Capital Projects Manager
Jane Edyvean	CBU Manager
Sam Jones	Lead Consultant – Paediatrics
Catherine Free	Lead Consultant – Medical
Ben Teasdale	Lead Consultant – Emergency care
Jaydip Banerjee	Lead Consultant - ED Low Acuity
Mark Williams	Lead Consultant - EDU/MH
Nigel Langford	Lead Consultant – Triage & Treatment
Keith Blanshard	Lead Consultant – Clinical Support
Lee Walker	Lead Consultant – Adult Assessment
Kim Wilding	Senior User Urgent Care Centre
Lisa Lane	ED High Acuity Lead Nurse
Kerry Morgan	ED High Acuity Lead Nurse
Andrew Coser	ED Low Acuity
Kate Hardiment	ED Low Acuity

Steve Peck	ED Low Acuity
Vijay Savant	ED Low Acuity
Sanjay Varma	ED Low Acuity
Gaby Harris	ED Low Acuity
Chandra Brown	ED Low Acuity Service Manager
Marianne Elloy	ED Low Acuity Paediatric ENT
Fay Gordon	CBU Manager
Geraldine Burdett	EDU/Mental Health Nurse
Paul Knowles	EDU/Mental Health
Julie Burdett	Triage and Treatment
John Jameson	Triage and Treatment
Gillian Wardle	Adult Assessment Lead Nurse
Shaheen Steers	Adult Assessment Lead Nurse
Esther Hyde	Adult Assessment
Emily Laithwaite	Adult Assessment
Daniel Barnes	Clinical Support
Ruth Denton-Beaumont	Clinical Support
Judy Gilmore	Clinical Support
Cathy Lea	Clinical Support
Andrew Rickett	Clinical Support
Stephen Samuels	Director – Interserve FM
Ian Morgan	Architect - Capita
Jonathan Hughes	Health Planner - Capita
Mark Wightman	Director Communications and External Relations

This group will be chaired by the Project Manager. Key roles and responsibilities will include:

- ▶ Day to day responsibility for the delivery of the project to meet the parameters described within the business case
- ▶ Provision of appropriate reports on status to the Project Director
- ▶ Management of risks and issues and escalation of appropriate matters for executive direction/ approval
- ▶ Providing working groups with detailed briefs
- ▶ Monitoring, co-ordinating and controlling the work of the Working Groups
- ▶ Drawing together the outputs of the Working Groups
- ▶ Ensure continuing commitment of stakeholders, both internal and external

The group will meet monthly or more frequently as required in accordance with the phase of the project. The Standing Agenda will be as follows:

- ▶ Apologies:
- ▶ Minutes of Previous Meeting
- ▶ Matters Arising
- ▶ Progress Report
- ▶ Shared BREEAM / Planning Issues

Other groups are likely to be established by the Project Steering Group as the project develops.

A Project Initiation Document (PID) has been prepared to provide detailed information on proposed project management arrangements, including:

- ▶ Aims and objectives
- ▶ Benefits and constraints
- ▶ Organisation
- ▶ Roles and responsibilities
- ▶ Detailed programme for stage activities
- ▶ Risk management arrangements
- ▶ Statutory Approvals and Quality Standards
- ▶ Project Communications

Working Groups

Working Groups will be convened to provide advice and direction to the detailed design process in developing this development. Their role can be summarised as follows:

- ▶ Architect Led Design Team: This group will be led by the Trusts appointed lead Architect and will be responsible for:
 - ▶ Managing design progress and coordination issues
 - ▶ Identifying key matters for Trust assistance/ decision making
 - ▶ Identifying design risks and issues for management and if appropriate escalation to the project team
- ▶ Service Development: Representing clinical services, responsibilities will include:
 - ▶ Provide comment to the Project Manager on Reviewable Design Information
 - ▶ Liaise with Infection Control to gain advice on final product/ detail selection issues
 - ▶ Refinement of Operational Policy(s)
 - ▶ Support the work of the Equipping process in preparation of key stage documents

Equipping Group

This group will be responsible for confirmation and procurement of equipment required for the operational needs of the Emergency Floor solution. This will include:

- ▶ Producing equipment schedules

- ▶ Planning the procuring of equipment in accordance with the Trusts SFIs and SOs and to ensure compliance with BREEAM obligations
- ▶ Planning the commissioning of equipment
- ▶ Understanding the transfer requirements of existing equipment/ furniture (as appropriate)

Hard and Soft Facilities Management:

Representing the needs of hard and soft FM, provide the following support:

- ▶ Providing comments to the Project Manager on reviewable design Information
- ▶ Advising on FM related fittings, fixtures and equipping selection as part of the detailed design process
- ▶ Updating whole hospital policies and service agreements to reflect the departmental operation of the proposed Emergency Floor
- ▶ Advising on risks or issues which may threaten the success of the scheme
- ▶ Managing delivery of client related BREEAM obligations

Information & Communications Technology

This group will be responsible for ensuring that voice and data requirements are delivered for the scheme, along with advice on equipment which is linked with communications (eg. CCTV, entry systems, BMS etc). This will cover

- ▶ Addressing any queries from the Design Team in relation to the design of cabling and associated works
- ▶ Reviewing any design information in relation to ICT
- ▶ Planning the transfer and commissioning of voice and data provision from the existing operating locations to the new development

The end stage of the project will result in the completion, handover and commissioning of the new facility. The Emergency Floor Project Board is responsible for providing assurance that the project has been delivered in terms of product and quality in line with the business case.

6.3.2 Project Plan

The Project Programme is intended to deliver the project by August 2016, though this timeline is predicated on the enabling works being commenced post NTDA approval of the Outline Business Case and in parallel with commencement of the Full Business Case process. The milestones for this project are set out below.

Table 6.3 Project Milestones

Milestone	Date
Preparation of Outline Business Case	October/ November 2013
Outline Business Case circulated to Executive Team for review	18 th November 2013
Outline Business Case presented to Executive Team	19 th November 2013
Outline Business Case circulated to Trust Board for review	21 st November 2013
Outline Business Case presented to Trust Board Development	21 st November 2013
Outline Business Case presented for Trust Board approval	28 th November 2013
Outline Business Case sent to the NTDA	December 2013
Outline Business Case presented to CCGs & UCB	December 2013
NTDA approval of the Outline Business Case	February 2014
Commence Full Business Case	February 2014
Commence enabling works	March 2014
Full Business Case presented for Trust Board approval	June 2014
Full Business Case sent to the NTDA	July 2014
NTDA approval of the Full Business Case	September 2014
Enabling works completed/ commence construction phase	December 2014
Handover	July 2016
Trust Commissioning Period	July/ August 2016
Trust Operational	August 2016

A project budget has been agreed and set up as shown in Table 6.4 below.

Table 6.4 Project Capital Budget Requirement:

Capital Costs	Option 3A Victoria (£)
Construction	23,643,192
Fees	6,344,090
Equipment	1,635,853
Decant	7,840,866
Planning Contingency	1,586,707
Sub Total	41,050,708
Optimism bias	3,411,420
Inflation	3,466,908
Total	47,929,036

6.4 Use of Special Advisors

Special advisers have been used in a timely and cost-effective manner in accordance with the Treasury Guidance.

Table 6.5 External Advisors

Emergency Floor Development		
1	Capita	Architects
2	Capita	Cost Consultants
3	Capita	Business case / Finance analysis
4	Capita	Structural Engineers
5	Capita	Mechanical and Electrical Engineers
6	Capita	PMO
7	Interserve	Building/Construction Supervisors
8	Capita	CDM

6.5 Stakeholder Engagement Plan

Table 6.6 Key Stakeholders

Internal stakeholders	External stakeholders
<ul style="list-style-type: none"> ▶ Trust Board ▶ Clinical staff ▶ Non clinical staff ▶ Patient Rep ▶ IT ▶ Estates & Facilities ▶ Finance ▶ HR ▶ PCTs ▶ Unions 	<ul style="list-style-type: none"> ▶ NHS Trust Development Authority (NTDA) ▶ Education provider – ▶ Local acute Trusts – ▶ CCG's ▶ General Public ▶ Special interests groups

6.6 Outline Arrangements for Change and Contract Management

Change management associated with the project will be managed through the Project Board and executive forums that preside over it, under the chairmanship of the Senior Responsible Owner (SRO) and Trust Board respectively. Day to day change management issues will be discussed at the Project Steering Group level and any resultant contract and/ or cost changes will need to be approved by the Project Board.

6.7 Outline Arrangements for Benefits Realisation

The delivery of benefits will be managed through the Emergency Floor Project Board. An outline copy of the benefits realisation plan is attached at Appendix 11 and will be expanded for the FBC submission. This sets out who is responsible for the delivery of specific benefits, when they will be delivered, and how achievement of them will be measured. The key opportunity is presented by the new design for facilities, which will ensure capacity meeting demand, efficiencies in service delivery, compliance to standards and minimised disruption to overall Trust operations.

Key benefits of the project are:

- ▶ To implement a design solution that provides a safe emergency care service that ensures capacity and known flexibility for current and known future demands of patients requiring emergency care
- ▶ Improve patient pathway management reducing the clinical risk and discomfort through the emergency care pathway
- ▶ Support and consolidate the provision of emergency floor concept at LRI
- ▶ Ensures that the service model of care is delivered in line with National, Trust and local health economy KPI's
- ▶ Patient safety is enhanced, and clinical risk is reduced

- ▶ Where possible ensures that the service is developed in line with NHS Guidance in terms of HBN, HTM, national and Trust policy and local health economy policy in terms of capacity provision
- ▶ Quality of care is enhanced, in terms of the model of care, and seamless pathways of care and patient flows
- ▶ The built environment enhances clinical practice that support clinical effectiveness, improved patient outcomes and patient safety
- ▶ Provides enhanced departmental relationships and clinical adjacencies that support clinical effectiveness and improved patient outcomes
- ▶ Ensures facilities are future proofed and adaptable to the changing needs of the health economy
- ▶ Improved Privacy and dignity provisions for all patients
- ▶ Consolidates existing services & provides clinical expertise whilst realising the Emergency Floor concept
- ▶ Improved patient access through a single front door process
- ▶ Enhances patient, visitor and staff safety through the built environment
- ▶ The design solution minimises the impact of the construction process on the site and therefore delivery of the Trust core services
- ▶ Option enables future proofing of the physical ED environment aligned to DCP future expansion needs
- ▶ The enabling moves will facilitate the Emergency Floor programme whilst minimising delay to delivery
- ▶ Reduces complexity and sequence dependency of enabling moves
- ▶ Maintains blue light access throughout whole build process

6.8 Outline Arrangements for Risk Management

The Trust ensures through the involvement of its employees, that risk management serves as a mechanism for risk reduction. Also, by taking a proactive approach to managing risk exposure, the Trust ensures protection of its patients, staff, visitors, assets and reputation. This project will be managed in that context.

6.8.1 Risk Management Policy

The risk management system is described in the Trusts Risk Management Policy which is accessible to all staff via the Trust Intranet. It is based on an iterative process of:

- ▶ Identifying and prioritising the risks to the achievement of the organisation's policies, aims and objectives
- ▶ Evaluating the likelihood of those risks being realised and the impact should they be realised
- ▶ Managing the risks efficiently, effectively and economically

This is achieved through a sound organisational framework, underpinned by a robust policy framework, which promotes early identification of risk, the co-ordination of risk

management activity, the provision of a safe environment for staff and patients, and the effective use of financial resources.

The Trust Risk Register details, in order of relative importance, all the significant risks facing the Trust which are most likely to affect (positively or otherwise) achievement of the Trust's objectives. Appendix 12a highlights the relevant current ED risks on the Trust Risk Register

All new Trust employees attend the corporate induction course, which includes elements of risk management, before they commence their duties in the workplace. This corporate induction is followed by a local induction, delivered by the service line manager, during which time staff receive information on risks specific to that service.

Risks are identified through feedback from many sources such as proactive risk assessments, adverse incident reporting and trends, clinical benchmarking and audit data, complaints, legal claims, patient and public feedback, stakeholder/partnership feedback and internal/external assurance assessments. Appendix 12c provides an overview of the robust system of risk management across the Trust.

6.8.2 Assurance Framework

The Trust's Assurance Framework provides it with a simple but comprehensive method for the effective and focused management of the principal risks to meeting the Trust's corporate objectives. In this way it provides a structure and describes the controls and assurance mechanisms in place to manage the identified risks. This simplifies Board reporting and the prioritisation of action plans, which, in turn, allows for more effective performance management.

The key elements of the Assurance Framework are:

- ▶ Establishment of the Trust's principal objectives (strategic & directorate)
- ▶ Identification of the principal risks that might threaten the achievement of these objectives
- ▶ Identification and evaluation of the key controls intended to manage these principal risks
- ▶ Setting out of the arrangements for obtaining assurance on the effectiveness of the key controls across all areas of principal risk
- ▶ Evaluation of the assurance across all areas of principal risk
- ▶ Identification of the positive assurances and areas where there are gaps in controls and or assurances
- ▶ Putting in place of plans to take corrective action where gaps have been identified in relation to principal risks
- ▶ Maintenance of dynamic risk management arrangements including, crucially, a well-informed risk register

Therefore, the Assurance Framework provides a simple framework for reporting key information to Boards. It identifies which of the organisation's objectives are at risk because of inadequacies in the operation of controls or where the organisation has insufficient assurance about them. At the same time it provides structured assurances about where risks are being managed effectively and objectives are being delivered.

The primary focus is confidence that effective processes are in place to deliver the strategic objectives of the Trust. This allows Boards to determine where to make efficient use of their resources and address the issues identified in order to improve the quality and safety of care.

Where any significant gaps in assurance are identified they are transferred to the risk register and an action plan is developed.

6.8.3 Project Risk Register

A risk management framework will be formulated to provide a comprehensive risk assessment and control framework for the project. This will focus on:

- ▶ The risks appertaining to developing the OBC for submission.
- ▶ The risks associated with the delivery of the options for schemes being developed – this will need to be used in the evaluation of the various design options and tested against the benefits defined for the Scheme
- ▶ Risk that is highlighted from the individual work stream committees and presented at the Project Board meeting

The reporting will follow the PRINCE2 process of checkpoint, highlight and exception reports. The condition will be indicated by using red, amber or green (RAG) colour code as outlined below.

Table 6.7 Risk Register Colour Code

Score	Probability	Impact
5	Almost certain	Severe
4	Likely	Major
3	Possible	Moderate
2	Unlikely	Minor
1	Rare	None

Score	RAG Status	Definition
15-20	R	Corrective action urgently required
7-14	A	Condition requires corrective action which has been implemented
6 or less	G	Condition is on programme or within budget no special action is required

The comprehensive risk register for the project will be monitored by the project manager, and reported monthly to the Project Board. The detailed risk register for this project, for each short listed option, is outlined in Appendix 12b. Additional Risks are also highlighted within Appendix 13 and 14. The focus of risk management will address broadly:

- ▶ Non-delivery of project outcomes as defined in stages of the project plan (the Board will manage business risks)
- ▶ Threats to the completion of the project within cost and time (managed on a day-to-day basis by the Programme Manager)

The initial key risks to the delivery of the project are shown in Table 6.8 below:

Table 6.8 Key Delivery Risks

Risk		Mitigation	
Approval Risk The proposals do not receive the approval of the board, the planning authority and/or NTDA resulting in abortive costs	5x2	The risk is mitigated by fixed consultancy fees up to planning approval stage that are already budgeted for in the current Capital Programme	5x1
Affordability Risk The Trust cannot afford the proposed proposals, resulting in abortive cost	5x3	This risk is mitigated by an assessment of affordability as part of the business case process and costs in the business case that will be competitively tendered through the P21+ framework	5x1
Programme Risk The proposals delay the redevelopment plans, resulting in abortive cost and failure to meet strategic objectives	4x4	This risk is mitigated by the delivery of the emergency care project being programmed as part of the redevelopment governance structure. P21+ framework will be utilised	4x1
Design Risk Design does not deliver the required specification resulting in failure to meet the project objectives and delayed changes impacts on phasing of work and abortive costs relating to planning and implementation	4x2	The risk is mitigated by design flexibility and early involvement of external expert design and technical consultants. P21+ provides contractual responsibilities by supply chain partners	4x1
Clinical Risk Interruption to service provision within clinical areas during phase implementation and set up of new capacity requirements	4x5	Early involvement and consultation with clinical users and detailed programme planning at all phases	4x2

Risk		Mitigation
Procurement Risk Contractor complications and escalating costs	4x2	This risk is mitigated by a detailed commercial case, detailed and specific contract arrangements in place
		3x2

6.9 Outline Arrangements for Post Project Evaluation

The outline arrangements for post Project Evaluation (PPE) have been established in accordance with best practice. The trust will ensure that a thorough post-project evaluation is undertaken at key stages in the process to ensure that positive lessons can be learnt from the project. These will be of benefit to:

- ▶ The Trust – in using this knowledge for future capital schemes
- ▶ Other key local stakeholders – to inform their approaches to future projects
- ▶ The NHS more widely – to test whether the policies and procedures used in this procurement have been used effectively
- ▶ Contractors – to understand the healthcare environment better

The evaluation will examine the following elements, where applicable at each stage:

- ▶ The effectiveness of the project management of the scheme – viewed internally and externally
- ▶ The quality of the documentation prepared by the Trust for the contractors and suppliers
- ▶ Communications and involvement during procurement
- ▶ The effectiveness of advisers utilised on the scheme
- ▶ The efficacy of NHS guidance in delivery the scheme
- ▶ Perceptions of advice, guidance and support from the strategic health authority and NHS Estates in progressing the scheme

Formal post project evaluation reports will be compiled by project staff, and reported to the Board to ensure compliance to stated objectives.

6.9.1 Post Implementation Review (PIR)

These reviews ascertain whether the anticipated benefits have been delivered and are timed to take place immediately after the new emergency care unit opens and then 2 years later to consider the benefits planned.

6.10 Gateway Review Arrangements

A Gateway 1 / 2 Review will be booked when the Trust Board has approved this OBC.

6.11 Contingency Plans

The Trust has a framework for Business/Service Continuity. In this instance, the Emergency Care Directorate ensures that the Trust's emergency care service contingency plans are in place for the event of any disruption.

The Trust's framework ensures the Trust can comply with the business continuity provisions of the Civil Contingencies Act 2004. Contingency plans have been developed to ensure the Trust can continue to deliver an acceptable level of service of its critical activities in the event of any disruption.

In the event that this project fails and the ED is not re-developed, the Trust will continue to implement and realise the benefits of its current Emergency Care action plan. The Trust will implement the Do Minimum albeit limiting in achieving capacity requirements and efficiencies, however it will enable a continuation of Emergency services within its existing facility.

In terms of financial contingency, Section 5 highlights a planning Contingency of 5% of the total costs, including fees and equipment, for short listed options.

Signed:

Senior Responsible Owner

Date:

Appendices

Appendices are attached as separate documents and consist of the following:

Appendix 1a	Letter re ECIST review- Visit 25 March 2013
Appendix 1b	Emergency Care Action Plan
Appendix 1c	Detailed Strategic Case Guiding strategies
Appendix 2	CQC Intelligence Monitoring Report October 2013
Appendix 3a	Model of care
Appendix 3b	Activity and Capacity Workings
Appendix 3c	LRI ED Design Operational Policy v0 1131014
Appendix 3d	Schedule of Accommodation
Appendix 3e 2013	UHL NHS Trust Emergency Care 4hr performance trajectory
Appendix 4	Development Control Plan
Appendix 5a	Phasing of Options
Appendix 5b	1.500 drawing 1A Balmoral
Appendix 5c	1.500 drawing 2C Jarvis
Appendix 5d	1.500 drawing 3A Victoria
Appendix	Economic Appraisal
Appendix 7	Non financial Appraisal Workshops
Appendix 8a	OBC Form Option 1A Balmoral (Including Decant)
Appendix 8b	OBC Form Option 2C Jarvis (Including Decant)
Appendix 8c	OBC Option 3A Victoria (Including Decant)
Appendix 8d	Assumptions & Exclusions Option 1A Balmoral - Nov 2013
Appendix 8e	Assumptions & Exclusions Option 2C Jarvis - Nov 2013
Appendix 8f	Assumptions & Exclusions Option 3A Victoria - Nov 2013
Appendix 9a	GEM Modelling
Appendix 9b	Optimism Bias Calculations Option 1A
Appendix 9c	Optimism Bias Calculations Option 2C
Appendix 9d	Optimism Bias Calculations Option 3A
Appendix 10	LRI Planning Input to OBC
Appendix 11	Benefits Realisation Plan
Appendix 12a	ED Risks on Trust Risk Register
Appendix 12b	Short Listed Options Risk register
Appendix 12c	Risk Management Policy

Appendix 13	LRI ED Short List Options MEP Appraisal Report
Appendix 14	LRI ED Structural Options Appraisal
Appendix 15	Technical Team non financial appraisal October 2013
Appendix 16	Decant Works LRI ED programme
Appendix 17	CCG supporting Documentation
Appendix 18	Opt 1A, 2C, 3A - Sidecast for Fees, NW & Other
Appendix 19	Project Initiation Document