

Borders NHS Board



Meeting Date: 3 October 2019

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| Approved by: | June Smyth, Director of Strategic Change & Performance |
| Author: | Hannah Fairburn, Head of Capital Planning Ugonna Mbaezue, Capital Planning Project Manager |
| PROGRESS REPORT ON DELIVERY OF SECONDARY DATA CENTRE AS PART OF IM&T ROAD TO DIGITAL (RTD) PROGRAMME | |
| Purpose of Report: | |
| <p>The purpose of this report is to:</p> <ul style="list-style-type: none"> • brief the Board on the conclusion of the Option Appraisal Process relating to the provision of a secondary data centre (Resilience Facility) • seek approval for a tender waiver so that procurement can progress with the preferred contractor | |
| Recommendations: | |
| <p>The Board is asked:</p> <ul style="list-style-type: none"> • to note the process that has been followed and the preferred solution • to approve a tender waiver to the value of £675,000 as part of the procurement route for the delivery of the secondary data centre facility (Resilience Facility) | |
| Approval Pathways: | |
| <p>This report has been prepared by the Capital Planning Team on behalf of IM&T RTD Programme Team and has been supported by -</p> <ul style="list-style-type: none"> • the Board Executive Team at their meeting on 24/09/2019 • The Road to Digital Programme Board – through virtual agreement | |
| Executive Summary: | |
| <p>A secondary data centre (Resilience Facility) was identified by the IM&T department as a requirement for the NHS Borders server network. This has been flagged to the NHS Board on a number of previous occasions as part of the RTD Programme updates.</p> <p>The purpose of the facility is to provide resilience in the event of any loss of the main data centre. The design is an active – active solution to load balance the Virtual Desktop Infrastructure (VDI) while also providing secondary instances of key systems.</p> <p>The main data centre has suffered from leaking water on a number of occasions over recent months and while mitigation and repair has been undertaken the lack of another secondary facility is of increasing concern.</p> <p>It is also essential to complete the facility so that the purchased infrastructure for VDI can</p> | |

be fully brought into service as the main data centre has insufficient capacity. This impacts the organisation's ability to fully comply with Cyber and NIS requirements in removing unsupported desktop operating systems. It is also critical that the risk of loss of the main data centre is mitigated by having a secondary instance available in the event the main centre is compromised.

An option appraisal process has been undertaken and seven possible locations were reduced to one preferred location (with two build options). Specialist suppliers were identified based on previous history of the project and site; they were invited to provide quotations for the options to provision a facility in that location.

The Programme Board was updated and supported the outcome of this option appraisal process. NHS Borders Board has also regularly received updates on the RTD Programme.

Returned quotations have been jointly reviewed by IM&T and Capital Planning, the quotation that provided the best value for money while also meeting the developed technical specification has been identified as the preferred option.

The cost of the preferred option is £675,000. This is a capital funding requirement which will be met through a £1,000,000 allocation from Scottish Government to support the RTD Programme. Due to the level of risk, timescale to complete a full tender and limited prospect of driving further value from a tender, we wish to proceed to direct engagement of the preferred supplier. The full rationale is in the attached paper and is consistent with the Code of Corporate Governance.

NHS Borders code of corporate governance requires that any approval for a tender waiver is given by NHS Borders Board and is noted to audit committee. We are now seeking from the board, approval to waive the requirement for a tendering exercise and allow the Capital Planning Team to engage directly with the preferred supplier.

Impact of item/issues on:

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| Strategic Context | <p>This proposal is part of the approved Road to Digital programme and necessary for the delivery of the IT Infrastructure described in the Roadmap.</p> <p>It is consistent with NHS Board requirements to have in place appropriate resilience measure to minimise impact and disruption to services.</p> <p>It is consistent with national Digital strategy for Health & Care.</p> |
| Patient Safety/Clinical Impact | Positive impact by significantly improving resilience and reducing risk of disruption to clinical services. |
| Staffing/Workforce | There are no workforce impacts of this paper |
| Finance/Resources | Capital funding for the project is part of the SG allocation for Road to Digital Programme. There is no additional recurring cost attributable to creation of the facility. |
| Risk Implications | <ul style="list-style-type: none"> • Potential for water damage to IT equipment in the existing sever room. • Potential of a network failure, device failure or a power outage with no backup system in place. |
| Equality and Diversity | N/A |

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| Consultation | Consolation as appropriate has taken place as described in the paper, including with SG eHealth ad Capital teams – there is no requirement for public consultation in creating this facility.. |
| Glossary | RTD = Road to Digital Programme. |

Situation

As part of the IM&T RTD Programme there is a dependency to create a secondary data centre (Resilience Facility). This facility must be in place to allow IM&T to progress with the RTD Programme and so IM&T, Capital Planning and Planning & Performance have been working together to progress this project.

Background

As part of the IM&T RTD programme, there is a requirement for a secondary data centre (Resilience Facility) which will be inclusive of the Virtual Desktop Infrastructure (VDI) servers. The secondary data centre is required to provide organisational resilience should an outage of the primary service occur. It will be designed, to function in an active/active capacity (i.e. Load-sharing between primary data centre and the secondary data centre). Some of the benefits of the secondary data centre include:

- Provision of high availability, load balancing and recovery/mitigation for disasters.
- Provides the organisation with the ability to adapt, change and overcome impacts on service.
- Removes the threat of significant service outage and provides NHSB with the ability to operate and access critical systems during a failure.
- Provides the organisation with a robust Recovery Point Object in place so that the Return to Operation impact post-outage is negligible or well within acceptable organisational tolerances.

SCC, an IT solution company, was initially contracted by IM&T to conduct surveys around the BGH site, with a view to identifying a suitable location for the facility. Several reports to this effect were produced and options submitted along with costs and project timelines. However it was agreed that in line with NHS Borders process, an option appraisal should be carried out in order to robustly identify a suitable location for the facility.

The Capital Planning Team and Planning & Performance worked with IM&T to identify seven possible locations on the BGH site to locate the secondary data centre. They included:

1. Status Quo: Retain the secondary and primary data centre with the same location.
2. Convert the garage space behind the tertiary services block
3. Build a communications pod to the rear of the secondary services block
4. Develop the grassed area adjacent to car park 4:
 - a. Communications pod
 - b. Building
5. Utilise Huntlyburn House/Cottages/Stables
6. Convert the old Estates Meeting Room
7. Communications pod by the Ambulance Station

From these options, four locations were taken forward to a shortlisted options appraisal process. These are outlined below:

1. Status Quo: Retain the secondary and primary data centre with the same location.
2. Convert the garage space behind the tertiary services block
3. Develop the grassed area adjacent to car park 4:
 - a. Communications pod
 - b. Erect a building
4. Convert the old Estates Meeting Room

A non-financial appraisal was then conducted. The Criteria which each location option was scored against were as follows –

- Patient Safety
- Ability to meet quality of care
- Timeliness
- Environment & Accessibility
- Resource Utilisation
- Ability to Deliver

The criteria were then weighted and scores, the outcome of this scoring is below -

| | Option 1 | | Option 2 | | Option 3a | | Option 3b | | Option 4 | |
|--------------|-----------------|-------------|-----------------|-------------|------------------|-------------|------------------|-------------|-----------------|-------------|
| Total | 8.00 | 1.40 | 21.50 | 3.30 | 30.00 | 5.00 | 26.50 | 4.25 | 17.50 | 2.55 |

Assessment

Based on the outcome of the non-financial appraisal, one location (Option 3) with two sub build options was taken forward to the financial appraisal:

- Option 3 - Develop the grassed adjacent to car park 4:
- a. Communications Pod.
 - b. Erect a new building.

The Capital Planning Team worked with IM&T to develop a concise technical specification for the data centre. Once the detail of this option was worked up further it became apparent that the specification given by IM&T could not be met by option 3b. For this reason option 3b was discounted and permutations of option 3a was progressed.

To allow a value for money cost comparison, two suppliers were approached to provide quotations and work through a greater level of detail to provide certainty of work required and costs.

The quotation brief was for each supplier to include, a breakdown of the total project cost to identify the individual cost of each element supplied, the technical specifications of the facility proposed and a project delivery timeline in their returned quotations. The quote details are below –

| Item/Description | Re-locatable unit Grassed Area A Supplier 1 | Fixed Unit Build on Grass Area B Supplier 2 | Re-locatable Modular Build on Grass Area C Supplier 2 |
|-------------------------|--|--|--|
| Quotes Ex. VAT | £704,723.03 | £561,924.76 | £590,777.96 |
| Quotes Incl. VAT | £845,667.64 | £674,309.71 | £708,933.55 |

The returned quotations were reviewed jointly by IM&T and Capital Planning for accuracy and comparability on solution cost, design, configuration and deployment. The conclusion at the end of the exercise was that the fixed modular unit offered by Holborn Projects Ltd offered the best value for money and functionality based on the technical specifications developed by IM&T and the Capital Planning Team. The proposal from Holborn Projects returned the best cost / benefits analysis and is the preferred supplier.

Dependant on planning consents it is expected that the project could be delivered around April 2020, the exact time line will be finalised through detailed design.

Procurement Process

Given the financial value of the project, the NHSB Code of Corporate governance procurement route would be to run a tender exercise or use an existing supplier framework.

Given the urgency, level of risk and the technical nature of the data centre design; we have explored the fastest compliant routes to procurement. Advice from Procurement and Finance is that the Code of Corporate Governance allows for tendering to be waived in certain circumstances.

We are requesting a tender waiver on the basis of the factors below which is consistent with our Code of Corporate governance –

- A tender process is likely to further extend the timeline for the delivery of the project due to the lengthy process involved in the tender itself and contractor selection. This would require the tolerance for the risk to the primary server to be significantly extended.
- The Resilient server facility is a dependency for the RTD, any adverse delay to this programme should be avoided as the RTD programme is proposed to mitigate a number of IM&T related risks that the organisation is currently operating with.
- The further additional work required to scrutinise quotes to the same level as those already submitted would be disproportionate to any anticipated reduction in cost that might be achieved.
- Additionally due to the specialist nature of this work NHS Borders does not have an existing supplier framework which can be utilised
- Also due to the specialist nature of this work there are not many companies who could be engaged with through a tender exercise.

It should be noted that as part of the detailed design process we intend to work with the preferred supplier to drive out further cost.

The requested tender waiver will be used by the Capital Planning Team to engage directly with the preferred supplier to deliver the project. The Board has previously approved delegated authority to place orders related to the RTD programme to the Director of Finance, Chief Executive, Chair and one other non-executive member. We will seek to secure that and place orders on approval of this paper.