



The Baird Family Hospital

and

The ANCHOR Centre

Foresterhill Health Campus, Aberdeen

Full Business Case

Executive Summary

January 2020

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1.1 Introduction

The Scottish Government (SG) provided Initial Agreement (IA) approval on 30 September 2015, Outline Business Case (OBC) approval on 22 March 2018 (refer to Appendix A) and on that date invited NHS Grampian (NHSG) to submit a Full Business Case (FBC) for a single capital Project which includes two distinct elements:

- The Baird Family Hospital
- The ANCHOR Centre

These new facilities will be developed on the Foresterhill Health Campus in Aberdeen.

This FBC is the third phase in the business planning process for the Project. Its purpose is to:

- confirm the Project Scope
- outline the main commercial and contractual arrangements of the recommended offer
- set out the full financial implications for the Project, including the Project's overall funding and affordability arrangements
- confirmation that the management arrangements are in place to ensure the Project's successful implementation.

1.2 Investment

1.2.1 The Baird Family Hospital

The development of The Baird Family Hospital (the Baird) will realise key priorities for NHSG. NHSG has recognised the importance of maternity services in particular during the past few years, leading to the creation of the Maternity Strategy and its associated recommendations.

The new hospital will provide maternity, gynaecology, breast screening and breast symptomatic services. It will also include a neonatal unit, centre for reproductive medicine, an operating theatre suite, Community Maternity Unit (CMU) and research and teaching facilities.

The new hospital will be called The Baird Family Hospital in recognition of the contribution made to health by the Baird family over many years in Aberdeen and elsewhere in Scotland. Over time, it is expected that the new hospital will be referred to simply as “The Baird” by the public, patients and staff.

The Baird will deliver on the following principles:

- facility to appropriately care for different patient groups
- provide opportunity for redesign
- plan for local, regional and national service delivery
- support women, patients and families e.g. Patient Hotel
- fit for purpose and appropriate service co-location e.g. Paediatric Surgery, Neonatal, ITU and MRI

The Baird will also support the following Operating Model:

- new service models e.g. Maternity Triage, Transitional Care
- ambulatory care as the norm
- 100% surgical pre-assessment
- 85% admission on day of surgery
- enhanced Recovery
- appropriate reduction in length of stay
- increased patient choice e.g. water births
- increased recruitment to clinical trials

1.2.2 The ANCHOR Centre

The ANCHOR Centre is the next significant phase in the development of services for haematology and oncology patients, creating much needed day and out-patient treatment and support accommodation space. The new centre will be co-located with the Radiotherapy Centre and, once

commissioned, both will operate as a single ambulatory ANCHOR Centre for the patients of Grampian and the North of Scotland (NoS).

The new centre will provide out-patient and day-patient investigation and treatment services for patients with cancer and for patients with blood and bone marrow disorders, including non-cancerous conditions as well as cancers. The centre will also include an aseptic pharmacy and research and teaching facilities.

This new facility will be called The ANCHOR Centre. ANCHOR (Aberdeen and North Centre for Haematology, Oncology and Radiotherapy) is a well-respected and highly regarded 'brand', established in the NoS for two decades.

The ANCHOR will deliver the following service delivery environment:

- comfortable, non-threatening communal areas
- maintains dignity and privacy
- facilitates clinical trials, research and teaching
- specific provision for teenagers and young adults
- safe, efficient and productive working environment

The new facility will also support the development of working practices:

- oncology and haematology services work seamlessly to provide enhanced, streamlined patient care
- increased nurse-led clinics
- seek to improve scheduling to optimise clinical resources and improve the patient pathway

1.3 Design Assurance

The purpose of the NHSScotland Design Assessment Process (NDAP) is to promote design quality and the service outcomes realised through this.

Following regular engagement, on 29 November 2019, an NDAP FBC submission to Architecture Design Scotland (AD+S) and Health Facilities

Scotland (HFS) was made. HFS have confirmed that they want to look at the NDAP submission in parallel with the forthcoming HFS design review planned for February 2020.

In response to the recent design reviews at the new Children's Hospital in Edinburgh and the new Queen Elizabeth Hospital in Glasgow, HFS and Health Protection Scotland (HPS) are developing a new Key Stage Authorisation Review process. This Project will be subject to an external design review during February 2020 in advance of construction commencement.

Design review by appropriate technical officers, external experts and clinical stakeholders has been an integral component of the development of this Project's facilities. An internal design assurance process is in place and has included recent workshops to revisit design sign off for water and drainage, electrical infrastructure, ventilation, fire and medical gases.

1.4 Revisiting The Strategic Case

The Strategic Case set out in the OBC has been revisited and remains valid. The Project is expected to provide clinical and design quality benefits which are directly relevant to the stated objectives.

The full list of policies listed in the OBC remain relevant for both facilities.

Two further workstreams in relation to services in The Baird Family Hospital have been developed since the OBC was approved.

- The Best Start: A Five-Year Forward Plan for Maternity and Neonatal Services 2017
- NHSG local documents related to the proposed redesign of women and children's services at Dr Gray's Hospital:
 - A Phased Approach to the Re-Establishment of Obstetric Services at Dr Gray's Hospital November 2018

- NHS Grampian: Women and Children’s Services in Dr Gray’s Hospital. A draft plan for safe and sustainable services, promoting choice and optimal local service provision (the Phase Two plan) June 2019

The Strategic Case includes more details on these workstreams, including a revision of the Baird model to accommodate and support future service change.

In conclusion, work being carried out with regards to redesign of Moray services and the impact of the Best Start strategy do not impact on the approved direction of travel for the Project.

The oncology and haematology services, to be accommodated in The ANCHOR Centre, have been reviewed to ensure the Project brief remains consistent with local, regional and national policy. There have been no significant changes to the relevant policies since OBC approval and the clinical services continue to work within the predicted incidence and prevalence indicators.

1.5 Revisiting The Economic Case

The appraisal of the costs, risks and benefits associated with the site options identified in the Economic Case set out in the OBC has been revisited and remains robust.

Operating and equipping costs, appraised risks and benefits have not materially changed in the period between OBC and preparation of the FBC, however, following market returns, the build costs for the preferred options have increased. The increase is as a consequence of design complexity and market conditions. In revisiting the original appraisal, it is assumed that the build costs in each of the options would have been impacted by this cost increase.

The outcome of the revised appraisal is set out in Table ES1 and ES2 below; this analysis demonstrates the relative value for money of the preferred sites and that the build cost changes since the preparation of the OBC do not materially change the outcome of the Economic Appraisal.

Table ES1 (FBC): Evaluation of Options - The ANCHOR Centre

	Option 1	Option 2	Option 3	Option 4
(Out of 100)	The ANCHOR Centre adjacent to the existing Radiotherapy Centre	The ANCHOR Centre between Radiotherapy and Matthew Hay Building	The ANCHOR Centre adjacent to the Radiotherapy Centre	The Baird Family Hospital integrated with The ANCHOR Centre
Economic Appraisal	56	42	53	44
Risk Appraisal	100	85	100	77
Total Score	156	127	153	121
Overall Ranking	1	3	2	4
Score OBC	158	129	155	123
Rank OBC	1	3	2	4

Table ES2 (FBC): Evaluation of Options - The Baird Family Hospital

	Option 1	Option 2	Option 3	Option 4
(Out of 100)	The Baird Family Hospital on Foresterhill HC site	The Baird Family Hospital adjacent to Children's Hospital	The Baird Family Hospital adjacent to future development	The Baird Family Hospital integrated with The ANCHOR Centre
Economic Appraisal	81	72	61	67
Risk Appraisal	100	81	67	100
Total Score	181	153	128	167
Overall Ranking	1	3	4	2
Score OBC	181	153	128	167
Rank OBC	1	3	4	2

The ANCHOR Centre is sited adjacent to the existing Radiotherapy Centre at the east end of Aberdeen Royal Infirmary (ARI). A site plan is shown in Figure C1. More details are available in the main FBC, section 4.3.3. The Gross Internal Floor Area (GIFA) for the development is 5,500 m².

The Baird Family Hospital is located towards the west of the Royal Aberdeen Children's Hospital (RACH). This option is consistent with the Foresterhill Development Framework agreed with Aberdeen City Council in 2008. The new facility will be internally linked to ARI and RACH. A site plan is shown in Figure C1, refer to main FBC section 4.3.3. The GIFA for the development is 25,950 m².

1.6 The Commercial Case

The Project is a health project with an investment cost in excess of £220 million. It is to be funded by means of a SG capital budget allocation and procured under the NHSScotland Frameworks Scotland 2 (FS2) arrangement.

The contractual arrangements for each stage of the Project Development have used the FS2 Frameworks Agreement New Engineering Contract 3 (NEC3) Option C contract. The construction stage contract has been developed and modified, with appropriate professional advice, to reflect its scale, complexities and risk. The Project uses a Project Bank Account. Key contractual risks have been allocated to the party best able to manage it.

Following a competitive process, GRAHAM Construction were appointed as the Principal Supply Chain Partner (PSCP) in November 2016. The PSCP Target Price for construction following an extensive tender process has been jointly developed on an 'Open Book' basis and was submitted in December 2019. This followed an extensive period of additional review, as tender returns had indicated circa 41% increase in build costs from that previously forecast and reported.

As part of this process, NHSG jointly commissioned with HFS the Royal Institution of Chartered Surveyors (RICS) to undertake an independent external review to objectively identify the reasons for the variance in project costs, given that there had been no material changes to the scope or design of the Project.

The key findings of the RICS review were:

- *It is entirely reasonable for NHS Grampian to have expected to be able to place reliance upon the Joint cost Advisor (JCA) and the PSCP to work collaboratively to present an accurate cost plan.*

- *A significant number of the total variances reported arose from inaccuracies in the cost plan, arising from benchmarking that did not fully take account of factors prevailing at the project and in the market and from a failure to track appropriately the impact of costs arising from design development and authorised changes.*
- *Limitation on the number of bidding contractors for certain packages of work, especially MEP, is likely to have restricted competition and ability to achieve ultimate best value.*
- *Both anecdotal and hard evidence to support the notion that market forces at play in Grampian, in Scotland generally, and in relation to the type and scale of the Project are such as to render the Project less attractive to potential bidders.*

In line with the recommendations of the external reviewer, additional work was commissioned from AECOM by NHSG to specifically look at the Mechanical, Electrical and Plumbing (MEP) procurement. The AECOM MEP specialist team confirmed, based on the AECOM library of projects and taking into account the specifics of the Baird and ANCHOR Project in 2019, that the MEP tender rate is within an acceptable range.

During the review period, four of the tender packages have been retendered with no material betterment in price. Retendering the whole project is an option, however it will take in the region of nine months to complete and expose the Project to additional risks, including loss of supply chain and inflationary cost pressures.

Based on the outcome of the external reviews and recent market engagement the proposed course of action is to proceed with the current Target Price submitted. This will result in an increase in the Project forecast from £163.7 million to £223.6 million.

NHSG will continue to work with the JCA and PSCP to deliver any further cost efficiencies that might be available including the use of the payment

mechanism, i.e. the PSCP is paid Defined Cost plus Fee Percentage (i.e. actual cost of labour, plant, materials and sub-contract work plus a fixed percentage for overhead and profit) but only up to the ceiling price of the Target Price. Efficiencies are also incentivised under the contract with savings that are generated against Target Price, up to 5% below the Target Price, shared on a 50/50 basis between client and contractor.

Table ES3 below outlines the key programme dates for the construction phase of the Project assuming FBC approval in February 2020.

Table ES3 (FBC): Project Programme

Construction	
Stage 4 appointment of PSCP	February 2020
Stage 4 appointment of PSCs	February 2020
Construction Commencement	May 2020
Construction Completion - ANCHOR	May 2022
Bring into Operation - ANCHOR	May 2022
Construction Completion – Baird	November 2022
Bring into Operation - Baird	March 2023
AMH Demolition	May 2023
Contract Completion	May 2023

1.7 The Financial Case

The Financial Case reflects the full financial implications of the Project.

The specific approval as part of this business case relates to the following investment in Table ES4.

Table ES4 (FBC): Summary of Initial Capital Investment for Approval

	Baird	ANCHOR	Total	Total
	£000s	£000s	£000s	£000s
Construction Related Costs	166,246	40,377	206,623	146,716
Furniture and Equipment	15,253	1,747	17,000	17,000
Total Initial Investment	181,499	42,124	223,623	163,716
Sources of Funding				
SG Additional Capital Funding	181,499	42,124	223,623	163,716
Total Sources of Funding	181,499	42,124	223,623	163,716

Table ES5 outlines the total investment required to deliver the new facilities. This includes enabling projects which freed up the preferred sites, project development costs, construction costs and furniture and equipment.

Table ES5 (FBC): Summary of Initial Capital Investment

	Baird	ANCHOR	FBC Total	OBC Total
	£000s	£000s	£000s	£000s
Enabling Projects	8,702	4,645	13,347	13,464
Construction Related Costs	166,246	40,377	206,623	146,716
Furniture and Equipment	15,253	1,747	17,000	17,000
Project Development Costs	6,442	1,535	7,977	6,748
Commissioning Costs	168	42	210	210
Total Initial Investment	196,811	48,346	245,157	184,138
Sources of Funding				
SG Additional Capital Funding	181,499	42,124	223,623	163,716
Hub Contract	7,838	0	7,838	7,531
NHSG Capital Funding	900	4,680	5,880	5,828
NHSG Revenue Funding	6,574	1,542	7,816	7,063
Total Sources of Funding	196,811	48,346	245,157	184,138

The Enabling Projects and Works have been delivered using combination of existing NHSG capital and revenue allocation and additional capital allocation from the SG to Fund.

Construction related costs have increased by £59.9 million (41%) from the budget estimate contained in the OBC (December 2017). The estimated build costs associated with construction of the facilities were produced in

consultation with the PSCP, by the JCA based on the emerging design and prevailing market conditions at that time.

The scope of the project has not changed materially since the OBC was prepared, with only £1.4 million of construction changes explicitly instructed by NHSG through the contract mechanism. The additional reasons identified for the variance are:

- cost planning allowances and assumptions at OBC did not sufficiently reflect the complexity of the Project (£15.2 million)
- coordination of the the design development process was inadequate in production of Cost Plan, including reliance on benchmarking data not fully aligned to emerging designs. (£14.7 million)
- market conditions and inflation both across the construction sector generally and in relation to the specific type and scale of the Project mean that tender returns were higher than anticipated (£28.5 million)

The programme delay has elongated the duration that the NHSG Project Team are required, resulting in an increase in Project Development Costs.

New facilities will attract additional recurring running costs, it will also provide an opportunity to deliver services differently and implement better ways of working. Some of these service changes will deliver efficiencies however it is anticipated that some cost pressures will arise. A substantial programme of service redesign is being undertaken to manage the transition. The additional costs relate to:

- depreciation – in relation to the new buildings and equipment
- clinical related running costs – of the services that will transfer to the new facilities a small number of clinical related running costs as a direct consequence of the new facilities have been identified and included within the business case
- non-clinical service costs – new equipment and technologies that will be installed in the new facilities will attract additional running costs

- building related running costs – as a consequence of the larger footprint and more modern and complex facilities running costs are anticipated to increase

These costs summarised in the table below will step up from the period of commissioning in 2022 and financial plans of NHSG.

Table ES6 (FBC): Summary of Additional Recurring Revenue Implications - First Full Year of Operation (2023/24)

	Baird	ANCHOR	Total
	£000s	£000s	£000s
Recurring Revenue Costs			
Additional Depreciation	4,276	978	5,254
Additional Clinical Service Costs	839	168	1,007
Additional Non-Clinical Service Costs	340	85	425
Additional Building Related Running Costs	2,299	714	3,013
Total Recurring Revenue Costs	7,754	1,945	9,699
Sources of Funding			
Third Party (UoA)	157	0	157
NHSG Revenue Funding (Other Scheme Costs)	3,321	967	4,288
Total Identified Sources of Funding	3,478	967	4,445
Revenue Funding (Depreciation)*	4,276	978	5,254
Total Core and Non Core funding available	7,754	1,945	9,699

* NHSG have requested that SG provide additional support for the costs associated with depreciation.

In the OBC a construction cost of the emerging design to £146.7 million was reported and funding from the SG agreed. The construction cost is now forecast to be £206.6 million and additional funding of £59.9 million from SG requires to be agreed.

NHSG is committed to the Project and subject to the provision of additional SG funding in relation to the construction costs, depreciation and equipment, all revenue and capital implications of the Project will be reflected in the financial plans of the Board.

1.8 The Management Case

Management arrangements are in place to ensure the Project's successful implementation.

Effective project management and governance arrangements have been in place throughout the Project and are documented within the Project Execution Plan (PEP), which is updated regularly. These arrangements support effective control of change and Project management and maintain continuity of approach within the Project.

The Project resources are currently being reviewed to make sure they are appropriate to address the complexities of the construction phase.

A robust risk management process has been put in place and continues to be actively managed through the whole programme to reduce the likelihood of unmanaged risk affecting any aspect of the Project.

A significant service redesign agenda has been identified and is being managed by the Executive Redesign Group, which meets quarterly. Additionally, three operational management-led Service Redesign Groups oversee the development and implementation of the agreed Service Redesign Plans.

Benefit Registers and Benefit Realisation Plans have also been developed and agreed with the appropriate Operational Management Teams.

The four key elements of a successful commissioning plan are in development with resources identified and key stakeholders engaged:

- Building Information Management Level 2 (BIM)
- Soft Landings Programme
- Technical Commissioning
- Functional Commissioning

The commissioning of each facility will be led and co-ordinated by the Functional Commissioning Manager and Project Team in close collaboration with the appropriate Operational Management Teams.

The Project is subject to regular monitoring and evaluation through its governance structure.

1.9 Conclusions

This FBC confirms that:

- the Project scope and preferred options set out in the OBC remains valid
- ongoing management arrangements have been identified to ensure the Project's successful implementation
- NHSG has undertaken a process with expert advice to confirm the reasons for the increase in build cost and that the Target Price and associated contractual arrangements are broadly representative of the cost of the Project in the current market
- confirmation of further SG funding is required for the Project to proceed. NHSG will continue to work with the JCA and PSCP to deliver any further cost efficiencies that might be available

These new facilities will be key enablers to allow a significant redesign of NHSG clinical services, improving not only the quality of care patients receive, with many able to be cared for on an out-patient or day-case basis, but also delivering efficiency benefits from the improved flow of patients throughout the buildings and the wider hospital environment in NHSG.