

<b>MEETING</b>	<b>Trust Board</b>	<b>Ref No. 7.2</b>
<b>DIRECTOR</b>	<b>Finance, Estates and Capital Development</b>	<b>Date: 4 November 2021</b>
<b>Outline Business Case for the Replacement of the Managed Equipment Service for the Royal Victoria Hospital – Imaging, Cardiology, Theatres and Critical Care</b>		
<b>Purpose</b>	<ul style="list-style-type: none"> <li>• The Department of Health (DoH) and Department of Finance (DoF) approved the Strategic Outline Case for this project April 2020. In June 2021, the DoH and DoF approved a Business Case that allows the Trust to extend the current PFI contract with Philips Healthcare for a further 2 years to 30/09/2023.</li> <li>• The PFI supplies the majority of clinical equipment and information systems within the RVH Imaging Centre (including 4 cath labs), adult operating theatres and adult critical care. The HSCB provide recurrent revenue funding of £9.7m per annum to the Trust for the existing MES contract. Under the terms of the contract, Philips provide the equipment and clinical information systems to an agreed specification and are responsible for maintenance and replacement of equipment in line with agreed lifecycles. Philips also work to a robust performance regime to minimise any equipment downtime and ensure a high quality of service.</li> <li>• The Trust must ensure that alternative arrangements are in place at contract end in order to ensure service continuity. Otherwise, the RVH would not be able to function without access to all of its imaging services, 4 of its 6 cath labs and the majority of its adult theatres and critical care beds (excluding cardiac surgery theatres and critical care).</li> <li>• The attached summary of the OBC provides information on the need for this project, the objectives, the options considered to replace the above contract when it ends in September 2023, the short listed options, the scores for these options, the costs of these options (including sensitivity analysis and optimism bias), the risks, the rationale for selecting the preferred option and the project management arrangements.</li> </ul>	

<b>Corporate Objective</b>	<ul style="list-style-type: none"> <li>• Safety, quality and experience</li> <li>• Service delivery</li> <li>• Resources</li> </ul>
<b>Key areas for consideration</b>	<ul style="list-style-type: none"> <li>• <b>Issues /risks</b> <ol style="list-style-type: none"> <li>1. Ensuring that an alternative arrangement is in place when the current contract ends to ensure service continuity on RVH site</li> <li>2. Availability of the required capital funding which has been identified under the business case options. (Recurrent revenue funding in place for current MES solution but changes in accounting rules change the capital and revenue consequences).</li> <li>3. Transition of clinical information systems under current contract to regional solutions (NIPACS and Encompass), ie these systems will not be included in any future MES.</li> </ol> </li> <li>• <b>Challenges</b> <ol style="list-style-type: none"> <li>1. Completion and approval of business case to enable an alternative solution to be in place by contract end.</li> <li>2. Completion of the procurement exercise for a new MES within project timeframes.</li> </ol> </li> <li>• <b>Internal/External engagement</b> <ol style="list-style-type: none"> <li>1. A project board and project team have been established.</li> <li>2. There is full engagement with the relevant clinical teams, service management and finance colleagues.</li> <li>3. Legal and procurement advisers have been appointed and are fully engaged in project Board.</li> <li>4. Early engagement has taken place with the HSCB and Department of Health.</li> </ol> </li> <li>• <b>Human rights / Equality</b> <ol style="list-style-type: none"> <li>1. No issues have been identified</li> </ol> </li> </ul>
<b>Recommendations</b>	<ul style="list-style-type: none"> <li>• The Trust Board approved the high level aims, objectives and options in this OBC in September 2021. <b>This is a follow up request for formal approval of the completed final draft OBC</b> for the Replacement of the RVH MES so that it can be submitted to the Department of Health. ET approved this on 20 October 2021.</li> </ul>

## Outline Business Case

### Replacement of the Managed Equipment Service for the Royal Victoria Hospital

#### Imaging, Cardiac Catheterisation, Theatres and Critical Care

## Executive Summary

### 1.0 Need for the project

- 1.1 The RVH has a Private Finance Initiative (PFI) contract which provides medical equipment for the Imaging Centre, four of the Cath Labs and most of the theatres, and 32 critical care beds on the RVH site. It includes a range of services designed to enhance performance (98% uptime) underpinned by a mechanism of financial penalties for non-performance and quality failures. Equipment is replaced when it reaches the end of its recommended lifecycle by equipment which is equivalent in the market place and is updated when updates are available.
- 1.2 The clinical staff using the equipment all report a very high degree of satisfaction with these arrangements and this is demonstrated in the PPE for the PFI completed in February 2020.
- 1.3 This PFI contract is due to end 30/09/2023 (having been extended for 2 years from 15 to 17 years earlier this year). When the PFI contract ends, if no action is taken all the equipment is removed and services cease as the equipment is owned by the PFI provider.
- 1.4 The OBC clearly sets out the need for all the equipment to be retained based on an analysis of capacity and demand within imaging, cardiac cath labs, theatres and critical care. Based on advice from PaLS/DLS on the appropriate scale of this project, the decision has been taken to restrict this project to the equipment included in the PFI, with the flexibility to increase the asset base for imaging, cardiac cath labs, theatres and critical care in the RVH at some point in the future if demand increases and further funding is identified through the business case process.
- 1.5 The purpose of this OBC is to identify a way forward when the PFI ends to ensure there is no service disruption due to lack of equipment and that service performance is not adversely affected in the future when new contractual arrangements are put in place.

### 2.0 Objectives Ranked in order of Priority

- 2.1 1<sup>st</sup> Project Objective (1<sup>st</sup> equal in priority) "To optimise patient care in imaging, cardiac catheterisation labs, theatres and critical care in the RVH by ensuring

that the medical equipment provided in these departments minimises the risk of causing harm to patients and staff.”

- 2.2 2<sup>nd</sup> Project Objective (1<sup>st</sup> equal in priority) “To provide sufficient modern, reliable medical equipment to deliver the core acute and tertiary referral services in the RVH as determined in future core activity agreements for imaging, cardiac catheterisation laboratories, critical care and theatres. Commissioners set targets for the first three and the BHSCT sets an internal target for theatre availability.”
- 2.3 3<sup>rd</sup> Project Objective (3<sup>rd</sup> in priority) “To provide equipment and associated services that allow the development of efficient imaging, cardiac catheterisation, theatre and critical care services in line with DoH policy and the strategic direction of the Trust over the lifespan of the project.”
- 2.4 4<sup>th</sup> Project Objective (4<sup>th</sup> in priority) “To ensure that there is minimal disruption to service provision for imaging, cardiac catheterisation labs, theatres and critical care when the current PFI contract ends and over the lifespan of the project.”
- 2.5 5<sup>th</sup> Project Objective (5<sup>th</sup> in priority) “Have equipment to meet the future projected demands for imaging, cardiac catheterisation, theatre and critical care services in the RVH over the lifespan of the project.”
- 2.6 In the OBC, each objective is supported by outputs, outcomes, a baseline for measurement and targets to make them S(specific),M(measurable), A(achievable), R(realistic) and T(with a timeframe).

### **3.0 Options**

#### **3.1 Long Listed Options**

- 3.1.1 There are 15 long listed options, which have been reduced to 4 short listed options which are included in the option appraisal. The status quo is used to provide a baseline option for costing purposes but is not analysed in the option appraisal as it is not commercially viable or feasible (based on advice from PaLS). All the short listed options include the purchase of all the equipment in the PFI from Philips at contract end to ensure service continuity.

#### **3.2 Short Listed Options**

- 3.2.1 Option 2 (the Do Minimum) – Capital purchase of PFI equipment at contract end, maintenance outsourced, equipment replaced when no longer fit for purpose, no potential for future expansion.
- 3.2.2 Option 6 - Capital purchase of PFI equipment at contract end, maintenance outsourced, equipment is replaced at end of recommended lifecycle, potential for future expansion to meet demand for equipment in imaging, cardiac catheterisation laboratories, theatres and critical care in the RVH over the lifespan of the project

3.2.3 Option 9 – Initial capital purchase at contract end and leasing when equipment needs replaced with provision for future expansion to meet demand for equipment in imaging, cardiac catheterisation laboratories, theatres and critical care in the RVH over the lifespan of the project

3.2.4 Option 15– Managed Equipment service before end of the current contract with the potential for future expansion to meet demand for equipment in imaging, cardiac catheterisation laboratories, theatres and critical care in the RVH over the lifespan of the project

## 4.0 Risks

Table 4.1		
Category of Risk		Risk
Commercial	(A)	Changes in Accounting Treatment (Leases and MES)
	(B)	Availability of Capital / Revenue Funding for this Project
	(C)	Potential to Decrease Standardisation
Legal	(D)	Risk of Legal Challenge
Strategic	(E)	RVH cannot fulfil its' strategic role within the NI Health Service
Project Specific Risks	(F)	Failure to meet Service Performance and Quality Standards
	(G)	Failure to keep pace with technological change
	(H)	Incorrect costings
	(I)	Incorrect Estimate of Residual Value of the Assets when the PFI ends
	(J)	Inaccurate activity projections
	(K)	Asset Become Obsolete before Replacement
	(L)	Duration of this Project is not correct
	(M)	Scope of this Project is not correct
	(N)	Feasibility of Implementation and Potential Service Disruption
(O)	Timings will not meet Project Deadlines	

## 5.0 Option Appraisal

5.1 In Section 7 of the OBC, an Option Appraisal establishes the pros and cons of each of the four short listed option against each of the five non-monetary costs and benefits (modelled on the 5 project objectives). The Project Team determined the weighting and maximum scores for each non-monetary benefit before undertaking the assessment and scoring of each of the short listed options

5.2 There are a number of key factors in the assessment.

- service performance (measured in uptime with a mechanism for ensuring compliance against a target of 98% uptime)

- guaranteed replacement at the end of the recommended lifecycle with equipment which is equivalent in the market place at the time of replacement
- equipment is updated when updates are available
- a similar maintenance regime is put in place to that in the current PFI (which has been exemplary)
- good project management of equipment selection and installation
- flexibility in terms of changing or adding to the asset base at some point in the future if funds permit.

5.3 The scores for the short listed options are listed in Table 5.3 below:

<b>Table 5.3 Non-Monetary Benefits</b>	<b>Weight</b>	<b>Average Weighted Scores</b>			
<b>Non-Monetary Benefits</b>		<b>Option 2</b>	<b>Option 6</b>	<b>Option 9</b>	<b>Option 15</b>
<b>1<sup>st</sup> Non-monetary cost and benefit</b>	25	75.42	126.25	138.75	214.17
<b>2<sup>nd</sup> Non-monetary cost and benefit</b>	25	92.92	157.08	160.00	218.75
<b>3<sup>rd</sup> Non-monetary cost and benefit</b>	20	97.33	118.00	125.33	160.67
<b>4<sup>th</sup> Non-monetary cost and benefit</b>	17	87.83	98.60	108.80	134.02
<b>5<sup>th</sup> Non-monetary cost and benefit</b>	13	45.93	77.57	81.03	105.73
<b>Total Weighted Score</b>		<b>399.43</b>	<b>577.50</b>	<b>613.91</b>	<b>833.34</b>

## 6.0 Costs of short listed options

6.1 The costs were calculated for all shortlisted options over the life of the project in line with business case guidance. The net present costs are as follows and have been set alongside the scores for the non-monetary costs and benefits as shown below.

<b>Combined Outcomes of Non-Financial and Financial Appraisals</b>										
<b>Option Number</b>	<b>Weighted Score</b>	<b>Ranking</b>	<b>Non-Risk Adjusted</b>				<b>Risk Adjusted</b>			
			<b>NPV £k</b>	<b>Ranking</b>	<b>Cost per benefit</b>	<b>CPB Ranking</b>	<b>NPV £k</b>	<b>Ranking</b>	<b>Cost per benefit</b>	<b>CPB Ranking</b>
Option 1 - Do Nothing			136,812	5			136,812	4		
Option 2 - Do Min - Purchase equip , maint outsourced , equip replaced from capital when no longer fit for purpose	399.43	4	128,816	3	322.50	4	137,677	2	344.68	4
Option 6 - Purchase equip, maint outsourced, equip replaced at end of recommended life	577.5	3	123,983	1	214.69	3	133,695	1	231.51	3
Option 9 - Initial Capital Purchase then leasing at end of recommended lifecycle	613.91	2	127,845	2	208.25	2	137,933	3	224.68	2
Option 15- Capital Purchase at Contract end then new MES	833.34	1	131,530	4	157.83	1	144,291	5	173.15	1

6.2 The above table shows that while the MES option has the highest net present value (cost) over the life of the project, when non-monetary costs and benefits are taken into account it has the lowest cost per benefit score.

## **7.0 Rationale for Selecting the Preferred Option**

- 7.1 In summary, Option 15 is the preferred option because the additional costs associated with this option are far outweighed by the advantages this option provides in terms of service performance, reflected in the scores for the non-monetary costs and benefits.
- 7.2 The equipment is contractually guaranteed to be replaced at the end of the recommended lifecycle with equipment which is equivalent in the marketplace to the equipment that is being replaced and updates are supplied when available. No other option has this contractual obligation.
- 7.3 The uptime of 98% underpinned by a mechanism to ensure compliance is also a contractual obligation, similar to that in the current PFI. This has had a very positive impact on patient services in imaging, cardiac catheterisation, theatres and critical care as it has minimised downtime due to equipment failure.
- 7.4 It would be a retrograde step for patients if the standard of service performance was significantly reduced by selecting any of the other short listed options. This is especially true in a hospital like the RVH with its heavy focus on urgent and emergency care and consequent reliance on having equipment available for patient use. This is particularly important over the next number of years as the Health Service seeks to address the legacy of the COVID pandemic and the associated service demands and the need to reform health services as outlined in Health and Wellbeing – Delivering Together 2016-2026.
- 7.5 Due largely to a change in accounting standards, the business case is seeking an estimated £112m (£140m including inflation) of capital cover. However, annual revenue costs will reduce by approximately £5.3m before inflation is accounted for when compared to the current payments made.

## **8.0 Project Management Arrangements**

- 8.1 There is a Project Board, chaired by the Director of Finance (SRO) and a Project Team chaired by a senior clinician who participated in the first PFI project. Both meet regularly.
- 8.2 There is a Project Manager, a Project Advisor, a Project Financial Advisor and input from both PaLS and DLS.
- 8.3 Progress is monitored by the Project Manager on an on-going basis and is an agenda item at meetings of the project board and project team over the lifespan of this project until the project is fully implemented.

There will be a formal project status review

- when the OBC is approved, at the start of the procurement process, at key points in the procurement process, when the procurement process is complete, at FBC submission and approval, when the contract is signed and finally when the project is fully implemented. There will also

be a review if there is a significant delay that impacts on the timescale for completion and remedial action is required.

- 8.4 The Project Manager will be responsible for completing the first parts of the Post Project Evaluation Review and another senior manager within the Trust who has not been part of the project prior to implementation will complete the remaining parts using the standard template before going through the standard Trust approval protocols and submission to the DoH.