# **WEST OF ENGLAND PATHOLOGY NETWORK** STRATEGIC OUTLINE CASE

Senior Responsible Officer: Deborah Lee, Chief Executive Officer, Gloucestershire

Hospitals NHS Foundation Trust

**Sponsoring Body:** West of England Pathology Network **Date**: 24<sup>th</sup> October 2019

### **EXECUTIVE SUMMARY**

The purpose of this Strategic Outline Case (SOC) is to secure organisational Board support for the next steps in considering the rationalisation of pathology services across the West of England Pathology Network. It has been developed with the full support and input of the member organisations (and their stakeholders) and is the Network's response to the NHS Improvement expectation that further consolidation of pathology services, as heralded in the Carter Review of 2006, would take place across the NHS. NHSI's expectations were communicated to NHS providers of pathology services in September 2017 (Appendix 1) including the view that for the West of England Network, full consolidation of services to a single hub located at North Bristol NHS Trust was their preferred model. The NHSI financial modelling indicated that the Network could release £8.2m through the single hub model being proposed (Appendix 2).

Following extensive discussions, which resulted in the generation of six additional options, in addition to that advocated by NHSI, it is now proposed that three options - alongside a do nothing scenario - are taken forward for further development and appraisal culminating in the production of an Outline Business Case (OBC). Of note, the three shortlisted options do not include the model advocated by NHS Improvement on the basis that this model evaluated less positively than the "do nothing" scenario.

Organisational Boards are asked to approve the SOC and confirm their support for development of the three shortlisted options, including the modest investment set out in section 9 of the SOC, and to approve the appended Memorandum of Understanding which sets out the basis on which the Network member organisations will work together to develop the Outline Business Case.

## 1. INTRODUCTION

The purpose of this strategic outline case is to describe the background, current context and proposals in respect of pathology services across the member Organisations of the West of England Pathology Network and, importantly, to seek Boards' approval for the development of an Outline Business Case.

The Case aims to set out the drivers for change, including a summary of the challenges and opportunities that face the services in scope. Having been at the forefront of thinking and development of pathology services nationally, the Network has now fallen behind many others in having not yet gained the support of Boards to develop a business case for the wholescale rationalisation of pathology services across the Network is more challenging. The reasons for this are multifactorial and considered as part of this Strategic Outline Case but can be summarised as uncertainty about the financial and quality benefits to be derived through such an approach, recent investment in facilities outside of the proposed hub and the challenges presented by the Network's geography. A further consideration germane to this case has been a lack of resource to develop a strategic case; a commitment from Boards to develop an Outline Business Case will also require a commitment to resource such a step and this is addressed through this proposal.

Oversight of the SOC development has been the West of England Pathology Network Board, Chaired by Deborah Lee, Chief Executive of Gloucestershire Hospitals NHS Foundation Trust who is the Senior Responsible Officer (SRO) for the Strategic Outline Case. The SOC was considered by the Network Board at its October meeting and supported by all members.

## 2. PROJECT RATIONALE AND CONTEXT

In September 2017 NHS Improvement (NHSI) wrote to all Trusts in England to propose a consolidation of Pathology nationally in to 29 networks in a new hub and spoke arrangement with a view to supporting the realisation of efficiencies following on from the Carter review and Model Hospital tool developments.

Locally the proposal was for North Bristol NHS Trust (NBT), University Hospital Bristol NHS Foundation Trust (UHBFT), Royal United Hospitals NHS Foundation Trust (RUHFT), Weston Area Health Trust (WAHT) and Gloucestershire Hospitals NHS Foundation Trust (GHFT) to form a network and in doing so cross the boundaries of three STP regions.

The context of pressures, challenges, opportunities and previous history of pathology partnership working for each of the organisations identified for the network is different and has been considered within the development of the wider objectives of this Strategic Outline Case. In early 2018 the identified organisations, with the addition of Public Health England's SW Regional Laboratory (PHE) – provider of Microbiology services to UHBristol and the RUH, agreed to form a Network Board with the remit to:

- identify any configurational changes that would be financially beneficial, improve quality or increase efficiency
- co-ordinate and oversee the implementation of any mutually agreed changes

Within this scope, the network agreed to include consideration of the specific NHSI proposals which identified NBT as the host for the hub laboratory with the other Trusts acting as spokes or Essential Services Laboratories (ESLs) within the new Network proposal. The stated estimated benefit from this consolidation was identified by NHSI as £8.4m. This figure has not yet been validated by the West of England Network and confirming the scale of the opportunity would be a key feature of the Outline Business Case.

Appendix 3 summarises the current configuration of Pathology Services within the West of England Pathology Network.

### 3. STRATEGIC CASE FOR CHANGE

Pathology is an essential clinical service for all acute and primary care healthcare providers with 70-80% of clinical decisions requiring input from pathology and 95% of chronic disease pathways reliant upon pathology. As such it is critical to delivering a high quality clinical service, patient flow in acute settings, reduced bed occupancy, avoided admissions and fewer secondary complications that meet the needs of patients and clinicians.

Pathology Modernisation has been in sharp focus nationally and locally within Bristol, North Somerset and South Gloucestershire (BNSSG) and Gloucestershire since the publication of the second Lord Carter of Coles report in 2008. The key recommendations of this report in relation to service configuration, logistics, information technology and the opportunity to deliver 20% efficiency savings in pathology has underpinned the national and local pathology strategy over the last 10 years. This in turn has led to a number of major developments within BNSSG and Gloucestershire, as follows:

- 1. The implementation of a pan Bristol, WAHT and RUH Managed Equipment service in 2009
- 2. Refurbishment and enhancement of Blood Science Laboratory facilities at BRI
- 3. PCT Pathology Review process from 2010-2013, which resulted in Severn Pathology and the PHE Collaboration with NBT. Proposed consolidation of UH Bristol and WAHT into a single site did not take place.
- 4. Outsourcing of local logistics solutions across BNSSG
- 5. Development of New Laboratory Facilities at RUH
- 6. The development of the Phase 2 Pathology building at NBT and the integrated Pathology model for Severn Pathology
- 7. Implementation of a single Clinisys LIMS system for NBT, UHB, WAHT and PHE in 2016
- 8. NBT awarded contracts as the Genomics Laboratory Hub for the South West and the HPV cervical screening provider for the South West
- 9. Gloucester and Cheltenham consolidation of Microbiology on the Gloucester site and Histology, and Cytology at Cheltenham, and partial consolidation of blood sciences on the Gloucester site (out of hours Clinical Biochemistry).
- Consolidation of Cell Path services from Frenchay, Weston and UHBristol on the North Bristol site
- 11. Consolidation of Infection Sciences from Frenchay, RUH, Myrtle Rd and UHBristol on the North Bristol site and subsequent release of Estate.
- 12. Refurbishment of the Clinical Biochemistry Lab at GHFT under their current Roche Managed Service arrangement
- 13. Rationalisation of GHFT LIMS onto one system and current development of a new LIMS compliant with SnoMed CT
- 14. West of England Pathology Network jointly procuring a new Managed Service Contract commencing in June 2021
- 15. Bristol Haematology Oncology Diagnostic Service (BIHODs) is used by the RUH for integrated haematological diagnostic reporting
- 16. Genetic monitoring of CML with PCR for BCR/ABL RUH will be moving genetic testing from another provider to NBT
- 17. RUH Haematology and Histopathology departments use NBT for Histopathology second opinions on bone marrow trephines and lymph node cases LIMS governance board has been set up between the hospital sites

NHSI wrote to Trusts in September 2017 with proposals for a new hub and spoke configuration of 29 pathology networks and have provided support in the form of a number of events focused on the pathology efficiency expectations, where and how these might be delivered and the requirements for developing business cases that are aligned to the 'Model Hospital' opportunities.

Trusts within the West of England responded to these proposals at the end of September 2017, formed the West of England Pathology Network Board and have been working with NHSI ever since leading to the development of this Strategic Outline Case.

A number of quick wins from this process have already been realised from the savings opportunity originally identified within national proposals:

- A Network wide retendering of the Managed Service Contracts (MSC) which supports the national agenda and development of the network by delivering enhanced savings. It will also act as an enabler for any further changes within the network in line with whatever service configuration proposals emerge through the Network Business Case process. Standardisation of technology as within the current MSC is a key enabler for reconfiguration whereas a lack of standardisation is a blocker when it comes to delivering service redesign. One of the benefits already realised from the network approach is that of scale. GHFT have now been included in this tender to tie in with the end of their current Managed Equipment Service. The contract has also been expanded to include new technologies. It should be noted that the West of England Pathology Network is currently in the dialogue stage of procurement for the West of England Pathology MSC, which would cover the vast majority of Pathology Services across the 5 local Trusts and PHE. This procurement is expected to conclude with contracts being signed in June 2021. This £300m procurement represents a significant opportunity for the network to standardise, reduce unnecessary duplication and deliver a broad range of quality and financial benefits, whilst maximising the benefits of innovation in technology with an appropriate transfer of risk to a Primary MSC Provider.
- The expansion of the Pathology Network has also facilitated closer working between the laboratories. There are currently projects under way for IT links between RUH and NBT using the National Pathology Exchange software (NPEx). This system will provide the facility to electronically request tests from one laboratory to another and receive electronic reports straight into the LIMS from the other laboratory.
- The operational network group has also reviewed the "send-away" test volumes throughout the network and procured a joint "send-away" test contract with a London provider. NBT, UHBFT and GHFT laboratories are all benefiting from efficiencies in logistics and reporting as well as better prices based on the total contract volumes.

Further work for the operational group includes a review of pathology test nomenclature, panel and test activity and costings across the network.

Current challenges and opportunities for pathology include:

- Continual drive to improve efficiency
- Recruiting and retaining high quality biomedical scientist and consultant staff particularly with the challenge of local demographics
- Elimination of inappropriate variation
- Ensuring the right test is performed on the right patient at the right time and in the right place – e.g. appropriate repertoire with appropriate turnaround times to optimise the efficiency and safety of patient pathways e.g. prevent admissions or facilitate earlier discharges or manage patients closer to home

- Providing a comprehensive 24/7 service where required reflecting the evolving pattern of care and service provision e.g. evening outpatient clinics, weekend theatre lists and weekend discharges
- Ever increasing workload numbers and complexity
- Demand optimisation
- Effective use of IT to support requesting and clinical decision making e.g. Order Comms,
   NPEx and to improve efficiency
- Impact of UKAS accreditation placing additional demands on Pathology departments
- Governance and accountability
- Challenges of GIRFT initiative
- Quality improvement/drive towards excellence of service
- Digital pathology requirement for histopathology departments
- Developing and co-ordinating an effective POCT programme, not just within the local Healthcare environment, that delivers safe, efficient and cost effective care that is fully integrated within our Pathology services

### 4. PATHOLOGY BENCHMARKING

Pathology features within the 'Model Hospital', as an area of opportunity for removal of unwarranted variation. The model hospital is the key output of Lord Carter's broader review of hospital efficiency and productivity, which identifies a potential for pathology to save £200m nationally. The delivery of the recommendations from Lord Carter's Report alongside realisation of the opportunities within the 'Model Hospital' is being led by NHSI and there is growing expectation that the West of England Pathology Network makes progress on this agenda.

The table below compares the cost per test for each site:

	Microbiology	Cellular Pathology	Blood Sciences
NBT	£ 9.96	£20.58	£1.50
GHFT	£ 4.66	£19.32	£0.88
RUHFT	£ 9.29	£13.86	£0.89
UHBFT	-	-	£0.55
WAH	£ 2.54	-	£1.97
PHE	£10.13	-	-
Group Median	£ 7.32	£17.92	£1.16
National Median	£ 4.36	£21.11	£0.92

Table 1 Cost By Test By Discipline for Each Trust (Model Hospital; latest published period 2017/18)

The quality and comparability of the benchmarking data is variable and accounts for some of the differences above; a key component of the Outline Business Case will be to develop reliable benchmarking to inform both the Network opportunity and individual organisation opportunity.

The methodology used in each individual Trust organisations is different and needs to be taken into consideration when interpreting the benchmarking

## 5. CURRENT POSITION

Reflecting the nature and location of pathology services in the Network area, members agreed that wholesale adoption of the NHSI recommended model was unlikely to meet the needs and aspirations of local providers and as such work was undertaken to scope and evaluate the options open to the Network which had the potential to realise the quality and financial benefits described in the Model Hospital.

Network member organisations held a workshop in December 2018 with the primary aim of identifying a long list of options for pathology networking across the defined geography. This culminated in each organisation evaluating (and scoring) each of the options based on their own local service requirements. This evaluation has been collated and used to draw up a short list of options to compare against a "do nothing" further option and a full NHSI model consolidation of pathology services in a hub and spoke.

To assist with this step, the Network's Operational Group have sought information from other pathology networks. Representatives from the Operational Group visited Frimley Park Hospital, one of the hub sites of the Berkshire and Surrey Pathology Service; it was very clear from the visit that the network had taken many years to achieve its current structure. They had a strong vision based on technology, procurement and workforce. There were also major drivers to the setting up of the network due to the age of the facilities and equipment at a couple of the sites. The model was based on a contractual joint venture between the Trusts. A single hub had been discounted due to the lack of contingency.

The Operational Group also approached Kent and Medway pathology network to gain an understanding of the development of their network. They are at a much earlier stage than Berkshire and Surrey Pathology Service. A full time project team have been employed to work on the pathology network development, with the outline business case in development covering MSC, LIMS and a number of site configurations.

The factors considered in the workshop for developing the long list evaluation criteria were:

- Delivering high quality pathology services that are recognised as responsive, innovative and able to deliver long term sustainable benefits meeting the needs of the pathology market
- Increased efficiency benefits through economies of scale and removal of unnecessary duplication
- Improvements in quality linked to a common governance structure, minimising potential risks to patient safety and embedding of continuous improvement methodologies
- Delivering appropriate capacity and new technology to respond effectively and consistently to the needs of an aging population demographic with increasing incidence of long term conditions and embedding of continuous improvement methodologies
- Service resilience through the 'whole system' approach minimising waste and redundancy
- An ability to compensate for skill shortages in the Pathology workforce through the benefits of shared training and recruitment initiatives, new technology and enhanced opportunities for skill mixing
- Standardised Reporting across the network with significant patient flows avoiding the need for repeat testing
- Driving efficiency in patient pathways aligned to access to new technology.
- Developing a network model for Pathology that supports a clinically and financially sustainable service.
- Advocating equality for patients throughout the geographical area based on access to common testing platforms, results interpretation and specialist testing irrespective of where the patient comes from or is referred to
- Increasing the alignment between Public Health England (PHE) a fully integrated collaborating partner in pathology at NBT and its customers across the network through standardisation of molecular technologies, sharing of expertise and the opportunity to integrate serology testing with biochemistry automation
- Introduction of connected IT LIMS systems linking all sites and enabling the efficient movement of specimens between sites.

## 6. CONSIDERATION OF OPTIONS

Reflecting the issues and considerations above, the following criteria and associated weighting were agreed by the Network Board.

The options were scored from 1-5 by each organisation for each critical success factor (1-meets none of the requirements to 5 meets all of the requirements). The total split for the success factors 35% for general, finance and governance and 65% patients and clinical quality.

The scores were multiplied by the overall weighting for each critical success factor and the total scores from each organisation (NBT, GHFT, WHAT, UHBFT and RUHFT) per option were averaged to give the combined scores.

Critical Success Factor	Link to SMART Objective	Proposed Sub - Weighting	Proposed overall weighting	Rationale for Weighting
Standardisation		15	9.8	The model facilitates the reduction of unwarranted variation, removal of unnecessary duplication and allows us to standardise to maximise resilience, quality and value. It allows for the introduction of common standard operating procedures, common ranges, KPIs and clinical reporting across sites.
Patient Safety and Experience		25	16.3	The option minimises any potential risk to patient safety, e.g. the need to have some services within a certain proximity to the patient, with any necessary links between staff, consultants (MDTs) and the patient are preserved or established.
Clinical Quality		20	13	The option provides the right level of clinical oversight to create a consultant led service with a common clinical governance structure across all sites
Clinical Responsiveness		20	13	The option delivers clinical responsiveness to acute trust requirements, local clinical specialisms and evolution of clinical services
Achievability		8	4.9	The service addresses the emerging needs of the pathology market and would face the lowest level of resistance by stakeholders
Achievability		8	4.9	Evidence that other organisations have successfully implemented the model without affecting quality
Workforce Sustainability		5	3.3	Does this option allow for higher levels of recruitment and retention. Does it present opportunities to manage the predicted/actual workforce shortage. Does it allow for sharing of skills and the broader benefits of driving staff and service development
Strategic fit, innovation and clinical sustainability		15	5.3	The option would provide the greatest chance for WoE Pathology Network to demonstrate alignment with national policy, become a clinically & financially sustainable service, supporting the retention of current & future revenues in the face of emerging

			commissioning intentions and supporting the development of the service to meet the future needs of the new models of care / value based population health propositions.
Potential Affordability	25	8.8	The option would provide the best opportunity to access funding and is likely to provide a high return on investment. Capital requirements are low and therefore achievable.
Potential Value for Money	30	10.5	The option would provide the greatest level of savings over the long term through economies of scale, synergy and removal of unnecessary duplication / unwarranted variation
Facilities, IT and Equip Systems	15	5.3	The options allows the introduction of a common of connected IT LIMS that would link all sites and common equipment platforms across all sites. Availability of estates for development of pathology
Control and Governance	15	5.3	The option would allow WoE Pathology Network to operate with an autonomous governance structure allowing it to operate in the market and effectively respond to market forces

## Table 2: Critical Success Factors and Weightings

Against the SMART objectives and Critical Success Factors three possible configurations exceeded the status quo model and it is proposed that these are taken forward for detailed evaluation through an Outline Business Case, against the "do nothing" scenario. Of note however, the prescribed NHSI model did not evaluate above the current configuration and it is not proposed that this be developed further.

Options	Main Features	Combined Score
Status Quo	No change in overall service ownership but continue to co- operate for mutual benefit on procurement etc. Board process to continue for mutual benefit.	3.45
Virtual Hub	Manage services as a network to minimise duplication and maximise efficiency whilst maintaining scale at each site. Further centralisation of specialist testing. Make best use of available technology to facilitate Network working e.g. digital pathology. Centralise some functions – including potentially Quality Management, training, IT. Operate to a single set of quality standards – with common SOPs etc.  Laboratories remain on current sites with joint pathology Network Board and memorandum of understanding:	4.08
Distributed Hub	Consolidation by test/technology/sub-specialism at different sites. Sub specialisms delivered locally to clinical sub specialisms and ensuring local ESL requirements (to be defined) are provided at all sites as a minimum. Centralise some functions - including, potentially, Quality Management, training, IT. Operate to a single set of quality standards - with common SOPs, etc.  Laboratories remain on current sites with Network Board and memorandum of understanding	3.69

Multi Hub	Full consolidation by discipline across the available sites with ESLs (to be defined) at all other sites. Centralise some functions - including, potentially, Quality Management, training, IT. Operate to a single set of quality standards - with common SOPs, etc.	3.44
Dual/Twin Hub	Full consolidation into two mirrored or complimentary laboratories with ESLs (to be defined) at each other site. Centralise some functions - including, potentially, Quality Management, training, IT. Operate to a single set of quality standards - with common SOPs, etc. Two large hub laboratories and ESLs on other three sites.	3.50
NHSI Model	Full consolidation into single hub at NBT with NHSI defined ESLs at all other sites	3.26
Outsource	Partnership with private provider to deliver pathology services for all providers on the same terms following a procurement process	2.64

Table 3: Combined Scores For Each Configuration

## 7. FUTURE NETWORK MANAGEMENT MODEL

The purpose of any reconfiguration of activity will be to sustain quality over the long term whilst ensuring the best use of resources. The Network recognises that change to delivery model may result in differential impact between organisational members. This is likely to require the network to describe partnership and governance arrangements that ensure an appropriate distribution of the resulting risks and benefits. The options for such arrangements will be explored at OBC phase for final conclusion in the FBC.

## 8. TIMETABLE AND NEXT STEPS

Subject to support of member Boards, it is proposed that the three shortlisted options, alongside the required "do nothing" option are developed further and evaluated through the production of an Outline Business Case, through which a preferred option will be identified for Final Business Case (FBC) development.

Through the presentation of the SOC, member organisations will be asked to confirm that none of the short-listed options are unacceptable, in principle, sign up to a Memorandum of Understanding as the governance framework for the next phase of this programme and commit to the investment proposed in a team to develop the OBC.

Key Milestones	Timing
SOC Approval	November 2019
Agreement of OBC project resources	November 2019
Agreement of Memorandum of Understanding for development of OBC	November 2019
Further development of shortlisted options to enable detailed	December 2019 to
financial and quality impact evaluation	March 2020
OBC Approval *	June 2020

Table 4 Key deliverables and outline timeframe

## 9. PROJECT STRUCTURE AND RESOURCING

This Strategic Outline Case has been developed through the contribution of staff from Network member organisations. However, the development of the OBC will require additional dedicated to capacity and capability and the table below describes the estimated costs.

<sup>\*</sup>This timeline will be confirmed with alignment to the MSC.

Description	WTE	Time Period	Cost £
Programme Director	0.2 WTE	6 months	£8,490
Programme Manager	1 WTE	6 months	£35,699
Finance support	0.5 WTE	6 months	£17,850
Legal support	As required and approved by the programme director	6 months	
Administration support	0.5 WTE	6 months	£6,891
Subject Matter Expertise			£10,000
Stage 1 - Pay Total			£78,930
Other Costs			
Non-pay			£7,900
Stage 1 - Other Total			
Contingency 15%			£13,024
Projected OBC Costs			£99,855

Organisation	Pathology Budget	% Share	Total Requested Cost £
GHFT	£21.68m	19.9	19,871
NBT	£39.93m	36.6	36,547
PHE	£11.20m	10.3	10,285
RUH	£15.65m	14.3	14,279
UHB	£14.52m	13.3	13,281
WAHT	£6.10m	5.6	5,592
Total		100%	£99,855

Should the OBC proceed to Full Business Case, the future resources required will be reviewed and may change.

## 10. KEY RISKS

The primary risks to the OBC development and proposed mitigation measures are described below

Risk	Mitigation Measures	
Insufficient capacity and expertise to develop OBC to required standard	Secure commitment to resource through OBC	
	Identify additional capacity and capability from member organisations and/or external sources	
Failure to meet proposed timeline	Establish robust programme management and oversight arrangements including sufficient capacity and capability in programme team	

NHSI approval	SOC approval and early agreement of NHSI support for OBC approach and content. Involvement of key NHSI personnel in Network Board and related activities.
Failure to secure support of member organisation Boards	Senior representation from member organisations on Network Board to enable identification of concerns and barriers to approval
	Involvement of member organisations lead staff in development of the Outline Business Case to reduce likelihood of challenge to OBC content
Failure to align with the managed service contract (MSC) with resulting impact on OBC development and final option.	Risk identified as part of MSC procurement approach and approach and timings now aligned in so far as legally sound to do so.

## 11. RECOMMENDATIONS

Trust Boards are asked to approve this Strategic Outline Case (SOC) and in doing so agree to:

- 1) The detailed development of the three shortlisted options to OBC level:
  - Virtual hub
  - Distributed hub
  - Dual/twin hub
- 2) Agreement to enter into a Memorandum of Understanding to govern the development of the Outline Business Case
- 3) Commitment to the proposed share of programme costs

## **Current configuration of Pathology Services within the West of England Pathology Network**

Organisation	Pathology Services Provided	Referral Centre (Yes/No)	If Yes for which Services
North Bristol NHS Trust	Clinical Biochemistry (Routine & Specialist) Clinical Haematology Clinical Immunology Tissue Typing Blood Transfusion Cellular Pathology  • Histopathology*  • Cytology (Designated SW Regional HPV Screening Centre) Infection Sciences (Routine and Antimicrobial Assay Lab) South West Genomics Hub Laboratory	Yes	HPV Testing Genomics Testing SIHMDs Newborn Screening Antibiotic Reference Immunology
University Hospital Bristol NHS Foundation Trust	Clinical Biochemistry (Routine & Specialist) Clinical Haematology Clinical Immunology	Yes	Metabolic Testing Specialist Coagulation
Royal United Hospital Bath NHS Foundation Trust	Clinical Biochemistry (Routine?) Clinical Haematology Clinical Immunology Blood Transfusion Cellular Pathology  Histopathology  Non Gynae Cytology  Andrology	No	
Gloucestershire Hospitals NHS Foundation Trust	Clinical Biochemistry (Routine) Clinical Haematology Clinical Immunology Blood Transfusion Cellular Pathology  • Histopathology  • Non Gynae Cytology Infection Sciences (Microbiology)  • Bacteriology  • Mycology  • Mycology  • Molecular Virology  • Manual and Automated Virology (Serology)  • Andrology	No	
Weston Area Healthcare NHS Trust	Clinical Biochemistry (Routine) Clinical Haematology Blood Transfusion Microbiology - Bacteriology	No	
Public Health England SW Regional Laboratory	<ul> <li>Infection Sciences (Microbiology)</li> <li>Bacteriology (provider for UH Bristol &amp; RUH)</li> <li>Mycology</li> <li>Molecular Virology</li> <li>Manual and Automated Virology (Serology)</li> </ul>	Yes	

<sup>\*</sup>NBT provides Histopathology Services for Bristol and Weston