Oxford University Hospitals NHS
NHS Trust

Trust Board Meeting: Wednesday 8th July 2015

TB2015.90

Title	Full Business Case for Redevelopment of the Horton Endoscopy Unit

Status	For approval	
History	March 2012	Original SOC to TME (SPC2012.054)
	May 2013	Feasibility study received and discussed
	Sept 2013	Revaluation of options with Estates
	05/03/2014	PID to Business Planning Group
	23/04/2014	Revised SOC to Surgery and Oncology Divisional Management Executive meeting
	29/04/2014	2nd PID to Business Planning Group
	13/05/2014	3rd PID to Business Planning Group
	11/12/2014	Briefing paper to TME- professional fees approved (TME2014.320)
	25/06/2015	Trust Management Executive

Board Lead(s)	Mr Paul Brennan, Director of Clinical Services			
Key purpose	**Strategy**	**Assurance**	Policy	Performance

Executive Summary

1. The Horton Endoscopy Unit provides 17 endoscopy sessions per week, and one session each of bronchoscopy, flexible cystoscopy and colposcopy. The two key issues needing to be addressed with the Horton Endoscopy Unit concern its same sex policy compliance and sub-optimal decontamination facilities. Failure to address same sex compliance means the service is in breach of national policy and guidance for which it risks incurring financial penalties. In the short term the suboptimal decontamination facilities risk the service having to close down - as happened in October 2014 - which risks breach of patient waiting time standards and the associated political and financial consequences. The medium term risk is that these facilities are not compliant with Joint Advisory Group on GI Endoscopy (JAG) or Trust infection control guidelines.

2. The Unit was inspected by JAG, the national quality assurance body for Endoscopy, on 4th March 2015. Accreditation was deferred for six months and will not be reinstated until or unless the plans outlined in this business case have been implemented. If this does not take place this will result in the endoscopy service at the Horton being downgraded, lead to a loss of best practice tariff equating to £80k per year; removal of Bowel Screening from the Horton site, and the potential reduction of up to £120k pa.in the planned Bowel Scope Screening income. There would also be a risk of losing Bowel Screening work and its income, of around £400k planned for the Horton, to an alternative provider.

3. Initial plans to redevelop the Unit to address the above issues were calculated to cost £4.1m. However, on further discussion with JAG another solution has been developed- using a pod-based system in recovery to achieve single sex compliance. The pod-based system would mean that that instead of separate male and female recovery areas, one recovery area would contain “pods”- a bed space contained within three walls and a curtain. This has been successfully introduced by other providers. It would mean that the above issues can be addressed with a redevelopment of £2.36m.

4. The service is therefore recommending that the Trust adopt this latter option. This would mean that the Unit would retain JAG accreditation and Bowel Screening and that the anticipated loss of income is avoided. Additionally it would position the service strategically to meet expected competition from other private providers and thus protect and increase the positive contribution it currently makes to Trust finances. Finally it will ensure that the Endoscopy service continues to provide the same level of service to all the county’s population and offer the same level of access to the population in the north of the county, in particular to the national bowel screening programme.

5. **Recommendation**

   The Trust Board is asked to approve
   - capital funding of £2.36m, plus
   - £310k to relocate the service to Oxford for the works period, during which time it is proposed that provision will be made for the transport of patients from the Horton to Oxford for planned endoscopy; and
   - additional revenue funding of £47k p.a. for future additional maintenance costs.

Full Business Case for Redevelopment of the Horton Endoscopy Unit

Appendices	Appendix A Cost of Off-site Endoscope Decontamination Appendix B Equipment and Maintenance Costs Estimate Appendix C: Relocation Costs Appendix D: Analysis of how to provide service during redevelopment Appendix E: Financial Pro Forma Appendix F: Capital and Depreciation Appendix G: Construction Cost Estimate Appendix H: Equality Analysis Form
Background papers (if any)	Previous Briefing paper to TME (TME2014.320)
Action/decision requested from Trust Board	Approval of £2.36m capital funding for redevelopment of the Horton Endoscopy Unit, plus £310k to relocate the service to Oxford during the works period and £47k p.a. revenue funding for future additional maintenance costs.
Strategic Objective(s) that the case will help deliver	SO1: "delivering compassionate excellence" (improving patient privacy and dignity through same sex policy compliance; and maintaining local access to bowel screening programmes for the population in the north of the county) SO2: "well governed and adaptable" (ensuring Trust is complaint with national same sex guidance)
Proposed date that revenue spend will begin:	01/09/2015
Proposed date that capital spend will begin:	01/09/2015
Conclusion of Equality Analysis	Business case will ensure equality of access to bowel screening is maintained for patients in the north of the county
Review Date	01/09/2016
Acronyms and abbreviations used	2WW Two Week Wait AER Automated Endoscope Reprocessor BCSP Bowel Cancer Screening Programme CQC Care Quality Commission FOBt Faecal Occult Blood test

	JAG Joint Advisory Group for Gastrointestinal Endoscopy LAT Local Area Team (for commissioning Bowel Cancer Screening Programme) QA Quality Assurance (for National BCSP Programme) TSSU Theatre Sterile Services Unit
Author (s)	Dr Satish Keshav, Clinical Director, Gastroenterology, Endoscopy and Churchill Theatres Dr James East, Director Bowel Cancer Screening Programme and Clinical Lead, JR Endoscopy Dr Jonathan Marshall, Clinical Lead, Horton Endoscopy Ben Wright, OSM, Gastroenterology, Endoscopy and Churchill Theatres Directorate Julia Wood, Matron, Gastroenterology, Endoscopy and Churchill Theatres Directorate
Lead Finance Manager	Rob Tovey, Senior Business Partner, Surgery and Oncology Division
Lead Estates Manager	Mark Bristow, Locum Estates Project Manager

1. Strategic Context and Case for Change

1.1. The Horton Endoscopy Unit comprises two Endoscopy rooms, a nine bedded recovery ward and decontamination Unit. It provides 17 endoscopy sessions per week, and one session each of bronchoscopy, flexible cystoscopy and colposcopy. In 2014 it undertook 4,095 endoscopy procedures (excluding bronchoscopy, flexible cystoscopy and colposcopy). The main issues needing to be addressed are as follows:

Same Sex Compliance

1.2. Same sex compliance is currently maintained through the use of temporary screens. The Unit needs to demonstrate full same sex compliance as detailed in the NHS Constitution (2009) and Department of Health Delivering Same Sex Accommodation (DSSA) policy and guidance (2009, 2010). This is in line with the Trust Delivering Same Sex Accommodation Policy (CGC2013.236). A permanent solution for same sex accommodation is also required for receiving JAG accreditation.

Pass through decontamination washers

1.3. The Unit's decontamination washers need to be replaced. The existing washers were both condemned in March 2015 having significantly exceeded their expected period of service. The resultant service disruption to patients - 79 patients had their procedures rearranged while alternative interim arrangements were made - underlined the importance of having reliable washers. Currently the unit has two second-hand washers on loan as a like for like replacement until a permanent resolution is agreed.

1.4. The loaned washers are top loading washers for decontamination of endoscopes. This is not compliant with Joint Advisory Group (JAG) or Trust infection control guidelines. The former is absolute in its stipulations, the latter (following latest guidance CFPP 01-06) states that non-pass through washers can only be used in smaller units. Smaller units are defined as those where there are less than 2,000 procedures per year. As Horton endoscopy conducts in excess of 4,000 procedures per year the Unit currently does not comply with infection control guidance. Therefore the current top loading washers would need to be replaced by pass through decontamination washers. The capital cost of these is marginally more than top loading washers but, crucially, these would require a larger decontamination room.

JAG accreditation

1.5. Both of the above drivers are also stipulations for receiving JAG accreditation. Both the JR and Horton sites received accreditation visits on 4th March 2015. The JR site received accreditation but the Horton did not. The Horton's accreditation has been deferred for six months and it will not receive reaccreditation until a solution to non-compliance with JAG's same sex and decontamination standards is implemented.

Patient experience

1.6. Currently there is one admission room and therefore a bay is used as an ad hoc admission room, which is co-located with patients recovering from their procedures. Therefore, patients waiting for their procedure, who may be anxious, are seated directly adjacent to the same recovery area. This sub-wait area is also near to the nurses' station, where confidential conversations take place.

Risks associated with current situation

Financial:

1.7. The financial risks are:

- Due to loss of JAG accreditation: loss of the best practice tariff at the Horton site. This equates to 5% of tariff, or £80K per annum. As endoscopy demand is growing at ten percent per year, this sum will increase year on year.
- Due to loss of JAG accreditation: reduction in Bowel Scope[1] income. It is predicted that 25% of the 8000 aged 55 screening population would choose to travel to Banbury rather than Oxford. Of these 2000 patients it is expected that half would accept an invitation to be screened. Based on evidence from breast screening studies, delivery of bowel scope at the JR only would lead to a 15% reduction in uptake in this population of 2000 (due to reluctance or inability to travel amongst certain socio-economic sections of the population). This would equate to 300 patients or a lost income of £120K per year.
- Due to loss of JAG accreditation: potential loss of all Bowel Scope and Bowel Screening income to alternative providers. As outlined above It is planned that 1000 patients would receive Bowel Scope screening at the Horton. Therefore the financial risk in lost income for Bowel Scope alone would be £400K per year (as the tariff for each procedure is £400). The Horton Bowel Cancer Screening block contract (screening of 60-74 year olds) is worth £227K per year
- Due to non-compliance with same sex guidance: should the status quo remain with temporary screens in recovery, there would be a risk of the Trust incurring financial penalties from commissioners for the patients passing through Endoscopy, due to lack of compliance with single sex requirements.

Replacement of the current washers with top loading washers would not be JAG or Infection Control compliant.

1.8. The regulation of decontamination has steadily increased in the last decade and it is probable that pass through decontamination - and the associated capital spend - would become a standard requirement in future years. It is therefore

[1] Bowel scope screening refers to a new programme whereby men and women will be invited around the time of their 55th birthday for an examination of their lower bowel using 'flexible sigmoidoscopy''. The aim is to find any small growths ('polyps'), which may develop into bowel cancer if left untreated. Bowel scope screening is an addition to the existing NHS Bowel Cancer Screening Programme (BCSP) which offers screening using the Faecal Occult Blood Test (FOBt) every two years to all men and women aged 60 to 74

likely that any new top-loading washer would need to be replaced by pass through washers before reaching the end of its expected life.

Effective downgrading of Horton Endoscopy Unit

1.9. JAG accreditation and the Global Rating Scale is the measure by which the CQC measures the quality of Endoscopy Units. Moving outside of the JAG process would by definition make the Horton a second tier unit.

Service would propose moving all Bowel Cancer Screening Programme (BCSP) patients to JR site

1.10. As all BCSPs are now commissioned by the Local Area Team (LAT) any movement of the service from the Horton would need to be agreed with them.

1.11. When questioned about this possibility, commissioners stated “we are keen that the OUH Trust does as much as possible to ensure that Bowel Scope and colonoscopy for FOBt positive [BCSP] patients is as accessible as possible for the whole eligible population in Oxfordshire. It is likely that individuals in the more vulnerable social groups in north Oxfordshire where uptake of screening is lower are the ones that would have most difficulty accessing services further away from their home should the service not be available at the Horton.”
Dr Christine Cook, Screening and Immunisation Manager (Thames Valley), NHS England Thames Valley Team.

1.12. The OX16 population (in a 2.5 mile radius of the Horton, 7-8% of Oxfordshire population) has the second lowest uptake for the BCSP currently of 53%. It is predicted that moving the whole BCSP to the JR could lead to a 15% reduction in uptake for this population, which is one of the most deprived populations in the county.

1.13. The Service would need to move some two week wait (2WW) or surveillance activity up to the Horton to allow for the additional capacity needed for the BCSP in Oxford. This would result in greater travel times for these patients also.

Service would propose to the National Bowel Screening Programme that Bowel Scope be delivered at the JR site only

1.14. Discussions with Public Health England have indicated that this may be possible, but again subject to agreement from the LAT. Should this be pursued, the service would not need to go through a formal process for change but would require written indication from the LAT that they supported this change.

1.15. All ten Bowel Scope sessions would be delivered on the JR site and, again, 2WW and surveillance work moved to the Horton to make capacity for this.

Reduced access and uptake for some patient groups

1.16. The option of flexing demand up to the Horton site has not been looked at in detail. On occasions when the service has needed to transfer patients between sites to meet wait times, the majority of patients have refused to move their appointment location.

1.17. It is therefore likely that the movement of some of the surveillance programme to the Horton site would reduce uptake for this cohort of patients, with potentially suboptimal outcomes as a result for patients who require interval cancer screening.

Altering Strategic direction of endoscopy service

1.18. The strength of Endoscopy at both the JR and Horton has meant that it has been difficult for other providers to enter the market in Oxfordshire.

1.19. The service is currently in a strong market position. The removal of JAG accreditation from the Horton would lead to a more level playing field for other providers. It would also provide competition for key endoscopists who are in demand due to the introduction of the Bowel Scoping programme.

Staffing issues

1.20. The perceived downgrading of the Horton site would make it more difficult to attract staff, which would have a direct impact on the ability of the service to meet wait times standards.

Loss of reputation with Quality Assurance

1.21. Movement of the BCSP to a single site would make the Trust a unique outlier within the National Screening service. The Trust has worked hard to improve its reputation with Quality Assurance for BCSP in the last three years; The Trust was the last screening centre to go live, and was fortieth (out of 59) to age extend (70-74). It was in the first half of centres to undertake Bowel Scope Screening. The Trust is therefore earning an increasingly good reputation with QA, our commissioners and national office for being a well-run programme. This would take a long time to re-gain were screening removed at the Horton Hospital.

2. Objectives/Benefit Criteria

2.1. The objectives/benefit criteria of the proposal, which are interrelated, are to:

- Maintain continuity of service (minimise breakdowns)
- Maintain access standards
- Avoid contractual penalties
- Achieve compliance with single sex guidance
- Achieve compliance with infection control guidance
- Improve patient privacy and dignity
- Maintain JAG accreditation for the Horton site
- Maintain best practice tariff for endoscopy
- Maintain the Bowel Cancer Screening Programme in both Oxford and Banbury

- Maintain the Bowel Scope Programme in both Oxford and Banbury
- Maintain equity of access for patients across the OUH's catchment area

3. Option Appraisal

3.1. The long list of options considered was:

No.	Option	Shortlist ?	Comment
1	**Do minimum**	Yes	Just replace top loading washers with like for like replacements
2	**Close Horton Endoscopy**	No	Not enough capacity at JR to absorb activity. No provision for acute emergencies at Horton
3	**Use external site**		
3a	Rent external premises	No	No provision for acute emergencies at Horton
3b	New build on Horton site	No	Too expensive
4	**Decontamination**		
4a	Decontaminate at Fosecote Hospital (private hospital in Banbury)	No	Not JAG compliant and insufficient capacity
4b	Managed service facility	No	Too expensive. No comparable unit has adopted this option
4c	Use existing JR facility	Yes	
4d	Separate decontamination unit on-site behind chapel (modular)	No	£759k more expensive than brick equivalent
4e	Separate decontamination unit on-site behind chapel (brick)	Yes	
4f	Collaboration with TSSU for on-site decontamination unit and temporary "vanguard" unit in the interim	No	Trust has decided that this project should be outside the scope of a joint TSSU project.
4g	Separate decontamination unit on-site using old mortuary	No	Too expensive due to removal of asbestos and modelling shows that new build extension into space behind chapel would still be necessary.
5	**Redevelop existing unit to address privacy and dignity**		
5a	Same sex accommodation and decontamination unit within	Yes	

	Unit. Mixed sex days		
5b	Same sex accommodation and decontamination unit external to Unit. Mixed sex days	Yes	
5c	Same sex accommodation and decontamination unit external to Unit. Single sex days	Yes	
5d	Same sex accommodation and decontamination unit within Unit. Mixed sex days. Pod-based approach	Yes	

3.2. The shortlisted options are shown below with their costs:

No.	Option	Building Cost (000s)	Equip. cost (000s)	Relocation costs (000s)	Total cost (000s)	Comment	Benefits	Costs
1	Do minimum	£0	£130	£0	£130	Just replace washers like for like. Loss of JAG accreditation at Horton and so loss of BCSP at Horton. Contravenes best practice infection control and risks upgrade needing to be undertaken in medium term if, as expected, guidance is tightened		
4	**External Decontamination options**							
4c	Use existing JR facility	£0	£2,391	£0	£2,391	See Appendix A for cost breakdown		
4e	External: Use space behind chapel (brick)	£2,031	£339	£0	£2,370	A number of options for external decontamination were looked at and this was the cheapest. Incorporated in 5b and 5c below.		
5	**Addressing same sex accommodation**							
5a	Original plans (May 2013): Extend existing Unit to provide same sex accommodation and decontamination within Unit, and 3rd procedure room. Mixed sex days (i.e. men and women on same day)	£3,394	£440	£310	£4,144	Equipment costs assume leaving third room as shell space until required.	JAG, infection control and same sex compliant. 3rd room provides mitigation against risk of higher than expected growth	High cost. Costs are also two years out of date.
5b	Revised plans (Jan 2014): Extend Unit to provide same sex accommodation but decontamination unit external to Unit. No 3rd room. Mixed sex days	£4,010 (inc £2,031 for ext decon)	£444	£0	£4,767	Would require building extension of approx. 150m^2	JAG, infection control and same sex compliant	More expensive than original plans with no additional procedure room

No.	Option	Building Cost (000s)	Equip. cost (000s)	Relocation costs (000s)	Total cost (000s)	Comment	Benefits	Costs
5c	Revised plans (Jan 2014): Same sex accommodation but decontamination unit external to Unit. Single sex days (i.e "Men only" and "Women only" days)	£3190 (inc (£2,031 for ext decon)	£440	£0	£3,630	At the current time this would mean Bowel Scope could only be delivered on the JR site due to IT booking system not differentiating between “male” and “female” days	JAG, infection control and same sex compliant	Single sex days risk meeting wait time targets
5d	Pod-based approach: Same sex accommodation, internal decontamination. Mixed sex days	£1,924	£440	£310	£2,674		JAG, infection control and same sex compliant	

4. Recommended option and how it meets the case for change

4.1. Options 5a, the original plan, is likely to be more than £4.1M as costs were estimated two years ago. It is not considered to be affordable. The development of options 5b and 5c has shown that even removing the third procedure room and looking at the option of moving to “men only” and “women only” days meant that the project would still cost at least £3.6m.

4.2. The service’s preferred option is therefore option 5d. The reduced cost of this option is made possible by the innovative adoption of the pod-based bed approach in recovery. Option 5d would ensure that the Horton Endoscopy Unit remains JAG compliant and can undertake Bowel Screening. A third room is not judged to be an essential requirement as capacity and demand modelling shows that the service will be able to meet future demand for the next five years. Currently the unit only uses 72% of its in-week capacity and further capacity could also be achieved through Saturday working and evening working- as has occurred at the JR site in the last two years. There are no national projections of demand growth after this date and it is possible that the development of other diagnostic interventions will mean that demand for endoscopy will not continue to increase at the rate experienced for the last five years.

5. Financial Analysis of Preferred Option

Revenue Costs

5.1. The additional revenue costs total £47k for ongoing maintenance.. Appendix B shows how these costs were derived.

5.2. Annual capital and depreciation costs are detailed in Appendix E and F.

Capital Costs

5.3. The capital costs total £2.364m and are broken down as follows:

- Construction cost of project: £1,924k (see Appendix G)
- Cost of equipment: £440k (see Appendix B)

5.4. In additional £310k is required to relocate the service to Oxford during the works period (see Appendix C)

5.5. A number of different options were considered regarding how to continue to deliver the Horton Endoscopy activity during the redevelopment works, which is predicted to take four months. The conclusion of this analysis was the proposal to close the Unit and relocate the work to Oxford. This analysis is shown in Appendix D. It is planned that inpatient work would continue to be undertaken on the Horton site, in Horton Theatres.

Income

5.6. The redevelopment is mainly predicated on avoidance of the financial risk through doing nothing; namely the loss of more than £80K per year in loss of best practice tariff, and also the risk of incurring financial penalties for non-compliance with national same sex guidelines.

5.7. It is calculated that the department would derive an income of £400K from Bowel Scope income once the programme is full matured. As detailed in paragraph 1.7 above, this is £120K per year more from undertaking Bowel Scope work in Banbury than if it were undertaken in Oxford. However this is not the main focus of this business case. The income and expenditure for this work will form part of a separate business case, due to be completed in the summer of 2015.

Impact on Profitability

5.8. The latest Patient Level Information Costing (PLICS) data show that the Horton Endoscopy Unit currently makes an £83,398 profit, or 11.78%. The addition of Bowel Scope screening would add a further 1,000 attendances.

5.9. This section assesses the current profitability of the service and an early indication of the predicted impact on the SLR performance of introducing Bowel Scope screening.

Service	Activity No. of Episodes /Attendances	Income (£)	Cost (£)	Profit/Loss (£)	Profit/Loss (%)
Current Value	4,095	707,808	624,410	83,398	11.78%
New Value	5,095	1,107,808	921,410	186,398	16.83%
Variance	1,000	400,000	297,000	103,000	5.04%

6. Market Assessment (including commissioner discussions)

6.1. As described above, income related to Bowel Scope is expected to equate to £400k per year at the Horton. Should the Unit not be able to provide Bowel Scope another provider might bid for this work.

6.2. As detailed above in paragraph 1.11, when questioned about the possibility of not providing bowel screening or bowel scope screening at the Horton, commissioners expressed concern over the detrimental impact this would have. They were particularly concerned over the effect on individuals in the more vulnerable social groups in north Oxfordshire where uptake of screening is lower and who would have most difficulty accessing services further away from their home, should the service not be available at Horton.

7. Benefits Realisation

7.1. The table below shows the quantifiable benefits of the proposal and the plan for achieving them.

Benefit	Performance Measure	Current Value	Target Value	Target Date
Same sex compliance as detailed in the NHS Constitution (2009) and DH Delivering Same Sex Accommodation (DSSA) policy and guidance (2009, 2010).	Compliant	Non-compliant	Compliant	01/01/2016
Compliance with JAG and Trust infection control guidelines (CFPP 01-06)	Compliant	Non-compliant	Compliant	01/01/2016
Receiving best practice tariff for Endoscopy procedures	Receipt of best practice tariff: Endoscopy tariff being paid at 100%	Currently in receipt of best practice tariff	Retention of best practice tariff	01/01/2016
BCSP Colonoscopy uptake rate	% Eligible Men & Women aged 60 - 74 who have colonoscopy following +ve FOBt test	85% (it is expected this would drop to 75% if BCSP were removed from the Horton)	85%	01/01/2016
Uptake of Bowel Scope screening at Horton	% Eligible Men & Women aged 55 who are screened	n/a	50% (based on national guidance following pilots)	01/04/2017

8. Management of Risks of Implementation of Proposal

8.1. The table below lists the risks that would remain if the proposal is agreed and the plan to manage them.

Risk	Impact (I)	Likelihood (L)	Total (IxL)	Mitigating Action	Residual Risk	Contingency plan to address risk
Delay in moving back to Horton Unit due to wait for decon validation	5	5	25	Ask project team to complete decon. works at earliest opportunity in project so validation can take place whilst other works are being completed		Regular meeting with project team and request for early sight of the planned timetable
Continuing to meet wait time KPIs	5	3	15	Use opportunity of Unit closure to standardise admin SOPs between JR and Horton: improved flexibility and communication between sites to book patients in danger of breaching	5	Early work up of plan to introduce evening and Saturday working
Delay in ability to hire a mobile Endoscopy facility	5	3	15	Regular contact with provider and look at alternate units e.g. mobile theatre	9	Work with project team to regularly review
Reduction in points on lists due to slow turnaround times	2	4	8	Use opportunity of Unit closure to integrate nursing staff across both sites to standardise SOPs and improve working across sites	4	
Breakdown of decontamination facilities	5	2	10	Retention of “Sure Store” decontamination equipment used during relocation to allow scopes to be decontaminated on JR site	5	Develop business case for additional capacity at JR to provide more robust capacity so work could be flexed to JR if required

9. Implementation Plan

9.1. Accountability and project management arrangements

- The project will be managed in accordance with the principles of PRINCE 2 methodology
- The Project Board for this project includes the following members:

Name	Role
Rainer Buhler	General Manager, Surgery and Oncology Division
Jonathan Marshall	Clinical Lead, Horton Endoscopy
Ben Wright	Operational Service Manager, GET Directorate
Julia Wood	Matron, GET Directorate
Muz Khan	Estates Project Manager

- A project group will be established which will incorporate:

Name	Role
James East	Clinical Lead, JR Endoscopy
Jonathan Marshall	Clinical Lead, Horton Endoscopy
Ben Wright	Operational Service Manager, GET Directorate
Julia Wood	Matron, GET directorate
Muz Khan	Estates Project Manager
Sue Kershaw	Sister, Horton Endoscopy
Dean Raffles	Environmental & Operational Services Manager, Horton
Gary Welch	Interim Head Of Procurement, Procurement
Susan Brown	Senior Communications Manager
Anne-Marie Williams	Operational Service Manager, Urology Directorate
Kathryn Hall	Operational Service Manager, Ambulatory Directorate
Rob Tovey	Senior Business Partner, Surgery & Oncology Division
Lola Obomighie/ Johanna Lafferty	HR Business Partner, Surgery & Oncology Division
Janine Riddell	PA, GET Directorate
TBC	Patient Representative

The group will also incorporate architects, mechanical and engineering representatives and cost advisors as appropriate.

- Key Project Roles have been identified as follows

Name	Role
Project Sponsor	Rainer Buhler, General Manager, Surgery and Oncology Division
Project Director	Ben Wright, Operational Service Manager, GET Directorate
Assistant Project Director	Julia Wood, Matron, GET Directorate
Clinical Lead	Dr Jonathan Marshall, Clinical Lead, Horton Endoscopy

9.2 The timetable for implementation is as follows:

Task Name	Duration	Start	Finish
Receipt of Trust Order	0 days	01/12/2014	01/12/2014
Stage C-D Design for Planning	20 days	01/12/2014	26/12/2014
Planning Consideration Period	40 days	29/12/2014	20/02/2015
Stage E-G Detailed Design	73 days	29/12/2014	08/04/2015
AE Approvals/Sign Off	40 days	26/01/2015	20/03/2015
Sweett/Scion Costing	6 days	09/04/2015	16/04/2015
Staff consultation for change in shift patterns	90 days	12/06/2015	10/09/2015
Trust Approval & Review	14 days	24/06/2015	08/07/2015
Issue equipment tendering documentation	28 days	05/06/2015	03/07/2015
Issue mobile unit tendering documentation	28 days	01/07/2015	29/07/2015
Planning permission requested	56 days	09/07/2015	03/09/2015
Order Issued to Scion	0 days	09/07/2015	09/07/2015
Approval to Place Orders	7 days	23/07/2015	30/07/2015
Enabling Works	10 days	27/09/2015	07/10/2015
Construction Period	100 days	08/10/2015	16/01/2016
Install AHU for Decontamination Room Only	30 days	26/11/2015	26/12/2015

Commissioning/Cleaning	10 days	16/01/2016	26/01/2016
Handover and client move	3 days	26/01/2016	29/01/2016

10. When and how will the impact and intended effect be reviewed and reported on?

10.1. The impact of the redevelopment will be immediately apparent should, as expected, the Unit receive JAG accreditation.

10.2. It is planned that Bowel Scope screening will commence at the Horton following completion of the redevelopment. Bowel Scope screening was begun at the JR in January 2014 and a quarterly review of income generated is being undertaken. Once screening has commenced at the Horton it will form part of these ongoing quarterly reviews.

11. Conclusion

11.1. In its existing state the Horton Endoscopy service is carrying two key risks: the risk of being declared in breach of same sex policy and the risk of suboptimal decontamination facilities. The former risk can only be mitigated through a move to same sex days, but this would certainly cause breaches against six week wait diagnostic targets with the subsequent impact on the wider 18-week and cancer pathways. The latter can be partially mitigated with the purchase of two top loading washers for £130k, however this would mean the Unit is neither infection control compliant nor future-proofed against a tightening up of infection control compliance.

11.2. Failure to address either of the above would also result in losing JAG accreditation. This would limit the work that could be undertaken at the Horton and, crucially, it would mean the Bowel Screening Programme would be removed wholly to the JR site.

11.3. Failure to invest in the service now would also incur a recurring cost of £200k per year in lost income through loss of a best practice tariff and lower uptake of Bowel Scope screening. As work grows this figure will increase. Further bowel screening and bowel scope income could also be lost to other providers. The total loss of Bowel Cancer Screening and Bowel Scope screening would mean a lost in income of £627K. The Bowel Scope screening service is predicted to make an even greater contribution than the rest of the Endoscopy Service, which, according to patient level costing data, is already profitable.

12. Recommendations

The Trust Board is asked to approve

- capital funding of £2.36m, plus
- £310k to relocate the service to Oxford for the works period, during which time it is proposed that provision will be made for the transport of patients from the Horton to Oxford for planned endoscopy and
- additional revenue funding of £47k p.a. for future additional maintenance costs.

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Dr Satish Keshav, Clinical Director, Gastroenterology, Endoscopy and Churchill Theatres

Dr James East, Director Bowel Cancer Screening Programme and Clinical Lead, JR Endoscopy

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June 2015

Appendix A: Cost of Off-site Endoscope Decontamination

The main concern regarding off site decontamination is financial. Unlike theatre trays, which are used once per day and therefore allow for a 24-hour turnaround, endoscopes are often used 3-4 times per day. Decontamination of an endoscope externally takes five hours (one hour in automated endoscope reprocessor (AER), four hours in drying cabinet). Therefore the Unit would have to have enough scopes each day to undertake all expected procedures.

Cost of additional scopes

Calculations for the additional scopes needed are:

Type of scope	Cost/scope (000s)	Current No.	Add. No. needed	Total cost (000s)
Gastroscopes	42	7	21	882
Colonoscopies	42	8	28	1,176
GI bleed gastroscope	42	1	1	42
Duodenoscope	42	1	1	42
bronchoscopes	24	2	2	48
Cystoscopies	24	4	4	96
Total Cost (inc VAT)				**2,286**

These scopes would need to be replaced every 5-7 years.

The option of decontamination at the JR would also incur the following additional costs:

Purchase of additional decontamination equipment

The logistics of decontaminating and drying sufficient scopes for a whole day (25-45 scopes) overnight at the JR would require an increase in the number of drying cabinets. Drying cabinets accommodate eight scopes and therefore space would need to be identified for an additional three drying cabinets (£35k each = £105k plus locating space and cost of enabling works)

During a recent decontamination audit carried out by the trust authorising engineer, he noted that the AERs at the JR are now 5 years old, have worsening reliability, extremely high usage and a plan should be developed for their replacement. Putting additional work through these machines will put the whole service at risk. There is also a requirement to self-disinfect the machines every night which takes approximately 2 hours, this may impact on the ability to decontaminate sufficient scopes for the Horton.

Staff costs

There would be ongoing costs relating to staff working overnight to decontaminate the scopes. The staff who currently pre-clean the scopes would still be required at the Horton (although 1.5 rather than 2 people), but additional staff would be required to process the scopes overnight at the JR (including night enhancements).

Transport costs
Scopes are delicate and would have to be transferred in protective cases (which the Trust does not currently have) in a suitably designed van.

Summary
The cost of off-site decontamination is prohibitive due to the investment needed in additional scopes. Separate endoscopic decontamination is therefore needed on both the Horton and JR site

Appendix B: Cost of equipment and maintenance costs

Area	Item	No.	Cost per item (£)	Total cost (£)	Comment
Decontamination	Drying cabinet inc compressor	1	25000	25000	
Decontamination	AER	3	47197	141592	
Decontamination	RO plant	2	32507	65013	
Decontamination	Miscellaneous inc lifting trolleys and data	1	18586	20086	
Decontamination	Cleanascope trolley	2	1450	2900	
Decontamination	Glove & apron holders	2	30	60	
Procedure rooms	Trolley for lightsource/processor	2	3000	6000	Currently rusty-infection control
Procedure rooms	Screen monitor inc bracket	2	6000	12000	
Procedure rooms	Patient monitor (cardiac)	2	6200	12400	2 currently, 4 best practice
Procedure rooms	Scope guide	1	36000	36000	
Procedure rooms	Ceiling Pendent	2	1935	3870	
Procedure rooms	Gratnell trolley	1	500	500	To replace trolley holding monitor
Procedure rooms	Drug cupboard	2	600	1200	Currently rusty-infection control
Procedure rooms	Glove & apron holders	4	30	120	
Recovery	Patient trolleys	3	2500	7500	One bed in enema room plus two fixed height replacements
Recovery	Oxygen & suction connectors	9	600	5400	Required by HBN
Recovery	Patient bed tables	2	200	400	Needed for pod system
Recovery	Glove & apron holder	4	30	120	
Reception	Patient chairs (various height)	2	250	500	
Reception	Receptionist chair	2	75	150	Current fabric torn
Staff facilities	Lockers	4	70	280	
Staff facilities	Water boiler	1	760	760	
Enabling Equipment	Sure Store Vacuum System	1	24995	24995	For transport of decon scopes for all inpatients at Horton during redevelopment
Total (exc. VAT)				£366,846	
VAT				£73,369	
Total (inc VAT)				**£440,215**	

Calculation of additional maintenance costs for new build and equipment

Maintenance costs below relate to new equipment being purchased as shown on the previous page. Planned Preventative Maintenance (PPN) costs in second table relate to the maintenance of equipment more integral to the fabric of the building, such as the new air handling unit and medical gases

Maintenance costs (10% for new equipment)	£44,022
Minus existing maintenance costs for equipment being replaced	
AER maintenance	£3,000
RO plant maintenance	£9,926
Monitor maintenance	£1,540
Current maintenance sub-total	£14,466
Net new maintenance costs	£29,556

PPN costs for building and equipment	£18,240
Minus existing maintenance costs for equipment being replaced	
AHU maintenance	£400
Net new PPN costs	£17,840

Total maintenance costs	£47,396

Appendix C: Relocation Costs

It is planned that, for the duration of the project that the Horton Unit will close and the work be relocated to a mobile facility on the JR site. However Inpatient procedures would be undertaken in Horton theatres.

This mobile unit will be open six days per week, providing twelve lists per week. Currently the Horton Endoscopy Unit uses an average of 12.3 lists per week however, as these lists also include inpatient work, it is predicted that the mobile facility should provide enough capacity during the redevelopment. Based on the above plan, the relocation costs would be as follows:

Item	Cost	Comment
Staff Travel		
Travel costs per week	£1,134	12 staff sharing taxi 6 days/week plus sister driving 4 days/week
Staff Travel total	**£19,278**	
Saturday working		
Add cost of Saturday working per week	£365	
Saturday work total	**£6,200**	Based on 17 Saturday lists
Decontamination costs		
Consumable costs per week	£90	For decontamination of inpatient scopes using Sure Store system
Transport of scopes costs per week	£105	
Decontamination costs total	**£3,315**	Based on 17 Saturday lists
Relocations of other services		
Relocations of other services' total per week	£338	Urology and Respiratory lists-one per week
Relocations of other services' total	**£11,499**	
Mobile facility e.g Vanguard	£270,200	£13,000 (exc VAT) per week plus £5K set up costs
Total	£310,492	

Appendix D: Horton Redevelopment: Analysis of how to provide service during redevelopment

Three options to be considered:

1. Phase work so that one room is left open in the Horton Unit and work is phased around this
2. Close unit and place mobile van on Horton site
3. Close unit and place mobile van on JR site

PHASING VERSUS CLOSING UNIT

Operational Considerations and costs for phasing

Area	Cost (time)	Cost (£)
Front end (patient entrance/ exit) being completely refurbished - impact of phasing	6-8 weeks	£75K
Cost of transporting scopes from Oxford in absence of decon facilities (16 weeks)	n/a	£82K
Phase works in each procedure room to run concurrently	4 weeks	£10K
Ventilation: removal of old plant, extension of the roof and installation of the new plant- cost of phasing	8 weeks	£100K
New plant serving recovery to be installed in a phased approach above pod areas	3 weeks	£5K
Phasing recovery area services (new hot and cold pipework serving wash hand basins, sanitaryware, electrics)	8-10 weeks	£10K
Risk allowance to be increased due to increased risk of undertaking a major refurbishment of live clinical area	n/a	£100K

Financial comparison

Area	Phase work	Comment
Additional Construction costs	£300,000	See above (minus scope decontamination, recorded separately below)
Staff travel	*-£4,578*	Net saving through all staff not needing to travel to Oxford
Saturday work total	£55,138	Due to needing to work additional 25 Saturdays during redevelopment
Decontamination costs	£82,365	Transport to Horton of scopes which will be decontaminated in Oxford
Mobile facility	-£265,200	Saving through not hiring mobile facility
Bowel scope opportunity cost	£96,750	Cost in lost profit of delaying bowel scope screening for 25 weeks
Total	£264,475	

MOBILE UNIT AT HORTON VERSUS JR

Two sites were considered at the Horton:

Space behind chapel
Operational Estates calculated that the following would be necessary:

- Providing a structural base
- Providing service connections (electrical, water, drainage, access control, fire alarm interface, telephone)
- Providing access route from main corridor to mobile unit that is level, lit and covered

Detailed calculations of this by quantity surveyors were calculated to cost £293K. When asked to look at a do minimum option they stated "*As a bare minimum could just provide the base and the service connections, providing measures were put in place to enable patients to safely access the mobile. If this was the case the estimated costs would be £175K".*Operational Estates also expressed their concern that it would be difficult to manoeuvre a mobile unit onto this site

Existing mobile pad outside A&E
A site visit was undertaken to directly review adequacy or otherwise, with the following conclusions:

1. *"The current site is too small to receive the endoscopy trailer. The current site is not rectangular but has approx. dimensions of 6m* 8m. The endoscopy mobile requires a minimum site of 10m *18m and will require some additional space for an access ramp for patients in wheelchairs/ in trolleys.*
2. *It is possible the mobile site could move elsewhere within the Horton A&E car park and utilise the existing services, but this would cause major disruption to the car park, by reducing the car park in size by approximately a third, it would constrict the access making ambulance access more difficult and higher risk and would reduce availability of parking by circa 20 cars.*
3. *The current site has a 3 phase electrical supply and a water supply via a tap, no drainage. The water supply would need to be upgraded and a connection made to mains drainage on the site, a local review of the drainage has not yet occurred and this could prove costly.*
4. *In summary our firm opinion that the risk to A&E and the site as a whole would be too great. The Trust could also be criticised by other Trust stakeholders for causing disruption and making patient access difficult in a key area of the hospital"*

At the JR, a site is already in place, having been used previously during the expansion of the JR Unit. It is estimated that re-servicing this space would cost £1K

Summary of financial comparison:

	Oxford	**Banbury** (original plan)	**Banbury** (do min)	**Comment**
Staff Travel total	£19,278	£2,380	£2,380	Travel to Banbury is to allow fellows to backfill lists (see comment below)
Saturday work total	£6,205	£6,205	£6,205	17 Saturdays
Decontamination costs total	£3,315	£0	£0	Cost of transporting scopes to Horton for inpatients
Mobile facility	£270,200	£563,200	£445,200	Banbury cost is £293K to put in pad behind chapel or £175K to do this as a do minimum i.e. concrete base, drainage and enabling works but no covered walkways to access pad etc). Assurance would need to be sought that do minimum would not compromise patient safety.
Additional evening lists to compensate for lost list time	£0	£15,301	£15,301	Required due to need for more evening capacity on JR site to offset risk of diagnostic breaches due to running same sex lists- based on three two-hour evening lists at JR
Relocations of other services' total	£11,499	£11,499	£11,499	
Total	**£310,497**	**£598,585**	**£480,585**	
Difference	*£0*	*£288,088*	*£170,088*	

Other considerations

- Mobile unit would be single sex. This would present two operational risks:
  - Risk to meeting cancer two week wait and six-week diagnostic targets due to greater inflexibility of lists.
  - Above would be offset by providing additional evening lists at JR. Evenings have been identified as medium term solution to ensuring JR could meet greater than expected increase in demand. Depending on timing of redevelopment and level of increase in demand at JR, this option may or may not be available.
- As Unit will be reduced to one room instead of two for the duration of the redevelopment, it is necessary to ensure all 12 sessions in the mobile Unit (two sessions, six days per week) are fully used. Back filling of sessions on Horton site would be much more challenging than on the JR site as

  - Main source of back filling lists are the six fellows employed by the Service. These fellows usually have an outpatient clinic at the JR each day. Normally they would not be asked to undertake a clinic on the JR site *and* an Endoscopy list at the Horton on the same day. This is because there is a risk of clinics or lists overrunning and so the afternoon session would either start late or else need to be curtailed. This situation is exacerbated as all but one of the fellows don't own a car (as fellows are typically on a one-year contracts and come from abroad) and are therefore reliant on public transport. The latter would be mitigated by paying for a taxi to transport fellows during the redevelopment but the issue of reduced lists would remain.
  - For clinical safety, fellows and nurse endoscopists are not allowed to work independently unless a consultant is on site. At Oxford this would not be an issue but would be at the Horton. This would increase the risk of lists in the mobile unit being unused
- Inpatients would be treated in Horton theatres

Summary

From a financial perspective the additional cost of phasing the work is calculated to be £264K. The increased operational risks and challenges would also make this a sub-optimal option, especially considering the need to replace the existing air handling unit in the roof space. Engineers have strongly urged against this option.

To use a mobile facility at the Horton rather than the JR would cost net £170K at a minimum. Use of the existing mobile unit pad in front of A&E would also incur significant cost and pose an unacceptable risk to patients trying to access other services.

Operationally, the use of a mobile facility at the Horton presents a specific risk to allowing the Service to meet two week cancer and six week diagnostic waits. Whilst some of this risk could be mitigated it is expected it would put further pressure on the JR service, a service which is expected to be under pressure itself to meet growing demand.

The service's starting point would always be to aim to continue to treat Horton patients on the Horton site as it is acknowledged that requiring patients in the north of the county to be treated in Oxford will cause significant inconvenience to both patients and staff. However from both a financial and service delivery perspective, the cost and operational risk of maintaining a service on the Horton site is considered to be too high