

**Borders NHS Board**



**NHS Lothian – Full Business Case for the Reprovision of the Department of Clinical Neuroscience and Royal Hospital for Sick Children**

**Aim**

The aim of this paper is to provide members with an update on the business case for the reprovision of the Department of Clinical Neuroscience and the Royal Hospital for Sick Children. The paper also seeks support for NHS Borders financial contribution and continued engagement through SEAT to this business case.

**Background**

For a number of years NHS Lothian has been working on business cases for the reprovision of DCN, as well as for the Royal Hospital for Sick Children (RHSC) Edinburgh. The aim has been to provide new, fit for purpose facilities in which to deliver high quality and modern clinical services.

**Outline Business Case (OBC) – draft December 2011**

In December 2011 NHS Lothian produced a combined OBC for the reprovision of both the Royal Hospital for Sick Children (RHSC) and the Department of Clinical Neurosciences (DCN) at the Royal Infirmary Edinburgh, Little France. This was one of the first projects to be funded through the Non Profit Distributing (NPD) revenue funded model, meaning that capital contributions were not required from partner Boards.

The following extracts from the OBC provide the key elements of the project:

*“The preferred option is a new hospital for children and young people, integrating the department of clinical neurosciences into the same new build, on car park B at Little France. The facility will stand-alone in terms of infrastructure and facilities management, with its own energy centre and goods delivery yard. It will link in to the Royal Infirmary Edinburgh (RIE) at ground and first floor to ensure clinical functionality, particularly in the interfaces between emergency departments, theatres and critical care on site. It will have a helipad on the roof to provide emergency access to all adult and paediatric specialties on site.*

*Services for children and young people and for adult neuroscience patients will meet national aims and ambitions laid out in the:*

- *2010 NHSScotland Quality Strategy;*
- *National policy to have two paediatric intensive care units in Scotland;*
- *Stated aims to deliver neurosurgery on the same site as an Emergency Department;*
- *Stated aims to deliver adult and paediatric neurosurgery on the same hospital site.*

*The preferred site for RHSC and DCN is at Little France, alongside the existing RIE which is provided via a private finance initiative (PFI) contract with Consort Healthcare (ERI) Ltd”*

## **Full Business Case (FBC) - June 2014**

Since 2012 NHS Lothian has linked with partner Boards through the regional SEAT Directors of Finance (DoFs) and Directors of Planning (DoPs) group, which includes membership of NHS Borders. Progress with the development of the business plans for RHSC and DCN have been presented at meetings of the DoFs/DoPs, as well as to the full SEAT group which includes Board chief executive membership.

Appendix 1 provides a summary from NHS Lothian of the FBC costs for the reprovision of RHSC and DCN, adjusted to remove Lothian-only service costs,. The paper includes information on regional partnership working to date, and proposals for continued joint working under the auspices of SEAT.

## **Key issues NHS Borders**

- NHS Borders officers have been involved in the partnership working and scrutiny of the FBC proposals
- NHS Lothian propose that the FBC costs be split using the current methodology for cross charging the East coast costing model (ECCM. The apportionment is therefore based – on the Board’s Activity x Average cost per case x Case mix complexity index).
- The ECCM approach ensures that NHS Borders (and other Boards) are only charged for the activity associated with residents, and will not cover costs associated with internal Lothian service redesign, population growth, etc.
- The present projected revenue gap for the whole project is estimated as being £15.4 million (indicative for 2017/18).
- NHS Borders had activity that amounted to 5.4% of the shared costs in the OBC however the most recent activity used for ECCM shows Borders at 4% in the FBC
- As detailed in the FBC the present estimate for NHS Borders share is an **additional £616k** revenue cost, from 2017

It should be noted that the basis of the present FBC is in line with the recommendations previously agreed i.e. ‘that no capital contribution is required and that any future additional revenue be limited to that agreed through the East Coast Costing Model’.

Given the above, and the positive regional scrutiny meetings and discussions with NHS Lothian, the assessment is that the FBC should be approved in principle, with further joint discussions, patient pathway review and scrutiny undertaken under the auspices of SEAT.

NHS Lothian required partner Boards to provide written support in principle by the 16<sup>th</sup> June. . Following a detailed discussion at the Financial Position Oversight Group this was actioned within the required timescales subject to Board approval.

## **Summary**

In December 2011 NHS Lothian produced an outline business case (OBC) for the reprovision of the Royal Hospital for Sick Children (RHSC) and the Department of Clinical Neurosciences (DCN), moving to the site of the new Royal Infirmary Edinburgh at Little France.

NHS Lothian is now finalising the Full Business Case (FBC) paper. Since the OBC the additional revenue cost has increased in the main due to changes in the clinical model including the implementation of single bedded rooms. Appendix 1 summarises these costs and the partnership working undertaken to support and scrutinise the reprovision model and financial consequences. The approach has been endorsed by the regional planning group, SEAT (South East and Tayside regional planning group). This work will continue.

NHS Lothian is seeking written support from partner Boards, to enable it to submit the FBC to the Scottish Government in July.

## Recommendation

The Board is asked to:

- **Note** that NHS Lothian is finalising a full business case (FBC) for the reprovision of the Royal Hospital for Sick Children (RHSC) and the Department of Clinical Neurosciences (DCN) at Little France, summarised in Appendix 1;
- **Note** that no capital funding contribution is required from NHS Borders ;
- **Note** the proposal that all Boards contribute proportionately to funding the revenue gap, based on the accepted East Coast Costing Model (ECCM);
- **Agree** that NHS Borders confirm to NHS Lothian that the Board formally give support for the FBC, as set out in Appendix 1;
- **Approve** the financial support for this development from 2017 onwards (estimated at £616k pa maximum) and note the ongoing scrutiny of the financial implications.

<b>Policy/Strategy Implications</b>	In line with national Quality Strategy Supports regional working and patient pathways, between secondary and tertiary care. Supports improvement against Neurology Health Improvement Scotland standards.
<b>Consultation</b>	Through SEAT
<b>Consultation with Professional Committees</b>	See above
<b>Risk Assessment</b>	See paper – financial risks to be included in future financial plans.
<b>Compliance with Board Policy requirements on Equality and Diversity</b>	NHS Lothian undertook Equality and Diversity Impact Assessments (EQIA) for RHSC and DCN projects in 2008 and 2009 respectively.
<b>Resource/Staffing Implications</b>	None locally

## Approved by

<b>Name</b>	<b>Designation</b>	<b>Name</b>	<b>Designation</b>
Calum Campbell	Chief Executive	Carol Gillie	Director of Finance

**Author(s)**

<b>Name</b>	<b>Designation</b>	<b>Name</b>	<b>Designation</b>
Stephanie Errington	Head of Planning and Performance		

# Appendix 1

## NHS Lothian Full Business Case Costs for the Reprovision of RHSC and DCN

### 1 Purpose of the Report

- 1.1 The purpose of this report is to invite the Group to support the full business case (FBC) for the Royal Hospital for Sick Children and Department of Clinical Neurosciences at Little France, including the related revenue costs.

### 2 Recommendations

Each NHS Board is invited to:

- 2.1 approve the methodology proposed for the split of Full Business Case costs, based on activity, across the NHS Boards;
- 2.2 agree to support their share of the NPD annual service payment;
- 2.3 to commit in principle to their share of the related operational costs, and
- 2.4 to commit to continue working with NHS Lothian to agree the implementation of service capacity and changes, and the related workforce requirement.

### 3 Summary of the Issues

- 3.1 In January 2012 the outline business case (OBC) was supported in principle by the principal NHS boards that send patients to Lothian for paediatric and neurosciences tertiary care. The split of costs was proportionate to the usage of RHSC and DCN services, based on East coast costing model (ECCM) methodology.

#### Activity distribution

- 3.2 Table 1 shows the proposed percentage share of costs to be divided between NHS Boards after Scottish Government contributions. The OBC cost split has been updated based on the most recent full year of activity for the FBC.

NHS Board	OBC cost split (based on 2010/11 activity)	FBC cost split (based on 2012/13 activity)	Change
Lothian	70.0%	<b>71.6%</b>	1.60%
Fife	9.6%	<b>11.4%</b>	1.80%
Forth Valley	5.6%	<b>4.9%</b>	-0.70%
Borders	5.4%	<b>4.0%</b>	-1.40%
Dumfries and Galloway	3.4%	<b>2.6%</b>	-0.80%
Tayside	2.3%	<b>2.3%</b>	0.00%
Others	3.8%	<b>3.2%</b>	-0.60%

Table 1: Percentage split of activity by Board

#### Annual service payment

- 3.3 Under the rules for revenue funded projects a payment is made to the private sector for the services it provides. This payment is referred to as an annual service payment (ASP) and has 5 separate components as detailed in table 2 below:

Component of ASP	Description
------------------	-------------

1. Facilities management (hard FM)	Cost of maintaining the building
2. Lifecycle	Replacement cost of major equipment during the life of the project, for example replacing boilers and lifts
3. Interest	Finance cost associated with borrowing
4. Debt repayment	Repayment of the original capital cost. This includes any financing cost such as arrangement and debt monitoring fee.
5. Special purpose vehicle	Administering, insuring, debt monitoring fee and running costs of the SPV

**Table 2: Components of the annual service payment**

- 3.4 As part of the competitive dialogue process, the preferred bidder supplied a financial model which projected the annual service payment over the life of the building. The total charge, based on the current financial model is £19.0 million. The majority will be met centrally by SGHSCD, the balance of £2,335k will be funded by NHS Lothian and partners. This equates to 50% of lifecycle costs. These numbers remain indicative until financial close is achieved.

### Facilities Management Costs

- 3.5 Elements of ongoing running costs will be covered by the annual service payment, whilst other services such as soft facilities management and utilities will be provided by NHS Lothian.
- 3.6 For the OBC, existing soft FM services within NHS Lothian and other available benchmarks were used to provide indicative costs for the facilities management services to be provided directly by NHS Lothian.
- 3.7 This approach was refined in July 2012 when the facilities management work stream commenced planning the future services workforce needs. This involved:
- establishing the workforce baseline and budget for each facilities management area (domestic, estates, materials management, logistics and catering services);
  - identifying the future workforce needs;
  - critically examining the rationale for any proposed change;
  - estimating overheads associated with the service; and
  - exploring opportunities for re-design of service delivery and roles.
- 3.8 Estimated costs compared to those presented in the OBC are shown in table 3 below:

	OBC	FBC	Difference
	£k	£k	£k
Soft FM			
<i>Domestics Services</i>	1,593	2,363	(770)
<i>Catering Services</i>	493	410	83
<i>Logistics</i>	567	1,072	(505)
<i>Rooftop helipad</i>		284	
<i>Estates &amp; materials management</i>	137	267	(130)
Sub total soft FM	2,790	4,396	(1,606)
Energy	1,052	1,300	(248)
Rates	1,067	1,000	67
Other	51	221	(170)
Off-setting budgets	(2,463)	(3,936)	1,473

<b>Total</b>	<b>2,498</b>	<b>2,981</b>	<b>483</b>
--------------	--------------	--------------	------------

**Table 3: FM cost movement from OBC**

- 3.9 The increased workforce costs for the rooftop helipad were not captured in the OBC. Around 400 transfers per year are anticipated and NHS Lothian is required to provide safety and fire-fighting cover for these landings.
- 3.10 The FBC costs are based on the assumptions for soft FM summarised in Table 4.

<b>Service</b>	<b>Assumption</b>
Domestics	Costs are based on national cleaning specifications and are driven by a 50% increase in floor area and 50% increase in sanitary ware given the number of single rooms and compliance with HEI and other standards
Catering	Cook freeze with regeneration on site at kitchen or ward level; staff/public catering outlets must break even.
Logistics	Staff numbers based on increased activity for additional beds, increased age range, transfers to and from RIE, larger building, 24 hour security presence for RHSC.
Rooftop helipad	24/7 access in favourable weather conditions; approximately 400 transfers to Little France per year. Costs are based on management and fire-fighting capability provided by band 2 staff as in other hospitals.
Estates	The majority of hard FM will transfer to Project Co; NHS Lothian will be responsible for redecoration, soft landscape and pest control.
Materials management	Top-up service for all clinical departments.

**Table 4: FM planning assumptions**

### **Clinical Service Costs**

#### **3.11 Capacity planning**

- 3.11.1 The OBC capacity plans for beds, theatre and imaging were all based on externally commissioned modelling carried out by Capita which projected activity and capacity based on GRO projections, the known model of care, known service changes and improved performance to top 25% as compared to the peer group.
- 3.11.2 These plans are reviewed annually and the re-validated model has been included in discussions with NHS Borders, Dumfries and Galloway, Fife, Forth Valley and Tayside through SEAT meetings. Work is underway to review current activity against these projections again, and also to recalculate the performance benchmarking. It is proposed to continue this with the working group established through SEAT, and to report annually to SEAT on the updated capacity and financial plans.

#### **3.12 Model of Care**

- 3.12.1 The key principles underpinning the model of care, and activity impacting on workforce costs, assume:
- a separation between scheduled and unscheduled care
  - rapid assessment treatment of unscheduled care patients
  - rapid access to diagnostics
  - an increase in single rooms for infection control
  - sufficient capacity to address access times
  - timely repatriation to local health board services
  - nursing establishments based on a national professional judgement tool.

3.12.2 The benefits to NHS Lothian and its partner Boards to deliver national strategy and improved services through the model of care include, but are not limited to, the following:

<b>Benefit</b>	<b>Description</b>
Helipad	The current helipad cannot facilitate emergencies out with daylight hours. This rooftop facility supports the national aim to provide 4 national trauma centres. The move to a rooftop one will support improved clinical outcomes through reduced transfer times and reduced handling leading to more rapid treatment for critically ill patients. New evidence of the benefits to clinical outcomes is due to be published shortly. Around 400 transfers per year are anticipated with the majority being from outside Lothian where distance indicates that air transfer is preferable to road ambulance.
Increased % of single rooms	Scottish Patient Safety Initiative (SPSP) -enhances patient recovery through fewer disturbances overnight by noise in ward area aiding sleep and aids infection control and out break control.
Additional theatre sessions	Provides additional capacity for activity from increased age range and supports delivery of access targets
Additional imaging capacity	Provides additional capacity for activity from increased age range and supports delivery of access targets. Enhances speed of assessment for unscheduled patients.
Additional Emergency Department capacity	Transfer of 13-16 year olds from RIE ED to age-appropriate services in RHSC in line with national policy, and providing capacity in RIE to maintain 4 hour access targets.
Transitional care beds	Dedicated unit to support skills transfer from hospital to community and frees up PICU bed capacity.
Adult critical care capacity	Creation of additional critical care bed, upgrading of all 42 spaces to flex to level 3 care and creation of two isolation cubicles to support current high occupancy leading to potential infection control issues.
Adult renal and transplant HDU capacity	Frees up space to allow DCN critical care patients to be cared for in RIE critical care unit. Provides additional HDU capacity in support of the donation and Transplantation plan for Scotland which aims to increase the transplantation rate from 65.8 to 74 per million by 2020.
DCN acute area	Dedicated assessment and admissions area for patients referred from other hospitals and Boards. Rapid treatment of stroke patients supporting the stroke strategy for Scotland.

**Table 5: RHSC and DCN service model benefits**

3.12.3 The following changes to the clinical model have been agreed since OBC and are incorporated into the building design and service model described by the FBC:

*Theatres:* the OBC specified a need for eight operating theatres and one minor procedures theatre. Further review of the service model and projected activity in both paediatrics and neurosurgery resulted in a change of scope and the proposed minor procedures and anaesthetic procedures rooms are now full theatres to provide more capacity and flexibility. Ten operating theatres are costed in the FBC.

*Four-bedded rooms in DCN:* where the OBC had 100% single rooms in DCN, the Chief Medical Officer has agreed to a derogation for 8 beds to be provided in two shared 4 bed areas for reasons of clinical safety and observation.

### 3.13 Partnership working



3.13.1 The 2012 OBC explicitly excluded additional clinical staffing for the building, stating that this required to be addressed through normal financial planning. Since then, detailed work has been carried out to identify the staffing required to deliver to the service model, firstly by NHS Lothian, and then with the support and scrutiny of NHS Borders, Dumfries and Galloway, Tayside, Fife and Forth Valley through SEAT. All Boards, including Lothian, are required to support these to sign-off the FBC.

3.13.2 The Boards have worked together to approve the workforce planning principles and to date have agreed in principle workforce costs to open the modelled capacity required in 2017. However, there is a concern that some of these costs are already being incurred through extended working days and further work is required to assess this.

### 3.14 Revenue gap

3.14.1 Table 6 outlines the financial impact of the agreed OBC model. The service changes listed here are all adjusted to remove the NHS Lothian-only service costs, therefore are in relation to all NHS Boards.

Service area	Planning assumptions	Gap
Impact of single rooms	Nursing establishment using national tools to care for an increased number of patients in single rooms. <i>These costs have been separated from other bed costs below to avoid double-counting.</i> a) 59% of RHSC beds will be in single rooms. b) The OBC assumption that 100% of DCN beds would be in single rooms has been revised downwards to 88% following approval from the CMO on clinical safety grounds.	£701k
DCN beds	Based on externally validated capacity modelling, opening 62 beds for requirements in 2017. This includes move of two acute stroke and four spinal beds surgery from current RIE. A further spinal surgery bed will be funded through NSD. The net increase after these budgets have transferred is for one bed.	£100k
DCN and RIE critical care	Based on externally validated capacity modelling, introducing DCN ITU and HDU into the RIE department. The net increase is two Level 3 (ICU) beds for neurosciences and a further Level 3 bed to address current over-occupancy in the RIE critical care.	£861k
DCN theatres	Opening four theatres, with the capacity to provide a total of 49 sessions in order to meet access targets, bring current out of hours work into daytime sessions, and protect CEPD capacity. E.g. 150 patients were operated on overnight in 2013. There are 30 funded sessions at present across DCN, RHSC neurosurgery and RIE orthopaedics spinal surgery to go into the new DCN theatres, leaving a gap of up to 19 sessions.	£945k
Imaging	a) Based on externally validated capacity modelling opening 2 MRI scanners to meet increase in demand and access times in DCN. There is funding for one currently. b) Intra-operative MRI in neurosurgery (DCN and RHSC) for two sessions a week. c) Based on externally validated capacity modelling additional equipment for theatres, wards and clinics, and long working days for planned three-session outpatient clinic days.	£806k
RHSC Emergency Department	Increased age range to include 13-16 year olds currently attending the RIE ED: 6,000 additional patients per year, 16 patients per day. This is a 10.5% increase in RHSC activity, with	£227k

	a corresponding 4% decrease in RIE ED activity and workforce costs cannot directly transfer.	
RHSC beds	Based on externally validated capacity modelling, opening 161 beds for requirements in 2017. Gap of 20 beds funded including: a) increase in two inpatient and three daycase beds for oncology to reflect increasing demand and complexity of treatment regimes. b) based on national capacity modelling, an additional 6 HDU beds c) establishing four transitional care beds for respiratory patients with complex needs for transition to home care packages d) increase in medical beds and capacity modelling at occupancy of 82% for inpatient wards, incorporating flexible use of beds to smooth peaks in activity	£2,227k
RHSC Theatres	Opening six theatres, based on externally validated modelling to meet access targets, bring current out of hours work into daytime sessions, and protect CEPOD capacity.	£367
<b>Total workforce gap for shared clinical services</b>		<b>£6,235k</b>

**Table 6: Total workforce gap for shared clinical services**

### 3.15 Equipment revenue costs

- 3.15.1 Estimated additional revenue costs for equipment developments currently amount to circa £4.6 million. This is based on all the equipment requiring replaced being fully depreciated and no maintenance contracts being in place. This requires further testing.

<b>Equipment costs</b>	<b>£k</b>
Equipment running costs	602
MRI running costs for additional scanner	187
Intra-operative MRI running costs (consumables for 2 sessions)	178
Depreciation	3,640
<b>Total</b>	<b>4,606</b>

**Table 7: Summary of equipment costs**

- 3.15.2 Equipment developments (excluding those relating to previously agreed developments such as additional theatres, imaging and critical care equipment) are currently being tested alongside the design development process to ensure they are justified.

## 4 **Conclusion and next steps**

- 4.1 The costs presented in the FBC, in comparison with the OBC are summarised below:

	<b>OBC £k</b>	<b>FBC £k</b>	<b>Difference £k</b>
Annual service payment	2,352	2,335	17
Facilities costs	4,961	6,917	(1,956)
<b>Sub total</b>	<b>7,313</b>	<b>9,252</b>	<b>(1,939)</b>
Offsetting budgets	(3,294)	(4,685)	1,391

<b>Net position before clinical services</b>	<b>4,019</b>	<b>4,567</b>	<b>(548)</b>
Clinical workforce		6,235	(6,235)
Other clinical service costs	4,308	4,606	(299)
<b>Grand total</b>	<b>8,326</b>	<b>15,409</b>	<b>(7,082)</b>

**Table 7: Summary costs and gap for FBC**

- 4.2 Using the activity split in Table 1, Table 7 shows the allocation of FBC revenue costs for regional services, assuming all capacity identified in the bed model is commissioned in 2017, by NHS Board.

<b>Board</b>	<b>Share</b>	<b>£k</b>
Lothian	71.6%	11,033
Fife	11.4%	1,757
Forth Valley	4.9%	755
Borders	4.0%	616
Dumfries & Galloway	2.6%	401
Tayside	2.3%	354
Other	3.2%	493
<b>Total</b>	<b>100%</b>	<b>15,409</b>

**Table 8: FBC costs by NHS Board**

- 4.3 Support from partner boards to scrutinise and test the workforce costs has been invaluable in getting to this position. All Boards, including Lothian, are required to support these to sign-off the FBC.
- 4.4 It is proposed that Boards agree in principle to the requirement for increased clinical service costs in certain areas, such as the delivery of national policy through single rooms, the helipad and bed model increases as were approved in the OBC.
- 4.5 It is proposed that the cross-board group continues to work to refine and agree the remaining operational costs to deliver the service model described. This cross-board working group would factor in the annual review of capacity models and population projections, and related financial planning implications.
- 4.6 The group could explore further options to phase implementation beyond May 2017 and make recommendations based on cost and benefits via SEAT. Examples for consideration include, but are not limited to,
- Phased commissioning of the helipad – delayed start date and/or limited operational hours (annual revenue £284k)
  - Phased additional beds / theatre / imaging capacity, balanced with impact on access times
- 4.7 It is proposed that SEAT continue to support the process by receiving an annual update on the comparison of the actual activity against the projected bed and capacity model for the project, and the associated revenue costs.
- 4.8 It is further proposed that other boards participate in the quarterly Service Redesign Board for the project. NHS Borders Nurse Director has agreed to sit on the Service Redesign Board, and a nomination is awaited from NHS Fife.

## **5 Resource Implications**

5.1 The resource implications are shown in full in the FBC, with items for consideration of each NHS Board highlighted in this paper.

Sorrel Cosens  
Project Manager

Moira Pringle  
Head of Property and Asset  
Management Finance

Jackie Sansbury  
Head of Commissioning  
and Service Redesign

22 May 2014