

Business Case Approval - 48009 Replacement of anaesthetic machines.



Agenda Item No: 8.1

Trust Board Report

Meeting Date:	29 th January 2018
Title:	Business Case Approval - 48009 Replacement of anaesthetic machines.
Executive Summary:	<p>This business case seeks to replace all anaesthetic machines that are currently (or will be) over 7 years of age. This will be phased over 3 years, with the oldest (currently over 10 years) being prioritised for replacement this financial year</p> <p>The case has previously been reviewed and approved by both the Capital Review Group (November 2017) and Trust Management Committee (November 2017)</p>
Action Requested:	Approve
For the attention of the Board	The business case has already been considered and approved by Groups and Committees with delegated responsibility including TEG (Trust Equipment Group). This replacement has been risk rated and identified as high priority.
Assure	<ul style="list-style-type: none"> This paper seeks to assure the Board that due process has been followed in the selection and procurement of the equipment including prioritisation matrix and risk rating.
Author + Contact Details:	<p>Will Nabih, Head of Estates Development Tel 01902 695347 Email w.nabih@nhs.net</p> <p>Lisa Monaghan, Strategic Capital Planning Manager Tel 01902 695349 Email lisa.monaghan@nhs.net</p>
Links to Trust Strategic Objectives	<ol style="list-style-type: none"> Create a culture of compassion, safety and quality Proactively seek opportunities to develop our services Maintain financial health – Appropriate investment to patient service Be in the top 25% of all key performance indicators
Resource Implications:	<p>Capital: £1,648,544 (of which £275,000 is Charitably Funded) Funding Source: Capital programme 2017/18-2020/21 plus Charitable Funds</p>
CQC Domains	<p>Safe: patients, staff and the public are protected from abuse and avoidable harm. Effective: care, treatment and support achieves good outcomes, helping people maintain quality of life and is based on the best available evidence. Caring: staff involve and treat everyone with compassion, kindness, dignity and respect. Responsive: services are organised so that they meet people's needs.</p>
Equality and Diversity Impact	None

Risks: BAF/ TRR	Risk Reference 4878 - amber
Risk: Appetite	Risks associated with equipment failure and equipment unavailability will be reduced as a result
Public or Private:	Public Board
Other formal bodies involved:	Trust Equipment Group - TEG Capital Review Group - CRG Trust Management Committee - TMC
References	N/A
NHS Constitution:	In determining this matter, the Board should have regard to the Core principles contained in the Constitution of: <ul style="list-style-type: none"> • Equality of treatment and access to services • High standards of excellence and professionalism • Service user preferences • Cross community working • Best Value • Accountability through local influence and scrutiny

Report Details	
	<p>The Directorate owns and operates 53 anaesthetic machines, which are in daily use. The manufacturer's recommendation is that the machines are replaced after 7 years. The oldest machines are currently 14 years old</p> <p>Repair of the equipment is becoming increasingly time consuming and expensive and an end of life certificate has been issued for the oldest machines.</p> <p>Additionally, there is £275,000 of charitable funding that is being given to the Trust to replace a number of machines this financial year</p>

Appendices	
1	Business Case – Anaesthetic Machine Replacement

TITLE OF PROPOSAL
 Purchase of main theatre anaesthetic machines, induction room anaesthetic machines, and recovery monitors.

DIRECTORATE
 Critical Care

PROJECT LEAD (ACCOUNTABLE OFFICER)
 Dr Richard Lightfoot

BACKGROUND INFORMATION
 Anaesthetic machines and monitoring are required to deliver safe effective anaesthesia. Improvements in the technology of this equipment is one of the main reasons anaesthetic mortality has reduced from 1 in 900 at the end of the 19th century, to 0.04-7 per 10 000 anaesthetics currently.

CASE FOR IMPROVEMENT
 Our current provider of anaesthetic machines/monitors has initiated an end-of-life certificate, and there is an increased risk of failure with this equipment. This has negative implications on patient safety and failure may also impact on service delivery. If we have no redundancy, theatre lists will be cancelled whilst equipment is repaired.
 Repair of this equipment is becoming increasingly time consuming and expensive. Work round solutions are required e.g. a faulty back light required a new screen, new software, and new mains board. The equipment is on the Capital Medical Equipment Replacement List.
 The Directorate currently owns and operates 53 anaesthetic machines, which are in daily use. The age distribution of the current devices is as per Table 1 below.
 Manufacturers recommendations advise that the expected working life of these devices is seven years, whilst the Association of Anaesthetists of Great Britain and Ireland (AAGBI), advise a working life of just five years.
 32 devices are older than the manufacturers recommend working life, with 35 devices exceeding the age limits suggested by AAGBI (Chart 1). Chart 2 plots the location of those machines by compliance with the AAGBI safe/ expected device life span.

Age	Number of devices this age
14	1
13	1
12	7
11	8
10	9
9	0
8	2
7	4
6	3
5	0
4	3
3	0
2	10
1	5

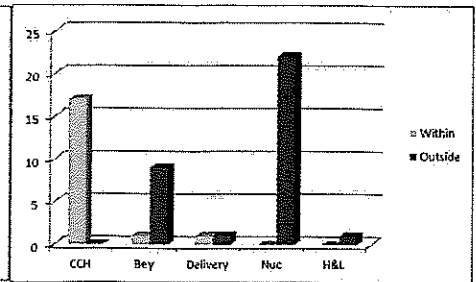
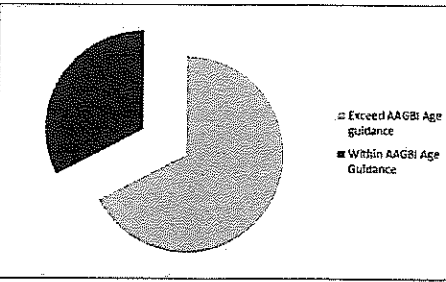


Table 1.

Chart 1.

Chart 2.

From this information, replacement priorities for these devices is clear, with Nucleus theatres being the primary site requiring immediate replacements, followed by Beynon theatres and the Vascular theatre in the Heart and Lung which has just one anaesthetic machine. Delivery suite will also need replacement units soon as their two machines are 8 years and 14 years old respectively. Each anaesthetic machine also requires a vital signs monitor of an appropriate specification to ensure safe deliver of anaesthetic care.

RISKS AND DEPENDENCIES

Risk Reference Number 4878	Grade (R,A,G)
Replacement of only some of the equipment does not entirely eradicate the risk posed by older and unreliable units that are not replaced.	Amber
The Trust must commit to a full replacement program over a period of years, with the proposed capital purchase representing phase 1.	Amber

PUBLIC CONSULTATION

N/A

EQUALITY IMPACT ASSESSMENT

N/A

HIGH LEVEL IMPLEMENTATION PLAN

Key Actions	Person responsible	Timescale

SUBMITTED BY:

Clinical Director Matron Dir. Mgr.

Date: 14/11/17
 16/11/17

App CRG 21/11/17

APPROVED BY:

Divisional Director

Date 17/11/17

Divisional Manager

Date 16/11/17

Divisional Accountant

Date 16/11/17

Head of Nursing

Date 17/11/17

FOR CAPITAL INVESTMENT ONLY

Director of Estates Development
(On behalf of Capital Review Group)

Date 23/11/17

W. Nobby

Business Case: Replacement of Anaesthetic Machines

Version: 2 Ref:

CAPITAL COSTS:-

	Capital £ Year 1	Life Years	Capital £ Year 2	Life Years	Capital £ Year 3	Life Years	Capital £ Total
MAIN THEATRE - ANAESTHETIC MACHINES DONATED (AISYS CS2) x 8 (YR1 8) VAT Recovered	275,000	7	0	7	0	7	275,000
MAIN THEATRE - ANAESTHETIC MACHINES (AISYS CS2) x 9 (YR1 6 YR2 2 YR3 1)	247,500	7	82,500	7	41,250	7	371,250
INDUCTION ROOM - ANAESTHETIC MACHINES (CARESTATION 650) x 20 (yr1 6 yr2 6 yr3 8)	205,589	7	205,589	7	274,118	7	685,296
ANAESTHETIC MONITOR (6450) x 33 (yr1 23 yr2 2 yr3 8)	220,938	7	19,212	7	76,848	7	316,998
TOTAL CAPITAL COST	949,027		307,301		392,216		1,648,544

FUNDING:-

Charitable Contribution	275,000
Trust Capital Equipment Replacement Programme	1,373,544
TOTAL FUNDING	1,648,544

ACTIVITY & OTHER INCOME:-

Description	Activity			Tariff			Income		
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Donated Asset Income				£	£		£	£	£
							275,000		
TOTAL INCOME							275,000	0	0

REVENUE COSTS:-

Note: All entered as minus values (-£)

Description	Department	Date wref	Pay Band	FAs/ Other	Cost per WTE £	WTE	Spend		
							Year 1	Year 2	Year 3
Pay - Direct Clinical							£	Recurring £	Recurring
							0	0	0
Pay - Clinical Support							0	0	0
Total Pay Costs							0	0	0
Non Pay Costs									
Non Pay - Direct Clinical							0	0	0
Non Pay - Clinical Support							0	0	0
Total Non Pay Costs							0	0	0
TOTAL CLINICAL AND CLINICAL SUPPORT COSTS							0	0	0

TOTAL CONTRIBUTION TO TRUST OVERHEADS
AS PERCENTAGE (Should be 20% or above)

275,000	0	0
1	N/A	N/A

OVERHEAD COSTS:-

TOTAL OVERHEAD COSTS	0	0	0
-----------------------------	---	---	---

TOTAL EBITDA
MARGIN AS PERCENTAGE (Should be 10% or above)

275,000	0	0
1	N/A	N/A

CAPITAL CHARGES:-

Note: All entered as minus values (-£)

Depreciation	(22,596)	(157,525)	(207,491)
Rate of Return	(11,515)	(26,338)	(33,567)
TOTAL COST OF CAPITAL	(34,111)	(183,863)	(241,057)

NET SURPLUS
MARGIN AS PERCENTAGE (Should be 3% or above)

240,889	(183,863)	(241,057)
1	N/A	N/A

Divisional Accountant

Name: _____
Date: _____

Divisional Manager / Director

Name: _____
Date: _____

16/01/17