

NHS GRAMPIAN

Infrastructure Investment – Cardiac Catheter Laboratory (Cath Lab) Replacement

1. Actions Recommended

The Board is asked to approve the following recommendations:

- Implement the preferred option to create capacity to house one of the replacement Cardiac Catheter Laboratories in ward 401, adjacent to the existing facility; and
- Delegate authority to the Board's Director of Finance to allocate funding and to commit the necessary expenditure, not to exceed £2.09 million, in order to procure equipment to replace the two existing permanent Cardiac Catheter Laboratories at Aberdeen Royal Infirmary and carry out the essential enabling and turnkey installation works.

In considering the above, the Board is asked to note the work underway to assess the implications of the growing demand for Cardiac Catheter Laboratory services and to build these requirements in to future service plans.

2. Strategic Context

The Infrastructure Investment Plan approved by the Board in April 2019 sets out an ambitious programme of investment in infrastructure linked to NHS Grampian's clinical strategy and supporting the strategic theme of delivering high quality care in the right place through providing safer, effective and sustainable services.

The matters outlined for Board approval in this paper relate to planned investment in infrastructure, consistent with strategic themes that will deliver the following benefits:

- improvements in patient experience and environment (person centred),
- improved access, quality and efficiency of key diagnostic processes (effective), and
- reduction in the level of backlog risks and enhance statutory compliance (safe).

3. Key matters relevant to recommendation

3.1 Background and Strategic Context

NHS Grampian currently has two Cardiac Catheter Laboratories (Cath Lab) which are both located at Aberdeen Royal Infirmary (ARI).

The diagnostic and therapeutic procedures carried out in these facilities, including 24/7 cover for emergency Primary Coronary Interventional Procedures, are a fundamental part of the cardiac service provided to the Grampian population and

also to the populations served by NHS Orkney, NHS Shetland and NHS Highland, who depend on the ARI facilities for out of hours access to cardiac procedures or for more complex procedures requiring the expertise of the tertiary cardiac centre.

Demand for the cath lab facilities has increased significantly over the last 10 years due to the continued development of interventional cardiology procedures, in particular: angiography, percutaneous coronary intervention (PCI) procedures and Transcatheter Aortic Valve Implantation (TAVI). ARI became the regional centre for delivery of a TAVI service to the North of Scotland population in April 2019. The demand for these services will continue to increase with the ongoing development of interventional procedures and the impact of demographic changes such as the ageing population.

3.2 Status of Current Facilities

The two permanent cath labs at ARI are over 11 and 14 years old respectively and reaching the end of their useful lives. Although functional, they are outdated technology and increasingly unreliable with regular periods of downtime.

Both currently operate at full capacity and the continued growth in demand now requires the intermittent use of a mobile cath lab facility made available through an external provider in order to cope with peaks in demand.

Access to cath lab facilities has been highlighted as an ongoing risk by clinicians and service managers who consider that the rapid development of, and growing demand for, cardiology treatments requires reliable modern technology and equipment in order to ensure a safe, effective and efficient clinical service.

Work is ongoing, in the form of an initial feasibility study, to determine the need for additional permanent cath lab capacity at ARI. This will inform any future case to be made for investment in additional capacity. However, in the short term, the replacement of the two existing permanent cath labs at ARI remains a service priority.

3.3 Procurement and Installation

The service has completed a mini competition under the national framework contract for imaging equipment and have selected Siemens as the preferred bidder. Siemens have agreed to hold the purchase price for two cath labs pending agreement on a physical solution for installation and an option to procure a third cath lab of the same make/manufacture should the Board decide that this is a requirement in future.

The process of decommissioning and installation, including any necessary turnkey works, for a straight “swap” of the equipment is estimated to take 2 months for each of the cath labs, a total of 4 months downtime. Due to the nature of the service and the increasing demand for these facilities, even a short period of downtime will have a significant impact on those patients who depend on the service and robust contingency arrangements must be in place to ensure that the service can continue to operate at full capacity throughout the implementation period.

The service has considered two main options that would allow continued access to a cath lab facility during implementation:

- **Option 1 - Create capacity in ward 401 adjacent to the existing cath lab facility**

The estimated cost of this option is:

	Total
Siemens Artis Floor Cath Lab x 2 (Equipment only)	£1.04M
Siemens/Measured Term - New Cath Lab (Construction)	£0.90M
Siemens Replacement Cath Lab 2 (Construction)	£0.15M
Total Cost	£2.09M

- **Option 2 - Use additional temporary modular cath lab capacity**

The estimated cost of this option is:

	Total
Siemens Artis Floor Cath Lab x 2 (Equipment only)	£1.04M
Siemens Replacement Cath Lab 1 (Construction)	£0.145M
Siemens Replacement Cath Lab 2 (Construction)	£0.145M
MTC - Enabling Works to allow Module Interface	£0.48M
Rental of InHealth Cath Lab Module (4 Months)	£0.25M
Contingency – Crane, Generator etc	£0.07M
Total Cost	£2.13M

3.4 Preferred Option

The project team recommend creation of a new Cath Lab within Ward 401 (an empty ward adjacent to the existing cath lab facility) as the preferred option. The benefits of progressing this option compared to using temporary modular capacity are as follows:

- Less expensive than the option to purchase temporary modular capacity (£2.09m compared to £2.13m);
- Throughout the programme, two cath labs, capable of doing the full range of procedures, can continue to operate normally, without interruption, while the enabling work and installation of the new equipment is ongoing (the modular unit is not capable of supporting certain types of procedure);
- The existing cath lab location on the ARI site is much more accessible, particularly for certain patient groups, than the options available for an additional modular unit;
- The location adjacent to the current cath labs ensures no changes required to clinical pathways or to existing staffing levels; and
- An accessible shell, following decommissioning of the second existing cath lab, will be available for turn-around space to ensure continued operation during a

future replacement programme or potentially to house a third cath lab should this be required in future.

4. Risk Mitigation

Access to cath lab facilities has been highlighted as an ongoing risk by clinicians and service managers who consider that the rapid development of and growing demand for cardiology treatments requires reliable modern technology and equipment in order to ensure an effective and efficient clinical service.

Approval of the recommendations as outlined will assist in mitigating the Board's strategic risk number 2155 "that our infrastructure will not be fit for purpose nor compliant with statutory requirements if we do not have an adequate medical equipment, information technology and backlog maintenance programme and plan for redesign and transformation of services."

5. Responsible System Leadership Member and contact for further information

If you require any further information in advance of the Board meeting please contact:

Responsible System Leadership Team Member

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