

Meeting:	NHS Grampian Board Meeting
Meeting date:	7 December 2023
Item Number:	9
Title:	Baird Family Hospital and ANCHOR Centre Project Update
Responsible Executive/Non-Executive:	Dr June Brown – Executive Nurse Director and Senior Responsible Officer (SRO)
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1 Purpose and recommendations

This is presented to the Board to:

- Note progress with The Baird Family Hospital and ANCHOR Centre project.
- Note the intention to prepare a revised project forecast to inform further dialogue with the Scottish Government and the Board Executive team on the potential implications of the planned changes on budget and programme.
- Note that recommendations on the way forward will be brought formally for approval to the Board at its next meeting

This aligns to the following NHS Scotland quality ambitions:

- Safe
- Effective
- Person Centred

2 Report summary

2.1 Situation

The previous updates received by the Board highlighted two significant areas of risk:

- The potential impact on programme and cost arising from the requirement to revisit elements of the design for both buildings to ensure that up to date

learning on Healthcare Acquired Infection (HAI) is incorporated and that both buildings will be operated to high standards of quality and safety. Key areas of focus include the design of water systems and ventilation.

- Several areas of potential cost pressure remain commercially under negotiation with the contractor. These issues are driven mainly by challenges in relation to market forces i.e. material shortages, price increases and labour shortages, as well as anticipated costs associated with known design changes such as the environmental matrix.

The Board were also informed that a potential opening date for either facility is uncertain until the outcome of the ongoing design review is known, including an assessment of the feasibility, cost and programme impact of any required changes.

Key stakeholders including our patients, their families, staff and our Scottish Government sponsors reasonably expect that these outstanding matters will be drawn to a conclusion as soon as possible in order to set a firm opening date for both facilities and to clarify the budgetary implications.

3.0 Background

3.1 Design Review

The Board have previously agreed that elements of the design for both buildings should be reviewed to provide assurance that recent learning from a HAI perspective is incorporated, future proofing both buildings to ensure they will be operated to high standards of quality and safety and capable of providing contemporary healthcare services for many years to come.

Recent emphasis on HAI risks has highlighted that technical guidance supporting the design in particular areas is sometimes not specific enough for the circumstances and can often lag behind current thinking with regard to HAI, guided by the results of recent investigations and research. The areas subject to review are informed by the outcome of previous HAI focused assessments, recommendations arising from external design review and Key Stage Assurance Review (KSAR) reports and regular visits to site by the Infection Prevention Control Team (IPCT) and project technical team. The project team including IPC, technical experts and relevant clinicians responsible for the affected services jointly work through each of the issues to confirm the existing design or where appropriate consider a change to the design.

Progress on the most significant areas is summarised below:-

3.1.1 ANCHOR Centre Open Plan Treatment Chair space

Issues highlighted with the current design include –

- an average of 6 air changes per hour (10 over treatment chairs and 2 in communal spaces which dilutes the overall position to an average of 6) being provided across the open plan area (compared to a requirement of 10 for a dedicated treatment room),

- access to the terrace by patients causing a mix of natural and mechanical air, and
- maintenance access to service risers within the open plan treatment area.

The design review is now complete with consensus agreement on the proposed changes to scope including:

- Deliver air change rate of 10 per hour (currently 6) across the whole open plan area,
- various amendments to the air pressure in adjacent rooms,
- partition wall to ensure separation of the negative pressure Pentamidine suite,
- Construction of a corridor to enclose the entrance to the terrace and adjacent service risers allowing maintenance access from a nearby stairwell.

3.1.2 Water Systems

The main issue is a concern over the nature of potential microbiological contamination in a recirculating system and available mitigation options. A risk assessment, recently finalised by the Board's Infection Prevention and Control team (IPCT) includes recommendations on specific design changes, commissioning and ongoing maintenance processes. There is also a link to a previous recommendation on the removal of outlets to manage splash risk and where they would be used infrequently.

The preparation of this risk assessment was informed by a current literature search and further expert opinion from NHS Assure concerning the emerging evidence relating to the microbiological risks associated with water systems. The outcome of this risk assessment and the associated recommendations were considered in detail at a workshop on Tuesday 14th November also attended by clinical members of the project team and members of the maintenance and technical services team.

Following this workshop, the proposed recommendations regarding the water system have been referred to the Board's water safety group as required by the Board's water safety policy. The water safety group is scheduled to meet on Monday 18th December.

The water system in both buildings is a complex design involving multiple loops covering heating, chilling and ventilation, hot and cold water as well as the multitude of sinks, sanitary connections, taps and other outlets. Accordingly, a number of other related actions are under consideration:

- Heating – It is proposed to progress with filling the heating loop within the ANCHOR building, which is a separate closed loop system. Testing of the supply from the main Scottish Water pipe which will be used to fill the system is underway and a temporary tank is on order. A decision whether to commission the heating loop will be taken with advice from the IPCT and maintenance teams when the results from a series of tests on the quality of the water are available in early December. The absence of heating to protect the building fabric during the winter months is considered a significant risk and the contractor has arranged temporary electric heating to be in place, at NHS Grampian's cost, until the heating loop can be commissioned.
- Water Supply – When testing is complete and if satisfactory then the main Scottish Water pipe will be diverted to supply the construction cabins on site as

an interim measure to ensure water flows through the main and to assist regular testing for assurance purposes until the water system can be commissioned.

- Sinks – The Board have previously been briefed on the recent learning and research with regard to the water safety risks associated with little used outlets and splash zones. The exercise, undertaken by a multi-disciplinary team including IPC experts, service clinicians and colleagues with specific skills/remit e.g. nuclear medicine, clinical scientists to understand the clinical function of each of the 675 sinks in the Baird Family Hospital, has now concluded with a recommendation that 26% of the planned number of sinks should be removed.

The impact on the construction programme, and therefore cost, of any change to the existing design of the water systems including changes to the required number of sinks in the Baird Family Hospital is potentially significant. The recommendations from the risk assessment have also been shared with the contractor who has agreed to prepare a high-level assessment of the technical implications and associated impact on programme and cost by the end of November. This will inform further consideration as part of the process outlined in section 4 below.

3.1.3 Neonatal Unit - Baird

Key issues include:

- Direction and flow of ventilation including positioning of grilles,
- Sinks – risk of infection from splash as explained above – solution may impact on ventilation solution,
- Parent craft rooms - kitchen areas and sinks in rooms – proposal to remove sinks.

There is now consensus on a solution for the parent craft rooms involving removal of sinks. The position regarding the approach to determining the direction of ventilation and positioning of grilles remains inconclusive and the matter will be referred to the Executive review panel on 6th December for consideration.

3.1.4 Operating Theatres - Baird

Issues include:

- Pressure cascade within ventilation system - i.e. no separate anaesthetic suite and access to Multi Disciplinary Team (MDT) room from theatre side
- Interlocking Doors on Entry/Exit bays – could impede emergency access
- Disposal Hold – creating second disposal hold
- Recovery ventilation – 15 air changes per hour in recovery bays but not in communal areas.

Consensus exists on a potential solution is as follows:

- Divide the Multi-Disciplinary team (MDT) room into two separate rooms,
- Remove interlocking mechanism on doors from entry/exit bays
- Review design solution to ensure ventilation flows are not impacted by these changes, and
- Merge two existing storerooms in to a single disposal hold.

- Ensure delivery of 15 air changes per hour across whole recovery area.

Other potential areas of design change include:

3.1.5 Fan Coils

Concern expressed over a previously agreed derogation for use of fan coils in rooms used for clinical treatment or procedures. The recommendation is to remove all fan coils from certain rooms.

3.1.6 Wet Services above the Neonatal Unit and the Fertility Service

Concern over the current design, which includes wet services above the Neonatal Unit and the Fertility service. Consensus that design is compliant with current guidance and focus now on the access and maintenance strategy to ensure risk are fully mitigated.

3.1.7 Shower Curtains/Screens

Concerns expressed that an HAI compliant shower screen is not currently available on the market. Replacing with a shower curtain is also not considered acceptable from an HAI perspective. There is now consensus agreement that the showers can be used without either a shower screen or curtain. The contractor has asked for agreement to a derogation regarding the position of shower controls, this is under consideration by the project's technical team, and a decision will be made by the end of November to allow this work to progress in line with programme.

3.1.8 Liquid Nitrogen

Original plan to use generators located within the Fertility Service suite is considered unsustainable by the service – only one manufacturer available. An external tank solution has been agreed. Awaiting result of design feasibility exercise from contractor.

3.1.9 Tambour Doors

Some cupboard doors in clinical areas within both the Baird and ANCHOR buildings are a tambour design. This is now considered an infection risk in clinical rooms and the proposal is to replace them with normal doors.

3.1.10 Link Corridor internal walls

Concern over proposed materials and exposed beams will be difficult to clean and therefore an infection risk. Proposal to use plasterboard and enclose the support beams.

3.2 Financial Aspects

The currently approved budget for the project is £261.1m.

At present, it is difficult to quantify the financial impact of any changes that will result from the remaining areas of design under review or the possible outcome from the various ongoing commercial matters but it is likely these will create pressure on the

project budget. Regular meetings with the Scottish Government Health Finance Directorate are in place in order to ensure that they are fully briefed on progress including the various risks to the project that are being managed by the Board.

Section 4.0 below outlines the intention to conclude all outstanding design matters and to progress the remaining commercial matters to inform an updated programme and financial forecast to be submitted for consideration by the Board at its next meeting.

3.3 Quality Assurance Process

The responsibility for the method, programme and quality of the construction process lies with the contractor.

NHS Grampian's Project Team technical representatives have been carrying out site inspections since the early stages of construction with the purpose of monitoring construction quality and ensuring works are in accordance with the contract specification.

The Infection Prevention and Control team have been participating in site visits since late 2022 and more recently in formal site walk rounds with technical members of the project team since April 2023. Notes of these formal visits are prepared summarising any key areas of concern to allow follow up actions to be identified. All quality observations are recorded in a shared application called BIM 360 by the project's technical representatives. This is a fully auditable element of the agreed quality control process and the primary method by which quality issues are brought to the attention of the contractor for remedial action. There are regular weekly and monthly meetings with the contractor's key construction management to review construction quality and follow up on outstanding actions.

3.3.1 Water Ingress

Issues relating to water ingress are being recorded on a continuing basis using BIM 360 and are managed using a water ingress procedure, agreed jointly between the project technical team, Infection Prevention and Control team and the contractor. The water ingress procedure aligns with the agreed Quality Delivery process for the project.

A recent report prepared by the Infection Prevention and Control Team (IPCT) has identified concerns over the extent of water ingress and mould growth experienced during the construction process. The report highlights a variety of issues associated with water ingress including the risk of mould growth, the effectiveness of the agreed water ingress procedure and the management of construction materials affected by coming into contact with water. The report makes a number of recommendations on remedial actions and this has been shared with NHS Assure for advice on the most effective method of providing assurance in this area. Meantime the project team are actively progressing additional testing and sampling in areas adjacent to known instances of water ingress. Any further issues identified will be corrected using the existing water ingress procedure.

4.0 Assessment

The project remains under significant pressure across a number of fronts:

- Commercially,
- Programme certainty,
- Supply chain availability,
- Cost certainty and affordability, and
- Expectation by key stakeholders that these facilities will be brought in to operation at the earliest opportunity.

Although we continue to enjoy excellent collaboration on progressing the various design issues, leading successfully to recent agreement, through consensus, on recommendations for several of the key outstanding matters, there are still many issues to be resolved. Previous updates to the Board have covered the complex and varied nature of the design issues and our commitment to addressing these through risk-based dialogue leading to consensus agreement. This approach does, however, elongate the time it takes to reach a conclusion and it is clear that the protracted delay in agreeing the outcome of the design review will result in additional costs and delay.

To inform a decision on the future budget requirements of the project and to create certainty over the completion dates, we must therefore agree a timely and effective way forward for the project concluding these issues as soon as possible. This process must also consider the affordability and opportunity cost of investing in proposed change and the risks that any further delay in programme will carry for our patients and clinical services.

The following approach was agreed by the Project Board at their meeting on 8th November 2023:

- The contractor has agreed to provide a high level “impact assessment” covering the significant potential design changes by the end of November.
- Dialogue is well progressed with the contractor regarding an alternative method of contracting for design team support – to provide guaranteed availability under a professional service contract for a designated time period.
- All of the outstanding issues covered in 3.1.1 to 3.1.10 above to be brought to a conclusion regarding agreed recommendations by the end of November and if not concluded key planning assumptions agreed.
- A separate holistic risk assessment to be prepared for both buildings considering impact of delaying occupancy on patients and services. To cover direct and indirect impact on health system – continuing to operate in existing facilities, ability to deliver service redesign, opportunity cost of investing further in Baird and/or ANCHOR v’s benefits to be delivered by proposed changes to Baird and/or ANCHOR – available end of November.

- A draft briefing paper to be prepared covering the potential costs, programme impact and associated risks/benefits by 13th December 2023 in order to inform a period of dialogue with the Scottish Government and the Board Executive team on the potential implications of the planned changes on budget and programme.
- Recommendations on the way forward to be considered formally for approval by the NHS Grampian Board at its next meeting.

5.0 Risk Assessment and management

Risk management procedures are an integral feature of the project with a comprehensive risk register maintained monthly by all parties, weekly risk reduction meetings and regular reporting of key risks to the Project Board.

Key high risks include:

- Mechanical Electrical and Plumbing (MEP) design co-ordination – regular minuted workshops, final MEP review and sign off.
- Changes as a result of IPC review/KSAR – schedule of HAI focused workshops and development of an agreed action plan underway.
- Agreement on a solution for Liquid Nitrogen provision – proposed solution now with contractor to consider design feasibility.
- Environmental matrix – design complete and commercial discussions with contractor ongoing.
- Impact of market forces and inflation – regular commercial meetings with contractor.
- Impact of multiple converging work streams and any further delay in programme on Project team resources.

6.0 Equality and Diversity, including health inequalities

The project undertook a Health Inequalities Impact Checklist in February 2018 as part of the Outline Business Case. This piece of work was commended by the Public Health Team.

This work demonstrated that these new facilities will provide opportunities to engage more with vulnerable or disadvantaged groups than is the case in existing facilities e.g. single room accommodation; increased space for families to be together; Transitional Care in the Baird which will help support vulnerable families, teenager and young adult provision in The ANCHOR Centre etc.

7.0 Other impacts

No other relevant impacts to note at this stage

8.0 Communication, involvement, engagement and consultation

The project has a very active communication work stream, which has been in place since 2015 when engagement with patients and staff commenced. The project team has a dedicated resource from the public engagement team. This is in addition to communication being a significant feature in the work undertaken by senior project team personnel.

The project team continues to communicate actively with stakeholders. Some of the learning during the Covid period has resulted in a mixed model of face to face, written and visual engagement. Face to face engagement and time spent in clinical departments updating colleagues, patients and visitors and engaging them in the preparation for functional commissioning and bring into operation continues to be a key feature of engagement.

Continued communication with and participation from charity and third sector partners continues to be an important focus for the team. Patient input from the start of the project has influenced and strengthened the design of the facilities; more detailed work is progressing to engage with patients and service users about features such as art, interior design, furniture selection etc.

Keeping our North of Scotland regional partners updated is also important with visits held during 2022 to both Orkney and Shetland and more being planned for during 2023 and 2024.

9.0 Route to the Meeting

Project performance is reported regularly at the monthly Project Board and Asset Management Group meetings. A report from the Project Director and Senior Responsible Officer is provided as appropriate to the Performance Assurance, Finance and Infrastructure Committee (PAFIC).

10.0 Recommendation

The Board is asked to:

- Note progress with The Baird Family Hospital and ANCHOR Centre project.
- Note the intention to prepare a revised project forecast to inform further dialogue with the Scottish Government and the Board Executive team on the potential implications of the planned changes on budget and programme.
- Note that recommendations on the way forward will be brought formally for approval to the Board at its next meeting.

24 November 2023