NHS
The Shrewsbury and Telford Hospital
NHS Trust

Recommendation ☑ **DECISION** ☑ **NOTE**	**The Trust Board** is asked to **APPROVE** the recommendation made by the Sustainability Committee to implement Option 3 of the Endoscopy Business Case.
Reporting to:	**Trust Board**
Date	Thursday 27th July 2017
Paper Title	Meeting current and future endoscopy demand
Brief Description	There is currently insufficient core capacity available to meet local demand for upper and lower GI endoscopy. This demand and capacity mismatch has led to delays in our patients' diagnostic pathways and subsequent treatment and our ability to meet the national 6 week diagnostic waiting time standard (DM01). Our inability to meet the 6 week waiting time standard means we are also unable to meet the timeliness component of the Joint Advisory Group (JAG) on Gastro-Intestinal Endoscopy Global Rating Score (GRS) standards. Failure to meet GRS standards resulted in our JAG accreditation being revoked in December 2016 and the loss of 5% best practice tariff income. Capacity constraints have also prevented the full roll out Bowel Scope bowel cancer screening as originally planned. The demand for endoscopy has been increasing year on year it is expected that by 2019/20 there will need to be sufficient capacity at SaTH to deliver 26,537 endoscopic procedures per annum, 4,875 more than in 2016/17. Our ability to recruit and retain sufficient workforce to meet service demand is the most significant risk to service sustainability. Workforce constraints have resulted in the service becoming reliant on our substantive consultant workforce undertaking additional clinical activity at premium cost, outsourcing to Shropshire Nuffield and more recently in insourcing nursing and medical resource also at premium cost. The Business Case: • Outlined the issues being faced in meeting endoscopy service demand; • Provided detail of the actions taken to bridge the capacity gap; • Provided detail regarding forecast activity between now and 2019/20; • Provided detail regarding the option to bridge the current and forecast capacity gap; and • Requested approval to implement Option 3 of the Business Case to what is the expansion of the substantive workforce across the multidisciplinary team. Following the Sustainability Committee of the 23rd May 2017, the Care Group was asked to reconsider the financial phasing and assumptions of the Business Case particularly in relation to year 1 (2017/18). The table overleaf demonstrates the financial impact of revised assumptions made by the Care Group.

		Original Business Case			Revised Financial Data		
		Option 3			Option 3		
		Expansion of Workforce			Expansion of Workforce		
	Years	Income £000	Expenditure £000	Contribution £000	Income £000	Expenditure £000	Contribution £000
	1	486	(1,238)	(753)	678	(981)	(303)
	2	1,006	(1,279)	(273)	1,211	(1,169)	42
	3	1,562	(1,295)	266	1,782	(1,176)	606
	4	2,157	(1,262)	894	2,393	(1,126)	1,267
	5	2,794	(1,295)	1,499	3,046	(1,169)	1,877
	Total Cost	**8,004**	**(6,370)**	**1,634**	**9,110**	**(5,621)**	**3,489**
	The Business Case was approved by the Sustainability Committee.						
Sponsoring Director	Chief Operating Officer Director of Finance and Deputy Chief Executive						
Author(s)	Centre Manager – Surgery, Oncology & Haematology Senior Finance Officer – Scheduled Care Group						
Recommended / escalated by	Recommended for approval by the Sustainability Committee Approval given in May 2017 subject to clarification on the financial phasing, particularly in year 1. The Committee were satisfied with the information presented in June 2017 and reconfirmed their support and approval.						
Previously considered by	**The Scheduled Care Group Board**						
Link to strategic objectives	Patient and Family – investing in additional staff will ensure delivery of national access targets (Cancer, RTT and Diagnostics) Safest and Kindest – consistent delivery of access targets will support JAG accreditation Innovative and Inspirational Leadership – the endoscopy service is not sustainable without an investment in stafing. This investment will generate a positive financial contribution. Values into Practice – An appropriately skilled fully staffed workforce is essential to ensuring long term sustainability of the County's endoscopy service.						
Link to Board Assurance Framework	RR561 – failure of national performance and quality standards RR859 – unsustainable service due to shortages of key clinical staff						
Equality Impact Assessment	● **Stage 1 only (no negative impacts identified)** ● **Stage 2 recommended (negative impacts identified)** ● negative impacts have been mitigated ● negative impacts balanced against overall positive impacts						

The Shrewsbury and Telford Hospital NHS Trust

Freedom of Information Act (2000) status	● **This document is for full publication** ● **This document includes FOIA exempt information** ● **This whole document is exempt under the FOIA**

The Shrewsbury and Telford Hospital NHS Trust

Paper 6

Business Case

Meeting Current and Future Endoscopy Demand

Care Group:	Scheduled Care
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Date:	15th May 2017

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1. Executive Summary

Endoscopy plays a vital role in the diagnosis of, and on-going surveillance for gastrointestinal cancers, including bowel and oesophageal cancer. Endoscopy is also performed for the diagnosis, surveillance and treatment of a wide range of conditions and diseases that are not cancer-related.

Endoscopy services are provided on both The Princess Royal Hospital (PRH) and Royal Shrewsbury Hospital sites (RSH). The service is an integral part of three key national performance standards, including 18 week Referral to Treatment (RTT), Cancer Waiting Time Standards, and the 6 weeks Diagnostic Waiting Time Standard (DM01)

The demand for endoscopy has been increasing at pace both locally and nationally for some time. This increase in demand is disproportionate to current capacity and presents a major challenge to service delivery as endoscopy remains the diagnostic test of choice for many cancers.

- **There is currently insufficient core capacity available to meet local demand for upper and lower GI endoscopy.**

This demand and capacity mismatch has led to delays in our patients' diagnostic pathways and subsequent treatment and our ability to meet the national 6 week diagnostic waiting time standard (DM01).

Our inability to meet the 6 week waiting time standard means we are also unable to meet the timeliness component of the Joint Advisory Group (JAG) on Gastro-Intestinal Endoscopy Global Rating Score (GRS) standards. Failure to meet GRS standards resulted in our JAG accreditation being revoked in December 2016 and the loss of 5% best practice tariff income.

Capacity constraints have also prevented the full roll out Bowel Scope bowel cancer screening as originally planned.

- **The demand for endoscopy has been increasing year on year.**

The reasons for this increasing demand are multifactorial and include:

- Demography - the ageing population (increase in both the number of older people and them living longer)
- National Policy - the faecal occult blood testing (FOBT) screening programme including people aged 60-69 and aged 70-75 and the introduction in 2015 of the bowel scope screening programme for 55 - 60 year olds.
- Increase in 2 week wait referrals and growth of colorectal service resulting in increased demand for colorectal diagnostics.
- On-going national public awareness campaigns,
- Surveillance protocols for people at increased risk of GI cancer detected via the symptomatic and screening services.
- New NICE referral guidance which has lowered the threshold for referral for lower GI endoscopy procedures
- Increasing demand for endoscopic ultrasound procedures to support upper GI cancer staging.

A recent study published by the Health Services Management Centre at the University of Birmingham and the Strategy Unit at NHS Midlands and Lancashire CSU, forecasts that by 2019/20 the demand for gastrointestinal endoscopy will exceed 2.4 million procedures per annum nationally. This represents an expansion of 44% over the 2013/14 baseline and a growth rate of 6.5% per annum, substantially greater than historical rates of increase in GI endoscopy activity of 2.8% per annum.

In a sub-national analysis of the above study undertaken NHS Midlands and Lancashire CSU - Modelling Potential Changes in Gastro-Intestinal Endoscopy Activity in the West Midlands between 2013/14 and 2019/20 local growth is forecast to increase from a 2013/14 baseline of 14,670 procedures to 22,160 by 2019/20 a 51% increase this analysis however did not include endoscopy procedures carried out during an emergency in-patient stay.

When inpatient activity is added to the above the revised forecast suggests that by 2019/20 there will need to be sufficient capacity at SaTH to deliver 26,537 endoscopic procedures per annum, 4,875 more than 2016/17 forecast out turn (Appendix 1)

From the detail presented in Appendix 2 it can be seen that the greatest increase in demand will be for flexible sigmoidoscopy as bowel scope screening continues to be implemented.

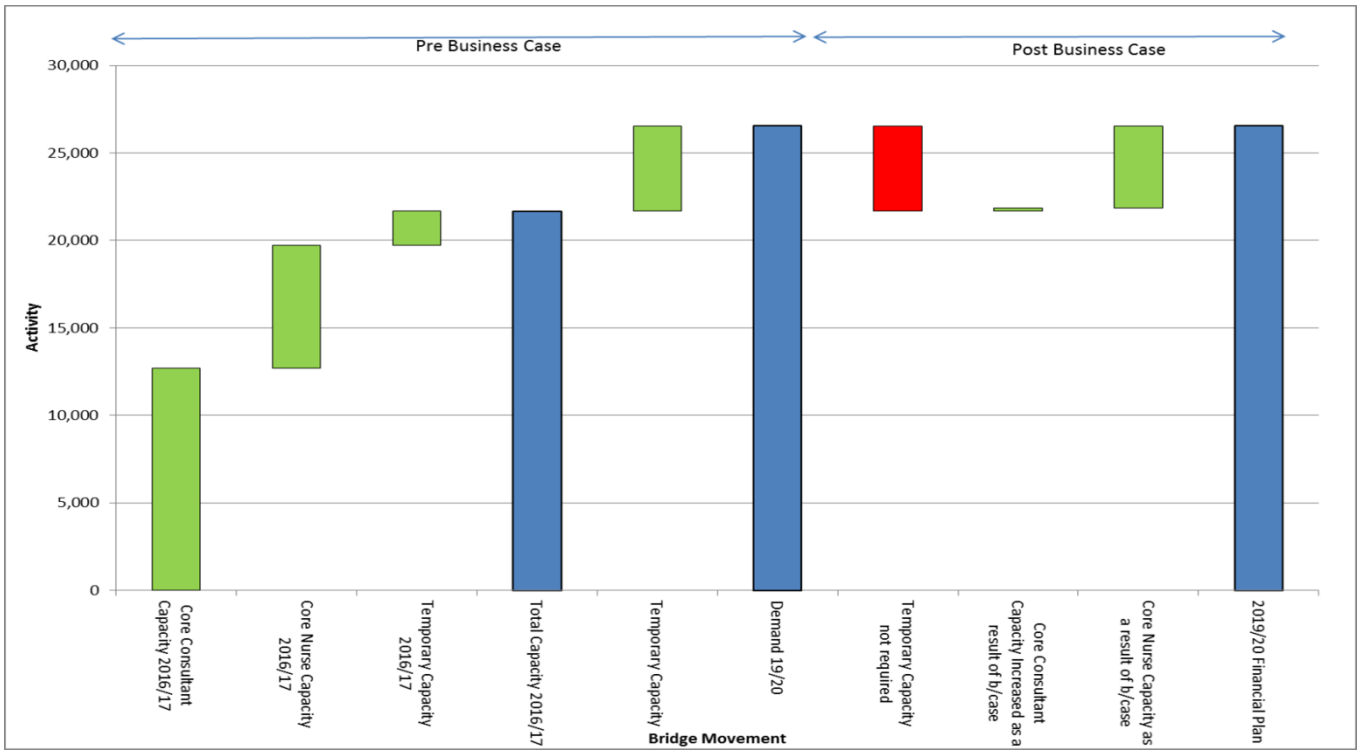
- **Our ability to recruit and retain sufficient workforce to meet service demand is the most significant risk to service sustainability.**

There is a well recognised national shortage of consultant gastroenterologists and non-medical endoscopists and our success in recruiting registered nurses to work in endoscopy has been variable in recent times. In addition to the challenge of recruiting to existing vacancies we also face losing two of our consultant gastroenterologists who we anticipate will retire in 2018/19.

- **Work force constraints have resulted in the service becoming reliant in recent months on outsourcing / insourcing services.**

Up until December 2016 the service attempted to bridge the demand and capacity gap via the use of WLI sessions to ensure maximum room utilisation and by outsourcing 20 cases per month to the Shropshire Nuffield. This alone however was insufficient to meet service demand. In December 2016 the service commenced insourcing additional resource to expand capacity at weekends which has enabled us to clear the then backlog of surveillance procedures and regain control of routine waiting times.

The current level of performance is unsustainable without ongoing insourcing and / or further investment in our substantive endoscopist and endoscopy nursing workforce, please see below:



Longer term, Endoscopy is a key element of the future clinical model within the Trust and the Sustainable Services Programme (SSP). Future service delivery is currently planned to be delivered predominantly on the Planned Care Site. However, due to the clinical need of patients accessing the service, appropriate capacity and facilities have to also be available on the Emergency Site. A sustainable workforce is essential to this delivery model.

The purpose of this business case is to:

- **Outline the issues currently being faced in meeting endoscopy service demand**
- **Provide the details of actions taken to date in an attempt to bridge capacity gap**
- **Provide the detail regarding forecast activity between now and 2019/20**
- **Provide detail regarding the options outlined below, to bridge the current and forecast capacity gap for an informed decision to be made.**

Options to Meet Current State

1. Do Nothing
2. Continue current insourcing arrangements and reliance on existing staff to work additional programmed activities at premium cost

Option to Meet Future State

3. Invest in the expansion of substantive workforce to meet current and forecast demand, bridging workforce gaps via the continuation of WLI payments / insourcing arrangement (6 day working including 3 session weekdays) until such a time that sufficient substantive workforce is recruited.

2. Current Service Profile and Operational Challenges

2.1 Facilities and Service Provision

PRH and RSH endoscopy units each have three procedure rooms. The service is currently funded to provide 66 sessions per week including 2 bowel scope screening sessions.
The service is currently operating 6 days per week providing 75 sessions following the commencement of insourcing arrangements in December 2016. (Appendix 3)

2.2 Funded Workforce

The combined funded endoscopy nursing and administrative establishment is 60.11 WTE.

Upper and lower GI endoscopy sessions are delivered by a combination of Consultant Gastroenterologists, Upper GI and Colorectal Surgeons, Upper GI middle grade doctors, GP with specialist interest and non-medical endoscopists. The number of endoscopy sessions scheduled within current job plans for the above staff is 2960 per annum
(Appendix 4)

2.3 Types of Procedures Performed

Activity performed within procedure rooms include:

- Upper GI Endoscopy (Gastroscopy) for the diagnosis or exclusion and therapeutic treatment of diseases and disorders which occur in the oesophagus, stomach and duodenum.
- Lower GI Endoscopy (Colonoscopy) for the diagnosis or exclusion and therapeutic treatment of diseases and disorders which occur in the large bowel.
- Bronchoscopy for the diagnosis of disorders of the Upper Respiratory Tract.

- Endoscopic Retrograde Cholangiopancreatography (ERCP) for the diagnosis or exclusion and therapeutic treatment of diseases and disorders which occur in the biliary tract.
- Endoscopic Ultrasound (EUS) +/- FNA (Fine needle aspiration) to evaluate disorders of the oesophagus, stomach and surrounding areas.
- Percutaneous Endoscopic Gastrostomy (PEG) providing access for nutritional support to patients.
- Cystoscopy - to investigate urology symptoms

Activity performed within department but outside of procedure rooms include:

- Carbon breath test for the diagnosis of the presence of Helicobacter Pylori
- Hydrogen breath tests for the diagnosis of Lactose intolerance and small bowel bacterial overgrowth.
- PH monitoring to diagnose oesophageal reflux disease

The majority of patients using the service are seen on a day case basis. There is a 24/7 on call rota for emergency endoscopies staffed by experienced endoscopists and endoscopy nurses

2.4 National Waiting Time Compliance / JAG Accreditation

2.4.1 National Waiting Time Compliance

The delivery of a timely endoscopy service is required to support the diagnostic element of both 18 Week RTT and Cancer Waiting Time Standards.

Where cancer is suspected, endoscopic investigations must be offered within two weeks of receipt of referral. Other referrals need diagnostic procedures within 6 weeks as part of the 18 Weeks Referral to Treatment (RTT) pathway with compliance reported via monthly DM01 submissions. The national standard for DM01 is that no more than 1% of patients awaiting diagnostic tests should wait longer than 6 weeks.

2.4.2 JAG Accreditation

JAG aims to ensure quality across endoscopy services. It agrees and sets standards for endoscopy units, and quality assures endoscopy services and training. It achieves these objectives through accreditation visits, annual self-reporting using the Global Rating Scale (GRS), offering training, quality assuring training courses, certifying individuals and providing a knowledge management system.

The JAG accreditation of an endoscopy unit is the formal recognition that an endoscopy service has demonstrated that it has the competence to meet the measures set out in the endoscopy GRS standards. The scheme is patient-centered and workforce focused, and is independently assessed against recognised endoscopy standards. The scheme was developed for all NHS and independent endoscopy providers across the UK.

The JAG accreditation process encourages continuous improvement in processes and patient outcomes, strengthens endoscopy services, provides a knowledge base of best practices, improves the management and efficiency of services, and provides a knowledge base and education on best practices.

The GRS standards also dictate that no patient requiring urgent endoscopic examination should wait more than 2 weeks and that all routine referrals should wait no longer than 6 weeks.

2.4.3 SaTH Current Status – National Waiting Time Compliance / JAG Accreditation

As stated previously ongoing capacity challenges prior to the commencement of insourcing arrangements resulted in our failure to meet the 6 week routine waiting time standard for new referrals and resulted in a significant number of surveillance patients not being seen within 6 weeks of their planned procedure due date. This led to our inability to meet the timeliness component of the GRS and the endoscopy component of DM01.

The service has however consistently achieved the 2ww Cancer Waiting Time standard but to the detriment of patients requiring routine and surveillance procedures. Patients require surveillance procedures because they are at risk of cancer.

As a consequence of SaTH not meeting the required GRS timeliness standard for routine referrals JAG accreditation was revoked in December 2016.

Also, in addition to our inability to meet the timeliness component of the GRS we do not currently meet all of the required measures associated with the consent process for 'high risk' procedures specifically for a significant number of patients receiving oral bowel preparation in advance of flexible sigmoidoscopy / colonoscopy.

3. Current Demand and Capacity GAP

As stated previously the number of funded sessions available currently to meet service demand is 66 sessions per week. There is no absolute guidance / recommendations to say how many procedures should be undertaken in any session and procedures within any list are identified in terms of points. The following identifies the points allocated to each procedure within SaTH which is broadly in line with other units we have benchmarked ourselves against.

Procedure	Points Per Procedure	Time Per Procedure
Upper GI Endoscopy	1	15 minutes
Colonoscopy	2	30 minutes
Flexible Sigmoidoscopy	1	15 minutes
BCSP Flexible Sigmoidoscopy	2	30 minutes
BCSP Colonoscopy	3	45 Minutes
ERCP	3	45 Minutes

The amount of points currently booked per list varies between 8 and 12 depending on who is undertaking the activity and the case mix within the list. For the purpose of this business case an average of 10 points per list and 1.5 points per procedure has been used to calculate sessional requirements.

To meet forecast demand as demonstrated in Appendix 1 & 2 the service will be required to provide a total of 85 sessions per week by 2019/20.

3.1 Actions Taken to Date

- Additional 2 WTE substantive consultant has been appointed
- 1 WTE Agency locum consultant has been employed and will be retained until further substantive consultant is recruited.
- On-going training of middle grade surgeons and non-medical endoscopists to undertake independent practice. Current training status:

Name	Independent Flexible Sigmoidoscopy	Independent Colonoscopy	Independent Upper GI Endoscopy	Bowel Scope Accredited	BS Mentor	Anticipated Training End Date
SH	Yes	Yes	Yes	Yes	Yes	N/A
KB	Yes	Yes	Yes	Yes	Yes	N/A

JP	Yes	In training	In training	Yes	Pending	1.4.18
PB	Yes	Yes	In Training	Yes	Pending	1.4.18
KB	Yes	In training	N/A	Yes	N/A	1.6.18
NY	No	In Training	Yes	No	N/A	1.6.18

- Room utilisation has been optimised ensuring dropped sessions are picked up at every opportunity. Table below shows room utilisation on both sites YTD

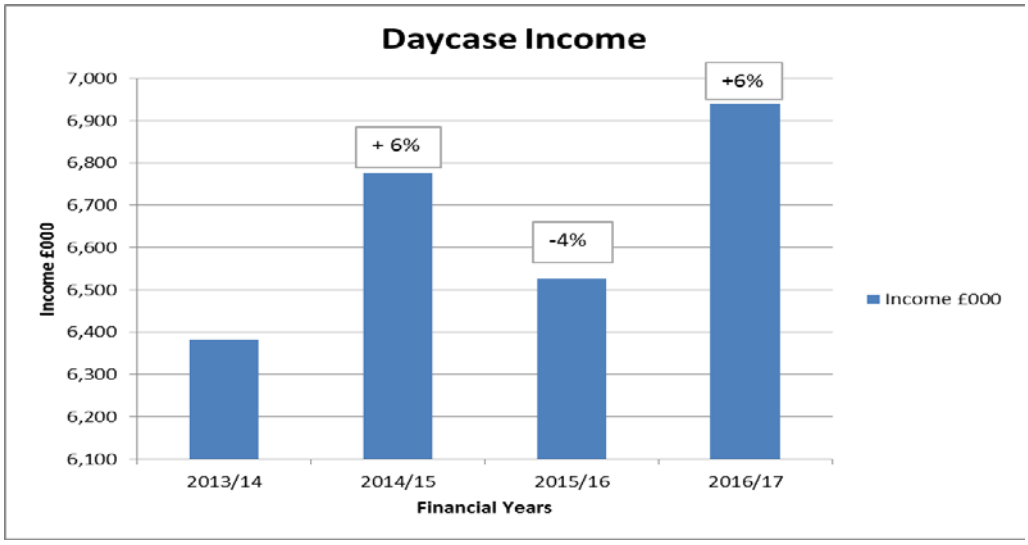
2016/17	Target	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
RSH	90%	95.0%	81.0%	99.3%	96.5%	97.4%	95.9%	97.9%	99.3%	90.4%	94.2%	97.4%	
PRH	90%	94.0%	102.0%	98.5%	90.8%	91.5%	92.0%	91.6%	97.8%	90.5%	91.7%	95.2%	

PRH / RSH Room Utilisation 2016/17

- Outsourcing to Shropshire Nuffield - 20 patients per month. This is the maximum amount of capacity Shropshire Nuffield.
- 3 Saturday sessions established cross site, core activity for nursing staff / voluntary additional activity at premium cost via WLI for medical staff.
- Further roll out of 'Bowel Scope' bowel cancer screening suspended until September 2017.
- 'Your World' insourcing commenced December 2016 supporting the provision of 9 additional Saturday sessions.
- Change management process completed to ensure no loss of service due to Bank Holidays (with the exception of Christmas Day, Boxing Day and New Years' Day)
- Appointment of dedicated endoscopy waiting list coordinator
- 'Live' endoscopy PTL (Patient Tracking List) has been developed increasing visibility at procedure level of numbers waiting and time waited.
- Electronic scheduling system has been developed to replace paper diary system to improve visibility and booking processes. System is currently being implemented.

4. Options Appraisal - Financial

In line with the anticipated growth that was identified within the study from the Strategy Unit at NHS Midlands and Lancashire CSU, Gastroenterology has generated additional income over the last three years from increased activity levels (as per the graph below).



The income growth demonstrated above is for day case activity only and does not include the income generated through inpatient activity.
The table below demonstrates the financial impact of the options above:

	Option 1			Option 2			Option 3		
	Do Nothing			Continue Current Insourcing Arrangements			Expansion of Workforce		
Years	Income	Expenditure	Contribution	Income	Expenditure	Contribution	Income	Expenditure	Contribution
	£000	£000	£000	£000	£000	£000	£000	£000	£000
1	(286)	0	(286)	678	(1,414)	(736)	678	(981)	(303)
2	(286)	0	(286)	1,211	(2,829)	(1,617)	1,211	(1,169)	42
3	(286)	0	(286)	1,782	(4,263)	(2,481)	1,782	(1,176)	606
4	(286)	0	(286)	2,393	(4,285)	(1,893)	2,393	(1,126)	1,267
5	(286)	0	(286)	3,046	(4,319)	(1,273)	3,046	(1,169)	1,877
Total Cost	**(1,431)**	**0**	**(1,431)**	**9,110**	**(17,110)**	**(8,000)**	**9,110**	**(5,621)**	**3,489**

The above table illustrates:

- **Option1** – do nothing assumes that the loss of JAG accreditation continues and the reduction in income due to the loss of the Best Practice Tariff income continues. The Trust is currently at level 3 - assessed as not meeting the minimum standard for JAG accreditation and therefore receive a price of 5% below the Best Practice Tariff.

- **Option 2** – assumes that the current insourcing arrangement will continue and will be increased in line with the increased activity projections. Year on year this option will generate a negative contribution, with a negative contribution of £8,000k at the end of the five year period. Included within this option is a cost in relation to the reduction in the lifespan of the equipment due to increased usage.

- **Option 3** - creates an income and expenditure level over a five year period, which demonstrates that an assumed 7% increase on income year on year will generate a contribution at the end of the five year period of £3,489k. This option assumes that the Best Practice Tariff will not be adjusted due to the JAG accreditation being re-instated. The staff costs are phased in accordance with the number of list requirements per annum.
  Within the first year there is an assumption that activity levels will be maintained at current levels through the use of waiting list initiatives and Your World until the substantive solution is in place. Included within this option is a cost in relation to the reduction in the lifespan of the equipment due to increased usage.

  Option 2 and 3 currently makes no assumptions with regards to the approved Meridian Programme and can be adjusted accordingly if any further efficiency is identified.

  See Appendix 5 for the income and activity sensitivity analysis

4.1 Financial Summary

See Appendix 6 for the detailed financial assumptions.

5. Options Appraisal - Non-Financial

Option 1: Do Nothing

S	• There are no strengths associated with this option
W	• Fails to recognise and address current and forecast capacity gap • Will result in continued premium payments for insourcing to maintain waiting time standards. • Substantive staff morale will continue to deteriorate as we continue to rely on staff being paid premium rates to provide what is a core service.
O	• There are no identified opportunities associated with this option.
T	• Worsening DM01 position. • Worsening 18 week RTT position in gastroenterology, upper GI and colorectal

	services due to prolonged diagnostic element of pathway. • Risk to delivery of cancer waiting time standards in upper GI and colorectal services • Risk of compromise to patient outcomes. • Inability to regain / retain JAG accreditation. • Loss of income associated with loss of JAG accreditation through tariff reduction - £286,000 per annum. • Inability to further roll out bowel scope programme in accordance with revised roll out plan leading to inequalities in County wide access to services and potential loss of screening centre accreditation. • Loss of bowel cancer screening centre status

Option 2 Continue current insourcing arrangements and reliance on existing staff to work additional programmed activities at premium cost

S	• Secures sufficient endoscopy nursing work force to support service delivery. • Optimises use of existing estate through weekend / evening working. • Secures sufficient endoscopist capacity to meet demand and maintain national waiting time standards. • Strengthens opportunity to regain and retain full JAG accreditation and deliver endoscopy component of DM01.
W	• Leaves an unresolved substantive workforce issue • No immediate reduction in the reliance on endoscopist WLIs / insourcing endoscopists capacity and associated costs. • Continuation of service provision at premium cost
O	• Regain BPT for endoscopy activity.
T	• Reliance on non-substantive workforce with no absolute guarantee of on-going availability. • Substantive endoscopist 'burn out' as a consequence of meeting WLI demand • Failure to negotiate consultant contracts including evening and weekend working • Any measures that we take will not be sufficient to meet the on-going rising demand for symptom driven endoscopy which could result in further stalling of bowel scope roll out.

Option 3: Invest in the expansion of substantive workforce to meet current and forecast demand, bridging workforce gaps via the continuation of WLI payments / insourcing arrangement (6 day working including 3 session weekdays) until such a time that sufficient substantive workforce is recruited.

S	• Secures sufficient endoscopy nursing work force to support service delivery. • Optimises use of existing estate through weekend / evening working. • Secures sufficient endoscopist capacity to meet demand and maintain national waiting time standards. • Strengthens opportunity to regain and retain full JAG accreditation and deliver endoscopy component of DM01.
W	• Leaves an unresolved substantive workforce issue • No immediate reduction in the reliance on endoscopist WLIs / insourcing endoscopists capacity and associated costs.
O	• Reduce premium nursing costs associated current insourcing arrangements • Regain BPT for endoscopy activity. • Expansion of non-medical endoscopists workforce further reducing reliance on a consultant delivered service at premium cost.
T	• Part reliance on non-substantive workforce with no absolute guarantee of on-going availability. • Substantive endoscopist 'burn out' as a consequence of meeting WLI demand

	• Failure to negotiate consultant contracts including evening and weekend working • Any measures taken will not be sufficient to meet the on-going rising demand for symptomatic endoscopy which could result in further delay of bowel scope roll out.

The options described above have been considered and assessed against a set of key outcome indicators.

Options to Meet Current State

1. Do Nothing
2. Continue current insourcing arrangements and reliance on existing staff to work additional programmed activities at premium cost

Option to Meet Future State

3. Invest in the expansion of substantive workforce to meet current and forecast demand, bridging workforce gaps via the continuation of WLI payments / insourcing arrangement (6 day working including 3 session weekdays) until such a time that sufficient substantive workforce is recruited.

The result of this assessment is demonstrated below:

Key Outcome Indicators	**Outcome Achieved Y / N**		
Desired Outcome	**Option 1**	**Option 2**	**Option 3**
Quality & Safety			
Improves quality and clinical outcomes	N	Partially	Y
Improves patient experience	N	Partially	Y
Supports the meeting of timeliness component of JAG GRS	N	Y	Y
Long term sustainability of clinical services	N	N	Y
Health Care Standards			
Support the delivery of DMO1	N	Y	Y
Supports the delivery of 18 week RTT	N	Y	Y
Supports the delivery of Cancer Waiting Time standards	N	Y	Y
Community & Partnership			
Alignment with the wider Clinical Service Strategy	N	N	Y
Alignment with local and national commissioning intensions	N	N	Y
People & Innovation			
Improves staff health and wellbeing	N	N	Y
Supports SSP workforce planning	N	N	Y
Financial Strength			
Ensures long term viability of service including future development	N	N	Y
Improve efficiency / reduce cost	N	N	Y
Increases contribution	N	N	Y
Number of Outcomes Achieved	**0**	4	14

6. Workforce Planning

6.1 Recruitment

Option 1 does not require a change to the current substantive workforce position.

Options 2 and 3 requires expansion of the current substantive workforce as detailed in Appendix 6 Any increase in workforce is phased over the next 3 years to meet forecast increase in demand including full roll out of Bowel Scope Screening Programme. This phasing provides a degree of risk mitigation should the forecast demand not happen i.e. should the demand for symptomatic demand reduce / plateau over the next 12 - 18 months staff employed at that point would be used to bring forward bowel scope roll out.

6.2 Education

The delivery of a sustainable workforce is dependent on our ability to not only recruit consultants but to also increase our establishment of non-medical endoscopists all of whom should have been trained or will require training to the standards expected of a medical endoscopist.

Training for a non-medical endoscopist can take up to 2 years if being trained to undertake all three diagnostic procedures. However, from recent experience the majority of trainees are competent to undertake at least one procedure independently within 12 months of appointment. The service is currently supporting 4 trainee non-medical endoscopists and given our recent success in attracting staff to these posts we are confident we will be able to recruit and train more.

6.3 Changes in Working Practice

This case assumes that activity will be delivered via 3 session week days and 6 day working weeks without any expansion in estate. To support this there will be a requirement for our medical endoscopists to work flexibly into the evening and weekends to avoid the burden of all out of hours work falling to the non-medical endoscopists. To date some but not all medical endoscopists have confirmed they would be willing to work some evening and weekend sessions within their core job plans and it is the Centres intention that all future posts advertised will include programmed out of hours elective sessions. The proposed establishment increases allows for current day time session backfill to support this move plan.

7. Stakeholder Engagement

Key stakeholders who have been involved in developing the case

Endoscopy Unit staff
Clinical Lead for Endoscopy
Finance
Operational management team
Domestic Services

Key stakeholders who will be affected by the proposed change

Patients
Endoscopy Unit staff
Medical and Non-medical Endoscopists
Bowel Cancer Screening Team
Commissioners
Public Health England
NHS England

8. Risks to Delivery

- Inability to recruit and retain sufficient workforce to meet increasing demand for endoscopy services.

- National / Regional campaign impact on already struggling service.
- Non delivery of training trajectory for non-medical endoscopists
- Inability to replace consultant gastroenterologists who we anticipate may retire in 2018/19.
- Impact of changes to FOBT test spring 2017, potential to further increase referrals.

9. Recommendations

Option 3 is seen as the only option available to us at this time given the national shortage of gastroenterology consultants and non-medical endoscopists and the Executive Directors are asked to **approve** Option 3 for implementation.

The Care Group also wishes to recommend that a feasibility study is undertaken to expand the number of endoscopy rooms and decontamination facilities available as part of the SSP programme.

10. Post Implementation Review

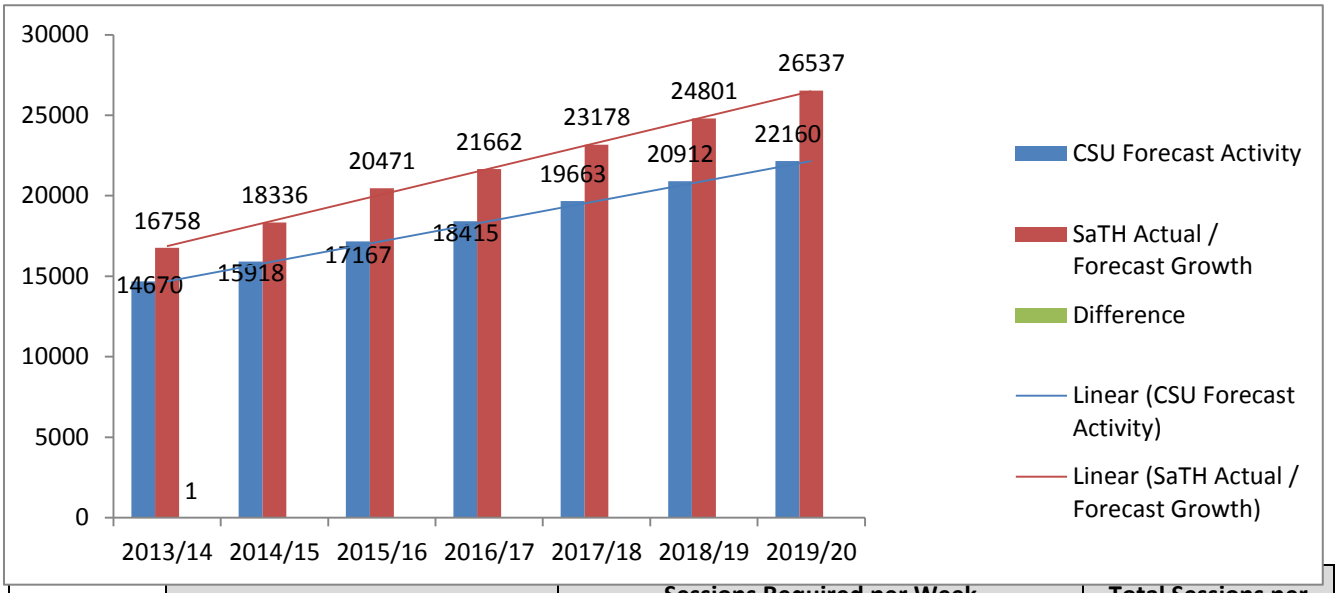
Key Performance Indicators

The achievement of the following KPIs will be used to assess the success of case implementation:-

- DM01 compliance
- Compliance with GRS timeliness for 2ww, routine and surveillance patients
- JAG accreditation awarded
- Improvement in nursing staff morale
- Recruitment and retention analysis

Appendix 1

	CSU Forecast Activity (Excludes Inpatients)	SaTH Actual / Forecast Growth (includes inpatients from 2014/15)	Percentage Increase
2013/14	14670	16758	
2014/15	15918	18336	9.42%
2015/16	17167	20471	11.64%
2016/17	18415	21662	5.82%
2017/18	19663	23178	7.00%
2018/19	20912	24801	7.00%
2019/20	22160	26537	7.00%



	Forecast Activity (Procedures)	Sessions Required per Week (Upper / Lower GI Endoscopy)	Total Sessions per Week
2017/18	23178	68	75
2018/19	24801	73	80
2019/20	26537	78	85

Assumptions

Average 1.5 point per patient

Average 10 points per list

Based on 51 week year

CSU Data excludes inpatients and Welsh

This analysis demonstrates that by 2019/20 there will need to be sufficient capacity to 26,537 endoscopic procedures / 39,806 procedure points per annum which equates to 77 sessions per week (26,537 x 1.5 / 10 / 51 = 78 + 7 urology / bronchoscopy list = 85 total).

The current forecast demand for:

2017/18 is 3477 sessions resulting in an annual capacity gap of 517 sessions (10 sessions per week) Total Capacity requirement including urology and bronchoscopy - 75 sessions per week

2018/19 is 3720 sessions resulting in an annual capacity gap of 760 sessions (15 sessions per week) Total Capacity requirement including urology and bronchoscopy - 80 sessions per week

2019/20 is 3981 sessions resulting in an annual capacity gap of 1021 sessions (20 sessions per week) Total Capacity requirement including urology and bronchoscopy - 85 sessions per week

Appendix 2

NHS Midlands and Lancashire CSU - Modelling Potential Changes in Gastro-Intestinal Endoscopy Activity in the West Midlands between 2013/14 and 2019/20 suggests local growth is forecast to increase from a 2013/14 baseline of 14,670 procedures to 22,160 by 2019/20 a 51% increase these numbers **do not** include endoscopy procedures carried out during an emergency in-patient stay.

From the detail below it can be seen that the greatest increase in demand will be for flexible sigmoidoscopy as bowel scope screening continues to be implemented.

		Total	Purpose			Procedure							
			Screening	Symptomatic	Surveillance	Flexi Sigmoidoscopy	Colonoscopy	CT Colonoscopy	Barium Enema	Upper GI Endoscopy	Upper GI EUS	HPB ERCP	HPB EUS
	Baseline 2013/14	14,670	360	12,010	2,300	2,370	4,800	290	60	6,590	100	380	90
	Match activity to demand	20	-	20	-	20	10	-	-	- 20	-	-	-
Demography & Population Health Status	Population Size	370	10	300	60	60	120	10	-	160	-	10	-
	Population Age Profile	930	- 10	790	150	130	260	30	-	470	-	40	-
	Cancer Incidence	10	-	10	-	10	30	-	-	- 30	-	-	-
	Cancer Survivorship	100	-	-	100	10	70	-	-	20	-	-	-
	Barrett's Oesophagus Incidence	30	-	30	-	-	-	-	-	30	-	-	-
Strategies / Initiatives / Clinical Practice	Screening > Surveillence	380	-	-	380	80	290	-	-	-	-	-	-
	BCSP : FOBT > FIT	770	610	-	160	60	660	40	-	-	-	-	-
	BCSP : Raise FIT Positivity Threshold	- 710	- 610	-	- 100	- 50	- 620	- 40	-	-	-	-	-
	BCSP : Bowel Scope Screening Roll Out	2,640	2,590	-	50	2,490	150	-	-	-	-	-	-
	Increase 2WW referrals and reduce variation	390	-	390	-	60	110	10	-	180	-	-	-
	Barrett's Surveillance	40	-	-	40	-	-	-	-	40	-	-	-
	New NICE Cancer Referral Guidelines	210	-	210	-	70	120	10	-	-	-	-	-
	Public Awareness Campaigns	480	10	470	-	60	120	-	-	270	-	10	-
TECH	Decommissioning Barium Enema	-	-	-	-	-	-	40	- 40	-	-	-	-
	Increase CT Colonoscopy	900	70	810	20	20	260	620	-	-	-	-	-
	Interaction	920	550	310	60	570	130	170	-	50	-	-	-
	Final 2019/20	22,160	3,580	15,340	3,240	5,930	6,370	1,410	-	7,780	110	460	90
	Growth	7,490	3,220	3,330	940	3,560	1,570	1,120	- 60	1,190	10	80	-
	% Growth	51	894	28	41	150	33	386	- 100	18	10	21	-

Appendix 3

Weekly funded capacity / procedure split

Procedure / Specialty	No. of Sessions Per Week
Upper / Lower GI Endoscopy (Gastro, Colorectal, Upper GI - PRH & RSH)	50
ERCP (Gastro - PRH & RSH)	3
Bowel Cancer Screening Programme (Gastro)	4
Bowel Scope Screening (Gastro - RSH Only)	2
Bronchoscopy (Respiratory – PRH & RSH)	5
Cystoscopy (Urology - PRH Only)	2
Total	**66**

The units are currently **funded** to operate as detailed below:

		PRH		RSH		
		No. of Sessions		No. of Sessions		
		AM	PM	AM	PM	Evening
Monday	08.00 -18.00	3	3	3	3	2 (BS)
Tuesday	08.00 -18.00	3	3	3	3	
Wednesday	08.00 -18.00	3	3	3	3	1
Thursday	08.00 -18.00	3	3	3	3	
Friday	08.00 -18.00	3	3	3	3	
Saturday	08.00 -18.00	1		2		

The units are currently operating at **premium cost** as detailed below:

		PRH		RSH		
		No. of Sessions		No. of Sessions		
		AM	PM	AM	PM	Evening
Monday	08.00 -18.00	3	3	3	3	2 (BS)
Tuesday	08.00 -18.00	3	3	3	3	
Wednesday	08.00 -18.00	3	3	3	3	1
Thursday	08.00 -18.00	3	3	3	3	
Friday	08.00 -18.00	3	3	3	3	
Saturday	08.00 -18.00	3	3	3	3	

Appendix 4
Current Funded Workforce

Endoscopy Units

	RSH	PRH
Band 7	1.00	1.00
Band 6	1.00	1.00
Band 5	14.14	12.05
Band 3	4.66	4.27
Band 2	4.70	4.17
Band 1	0.53	0.53
Total	**26.03**	**23.02**

Endoscopy Booking Office

	RSH / PRH
Band 3	2.00
Band 2	9.06
Total	**11.06**

Non-Medical Endoscopists

	RSH / PRH
Band 8b	1.00
Band 8a	0.64
Band 7 (Trainees)	2.92
Total	**4.56**

Medical / Non-Medical Endoscopists Job Planned Sessions per Annum

Upper and Lower GI Endoscopy Available Sessions Within Core Job Plans					Lists per Week	No. of Weeks	Core Job Plan Capacity	Points per List	Total Points
Gastro									
Bateman	5 lists per week		All procedures	BCSP / EMR / ERCP	5	32	160	10	1600
Bateman	1 list per week		All procedures	BCSP / EMR / ERCP	1	42	42	10	420
Butterworth	4 lists per week		All procedures	BCSP / EMR	4	29	116	10	1160
Butterworth	1 list per week		All procedures	BCSP / EMR	1	42	42	10	420
Smith	2 lists per week		All procedures	BCSP / EMR/ERCP	2	42	84	10	840
Smith	4 lists per week		All procedures	BCSP / EMR/ERCP	4	29	116	10	1160
Maxton	3 lists per week		All procedures		3	42	126	10	1260
Jones	2 lists per week		All procedures	EUS x1 list per week @ PRH	2	32	64	10	640
Townson	3 lists per week		All procedures		3	29	87	10	870
Townson	1 list per week		All procedures		1	42	42	10	420
Rye	1 list per week		OGD only		1	29	29	10	290
Tehami	3 lists per week		All procedures	ERCP/EUS	3	29	87	10	870
Tehami	1 list per week		All procedures		1	42	42	10	420
Harrison	3 lists per week		All procedures		3	32	96	10	960
Mahgoub	up to 8 lists per week		All procedures	*Agency Locum	8	42	336	10	3360
Mike (CoE)	1 list per week		OGD only		1	42	42	10	420
Stapleton	1 list per week		All procedures	*GP	1	42	42	10	420
Upper Gi									
Rink / Riera	1 pr week (shared)		OGD ONLY		1	32	32	10	320
Adjepong	1 pr fortnight		OGD ONLY		1	21	21	10	210
Colorectal									
Hunt	1 list per week		Colon / Flexi only		1	42	42	10	420
Cheetham	1 list per week		Colon / Flexi only		1	32	32	10	320
McCloud	1 list per week		Colon / Flexi only		1	32	32	10	320
Schofield	1 list per week		Colon / Flexi only		1	32	32	10	320
Lacy Colson	1 list per week		Colon / Flexi only		1	32	32	10	320
Farquharson	1 list per week		Colon / Flexi only		1	32	32	10	320
Hamilton	1 list per week		Colon / Flexi only		1	32	32	10	320
Clarke	1 list per week		Colon / Flexi only		1	32	32	10	320
TH Replacement	1 list per week		Colon / Flexi only		1	32	32	10	320
Nurse Endoscopsists									
Harnden	4 lists per week		All procedures	Bowel Scope Accredited	2	44	88	10	880
Bishop	4 lists per week		All procedures	Bowel Scope Accredited	4	44	176	10	1760
Naz	4 lists per week		OGD training		4	44	176	8	1408
Barber	4 lists per week		Flexi	Bowel Scope Accredited	4	44	176	10	1760
Brayford	5 lists per week		Colon / Flexi only	Bowel Scope Accredited	5	44	220	10	2200
Page	5 lists per week		Flexi	Bowel Scope Accredited	5	44	220	10	2200
					79	1234	2960		29248

Appendix 5

Income and Activity Sensitivity Analysis

Income Sensitivity Analysis

	Total £000	Year 1 £000	Year 2 £000	Year 3 £000	Year 4 £000	Year 5 £000	Year 6 £000	Year 7 £000	Total £000
2016/17 Outturn Daycase Income	6,940								
Growth Assumptions									
2%		139	142	144	147	150	153	156	1,032
4%		278	289	300	312	325	338	351	2,193
6%		416	441	468	496	526	557	591	3,495
7%		486	520	556	595	637	681	729	4,204
8%		555	600	648	699	755	816	881	4,954
10%		694	763	840	924	1,016	1,118	1,229	6,584
12%		833	933	1,045	1,170	1,310	1,468	1,644	8,402
14%		972	1,108	1,263	1,439	1,641	1,871	2,133	10,426
16%		1,110	1,288	1,494	1,733	2,011	2,332	2,705	12,674
18%		1,249	1,474	1,739	2,052	2,422	2,858	3,372	15,167
20%		1,388	1,666	1,999	2,398	2,878	3,454	4,145	17,927

Note:

The 2016/17 outturn activity is based on months 1-9 daycase activity pro rota for 12 months. Within the last three months activity increases in part have been due to clearing the backlog to achieve the DMO1 target.

Excluding the backlog element, activity throughout the year has been achieved through funded sessions and additional sessions via waiting list initiatives.

Activity Sensitivity Analysis

	Total HRG	Year 1 HRG	Year 2 HRG	Year 3 HRG	Year 4 HRG	Year 5 HRG	Year 6 HRG	Year 7 HRG	Total HRG
2016/17 Outturn Daycase Activity	16,471								
Growth Assumptions									
2%		329	336	343	350	357	364	371	2,449
4%		659	685	713	741	771	802	834	5,204
6%		988	1,048	1,110	1,177	1,248	1,322	1,402	8,295
7%		1,153	1,234	1,320	1,412	1,511	1,617	1,730	9,978
8%		1,318	1,423	1,537	1,660	1,793	1,936	2,091	11,757
10%		1,647	1,812	1,993	2,192	2,411	2,653	2,918	15,626
12%		1,976	2,214	2,479	2,777	3,110	3,483	3,901	19,941
14%		2,306	2,629	2,997	3,416	3,895	4,440	5,061	24,743
16%		2,635	3,057	3,546	4,113	4,772	5,535	6,421	30,079
18%		2,965	3,498	4,128	4,871	5,748	6,783	8,003	35,996
20%		3,294	3,953	4,744	5,692	6,831	8,197	9,836	42,547

The 2016/17 outturn activity is based on months 1-9 daycase activity pro rota for 12 months. Within the last three months activity increases in part have been due to clearing the backlog to achieve the DMO1 target.

Appendix 6

Financial

Financial Analysis of Option 2 - Continue Current Insourcing Arrangements

Category	Requirements	Band	Full Year WTE	Full Year £	2017/18 £	2018/19 £	2019/20 £	2020/21 £	2021/22 £
Income									
	Daycase activity			2,793,735	485,805	1,005,615	1,561,813	2,156,945	2,793,735
	Daycase Actual Outturn			252,198	192,401	205,869	220,280	235,699	252,198
Resource Requirements									
	Waiting List Costs			(216,798)	(216,798)	(216,798)	(216,798)	(216,798)	(216,798)
	Waiting List Costs Supporting Your World			(66,446)	(66,446)	(66,446)	(66,446)	(66,446)	(66,446)
	Bowel Screening/Scope Additional Posts	Various	0.97	(62,560)	0	(62,560)	(62,560)	(62,560)	(62,560)
	Pre-operative Assessment/Pre-Consenting	5	3.21	(114,661)	(76,441)	(114,661)	(114,661)	(114,661)	(114,661)
Non Clinical	Operational Manager	8A	1.00	(61,059)	(33,796)	(52,436)	(54,592)	(55,794)	(56,747)
	Governance	7	1.00	(52,436)	(30,588)	(52,436)	(52,436)	(52,436)	(52,436)
	Co-ordinator	4	1.00	(27,948)	(23,290)	(27,948)	(27,948)	(27,948)	(27,948)
	Secretarial Support	3	1.00	(24,320)	(14,187)	(24,320)	(24,320)	(24,320)	(24,320)
	Reception & Clinic Preparation	2	1.95	(43,231)	(28,821)	(43,231)	(43,231)	(43,231)	(43,231)
	Ward Clerk	2	1.60	(35,435)	(23,623)	(35,435)	(35,435)	(35,435)	(35,435)
	Porters	1	2.44	(46,262)	(26,986)	(46,262)	(46,262)	(46,262)	(46,262)
	Domestics	1	0.90	(25,701)	(25,701)	(25,701)	(25,701)	(25,701)	(25,701)
Non Pay	Clinical Supplies			(124,197)	(94,749)	(101,382)	(108,478)	(116,072)	(124,197)
	Maintenance Contract			(7,200)	(3,600)	(7,200)	(7,200)	(7,200)	(7,200)
	Your World - WLI			(3,390,702)	(575,358)	(1,932,756)	(3,390,702)	(3,390,702)	(3,390,702)
	Capital Charges				(173,829)	(19,362)	14,023	345	(24,190)
Total Resource Requirments			15.08	(4,298,956)	(1,414,213)	(2,828,933)	(4,262,747)	(4,285,221)	(4,318,834)
Contribution				(1,253,022)	(736,007)	(1,617,449)	(2,480,654)	(1,892,577)	(1,272,900)

Financial Analysis of Option 3 - Expansion of Workforce

Category	Requirements	Band	Full Year WTE	Full Year £	2017/18 £	2018/19 £	2019/20 £	2020/21 £	2021/22 £
Income									
	Daycase activity			2,793,735	485,805	1,005,615	1,561,813	2,156,945	2,793,735
	Daycase Actual Outturn			252,198	192,401	205,869	220,280	235,699	252,198
Resource Requirements									
Consultant	Consultant		1.00	(122,390)	0	(122,390)	(122,390)	(122,390)	(122,390)
	Waiting List Reductions			196,610	0	54,200	108,399	196,610	196,610
	Your World - WLI			0	(132,892)	0	0	0	0
Nursing	Nurse Endoscopist	8B	1.00	(77,961)	0	(62,946)	(64,960)	(68,233)	(70,350)
	Nurse Endoscopist	8A			(40,104)	0	0	0	0
	Nurse Endoscopist	8A	4.12	(260,726)	0	(72,147)	(148,673)	(225,817)	(232,841)
	Nurse Endoscopist	7			(43,696)	(67,376)	(65,063)	0	0
	Bowel Screening/Scope Additional Posts	Various	0.97	(62,560)	0	(62,560)	(62,560)	(62,560)	(62,560)
	Pre-operative Assessment/Pre-Consenting	5	3.21	(114,661)	(76,441)	(114,661)	(114,661)	(114,661)	(114,661)
	Endoscopy Units Staffing	Various	5.75	(294,840)	(33,354)	(285,793)	(294,840)	(294,840)	(294,840)
Non Clinical	Operational Manager	8A	1.00	(61,059)	(33,796)	(52,436)	(54,592)	(55,794)	(56,747)
	Governance	7	1.00	(52,436)	(30,588)	(52,436)	(52,436)	(52,436)	(52,436)
	Co-ordinator	4	1.00	(27,948)	(23,290)	(27,948)	(27,948)	(27,948)	(27,948)
	Secretarial Support	3	1.00	(24,320)	(14,187)	(24,320)	(24,320)	(24,320)	(24,320)
	Reception & Clinic Preparation	2	1.95	(43,231)	(28,821)	(43,231)	(43,231)	(43,231)	(43,231)
	Ward Clerk	2	1.60	(35,435)	(23,623)	(35,435)	(35,435)	(35,435)	(35,435)
	Porters	1	2.44	(46,262)	(26,986)	(46,262)	(46,262)	(46,262)	(46,262)
	Domestics	1	0.90	(25,701)	(25,701)	(25,701)	(25,701)	(25,701)	(25,701)
Non Pay	Clinical Supplies			(124,197)	(94,749)	(101,382)	(108,478)	(116,072)	(124,197)
	Maintenance Contract			(7,200)	(3,600)	(7,200)	(7,200)	(7,200)	(7,200)
	Nuffield			67,586	67,586				
	Your World				(242,991)				
	Capital Charges				(173,829)	(19,362)	14,023	345	(24,190)
Total Resource Requirments			26.94	(1,116,731)	(981,062)	(1,169,384)	(1,176,327)	(1,125,944)	(1,168,697)
Contribution				1,929,203	(302,856)	42,100	605,766	1,266,700	1,877,237

Notes

Income growth is based on a 7% increase in daycase activity
Your World will continue for the first six months of 2017/18
Costs are at top of the grade (inc employers costs) and unavailabilty where necessary